



The Association Between School Environment and Smoking Behaviors Among Secondary Schools Students

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Written By

Ruqaya Ali Mohammed Ali Ali

Supervisor

Assist. Prof. Dr. Selman Hussein Faris Al-kerety, PhD

Dhu al-Hijjah, 1444 A.H.

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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Supervisor Certification

I certify that this thesis, which entitled (**The Association Between School Environment and Smoking Behaviors Among Secondary School Students**), was prepared under my supervision at the College of Nursing, the University of Kerbala in partial fulfillment of the requirements for the degree of master in nursing sciences .



Selman
Supervisor

Assist. Prof. Dr. Selman HusseinFaris Al-kerety

College of Nursing
University of Kerbala

Date / / 2023

University of Kerbala

Approval Certification

We are reviewing the thesis and fulfilling all the requirements.

Ghazwan

Head of Commuinty Health Nursing Department

Assist. Prof.Dr.Ghazwan Abdulhussein Al-Abedi

College of Nursing

University of Kerbala

Date / / 2023

Selman

Associate Dean for Scientific Affairs and Higher Studies

Assist. Prof. Dr. Selman Hussein Faris

College of Nursing

University of Kerbala

Date / / 2023

Committee Certification

We are, examining committee, certify that we have read this thesis (**The Association Between School Environment and Smoking Behaviors Among Secondary Schools Students**), which is submitted by (Ruqaya Ali Mohammed Ali Ali) from the department of community health nursing, and we have examined the student in its contents, and what is related to it and we decide that it is adequate for awarding the degree of master in nursing.



Member
Assist. Prof. Dr. Hassan

Abdullah Athbi

Signature

Date / / 2023



Member
Assist. Prof. Dr. Ghazwan

Abdhussein Al- Abedi

Signature

Date / / 2023



Prof. Dr. Wissam Jabbar Qassim

Chairman

Date / / 2023

Approved by the council of the College of Nursing-University of Kerbala



University of Kerbala

Prof. Dr. Ali Kareem Al-Juboori

Dean College of Nursing /University of Kerbala

Date / / 2023

Dedication

to

My father, who was always with me spiritually.

*My Mother, brothers, and Sisters for their love, support, and
encouragement*

*Dear friends and every person who gave me opportunity to go on the
right way...*

Ruqaya Ali

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Abstract

Background: The most common preventable cause of mortality in Iraq is smoking, which is one of the high-risk behaviors for developing chronic diseases and early mortality, and breaking the smoking habit is difficult. The school environment reflects a broader contextual element that is connected with students smoking.

Objective: To identify the association between school environment and smoking behavior among secondary schools student.

Methodology: A descriptive correlation study was performed from 27th September, 2022 to 9th July, 2023. The study was conducted in the of secondary schools in the Center of Kerbala City. Multiple-stage cluster systematic random sampling was used to choose the students. The sample study includes 372 students.

Results: The study indicated that the prevalence of smoking behaviors among secondary schools' students was 25.3%. The majority was males. There is a significant association between teachers smoking and students smokers ($H.S = 0.00$). Also There is no a significant differences between smoking behaviors' among smokers' students and school environment, and there is a significant differences between smoking behaviors' among smokers' students and their soicodemographic characteristics (age and sex) (P -value = 0.016; and 0.047) respectively, and the schools environment was acceptable in Kerbala City ($R.S=67.38$).

Conclusions: The study indicated that the prevalence of smoking behaviors among secondary school students was 25.3%. The majority of smokers students are between the ages of 16 and 18, are male, fifth class, more than a third they smoke hook, and living with their families in low monthly income was less than 300.000 iraqi dinar.

Recommendations: There are many solutions to deal with the problems through preventive education programs, tracking by parents and teachers to

their students to control the smoking prevalence among secondary school students, and identify the causes that affect smoking behaviors.

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List of Abbreviations

Items	Meaning
AHA	The American Heart Association
ASA	The American Stroke Association
CAQ	Classroom Air Quality
CO	Carbon dioxide
CSHP	The Coordinated School Health Program
d.f	Degree of Freedom
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders
e.g.	For Example
et al	Others
Fig.	Figure
GYTS	The Global Youth Tobacco Survey

HRQoL	Health-Related Quality of Life
H.S.	High Significant
min	Minutes
MVPA	Moderate-to-Vigorous Physical Activity
NASPE	The National Association for Sport and Physical Education
NICE	National Institute for Health and Clinical Excellence
No.	Number
PA	Physical Activity
PE	Physical Education
PHIAC	The Public Health Interventions Advisory Committee
R.S.	Relative sufficiency
SB	Sedentary Behavior
SCRI	Salford Centre for Research and Innovation
SD	Standard deviation
SES	Socioeconomic Behaviors
STPs	School Tobacco Policies
SPSS	Statistical Package of Social Sciences
Std	Standard Deviation
Sig	Significance
UK	United Kingdom
UNICEF	United Nations Children's Fund
US	United States
WHO	World Health Organization
&	And
%	Percentage
F	Frequency

Chapter One

Introduction

Chapter One

Introduction

1.1. Introduction:

Smoking is the biggest preventable cause of mortality worldwide and a major known risk factor, contributing significantly to the increasing incidence of non-communicable diseases (Chand et al., 2022).

Smoking is an unhealthy behavior that has an effect on one's emotional, social, and physical health. Early smoking can lead to a highly dependent adulthood who fights to quit and is more likely to become ill than someone who only started smoking as an adult (Chirasatienpon et al., 2021).

More than 8 million people are killed by the tobacco pandemic every year, including over 1.2 million deaths from indirect smoke exposure. It is one of the worst public health issues the world has ever seen (WHO, 2023). It may take a while to go from smoking occasionally to regularly smoking. Adolescent-developed behaviors, especially those that are health-related, may continue into adulthood and have an effect on their long-term health. Smoking is one health-related habit that may have an impact on a person's future health as well as their current health (Jakobsen et al., 2021; Chae & Chung, 2021).

Around the world, 80–100,000 children begin smoking every day. Understanding is one of the elements that affect students' decisions to use smoking; without sufficient understanding regarding smoking use and its effects, a student will be less likely to make a fact-based and educated decision. Several factors influence whether a teenager takes smoking, and knowledge is one of those factors. In other words, the fundamental cause of environmental issues is the rise of humanity. The outcome is we can use education as a process to transform people, enabling them to develop the required behavior, cognition, value judgment, knowledge, and skills in order to solve environmental problems (Al-Ani, Abbas & Naji, 2020; Mahmood et al., 2018; Yeşilyurt, Balakoğlu & Erol, 2020).

In addition to other factors that may affect how education is delivered and received, the school environment contains the classrooms, instructional resources, technical workshops, library, instructors' qualifications, teaching strategies, and peers. The process of teaching and learning heavily relies on instructional materials, and textbooks are frequently the most economical way to raise academic achievement and enhance productivity at school (Ochwada, 2021).

Students are more likely to smoke if their parents smoke at home and if they are surrounded by friends who smoke, according to social and environmental factors. Furthermore, societal factors have an effect on young adolescents' decisions to begin and continue smoking (NICE, 2010).

When assessing a student's well-being, the school environment is crucial. Previous studies have demonstrated that factors including physical, academic, and social characteristics affect school environments (Tapia-Fonllem et al., 2020).

The physical environment of a school system is made up of several components and resources, like lighting, ventilation, room size, walls, desks, chairs, carpets, whiteboards, computers, and other items that add to the aesthetic appeal of the learning environment. An appropriate physical environment significantly boosts an organization's productivity and serves as a catalyst for attaining its goals (Oyinwi, 2020).

The term "school environment" involves a combination of physical, social, and behavioral aspects in addition to the interactions that develop among pupils and teachers and are affected by the institutional, individual, and functional factors that give schools their unique character, as show in figure (1.1) (Ezyschooling, 2023; Tapia-Fonllem et al., 2020).

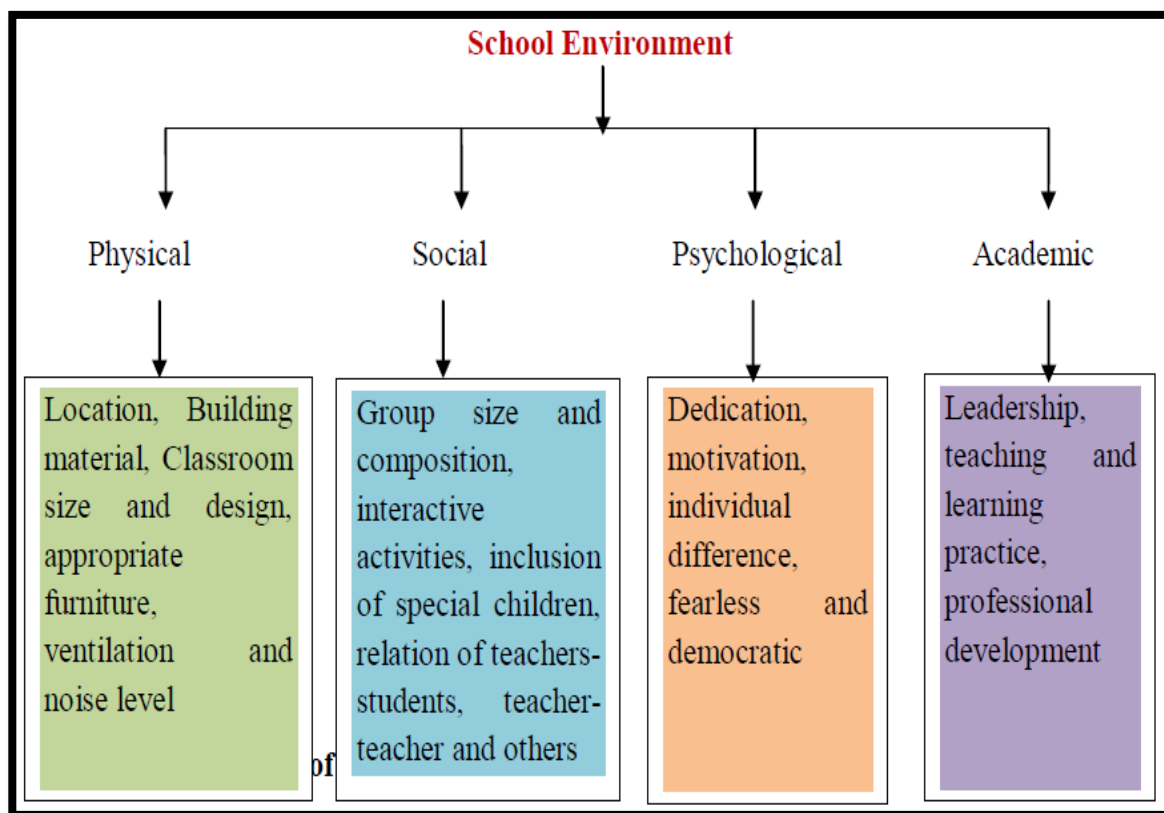


Fig 1.1. The School Environment Components (Meena, 2017).

The body's immunological response to malignant development is known to be suppressed by nicotine. In addition to being connected to cancer, tobacco smoke also leads to hypertension, diabetes, and a number of respiratory illnesses, all of which are serious risk factors for cardiovascular disorders. These risk factors' combined impact raises the likelihood of cardiovascular events (Al-Delaimy & Al-Ani, 2021).

Smoking is the act of breathing in the smoke produced when tobacco is burned in cigarettes, pipes, or cigars. About 4000 poisonous substances can be found in smoke, including nicotine, tar, carbon monoxide, ammonia, and hydrogen cyanide, all of which can cause cancer. Smoking is an obsessive habit that has a wide range of detrimental impacts on one's health, including one's mental and physical well-being (Abdel-Salam, Ramzan & Siddiqui, 2021).

All tobacco products are harmful; there is no degree of cigarette exposure that is appropriate. Most popular Cigarettes are one way to consume

tobacco. Other types of tobacco include cigarillos, cigars, roll-your-own tobacco, pipe tobacco, kretek , and bidis in addition to different smokeless tobacco items (WHO, 2023)

The topic of nicotine and addiction to this substance has been covered in multiple Surgeon General's reports. The 1988 report concluded that Cigarettes and other forms of tobacco are addicting. Nicotine is the identified drug in tobacco that causes addiction. The pharmacologic and behavioral processes that determine tobacco addiction are similar to those that determine addiction to drugs such as heroin and cocaine. The 2010 report, which covered the extensive advances in research on nicotine since the 1988 report, reconfirmed nicotine's key role in causing addiction and concluded that genetic variations in responses to this drug contribute to determining patterns of smoking behavior and cessation (U.S., 2012).

Smoking has been linked to difficulties in school, substance abuse, criminal behavior, impaired psycho-social functioning, sadness, anxiety, and high-risk sexual activities, despite the fact that many of the harmful health effects of tobacco appear later in life (Hamzeh et al., 2020).

Iraqis, especially teenagers and young adults, have grown increasingly used to smoking tobacco through a water pipe (narghileh). In reality, it has evolved into a regular habit and a social activity (Ramadhan & Habeeb, 2022).

The introduction of flavored tobacco, social acceptance, and a lack of laws and regulations all led to its progress, and there are indications that it is already a severe global epidemic with critical implications for morbidity and mortality (Alves et al., 2022).

The region of the brain in charge of executive processes and attention capability. Adolescent smokers suffer attention problems, which get worse the longer they smoke. Abusing tobacco leads to several physical alterations in the body and brain. These bodily alterations could make it harder to concentrate and study, which would be bad for school achievement (Kharna et al., 2020).

In addition to being important for global health, reducing tobacco usage is also important for economic growth, sustainable development, and human rights. Due to the fact that men's use rates stay far higher than women's and also decreasing much more slowly (WHO, 2018).

Smoking is linked to more expensive medical care, a shorter life span, violence, criminal activity, and theft. Smoking has been linked to respiratory, cardiovascular, and cancer disorders, as has been demonstrated (Hamzeh et al., 2020).

The results also suggest that when students are engaged in their studies, they learn more easily because they feel at ease in the classroom. The results also demonstrated that the availability of resources is crucial in determining how successful learning is (Godson & Ngussa, 2020).

People's actions and a social and cultural context that supports smoking are responsible for the high prevalence of smoking in Iraq. Three decades' worth of post-war hostilities are the most reasonable psychological reason. According to a study conducted on school students in Iraq, stress, melancholy, depression, and anxiety are the main causes of smoking behavior. It's interesting to point out that other significant predictors of tobacco smoking prevalence include the parents' marital behaviors, educational attainment, financial situation, and income (Ibrahim, Al-Humaish & Al-Obaide, 2018).

Approximately 4,000 teenagers light up for the first time every day. That is almost 1.5 million young people each year. Many young people who try cigarettes are unaware of how easy it is to develop an addiction. Because of how strongly addictive nicotine is, about 1,000 children start smoking regularly every day (US Department of Health and Human Services, 2010).

The Anti-Smoking Act's implementation may not have had a significant impact on today's teens. The first cigarette was smoked by more than one-third of adult smokers when they were fourteen, where as almost of people who have ever smoked regularly first cigarette was smoked before they became age of eighteen. An adult's likelihood of continuing to smoke is higher

when smoking begins earlier. In regard to this, it is essential to understand the elements that affect adolescents' cigarette use (Liang et al., 2022).

1.2. Importance of the Study

Smoking is a significant public health issue and one of the main causes of mortality and morbidity because of its connection to numerous life-threatening illnesses (Ramadhan & Habeeb, 2022).

World health organization (WHO) considers that adolescents who use these items have a threefold increased chance of using tobacco products in the future. The organization advises governments to pass legislation to deter non-smokers from taking up the habit, to prevent smoking from becoming socially acceptable once again, and to save future generations. In most nations, the percentage of smokers has decreased, but due to population expansion, the overall rate of smoking has stubbornly stayed high. Approximately 80% of the world's estimated 1 billion smokers currently reside in low- and middle-income countries (LMICs) (WHO, 2021).

Adolescents start smoking for several reasons, including pressure from their peers, an attempt to imitate the actions and lifestyles of adults in media such as movies and ads, and an effort to manage weight, especially among young women. Adolescents who don't smoke typically have relatives and friends who keep away from smoking or who are against it. The majority of adolescents who don't smoke want to be successful in sports or academics and have aspirations to attend college. Smoking bans in schools also serve a number of other purposes, such as preventing pupils from starting to smoke, promoting smoke-free environments as the norm, and reiterating the dangers of smoking and exposure to environmental tobacco smoke (Hockenberry, Wilson & Rodgers, 2017).

A significant relative decrease in rates by 2025 may be easier to achieve in nations where smoking prevalence was high in 2010 than in those where it was low. To understand patterns of use and develop effective policy

responses, each nation must monitor tobacco use among adults and teens at least once every five years on a nationwide level (WHO, 2018).

Most tobacco use starts during the teenage years. Overall, 88% of daily smokers who are adults state which they began smoking before age of eighteen. It is a period of life when people are particularly susceptible to social influences, and the pervasive marketing of tobacco products which includes anything from chic magazine ads to posts made by young people on social media networks to images of smoking in films transmits messages that make tobacco use appealing to children (U.S., 2012).

Hookah smoking is generally seen to be less dangerous than smoking cigarettes, but the fact is that one hour of hookah is roughly comparable to 100 cigarettes, or 50 to 60 cigarettes, and a two to a three-hours period of smoking hookah is nearly similar to 25 cigarettes. Smoking tobacco with a water pipe (Narghileh) has become more popular among Iraqis, particularly adolescents and young people. In fact, it has turned into a social pastime and a regular habit (Hendrick, 2020; Sun, and Yang 2014, Sterling et al., 2015; Hamad Medical Corporation, 2020).

Tobacco that has been combined with natural goods or molasses sugar, as well as unusual fruits including apricot, apple, strawberry, mint, and cola, are widely used in hookah smoking (Young, 2020). Furthermore, smoking hookah has become increasingly accessible, owing to an increase in the number of hookah-serving establishments and lower venue charges. While many students consider hookah smoking to be socially acceptable, they may be unaware of the dangers it poses to their overall and dental health. Hookah smoking has lately been deemed a growing public health threat because to its popularity and associated serious health impacts ((Merlo, 2013; American Lung Association, n.d).

1.3. Statement of the Problem:

Problem identification :

Iraq has one of the highest rates of smoking among adolescents and young adults (13 to 18 years old) within the Middle East (21.8%). In many societies, young boys still believe that smoking cigarettes is a sign of maturity and power (Hajee & Agha, 2022).

Background :

The cultural and social environment in Iraq that fosters smoking and affects people's attitudes toward it is a contributing factor in the country's tobacco smoking problem. The adverse effects of smoking tobacco on health are a further problem. More than 4,800 chemicals, including at least known to cause cancer, are present in cigarette smoke (Ibrahim, Al-Humais & Al-Obaide, 2018).

Scope of knowledge:

Numerous studies have been conducted in Iraq, such as one that found that adolescents aged 13 to 15 in Kurdistan in 2007 smoked 15% of the time (compared to 2.1% of girls and 25.1% of boys) (Al-Ani, Abbas & Naji, 2020).

Consequences:

People who smoke tobacco are more likely to be exposed to a wide variety of toxicants. During a usual smoking period, which could last 45 min or longer, people are exposed to hazardous amounts of carbon monoxide. When as compared to smoking one cigar., there are 40 times as many tarparticles and twice as much nicotine present. There are also 30 times as many carcinogenic polycyclic aromatic hydrocarbons (Ramadhan & Habeeb, 2022).

Lung cancer incidence among men has gradually increased in Iraq, and this could be partly attributed to the nations rising cigarette smoking (Al-Ani, Abbas & Naji, 2020).

Knowledge gap:

Sadly, our schools' environments are not pleasing to look at and fail to encourage effective teaching and learning, which causes students to become frustrated and dissatisfied (Oyinvwi, 2020).

The majority of research studies reported evidence of a decrease in smoking, but there is little or no evidence to suggest smoking cessation, anti-smoking behavior, or long-term efficacy (Hanpatchaiyakul et al., 2022).

Proposed solutions:

In order to prevent smoking behaviors, treatments must be delivered throughout adolescence, sometimes known as the "secondary school years." At the end of adolescence, between the ages of 15 and 19, there is a higher likelihood that smoking behaviors will be adopted (Waller et al., 2017).

Health education delivered at schools is an appropriate method for raising students' awareness. Therefore, educating students about smoking behaviors in the classroom can help them make wise decisions for their futures, which in turn helps to prevent or minimize smoking use among this group of people (Mahmood et al., 2018).

In order to prevent this risky behavior, in addition to other alternative programs, health education about smoking hazards is preferred to be introduced earlier (at the age level of primary schools) before attending intermediate and higher secondary schools where the student previously selected the cigar (Al-Ani, Abbas & Naji, 2020).

Implementing school tobacco policies (STPs) with the goal of reducing smoking is one approach to getting involved in the school smoking environment. In comparison to smoking cessation services, smoking policies in schools have not received as much research. The authors did, however, note several positive aspects, such as comprehensive and obvious rules that apply to all, consistent enforcement by students and adults at school, and the availability of education and preventative programs (Jakobsen et al., 2021).

1.4. Research Hypotheses:

Null Hypothesis #1: There are no an associations between school environment and smoking behavior among secondary schools students.

Aternative Hypothesis #2: There are an associations between students' socio-demographic characteristics and smoking behavior among secondary schools students.

1.5. Objectives of the study:

Important objectives of the study were:

1. To evalute the secondary school environment in holy Kerbala City.
2. To determine the prevalence of smoking behavior among secondary schools students.
3. To findout the association between teachers smokers and smoking behaviors of students.
4. To findout the association between school environment and smoking behaviors among secondary schools students.
5. To findout the association between smoking behavior among secondary schools students and their socio-demographic characteristics (age, sex, class, living arrangement, education level of the mother, education level of the father, family monthly income level, and household's profession).

1.6. Definition of Terms:

1.6.1 Association:

A. Theoretical Definition:

Is a link or relationship that exists between two things (such as ideas, events, or feelings), and when the first thing is experienced, the second thing is activated as a result. Statistical dependence or link between two or more occurrences, in terms of degree (VandenBos, 2007).

B. Operational Definition:

Is the linkage or discovery of the connection between two or more phenomena or issues, like school environment and smoking behaviors among secondary schools students.

1.6.2. Smoking Behaviors:**A. Theoretical Definition:**

Is the outcome of interactions between multiple factors at different levels (personal, social, and environmental) (Liang et al., 2022).

B. Operational Definition:

Is a practice that students engage in to relieve stress or to imitate others who smoke.

1.6.3 School Environment:**A. Theoretical Definition:**

The setting or climate in which school-related activities are conducted can be referred to as the school environment. It consists of the institution's physical, social, psychological, and pedagogical framework (Meena, 2017)

B. Operational Definition:

Is the location of most of the student's time spent in school, and this is where the environment has a different impact on learning through curricula, instructional methods, and relationships, and effect on smoking behaviors among secondary schools students.

Chapter Two

Review of Literature

Chapter Two

Review of Literature

2.1. Overview About Smoking Behavior:

Smoking is an unhealthy habit. There is no disputing the fact that smoking causes a number of health problems. In addition to increasing the risk of heart disease, stroke, respiratory disorders, and other diseases, smoking increases the risk of certain malignancies, like lung cancer (Arifin et al., 2020).

The habit of smoking is typically formed throughout adolescence and frequently extends into adulthood. Risk behaviors like smoking, which raise the chance of morbidity and mortality in the short- and long-term, are avoidable yet continue to be an urgent issue. Although smoking rates among teenagers have generally decreased in many countries, these changes have not occurred uniformly across socioeconomic groups; the fall has been greater among adolescents from higher socioeconomic backgrounds, leading to increased social inequalities in tobacco use. Teenagers in lower socioeconomic groups now smoke cigarettes more frequently as a result (Moor, 2015).

Since people are becoming more aware of the negative consequences smoking can have on their health, it remains a problem for public health. Because breathing in secondhand smoke has both short- and long-term negative impacts on one's health, decreasing exposure to it is a top goal in the fight against tobacco usage (Hawkins, 2012).

Numerous variables have been found to influence adolescent smoking, including socioeconomic behaviors, social support, individual characteristics (such as low self-esteem, smoking-refusal skills, and attitudes), academic success, peer or family pressure, acceptability, and accessibility to tobacco products. Schools have a particularly strong capacity to make a significant impact on the severe issue of adolescent smoking. Additionally, students'

perceptions of these factors in their surroundings could influence their smoking behavior (Roohafza, 2014).

The initial years of secondary school play a major role in the development of the smoking habit. Numerous studies on adolescent and teenage smoking have revealed that, by the time schoolchildren reach the age of 18, almost half of them have started a regular smoking habit. There is typically a gap of 1.5 to 2 years between the start of smoking and the development of the habit when people first experiment with cigarettes, which frequently happens during childhood or early adolescence. A current smoker is a person who smokes right now, regardless of how often or how much they smoke. Tried/smoked before: an individual who has never smoked before or an individual who has tried smoking in the past but is not currently a smoker. Never tried: a person who has never attempted to smoke in all of their lives (Naing, 2004).

One of the main factors contributing to the widespread acceptance of nicotine use is flavored tobacco. Removing these flavors will likely have a negative impact on the satisfaction of current cravings and future consumption. This effect will be more pronounced among frequent smokers of nicotine than among less frequent ones. After forty-five minutes of nargile smoking, about two times as much carbon dioxide (CO₂) is present in the blood and three times as much nicotine is exposed as compared to one regular cigarette. The exhaled air carbon dioxide, nicotine in plasma, and heart rate are all significantly increased (Shubbar, Anwer & Daffaar, 2022).

The Global Youth Tobacco Survey (GYTS) that in 2008, conducted in Baghdad, Iraq. The GYTS is a survey that students between the ages of 13 and 15 self-administer in their classes at particular schools. Tobacco use in Iraq takes the form of cigarettes and shisha. Future decreases in adolescent tobacco use in Iraq could be aided by extending current tobacco control programs to encompass tobacco use prevention and quitting, putting in place measures to

deter adolescents who have never smoked from starting, enacting legislation regulating exposure to secondhand smoke in all indoor workplaces, and prohibiting pro-tobacco sponsorship and advertising (Jasim et al., 2009).

2.2. Prevalence of Smoking:

The majority of the world's one billion tobacco users are now found in developing nations. The length of tobacco use has been found to be negatively correlated with the age of initiation. Worldwide, there are 25 million and 13 million adolescent males and girls who smoke cigarettes, respectively (Al-Dahshan et al., 2019).

In developing nations, particularly in low- and middle-income nations, tobacco usage is displacing it from the developed world. On the prevalence and correlates of tobacco use among adolescents in Iraq, there is currently a lack of data. The Kurdistan-Iraq Global Youth Tobacco Survey is one such study, noting a prevalence of current cigarette smoking of 15.3% while emphasizing the role of parental and peer smoking, male gender, increased pocket money, and perceptions that boys or girls who smoked were attractive as factors related to tobacco use. There is, however, less information on the frequency of tobacco use in Iraq, a nation that has gone through three destructive wars and years of sanctions, all of which may have had an impact on young people's smoking rates there (Hussain & Abdul Satar, 2013).

There are few studies and scientific resources available in Iraq that provide evidence of smoking use. The main causes are the insufficient financial resources and staffing given to research. In the past ten years, male smoking prevalence in Iraq has ranged between 5% and 47%, and female smoking prevalence has ranged between 1% and 10%. A cross-sectional study was conducted to fill in the knowledge gaps about current prevalence and related demographic features due to the serious recognized harm caused by tobacco, the dearth of studies available in Iraq, and indicators pointing to an increasing prevalence (Mousawi, 2014).

Multiple stages are used to define patterns of smoking prevalence and smoking-related deaths. Smoking prevalence is still low but increasing in the early stages, mostly among men. In the second stage, smoking rates start to rise among women and keep rising among men. In the third stage, the effects of smoking begin to manifest themselves to a significant extent, and after plateauing, the prevalence of smoking starts to fall. The rate of smoking initiation and the rate of smoking cessation among smokers, both of which are influenced by social patterns, determine the smoking prevalence, or the percentage of smokers in a population at any particular moment (Fig.1) (Östergren, 2021).

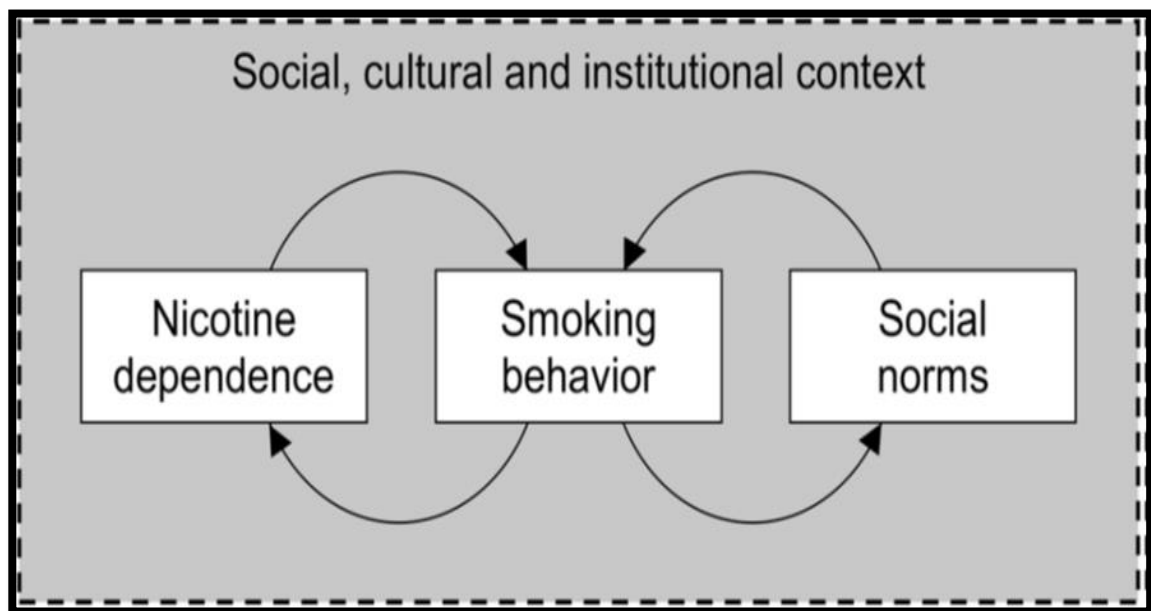


Fig. 2.1 The reflexive processes connecting nicotine dependence, smoking behavior and social norms (Östergren, 2021).

Tobacco regulations and restrictions, promotion, sponsorship, an anti-cigarette trend, improved smoking-related health education, and multiple other active measures must be taken in order to reduce the prevalence of smoking (Suhányi et al., 2020).

2.3. Causes and Risk Factors of Smoking:

Smoking is risky at any age, according to the Public Health Interventions Advisory Committee (PHIAC). However, it also made notice of

the fact that the sooner someone starts, the more likely it is that they will continue smoking for a longer period of time and pass away from a linked illness or condition early. PHIAAC believed that postponing the initiation of smoking was advantageous (in addition to preventing uptake completely) because the risk of disease is correlated with the total amount of time a person smokes (NICE, 2010).

The reasons why some people smoke more than others are complicated and multifactorial. Teenage smoking has a significant connection with psychosocial factors in the household, the classroom, and the peer group. Adolescent smoking, for example, is related to psychological disorders including poor parent-child connections, a broken home, and a negative school climate. Additionally, social connections have a significant impact on teenage smoking habits, with worse peer ties being linked to a decreased likelihood of smoking (Moor et al., 2015).

The gradual loss of the human mind and the impairment of human volition are what drive people to commit crimes. Substance abuse is therefore one of the most difficult issues facing the community and is just as hazardous as terrorism. It affects both developed and developing communities alike (Mahmood et al., 2018).

2.4. School Environment:

The social and academic setting at school where students engage in academic and social activities organized to achieve predetermined goals is referred to as the "school climate." . Clear behavioral and academic goals are set, family involvement is encouraged, and programs for staff development are used to prevent, foster social skills, and resolve conflicts. Relationships between and among students, between instructors and students, among school staff, and between families and the school, the school, and the wider community are all examples of aspects of the school environment (Clark, 2015).

The forces of the environment begin to influence the growth and development of the individual right from the womb of the mother. Educational process of development occurs in the physical, social, cultural and psychological environment (Harinarayanan & Pazhanivelu, 2018).

Bad lighting, noise, excessive levels of carbon dioxide in classrooms, and erratic temperatures effected smoking behaviors. Poor upkeep and inadequate ventilation systems cause ill health among the students, higher absentee rates, and smoking. In addition to the direct effects that poor facilities have on students' ability to learn, the combination of poor facilities, which create hostile and uncomfortable places of employment for the teachers, combined with frustrating behavior by the student, including poor concentration, also has an effect on smoking behaviors and teaching. Effective teaching and learning may not occur in schools without proper physical infrastructure and educational resources (Mege, 2014).

Many school employees and students are exposed to a variety of pollutants from nearby roads, businesses, construction sites, and toxic sites, as well as inadequate lighting, heating, cooling, and ventilation; lead in paint and drinking water; radon; polychlorinated biphenyls; chemicals in paints, glues, and cleaning products; allergens from cockroaches, mice, and rats; lawn chemicals; artificial turf; and chemicals used in lawn care products (Kolbe, 2019).

Students who feel alienated from teachers, lack peer and teacher support, and have a general lack of tolerance are indicative of a bad school atmosphere (Ebbert & Luthar, 2021)..

The three aspects of the school environment that the United Behaviors (US) Department of Education's model of school culture emphasizes are safety, engagement, and the environment (Bochaver, Korneev & Khlomov, 2022).

2.5. School Environmental Factors:

School environmental factors are the components that affect how students learn and are taught at a given institution. The term "school location" refers to the site, or location, of the school. Physical facilities in schools are traveling and stationary items that offer comfort for students. Instructional materials refer to those materials that a teachers uses in class to facilitate teaching and learning. Class size refers to the number of pupils in a class (Mege, 2014).

Adolescents strive for personhood, which encompasses not only the physical and cerebral characteristics of maturity but also the often undervalued but equally significant emotional, psychological, social, and spiritual aspects (Alkhazrajy & Abdulmajeed, 2021).

Adolescents' development and well-being can be negatively impacted by health-risk behaviors, which can also have a big impact on their lives and those around them. Cigarette smoking is a health-risking habit. Additionally, studies on the health risks associated with adolescent habits have been conducted in a number of nations. For example, many young smokers will maintain their habit throughout adulthood. The first crucial step in promoting lifelong health, as well as in identifying which adolescent risk behaviors require treatment, is recognizing adolescent health risk behaviors and deciding variables (Qasem, Nasir & Al-Tawil, 2022).

2.6. Socio-demographic Characteristics as Predictors of Smoking:

Although peer, school, and family influences on adolescent smoking have been widely investigated, little is known about how these influences interact with socioeconomic behaviors (Fig.2.2). There is a need to pinpoint the explanations for the relationships between socioeconomic behaviors (SES) and smoking behavior since there are significant socioeconomic variations in mortality and morbidity caused by health behaviors, particularly smoking.

Teenagers with lower SES may encounter fewer psychosocial resources in the context of their families, schools, and peer groups. Therefore, it is conceivable that SES affects smoking behavior through having an impact on psychological traits in adolescents' social environments, including family, school, and peers (Moor, 2015).

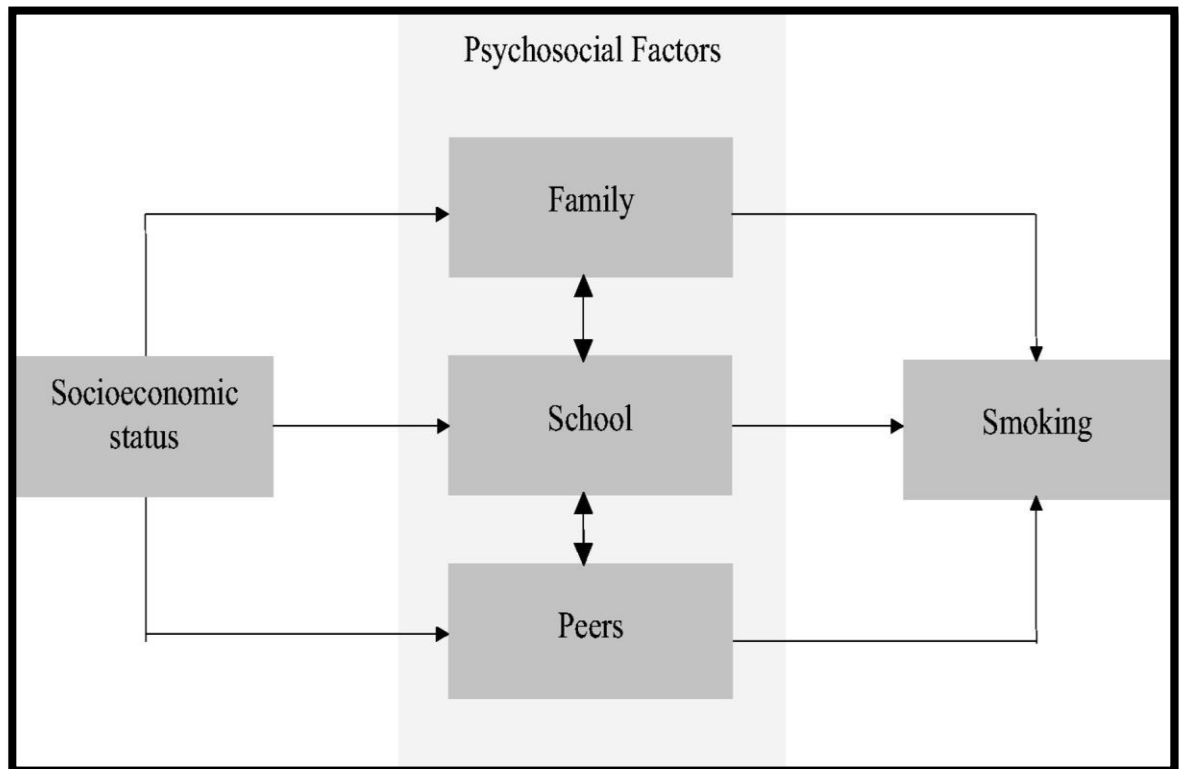


Figure 2.2. Conceptual framework for explaining social inequalities in adolescent smoking (Moor et al., 2015).

The personal factors associated with and demographic differences in cigarette smoking among adolescents have been explored. Men smoke more than women do, and older adolescents smoke more than younger adolescents (Liang et al., 2022).

Age, sex, class level, pocket money, parental smoking status, etc. are frequently used as indicators of determinants of smoking in adolescents. The age, gender, marital status, level of education, and occupational status were all connected to specific reasons. Like, concerns about family problems, finances, and poor performance, were seen more frequently in men than in women. Cigarette smoking was found to be most widespread among those with a

higher degree of education (Cheng, Guo & Jin, 2022; Reime et al., 2006 ;Khadem-Rezaiy & Dadgarmoghaddam, 2016).

2.4. Socioeconomic Behaviors and Smoking:

The latent construct of socioeconomic behaviors was underlain by demographic indicator variables such as the poverty ratio, personal earnings, occupation, and levels of education. Smoking has a negative correlation with socioeconomic position, although the underlying mechanisms are yet unknown. To identify targets for interventions that would lessen health inequities caused by tobacco use, more awareness of the relationship between socioeconomic behaviors and smoking is essential. Numerous studies have examined individual risk variables, such as social support, motivation, stress, psychological issues, and environmental factors, to explain the high prevalence of smoking among groups of low socioeconomic behaviors. variances in smoking uptake or beginning and variances in smoking cessation, both of which are impacted by a variety of circumstances, may contribute to variations in current smoking prevalence (Martinez et al., 2018).

Prevalence of current tobacco product use ranged from 7.2% among students reporting no psychological distress to 18.3% among those reporting severe distress. Current use of any tobacco product was reported by 12.5% of students whose families were categorized as having low affluence, and by 9.6% of those with medium or high family affluence. E-cigarettes were the product type most commonly used (14.1%), followed by cigars (2.8%), cigarettes (2.0%), smokeless tobacco (1.6%), hookahs (1.5%), nicotine pouches (1.4%), heated tobacco products (1.1%), and pipe tobacco (0.7%). Among middle school students, 4.5% reported current use of any tobacco product, 1.6% (35.6% of current users of any tobacco product) reported current use of any combustible tobacco product, and 1.5% (33.3% of any tobacco product users) reported current use of multiple tobacco products. By product type, e-cigarettes were most commonly used (3.3%), followed by

cigarettes (1.0%), smokeless tobacco and heated tobacco products (both 0.7%), cigars (0.6%), hookahs and nicotine pouches (both 0.5%), and pipe tobacco (0.3%) (Park-Lee et al., 2022).

2.8. Self-Efficacy and Smoking Behavior:

Teenagers' perceptions of smoking's self-efficacy and their actual smoking activities are negatively correlated. The results showed that there was a significant direct association between self-efficacy and ever used electronic cigarettes, with people who had lower efficacy being more likely to have done so (Ayar et al., 2019; Durkin et al., 2021).

2.9. The Coordinated School Health Program components:

The Coordinated School Health Program (CSHP) was created as a framework for systems approach to planning and executing school-based children's health activities. The construction of healthy school settings that promote healthy lives is a key component of CSHP implementation. The concept consists of eight elements: staff health promotion, family and community involvement, healthy surroundings, health education, physical education, health services, nutrition services, counseling, psychological services, and social services (Miller & Bice, 2014).

2.9.1 The Environmental Health (or Healthy Environment):

Environmental health is a field that studies all aspects of the environment that affect people's health and well-being. The World Health Organization (2011) states that environmental health entails efforts to deal with all exterior physical, chemical, and biological elements as well as all connected factors that have an effect on behaviors. It includes evaluating and managing environmental variables that have an impact on health. It aims to prevent illness and create environments that foster wellness. There are 24 objectives in the Healthy People 2020 environmental health targets, many of which have numerous sub-targets. The targets address six important environmental topics, such as outdoor air quality, surface and groundwater

quality, toxic substances and hazardous wastes, houses and communities, infrastructure and environmental hazard surveillance, and global environmental health. Human health is influenced by many environmental variables. Animals participate in the spread of communicable diseases caused by microorganisms like bacteria, viruses, and fungi ((Judith, 2010; Clark, 2015).

2.9.2 Health Education, and Health Promotion:

The process of motivating people to gain more control over and enhance their health is termed "health promotion". Health education is any set of educational activities intended to assist people and communities in living better lives by enhancing health literacy, knowledge, and motivation. (WHO, 2021).

Teachers have a key role in the success of health promotion in schools. The commitment of teachers to health education and health promotion in schools differs and is occasionally motivated by personal values. As a result, teacher commitment is essential. The political will to adopt health-promoting school policies and practices is one of the many aspects that determine the success of health promotion in schools (Jourdan et al., 2016).

2.9.3. Physical Education:

The majority of nations have laws requiring students to participate in school physical education for at least some of the required schooling years. Physical education (PE) is by far the most popular way to promote physical activity (PA) during the school day worldwide. PE is reportedly only provided to males in 5% of the world's countries. The National Association for Sport and Physical Education (NASPE) suggests that elementary and secondary schools give 150 minutes and 225 minutes of physical education per week, respectively (Hills, Dengel & Lubans, 2015).

For adolescent health, regular physical activity (PA) is crucial. A sufficient PA intake is related to a number of positive health outcomes,

improved psychosocial wellbeing, and improved academic performance. The school setting is crucial for children's PA levels because all youngsters spend a significant amount of time there (Van Kann et al., 2016).

2.9.4. Counseling, Psychological, and Social Services:

Mental illnesses can have a negative impact on behavior, teaching, and health. A nationally representative study of adolescents between the ages of 13 and 18 found that 22% of them had mental disorders that caused severe impairment or distress, and about 50% of them had at least one DSM-IV mental disorder (the Diagnostic and Statistical Manual of Mental Disorders) throughout their lifetime. These disorders included those affecting anxiety, mood, behavior, and substance use. Because almost half of lifelong mental and behavioral health diseases start during adolescence, adolescence is a crucial time for the prevention, screening, and treatment of such illnesses (Brenner & Demissie, 2018).

2.9.5. Family, and Community Involvement:

A student's and their family's health can be improved through family and community involvement in schools. Participating as a family in school health programs, for instance, can increase family members' understanding of health-related topics like physical activity. This can allow them to act as positive role models and promote healthy behaviors at home. Additionally, when school-based health programs collaborate with community variables, such as a television campaign, they are more effective at preventing health-risk behaviors like tobacco use (Michael, Dittus & Epstein, 2007).

2.9.6. Health , and Nutritional Services:

For the child, the school serves as a second home. Students are susceptible to a variety of aspects of the educational setting that might either benefit or harm their health. The school health program has been in effect in Iraq since 1936. It's interesting that it's critical to both curative and preventive management. The primary element of the school health program is the health

service, which is still a crucial aspect of it. which phrase refers to services for school personnel, including students, that promote health and development, early identification and intervention of physical, psychological, and social factors impacting young children and all school personnel, and prevention of such factors (Abed, Abed & Daham, 2022).

The availability of school and community health care resources for students is taken into account in an integrative approach to school nutrition (Briggs, Fleischhacker & Mueller, 2010).

A nutritious diet is a vital part of a healthy lifestyle and is linked to improved health, a longer life expectancy, and a lower chance of developing numerous chronic diseases. By including behavior-focused nutrition instruction in their lesson plans, teachers can encourage students to eat healthily (O'Toole et al., 2007).

Specifically Maslow theorised that people have five types of needs and that these are activated in a hierarchical manner This means that these needs are aroused in a specific order from lowest to highest, such that the lowest-order need must be fulfilled before the next order need is triggered and the process continues. Physiological needs are the need at the bottom of the triangle and include the lowest order need and most basic. This includes the need to satisfy the fundamental biological drives such as food, air, water and shelter. Safety needs this occupies the second level of needs. Safety needs are activated after physiological needs are met. Social needs: This represents the third level of needs. They are activated after safety needs are met. Social needs refer to the need to be affiliated that is (the needed to be loved and accepted by other people). Esteem needs this represents the fourth level of needs. It includes the need for selfrespect and approval of others. Self-actualisation: This occupies the last level at the top of the triangle, as show in fig.2.3 (Kaur, 2013).

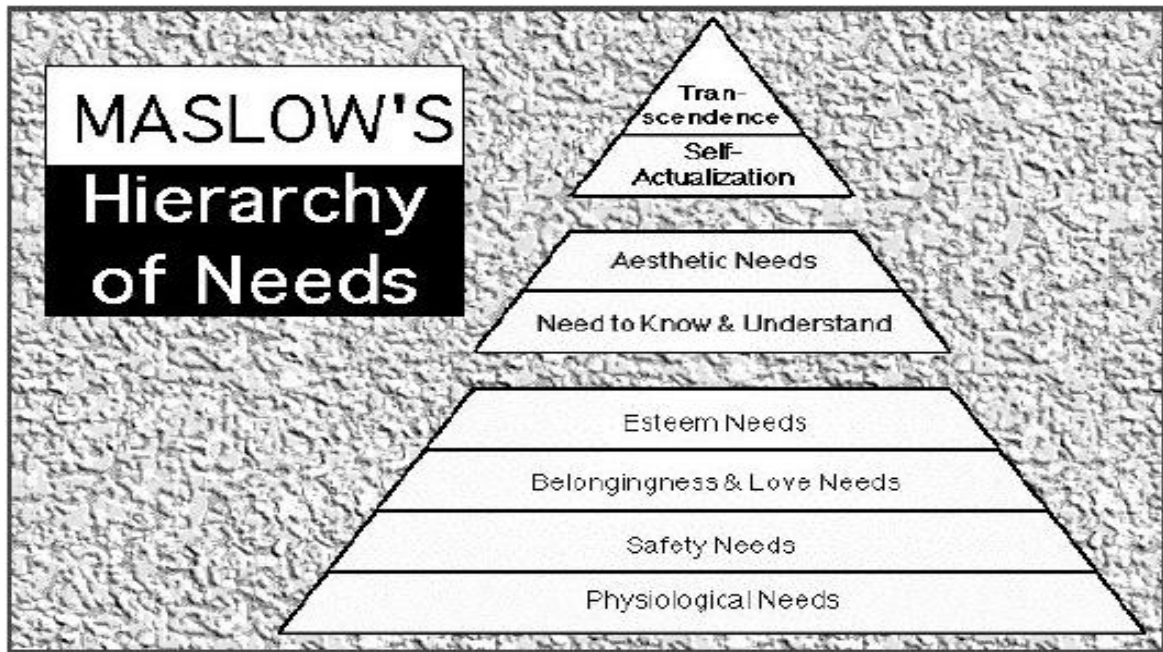


Fig. 2.3. Maslow's need hierarchy theory (Kaur, A. (2013).

2.10. Theoretical Framework:

Over a century ago, Florence Nightingale (1820–1910) passed away. She was a true innovator in an unexplored area. She advocated healthcare reform for all people as an educator, reformer, reactionary, and revolutionary (Gilbert, 2020).

The environment, defined as all external factors and conditions that have an impact on an organism's life and development and have the potential to cause or be a factor in disease and death, has been the primary focus of Florence Nightingale's environmental theory, which was developed in England in the second half of the nineteenth century. Hence, this is the idea of a human being as a creature of nature whose innate defenses are affected by their surroundings, whether they are healthy or not (Medeiros, Enders & Lira, 2015).

Her observations suggested that disease was more prevalent in poor environments, and that health could be promoted by providing adequate ventilation, pure water, quiet, warmth, light, and cleanliness. The crux of her theory was that poor environmental conditions are bad for health and that good environmental conditions reduce disease. Limiting environmental toxins

and safeguarding the environment are crucial objectives. The impact of Nightingale on the way we address health issues affecting communities is still significant (Allender et al., 2013).

The interaction between the person who smokes, and the environment in which the activity is carried out, this may be relevant to how the environment affects a cigarette user (Alsehaibani, 2018).

According to Macintyre et al. (2002), both "compositional" variables (the types of people in a place) and "contextual" elements (the features of a location) can have an impact on a place's effects on health (Macintyre, Ellaway & Cummins, 2002).

The physical characteristics of the school, its location, its size, the availability of playgrounds for extracurricular and recreational activities, the nearby lab and library facilities, and other factors all have an impact on the school and its pupils (Idris et al., 2014).

Evidence reveals that over nine out of ten smokers who are still active did so before reaching maturity, and 98% of smokers don't start smoking until they're 26 years old. People who had never smoked had considerably higher health-related quality of life (HRQoL) compared to current smokers, according to prior studies. Most studies found a larger correlation between smoking and the mental health aspect of HRQoL compared to the physical health aspect, and this population is generally regarded as healthy (Milic et al., 2020).

Environmental influence has not previously been thought of as a component that affects secondary schools, and this is crucial in preparing children for higher education and productive living in society (Oselumese, Omoike & Andrew, 2016).

Teenagers are perceptive to what they observe and hear in their environment. Teenagers could desire to smoke if they see pictures of smokers

as cool, beautiful, rebellious, fun-loving, risk-takers, or having other qualities they admire (United States, 2012).

2.1. School Building Typology:

The typology of school buildings describes the different kinds of schools that can be designed. The Salford Centre for Research and Innovation (SCRI) research emphasized the importance of studying three fundamental aspects of school buildings: the plan and envelope of the structure, the design principles for school buildings, and the necessary spaces. There are two methods to categorize this: either according to the development or time period of building or according to the primary, secondary, and tertiary levels of education. In any case, the needs, scales, and sizes vary depending on the number of users (Barrett et al., 2015).

The following are the most important aspects of buildings: low energy use, water utilization and reuse, low CO₂ emissions, natural ventilation, natural day lighting, and acoustics (Al Hattali & Husin, 2021).

2.1.1. Design Principles for School Buildings:

The necessity for ventilation, lighting to make the most of the daytime sun, and cooling or heating the building should all be taken into account by the designers. To reduce pollution, materials and appliances should be non-toxic, recyclable, produced locally or purchased from local suppliers, and use more enduring materials (Al Hattali & Husin, 2021), as show in fig(2.4).

Mohammed (2010) stressed that a variety of design elements, such as wall colors, window surfaces, interior common areas, courtyards, etc., contribute to the aesthetics of the school environment, which in turn creates a comfortable environment for students and enhances their education (Mohammed, 2010).

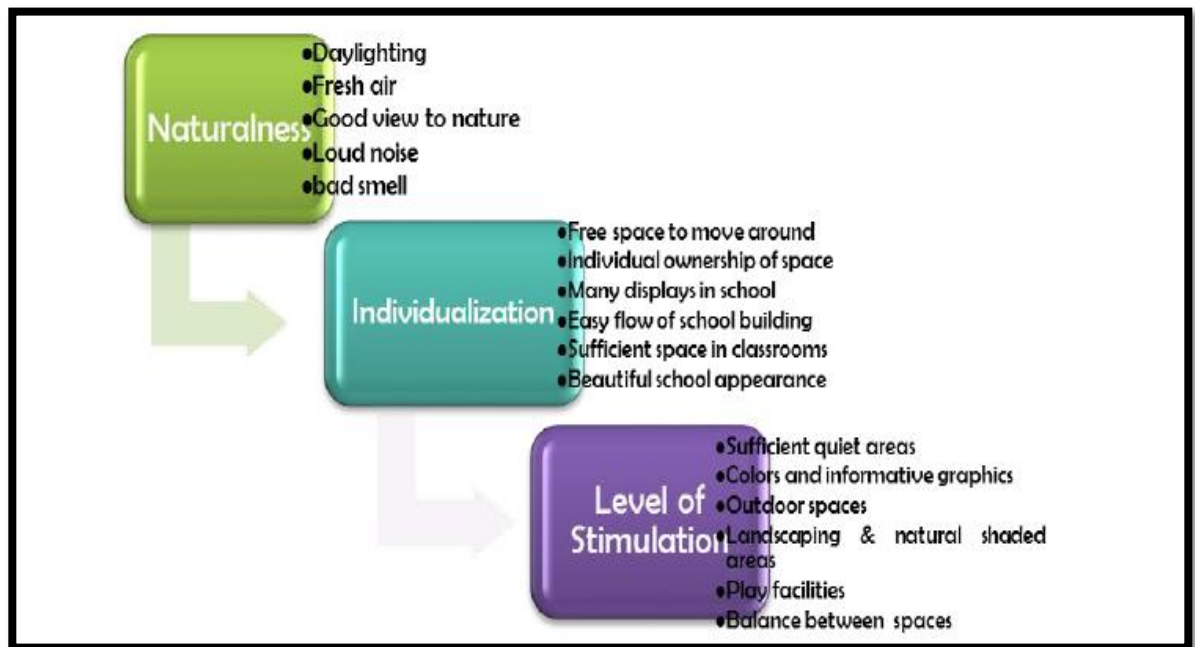


Fig 2.4. Principles to be considered in the design of school buildings
source: Okafor et al., 2016)

2.1.2. Space Requirement of School Buildings:

Spaces in a school building relate to the usable area needed for academic and extracurricular activities to function well. There are fundamentally three types of spaces that must exist in school buildings: teaching spaces, recreational spaces, and facilities. Spaces used for formal education and training are called instructional spaces. There are classrooms, a library, a lab, a school farm, a beautifully planted outdoor area. Facilities are areas that ensure a workshop, etc. Recreational spaces include areas that permit play, exercise, relaxation, extracurricular activities, etc. Among them are a meeting hall and kids are comfortable while attending school; these include restrooms, etc. (Okafor et al., 2016).

The ideal school design includes "a pyramid or circular shape" and "many close units" with the least amount of partitions, and is placed "in a calm place that is far away from crowded places, a short distance between home and school, and having green grounds. Food and nutrition are essential

components of the educational environment and are required for feeling at ease and fulfilled there (Alnajdawi, 2019).

2.12. Academic Competency and Satisfaction:

Regarded as an "important positive indicator" of a person's subjective well-being and satisfaction. Happiness has traditionally been seen as the most fundamental sign of a good life. Happiness is viewed as a subjective notion of wellbeing in the study of psychology. It is possible to conceptualize satisfaction as an assessment of an individual's general level of life satisfaction (Turan, 2021).

Emphasize that a key component of the "classroom as a learning environment" is the academic proficiency of the pupils. Academic proficiency is a measure of a student's estimate of their potential in a classroom setting. Whether or not the classroom atmosphere suits students' tastes may have an impact on how happy they are. Researchers have shown a connection between contentment and children' mental health in the classroom, academic progress, and avoiding school failure (Cengel, Özelçi & Totan, 2021).

2.13. Student-Teacher Relationships:

In order for students to feel connected to and "stick" with school, relationships with others are key components of school engagement procedures (Contreras et al., 2022).

Teachers can influence students in a variety of ways, including their communication style, expectations, and interpersonal interactions, and they can foster supportive environments in the classroom. The interaction between students and teachers is crucial in determining the caliber of students' classroom learning experiences. Respect, confidence, and honesty are all possible emotions in student-teacher relationships. Positive student-teacher interactions can help students learn more effectively, be more adaptable, persevere through challenges, and generally be more motivated (Cengel, Özelçi & Totan, 2021).

When teens observe a role model, like a teacher, smoking, they will emulate that behavior. Around the world, several schools have written smoking policies. Whether a school had a written policy seemed to have little bearing on whether students smoked in the restrooms or teachers smoked outside on school grounds. Where there was a complete restriction on teacher smoking, teachers were more likely to smoke outside of the school than in the staff rooms. If teachers have sufficient understanding of all topics relevant to these problems, they can expand students' inadequate knowledge of smoking-associated medical issues. Concerted efforts have been made to control smoking since the 1980s, including educational initiatives on the risks associated with smoking. Such school-based initiatives are particularly successful in raising students' awareness, attitudes, and subsequent abstinence from tobacco use (Alnasir, 2004).

In recent years, it has been demonstrated that relationships between students and teachers are just as essential for secondary school students' engagement and that these relationships are even more strongly linked to secondary school students' engagement than they are to primary school students' engagement. However, while evaluating correlations between relationships and student-teacher relationship quality, it is vital to take into account the significant disparities between primary and secondary schools (Roorda, Jorgensen & Koomen, 2019).

Low teacher support and insufficient expectations among pupils in a school environment, for instance, seem to be connected to smoking initiation. Because exposure to instructors and other students smoking at school is linked to adolescent smoking habits (Poulsen et al., 2002).

2.14. Student-Student(s) Relationships:

An essential aspect of examining the classroom environment is how the students interact with one another. Mostly teacher-focused, student-student

contact is an important component of a helpful classroom environment (Cengel, Özelçi & Totan, 2021).

Relationships between students can differ from those between students and teachers in nature. Students are more likely to feel comfortable and think they are being taken seriously if they have better relationships with their classmates. As a result, they will be more eager to engage and express their thoughts (Wanders et al., 2020).

Little research has been performed on the influence of peers on student smoking. Many students who began smoking were genuinely inspired by their friends' smoking habits (Resen, 2018).

Peer pressure is a major contributor to teen smoking, according to previous research. Teenagers are particularly susceptible to social pressure because they want to fit in with their classmates. Numerous studies indicate that some smokers believe smoking raises their social behaviors, but previous research has not tested a crucial consequence that suggests the propensity to smoke may rise with peer acceptance of smokers. Peer influence has been observed to rise with individuals' social behaviors (Robalino & Macy, 2018).

2.15. School Library:

A variety of information handling and utilization skills that result in the creation of in-depth knowledge and understanding can be developed in the school library. This idea of the school library as a knowledge commons concept placed the focus on the library as an intellectual agency for fostering in-depth knowledge and comprehension, as opposed to that of information gathering (Montiel-Overall, 2010).

Many schools have a library with a reading room. The reading room is often made to hold 10 to 15 pupils, and the room where the library is located is situated on the periphery (Pozdnyakova et al., 2017).

The school library serves as a resource and encourages a love of reading. One of the roles of the school library is to teach students media and

information literacy skills, including how to identify, select, organize, and evaluate information. It also offers a quiet environment for research and encourages independent study. They can also be a place of belonging and refuge, and they supplement and support classroom instruction (Gbotosho & Adejumo, 2019; Montiel-Overall, 2010).

2.16. The Schoolyard:

However, during the past ten years, levels of sedentary behavior (SB), such as watching other children's activities and playing video games on smartphones, have increased while children's levels of PA have decreased (Van Kann et al., 2016).

The outdoor built environment has the potential to influence children's behavior in positive ways if it is properly planned. It has been demonstrated that measures to increase schoolyard safety also increase the use of those spaces. In fact, communities with supportive traits have been found to have 100% greater rates of adequate physical activity than those without any such features (Anthamatten et al., 2011).

By providing a supportive physical and social environment, such as supportive environments for active school transportation, sufficient physical education lessons, and PA during recess, the school environment can contribute to daily moderate-to-vigorous physical activity (MVPA) and decrease SB. It is best to think of SB as an independent behavior with separate antecedents from (and distinct from) PA. For a healthy lifestyle in later life, it is crucial to build a good PA pattern in childhood. Sedentary behaviors seem to persist throughout maturity even longer than PA behaviors, highlighting the significance of promoting both enough PA and constrained SB in kids (Van Kann et al., 2016).

2.17. Exposure to Environment Health Risk Factors in Schools

In this setting, exposures at schools—where kids spend a large percentage of their time—are crucial. Exposures to chemical and biological

agents can be significantly higher in schools than in houses due to the high population density. Environmental exposures at school have the potential to harm students' health, learning, and academic performance, in addition to resulting in diseases and unpleasant health symptoms (Hänninen & Haverinen-Shaugnessy, 2015).

2.17.1. Sanitation and Hygiene in Schools:

Inadequate drinking water, sanitation, and hygiene (WASH) are the primary causes of many diseases (WHO, 2019). In order to promote good hygiene practices, such as drinking water from an improved source, using usable better facilities, and washing hands with facilities that provide access to water and soap (WHO, 2019; Anthonj et al., 2021).

Results of recent or continuing surveys conducted using a standardized methodology created by WHO and UNICEF (United Nations Children's Fund) revealed major issues, especially in nations with little resources (Hänninen & Haverinen-Shaugnessy, 2015).

2.17.2 Classroom Environment:

The socioeconomic, psychological, and environmental elements that affect student achievement Students' academic success is impacted by both internal and external classroom influences. Class size, test scores, learning environments, homework, the setting of the class, the difficulty of the course material, the role of the teacher in the class, the technology used in the class, and exam systems are all internal classroom aspects. Extracurricular activities, family issues, financial difficulties, employment and other issues, social behaviors, and other issues are examples of external classroom variables (Kharma et al., 2020).

2.17.3. Exposure to Chemical Indoor Air Pollutants, and Dampness/ Mould in Schools:

Since children spend a substantial portion of their day at school, the school or classroom environment has a significant impact on mold exposure.

Mold spores are present both inside and outside of buildings. They contribute significantly to nature by converting organic waste back into beneficial nutrients. As allergens, irritants, agents, or producers of poisons, mold spores are also to blame for a range of illnesses (Baxi et al., 2013).

2.17.4. Classroom Air Quality (CAQ)

An important element for creating a secure, cozy, and healthy indoor atmosphere is the school's ventilation system. Previous studies in educational settings have shown that classroom air quality (CAQ) is frequently insufficient and inadequate, increasing the risk of respiratory infections and other health-related symptoms. The sources of both indoor and outdoor pollution, their dilution, and their removal via ventilation all affect the CAQ. Air quality will also be impacted by the type of ventilation system and air dispersion in the classroom. It has been demonstrated that exposure to high CO₂ levels has a detrimental effect on students' capacity to learn (Sadrizadeh et al., 2022; Griffiths & Eftekhari, 2008).

2.17.5. Smoking in Schools:

Schools play a special role and are seen as the best settings for addressing student smoking habits. The majority of smoking behavior is recognized and established at or before the age of 18, according to well-known statements. As a result, efforts to prevent smoking have primarily been directed at adolescents in school settings. For the creation of policy in tobacco control programs, it would be useful to have a better understanding of the key elements that influence students' smoking behaviors in settings other than schools. Schools serve as an important environment where prevention and control measures can be utilized (El Amin, 2019).

2.18. Association Between School Environment And Smoking Behavior Among Secondary School Students.

A teenager spends around ten years of his life in school, where he not only learns but also grows socially by interacting with others. Communication

skills should be introduced in schools since socialization is necessary in today's information age. The area where every school stream will converge on a daily basis serves as a gathering place for classmates as well as peers, eventually assisting the child in realizing that he is an important member of a huge community (Pozdnyakova et al., 2017).

Teenagers frequently engage in several health-risk activities despite the possibility of health promotion in educational settings. The use of tobacco is one of these habits that is of special concern (Darling & Reeder, 2003).

Due to their distinct bio-psycho-social traits, teenagers are particularly susceptible to health-related behaviors, with tobacco experimentation being a common activity with potentially serious effects, especially among adolescents in developing countries. Any degree of tobacco use during adolescence can raise serious concerns, and various factors influence this worry (Hussain & Abdul Satar, 2013; Al-Murshedi & Baiee, 2018).

Teacher smoking, the smoke-free policy, student compliance, school staff concern for students' smoking behavior, and school instruction are all aspects of the school environment that influence student smoking behavior. Teachers can influence students' views about smoking. Students are more likely to smoke if teachers smoke and if other important people approve of their use because they will believe that smoking is normal, common, or acceptable behavior. Teenagers who have observed others smoking are more likely to believe that smoking is a habit that is acceptable in society. The significance of teachers as role models has been mentioned in some research. Because students often imitate their influential role models, teachers who smoke are more likely to start smoking (Roohafza et al., 2014)

Smoking has negative impacts on individuals, families, communities, society, and the country as a whole. These effects include financial loss, loss of a loved one due to a smoking-related illness, loss of work for the

development of the nation, personal suffering from illness, and reduced quality of life (Chirasatienpon et al., 2021).

Health disparities frequently develop early in life, during childhood and adolescence, and persist throughout one's lifetime. In order to reduce health disparities, early childhood investment is crucial. A complementary strategy is to alter the school environment to enhance health, guided by the idea of the "school effect." (Bonell et al., 2013).

Promoting healthy behavior modification in the classroom is an excellent way to improve population health. Because people spend most of their youth in the classroom, schools are a natural choice as settings to situate interventions that establish healthy habits early in life for the prevention of disease across the life course. Elementary, middle, and high schools as well as preschools and afterschool programs have the potential for tremendous reach. Schools can promote healthy behaviors and deliver services to a broad population in a way that other settings cannot. Children spend roughly 1,260 hours (180 days, 7 hours per day) at school each year, while they will likely only spend about a half-hour with a primary care provider during a yearly physical exam (Leem et al., 2017).

2.19. Smoker's Mindset Towards Smoking:

A person with a fixed mindset views a characteristic like intelligence or addiction as a constant, deeply ingrained personality trait that is essentially unchangeable. The success of a behavioral change can be influenced by one's perspective about a human quality, regardless of whether it is fixed or malleable, according to psychological study. Different expectations regarding whether the effort would result in a successful behavior change have also been linked to mindset. Positive effort expectations, which are more common in people with a growth mentality, are thought to contribute to better achievement (Limalima et al., 2022).

The hookah, often referred to as shisha, hubble-bubble, kalia, narghile, and waterpipe, is a common smoking tool in the Middle East. There are regional variations in the hookah's size, shape, and tobacco consumption. Male gender, recent cigarette smoking, past-year alcohol use, current or past-year hookah or cigarette use among friends, current or past-year alcohol use among friends, and current or past-year use of illegal substances among friends were all associated with hookah smoking. Students' perceptions of the negative effects of smoking and their actual smoking behaviors are positively correlated (Abbasi-Ghahramanloo et al., 2016; Ayar et al., 2019).

2.20. Social Influences:

Adolescents are particularly vulnerable to social pressures. Adolescents are more likely to attempt tobacco use if they perceive it as a normal practice since their peers or family members smoke. Teenagers place a high priority on their friendships and strive to blend in. What they do can be significantly influenced by what their peers and, in particular, the leaders of their social groups do. Adolescents are far more likely to start smoking if their friends do (United States, 2012).

There is literature on the social influences (such as parents, siblings, and friends) of studies that are centered on tobacco usage. These studies have often shown that there are strong correlations between the target adolescent's usage and the use of social agents (such as friends). It's interesting to note that this study also suggested that the target adolescent and his or her older sibling shared friendship circles and that these shared peer networks interacted with sibling alcohol use to predict higher target adolescent alcohol use (Windle et al., 2017).

Social influence refers to the mechanisms by which individuals affect others' beliefs, feelings, and behaviors directly or indirectly. It is well recognized that social variables affect cigarette smoking. Particularly, social media platforms are crucial channels through which people interact with

health-related information and the attitudes and behaviors of their communities. In fact, a significant portion of media influence is actually mediated by other individuals, which justifies its inclusion in the category of social influence (Amin Dunn & Laranjo, 2020).

2.21. Physical Influences:

People who had never smoked had considerably higher health-related quality of life (HRQoL) compared to current smokers, according to prior studies. Most studies found a larger correlation between smoking and the mental health aspect of HRQoL compared to the physical health aspect, and this population is generally regarded as healthy (Milic et al., 2020).

Nicotine is just as addictive as heroin and cocaine. Because they are sensitive to nicotine, teens can become dependent on tobacco sooner than adults. There is also evidence that genetics might make it more difficult for some adolescent people to quit smoking once they have started (United States, 2012).

2.22. Smoke-Free Legislation:

Another aspect of the school environment is the smoke-free environment, where smoking is not permitted anywhere on school property. Students would regard smoking as normal if there were no no-smoking policies in place, which would encourage them to start the habit (Roohafza et al., 2014).

Because virtually all adults who start smoking regularly do so by the age of 18 (88%), and nearly all start smoking regularly by the age of 26, prevention efforts must concentrate on both adolescents and young adults (US Department of Health and Human Services, 2012).

Smoke-free spaces have the potential to enhance community health, according to a recent study. Additionally, smoke-free settings may lessen exposure to both secondhand smoke and teen smoking. Therefore, enforcing

smoking restrictions appears promising to lessen and prevent teen tobacco usage (Rozema et al., 2016).

School factors can have both positive and negative effects on teenagers who smoke, but the causes of teenage tobacco consumption are complex and not restricted to schools alone (Darling & Reeder, 2003).

Since teachers have responsibilities for polishing, preparing, and instructing children to be informed, capable, and possess the positive qualities needed by society, schools are an extremely crucial setting to stop young people from starting to smoke (Chirasatienpon et al., 2021).

The behaviors of smoking policies at schools and how they are thought to affect smoking habits vary widely. While school staff smoking policies typically aim to protect non-smoking personnel from exposure to environmental tobacco smoke at work, the goal of student smoking rules is to prevent or limit the onset of smoking in young people. The goal of staff smoking regulations may also be to prevent students from emulating smoking habits. The inconsistency that results from staff and student regulations, however, could potentially harm efforts to promote health and reduce adolescent smoking (Griesbach, Inchley & Currie, 2002).

By encouraging prevention, limitation, and quitting, as well as by forbidding students from using tobacco on school grounds and safeguarding non-smokers, anti-smoking policies can lower the prevalence of smoking (El Amin, 2019).

2.23. Multifactorial Etiology of Adolescent Nicotine Addiction

2.23.1 Parental and Peer Influence:

Genetics, physical and mental health, lifestyle choices, and socioeconomic behaviors are all ways that parents can have an impact on their children's health. The onset of smoking, regular smoking, and nicotine addiction in children is directly influenced by parental smoking and nicotine dependency (Mahajan, Homish & Quisenberry, 2021).

Numerous studies have shown a link between peer smoking and personal smoking, showing that having friends who smoke increases the likelihood of becoming a smoker. The exact impact of peer influence and peer selection mechanisms on smoking behavior throughout adolescence, as well as how these impacts alter and develop over time and in relation to adolescent age, are becoming increasingly crucial to pinpoint (Vitória et al., 2020).

Male gender, recent cigarette smoking, past-year alcohol use, current or past-year hookah or cigarette use among friends, current or past-year alcohol use among friends, and current or past-year use of illegal substances among friends were all associated with hookah smoking (Abbasi-Ghahramanloo et al., 2016).

2.23.2. Genetic Influence on Nicotine Dependence:

Variations in specific genes have been linked to nicotine dependency, and genetic predisposition gives vulnerability to nicotine dependence. There is strong evidence that genetic factors play a key role in nicotine dependency. Early adulthood and adolescence's bad health are greatly impacted by nicotine habit, depression, and parental socioeconomic issues. Individual genetic differences in initial sensitivity to nicotine may constitute a crucial factor in adolescent vulnerability to nicotine dependency, even if adolescent behavioral and psychological traits may be connected with the beginning and continuing use of cigarettes (Mahajan, Homish & Quisenberry, 2021).

Adolescence is characterized by both the maturing of the brain as well as experimentation, misuse, and usage. Nicotine, a poisonous and psychoactive drug, may be to blame for these long-term effects of nicotine use and addiction during this time of brain development by altering the course of brain development. The beginning of substance use during this crucial developmental period is a vital component in the progression to addiction. One of the substances that teenagers abuse the most frequently is nicotine (Lisa & Thomas, 2022).

2.22 The Role of School Administration and School Personnel:

An important aspect of a school's success is its administration. The head teacher should be in a position to check that all elements in the school that support the teaching-learning process are in place in order to maintain high standards, serve as role models for them, incorporate tobacco control policies into school curricula, and teach about tobacco use prevention, teachers and administrators serve as a target group for tobacco control initiatives. In fact, interacting with teachers and peers at school may serve as protective factors against risky behaviors in young people. The majority of school staff members concur that instructors' smoking habits have a significant impact on pupils' tobacco use. Teenagers who smoke would be more likely to think about stopping if parents or other major adults supported them in doing so and if school officials strictly implemented anti-smoking policies (Mege, 2014; Chen, Huangn & Chao, 2011).

2.23 Quitting

One of the most important yet difficult measures a person can take to enhance their health is giving up smoking, and most smokers make multiple failed attempts before finally giving it up. Quitting smoking improves one's overall quality of life and offers both short- and long-term health benefits (Limalima et al., 2022).

Smokers employ a variety of techniques to successfully stop smoking because it is a challenging and complex process. It is incredibly difficult to determine with accuracy how many efforts the average smoker must make to successfully quit. Smokers who had one or more recent failed quit attempts were less likely to succeed at quitting; therefore, it may be possible to increase the estimate of the number of attempts prior to quitting successfully (Chaiton et al., 2016).

People who want to stop smoking can do it with both material and social support. If smoking is a coping mechanism for stress or a mental illness,

these problems persist during the quitting attempt and make it harder to stop smoking. This may help explain why there is a social gradient in smoking cessation because stress and psychiatric illnesses are more prevalent in lower socioeconomic groups (Östergren, 2021).

In the Middle East, religion has a significant impact since it permeates every aspect of daily life. Religion plays a significant role in how tobacco use is addressed. In Islamic culture, religious education has a significant impact on society from both a moral and legal perspective. Understanding Muslim beliefs is crucial for comprehending how religions react to smoking behavior as well as determining the most effective ways to support smoking cessation (Alturki, Hamza & Walton, 2020).

There was a clear negative correlation between nicotine dependence and wanting to stop. A higher level of involvement in the process of stimulus impact and social emancipation, as well as a smaller commitment to personality and resisting programming, were all associated with high nicotine dependency scores (Kleinjan et al., 2008 a; Kleinjan et al., 2008 b)

Amount of Smoking, in order to lessen the addictiveness of cigarettes, prevent new smokers from becoming addicted, and make it easier for current smokers to stop, a broadly regulated reduction of the nicotine content of cigarettes has been advocated (Benowitz et al., 2015).

Current and past smokers had tried to quit smoking at least once before, and 55.1 % had used smoking cessation aids such as sweets, nicotine-free tobacco, and nicotine gum. More than two forms of smoking cessation assistance were used by 25.9% of those who used them. 71.4% of current, as well as former smokers, had tried to quit smoking at least once before. Barriers had a substantial impact on the Pros of smoking (Hamad, 2020; Macnee & McCabe, 2004).

2.24 Pervious Study

First Study :

Qasem, Nasir & Al-Tawil 2022 in Erbil City have studied “Prevalence and Perceived Contributing Factors of Physical Fighting, Cigarette Smoking, and Alcohol Use among Adolescents in Erbil City”.

The study, which included both male and female teenage pupils aged 14 to 19, was cross-sectional in nature. The sample size was 1000 pupils drawn at random from high schools, and it was collected using a multistage cluster sampling technique between the dates of November 4, 2020, and March 10, 2021.

According to the study's findings, the age group of 18 to 19 had the highest prevalence of smoking (17.5%). Relationships with friends are a vital reason for cigarette smoking (39.6%).

Second Study:

Al-Delaimy and Al-Ani (2021) have studied the "Prevalence of hookah smoking and associated factors among male high school students in Iraq". A cross-sectional survey was used as the study's design in three high schools in the Al-Kharkh district, west of Baghdad. 847 male high school students, aged 15 to 18, from a convenience (non-probability) sample were employed in the study. The high schools were chosen at random from a list of schools to include in each over the study's time frame, which was from October 2017 to January 2019. There are 28 high schools they chose. 847 male high school students participated in the survey, and 96.5% of them responded.

The study's findings revealed that, among male high school students, less than half (46.1%) smoked hookah in the previous 30 days, compared to the majority (85.7%) in the previous six months. With an odds ratio of 0.18 (95%, being around friends who smoke hookah was also discovered to be strongly linked with hookah use.

Third Study:

Al-Ani, Amer Abbas, and Naji (2020) have studied "The prevalence of smoking among secondary school students in Baghdad and the application of the Fagerstrom score for nicotine addiction". For the duration of six months of instruction, a descriptive cross-sectional study was conducted on 24 secondary schools (boys and girls) in Baghdad utilizing a random sample (multi-stage sampling). Using Epi-Info 6, a sample size of 2640 students from both sexes was chosen, with the worst-case scenario of non-response being 10% and the predicted frequency being 20%, result of non-response 10% and expected frequency 20% to involve 2640 students from both sexes.

The results revealed a 16.1% prevalence of smoking (22.6% in boys and 9.1% in girls) among vulnerable populations. For boys (54%), their first cigarette was given to them by a friend; for girls (57%), it was from family or close friends.

Fourth Study:

Rachmat et al., in (2020) have studied "Smoking Characteristics on Junior High School Students: A Cross-Sectional Study". 1062 Indonesian junior high school students in grades 7 and 8 made up the sample population. Utilizing structured questionnaires, data were gathered. According to the report, 26.7% of people smoke.

Fifth study:

Albangy, Mohamed & Hammad in 2019 have studied "Prevalence of smoking among male secondary school students in Arar City, Saudi Arabia". In the city of Arar, a cross-sectional study was done. From a pool of 21 secondary schools, four were picked at random. The pre-designed survey received responses from 240 students in total. The results indicate that two-fifths (40.8%) of male secondary school students currently smoke. The most prevalent type was smoking cigarettes (67.3%), which was followed by shisha smoking (22.4%).

Sixth study:

Mahmood et al., 2019 have studied "Substance use among high school students in Erbil City, Iraq: prevalence and potential contributing factors". The study's layout A cross-sectional study with a sample size of 3000 students aged 14 to 19 was carried out utilizing a multistage cluster sampling technique.

The study's findings indicated that the prevalence of smoking among students over their lifetime, the last 12 months, and the last 30 days was 27.6%, 16.3%, and 13.0%, respectively (the most common types of substance use among students in Erbil City are cigarettes and waterpipes).

Seventh study:

Al-Murshedi & Baiee 2018 have studied "Smoking and its correlates among secondary school students in Al-Hilla City 2018". Male and female secondary school students in the fourth, fifth, and sixth grades who were randomly chosen from 15 secondary schools in Al-Hilla City, Babylon Province, Iraq, between March 7 and April 30, 2018, were the subjects of a descriptive cross-sectional epidemiological study.

As a result, smoking was 32.0% prevalent, and men made up the majority of smokers. Two-thirds of the participants in this study looked to be hookah smokers (with the remaining one-third mixing hookah and cigarettes), and there have been theories on what motivated the students to start smoking as well as who their initial tobacco sources were.

Eighth study:

Shadid & Hossain in 2015 have studied "Smoking behavior, knowledge and perceived susceptibility to lung cancer among secondary-school students in Amman, Jordan". In order to choose the schools and find the eligible participants (n = 648), stratified random sampling was utilized. Out of the 155 secondary schools for students ages 16 to 18 in Amman, Jordan, a total of 24 schools were chosen at random. The findings indicate that among Jordanian

school students aged 16 to 18, there was a significant frequency of present smoking (27.6%) as well as prior smoking (43.6).

Chapter Three

Methods

Chapter Three

Methods

This chapter will cover current study's methods and design. Administrative arrangements, ethical considerations, the study's context, its sample and sampling, its constraints, data collection methods, the instrument's reliability and validity, the pilot study, and the data analysis are also discussed.

3.1. Design of the Study:

Non experimental design- a descriptive correlational study used evaluation approach . This study was conducted among secondary school students from 27th September, 2022 to 9th July, 2023, to determine the relationship between the school environment and smoking behaviors among secondary schools students.

3.2. Administrative Arrangements:

Before gathering study's data, the following formal permissions were requested from the appropriate authorities:

1. Research protocol and official approval to carry out the study obtained from University of Kerbala/College of Nursing, as show in (**Appendix A-1**).
2. The College of Nursing's Ethics Committee assessed the study's title, design, and questionnaire (which included questions about smoking behaviors and the school environment) before agreeing to proceed with the study as show in (**Appendix B**).
3. The licenses were obtained from the Holly Kerbala Province's Directorate General of Education, as shown in (**Appendix A-2**).
4. Additionally, the student's agreement to engage in the study after being informed of its goals and value and having been assured that any information submitted will be kept private, research purposes, and used only for scientific (autonomy and privacy).

3.3. Ethical Considerations:

One of more crucial things the researcher must adhere to and follow when doing the study is their ethical commitments.

The study discussed with representatives from the secondary schools about the study after it was acquired consent from the College of Nursing, University of Kerbala, as shown in (Appendix B). In order to guarantee that the participants understanding that participation is optional and that they can opt out at any moment, and the overall aim of the study as well as how to complete the survey were conveyed to them. Participants were given the reassurance by the study that their data will be kept private and secure during the study. The study gave study participants additional assurances that their identities would be kept secret in the presentation, reporting, and/or any potential study publications.

3.4. Setting of the Study:

Three females schools and ten males schools in Kerbela city involved in the study, which included:

1. Secondary School Ammar Ibn Yasser for males.
2. Secondary Al-Shahid Jun for males.
3. Secondary Babylon for males.
4. Secondary Meteorites for females.
5. Secondary Al-Hussein Revolution School for males.
6. Secondary for the martyr Abu Maali for males.
7. Secondary Taha for males.
8. Secondary Al-Manar for females.
9. Secondary Aldharaa for the distinguished for males.
10. Secondary Othman bin Said for males.
11. Secondary Al-Rawdatainfor females.
12. Secondary Alaiqtidar for males.
13. Secondary Albalagh for males.

3.5. Sample and Sampling:

It involved a probability (systematic) sample of 372 secondary schools students, 90 females and 282 males (who volunteered to participate in the study). Six classes in these schools made up the study's subject population.

Multiple-stage systematic cluster random sampling was used to choose the students. Districts of schools are included in clusters. Then, using a random numbers table, schools were chosen at random from each cluster, and finally, students were chosen from among the schools that had been chosen.

So, 413 would be the suggested number of samples, there were 41 samples that were removed from the study because they did not adhere to the necessary criteria, resulting in a final sample size of 372.

3.6. Limitations of the Study:

This study has some limitations. Due to the cross-sectional design of the study, causal inference of our results cannot be identified. Furthermore, findings of the study are relied on self-report data and it was assumed that the students were honest in answering the questions. For future studies, longitudinal studies are required to determine and monitor the incidence rate of hookah use and its correlates among secondary schools students.

3.7. Methods of Data Collection:

From 2^{ed} to 30th January, 2023, data collection took place in the City of Kerbala at secondary schools.

The questionnaire contained the following questions:

3.7.1. Except for 372 students who completed a data form through interview using the Arabic version of the questionnaire, all students submitted self-report data forms.

3.7.2. All participants in the study take between 20 and 30 minutes to full the questionnaire.

3.7.3. There were 32 items about the school environment and 13 questions about smoking behaviors in the student questionnaires.

3.8. Study Instrument:

3.8.1. Questionnaire of the Study:

The investigators adopted the questionnaire that goals to explain the study's goals and significance by getting answers of study questions. The questionnaire is considered one of the means to help in collecting data that contribute to achieving the expected results of the study.

It is organized into three sections, using the following scales to support the association between secondary school students' smoking behavior, their demographic features, and the school environment:

Section 1: This section covers the study instrument consists of subjects' sociodemographic characteristics of age, sex, class, living arrangement academic achievement, living arrangement, family's socioeconomic status was determined based on the Revised Kuppaswamy and B G Prasad socio-economic scales for 2016 (Shaikh & Pathak, 2017) which encompasses parents' level of education which consists of 10 level (10 points for each of the parents), household's occupation which consists of seven levels; the seventh level takes 10 points, and family's monthly income which includes six categories; the highest or sixth category takes 10 points. Thus, the overall scores would be 40. The score ranges between 34-40 is classified as upper class, the score ranges between 21-33 is classified as upper middle class, the score ranges between 15-20 is classified as lower middle class, the score ranges between 6-14 is classified as upper lower class, and the score of 5 or less is classified as lower class.

Section 2: There are 13 items in this section that are used to evaluate secondary school students' smoking behavior (Roohafza et al., 2014; Leatherdale & Manske, 2005).

Section 3: This segment, which consists of 32 items divided into three parts, is used to evaluate the schools environment (Tapia-Fonllem et al., 2020). That

are measured on a 3-point Likert scale of 1 for (*Never*), 2 for (*Sometimes*), and 3 for (*Always*), and measured on less than 60% = poor environment; 60-79% = accept environment; and more than 79% = good environment.

Part 1. Consists of 9 categories used to evaluate the physical school environment for students in secondary schools.

Part 2. There are 12 items in this section that are used to evaluate the psychological climate in secondary school.

Part 3. This component, which consists of 11 items, is used to evaluate the social climate of secondary school students.

3.8.2. Validity of the Questionnaire:

The questionnaire's validity must be ensured by checking that it has all the components required for analysis and that the words and language are clear enough to be understood by anyone using it.

The validity of the questionnaire was tested by presenting the instrument to (11) experts from related fields as shown in (**Appendix D**), (4) Faculty members from University of Kerbela/ Collage of Nursing, (3) Faculty members from University of Kerbela/ Collage of Medicine, (1) Faculty members from University of Wartith Al-Anbiya/ Collage of, (3) Faculty members from University of Babylon/ Collage of Nursing, in order to increase its validity, interviewees were asked for their thoughts and recommendations on each of the study questionnaire items in terms of how well they fit the context of the study population, how well they were organized with The dimensions of the variables that have been allocated, and the relevance of the text of the study.

3.9. Pilot Study:

The purpose of the pilot study was to evaluate the consistency validity, clarity, and effectiveness of the study tool. This confirmed the average amount of time needed to collect data for each subject, which can be estimated because of the method of interview procedures for data collection and potential identification challenges, the samples are 40 students.

The following goals were sought to be accomplished by the pilot study:

1. The adequate research equipment.
2. Determining whether an instrument is feasible
3. Identifying potential logistical problems brought on by the suggested methodology.
4. Calculate the length of time the researcher spent collecting the data.
5. To obtain stability.

In Holy Kerbala Province, a pilot study was carried out with forty secondary school students. Later, the pilot study sample was dropped from the study's initial sample. This study was conducted to ensure the consistency and reliability of the study instrument, its intelligibility and efficiency, which were certain, and the standard amount of necessary time to gather data for each subject, which could be calculated during the interview procedures, as well as to identify any possible difficulties.

Results of Pilot Study:

1. The survey is accurate.
2. Between 20 and 30 minutes were needed to complete the questionnaire.
3. The instrument items were clear, and the research phenomenon were understood.

3.10. Reliability of the Questionnaire:

The study instruments' dependability entails guaranteeing that the result will be nearly the same if it is frequently offered to all of the identical people at various times. This can be accomplished by contrasting the outcomes of earlier applications.

The students utilized the study tool to a randomly selected pilot sample of 40 from 2 schools for the pilot study and excluded from the study, after establishing the apparent validity of the tool.

They received the questionnaire without realizing that they were being used as a sample to test the tool's stability, and after about a week had passed,

the same exploratory sample received the questionnaires again; however, this time, the participants were later dropped from used the original sample for the final study. Using the example Alpha Cronbach's coefficient as provided below, calculate the reliability coefficient.

Table 3.1: Reliability of the Studied Questionnaire ($n=40$)

Scale (Reliability Coefficient)	Cronbach's Alpha Value	Standard Value	Evaluation
Smoking Behaviors Scale (13 items)	.711	0.70	acceptable
School Environment Scale (32 items)	.758		acceptable

The study results display the smoking behaviors(13 items) scale demonstrated acceptable internal consistency reliability ($r = 0.711$). While, the school environment(32 items) scale demonstrated acceptable internal consistency reliability ($r = 0.758$).

3.11. Statistical Analysis Approach:

Using the version of SPSS (25) and Microsoft Excel (2010) programs to statistically analyze the data obtained from the study sample with a purpose arrive at the results, and to obtain the final results of the research according to a series of statistical tests.

3.11.1. Descriptive approach:

When describing a dataset quantitatively with tables, descriptive statistics uses a variety of mathematical and statistical techniques. The goal of descriptive statistics is to display and describes the data that has to be processed, sorted, sum up, and categorized while also making It is easier for the recipient to identify them, and comprehend the information's substance. The descriptive statistics were obtained using means and standard deviations, while categorical variables were computed using frequencies and percentages.

The data were then evaluated using the Kolmogorov-Smirnov test to check for normality.

The analysis was carried out using:

A. "Frequencies and percent" statistical tables that are:

$$\text{Percentage \%} = \frac{\text{Frequency}}{\text{Sample Size}} \times 100$$

Statistical Mean "M".

C. The following formulas can be used to determine the average score:

$$M. \text{ pass } S = \frac{\sum r_i = 1 F_i \times S_i}{\text{pass} \sum r_i = 1 F_i} \times 100$$

D. Standard Deviation (SD).

$$SD = \sqrt{\frac{1}{n-1} \sum_{i=1}^n (X_i - \tilde{\chi})^2}$$

3.11.2. Inferential approach:

The standard of significance was established at p 0.05, and statistical analyses have been implemented using SPSS (IBM SPSS Statistics for Windows, Version 24.0, Armonk, NY, USA; IBM Corp.).

The correlations between the school environment dimensions and the students smoking behaviors was investigated using spearman-correlation. The association between the school environment and smoking behavior among secondary school students was investigated using an ANOVA. ANOVA to test for mean equality (looking for coincidence when the mean's parameter varies).

Table 3.2: Analysis of Variance (ANOVA)

Source of variance	Sum of squares	Degree of freedom	Mean of square	F-statistics
Between groups	$SSB = \sum \frac{(\sum X)^2}{n} - \frac{(\sum X)^2}{n}$	DFB=1	$\frac{SSB}{DFB}$	$\frac{MSB}{MSW}$
Within groups	$SSW = (\sum X)^2 - \frac{(\sum X)^2}{n}$	DF=N-K	$\frac{SSW}{DFW}$	
Total	$SST = (\sum X)^2 - \frac{(\sum X)^2}{n}$	DFT=N-1		

Where Dfb (degree of freedom for the between variance); Dfw (degree of freedom for the within-groups variance); f = anova coefficient; msb (mean sum of squares between the groups; SST = total sum of squares; p= total number of population; n = the total number of samples in a population; SSW = sum of squares within the groups; SSB = sum squares between groups; s = standard deviation of the samples; N = total number of observation.

Chapter Four

Results of the Study

Chapter Four

Results of the Study

Table 1. Socio-demographic characteristics of the students (N = 372)

Variants		F.	%
Age (Years)	13-15	140	37.6
	16-18	171	46.0
	19-21	61	16.4
Mean - Std. Deviation (16.37 ± 1.95)			
Sex	Male	282	75.8
	Female	90	24.2
Classes	First	12	3.2
	Second	60	16.1
	Third	117	31.5
	Fourth	40	10.8
	Fifth	61	16.4
	Sixth	82	22.0
Living arrangements	Live with parents	320	86.0
	Live with mother	27	7.3
	Live with father	15	4.0
	Live with relatives	10	2.7

Std. Deviation: Standard Deviation; F. : frequance; and % : percentage).

Table 1. (Followed)

Variants		F.	%
Father's level of education	Illiterate	32	8.6
	Read and write	37	9.9
	Elementary school	68	18.3
	Middle school	74	19.9
	High school	67	18.0
	Diploma	25	6.7
	Bachelor's degree	42	11.3
	High diploma	3	0.8
	Master's degree	11	3.0
	Doctoral degree	13	3.5
Mother's level of education	Illiterate	26	7.0
	Read and write	59	15.9
	Elementary school	87	23.4
	Middle school	76	20.4
	High school	72	19.4
	Diploma	20	5.4
	Bachelor's degree	18	4.8
	High diploma	1	.3
	Master's degree	5	1.3
	Doctoral degree	8	2.2

Table 1. (Followed)

Variants		F.	%
Family monthly income (Iraqi Dinar)	Less than 300.000	110	29.6
	300.000 - 600.000	91	24.5
	601.000 - 900.000	69	18.5
	901.000 - 1.200.000	41	11.0
	1.201.000 - 1.500.000	28	7.5
	$\geq 1.501.000$	33	8.9
Household's occupation	Unemployed	52	14.0
	Unskilled Worker	35	9.4
	Semi-Skilled Worker	16	4.3
	Skilled Worker	67	18.0
	Clerical, Shop Owner, Farmer	53	14.2
	Semi-Professional	41	11.0
	Professional	108	29.0
Family's Socioeconomic Behaviors	Lower level	6	1.6
	Upper lower level	155	41.7
	Lower middle level	109	29.3
	Upper middle level	92	24.7
	Upper level	10	2.7

The study results revealed that the age mean is 16.37 ± 1.95 ; less than a fifth age 16-18-years ($n = 171$; 46.0%), followed by those whose age 13-15-years ($n = 140$; 37.6%), and those whose age 19-21-years ($n = 61$; 16.4%).

Concerning the sex, most are males ($n = 282$; 75.8%) compared to females ($n = 90$; 24.2%).

With respect to the living arrangement, the majority reported that they have been living with their parents ($n = 320$; 86.0%), those who are live with their mother ($n = 27$; 7.3%), those who are live with their father ($n = 15$; 4.0%), and followed by those who are live their relatives ($n = 10$; 2.7%).

Regarding the classes, less than a third are third class ($n = 117$; 31.5%), followed by those who are sixth class ($n = 82$; 22.0%), those who are fifth graders ($n = 61$; 16.4%), those who are second class ($n = 60$; 16.1%),

Concerning the father's level of education, around fifth completed middle school ($n = 74$; 19.9%), followed by those who completed elementary school ($n = 68$; 18.3%), those who completed high school ($n = 67$; 18.0%), those who have a bachelor's degree ($n = 42$; 11.3%), those who read and write ($n = 37$; 9.9%), those who are illiterate ($n = 32$; 8.6%), those who have a diploma degree ($n = 25$; 6.7%), those who have a doctoral degree ($n = 13$; 3.5%), those who have a master's degree ($n = 11$; 3.0%), and followed by those who have high diploma degree ($n = 3$; 0.8%).

Regarding the mother's level of education, less than a quarter completed elementary school ($n = 87$; 23.4%), followed by those who completed middle school ($n = 76$; 20.4%), those who completed high school ($n = 72$; 19.4%), those who read and write ($n = 59$; 15.9%), those who have a diploma degree ($n = 20$; 5.4%), those who have a bachelor's degree ($n = 18$; 4.8%), those who have a doctoral degree ($n = 8$; 2.2%), those who have a master's degree ($n = 5$; 1.3%), those who are illiterate ($n = 26$; 0.7%), and one who have high diploma degree ($n = 1$; 0.3%).

With respect to the family's monthly income, more than a quarter mentioned that their family's monthly income was less than 300.000 Iraqi Dinar ($n = 110$; 29.6%), followed by those whose monthly income differ between 300.000 – 600.000 ($n = 91$; 24.5%), those whose monthly income differ between 601.000 – 900.000 ($n = 69$; 18.5%), those whose monthly income differ between 901.000 – 1.200.000 ($n = 41$; 11.0%), those whose monthly income was 1.501.000 or above ($n = 33$; 8.9%), and those whose monthly income was 1.201.000 – 1.500.000 ($n = 28$; 7.5%).

As per the household's occupation, less than a third are professionals ($n = 108$; 29.0%), followed by those who are skilled workers ($n = 67$; 18.0%),

those who are clerical, shop owners, farmers ($n = 53$; 14.2%), those who are unemployed ($n = 52$; 14.0%), those who are semi-professionals ($n = 41$; 11.0%), those who are unskilled workers ($n = 35$; 9.4%), and those who are semi-skilled workers ($n = 16$; 4.3%).

As per the family's socio-economic level, more than two-fifth are of upper lower level ($n = 155$; 41.7%), followed by those who are of lower middle level ($n = 109$; 29.3%), those who are of upper middle level ($n = 92$; 24.7%), those who are of upper level ($n = 10$; 2.7%), and those who are of lower level ($n = 6$; 1.6%).

Table 2. Students' smoking behaviors

Variants		F.	%
Smoking Behaviors	Never smoked	278	74.7
	Ex-smoker	27	7.3
	Intermittent smoker	22	5.9
	Daily smoker	45	12.1
If yes, what form of smoking do you use? (n = 94)	Cigarettes	30	31.9
	Hookah	34	36.2
	Both	30	31.9
Who are the individuals who influenced your opinion more than others toward smoking? (n = 94)	Family members	12	12.8
	Friends	56	59.6
	By myself	22	23.4
	Other	4	4.3
Source of smoking? (n = 94)	Pocket money	30	31.9
	Available in home	30	31.9
	From others	34	36.2

The study results display that most never smoked ($n = 278$; 74.7%), followed by those who are daily smokers ($n = 45$; 12.1%), those who are ex-smokers ($n = 27$; 7.3%), and those who are intermittent smokers ($n = 22$; 5.9%). For those who mentioned that they are smokers or ex-smokers, more than a third mentioned that they smoke hookah ($n = 34$; 36.2%), followed by

those who smoke cigarettes and each of cigarettes and hookah ($n = 30$; 31.9%) for each of them, in figure (4.1).

Concerning the source of smoking from pocket money are ($n = 30$; 31.9), available in home ($n = 30$; 31.9), and from others ($n = 34$; 36.2).

Regarding the individuals who influenced participants' opinion more than others toward smoking, most mentioned that they are the friends ($n = 56$; 59.6%), followed by themselves ($n = 22$; 23.4%), family members ($n = 12$; 12.8%), and others ($n = 4$; 4.3%).

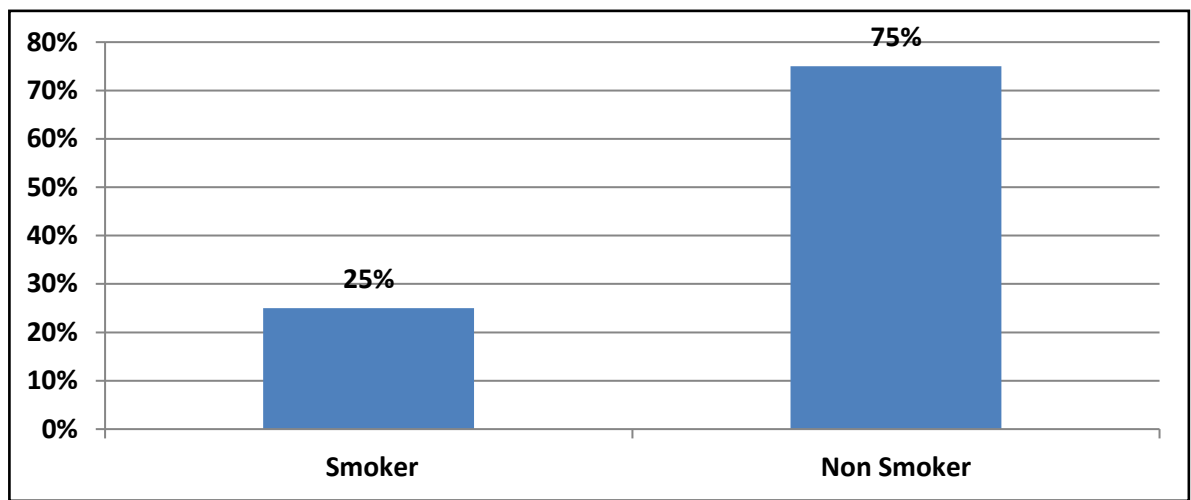


Figure 4. 1. Prevalence of Smoking Behavior Among Secondary School Students (N = 372).

The study results of this figure indicated that three quarters of the students non-smokers are (75%), and followed by those who are smokers (25%).

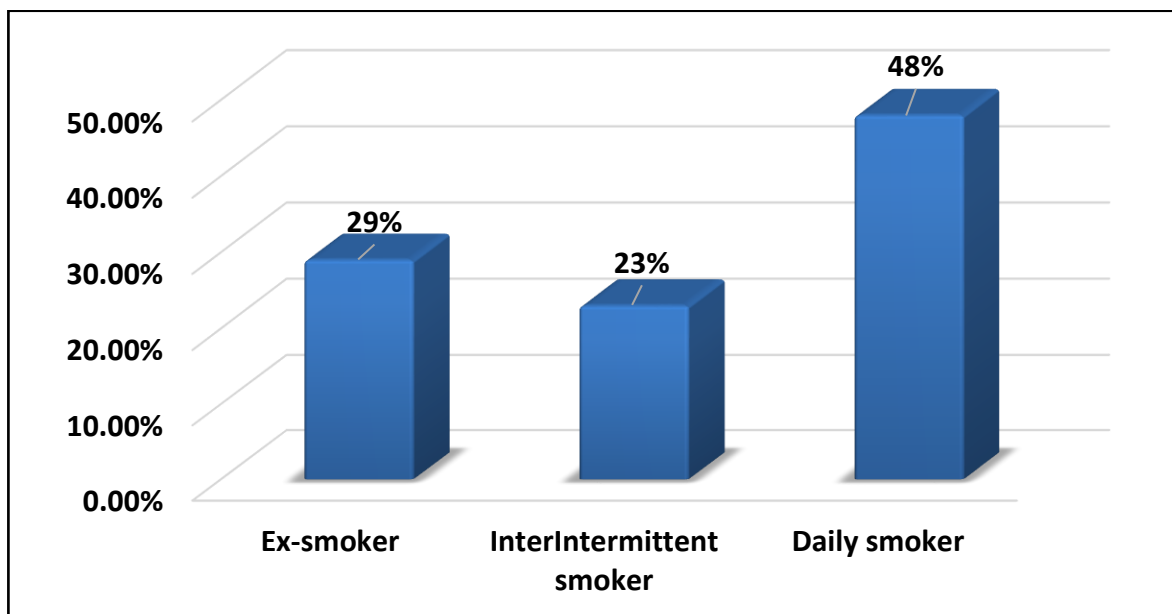


Figure 4-2: Percentage of Smoking Behaviors Among Smokers' Students (N = 94).

The study results of this figure indicated that less than half mentioned that they are daily Smokers' (48%), followed by ex-smoker(29%), and intermittent smoker (23%).

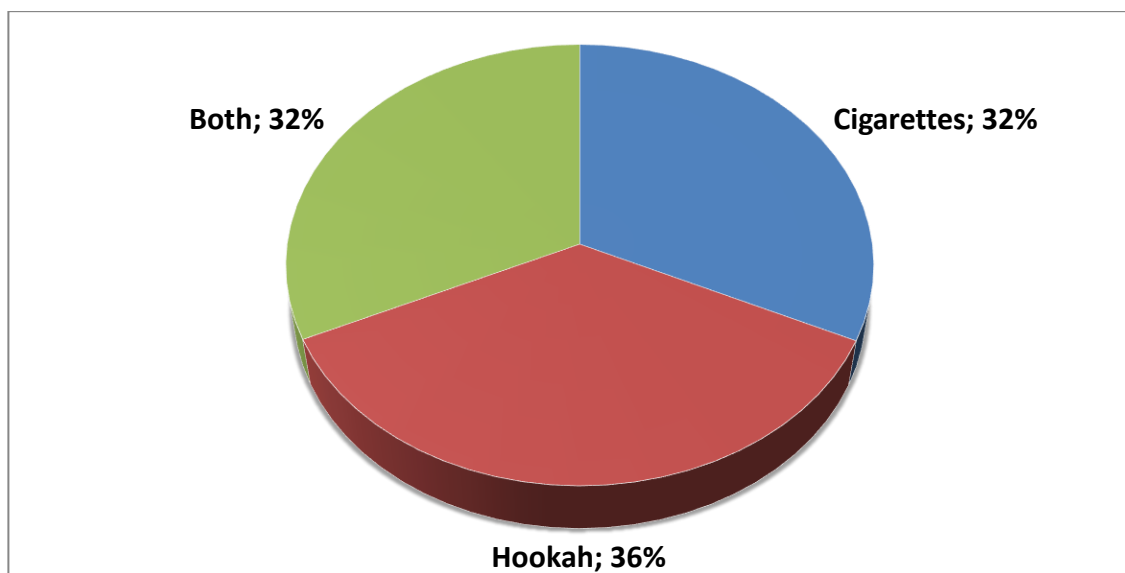


Figure 4-3: Percentage of Students Who Smoke, according to the Type of Smoking (N = 94).

The study results of this figure indicated that more than a third that they smoke hook (36%), followed by those who smoke cigarettes (32%), and each of cigarettes and hookah (32%) for each of them.

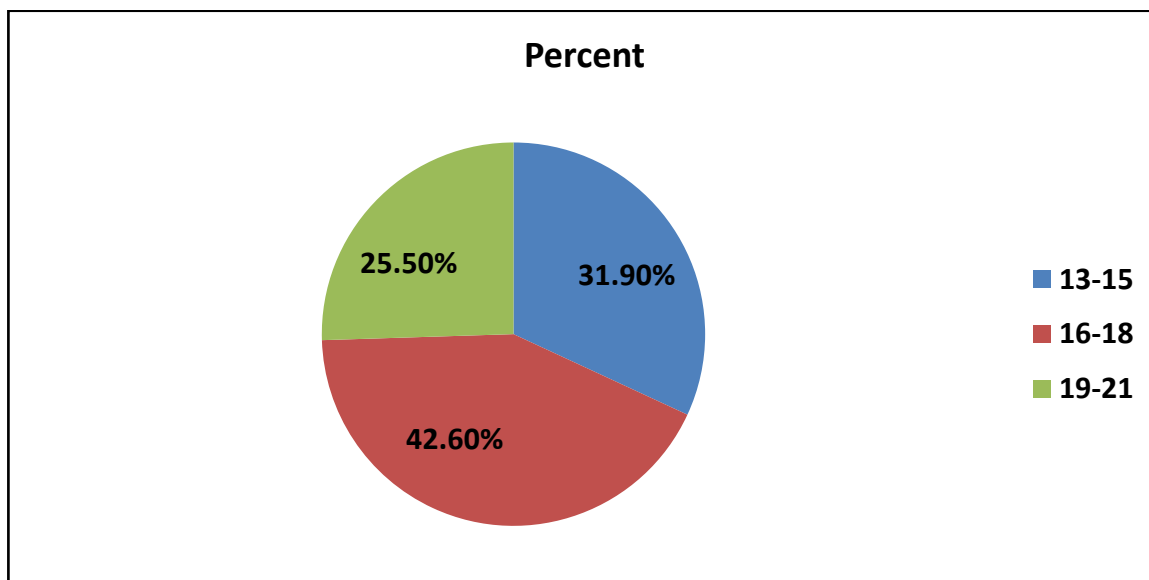


Figure 4.4. Percentage of Smokers' Students Due to Age Group (N = 94).

In this figure the findings indicate that the age of smokers, less than a half are 16–18 years (42.60%), followed by those who are 13–15 years (31.90%), and those who are 19–21 years (25.50%).

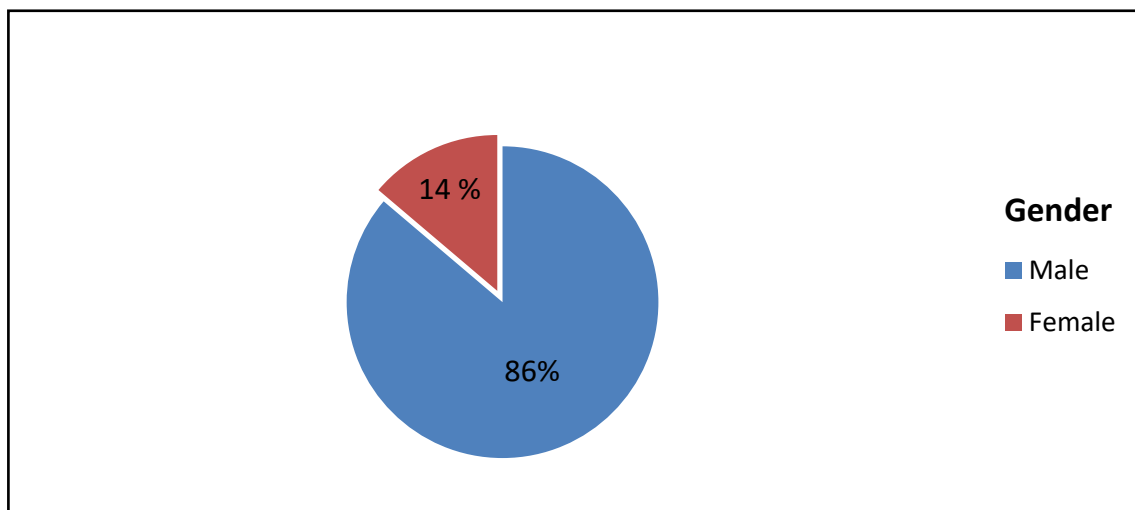


Figure 4.5. Percentage of Smokers' Students Due to Sex (N = 94).

The study results of this figure indicated that the gender of smokers, majority are males (86%) compared to females (14%).

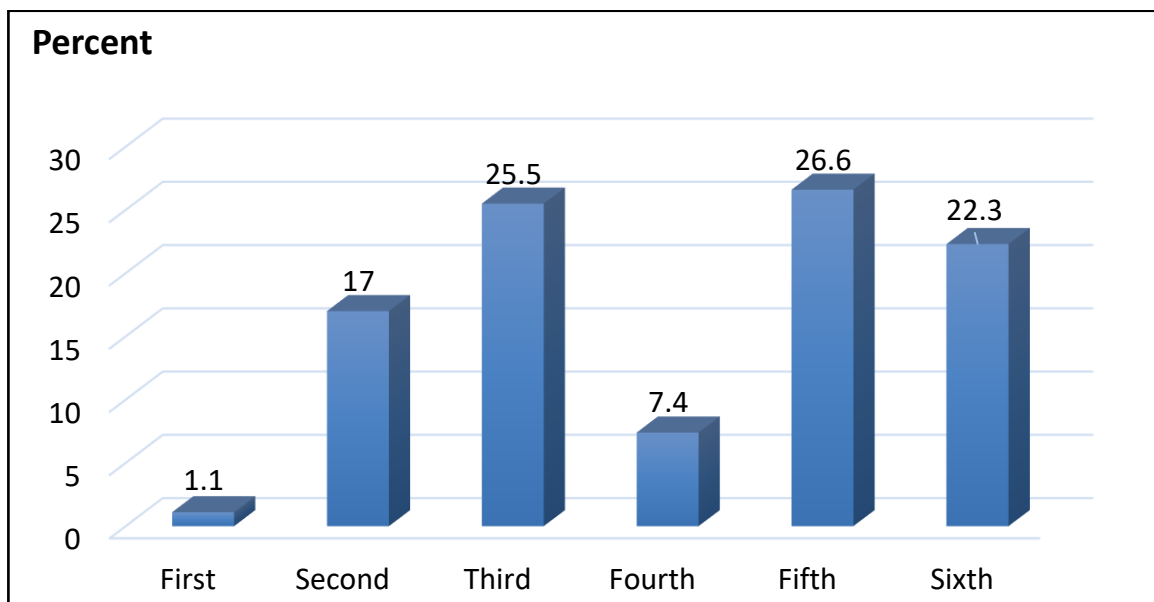


Figure 4. 6. Percentage of Smokers' Students Due to Class (N = 94).

The study results of this figure indicated that the class, more than a fifth are fifth class (26.6%), followed by those who are third class (25.5%), those who are sixth class (22.3%), those who are second class (17%), those who are fourth class (7.4%), and those who are first class (1.1%).

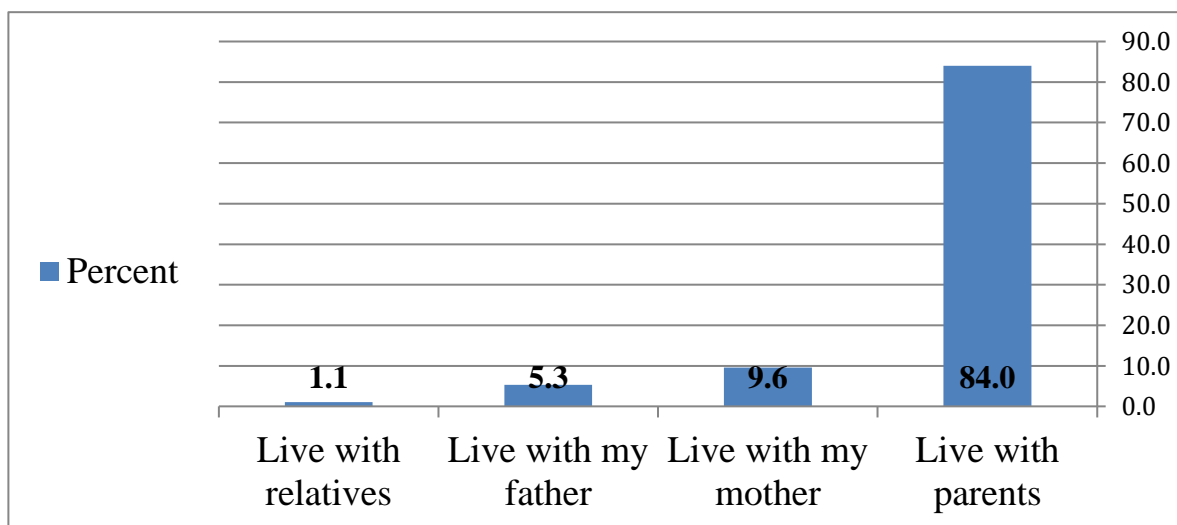


Figure 4.7. Percentage of Smokers' Students Due to living Arrangement (N = 94).

The study results of this figure indicated that the living arrangement of smokers', majority mentioned that they have been living with their parents (84%), followed by those who have been living with their mothers (9.6%),

those who have been living with their fathers (5.3%), those who have been living with their relatives (1.1 %).

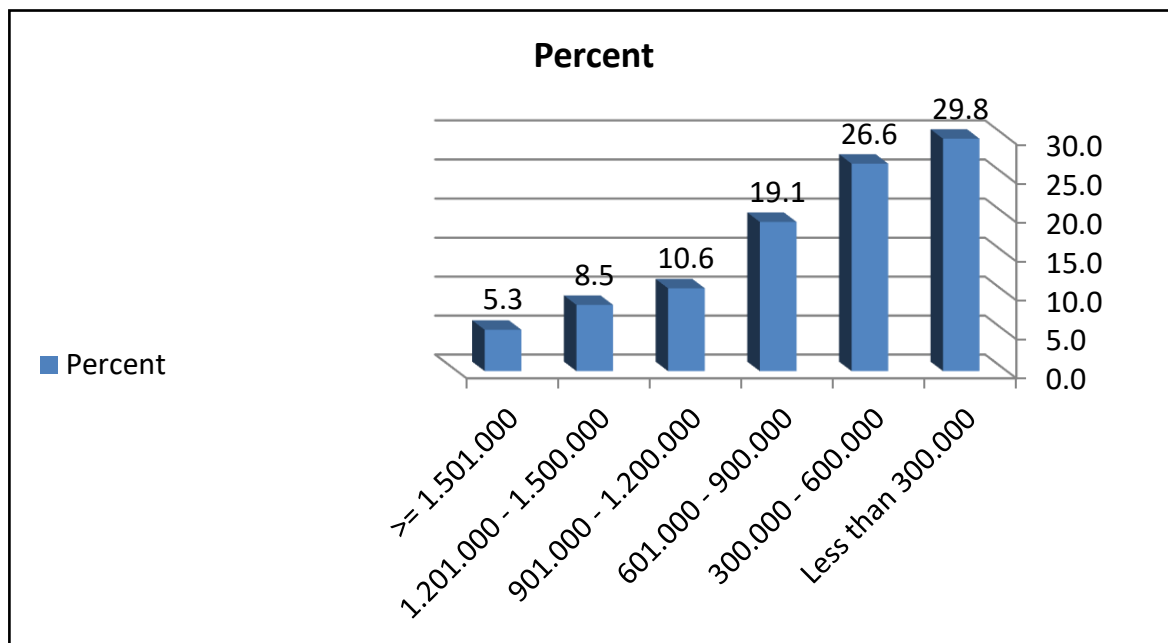


Figure 4.8. Percentage of Smokers' Students Due to Family monthly income (N = 94).

The study results of this figure indicated that the family's monthly income of smokers', mentioned that their family's monthly income was less than 300.000 Iraqi Dinar (29.8 %).

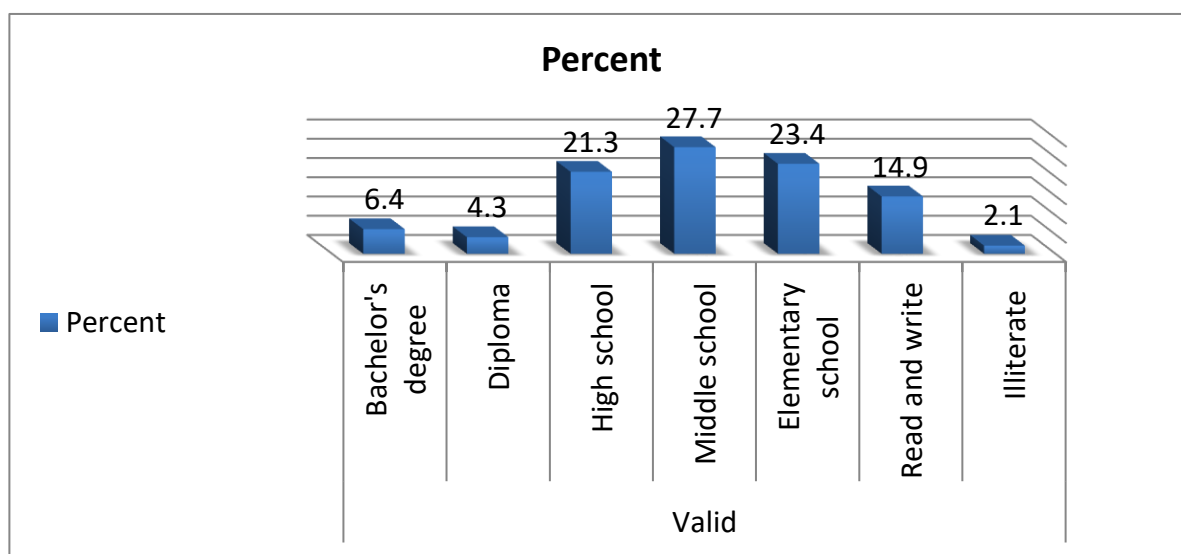


Figure 4.9. Percentage of Smokers' Students Due to the mother's level of education (N = 94).

The study results of this figure indicated that the smokers' mother's level of education, one a quarter completed middle school (27.7%), followed by those who completed elementary school (23.4%), those who completed high school (21.3%), those who read and write (14.9%), those who hold a bachelor's degree (6.4%), those who hold a diploma degree (4.3%), and those who are illiterate (2.1%).

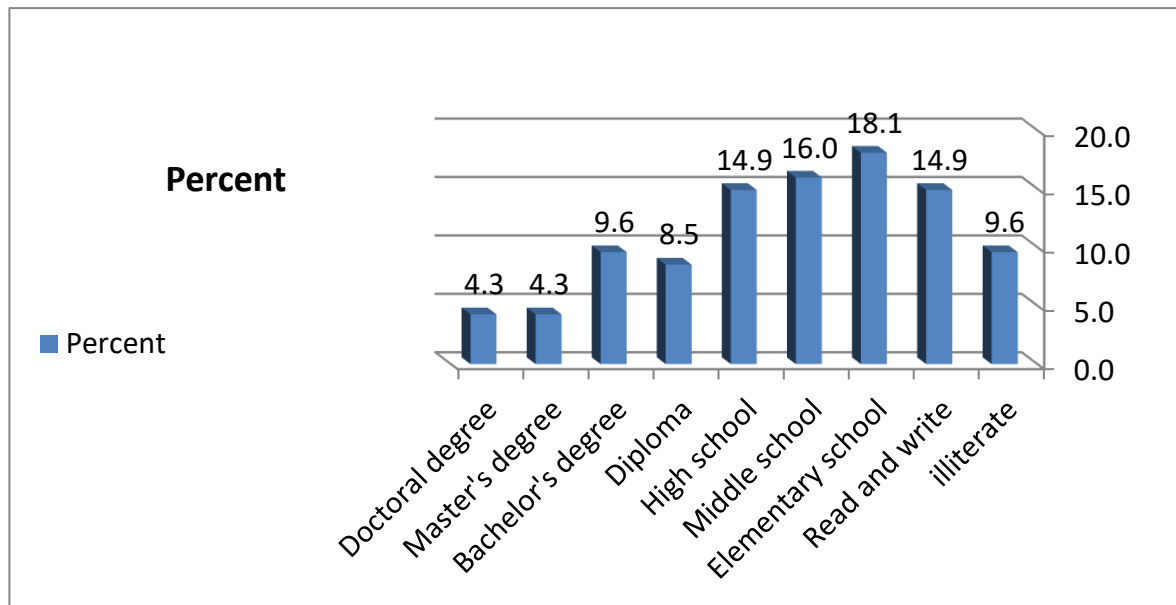


Figure 4.10. Percentage of Smokers' Students Due to father's level of Education (N = 94).

The study results of this figure is indicated that the smokers' father's level of education, around completed elementary school (18.1%), followed by those who completed middle school (16.0%), those who completed high school (14.9%), those who hold a read and write degree (14.9%), those who hold a bachelor's (9.6%), those who are illiterate (9.6%), those who hold a diploma degree (8.5%), those who hold a doctoral degree (4.3%), and those who hold a master's degree (4.3%).

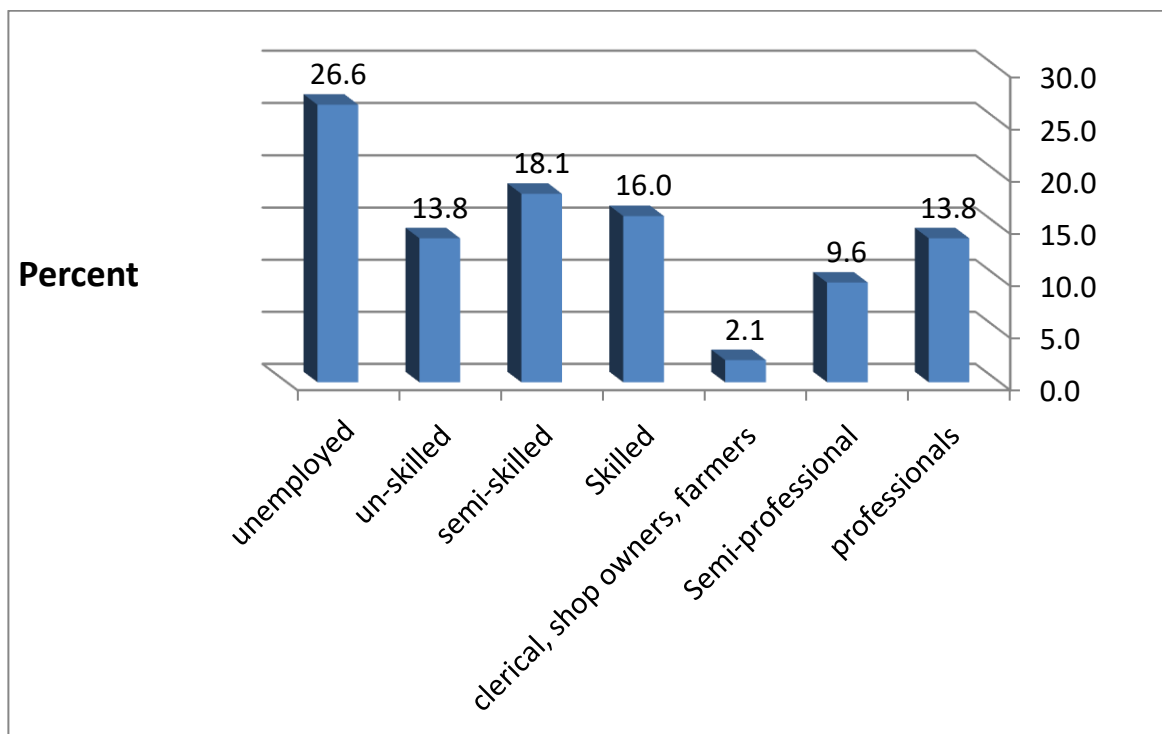


Figure 4.11. Percentage of Smokers' Students Due to household's occupation (N = 94).

The study results of household's occupation of smokers' this figure indicated that one quarter are unemployed (26.6%), followed by those who are semiskilled workers (18.1%), those who are skilled (16.0%), those who are unskilled workers (13.8%), those who are professionals (13.8%), those who are semi-professionals (9.6%), and those who are clerical, shop owners, farmers (2.1%).

Table 3. *Smoking behaviors*

N	Variants	F.	%
1	Are you secondhand smoker?		
	Yes	180	48.4
	No	192	51.6
2	Mother's smoking		
	Yes	14	3.8
	No	358	96.2
3	Father's smoking		
	Yes	147	39.5
	No	225	60.5
4	Brothers' smoking behaviors		
	Yes	96	25.8
	No	276	74.2
5	Smokers are often close friends		
	Yes	165	44.4
	No	207	55.6
6	Teachers' smoking behaviors		
	Yes	139	37.4
	No	233	62.6
7	Does your teacher shed the light on smoking-related issues in the class?		
	Yes	231	62.1
	No	141	37.9
8	Has the school had clear rules about smoking?		
	Yes	320	86.0
	No	52	14.0
9	Do students abide with smoking prohibition rules in the school?		
	Yes	254	68.3
	No	118	31.7

The study results exhibit that more than a half of participants mentioned that they are not secondhand smokers ($n = 192$; 51.6%) compared to those who are negative smokers ($n = 180$; 48.4%).

Concerning the mother's smoking behaviors, the clear majority mentioned that their mothers are non-smokers ($n = 358$; 96.2%) compared to those who are smokers ($n = 14$; 3.8%).

Regarding the father's smoking behaviors, most mentioned that their fathers are non-smokers ($n = 225$; 60.5%) compared to those who are smokers ($n = 147$; 39.5%).

With respect to the brothers' smoking behaviors, most mentioned that they are non-smokers ($n = 276$; 74.2%) compared to those who are smokers ($n = 96$; 25.8%).

Concerning smokers were close friends, more than a half mentioned with no ($n = 207$; 55.6%), in figure (4-13). Whether teachers were smokers, most a half mentioned with no ($n = 233$; 62.6%).

Regarding teachers shed the light on smoking-related issues in the class, most mentioned with yes ($n = 231$; 62.1%).

Concerning the school has clear rules about smoking, the majority mentioned with yes ($n = 320$; 86.0%). Whether students abide with smoking prohibition rules in the school, most mentioned with yes ($n = 254$; 68.3%).

Table 4. *The association between teachers smokers and smoking behaviors of students.*

			Student's Smoking Behaviors				Total	Df.	Sig.	
			Never smoked	Ex-smoker	Intermittent smoker	Daily smoker				
Teachers' smoking	Yes	Count	91	12	18	18	139	3	0.000 H.S	
		% within Teachers' smoking	65.5%	8.6%	12.9%	12.9%	100.0%			
		% within Smoking Behaviors	32.7%	44.4%	81.8%	40.0%	37.4%			
		% of Total	24.5%	3.2%	4.8%	4.8%	37.4%			
		Count	187	15	4	27	233			
	No	% within Teachers' smoking	80.3%	6.4%	1.7%	11.6%	100.0%			
		% within Smoking Behaviors	67.3%	55.6%	18.2%	60.0%	62.6%			
		% of Total	50.3%	4.0%	1.1%	7.3%	62.6%			
		Total	Count	278	27	22	45			372
			% within Teachers' smoking	74.7%	7.3%	5.9%	12.1%			100.0%
% within Smoking Behaviors	100.0%		100.0%	100.0%	100.0%	100.0%				
% of Total	74.7%		7.3%	5.9%	12.1%	100.0%				

Teachers' smoking * Smoking Behaviors Crosstabulation

(df: Degree of freedom; Sig.: Significance; H.S: High Significant).

In this table, the results showed that there is a high statistically significant association between the prevalence of smoking among students and teachers smoking in school (p - value = 0.000)

Table 5. Evaluation of Physical Dimensions for School Environment.

No.	Item	Minimum	Maximum	Mean	Std. Deviation	Relative sufficiency (%)	Evaluation
classroom	1 Classroom condition and clean	1.00	5.00	2.7930	1.30834	55.86	Poor
	2 Adequate the natural light in the classroom	1.00	5.00	3.1371	1.37753	62.74	Accept
	3 Ventilation is appropriate in the classroom	1.00	5.00	3.1694	1.42592	63.39	Accept
	4 The acoustic inside the classroom is Affected by outside noise	1.00	54.00	2.6801	3.01967	53.60	Poor
School yard	1 Cleaning	1.00	5.00	3.3306	1.36013	66.61	Accept
	2 Adequate space	1.00	5.00	3.4866	1.34478	69.73	Accept
	3 Safety	1.00	5.00	3.4731	1.46176	69.46	Accept
	4 Availability enough equipment of games	1.00	5.00	2.3978	1.54808	47.96	Poor
	5 School library	1.00	2.00	1.8763	.32963	93.8%	Good
Total :						72.05	Accept

Cutoff point the lowest limit for acceptance was (60%)

(Less than 60% = Poor environment; 60-79% = Accept environment; and more than 79% = Good environment).

The study results show that the evaluation of school environment for classroom in this table are poor in the studies items numbers (1 and 4) (R.S. = 55.86%; 53.60%) except the items number (2 and 3) are accepted (R.S. = 62.74%; 63.39%). While, the evaluation of the School yard of studies items numbers (1,2, and 3) are accepted (R.S. = 66.61%; 69.73%; and 69.46%) expect, the item number(4) are poor (R.S. = 47.96%) , and the item number (5) of the school library are good (R.S. = 93.8%). While the total evaluation Of items one are accepted (R.S. = 72.05%).

Table 6. Evaluation of Academic Dimension for School Environment.

No.	Items	Minimum	Maximum	Mean	Std. Deviation	Relative sufficiency (%)	Evaluation
1	The accessibility of the teacher and his willingness to help	1.00	3.00	2.4274	.65061	80.91	Good
2	If you ask any questions in class, the teacher asks and guides the students.	1.00	3.00	2.5430	.61935	84.77	Good
3	It is easy to talk to the teacher even after class time is over.	1.00	3.00	2.3468	.73103	78.23	Accept
4	The teacher is interested in what students do on weekends, sports, fun, hobbies, trips or other activities.	1.00	3.00	1.7339	.74994	57.8	Poor
Total						75.43	Accept

Cutoff point the lowest limit for acceptance was (60%)

The study results show that the evaluation of academic dimension for school environment in this table are good in the studies items numbers (1 and 2) (R.S.= 80.91%; 84.77%) respectively except, the item number (3) are accepted (R.S.= 78.23%), and the items number (4) are poor (R.S.= 57.8%). While the total evaluation of items two are accepted (R.S.= 75.43%).

Table 7. Evaluation of Evaluation Dimension for School Environment.

No.	Items	Minimum	Maximum	Mean	Std. Deviation	Relative sufficiency (%)	Evaluation
1	I know how my teacher will class each subject at the beginning of each subject	1.00	3.00	2.1855	.71224	72.85	Accept
2	We are clear about what my teachers require of us in each class.	1.00	3.00	2.4919	.63368	83.06	Good
3	When my teacher gives us class, he explains why we got that class and can check it if we think it might be wrong.	1.00	3.00	2.3522	.75391	78.41	Accept
4	My teacher repeats class assignments, pointing out how we can correct our mistakes.	1.00	3.00	2.2366	.77213	74.55	Accept
Total						77.22	Accept

The study results show that the evaluation of evaluation dimension for school environment in this table are accepted in most studies items numbers (R.S.= 72.85%; 78.41%; and 74.55%) respectively except, the item number

(2) are good (R.S.= 83.06%). While total evaluation of items three are accepted (R.S.= 77.22%).

Table 8. Evaluation of Teaching Strategies Dimension for School Environment.

No.	Items	Minimum	Maximum	Mean	Std. Deviation	Relative sufficiency (%)	Evaluation
1	Create experiments to explain a natural phenomenon.	1.00	5.00	1.8925	.80714	63.08	Accept
2	Prepare class group proposals for taking care of the environment or nature.	1.00	3.00	1.8548	.73818	61.83	Accept
3	Prepare calisthenics with examples of the environment or nature.	1.00	3.00	1.8414	.80705	61.38	Accept
4	Leave us reading materials with topics on environmental issues: nature, how to care for plants and animals, and so on.	1.00	5.00	1.8575	.84268	61.92	Accept
Total						62.05	Accept

The study results show that the evaluation of teaching strategies dimension for school environment in this table are accepted in all studies items (R.S.= 63.08%; 61.83%; 61.38%; and 61.92%) respectively. While total evaluation of items four are accepted (R.S.= 62.05%)

Table 9. Evaluation of Social Dimension for School Environment(n= 372).

No.	Items	Minimum	Maximum	Mean	Std. Deviation	Relative sufficiency (%)	Evaluation
1	School rules apply in my class:	1.00	5.00	3.2554	1.35855	65.11	Accept
2	The assessment system for assignments and tests is:	1.00	5.00	3.4032	1.31907	68.04	Accept
3	Penalties and rewards:	1.00	5.00	3.2339	1.35846	64.68	Accept
4	My participation in important decision making is:	1.00	5.00	2.5995	1.41927	51.99	Poor
Total						62.46	Accept

The study results show that the evaluation of social dimension for school environment in this table are accepted in all studies items (R.S.= 65.11%; 68.04%; and 64.68%) respectively except, the item number (4) are poor (R.S.= 51.99%). While total evaluation of items five are accepted (R.S.= 62.46%).

Table 10. Evaluation of Sustainability Dimension for School Environment (n= 372).

No.	Items	Minimum	Maximum	Mean	Std. Deviation	Relative sufficiency (%)	Evaluation
1	Reuse of educational materials and recycling of rubbish are promoted in my school.	1.00	3.00	1.9032	.79166	63.44	Accept
2	Campaigns to care for the school environment: Providing electricity, taking care of water, and reforestation are an important part of school programs.	1.00	3.00	1.9220	.79544	64.07	Accept
3	Healthy school life is promoted through festivals, sports games, competitions or special presentations on the harms of smoking.	1.00	3.00	1.7849	.77145	59.49	Poor

Table 10. (*Followed*)

4	There are activities in the school program that promote respectful communication between students and teachers, such as plays, plenary sessions, special training, signature campaigns, or reflection events (contact-workshop courses).	1.00	3.00	1.6586	.79697	55.29	Poor
Total						60.57	Accept

The study results show that the evaluation of sustainability dimension for school environment in this table are accepted in the studies items numbers (1 and 2) (R.S. = 63.44%; 64.0.7%) respectively expect, the item numbers (3and4) are poor (R.S.= 59.49%; 55.29%). While total evaluation of items seven are accepted (R.S.= 626.57 %).

Table 11. Total Evaluation of All Dimension for School Environment

No.	Dimension	Relative sufficiency (%)	Evaluation
1.	Physical Dimension	72.05	Accept
2.	Academic Dimension	75.43	Accept
3.	Evaluation Dimension	77.22	Accept
4.	Teaching Strategies Dimension	62.05	Accept
5.	Social Dimension	62.46	Accept
6.	Sustainability Dimension	60.57	Accept
Total		67.38	Accept

The study results show that the evaluation all dimension for school environment in this table are accepted in all studies items (R.S.= 72.05%; 75.43%; 77.22%; 62.05%; 62.46%; and 60.57%)respectively. While the total evaluation of all dimension for school environment are accepted (R.S.= 67.38%).

Table 12. Differences between the school environment dimensions and the students smoking behaviors.

ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
Physical Dimension	Between Groups	115.810	3	38.603	2.311	.076
	Within Groups	6146.018	368	16.701		
	Total	6261.828	371			
Academic Dimension	Between Groups	14.210	3	4.737	1.373	.251
	Within Groups	1269.820	368	3.451		
	Total	1284.030	371			
Evaluation	Between Groups	16.046	3	5.349	1.411	.239
	Within Groups	1394.607	368	3.790		
	Total	1410.653	371			
Strategies	Between Groups	3.909	3	1.303	.228	.877
	Within Groups	2102.016	368	5.712		
	Total	2105.925	371			
Social Dimension	Between Groups	84.168	3	28.056	1.636	.181
	Within Groups	6310.807	368	17.149		
	Total	6394.976	371			
Sustaining	Between Groups	8.508	3	2.836	.545	.652
	Within Groups	1914.610	368	5.203		
	Total	1923.118	371			
Overall Environment	Between Groups	2467.623	3	822.541	3.200	.023
	Within Groups	94601.173	368	257.068		
	Total	97068.796	371			

df: Degree of freedom; F: F-statistics; Sig.: Significance

The results show that there is a significant differences in the overall school environment among the students' smoking behaviors (p -value =.023).

Table 13. *Association between the socio-demographic characteristics and the students smoking behaviors.*

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	39.401	3	13.134	3.503	.016
	Within Groups	1379.911	368	3.750		
	Total	1419.312	371			
Sex	Between Groups	1.461	3	.487	2.684	.047
	Within Groups	66.765	368	.181		
	Total	68.226	371			
Class	Between Groups	6.035	3	2.012	.879	.452
	Within Groups	841.771	368	2.287		
	Total	847.806	371			
Living arrangements	Between Groups	1.566	3	.522	.938	.422
	Within Groups	204.682	368	.556		
	Total	206.247	371			
Father's level of education	Between Groups	2.855	3	.952	.197	.898
	Within Groups	1776.661	368	4.828		
	Total	1779.516	371			

df: Degree of freedom; **F:** F-statistics; **Sig.:** Significance

Table 13. (Followed)

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Mother's level of education	Between Groups	5.578	3	1.859	.530	.662
	Within Groups	1290.121	368	3.506		
	Total	1295.699	371			
Family monthly income	Between Groups	3.987	3	1.329	.519	.669
	Within Groups	941.462	368	2.558		
	Total	945.449	371			
Household's occupation	Between Groups	11.700	3	3.900	.857	.464
	Within Groups	1674.717	368	4.551		
	Total	1686.417	371			
Socioeconomic Behaviors	Between Groups	75.971	3	25.324	.527	.664
	Within Groups	17682.502	368	48.050		
	Total	17758.473	371			

df: Degree of freedom; F: F-statistics; Sig.: Significance.

The results show that there is a significant association in the age and gender among the students' smoking behaviors (p -value = 0.016, and 0.047) respectively.

Table 14. *The Correlations between the school environment dimensions and the students smoking behaviors.*

Non	1	2	3	4	5	6	7	8	9	10
1 Smoking Status	-									
2 Classroom Environment	.129	-								
3 School yard	.137	.544**	-							
4 School library	-.122	-.090	-.064	-						
5 Academic Dimension	-.017	.025	.344**	-.176	-					
6 Evaluation	.149	.306**	.290**	-.080	.388**	-				
7 Strategies	.009	.155	-.009	-.191	.219*	.243*	-			
8 Social Dimension	.060	.480**	.392**	-.241*	.303**	.387**	.253*	-		
9 Sustaining	.036	.097	-.059	-.101	.199	.259*	.393**	.313**	-	
10 Overall School Environment	.086	.720**	.650**	-.212*	.409**	.566**	.403**	.754**	.428**	-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

There is no a statistically significant inverse correlation between the school environment dimensions and the smokers students behaviors.

Chapter Five

Discussion

Chapter Five:

Discussion

The researcher refers to the fact that smoking is not a good behavior; it affects the physical and mental health of adolescents. So This chapter gives a thorough summary of the results of the present study and a discussion of those results, which are supported by pertinent research. Thirteen secondary schools out of one hundred twenty-five from the center of the Kerbala City were studied. Those findings were based on students' smoking behavior.

5.1: Discussion of the Socio-demographic Characteristics of the Smokers Students in Secondary Schools:

Following the discussion of the demographic characteristics as indicated in Fig. 4-4, it is indicated that the age of smokers among students is less than half: 16–18 years (42.60%), followed by those who are 13–15 years (31.90%), and those who are 19–21 years (25.50%). This result indicated that smoking is widespread among the students, which means that it increases morbidity and mortality among adolescents in Kerbala City. The spread of smoking among female adolescents reflects that there is no surveillance in the home and in the school, which means parents are neglecting their children's behaviors. This finding disagrees with Qasem, Nasir & Al-Tawil (2022), reported that the highest prevalence of smoking (17.5%) was in the age group 18-19.

This study revealed that the sex of smokers students in Kerbala City in Fig. 4-5 indicates that the majority of smokers are males compared to females. The prevalence of smoking among adolescents is a problem that the Iraqi society suffers from, but its prevalence among girls by a small percentage in the a community reflects the sanctity, awareness, keenness and commitment of the city's individuals towards smoking. The present study is supported by Siddiqua, Dghaim & Barakat-Haddad (2018) in the United Arab Emirates,

reported that the prevalence of smoking among male (24%) was higher than females smokers (5.5%).

Regarding the class, the study results indicated that more than quarter of the subjects are in fifth class (26.6%), followed by those who are in third class (25.5%), those who are in sixth class (22.3%), those who are in second class (17%), those who are in fourth class (7.4%), and those who are in first class (1.1%). This finding is consistent with Al-Murshedi & Baiee (2018) in Al-Hilla city, reported that more than half are in fifth class (56.2%), those in fourth class (34.8%), and those in sixth class (9.0%).

Family disintegration or the absence of the family's effective role in guiding adolescent. The students lives in a state of disarray during this stage due to the mixing of his feelings, desires, needs, and aspirations, so he needs someone to guide him. When the role of the mother or father is absent, this students resorts to smoking, and the presence of a family member Smoking increases a teenager's desire to smoke because he feels that it is not dangerous. As show in Fig. 4-7 indicated that the majority of smokers' they have been living with their parents (83%), followed by those who have been living with their mothers (8.5%), those who have been living with their fathers (5.30%), and those who have been living with their relatives. This finding is consistent with Ramadhan & Habeeb (2022) in Bagdad Captial, reported that the majority have been living with their parents (91.7%), followed by those who have been living with their mothers (8.3%), those who have been living with their fathers (4.2%), and those who have been living with their relatives (0.0%).

As per the family's socioeconomic class, less than a third of the smoker students had insufficient socio economic behaviors. Ahmad et al., (2021) in Kerbala City, reported that more than half of students had sufficient socio economic behaviors. This study disagrees with present study. Another study is supported by Qasem, Al-Hadithi & Al-Tawil (2019) in Kurdistan Region,

had reported that their socio-economic behaviors (SES), more than half of them insufficient socio economic behaviors.

5.2. Discussion the Students' Smoking Behaviors:

In young people, psychological stability is formed. The psychological factors that contribute to smoking are situations that are independent of the subject's decision-making intentions. Teenagers first become aware of tobacco usage when they are little children and watch their elders' behavior. The family is the key player in this. The family's tolerance of smoking shapes the child's attitude toward smoking. This mindset naturally permeates his consciousness, leaving a mark on the emotionally-evaluative attitude toward this previous experience, and shapes the child's future behavior in accordance with it. The study results indicated that most are never smoked. Also, the finding in the current study is supported by Alsubaie (2018) in Saudi Arabia that reveals the prevalence of smoking was (24.3%) among adolescents. Another result is supported by Qasem, Nasir & Al-Tawil 2022 in Erbil City, reported that the prevalence of smoking are (17.5%).

Concerning the result in Fig. 4–3 show who they smokers or ex-smokers are more than a third that they smoke hook (36%), followed by those who smoke cigarettes (32%), and each of cigarettes and hookah (32%) for each of them. This finding agrees with Surji (2019), reported that among smokers or ex-smokers are more than a third they smoke hookah (49.5%), followed by those who smoke cigarettes (16.7%), and each of cigarettes and hookah (16.3%) for each of them.

Regarding the person who influenced participants' opinions more than others toward smoking are most reported that they were their friends (67.9%). Also, the finding in the current study was similar to studies with Qasem, Nasir & Al-Tawil. (2022) in Erbil City, reported that the main reason of smoking was the friends (39.6%).

The sources of smoking are pocket money less than half from others (44.4%). These findings disagree with Hajee & Agha (2022) in Duhok, reported that the sources of smoking were pocket money (60.5%), available at home (8.2%), from their friends (21.1%), someone who bought it for them (8.8%), and some other way (1.4%).

The study results exhibit that more than half of participants reported that they are not secondhand smokers (51.6%). This study is consistent with Agaku et al. in 2016 report that more than half of students reported that they were secondhand smokers (55.9%). Another study is disagree with Itanyi et al. in 2020 report that more than half of students are secondhand smokers (60.4%).

The findings of the mother's smoking status that the majority are non-smokers (96.2%), which mean that the reason is due to the environment in which the mother grows up had more conscious and healthy. These results are supported with Oudah in 2020 report that their mothers are smokers (15.78%).

Findings show that the father's smoking status are non-smokers (60.5%). The finding disagree with the Leatherdale & Manske in 2005 report that their fathers' smoking status indicates that their fathers are smokers (68.3%).

With respect to the brothers' smoking status, most reported that they are non-smokers (74.2%) compared to those who are smokers (25.8%). This result is due to an attempt to imitate adult behaviors without awareness or ignoring the harms. This finding is disagree with Al-Delaimy & Al-Ani in 2021 report that those who are smokers (8.1%). Another study is consistent with Andersen et al. in 2019 report that siblings who smoke are 32%.

Whether smokers were close friends, more than half reported no (55.6%). This study agrees with Bonilha et al. in 2014 report that most smokers were close friends with no (64.5%). Another study disagree with Al-

Delaimy & Al-Ani in 2021 reported that most smokers were close friends (65.2%).

The study findings show that teachers were smokers, most reported that teachers were smokers (62.6%). This finding supported with Alnasir in 2004 who reported that the teachers were smokers (93%). Another study is consistency with Unsal et al. in 2008 reported that the majority said yes (94.2%).

The outcomes in the current study show the teachers teaching about smoking-related issues in the class, most reported yes (62.1%). This study disagrees with Sabiston et al. in 2009 report that most had no (85.2%).

Whether the school has clear rules about smoking, the majority reported yes (86.0%). This finding is agree with findings of the research by Andersen et al. in 2019 who revealed that the majority said yes (87%). Another study disagree with Leatherdale & Manske in 2005 who reported that more than half with no rules in schools(58.5%).

Whether students obey the smoking rules in the school, most reported yes (68.3%). This study is consistent with Trinidad, Gilpin, & Pierce in 2005 who reported that yes they obey the rules that prevent the smoking in schools.

5.3. Discussion the Association Between Teachers Smokers and Smoking Status of Students:

The study results in Table 4 show there is an association between teacher smokers and the smoking status of students (p - value = 0.000). This study is consistent with Poulsen et al. in 2002 report that there is a positive relationship between teacher smoking and student smoking.

Another study is agreement with Escario & Wilkinson (2018) in Spain, reported that high levels of visibility of teacher smoking on school increased the odds of being a smoker among students (OR=2.09 and OR=1.64, for the highest levels of visibility). Teacher smoking on school grounds is associated with student smoking behaviour. Consequently, smoking policies designed to

prevent adolescent smoking should address this important social environment. Another study is agreement with Zhang et al. (2000) in Chin reported that there are a positive relationship between teacher smoking and student smoking.

5.4. Discussion the Evaluation of All Dimension for School Environment.

The school environment, which is composed of physical, social, and psychological dimensions, is an important component in the formation of the adolescent conscious and behavioral periods, school climate is a broad, multi-dimensional construct that represents the quality and character of school life, so in Table 12, the demonstrated evaluation, the total evaluation of all dimensions accepted for the school environment is accepted (R.S.= 67.38%).

This findings is diaggrement with César et al. (2020) in Mexico reported that the effect of school surroundings as a function of their physical, intellectual, and social contexts is unacceptable. These findings indicated that the dimensions of school environment have a major effect on student smoking.

5.5. Discussion the Evaluation of Physical Dimension for School Environment.

The study results show that the evaluation of classroom for school environment in table 5. are accepted. This study is consistence with Özyildirim in 2021 report that the evaluation of classroom for school environment of classroom condition and clean are poor, but the ventilation and lighting are accepted.

Another study is consistent with Ahmad & Amirul in 2017 reports that the furniture are good(High), lighting is good (high), and ventilation is accepted. Another study is consistence with Saeed in 2015 reports that the evaluation of classroom for school environment of classroom condition and

clean, the ventilation, and lighting are accepted, but the classes were free of sound pollution is good, and the library school library are good.

Another study is consistence with Salih & Khalifa in 2013 report that the evaluation of classroom furnitures are poor, and schoolyard are poor.

Another study is disagree with Abd-Alhameed & Al-Tae in 2012 reported that classroom ventilation are accepted , lighting are poor, and Classroom cleanliness are good, while the schoolyard evolution are good.

Another study is consistence with Saadoon in 2017 report that the evolution of classroom ventilation, lighting, and clean condition are poor, while the school yard are poor.

6.6. Discussion the Evaluation of Psychological Dimension for School Environment.

Smoking is not a biological requirement; rather, it develops as a result of ignorance, misunderstanding, poor upbringing, and environmental effects. Teenagers frequently have an unmotivated protest against "everyone and everything in the world" due to a lack of upbringing, strong-willed traits, and banned boundaries, which is a reason to start smoking. The psychological dimension is a combination of the academic, evaluation, and teaching strategies dimensions of the school environment.

So the results show that the evaluation of psychological dimension for school environment was accepted (R.S.= 75.43%; 77.22%; and 62.05%) respectively. This study is consistence with Weiss et al. (2008) were psychological dimension for school environment the significantly was associated with a higher risk of lifetime smoking for both boys and girls.

6.7. Discussion the Evaluation of Social Dimension for School Environment.

Social dimension of the school environment is a combination of the social, and sustainability dimensions of the school environment. School can impact the social, psychological, and physical well-being of both students and

teachers and disrupt the learning process. The results show that the evaluation of social dimension for school environment was accepted (R.S. = 62.46%; and 60.57%) respectively. According to the results in social dimensions, students seem to benefit in terms of their development of social competencies and social relations such as self-esteem, self-confidence, trusting relationships, and the sense of belonging.

This study is consistence with Cheng, Gu & Jin (2022) were social dimensions of the school environment, they were significantly accepted. Social interaction, social relationship and its perception occur through communication. Another study is agreement with Johnson (2009) reported that psychological dimension was acceptable.

5.8. Differences Between the School Environment and the Students Smoking Behaviors.

Various factors play a role in this increasing prevalence of smoking behaviors, including the school environment. The researcher think that the association between the dependent variable (student smoking behaviors) and the independent variable (school environment) is important to strengthen weaknesses in Iraqi society and reduce smoking.

So the results show that there is no a statistically significant correlation between the school environment and the students' smoking behaviors. This result is disagreement with Roohafza et al. (2014), reported that there are relationship between school environment and students' smoking. More research is needed to find out what motivations, causes smoking and the psychosocial aspects that affect it.

5.9. Discussion the Diferrances Between the students Socio-demographic Characteristics and the Students Smoking Behaviors.

According to the results, we found that monitoring adolescent behavior is necessary in Iraqi society. Because of the difficulty of quitting smoking in

the future. The current results show that there is a statistically significant differences between the smoking behaviors of students and demographic characteristics such as sex and age ($P = 0.016$, and 0.047) respectively.

Ahmad et al. (2021) in Kerbala city, found that there are no association between student smoking and socio-demographic characteristics (age and sex). This finding not consisted with present study. Also, the finding in the current study was similar to studies with Mohammadpoorasl et al. 2012 in Iran, which reported that who revealed that there were association between students smoking behaviors and soicodemographic characteristics such as age and sex.

Chapter Six

Conclusions and Recommendations

*Chapter Six:**Conclusions and Recommendations***6.1. Conclusions:**

In Iraq, smoking is a community problem. Tobacco products were accessible and affordable for adolescents. So in this chapter includes the conclusions based on the interpretation and discussion of the study's findings, as well as significant recommendations that might support the development of strategic planning in order to improve the school environment and prevent smoking among secondary school students. Based on the results of the present investigation, the researcher came to the following conclusions:

1. The socio-demographic characteristics of the recent research shows that the majority of smokers students are between the ages of 16 and 18, male, fifth class, living with their families in low monthly income was less than 300.000 iraqi dinar, and more than a third that they smoke hook.
2. The secondary school environment in the centered of Kerbala City was accepted.
3. The prevalence of smoking behaviors among secondary school students was 25.3% among the total of 372 male and female students.
4. The study showed an differences between school environment and smoking behaviors among students.
5. The results show that there is a statistically significant differances between smoking behaviors among students with their sociodemographic characteristics of the student in the age and gender.

6.2. Recommendations

To deal with the problem, we suggested some of the recommendations in this study, which are as follows:

1. Follow-up evaluation of the school environment (physical, social, and psychological dimensions) by the community health nursing staff every period to estimate if there are any problems that affect adolescent students and solve them before they become complicated and to promote the school environment.
2. Providing and applying education programs to improve teacher and adolescent health through health education, health promotion, and being aware of the risks of smoking and its effects, direct and indirect, and its consequences, and preventing smoking.
3. The attention about what students interest about and encouraging their talents to enhance their self-confidence and society to create an awareness and successful generation away from wrong behaviors.
4. Work they collaborating parents to monitor students' participation in hazardous activities, such as smoking behaviors.
5. Our roles as community health nurses require us to work with the Ministry of Health and Ministry of Education to educate students and school staff about prevention of smoking, and motivation in helping and motivating students to be more interactive and social with their peers, families, and teachers.
6. To control smoking, the school manager, staff, and family, which have the largest role, must cooperate to follow students up in terms of unhealthy behaviors, including smoking behaviors, and raise students' awareness about the dangers of smoking and its dimensions for the purpose of providing and maintaining a safe educational environment.

7. The ability to respond to ongoing stress and to keep a level head are acquired skills that are a representation of psychological stability. The child's development and the development of his socially constructive interests are both facilitated by psychological stability.
8. The development of a teen's psychological stability is simultaneously influenced by the psychological stability of adults. Therefore, by using training programs, we can help avoid the establishment of an unwelcome addiction and help teens develop psychological resistance to smoking.
9. Preparing a booklet that includes the dangers of smoking and its health effects on students and society.
10. Holding periodic meetings with the students' families for the purpose of discussing unhealthy behaviors, including smoking, and following up with their children after work.

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Appendix

Appendix A-1

Republic of Iraq Ministry of higher education & scientific research University of Karbala College of Nursing Graduate studies Division		جمهورية العراق وزارة التعليم العالي والبحث العلمي جامعة كربلاء كلية التمريض شعبة الدراسات العليا
التاريخ: 28 / 11 / 2022		العدد: 279 / ع. >

الى / مديرية تربية كربلاء المقدسة

م/ تسهيل مهمة

تحية طيبة...

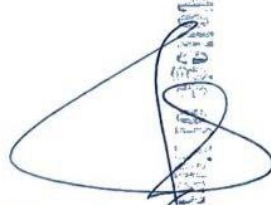
يرجى التفضل بالموافقة على تسهيل مهمة طالبة الماجستير السيدة (رقية علي محمد علي) لإنجاز رسالتها الموسومة:

The Association Between School Environment And Smoking Behavior Among Secondary School Students

العلاقة بين البيئة المدرسية وسلوك التدخين بين طلاب المدرسة الثانوية.

وهي إحدى طلبة الدراسات العليا / الماجستير في كليتنا / للعام الدراسي (2022-2023) .

مع التقدير ...

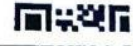


أ.م.د. سلمان حسين فارس الكريطي
 معاون العميد للشؤون العلمية و الدراسات العليا
 2022 / 11 / 28



نسخة منه الى :-

- مكتب السيد معاون العلمي المحترم.
 - شعبة الدراسات العليا.



Appendix A-2

Republic of Iraq
The Province of Holy Karbala
Directorate General of Education
in Holy Karbala Province

العهد /
التاريخ /
٢٠٢٣ / ١١ / ١٩



جمهورية العراق
محافظة كربلاء المقدسة
المديرية العامة للتربية
في محافظة كربلاء المقدسة
قسم الاعداد والتدريب/البحوث والدراسات

الى / إدارات المدارس المتوسطة والاعدادية والثانوية في مركز المحافظة كافة

م/ تسهيل مهمة

تحية طيبة...

استناداً الى كتاب جامعة كربلاء المقدسة/ كلية التمريض ذي العدد د:ع/ ٢٧٩ في ٢٠٢٢/١١/٢٨ يرجى تسهيل مهمة طالبة الدراسات العليا (رقية علي محمد علي) لإنجاز متطلبات بحثها الموسوم (العلاقة بين البيئة المدرسية وسلوك التدخين بين طلاب المدرسة الثانوية) خلال العام الدراسي ٢٠٢٢/٢٠٢٣ على ان لا تتضمن متطلبات البحث أي عملية معالجة أو فحص للطلاب والاكتفاء بملء الاستبانة المطلوبة وتقديم الارشادات التوعوية فقط خدمة للعلم والمعرفة مع التقدير.

سليم أحمد عبد الكريم
معاون المدير العام للشؤون الادارية

١١ / ١٩


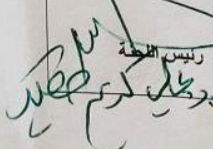
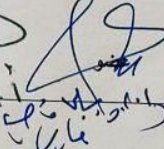
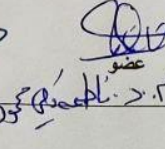


نسخة منه الى :-

- مكتب السيد المدير العام/ للتفضل بالعلم.....مع التقدير.
- السيد معاون الفني/ للتفضل بالعلم.....مع التقدير.
- قسم التخطيط التربوي / للقرض نفسه اعلاه.....مع التقدير.
- قسم الاعداد والتدريب / شعبة البحوث والدراسات/ ب ٢ نسخ مع المرفق.
- الأرشيف الالكتروني ويريدي المدارس.
- الملفة العامة

www.karbala.edu.iq الموقع الالكتروني
info@karbala_edu.iq البريد الالكتروني
العنوان / كربلاء المقدسة - حي الاسكان - تقاطع الاصلاح

Appendix B

Ministry of Higher Education and Scientific Research University of Karbala / College of Nursing Scientific Research Ethics Committee		وزارة التعليم العالي والبحث العلمي جامعة كربلاء / كلية التمريض لجنة أخلاقيات البحث العلمي
استمارة أخلاقيات البحث العلمي		
عنوان مشروع البحث		
The association between school environment and smoking behavior among secondary school students العلاقة بين البيئة المدرسية وسلوك التدخين بين طلاب المدرسة الثانوية		
بيانات عن الباحث الرئيسي		
الاسم الثلاثي للطالب	مستوى الدراسة	
رقبه علي محمد علي	ماجستير / تمريض صحة مجتمع	
بيانات الباحث أو الباحثين المشتركين		
الاسم الثلاثي للأستاذ المشرف	اللقب العلمي	
سلمان حسين فارس	أ.م.د	
اهمية موضوع البحث واهدافه (Importance of the research and its objectives)		
Importance of the study: The smoking epidemic is a matter of worldwide concern. School environment which effect student smoking behavior encompass teacher smoking, smoke-free policy, students adherence to these rules, school personnel care on their students smoking behavior and school training. The objective of this study to : 1. Evaluate the school environment 2. Determine smoking behavior among secondary school students. 3. explore the relationship between school environment and smoking behavior among secondary school students. 4. identify the association between smoking behavior among secondary school students and their demographics characteristics		
وقت ومكان اجراء البحث (الامكن المقترحة لأجراء البحث فيها)		
The study will be conducted at students (the secondary school at Holy Kerbela city).1/9/2022-1/9/2023		
منهجية البحث (Methodology)		
A cross-sectional design will be carried throughout the study (descriptive study).		
عينة الدراسة Sample of the study		
Random sampling (250 students)		
الاعتبارات الاخلاقية خلال اجراء البحث (Ethical consideration during research)		
التعهد		
<ul style="list-style-type: none"> اني الموقع انا رقية علي محمد علي علي اتعهد بان اقوم باجراء البحث وفقا لما ذكر في البروتوكول اعلاه وان التزم باتباع القوانين والتعليمات فيما يخص اجراء البحوث والالتزام بأخلاقياتها , كما واتعهد باخذ الموافقة من افراد العينة للمشاركة في الدراسة واخذ موافقة من ولي امر المشارك الشرعي في حال كون عمر الشخص المشارك اقل من ١٨ سنة، او كونه غير قادر على الفهم , وان اقدم الإيضاحات و المعلومات الخاصة بالدراسة لافراد العينة للمشاركين في حال طلبها. وان اتعامل بسرية تامة مع بيانات افراد العينة. 		
اسم وتوقيع الباحث		
توصية لجنة أخلاقيات البحث العلمي في الكلية		
قرار اعضاء لجنة أخلاقيات البحث العلمي حسب جلساتها المنعقدة بتاريخ / / ٢٠٢٢ :		
<input type="checkbox"/> عدم الموافقة على اجراء البحث	<input checked="" type="checkbox"/> الموافقة على اجراء البحث	
		
رئيس اللجنة	عضو	عضو

Appendix C

"الاستبانة"

عزيزي/عزيزتي الطالب/ة ...

بين يديك استبانة خاصة للبحث الموسوم : (العلاقة بين البيئة المدرسية وسلوكيات التدخين بين طلاب المدارس الثانوية)

الجزء الأول: المعلومات الشخصية (الديموغرافية) :

١. العمر : _____
٢. الجنس : ذكر انثى
٣. المرحلة الدراسية :
- الاول الثاني الثالث
- الرابع الخامس السادس
٤. ترتيبات المعيشة :
- اعيش مع الوالدين - اعيش مع والدي
- اعيش مع اقاربي - اعيش مع والدي
٥. التحصيل الدراسي/ ضع علامة صح امام الاختيار المناسب:

الدراسي التحصيل	للاب	للام
لا يقرأ ولا يكتب		
يقرأ ويكتب		
خريج الدراسة الابتدائية		
خريج الدراسة المتوسطة		
خريج الدراسة الاعدادية		
دبلوم فني (خريج معهد)		
بكالوريوس (كلية)		
دبلوم عالي		
ماجستير		
دكتوراه		

6. مستوى الدخل الشهري للأسرة (بالدينار العراقي) :

١	أقل من ٣٠٠,٠٠٠	٢	من ٣٠٠,٠٠٠ الى ٦٠٠,٠٠٠
٣	من ٦٠١,٠٠٠ الى ٩٠٠,٠٠٠	٤	من ٩٠١,٠٠٠ الى ١,٢٠٠,٠٠٠
٥	من ١,٢٠١,٠٠٠ الى ١,٥٠٠,٠٠٠	٦	أكثر من ١,٥٠٠,٠٠٠

٨. مهنة رب الأسرة :

أ	المهنيين (بما في ذلك الأطباء ، وكبار الموظفين الإداريين ، وكبار المحاضرين ، والأساتذة ، والمحامين ، ومراجعي الحسابات ، ومحرري الصحف ، والموسيقيين الخبراء ، والمهندسين المعماريين ، والمديرين الإداريين للشركات الصناعية والتجارية)
ب	شبه المهني (بما في ذلك الأشخاص الحاصلين على درجة علمية بعد المدرسة الثانوية أو التعليم الجامعي مثل المهندسين والمدرسين وما إلى ذلك)
ج	كاتب ، صاحب متجر ، مزارع ، عمل متكرر. كاتب طابعة ، محاسب ، بائع ، صاحب مزرعة.
د	عامل ماهر: العمل المعقد الذي يتطلب تدريباً مكثفًا مثل النجار ، وعامل البناء ، والميكانيكي ، وسائق السيارات ، وما إلى ذلك.
هـ	عامل شبه ماهر - العمل الذي يتطلب بعض التدريب ؛ كهربائي ، عامل مصنع ، تجليد كتب ، نادل.
و	العامل غير الماهر - العمل الذي لا يتطلب تعليمًا أو تدريبًا مثل الحارس ، عامل النظافة ، الحمل ، إلخ.
ي	لا يعمل.

الجزء الثاني : ملحوظة / يرجى التأشير على خيار واحد فقط داخل الاقواس:

١. حالة التدخين (الطالب/ة) :

- ١,١ غير مدخن () ١,٢ مدخن سابقا ()
 ١,٣ مدخن متقطع () ١,٤ مدخن يومي ()

٢. في حالة الاجابة بنعم فما هو نوع التدخين :

- ٢,١ سجائر () ٢,٢ النرجيلة ()

٢,٣ كلاهما السجائر والنجيلة ()

٣ . ما هو مصدر التدخين :

٣,١ المصروف الشخصي () ٣,٢ متوفر بالمنزل ()

3.3 من الآخرين ()

٤ . من هم الأشخاص الذين أثروا بك أكثر من غيرهم ودفعوك لبدء عادة التدخين؟

٤,١ أفراد العائلة () ٤,٢ الأصدقاء ()

٤,٣ لوحدي () ٤,٤ المدرسين () ٤,٥ غيرهم ()

التعليمات: اقرأ بعناية كل سؤال وحدد الإجابة المناسبة بوضع علامة صح :

لا	نعم	الفقرة	
		هل انت مدخن سلبي (تتعرض لدخان السجائر او النرجيلة بطريقة غير مباشرة)	١
		حالة تدخين الأم	٢
		حالة تدخين الأب	٣
		حالة التدخين الاخوة	٤
		المدخنون في الغالب من الأصدقاء المقربين	٥
		حالة تدخين المدرسين	٦
		هل يقوم معلمك بالتدريس في المسائل المتعلقة بالتدخين في الصف؟	٧
		هل المدرسة لديها قوانين واضحة بشأن التدخين؟	٨
		هل يلتزم الطلاب بقوانين منع التدخين في المدرسة؟	٩

الجزء الثالث : البيئة المدرسية (البعد المادي).

الصف / ملاحظة : اقرأ بعناية كل سؤال حول ظروف مدرستك وحدد رقمًا واحدًا على مقياس من (١ إلى ٥).

١- هل أثاث الصف بحالة جيدة ونظيف؟

سيء للغاية وغير نظيف ١ ٢ ٣ ٤ ٥ بحالة جيدة ونظيف جدا

٢- أقيم الضوء الطبيعي (النوافذ) في الصف على أنه :

محدود جدا ١ ٢ ٣ ٤ ٥ كافي جدا

٣- التهوية داخل الصف :

غير كافية جدا ١ ٢ ٣ ٤ ٥ كافية جدًا

4- داخل الصف انه :

متأثر بالضوضاء الخارجية كثيرا ١ ٢ ٣ ٤ ٥ خالي من الضوضاء الخارجية
تماما

ملاحظة : اقرأ بعناية كل سؤال حول ساحة المدرسة ومكتبة مدرستك وضع علامة "X" على مربع واحد/ ساحة المدرسة هي:

نظيفة جدا	٥	٤	٣	٢	١	غير نظيفة جدا
مساحة كافية جدا	٥	٤	٣	٢	١	مساحة صغيرة جدا
أمنة جدا	٥	٤	٣	٢	١	غير آمنة جدا
مجهزة بما يكفي للألعاب تماما	٥	٤	٣	٢	١	غير مجهزة بما يكفي للألعاب تماما

عن مكتبة المدرسة أنها : ١. متوفرة () ٢. غير متوفرة ()
البعد الأكاديمي/ ملاحظة : اقرأ بعناية كل سؤال حول العلاقة بين الطلاب والمدرسين في مدرستك
وحدد إجابة واحدة بين "أبدأ" و "دائماً". العلاقة/ التفاعل مع الطلبة :

ت	الفقرة	دائماً	أحياناً	مطلقاً
١	مدرسي مستعد لمساعدتنا (يريد المدرس مساعدتنا).			
٢	إذا طرحنا أي أسئلة في الصف، يجيبنا المدرس ويوجهنا.			
٣	من السهل التحدث مع الأستاذ حتى بعد انتهاء وقت الدرس.			
٤	يهتم المدرس بما نقوم به في عطلات نهاية الأسبوع ، والرياضة ، والمرح ، والهوايات ، والرحلات أو الأنشطة الأخرى.			

التقييم

ملاحظة : اقرأ بعناية كل سؤال وحدد إجابة واحدة بين "أبدأ" و "دائماً"

ت	الفقرة	دائماً	أحياناً	أبداً
١	انا أعلم كيف سيقوم المدرس كل مادة في بداية كل موضوع.			
٢	نحن نفهم ما يطلب منا المدرس القيام به في كل درس.			
٣	عندما يعطينا المدرس الدرجات ، فإنه يشرح لنا سبب حصولنا على هذه الدرجة ويمكنه التحقق منها إذا اعتقدنا أن ذلك قد يكون خطأ.			

٤	يعيد المدرس مهام الصف مشيرًا إلى كيفية تصحيح أخطائنا.			
---	---	--	--	--

استراتيجيات التدريس / كم مرة مدرسك في الدرس :

ملاحظة : اقرأ بعناية كل سؤال وحدد إجابة واحدة بين "أبدًا" و "دائمًا"

ت	الفقرة	دائمًا	أحيانا	أبدا
١	يقوم بإنشاء التجارب لشرح ظاهرة طبيعية.			
٢	يحضر سويًا مع مجموعة الصف مقترحات للعناية بالبيئة أو الطبيعة.			
٣	اعداد التمارين الرياضية مع أمثلة على البيئة أو الطبيعة.			
٤	يتركنا نقرأ المادة التي تحتوي على موضوعات حول القضايا البيئية: الطبيعة ، وكيفية العناية بالنباتات والحيوانات ، وما إلى ذلك.			

البعد الاجتماعي

ملاحظة: اقرأ بعناية كل سؤال حول قواعد مدرستك وحدد رقمًا واحدًا على مقياس من (١ الى ٥)

١. يتم تطبيق قواعد المدرسة في صفي:

غير متساوية جدًا ١ ٢ ٣ ٤ ٥ متساوية جدًا

٢. نظام تقويم الواجبات والاختبارات هو:

غير مطبق بالتساوي اطلاقًا ١ ٢ ٣ ٤ ٥ يتم تطبيقه بالتساوي جدًا

٣. العقوبات والمكافآت:

غير مطبقة اطلاقًا ١ ٢ ٣ ٤ ٥ مطبقة تمامًا

٤. مشاركتي في صنع القرار المهم:

غير معتبرة جدًا ١ ٢ ٣ ٤ ٥ معتبرة جدًا

الاستدامة

ملاحظة : اقرأ بعناية كل سؤال حول السلوك البيئي لمدرستك وحدد إجابة واحدة بين "أبدًا" و "دائمًا".

ت	الفقرة	دائمًا	أحيانا	أبدا
١	يتم الترويج لإعادة استخدام المواد التعليمية وإعادة تدوير القمامة في مدرستي.			
٢	حملات رعاية البيئة المدرسية: توفير الكهرباء ، والعناية بالمياه ، وإعادة التشجير جزء مهم من البرامج المدرسية.			

			يتم الترويج للحياة المدرسية الصحية من خلال المهرجانات والألعاب الرياضية والمسابقات أو العروض التقديمية الخاصة بمضار التدخين	٣
			هناك أنشطة في البرنامج المدرسي تعزز التواصل المحترم بين الطلاب والمدرسين ، مثل المسرحيات ، والجلسات العامة ، والتدريب الخاص ، وحملات التوقيع ، أو فعاليات التفكير (دورات الاتصال- ورش العمل).	٤

Appendix D

"الاستبانة"

عزيمي /عزيمتي الطالب/ة

بين يديك أستبانة خاصة للبحث الموسوم: (العلاقة بين البيئة المدرسية وسلوكيات التدخين بين طلاب المدارس الثانوية)

Part one : Socio-demographic data

1. Age: _____

2. Gender: Female Male

3. Class:

First Second Third Fourth Fifth Sixth

4. Living Arrangement:

- Live with my parents - Live with my mother - Live with my father - Live with my relatives

5. Education behaviors of the mother

- Illiterate - Read and write - Elementary school - Middle school - High school - Diploma - Bachelor's degree - High diploma - Master's degree - Doctoral degree

6. Education behaviors of the father

- Illiterate - Read and write - Elementary school - Middle school - High school - Diploma - Bachelor's degree - High diploma - Master's degree - Doctoral degree

7. Family Monthly Income level ((in Iraqi Dinars):

Less than 300,000		300,000-600,000	
601,000-900,000		901,000-1,200,000	
1,201,000-1,500,000		1,501,000 or more	

8. Household's Profession

A.	Professional (including doctors, senior administrative staff, senior lecturers, professors, lawyers, auditors, newspaper editors, expert musicians, architects, managing directors for industrial and commercial companies)	
B.	Semi-professional (include people with a degree after high school or university education such as engineers, teachers, etc.)	
C.	Writer, shopkeeper, farmer, work of a repetitive nature. Printer clerk, accountant, salesman, farm owner.	
D.	Skilled Worker: Complicated work that requires excessive training such as carpenter, construction worker, mechanic, car driver, etc.	
E.	semi-skilled worker - work that requires some training; electrician, factory worker, bookbinder, waiter.	
F.	Unskilled worker - work that does not require education or training such as guard, cleaner, porter, etc.	
G.	It doesn't work.	

Part Two: Note/ Please tick only one option**1. Smoking Behaviors for student**1.1 Never smoked 1.2 Former smoker 1.3 Intermittent smoker 1.4 Daily smoker

2. If the answer is yes, what is the type of smoking:2.1 Cigarettes 2.2 Hookah 2.3 Both cigarettes and Hookah **3 . Source of tobacco :**3.1 Personal expense 3.2 Available at home 3.3 From others **4. Who are the people who influenced you the most and pushed you to start a smoking habit?**4.1 family members 4.2 friends 4.3 on my own 4.4 Teachers 4.5 Others **Instruction:** Read carefully each question and mark the appropriate answer:

Non	Items	Yes	No
1	Are you a passive smoker (exposure to cigarette or hookah smoke indirectly)?		
2	Smoking behaviors of the mother		
3	Smoking behaviors of the father		
4	Smoking behaviors of siblings		
5	Smokers are mostly from close friends		
6	Smoking behaviors of the teacher		
7	Does your teacher teach on smoke-related issues on the class?		
8	Does the school have clear rules about smoking?		
9	Does students obey the smoke-free laws on the school?		

Part Three: School Environment (Physical Dimension)**Instruction:** Read carefully each question about the conditions of your school and mark a single number on a 1– 5 scale.**Classroom**

1 . Classroom furniture is in good condition and clean?

Very bad and dirty 1 2 3 4 5 Very good condition and clean

2 . I value the natural light (windows) in the classroom as

Very limited 1 2 3 4 5 Very adequate

3 . The ventilation inside the classroom is

Very insufficient 1 2 3 4 5 Very appropriate

4 . Inside the classroom is:

Very affected by outside noise 1 2 3 4 5 Very outside noise free

Instruction: Read carefully each question about the school yard and mark a single box with an “X”.

The school yard is:

Very dirty	1	2	3	4	5	Very clean
Very reduced space	1	2	3	4	5	Very enough space
Very unsafe	1	2	3	4	5	Very safe
Not enough equipped for games Completely	1	2	3	4	5	Enough equipped for games completely

About the school library:a. Available b. Not available **Academic Dimension**

Instruction: Read carefully each question about the relationship between students and teachers of your school and mark a single answer between “never” to “always”.

Relationship / interaction with students

Non	Item	Never	Sometimes	Always
1	My teacher is willing to help us (The teacher wants to help us).			

2	If we ask any questions in class, my teacher answer us and guides us.			
3	It's easy talk with my teacher even when it's not class time.			
4	My teacher is interested in what we do on weekends, sports, fun, hobbies, journeys, or other activities.			

Evaluation

Instruction: Read carefully each question and mark a single answer between “never” to “always”.

Non	Item	Never	Sometimes	Always
1	I know how my teacher will evaluate each subject at the beginning of each topic			
2	We are clear about what my teacher asks us to do in every class.			
3	When my teacher gives us the grades, he/she explains to us why we get that grade and can check it if we think that might be an error.			
4	My teacher returns class assignments pointing out how to correct our mistakes.			

Teaching strategies / How often your teacher in class:

Instruction: Read carefully each question and mark a single answer between “never” to “always”.

Non	Item	Never	Sometimes	Always
-----	------	-------	-----------	--------

1	Create experiments to explain a natural phenomenon.			
2	Prepare together with the class group proposals for the care of the environment or nature.			
3	Prepare mathematical exercises with examples of the environment or nature.			
4	Leave us reading material with topics about environmental issues: nature, how to take care of plants and animals, etc.			

Social Dimension

Instruction: Read carefully each question about the rules of your school and mark a single number in the 1 – 5 scale. / **Justice**

1. The school rules are applied in my classroom:

Nothing Very equal 1 2 3 4 5 Very equal

2. The homework and exam evaluation system is:

Not equally applied 1 2 3 4 5 Equally applied

3. Punishments and rewards:

Not accomplished 1 2 3 4 5 Totally
accomplished

4. My participation in important decision making is:

Not considered 1 2 3 4 5 Very considerate

Sustainability

Instruction: Read carefully each question and mark a single answer between “never” to “always”.

Non	Item	Never	Sometimes	Always
1	The reuse of educational materials and			

	garbage recycling is promoted in my school.			
2	School environmental care campaigns: saving electricity, water care, reforestation is an important part of school programs.			
3	Healthy school life is promoted through festivals, sports games, competitions, or special presentations on the harms of smoking.			
4	There are activities in the school program that promote respectful communication between students and teachers, such as plays, plenary session, special training, sign campaigns or reflection events (communication courses-workshops).			

Expert's Panel

Appendix E

ت	اسم الخبير	القب العلمي	الاختصاص	مكان العمل	عدد سنوات الخبرة
١	د. امين عجيل ياسر	استاذ	تمريض صحة مجتمع	جامعة بابل/ كلية التمريض	38
2	د. سلمى كاظم جهاد	استاذ	تمريض صحة مجتمع	جامعة بابل/ كلية التمريض	38
٣	د. ناجي ياسر سعد	استاذ	تمريض صحة مجتمع	جامعة بابل/ كلية التمريض	33
٤	د. علي كريم خضير الجبوري	استاذ مساعد	تمريض صحة نفسية وعقلية	جامعة كربلاء/ كلية التمريض	٣٠
٥	د. علي عبد الرضا ابو طحين	استاذ مساعد	طب الاسرة والمجتمع	جامعة كربلاء/ كلية الطب	٢٤
٦	د. صافي داخل نوام	استاذ مساعد	تمريض صحة نفسية وعقلية	جامعة كربلاء/ كلية التمريض	٢٠
٧	د. غزوان عبد الحسين	استاذ مساعد	تمريض صحة مجتمع	جامعة كربلاء/ كلية التمريض	١٨
٨	د. مرتض غانم عداي الجبوري	استاذ مساعد	تمريض صحة مجتمع	جامعة وارث الانبياء/ كلية التمريض	16
٩	د. بشير عقيل مسلم	استاذ	طب الاسرة والمجتمع	جامعة كربلاء/ كلية الطب	10
١٠	د. شهرزاد شمخي الجبوري	استاذ مساعد	طب الاسرة والمجتمع	جامعة كربلاء/ كلية الطب	8
١١	د. حقي اسماعيل منصور	استاذ	تمريض صحة مجتمع	جامعة كربلاء/ كلية التمريض	٦

Appendix F-A

Republic of Iraq
Ministry of higher education & scientific research
University of Kerbala
College of Nursing



جمهورية العراق
وزارة التعليم العالي والبحث العلمي
جامعة كربلاء
كلية التمريض
الدراسات العليا

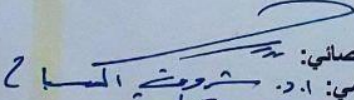
أقرار الخبير الاحصائي

اشهد بان الرسالة الموسومة :

(العلاقة بين البيئة المدرسية وسلوك التدخين بين طلاب المدرسة الثانوية)

(The association between school environment and smoking behaviors among secondary school students)

قد تم الاطلاع على الاسلوب الاحصائي المتبع في تحليل البيانات و اظهار النتائج الاحصائية وفق مضمون الدراسة ولأجله وقعت.

توقيع الخبير الاحصائي: 
الاسم والمقب العلمي: د. شروان المسبح
الاختصاص الدقيق: احصاء تطبيقي
مكان العمل: جامعة كربلاء / كلية الدراسات والبحوث
التاريخ: 2023 / 5 / 11




العنوان : العراق - محافظة كربلاء المقدسة - حي الموظفين - جامعة كربلاء
Mail: nursing@uokerbala.edu.iq website: nursing.uokerbala.edu.iq



Appendix F-B

Republic of Iraq
Ministry of higher education & scientific research
University of Kerbala
College of Nursing



جمهورية العراق
وزارة التعليم العالي والبحث العلمي
جامعة كربلاء
كلية التمريض
الدراسات العليا

اقرار الخبير اللغوي


اشهد بان الرسالة الموسومة :

The Association – students


قد تم جرى مرجعتها من الناحية اللغوية بحيث اصبحت بأسلوب علمي سليم خال من الأخطاء اللغوي ولأجله وقعت.

الرسالة على بعض الخطأ التي تحتاج
الى تصحيح من قبل الباحث.

توقيع الخبير اللغوي:
الاسم واللقب العلمي: م. هادي خليل صالح
الاختصاص الدقيق: لغويات / آداب
مكان العمل: جامعة كربلاء / كلية
التاريخ: 2023 / 7 / 23



العنوان : العراق - محافظة كربلاء المقدسة - حي الموظفين - جامعة كربلاء
Mall: nursing@uokerbala.edu.iq website: nursing.uokerbala.edu.iq



الخلاصة

الخلفية: السبب الأكثر شيوعاً للوفيات التي يمكن الوقاية منها في العراق هو التدخين، وهو أحد السلوكيات عالية الخطورة للإصابة بالأمراض المزمنة والوفيات المبكرة، كما أن الإقلاع عن عادة التدخين أمر صعب. تعكس بيئة المدرسة عنصرًا سياقيًا أوسع يرتبط بتدخين الطلاب.

الهدف: التعرف على العلاقة بين البيئة المدرسية وسلوكيات التدخين بين طلاب المدارس الثانوية. المنهجية: أجريت دراسة الارتباط الوصفي في الفترة من ٢2 ايلول ٢٠٢٢ إلى ٩ تموز ٢٠٢٣. أجريت الدراسة في المدارس الثانوية في مركز مدينة كربلاء. وتم استخدام العينة العشوائية المنهجية العنقودية متعددة المراحل لاختيار الطلاب. وتضم عينة الدراسة ٣٧٢ طالبًا.

النتائج: أشارت الدراسة إلى أن معدل انتشار سلوكيات التدخين بين طلاب المدارس الثانوية بلغ ٢٥,٣%. وكانت الأغلبية من الذكور. توجد علاقة معنوية بين تدخين المعلمين والطلبة المدخنين ($H.S=0.00$) كما لا توجد فروق ذات دلالة إحصائية بين سلوكيات التدخين بين الطلاب المدخنين والبيئة المدرسية، كما توجد فروق ذات دلالة إحصائية بين سلوكيات التدخين بين الطلاب المدخنين وخصائصهم الاجتماعية والديموغرافية (العمر والجنس) ($P\text{-value} = 0.016; \text{and } 0.47$) على التوالي، وكانت بيئة المدارس مقبولة في مدينة كربلاء. ($R.S=67.38$)

الاستنتاجات: أشارت الدراسة إلى أن معدل انتشار سلوكيات التدخين بين طلاب المدارس الثانوية بلغ ٢٥,٣%. غالبية الطلاب المدخنين تتراوح أعمارهم بين ١٦ و ١٨ سنة، وهم ذكور، من الصف الخامس، وأكثر من ثلثهم يدخنون النرجيلة، ويعيشون مع أسرهم ذات دخل شهري منخفض أقل من ٣٠٠,٠٠٠ دينار عراقي.

التوصيات: هناك العديد من الحلول لمعالجة المشاكل من خلال برامج التنقيف الوقائي، ومتابعة أولياء الأمور والمعلمين لطلابهم للسيطرة على انتشار التدخين بين طلاب المدارس الثانوية، والتعرف على الأسباب التي تؤثر على سلوكيات التدخين.



جامعة كربلاء

العلاقة بين البيئة المدرسية وسلوكيات التدخين بين طلاب المدارس الثانوية

مجلس كلية التمريض / جامعة كربلاء
هي جزء من متطلبات نيل درجة الماجستير في علوم التمريض

رسالة تقدمت بها:

رقية علي محمد علي علي

بإشراف

أ.م.د. سلمان حسين فارس الكريطي

ذو الحجة - ١٤٤٤

تموز - ٢٠٢٣ م