



*University of Kerbala
College of Nursing*

*Self-Efficacy for Smoking Cessation and Knowledge
about Smoking Consequences among Adolescents*

*Thesis Submitted
By
Ayoub Akbar Rafat*

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*Supervised By
Instructor Dr. Haqi Ismael Mansoor*

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﴿ وَأَنْفَقُوا فِي سَبِيلِ اللَّهِ وَلَا تُلْقُوا

بِأَيْدِيكُمْ إِلَى التَّهْلُكَةِ ﴾

"صدق الله العلي العظيم"

سورة البقرة آية ١٩٥

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I certify that this thesis, entitled (***Self-Efficacy for Smoking Cessation and Knowledge about Smoking Consequences among Adolescents***), submitted by **Ayoub Akbar Rafat** , was prepared under our supervision at the College of Nursing, the University of Kerbala in partial fulfillment of the requirements for the degree of master science in nursing.

Signature

Supervisor

Instructor.Dr. Haqi Ismael Mansoor

University of Kerbala

College of Nursing

Date: / / 2024

Approval Certification

After reviewing the thesis (**Self-Efficacy for Smoking Cessation and Knowledge about Smoking Consequences among Adolescents**), we certify that it fulfills all the requirements for awarding the degree of master science in nursing.


Signature

Head of Community Health Nursing Department
Assist.prof. Dr. Gazwan Abdulhusein Al-Abedi

University of Kerbala

College of Nursing

Date: / / 2024

Signature

Associate Dean for Scientific Affairs and Higher Studies

Assist. Prof. Dr. Hassan Abdulla Athbi

University of Kerbala

College of Nursing

Date: / / 2024

Committee Examination

We, the members of the examining committee, certify that after reading this thesis entitled (**Self-Efficacy for Smoking Cessation and Knowledge about Smoking Consequences among Adolescents**), which is submitted by (**Ayoub Akbar Rafat**) and we have examined the student's thesis in its contents, and what is related to it, and we have decided that it is qualified for pursuing the master degree of science in Nursing .



Signature

Prof. Dr. Khamees Bandar Obaid

University of Kerbala
Collage of Nursing

Member

Date: / / 2024



Signature

Assist. Prof. Dr. Ghazwan Abdalhussin

University of Kerbala
Collage of Nursing

Member

Date: / / 2024



Signature

Prof. Dr. Ameen A. Yasir

University of Babylon
Collage of Nursing

Chairman

Date: / / 2024

Approved by the council of the Nursing College



Signature

Assist Prof. Dr. Dr. Selman Hussein faris

Dean of the College of Nursing/University of kerbala

Date: / / 2024

Dedication

*To the soul of my brother, the martyr Ihsan Akbar,
Rifaat Duger, may Allah have mercy on him.*

To my deceased Sajjad Mohammad Akbar

*To my dear father..... May God prolong his life and give
him more health .*

*To my dear mother..... May God prolong her life and give
her more .*

To my brothers and sisters...all love and respect.

To my dear family.....all love and respect

Akcnowlegdement

Above all, praise be to God Almighty

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Abstract

Tobacco use heightens the risk of severe chronic diseases and is a major preventable cause of death. Adolescence is a pivotal time for both starting and quitting smoking. Self-efficacy confidence in one's ability to quit and knowledge about smoking's consequences significantly affect adolescent smoking behaviors.

A cross section study conducted from 10th October 2023 to 20th June 2024, study aimed to identify if participants' age, family's socioeconomic status, and knowledge about smoking consequences can predict their self-efficacy for smoking cessation, and investigate the differences in knowledge about smoking consequences and self-efficacy for smoking cessation between the groups of grade, and living arrangements, family's socioeconomic status. The study included 400 secondary school students selected by a convenience sample. The study instrument is included Sociodemographic part, Family's Socioeconomic Status Scale, The Smoking: Self-Efficacy Scale, and Knowledge about the Consequences of Smoking.

The study results revealed that family's socioeconomic status positively predicts students' self-efficacy for smoking cessation and knowledge about the consequences of smoking positively predicts students' self-efficacy for smoking cessation. There is a statistically significant difference in self-efficacy for smoking cessation among family's socioeconomic status groups.

The study concluded that the better the socioeconomic status the family has, the greater the Self-Efficacy students enjoy. The broader the knowledge the students have, the greater the Self-Efficacy for smoking cessation they enjoy. The study recommends that there is a need for the community health nurses to initiate multisectoral collaboration with the raising of the knowledge of students about the deleterious consequences of smoking. There is a need for the community health nurses to collaborate

with health officials in the Ministry of Health, Ministry of Labour and Social Affairs with the goal of protecting adolescents from the hazardous effects of smoking.

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Symbol Table

Symbol	Meaning
%	Percentage
=	Equal to
&	And
-	Minus
±	Minus/plus
>	More than

List of Abbreviation

Abbreviation	Meaning
APP	American Academy of Pediatrics
ANOVA	Analysis of Varians
et al	And others
Assess	Assessment
BCE	Befor Common Era
CDC	Centers for Disease Control and Prevention
COPD	Chronic Obstructive Pulmonary Disease
DF	Degree of freedom
DNA	Deoxyribonucleic acid
DALYs	disability-adjusted life years
ETS	Educational Testing Service
EU	European Union
F	Frequency
Fig	Figure
FCTC	fream work convention on tobacco control
GBD	Global Burden of Disease
H.S	High Significant
HDI	Human development Index
i.e.	id est (that is)
IMR	Infant Mortality Rate
IBM	International Business Machines
ID	Iraqi Dinar
M	Mean
N	Number of Samples
nAChR	nicotinic acetylcholine receptor
N.S	Not Significant
H0	Null Hypothesis
No.	Number
OR	Odds Ratio
PAHs	polynuclear aromatic hydrocarbons
P	Probability
P-Value	Probability Value
R	Reliability Coefficient
SHS	secondhand smoke
Sig	Significance
S	Significant
SLT	smokeless tobacco
SLT	smokeless tobacco
SES	socioeconomic status
SD	Standard Deviation

SPSS	Statistical Package for Social Sciences
OECD	The Organization for Economic Cooperation and Development
TTM	Transtheoretical Model
US	United States
USA	United States of America
USPHA	United States public Health Service
WHA	World Health Assembly
WHO	World Health Organization

Chapter One

Introduction

Chapter one

1.1. Introduction

The agricultural product known as tobacco is made from the dried leaves of the genus *Nicotiana*, which contains 64 species of plants in the Solanaceae family. Tobacco has been utilized in many ways by humans throughout history. Chewing or smoking tobacco in pipes was common practice in bygone eras. Cigarettes are the primary packaging it is now found in (Popova,*et al.*, 2020).

According to WHO recommendations, there are two main types of tobacco products: those that can be burned in a cigarette and those that can be chewed or snuffed out. (Medial, 2017). People of all income levels smoked at dizzying rates. The most popular time to smoke tobacco was during the transition from the 16 to the seventeenth centuries. Tobacco became victorious. At this time, smoking was primarily characterized by its fashionable position in terms of social relevance (Apperson,2019).

Tobacco products such as cigars, pipe tobacco, and chewing tobacco were widely used during the turn of the twentieth century. Even if cigarette smoking was starting to rise sharply, mass manufacture of cigarettes was only starting. There was a dual perception of tobacco's therapeutic and harmful effects in the ninth edition of the Encyclopaedia Britannica (1888), which states that tobacco products were thought to cause certain health problems. As a means to alleviate boredom, boost mood, and increase focus and performance, many academics and medical experts of the day promoted the use of tobacco (West, 2017).

An unwavering commitment to tobacco was one characteristic that distinguished the gallant, dandy, swell, or beau of that era. Despite the fact that gallantry was only a piece of equipment, Earle asserts that certain individuals were "born and made" to wear it (Apperson, 2020). The vast majority of people who smoke do so because they like the flavor and aroma

of tobacco. In many cases, the agricultural product is combined with additives before being burned (Peterson & Hecht.,2017). Tobacco smoke is inhaled via the airways and enters the bloodstream through the oral mucosa and alveoli. Among the many active components in the smoke is the addictive psychostimulant drug nicotine. Cigarette smoke contains many chemicals, the most prominent of which is nicotine, which acts on nerve endings to increase heart rate, alertness, and arousal (Glasser *et al*, 2017). together with other factors, such as response time. Addiction develops as a result of the release of the feel-good chemicals dopamine and endorphins (Satel & Lilienfeld, 2014).

German scientists' discovery of the link between smoking and lung cancer in the late 1920s marked the beginning of the first modern anti-smoking campaign, though it was cut short by the collapse of Nazi Germany at the end of World War II (Wolfson, 2017). In 1950, scientists in the United Kingdom proved beyond a reasonable doubt that smoking causes cancer. As more and more proof accumulated in the 1960s, politicians began to take a stand against the practice. The developed world's consumption rates have either plateaued or fallen since 1965 (Leiter *et al.*,2023).

However, they continue to rise in the developing globe. In 2008–2010, 11% of women and 49% of men who were 15 years of age or older in fourteen low- and middle-income nations *Bangladesh, Brazil, China, Egypt, India, Mexico, Philippines, Russia, Thailand, Turkey, Ukraine, Uruguay, and Vietnam* reported consuming tobacco. The majority of tobacco use (almost 80%) came from cigarettes (Theilmann *et al.*,2022). In younger age groups, the gender difference is often less noticeable. The world Health Organization reports that tobacco usage results in 8 million deaths worldwide each year (Zainel *et al.*,2024).Recognized that tobacco use, especially smoking, negatively affects society. There is an increasing agreement that tobacco consumption and smoking have become epidemic

in nature. Research suggests that if current smokers do not quit, the number of deaths related to tobacco use will rise significantly over the next 25 years (Neil & Williamson.,2014).

On the other hand, tobacco and its derivatives are lawfully manufactured, traded, and used, just like any other goods. The laws and regulations governing these activities also apply to the manufacturing and trading of tobacco products. As a result, although many nations actively work to lower smoking and other tobacco use in order to decrease the societal costs associated with tobacco use, the employment and revenue of other nations must primarily rely on the production of tobacco and related products (Petit & Nagy, 2016).

The World Health Organization (WHO) and its allies are urging nations to remove tobacco product branding in honor of World No Tobacco Day 2016. As part of its Framework Convention on Tobacco Control, the World Health Organization has a regulation called "plain packaging" for tobacco products. Using logos, colors, photos, or promotional text on tobacco products is either limited or outright forbidden by this law. The approval is given to use only trademarks and product names that are consistently styled and colored (Malaeb *et al.*,2024).

The main cause of lung cancer is smoking cigarettes. Another fact is that almost 90% of lung cancer fatalities are caused by smoking cigarettes. According to another survey, almost 1,590,000 people lost their lives to lung cancer in 2012. Tobacco cessation protects against lung cancer, the most lethal form of the disease. Additionally, the chance of bladder cancer, head and neck cancer, prostate cancer, and mortality from any disease is increased when one smokes. Furthermore, COPD accounts for around 85% of all fatalities. Reasons for the issue in Iraq, the need for effective treatments for tobacco-related cancers, and ways to discourage smoking are the main points of this viewpoint piece (Ibrahim *et al.*,2018).

Tobacco usage increases the likelihood of developing serious chronic illnesses and is a leading cause of avoidable mortality. Medical professionals and smokers alike face obstacles while trying to kick the habit. This research set out to determine how a cohort of males in Mosul city's smoking habits changed as a result of the city's mandatory smoking ban from 2014 to 2016 (Ahmed & Tawil.,2021).

One of the numerous risky health behaviors to which this group is prone is tobacco experimentation, which is prevalent and potentially harmful among adolescents, especially in poor countries. Cigarette usage has been on the decline in developed countries but on the rise in developing ones, especially in low- and middle-income areas like the Middle East, for the last several decades. Little is known about the prevalence or causes of adolescent tobacco use in Iraq. Included in this group of research is the Kurdistan-Iraq, Global Youth Tobacco Survey, which found that 15.3% of the youth population now smokes cigarettes. Being male, having more money, believing that smoked boys or girls were beautiful, and being influenced by parents or friends who smoked were some of the variables linked to tobacco usage in the poll. While Iraq's three terrible wars and long-term sanctions may have had an impact on adolescent tobacco use, there is a dearth of data on the prevalence of tobacco use across the nation (Jawad *et al.*,2018).

Represents a common practice that is well-accepted by Iraqi culture. But the administration has been pushing for tougher regulations since 2003. It has been unlawful to smoke in or near public buildings in Iraq since 2009, yet the rule is still controversial and implementation is patchwork. According to a research done in 2015 by health activists, 55 Iraqis die per day as a result of tobacco-related illnesses. Terrorism and violence in Iraq kill an average of 10 people every day (Al-Badri *et al.*,2017). With a wide range of brands and varieties accessible nationwide, smokeless tobacco (SLT) is widely used and produced in India, making the

country a global leader in this industry. While smoking is uncommon among Indian women, studies conducted in the last decade reveal that smokeless tobacco use is rampant and has serious effects on oral health and perinatal health, including issues like preterm birth, low birth weight, and length at birth. These effects are dosage sensitive, meaning they become worse with greater doses of SLT, according to studies conducted in India. Despite the persistence of these epidemiologic linkages, very little is known about the variables that motivate SLT use throughout reproductive years, particularly during pregnancy. The increasing usage of packaged tobaccos and specialty tobaccos flavored with supari (betel nut) and chemical pollutants and carcinogenic additives by low-income, poorly educated women highlights the critical need for research on this subject. Cheap tobaccos have a great potential to negatively damage the reproductive and general health of these women, and they make up a large portion of the market for them (Nair *et al.*,2015) .

Giving up tobacco has practically instant advantages. Your heart rate improves in as little as twenty minutes after you stop smoking. Coughing and dyspnoea go away in one to nine months. Your stroke risk will drop to that of a non-smoker in five to fifteen years. Your 10-year lung cancer mortality rate is approximately half that of a smoker. Your risk of heart disease will be equal to that of a non-smoker after 15 years (Villanti *et al.*,2016). Adolescence is a time of physical and psychological transition that typically takes place between the ages of puberty and legal adulthood. The World Health Organisation states that adolescents, a youthful demographic between the ages of 10 and 19, are frequently assumed to be in good health. However, adolescence is the precursor to many major disorders that manifest in adulthood. For instance, using tobacco (Sharma & Chalise,2018).

There are 1.2 billion people in the globe between the ages of 10 and 20. Eighty-eight percent of teenagers reside in poor nations. Adolescents

have a tendency to take chances, which is a frequent trait linked to the psychological desire to push boundaries in order to build a unique identity. Due to their willingness to take chances, many teenagers experiment with alcohol, tobacco, and other addictive substances without fully realising the long-term effects of addiction or the possible harm to their health (Istenic *et al*,2023).

Teenage cigarette smoking continues to be a public health issue. Nowadays, a sizable segment of the teenage population smokes. Adolescents are especially susceptible to nicotine addiction, and stopping is challenging. Primary prevention as well as smoking cessation must be the objectives of programs aimed at stopping teenage cigarette smoking. There hasn't been much research done on bupropion and nicotine replacement treatments for adolescents, including as gum, patches, and nasal spray. Adolescents have not had vannicline examined as a therapeutic option (Mahaian *et al*,2021).

Public education about the harmful effects of tobacco use is recommended by the World Health Organisation Framework Convention on Tobacco Control (WHO FCTC). It highlights how crucial it is to inform people about the dangers to their health, the addictive nature of tobacco products, and the possibility of dying from tobacco use and smoke inhalation. Raising public knowledge of the dangers of smoking is one of the main goals of the WHO FCTC, which aims to protect public health. (Hoffman *et al*.,2019).

Even teenagers who smoke develop an addiction to nicotine. Ninety-three percent of daily teenage smokers who had previously tried to quit reported experiencing symptoms of nicotine withdrawal. Of daily smokers aged 10 to 22, seventy-four percent said that one of the reasons they used tobacco was because it was difficult to quit. (Das *et al*,2016).

Cigarette smoking has slow-moving, progressive, and cumulative health effects. The smoke from cigarettes is not harmful enough to breathe

in excessive amounts. Its addiction has always been among the most difficult to overcome. Despite the widespread awareness of the dangers associated with smoking, a significant proportion of teenage pupils continue to smoke. Numerous factors contribute to these students' smoking, such as their socioeconomic position, the presence of smokers in their parents, siblings, and friends, as well as their social surroundings (Ebirim et al,2014).

Young individuals may find it simpler to overlook the long-term effects of smoking cigarettes because they believe they are immune to these remote risks and because many of them think they can stop smoking before their smoking behaviour has a negative impact on their long-term health. Nonetheless, research indicates that the majority of smokers who start while they are teenagers will likely keep smoking even if they decide to stop. (Adeloye *et al*,2019). Since smoking frequently starts in adolescence, lowering the rate of adolescent smoking is crucial. Roughly 90% of adult smokers begin their habit before turning 20. The fact that many of these teenagers attend senior secondary school in Owerri, South-Eastern Nigeria, led to the investigation of the incidence of cigarette smoking among teenagers enrolled in school. This study investigates teenagers who are enrolled in school, their current smoking activity, and their awareness of the health concerns connected to smoking (Oyewole *et al*,2018).

Additionally, a relationship was found between increased income levels and a better understanding of the negative health effects of smoking. Moreover, geographic location was shown to be another sociodemographic factor that was relevant in this situation, and research was done on Nigerian people' awareness of the health dangers connected to smoking (Adeniyi *et al*.,2017) .

The study discovered that people's perceptions of the dangers of smoking differed depending on their socioeconomic status and place of residence. People who lived in cities knew more about the health hazards of

smoking than people who lived in rural areas. In a similar vein, Sasone et al. (2012) discovered that among their sample of Indian participants, city dwellers were better informed about the health risks associated with smoking than their rural counterparts. There exists a discrepancy in the comprehension of the health hazards linked to tobacco use and smoking. The negative effects of smoking were less known by present smokers than by non-smokers. According to Krosnick et al., smokers may be underestimating the risks associated with smoking. They further question why smokers are unaware of the full range of harmful effects associated with smoking (Nargis *et al.*,2019).

1.2. Important of the study

Each year, approximately 1.3 billion people worldwide smoke cigarettes, with about 80% residing in countries with lower or middle economic status. In 2020, smoking rates were recorded at 36.7% for men and 7.8% for women, leading to an overall smoking prevalence of 22.3% globally (Hanafin & Clancy,2015).

Additionally, Iraq is holding symposiums in Erbil and Baghdad to address tobacco use as one of the four main risk factors for noncommunicable diseases. Recent surveys indicate that approximately 20% of Iraqis regularly use tobacco products, which is a notably high prevalence. Compounding the issue, the latest Global Youth Tobacco Survey conducted in Iraq reveals that 11% of the youth population are regular smokers (Malaeb *et al.*,2024).

As of 2021,15.9% of adolescent in the Organization for Economic Cooperation and Development OECD nations smoked tobacco every day. While over 25% of the population smokes in France and Türkiye, less than 10% of the population smokes in Iceland, Costa Rica, Norway, Mexico, Canada, the US, New Zealand, and Sweden. China, Bulgaria, Indonesia had rates over 25% among partner and accession nations, whereas India,

Peru, and Brazil had rates below 10%. With the exception of Norway, all OECD nations had higher rates of male smokers than female smokers; 19.9% of men and 12.3% of women smoked cigarettes daily on average (GBD, 2015).

Nearly 100 million people died from it in the 20th century, with most of those casualties residing in the developed countries of today. Roughly 7 million of those deaths are directly attributable to tobacco use. Around one and a half million nonsmokers are losing their lives each year due to secondhand smoke (Ritchie & Roser, 2023). Tobacco use damages almost every bodily organ and causes illness and incapacity (CDC, 2024). Fifty percent of smokers who do not stop eventually die from their addiction. There are almost 8 million annual tobacco-related deaths, with an additional 1.3 million non-smokers being killed by secondhand smoke (Verguet, *et al.*, 2016).

When it comes to avoidable mortality, disability, and illness in the US, cigarette smoking is at the top of the list. The number of American adults who smoke cigarettes is at 28.3 million, while 2.80 million youths in grades 7 through 12 use electronic cigarettes or other tobacco products. Tobacco use and secondhand smoke are the leading causes of premature death for half a million Americans annually. Major smoking-related illnesses affect an additional 16 million individuals. Adolescent smoking-related disorders cost more than \$225 billion a year to pay for healthcare in the United States (CDC, 2023). Tobacco companies shell out billions of dollars annually to promote their products (CDC, 2024).

Tobacco smoke includes nicotine and hundreds of other chemicals that might be harmful. These are the results of tobacco products being burned. Sticky solid particle matter (tar), gasses like carbon monoxide, and volatile organic compounds are all considered compounds. (Rigotti, *et al.*, 2022). Tobacco and tobacco smoke have a combined total of 1,172

components, with 3,044 identified in tobacco and 3,996 in average cigarette smoke (Acharya,*et al* ,.2016).

Tobacco smoke contains 69 known carcinogens, according to research conducted in 2001 by Hoffmann and Hoffmann. Among these carcinogens, you can find ten species of polynuclear aromatic hydrocarbons (PAHs), six types of heterocyclic hydrocarbons, four types of volatile hydrocarbons, three types of nitrohydrocarbons, four types of aromatic amines, eight types of N-heterocyclic amines, ten types of N-nitrosamines, two types of aldehydes, ten different organic compounds, nine inorganic compounds, and three phenolic compounds (Li,Y & Hecht, 2022).

Worldwide, tobacco smoking ranks high among the most serious risks to public health. Worldwide, more than 1.3 billion people smoke cigarettes at least once a year. That's equivalent to one-third of the global population over the age of 15. Even though the developing world is seeing a rise in smoking frequency, very little is being done to track this trend there. Iraqi smoking prevalence studies performed during the last decade have shown rates of 15-25% for men and 1-10% for girls, while there is a dearth of research on this topic overall (Mousawi,2014).

Humans have been using tobacco for millennia, but it wasn't until the 19th century that mass cigarette production and smoking emerged. Since then, cigarette smoking has become more and more commonplace; in 2000, around 1.1 to 1.2 billion persons worldwide—or one in three adults—smoked cigarettes. There are an estimated four million fatalities worldwide each year attributed to smoking (Leinberger-Jabari *et al.*,2015). Because of rising adult population and rising tobacco use, it is predicted that by 2025 there will be 1.6 billion smokers worldwide (Sjöstrand *et al.*, 2015).

About 6 million people die each year as a result of the tobacco pandemic, making it one of the worst public health crises in human history. There are over 5 million fatalities directly attributable to tobacco usage and

over 600,000 attributable to non-smokers being exposed to second-hand smoke (Malaeb *et al.*,2024).

1.3. Statement of the problem

The prevalence of teenage smoking is still a serious public health concern even in the face of extensive anti-smoking efforts and educational initiatives. Developing effective therapies requires an understanding of the interaction between knowledge about the harms of smoking and self-efficacy for quitting. Teenagers' smoking behaviour and attempts to stop are significantly influenced by their amount of knowledge about the health dangers connected with smoking and their level of self-efficacy, or confidence in their ability to stop. Nevertheless, little study has been done on the interactions between these two variables and how to address both of them at once to increase quitting rates in this demographic (Orsal & Ergun,2021).

The difficult part is figuring out which precise elements of knowledge and self-efficacy have the biggest effects on teenage smoking behaviour and success with quitting. The purpose of this study is to investigate how teenagers' perceptions of the health hazards associated with smoking and their level of self-efficacy in stopping connect to each other, as well as how these factors influence their smoking behaviour and attempts to stop (Melizza *et al.*,2021).

The literature, on the other hand, is lacking in information about how these factors combine and affect adolescents' attempts to quit smoking as a whole. More specifically, it's unclear how differences in smoking knowledge and self-efficacy affect certain smoking behaviours and outcomes related to quitting within this demographic. In order to ascertain the influence of current interventions on smoking cessation rates, more research is necessary to evaluate how well they work at boosting self

efficacy and raising awareness of the negative effects of smoking (Lydon *et al.*,2014).

1.4. Objectives of the study

1. To identify the self efficacy for smoking cessation among adolescents.
2. To assess their knowledge about smoking consequences
3. To identify if participants' age, family's socioeconomic status, and knowledge about smoking consequences can predict their Self-Efficacy for smoking cessation.
4. To investigate the differences in knowledge about smoking consequences and Self-Efficacy for smoking cessation between the groups of grade, living arrangements, and family's socioeconomic class.

1.5. Research Question

Is there relationship between self-efficacy for smoking cessation and adolescents' knowledge about the consequences of smoking?

1.6. Definition of terms

1.6.1. Knowledge

A. Theoretical Definition

Smoking increases the risk of many types of cancer, such as cancers of the mouth, throat (pharynx), esophagus, larynx, bladder, pancreas, kidney, cervix, and some types of leukemia (Kutlu & Gold,2016)

B. Operational Definition

Knowledge about the harms and consequences of smoking refers to an individual's awareness and understanding of the wide range of negative effects that smoking can have on health and well-being.

1.6.2. Self-Efficacy for Smoking Cessation

A. Theoretical Definition

Adolescent smoking cessation self-efficacy is the confidence, perceived capacity and perceived ability that the teen possesses to quit smoking

(Materese *et al*,2018).

B. Operational Definition

It is students' ability to abstain from smoking as measured by the Self-Efficacy for Smoking Cessation Scale.

1.6.3. Smoking consequences.

A. Theoretical Definition

Tobacco usage negatively impacts the health of smokers and almost every organ in the body (Onor *et al.*,2017).

B. Operational Definition:

Smoking is the act of inhaling smoke from burning plant material.

While nicotine can create calming and pleasurable effects, making it hard to quit, smoking poses serious health risks, including cancer, stroke, heart attack, and lung disease.

1.6.4. Teenage smoking

A. Theoretical Definition

People who start smoking at an early age are more likely to develop a severe addiction to nicotine than those who start at a later age (Mahajan et al ,2021).

B. Operational Definition

Teen smoking is more dangerous because nicotine is more addictive.

Chapter Two
Review of
literature

Chapter Two

Review of literature

This chapter provides a comprehensive literature analysis that will address the teenage smoking issue from every angle, drawing on a wide range of current resources and delving deeply into opposing viewpoints aimed at providing broad details on all research subjects

2.1. Historical Background of Tobacco and Smoking

The Great Spirit once sent a lady to save mankind from famine and desert in an ancient period. As she journeyed throughout the globe, potatoes sprung up wherever her right palm touched the ground. Corn sprung up wherever her left palm made contact with the ground. Tobacco plants flourished in the spot where she had slept. (McKay,2014).

Ancient Indian legend of the Huron There is a long-standing Huron Indian story that states tobacco has existed. Its use into American Shamanistic rites marks its earliest recorded usage, which occurred approximately 4000 BC. (Sadik,2014).As early as 6,000 BCE, the first tobacco plants were cultivated in the Americas. About 2000 years ago, indigenous people began smoking tobacco and using tobacco enemas. (Tobacco Atlas, 2019).

In 1492, Christopher Columbus brought tobacco seeds and leaves back from the Americas, introducing it to Europe. (Menavi,*et al.*,2020) Introduced by two crew members, including Rodrigo de Jerez, Columbus was made aware of the indigenous people's use of tobacco. In his journal entry, he made note of the pleasant aroma associated with tobacco (Martínez-Fernández, 2019).In their travels to their communities, Columbus and his companions saw several individuals, both male and female, who were each carrying a burning brand and plants to make aromatic smoke (Hashemian,*et al.*, 2019). Upon their arrival back in

Europe, De Jerez, often referred to as the initial European tobacco consumer, was observed engaging in smoking. Consequently, he was subjected to a seven-year imprisonment by the Holy Inquisition, as there was a prevailing belief that malevolent spirits had taken control of him (Tobacco Atlas, 2017).

In 1560, Jean Nicot, from whom the term nicotine originates, brought tobacco to France (Connor, *et al.*, 2022). It is said that he sent snuff, a form of smokeless tobacco, to Queen Catherine de Medici of France. The Queen Consort used this snuff to alleviate migraines, whether they were her son Francis II's or her own (Tobacco Atlas, 2017). A number of indigenous tribes in the Americas historically considered tobacco to be a significant medicinal component (Jetty, 2017).

In 1560, tobacco was introduced to East Africa by Spanish and Portuguese merchants, eventually making its way to West and Central Africa. Although it took approximately 90 years for tobacco to reach South Africa, European colonizers began cultivating it shortly after their arrival in 1652, utilizing it as a means of exchange (Eriksen *et al.*, 2012; Tobacco Atlas, 2017).

During the 1570s, tobacco gained recognition in Europe for its medicinal and health benefits (Sanchez-Ramos, 2022). Earning the nickname "holy herb," European physicians authored numerous publications highlighting the therapeutic properties of tobacco and asserted its efficacy in treating various ailments, including toothache, bad breath, and even cancer (Eriksen *et al.*, 2012). One example is the list of 36 maladies that Spanish physician . Nicolás Monardes supposedly cured with tobacco in 1571 (Hanafin & Clancy, 2015).

During the 17th century, there was a shift in awareness regarding the risks associated with tobacco consumption. Fang Yishi, a Chinese

philosopher from the 1600s, observed that smoking could have detrimental effects on one's lungs, particularly with long-term use (Islami *et al.*, 2017).

The Qing Dynasty of China took a significant step in 1634 by implementing a smoking prohibition, punishable by death. China emerged as one of the pioneering nations to enforce strict penalties against smoking. It is important to highlight that the primary reason behind this decree was to address trade imbalances with other countries, rather than prioritizing public health concerns (Parascandola & Xiao., 2019).

In 1604, during the reign of King James I, a renowned anti-smoking document titled "A Counterblaste to Tobacco" was authored by the King himself in England. This tract served as a prominent piece of literature that expressed King James I's strong disapproval towards the prevalent smoking culture of that era. Within the document, the King emphasized the detrimental effects of second-hand smoke and shed light on the various dangers and harms associated with smoking (Stanislav,2014).

Throughout his rule, King James I, who held a deep aversion towards tobacco usage, persistently waged a campaign against tobacco users and merchants. In a notable instance, he even imposed a staggering 4,000% increase in the import tax on tobacco (Stone,2017).In 1761, a little over 150 years after King James I published "A Counterblaste to Tobacco. John Hill performed pioneering research on the effects of tobacco in England. A lot of people think that Hill's studies were some of the first scientific trials to show that smoking was bad for your health. Crucially, the ground-breaking studies were the ones that proposed a connection between smoking and cancer (Rigotti *et al.*,2022).

Hill found that those who snuffed too much eventually acquired malignant sores in the nose called polypuses, and that these tumors might be deadly (Traboulsi *et al.*,2020). This was followed in 1795 by the discovery that pipe smoking increased the incidence of lip cancer by

Samuel Thomas von Soemmering (Alberg,*et al.*,2014) The results of. John Lizars's 1859 study also supported this. Cancers of the mouth and lip have been associated with smoking, according to Lezars, a surgeon at the Royal College of Surgery. (Lizars, 2024).

Throughout the 20th century, despite the expanding research on the negative consequences of smoking there was a noticeable surge in the number of individuals who smoked and a concurrent increase in the production of cigarettes (Onor *et al.*, 2017). Gately has provided a detailed account of how tobacco consumption became deeply rooted in contemporary culture, tracing its roots back to ancient times (Mishra & Mishra,2013).

Published in 1912 under the title Primary malignant growths of the lungs and bronchi: a pathological and clinical study the first association between smoking and lung cancer was discovered by Isaac Adler (Groot,*et al.*, 2018). But it wasn't until 1950 when Wynder and Graham, verified the link in an article titled Tobacco smoking as a possible etiologic factor in bronchogenic carcinoma. In their study's last section, the authors mentioned that, in comparison to the overall male hospital population free of cancer, a much larger proportion of males diagnosed with bronchogenic carcinoma were heavy smokers (Di Cicco, 2016).In 1951,. Richard Doll and Prof. Austin Bradford Hill performed a groundbreaking case-control research that proved the link between smoking and lung cancer. Twenty-one hospitals in and around London participated in the research, which questioned 1,732 patients and 743 controls (Gaetano, 2018).

The Framingham Heart Study provided additional proof regarding the negative health outcomes associated with tobacco consumption, revealing that smoking cigarettes heightened the likelihood of developing heart disease (Gallucci,*et al.*, 2020). In addition, the first publication on Smoking and Health was produced in 1962 by the Royal College of

Physicians. It detailed the link between smoking and a number of diseases, including lung cancer (Araujo, 2015).

Luther L. Terry, the United States Surgeon General at that period, released the first report of the Surgeon General's Advisory Committee on Smoking and Health on January 11, 1964. This article states that chronic bronchitis, lung cancer, and laryngeal carcinoma are most often caused by cigarette smoking in men. The findings also pointed to smoking as the leading cause of lung cancer in women (Brawley,*et al.*,2014).

The study found that smoking is causally linked to several illnesses and ailments, including heart disease, cancer, and emphysema, even if there isn't enough data to draw firm conclusions. Fifty years subsequent to the 1964 research, an additional report brought attention to the significant strides achieved in the fight against tobacco. Conversely, it brought attention to the ongoing concern of the burden of sickness caused by this preventable cause of death (Parmar *et al.*,2023).

2.2.Tobacco As a Global Pandemic and Disease-Related Burden

Smoking continues to be the primary cause of premature death and disability worldwide (Reitsma *et al.*, 2017). Annually, 5.4 million people lose their lives due to tobacco use, according to a study by the World Health Organization on the worldwide tobacco epidemic. (Verguet,*et al.*,2016). Throughout the 20th century, tobacco claimed the lives of 100 million individuals. However, projections indicate that by 2030, the number of deaths per year will surpass 8 million, ultimately resulting in a staggering 1 billion deaths in the 21st century (Strategies, 2022).

Disturbingly, there is a significant gender gap in this worldwide epidemic. In males, smoking ranks second in terms of mortality and disability-adjusted life years (DALYs), accounting for 9.3% of both and

16.3% of all male deaths. It is also the top risk factor for disease burden as assessed in DALYs. On the contrary, smoking accounts for 16.3% of female mortality and 5.8% of disability-adjusted life years. (Gakidou et al., 2017). In spite of the alarming mortality and morbidity statistics, the global population persists in engaging in smoking habits. According to data from 2015, one out of every four men and one out of every twenty women were habitual smokers (Reitsma *et al.*, 2017).

There has been a significant decline in smoking rates throughout the last quarter of a century (1990-2015). In 1990, women accounted for 8.2% of smokers, while males accounted for 34.9%. The rates for males were 25.0% and for women 5.4% in 2015, however, these figures have fallen significantly. The decrease in smoking rates is a promising indicator of the success of programs aimed at reducing tobacco use (Dai, *et al.*, 2022).

Around 942 million men and 175 million women smoke among the 1,117 million individuals who smoke worldwide (aged 15 and older). This persists even after policies aimed at reducing tobacco use have been implemented. In 2016, 34% of men and 6% of women smoked tobacco, according to statistics presented in the World Health Statistics report. In addition, recent studies have shown a concerning rise in the number of young people smoking, particularly among girls (Strategies, 2022). Smoking seems to have been completely eradicated in most nations with very high Human Development Index (HDI), according to recent research. On the other hand, smoking rates are consistently high, or even rising, in nations with a moderate to high HDI (Strategies, 2022).

A rising amount of research indicates that smoking is becoming more common in certain nations with a poor HDI. On the basis of current data about smoking prevalence in 173 countries for men and 178 countries for women, Bilano et al. forecasted the expected quintiles of smoking prevalence by the year 2025. (Bilano *et al.*, 2015).

Given that the differences in tobacco use based on the Human Development Index (HDI) are anticipated to remain until 2025 if current prevalence trends continue, the predicted worldwide smoking prevalence as provided by Bilano et al. is alarming. When looking at statistics showing an increase in tobacco use in low- and middle-income countries, the disparity in national tobacco use rates becomes even more apparent (Bilano,et al.,2015)

In addition, low- and middle-income nations are home to more than 80% of the world's smokers, out of an estimated 1 billion (Perez-Warnisher,*et al.*,2018).Disparities in tobacco use prevalence and mortality rates exist within countries, with individuals of lower socioeconomic status being disproportionately affected. This demographic group is more inclined to engage in tobacco use at a younger age and faces a higher risk of experiencing tobacco-related deaths (Strategies, 2022). The significance of tobacco disparity is further underscored by the fact that tobacco use is a risk factor for six of the top eight causes of death globally and is also recognized as the primary preventable cause of death worldwide (Perez-Warnisher et al.,2019).Various publications have highlighted the significant harm caused by tobacco consumption (Reitsma *et al.*, 2017). The 2014 report from the US Surgeon General even describes the tobacco epidemic as a "massive preventable public health disaster", emphasizing that over 20 million premature deaths have been linked to cigarette use since 1964 (Jung,et al.,2014).It is projected that poor and medium income nations would have the highest number of smoking-related premature deaths. The reason for this is because studies have shown that people from lower socioeconomic backgrounds are more likely to smoke cigarettes (Al-Hamdani, 2013; Hammond, 2011; WHO, 2003).

Moreover, the detrimental effects of smoking extend beyond tobacco-related health consequences, as they also hinder the progress of various development intentions (Bafunno,*et al.*,2024). Tobacco is

dangerous not just for the user but also for bystanders, who are at risk of health problems and even death from secondhand smoke. One example is the over 884,000 fatalities caused by secondhand smoking in 2016 (Sychareun *et al.*, 2015).

The use of tobacco imposes a significant burden on society and inflicts harm on multiple levels (Cantrell *et al.*, 2013). The world is taking action because people have realized how harmful tobacco is. One example is the voluntary target of a 30% relative reduction in the prevalence of current tobacco use among adults aged 15 years and older by 2025, which was adopted by the World Health Assembly (WHA) in 2013 (Shankleman *et al.*, 2015).

This objective is set to enhance the enforcement of the WHO framework convention on tobacco control (FCTC) as the primary international agreement against tobacco (Stead *et al.*, 2013). The WHO FCTC mobilizes nations and the international community to combat tobacco use and guarantee the protection of society (Elton-Marshall *et al.*, 2015; Stead *et al.*, 2013).

2.3.Smoking caution

It is essential to comprehend the pathophysiology of smoking and its role in disease development for various reasons. Understanding this connection can help in recognizing the potential health hazards associated with smoking, pinpointing individuals who may be more susceptible to its effects and contributing to the implementation of the WHO FCTC (Stead *et al.*, 2013).

The correlation between smoking, disease causation, and other smoking-related outcomes has been well-documented. Nevertheless, the specifics regarding the mechanisms through which tobacco induces disease are still being uncovered. What has been established is that tobacco-related

illnesses result from a variety of pathways, each involving one or more mechanisms (Cao,*et al.*,2015).The presence of identical mechanisms across various pathways can be observed; for example, epigenetic factors may trigger the development of diseases through multiple pathways and mechanisms. Consequently, there could be interconnections among these pathways (Health & Zimmerhoff, 2017).

In order to design tobacco control policies, diagnose tobacco users, treat them, and prevent their diseases, it is necessary to have a thorough knowledge of the pathways and mechanisms by which tobacco smoke causes these diseases (Health & Zimmerhoff, 2017).

Tobacco control public health recommendations, for instance, are based on the known pathophysiological processes and pathways of tobacco-related cardiovascular disease. It is well-established that smoking increases the risk of cardiovascular disease (Alberg *et al.*, 2014).

Tobacco smoking induces atherothrombosis and, in the end, cardiovascular disease, via a variety of well-established pathophysiological pathways. Tobacco causes heart disease progression via a number of pathophysiological mechanisms, including hypercoagulability, endothelial dysfunction, insulin resistance, increased oxidative stress, and heightened inflammation mediated by cytokines. Atherothrombosis in smokers is caused by a complex interplay of many pathophysiologic processes. As an example, one established pathophysiological process linked to cigarette smoking is chronic inflammation. Moreover, inflammation is a key player in the development of atherosclerosis, which in turn causes cardiovascular disease (Alnima *et al.*, 2023).

A person's risk of cardiovascular disease increases when they smoke and when they are among other people who smoke. The impairment of coronary circulation produced by endothelial dysfunction may be the mechanism by which second-hand smoking increases the risk of death. The increased risk of death from cardiovascular disease in nonsmokers may be

better understood in light of this new information on second-hand smoke (Schmidt *et al.*, 2018). Smoking has another significant consequence in terms of its pathophysiological impact, particularly in relation to the development of cancer as a result of tobacco use. Lung cancer stands out as the primary cause of cancer-related deaths on a global scale (Drope *et al.*, 2018).

The primary pathophysiological mechanism through which cancer is induced by cigarette smoke involves the activation of carcinogens present in the smoke, leading to DNA damage. This damage, in turn, results in mutations in crucial genes, disrupting normal control mechanisms and ultimately facilitating the development of cancer (Comen *et al.*, 2018).

Consequently the available evidence concerning the underlying mechanisms of smoking indicates that there is no exposure level that can be considered completely safe (Malenica *et al.*, 2017). As a result, it is crucial to not only understand the pathophysiology of smoking but also to have a comprehensive understanding of the neurophysiology of smoking in order to effectively address tobacco control measures (Fратиanni *et al.*, 2017).

2.4. The Biology and Behavioral Basis for Smoking-Attributable Disease

Starting with the first instalment in 1964, the reports of the Surgeon General have published the authorized summary of the data pertaining to smoking and health. Among the many other topics addressed, the effects of smoking, both actively and passively, on human health have been thoroughly examined (Lushniak, *et al.*, 2014).

Public health-related causality assessments have been the focus of several articles, which have sought to synthesise the available evidence. After collecting all pertinent lines of scientific evidence, analyzing it critically, determining its strength using standards for evidence evaluation,

and finally producing a summary conclusion on causation, the reports have arrived at conclusions on causation following a model that began with the 1964 report (Calonge *et al*,2023).The Surgeon General's report from 2004 provides an analysis of this approach and a system of ordered categories for classifying the strength of the evidence supporting causality. Both the 2004 report on active smoking and the 2006 report on involuntary smoking used these categories (Table 2.1). (USPHS,2012).Several illnesses and health problems linked to tobacco smoking and smoke exposure have been documented in reports by the Surgeon General (Figure 2.1).

This research investigates the hypothesis that the pathogenicity of tobacco smoke may stem from physiological and behavioral mechanisms. The evaluation of the biological plausibility of associations found in epidemiological research has been the subject of several Surgeon General reports. The plausibility of a hypothesis is an important factor in assessing evidence on causation, making disease mechanisms significant.The findings of animal studies and the existence of carcinogens in cigarette smoke were major factors in the 1964 study (Gashaw,2016).

When it comes to the capacity of tobacco smoke to injure people, however, the most recent studies examine the evidence on the probable disease-causing mechanisms of smoking and evaluate the probability that one is at work. The risks of tobacco products, the mechanisms by which smoking causes disease, and the identification of those at increased risk may all be better understood with this data. Additionally, the completion of the tobacco-related aims and goals in the Healthy People program—the government's strategy for illness prevention and health promotion—and the creation of interventions to meet our nation's 2020 tobacco cessation targets are both impacted by this study (WHO,2015).

The illnesses and other negative consequences that may be attributed to smoking were used to establish the boundaries of the topics covered in each chapter as this report was being prepared. This report's evaluation of

information on biologic and behavioral processes supplements and supports the causal findings previously established, because enough biologic plausibility had been shown in previous studies for all causal conclusions. The study does not focus on the question of whether there is evidence to support the idea that smoking causes a certain illness. Tobacco use has long been known to cause many of the illnesses and other negative consequences discussed in this study. The effects of secondhand smoke on human health are the primary emphasis of this study, which omits any discussion of the research into the origins of illness caused by smokeless tobacco (Gallucci,*et al.*,2020).

Possible implications for prevention, diagnosis, and therapy arise from the need to ascertain if a specific mechanism contributes to the disease-causing effects of tobacco smoke. Figure 2.2 provides an overview of the potential mechanisms by which secondhand smoking causes illness. The underlying premise is that illness might result from a variety of routes, with each pathway potentially including many mechanisms.

Each of the paths shown in the diagram might include a number of different processes. Also, the same mechanism may play a role in more than one route. As an example, there are presumably several routes in which gene mutations contribute to the development of cancer. Tobacco smoke is likely to cause illness via various routes, and several genes may be implicated, since it is a complex combination with many distinct harmful components. It is possible that genes influence the functioning of various pathways, and that these pathways are interconnected. The impact of smoking on disease incidence may be amplified by other environmental variables that operate via mechanisms similar to or distinct from those of tobacco smoke. As an example, radon plus smoking may have a synergistic impact that increases the risk of lung cancer (Samet, 2016).The pathways and processes that contribute to the pathogenesis of cardiovascular disease

by active and passive smoking are shown in Figure 2.3. The "tar phase" and "gas phase" of cigarette components are shown below, and their activity is shown to occur via several interrelated routes. This suggests that genetics and other variables come into play (Kondo,*et al.*,2019).

The following are some potential public health benefits that could result from elucidating the mechanisms by which smoking causes disease: assessing the injury-inducing potential of tobacco products; developing injury biomarkers to identify smokers early on in the disease's progression; identifying genetic risk factors due to the operation of a specific mechanism; laying the groundwork for preventive therapies that can halt or even reverse the injury process; and determining the role of smoking in the etiology of complex diseases. Researchers are still trying to pin down exactly how smoking causes all those diseases, even though we know for a long time that smoking itself and secondhand smoke are major contributors (Samet ,2013).

Diseases induced by substances other than smoking, but which share certain processes with smoking, may also be amenable to the ensuing knowledge of mechanisms. The study is being published at an era when new research methodologies have made it feasible to investigate the causes of smoking-related diseases at a level of detail that was previously impossible. The advent of effective molecular and cellular research methodologies has allowed for the development of animal models to investigate particular routes of damage and the molecular level study of disease etiology. Consequently, this research takes a wide variety of information into account, including those from in vitro systems, animal models, and clinical trials. From biomarker studies conducted on populations to those conducted at the molecular level, it's everything covered (Hahad *et al.*,2024).

Table 2.1: A four-tiered system for evaluating the reliability of evidence-based causal inferences

Level-1	A causal link may be inferred from the evidence.
Level-2	The evidence is enough to raise suspicions, but not prove a causal link.
Level-3	Insufficient evidence (including inconsistent, low-quality, or scarce data) to draw any firm conclusions on the existence or nonexistence of a causal link
Level-4	The available evidence does not point to a causal link.

Source: US.PHS. Office of the Surgeon General, National Center for Chronic Disease Prevention, & Health Promotion (US). Office on Smoking. (2012).

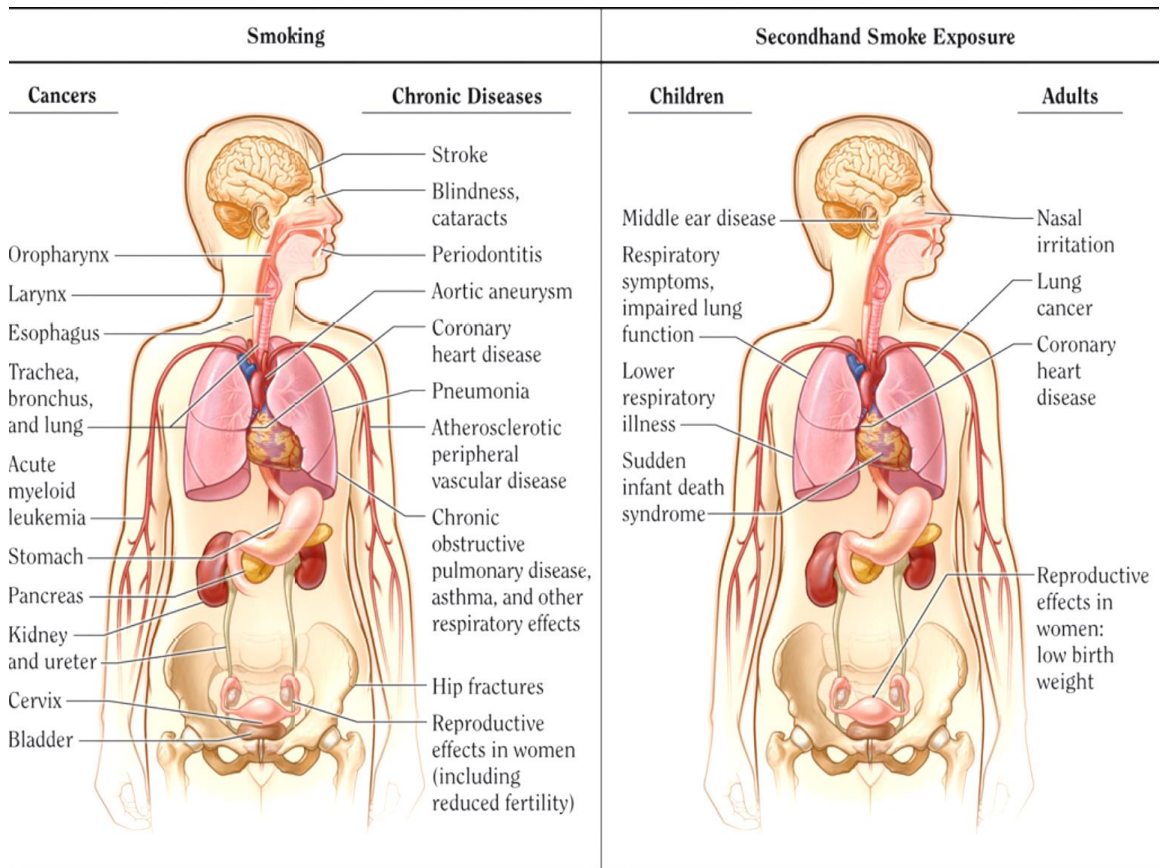


Figure 2.1: The risk factors for disease associated with smoking and passive smoking (Arnet et al.,2019).

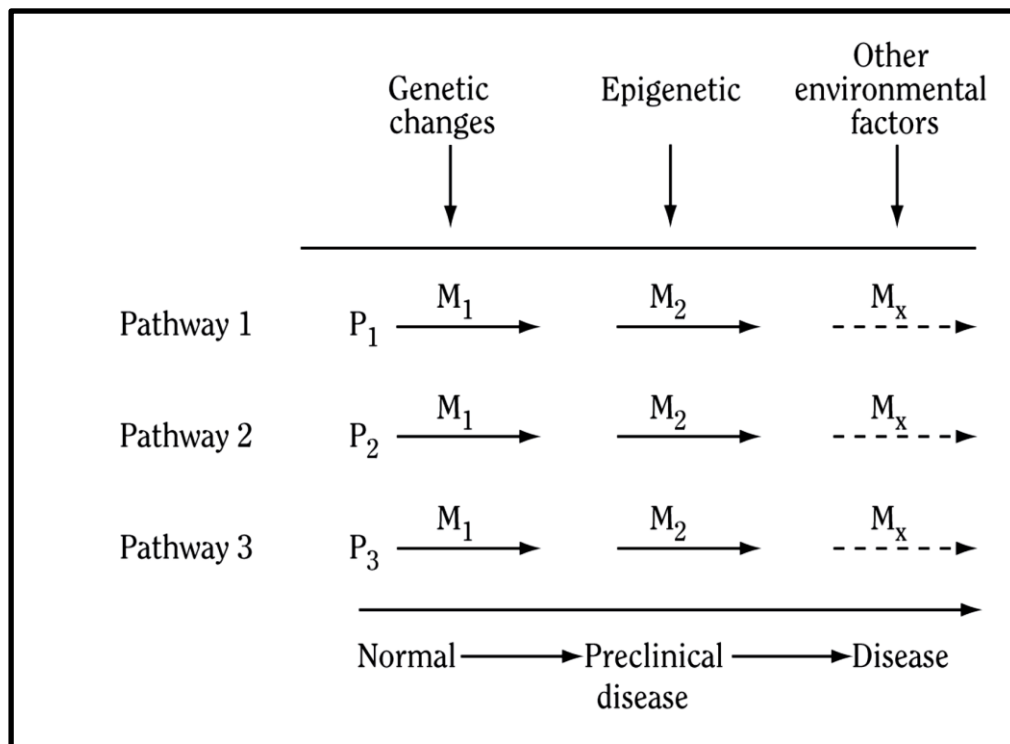


Fig. 2.2 A general framework for the disease-causing effects of cigarette smoke (Comen et al.,2018). Note: M = disease mechanisms; P = disease pathways.

2.5.Smoking among adolescents:

Adolescence is a time of intense transition from childhood to puberty, during which the developing brain starts to search for and retain abstract concepts while also looking for behaviours and actions associated with rewards. Because of all the difficulties the developing brain faces during this time, it can be difficult to distinguish between normal and abnormal behaviour (Willoughby *et al.*, 2014).

Adolescence is a time when substance abuse, including smoking, starts. In addition to alcohol, marijuana, and other illicit drugs, substance use and abuse start during this time. Teenagers typically exhibit varying degrees of substance abuse and smoking, but one thing that is certain is that men are more likely than women to smoke and abuse drugs, and as they age, men become more addicted to these substances. In fact, because women can self-administer tobacco products more quickly than men do, they take less tobacco, co-morbidities in mental health, as well as extrinsic factors such as the date of abuse, peers, and family that influence the transition from normal use to abuse, are all increasing during the adolescent years. These factors are influenced by changes in the brain, and in females, oestradiol affects brain processes, making them vulnerable (Johnston *et al.*, 2014; Kuhn, 2015).

According to neuroscience, tobacco addiction is a process that depends on the amount and kind of substance used. To combat these effects, various pharmacological approaches are used; however, epidemiology and clinical research have shown that the majority of drug users do not become dependent; psychological disorders are one of the key factors that may explain a person's propensity for addiction. (Swendsen and Le Moal, 2014).The beginning of smoking or using any kind of nicotine during adolescence is typically influenced by a variety of circumstances, such as hormonal shifts, changes in personality, mental health, parental

monitoring, autonomy, and impulsivity, among many other things (Kaltiala-Heino *et al.*, 2015)

2.6. Self-efficacy smoking cessation

There is a big gap in the possibilities for therapy for smokers who want to stop due to declining trends in the number of people seeking in-person help. Face-to-face behavioural support and other therapies aim to address psychological aspects that are linked to a higher chance of successful stopping smoking, such as smokers' desire to quit and sense of self-efficacy (Rajani *et al.*, 2021). One of the most important preventive care/health promotion strategies that nurses globally provide is quitting smoking. The majority of training is designed with adults in mind, even though there are differences in adolescent development, coping mechanisms, resources, and smoking causes. Comprehending the notion of self-efficacy in the context of the teenage demographic will enable nurses to effectively address smoking cessation practices within this cohort to effectively address smoking cessation practices within this cohort (Conner, 2015).

Even though it is well recognised that smoking poses health concerns, the number of adolescent and kids who use tobacco is rising, and many of them struggle to effectively stop. 2, 5 and 6 Merely 4–7% of the 19 million adult Americans who made a sincere effort to give up tobacco usage in 2005 succeeded in doing so. 2,5 (Elshatarat *et al.*, 2016).

Unfortunately, during the first month of abstinence, 80% of American smokers who tried to stop on their own returned to tobacco usage. Research indicates that the reasons for the failure of these attempts to stop smoking include either tobacco addiction or a lack of motivation, such as self-efficacy. (Saroj & Bhardwaj, 2022). The self-efficacy hypothesis has been applied to health promotion for over thirty years, addressing a range

of health concerns including substance misuse, quitting smoking, and cancer prevention.⁹ Research indicates that a person's ability to change negative behaviours and produce better results is significantly influenced by their level of self-efficacy (Dolatabadi *et al*,2022).

Recent research has shown that efforts to stop are predicted by estimates of one's own drive and willpower, but not by ratings of one's own self-efficacy. On the other side, assessments of self-efficacy are predictive of abstinence capacity, whereas rates of willpower are not. Furthermore, there is some qualitative evidence that implies, in a roundabout way, that believing one has enough willpower to stop reduces the likelihood of really trying to quit and that believing one has more than enough willpower to actually use therapy lowers the likelihood of actually utilizing treatment. Furthermore, there is some qualitative evidence that implies (Hughes&Naud., 2016).

Effective cessation strategies include pharmaceutical therapy that addresses the underlying biology of addiction in conjunction with behavioral assistance. Compared to those who try to stop on their own, those who get a mix of behavioral and pharmaceutical help had a threefold higher chance of success. Methods that target smokers' self-efficacy and desire to stop are often used in behavioral support treatments, especially in individual and group therapy. These variables are known to boost the chances of smokers trying to quit and effectively doing so (Chevalkin *et al*,2018).

When discussing quitting smoking, the term "self-efficacy" refers to a smoker's belief in their own abilities to control their smoking behavior in response to both internal and external cues. Treatments for tobacco use and nicotine dependency that include self-efficacy as an integral part of behavioral therapies and the process of quitting are successful, according to

research. In a similar vein, it has been shown that boosting motivation to quit is an essential component "of the overall treatment for tobacco addiction" as it gives smokers more excitement, purpose, and determination to stop. The significance of quitting and the tenacity with which a smoker attempts to stop at any one time are factors in their motivation to do so (AL Thani *et al.*,2022).

Behavioral assistance and attempts to stop smoking were lower in 2017 compared to 2008, according to further studies. There is a serious shortage of treatment choices for smokers trying to stop due to the decline in people using in-person assistance. Digital cessation assistance might replace in-person behavioral therapy, and other alternatives to traditional ways of quitting may also focus on clients' sense of self-efficacy and their desire to stop (Nian *et al.*,2023).

While behavioural support for smoking cessation has been on the decline, interest in digital alternatives has grown in the public health sector. In light of the growing number of people who own and use smartphones, it might be a great and affordable way to help people quit smoking by delivering treatments via these devices. According to one survey, there were 400 smoking cessation applications accessible in the app stores in 2015 alone. It's safe to assume that number has grown since then (Rajani *et al.*,2019).

The results of smoking cessation programs that use mobile devices, and more specifically those that rely on text messaging, have been shown to be favorable in the majority of studies. Despite the lack of strong proof, several studies have shown that smartphone applications may help people quit smoking. Ubhi *et al.* observed, for instance, that compared to non-app users, smokers who used cessation apps were more likely to report successfully stopping. We still don't know enough about the effectiveness and impact of cessation applications on smokers trying to stop, despite their

availability and their potential to combat the tobacco pandemic (Zhou *et al.*,2023).

There is a dearth of research on the effects of smoking cessation applications on self-efficacy and drive to stop, two psychological success criteria. Very few studies have tried to examine this, and those that have either used tiny sample numbers or relied only on qualitative methods. Therefore, this research intends to fill a need in the literature by statistically investigating whether smoking cessation mobile applications might support smokers' self-efficacy and drive to stop, two crucial components for a successful cessation effort (Gallus *et al.*,2023).

2.7. Health Consequences of Smoking

The health consequences of smoking are vast, impacting nearly every organ in the body (Varghese & Gharde.,2023). Exposure to the multitude of carcinogens and toxic chemicals found in tobacco, numbering around 70 and 7,000 respectively, is responsible for these health consequences. In fact, dating back to the 17th century, certain risks and health effects associated with tobacco consumption were already recognized. Subsequently, additional research has surfaced regarding the health implications of smoking (Inaba *et al.*,2019).

Crucial insights into the health concerns connected with smoking are provided by the important 1964 US Surgeon General's report on smoking and health. The study focuses primarily on the incidence of lung cancer in both male and female populations (Marshall.,2015). After half a century, the United States Surgeon General has issued a study that, among other things, examines the negative impacts of smoking on human health. Additionally, the study recognizes that smoking is associated with a broad range of disorders and has a detrimental influence on the health of smokers generally (Lushniak et al, 2014).

When one considers that a regular smoker usually loses 10 to 11 years of their life expectancy due to smoking, the conclusion about smokers' generally bad health becomes even more striking (Drope *et al.*, 2018). Moreover, the likelihood of mortality from any cause is heightened in both males and females who smoke cigarettes (Lushniak *et al.*, 2014). Additionally, the detrimental effects of cigarette smoking commence with the consumption of just a few cigarettes; as tobacco usage escalates, so does the risk of illness and death. Lung cancer is a prominent example of a disease that can be attributed to the use of tobacco (Drope *et al.*, 2018).

Although it affects both sexes equally, lung cancer is notable for being the leading cause of cancer-related deaths worldwide (The health consequences of smoking, 2014). Cigarette smoking greatly increases the risk of lung cancer; in fact, the risk is 25 times greater for males and 25.7 times higher for women. Cigarette smoking causes harm not just to the lungs but also to other regions of the body, leading to the development of many different kinds of cancer (Keeffe *et al.*, 2018). Among the many malignancies that may develop as a result of tobacco smoking are those of the bladder, stomach, colon, esophagus, liver, and pancreas (Yokota *et al.*, 2016). One of the top causes of mortality globally, chronic obstructive pulmonary disease (COPD) is heavily influenced by tobacco usage. Mortality from chronic obstructive pulmonary disease (COPD) is 45% greater in those who smoke than in nonsmokers, and smoking is the leading cause of death from COPD worldwide (Drope *et al.*, 2018).

In addition, smoking is closely linked to an increased risk of stroke and heart disease. In addition to an increased risk of death from cardiovascular disease and stroke, two of the leading causes of death worldwide, smokers are two to four times more likely to acquire these disorders than non-smokers. (Drope *et al.*, 2018). It is important to highlight the specific health consequences of smoking in women, as they experience

similar effects to men but also face gender-specific differences (Allen *et al.*, 2014). It should be noted that the harmful effects of smoking do not only affect those who smoke directly but also those who are exposed to second-hand smoke. Actually, passive smokers are just as vulnerable to many of the health risks as active smokers (Štěpánek *et al.*, 2022).

The adverse health effects resulting from exposure to second-hand smoke are substantial, as there is no known safe threshold for such exposure (Eriksen *et al.*, 2015). Furthermore, second-hand smoke impacts individuals of all ages (Eriksen *et al.*, 2015).

In 2016, adolescents females experienced a higher number of deaths attributed to second-hand smoke compared to adult males, with 573,000 deaths versus 311,000 deaths, respectively (Drope *et al.*, 2018). Exposure to second-hand smoke has been linked to a 25% higher risk of developing coronary heart disease and a 30% higher risk of developing lung cancer in adults compared to those who are not exposed (Wu *et al.*, 2022).

Additionally, children exposed to second-hand smoke are at increased risk of middle ear disease and lower respiratory illness. The primary causes of death related to secondhand smoke in adults are lung cancer and coronary heart disease (Sun & Frédéric., 2020). Third-hand smoke, in addition to second-hand smoke, holds importance as well (Hang *et al.*, 2017). Third-hand smoke refers to the toxic residue left behind on surfaces following tobacco smoke exposure, such as clothing or furniture (Barnoya & Navas-Acien, 2012; Eriksen *et al.*, 2015; Hang *et al.*, 2017).

This toxic residue can persist for several months, even after cleaning the surfaces or washing the clothes (Eriksen *et al.*, 2015; Hang *et al.*, 2017). Currently, research on the health impacts of third-hand smoke is continuously expanding (Barnoya & Navas-Acien, 2012; Hang *et al.*, 2017). Despite this, studies have demonstrated that third-hand smoke can induce substantial DNA damage to human cells in laboratory settings,

making it genotoxic (Hang *et al.*,2020).Additionally, there is a growing body of evidence suggesting that third-hand smoke may pose a greater risk to vulnerable groups, such as children and infants, and could potentially worsen conditions like asthma (Barnoya & Navas-Acien, 2012; Hang *et al.*, 2017).

Considering that tobacco use is responsible for over 90% of diseases and fatalities associated with smoking, it is crucial to ensure that individuals across the globe are well-informed about the health consequences linked to smoking, as emphasized in Article 4 of the WHO FCTC. Abandoning the habit of smoking yields significant health advantages (Znyk *et al.*,2022).

2.8.Adolescent Knowledge About Health Consequences of Smoking

The World Health Organization Framework Convention on Tobacco Control (WHO FCTC) suggests the dissemination of information to the general public regarding the detrimental effects of tobacco usage. It emphasizes the importance of educating individuals about the health risks, addictive properties, and potential fatality associated with tobacco consumption and exposure to tobacco smoke. A key objective of the WHO FCTC is to increase public awareness of the hazards of smoking in order to safeguard the well-being of the population (Hoffman *et al.*,2019).

In the study conducted by Sansone *et al.* (2012), it was found that individuals who are knowledgeable of health consequences associated with smoking were consistently more inclined to formulate plans to quit. Many studies conducted globally have also delved into the understanding of smoking-related consequences (Omar *et al.*,2016).

These studies have revealed that the knowledge of smoking-related health consequences varied depending on the specific type of knowledge

(Minh An *et al.*, 2013; Mutti *et al.*, 2013). In a study conducted among Vietnamese adults, it was found that while there was a good overall knowledge of the health consequences related to smoking, there was a lack of knowledge about specific consequences such as vascular diseases (Minh An *et al.*, 2013). This finding aligns with the research conducted by Mutti *et al.* in Mexico and the United States, where it was discovered that less than half of the smokers were knowledgeable that stroke is a potential health consequence of smoking (Mutti *et al.*, 2013).

The findings that there is insufficient knowledge about vascular conditions like stroke is troubling, given the widespread prevalence of these non-communicable diseases on a global scale (WHO, 2013). In addition, there were variations in the knowledge about the health consequences associated with smoking based on sociodemographic characteristics. These factors encompassed gender, age group, level of education, and geographic location (WHO, 2014).

According to a study conducted by Trofor *et al.* (2019), it was observed that women exhibited greater knowledge about the health risks associated with smoking compared to men in three out of the six European countries examined (Hungary, Poland, and Germany). This finding highlights the importance of considering sociodemographic factors when addressing smoking-related knowledge and health consequences (Trofor *et al.*, 2019).

Additionally, a couple of other studies have documented that women possess a greater knowledge about the detrimental effects associated with smoking in comparison to men (Cheng *et al.*, 2015; Mutti *et al.*, 2013; O. Egbe *et al.*, 2016). Moreover, it has been observed that individuals belonging to older generations exhibit are more knowledgeable of the harms associated with smoking when compared to their counterparts in younger age groups (Mutti *et al.*, 2013).

The level of education emerged as a distinguishing factor, as individuals with a more advanced educational level are more knowledgeable of the detrimental effects of smoking (Cao *et al.*, 2023).

Furthermore, a correlation was observed between higher income levels and a greater knowledge of the health consequences associated with smoking. Additionally, geographic location was identified as another socio-demographic determinant that warranted consideration in this context, conducted a study focusing on Nigerian adults' knowledge of health risks associated with smoking (Adeniyi *et al.*, 2017).

The research found that people's understanding of the risks of smoking varied according to their socioeconomic class and where they lived. Residents in urban regions were more informed about the health risks associated with smoking than those residing in rural areas. Sasone *et al.* (2012) found a similar thing in their research of Indian participants; those living in cities knew more about the dangers of smoking than those living in rural areas.

There was a disparity in the understanding of the health risks associated with smoking as it relates to tobacco use. When compared to non-smokers, current smokers showed less awareness of smoking's harmful consequences. Smokers may be underestimating the dangers of smoking, according to Krosnick *et al.*, who also wonder why smokers don't know more about the negative effects of smoking (Nargis *et al.*, 2019).

Furthermore, a study conducted by Yang *et al.* (2010) revealed that individuals who smoke may possess an optimistic bias. In simpler terms, they hold the belief that the negative consequences associated with smoking may not impact them personally, despite their smoking habit. This notion aligns with the suggestion made by Weinstein (1998), who proposed that smokers may attempt to reduce cognitive dissonance by downsizing the risks they encounter from smoking. Extensive research has

substantiated the fact that current smokers tend to underestimate the personal risks associated with smoking. Consequently, they may adopt strategies to shield themselves from concerns regarding smoking-related harms, ultimately aiming to minimize cognitive dissonance (Masiero et al.,2015).

Research has additionally indicated that the knowledge and understanding of smoking-related health risks and diseases can influence smoking behavior (Lakshmi *et al.*,2023). To illustrate, individuals who possess a greater understanding of the detrimental effects caused by smoking are more likely to exhibit a positive inclination towards quitting (Noar *et al.*, 2016).The study conducted by Willemsen and colleagues in 1990 revealed a rise in calls to the Dutch quitline following the implementation of health warnings by the European Union (EU). It was observed that exposure to health warnings, particularly those with pictorial representations, led to an enhancement in knowledge about smoking-related health risks and an increase in attempts to quit smoking (Hammond, 2006; Noar et al., 2017).

The findings of a study carried out among smokers in India revealed that a mere 10% of smokers had intentions to quit smoking within the upcoming six months, with a significant lack of knowledge about the health risks associated with smoking (Bansal-Traver *et al.*,2014) In a separate study conducted among smokers in Iraq, it was observed that the intention to quit smoking was influenced by the knowledge of smoking-related health consequences(Dawood *et al.*,2016).

Lower levels of awareness concerning the health consequences of smoking were linked to the consumption of tobacco products apart from cigarettes. For instance, individuals who currently use a waterpipe (commonly referred to as a hookah or hubbly-bubbly) exhibited limited knowledge about the health consequences of smoking (Arshad *et al.*, 2019; Eshah & Froelicher, 2017).

Moreover, there is a general lack of knowledge about the health risks associated with the use of waterpipes. Individuals who smoke exhibited a lower level of knowledge about the negative effects of e-cigarettes; a significant portion were uncertain, while some believed that e-cigarettes posed a lesser risk (Brown *et al.*, 2014).

Given the rising prevalence of e-cigarette usage, this finding is alarming. Nevertheless, it is important to highlight that Majeed and colleagues (Dockrell *et al.*, 2013), as well as Huang and team, observed a steady rise in awareness regarding the comparable or heightened harmfulness of e-cigarettes in comparison to traditional cigarettes, as evidenced by data from 2012 to 2015 in the United States and from 2015 to 2017 (Huang *et al.*, 2019; Majeed *et al.*, 2017). Among the younger population, who are often the primary target of the tobacco industry (Ganz & Delnevo, 2020), there exists some data knowledge of the risks associated with smoking (Reddy *et al.*, 2013). Despite a notable 26.5% decrease in the prevalence of current smoking among youth over a 12-year period (1999–2011), 16.9% continue to smoke (Reddy *et al.*, 2013), while 14.5% utilize alternative non-cigarette tobacco products, predominantly snuff (Yusof *et al.*, 2019).

Smoking was believed by almost 60% of the student body to be harmful to their health. A little over a third of the kids lived in homes where someone smoked while they were there, indicating a high incidence of exposure to second-hand smoke (ETS). On top of that, according to Reddy and Swart (2002), more than 40% of pupils were exposed to secondhand smoke in public places, and a whopping 29.5% of those students' parents smoked (Reddy *et al.*, 2013).

The knowledge about smoking-related risks is linked to exposure to second-hand smoke. Individuals who were not exposed to second-hand smoke demonstrated better knowledge of the health risks associated with

smoking (Lee *et al.*, 2019). Article 4 of the World Health Organization Framework Convention on Tobacco Control (FCTC) calls for public health education regarding the dangers of smoking and recommends a number of governmental actions to protect people from secondhand smoke. These findings provide credence to this recommendation (Villanti *et al.*,2016).

The World Health Organization Framework Convention on Tobacco Control (WHO FCTC) recommends adding health warnings on cigarette packs as a means of getting the word out about the risks of smoking. The goal of this policy, as stated in Article 11, is to decrease the occurrence of smoking-related diseases by educating people about the dangers of smoking. Tobacco usage, in any form, is harmful to youth. The majority of people who start using tobacco products do so throughout their teenage years (Nan *et al.*,2018). Nearly 9 out of 10 adults who smoke cigarettes daily first try smoking by age 18 (CDC, 2019).

2.9.Previous Study

2.9.1.The first study

The first study “Knowledge and perception about health risks of cigarette smoking among Iraqi smokers” conducted in Iraq-Tikrit, 2016 by Dawood and et al. The aim of study was to “to determine smokers' knowledge and perception about smoking health risks; and to determine smoking behavior and quitting intentions among Iraqi smokers; as well as to predict the factors that may associate with quit intentions In the outpatient clinic of the Tikrit Teaching Hospital in Tikrit City, Iraq, a cross-sectional research was carried out. Participants in the study were to be adult smokers who could converse with the researcher and smoke cigarettes on a daily basis. 386 individuals completed a self-administered questionnaire that was used to gather data.This research revealed that smokers' knowledge of some negative consequences of smoking, such as

stroke (66.3%), male smokers' impotence (52.6%), accelerated ageing (64%), and lung cancer (30.1%) among nonsmokers, was low. Furthermore, there was a substantial correlation found between the high knowledge and perception scores with the desire to stop. The research findings There was a lack of awareness and perception among smokers about the health impacts of smoking, particularly with relation to secondhand smoke. Health policymakers and medical experts must make significant efforts in order to.

2.9.2. The second study

The second study “Effects of adolescents’ self-efficacy and social anxiety on attitudes toward pros and cons of smoking” conducted in Turkish by (Ayar and et al 2019). The aim of study was to “Examine the impacts of adolescents’ levels of social anxiety and self-efficacy on their perceptions of the pros and cons of smoking”. Students (n = 219) from fifth, sixth, seventh, and eighth grades provided demographic information along with scoring on the Decisional Balance Scale, the Social Anxiety Scale for Adolescents, and the Middle School Self-Efficacy Scale. Multiple regression analysis, logistic regression, and Pearson's correlations were used to examine the data. Of the teenagers, 2.2% had a negative opinion of smoking and 52.8% had a good opinion of smoking; these individuals were current smokers. Furthermore, 61.1% of men and 38.9% of women believed that smoking was good for them, whereas 53% of men and 47% of women said that smoking cigarettes was bad for them. Adolescents with high levels of self-efficacy, low levels of social anxiety, and those with advanced degrees were more likely to see smoking as having negative health implications. To help teenagers develop life skills, reduce social anxiety, and boost their self-efficacy, more experimental research is required. Furthermore, experimental research should be done to see how these measures affect teenagers' attitudes of smoking.

2.9.3.Third study

The third study “Effects of Self-Efficacy in the Relationship between Environmental Factors and Adolescent Cigarette Smoking Behavior” conducted in Iran 2015 by Golestan and Abdullah. The aim of study was to “ Relationship between the environmental factors of peer pressure and family smoking parents’ smoking and siblings’ smoking and adolescent cigarette smoking habits in Kerman as a big province in Iran”. Family smoking and peer pressure are both investigated. For this, a quantitative research approach was used. Three hundred smokers in their teen years made up the sample. Structural Equation Modeling (SEM) and AMOS Software were used to evaluate the data. Research in these studies relied on questionnaires that participants filled out on their own. Peer pressure and parental smoking were positively and statistically significantly correlated with teenage cigarette smoking. A person's level of self-efficacy significantly moderates the association between “cigarette smoking behavior” peer pressure,, and family smoking, according to the pertinent findings and conclusions. Findings from this research have important implications for practitioners and policymakers in the fight against teenage smoking in Iran and may add to the existing body of knowledge in this area.

2.9.4.Fourth study

The fourth study “Effect of a Smoking Prevention Program on Smoking-Related Knowledge, Refusal Self-Efficacy, Attitude, and Intention of NonSmoking Adolescents” conducted in India 2013 by Atabila and Gastillo. The aim of study was to “Examine the effects of a three week smoking prevention program on smoking-related knowledge, refusal self-efficacy, attitudes and intentions of non-smoking adolescents”. The study sample included thirty-two teenagers, aged between ten and eighteen, who

did not smoke. The model of health belief and the theory of planned behavior were the theoretical foundations upon which the intervention was built. This study used a one-group pretest-posttest design to look at how the smoking prevention program worked. Participants' knowledge and ability to refuse smoking improved after the session; they also exhibited a negative attitude toward smoking and were less likely to smoke in the future ($p < 0.01$) when comparing their scores before and after the intervention.

2.9.5.Fifth study

The fifth study “Effectiveness of Smoking Prevention Programs on the Knowledge, Attitudes, and Anti-Smoking Exposure Self-Efficacy among Non-Smoking Rural Seventh-Grade Students in Taiwan” conducted in Taiwan 2022 by Guo and et al. The aim of study was to “Determine the effectiveness of a school-based prevention program in enhancing knowledge, attitudes, and anti-smoking exposure self-efficacy among seventh-grade non-smoking students”. Inadequate anti-smoking education might be the reason for Taiwan's disproportionately high teenage smoking prevalence in rural areas. Increasing teenage access to this kind of teaching should aid in lowering smoking initiation and encouraging quitting among this demographic, especially in rural locations. Verification is necessary to determine these programs' impact, however. The intervention group took four classes on preventing smoking and exposure to secondhand smoke (SHS), whereas the control group did what the control group did: engaged in typical school activities. The intervention group had considerably higher knowledge of SHS ($B = 2.35$, $p < 0.001$) and smoking ($B = 4.38$, $p < 0.001$). Additionally “there was a significant difference between the groups in terms of avoiding SHS exposure ($B = 3.03$, $p = 0.031$ ”). To maximize the program's impact on attitudes and self-efficacy linked to smoking exposure, intervention changes could be required. Furthermore, these outcomes might be influenced by cultural factors and other factors (the

"urban-rural gap"). Subsequent RCTs should compare youth from urban and rural areas use longitudinal designs, and evaluate the beginning or cessation of smoking.

2.9.6.Sixth study

The sixth study "Predictors of adolescent smoking cessation and smoking reduction" conducted in Switzerland university of zurich 2014 by Haug and et al. The aim of study was to "Investigate processes of change, demographic, health- and smoking related predictors of both smoking cessation and smoking reduction in adolescents". Seven hundred and fifty-five adolescent smokers provided information for a study that assessed the efficacy of a smoking cessation strategy based on text messaging. began by collecting data on smoking rates, health status, and other demographic variables. At the 6-month follow-up, the five smoking cessation methods were evaluated using outcome measures and data generated from the Transtheoretical Model and the Social Cognitive Theory. The researchers used both univariate and multivariate regression analyses to find the process factors and baseline variables that may predict whether people will stop smoking or cut down on their smoking. The results showed that not smoking was predicted by being male (OR = 0.43, $p < .01$), consuming less alcohol (OR = 0.90, $p = .05$), and smoking fewer cigarettes per day in the beginning (OR = 0.87, $p < .01$). Reducing smoking was predicted by baseline physical activity (OR = 1.04, $p = .03$). Tobacco cessation was not predicted by any of the process factors that were tested. The process variable "counter-conditioning" was shown to be a strong predictor of reduced smoking (OR = 1.46, $p = .03$). Factors that predict reducing smoking compared to those that predict quitting smoking are different. Predicting whether or not adolescents will quit smoking depends heavily on dynamic or adjustable characteristics. Interventions aimed at helping teenagers quit smoking may benefit from using counter-conditioning.

Chapter Three

Methodology

Chapter Three Methodology

Beginning with the permission process and finishing with data analysis, this chapter will explain and summarize the methodologies employed in the research as well as the many phases and procedures that were required to accomplish it.

3.1. Study Design

A descriptive cross sectional design was carried out, so as to accomplish the stated objectives .During the period from 1th November 2023 to 20th June 2024.

3.2. The Setting of the Study:

The study was conducted at the secondary school of Tuz City, Saladin Governorate A total of (8) secondary schools randomly selected by lottery from a total of (14) secondary schools existed in Tuz City.

3.3. Administrative Arrangements

1. To start this study officially, an official request must be submitted to the official authorities concerned in this field.
2. The title and objectives of the study and the prepared questionnaire were submitted to the Scientific Research Ethics Committee at the College of Nursing, which reviewed the study tools (questionnaire) and approved the study (Appendix A).
3. An official administrative request was submitted from the College of Nursing / University of Kerbala to facilitate the task of collecting samples, and then an official administrative request was submitted from the College of Nursing / University of Kerbala to the Tuz Education Department (Appendix B1).
4. An official letter was issued by the Tuz Education Directorate to preparatory school administrations to facilitate the task of collecting samples from students. (Appendix B2).

3.4. Ethical Considerations

Following the study's permission by the University of Kerbala's College of Nursing, the student researcher met with Saladin Directorate of Education authorities to discuss the study's specifics. study's explained the overarching goal and gave participants instructions on how to fill out the questionnaire, made sure they knew their participation was entirely voluntary and that they may withdraw at any time. The participant was assured by the student that their data will be kept confidential and safe both throughout and after the study. The sample went on to say that everyone involved in the study would stay anonymous whether it's presented, reported, or published

3.5. The Study Instrument

The study instrument is composed of students' sociodemographic sheet (age, living arrangement), and grade. It also includes the Family's Socioeconomic Status Scale which is adopted from Shaikh and Pathak (2017). This scale encompasses father's level of education (its score ranges from 1-10), mother's level of education (its score ranges from 1-10), household's occupation (its score ranges from 1-10), and family's monthly income (its score ranges from 1-10). The total score is calculated by summing the scores of the aforementioned indices. Depending on the range of numbers, different classes are indicated: lower class for scores between 4 and 5, upper lower class for scores between 6 and 14, lower middle class for scores between 15-20, upper middle class for scores between 21 and 33, and upper class for scores between 34 and 40. The study instrument also includes the Smoking: Self-Efficacy. It also includes the 19 items that are measured on a 5-point Likert scale of 1 for (Not at all tempted), 2 for (Not very tempted), 3 for (Moderately tempted), 4 for (Very tempted), and 5 for (Extremely tempted). The total score ranges between 19-90. Higher score indicates Self-Efficacy for smoking cessation. It also

includes the Knowledge about the Consequences of Smoking Scale 12 items (Trofor et al.,2018).

3.6. Questionnaire of The Current Study Validity:

The construct validity In order to ensure that the current study questionnaire was suitable, appropriate, clear, and understandable for achieving the study objectives, 14 experts (including those with a minimum of five years of experience in the medical and nursing fields as well as biostatistics and English language experts) were used for its definition, specification, and validation

The specialists listed in were given a trial version of the research questionnaire in order to refine it (Appendix D).

The questionnaire was deemed suitable for evaluating adolescents' self-efficacy in quitting smoking and their knowledge of the consequences of smoking by the majority of the experts.

Table (3-1): The Experts' Distribution According to the Field

The field	No.
Faculty member from College of Nursing/ Kerbala University	4
Faculty members from College of Nursing/ Baghdad University	1
Faculty members from College of Nursing/ Babylon University	2
Faculty members from Kut University College of Medicin	1
Faculty members from College of Nursing/ Kufa University	1
Faculty members from College of Nursing/ Kirkuk University	3
Faculty members from College of Nursing/ Mosul University	1
University of kerbala college of medicine	1

3.7. Pilot Study:

In the pilot study, 40 students representing 10% of the total sample of high schools who smoked were randomly selected from four different schools in Tuz; however, this sample was not included in the final study. The dates of March 11-15, 2023 were used for the pilot research.

3.7.1. The aims of the pilot study were:

1. To determine the reliability of the questionnaires.
2. To confirm the clarity and content adequacy of the questionnaire structure throughout the understanding of the study subjects and to determine the required modifications.
3. To estimate the time required for answering the questionnaire.
4. To identify the best approach needed to find out nature of difficulties which they might be faced.

3.7.2. The Result of the Pilot Study:

1. The reliability of the questionnaires is determined.
2. The items of the questionnaire are clear, easy to understand and adequate to assess the phenomenon underlying the study.
3. The average time required for answering questionnaire is nearly (15-20) minute.

3.8. Reliability of the study instruments:

By using the coefficient test of Cronbach's Alpha to determine the reliability of the study tool was specified, in addition to that, the test was separately performed for Self-Efficacy for smoking cessation and Knowledge about smoking consequences (Table 3.2).

Table 3.2. Reliability of the current study instrument:

No. of items	Alpha Cronbach	Assessment
Self-Efficacy for smoking cessation 19 items	0.862	Acceptable
Knowledge about smoking consequences 12 items	0.873	Acceptable

3.9. Sample and Sampling

A convenience sample, which does not rely on probability, was used to choose high school students who agreed to participate in the study.

Researchers often use convenience sampling, whereby they include into the study any persons who meet the eligibility and willingness criteria. Using convenience sampling, participants are included in the study if they chance to be at the correct location at the correct time. (Gray & Grove, 2021).

After the first three steps, the student researcher may start enrolling people until he has a sufficient sample.

A modest effect size (0.25), alpha error probability (5%), power (95%) and ten groups were used to estimate the sample size. Therefore, 400 is the suggested number of samples.

3.10. The Sampling of the Study:

Tuz City is have to sixteen different secondary schools, according to data collected by the Tuz District General Directorate of Education. Following that, a numerical representation was assigned to each institution. Next, a random selection of eight preparatory schools was made using the SPSS application (SPSS → Data → Select cases). Three private preparatory schools, five governmental preparatory schools, and others emerged as a consequence. From the schools listed above, (400) smoking students were chosen at random using the basic random sampling approach.

3.11. Criteria for Including the Sample:

1-It is difficult to find anything like this among Iraqi women, which is why the research exclusively included male participants.

2-Due to their high level of education, all of the participants were middle school pupils.

3-The age range of the participants was 16–20 years, which is a wide enough range to include a variety of teenage stages.

3.11.1. Inclusion Criteria

1. High school student
2. Adolescents boys with age (16-20)
3. Smoker

3.11.2. Exclusion Criteria

The student researcher excluded

1. Students at middle school
2. Evening study
3. Girls students

3.12. Data Collection

Data were collected through a self-administered procedure using a well-designed and prepared questionnaire. The researcher also visited each school principal who agreed to participate in the data collection, asked for permission to observe the students individually, and after interviewing the vast majority of the students, he completed the data collection. After the researcher had the students' verbal agreement to participate in the study, they randomly picked several from the smoking group. The next step was to explain the study's goals to each smoking student group and provide them with instructions on how to accurately fill out the Arabic questionnaire. Lastly, the researcher oversaw the chosen students while they filled out the surveys. In total, 500 questionnaires were collected and considered for statistical analysis. However, 60 of them were deemed invalid due to incorrect filling, 35 questionnaires were never returned, and 5 questionnaires lacked appropriate socio-demographic information. The total time required for an individual to complete the questionnaire was approximately twenty to thirty minutes. The time period for data collection began on February 15, 2024 and ended on March 4, 2024.

3.13. Data analysis

Used SPSS, version 27, developed by IBM for scientific and social research. Descriptive statistics were used to define the sociodemographic characteristics of the research participants. Additional metrics used were the geometric mean and standard deviation. We utilized a one-way analysis of variance (ANOVA) to search for differences in the dependent variable

when the independent variable had three or more categories. When the independent variable was dichotomous, we used an independent-sample T-test to look for differences in the dependent variable. Last but not least, we used the inferential statistical measures of Pearson correlation to find the correlation between the dependent and independent variables.

Chapter Four
Results of the
Study

Chapter four

Results of study

This chapter provides a descriptive analysis of the social and demographic characteristics of the sample. Of the student smokers participating in the current study: To identify if participants' age, family's socioeconomic status, and knowledge about smoking consequences can predict their Self-Efficacy for smoking cessation and To investigate the differences in knowledge about smoking consequences and Self-Efficacy for smoking cessation between the groups of grade, living arrangements, and family's socioeconomic class. Statistical procedures were used to analyze the results of the current study, and the results were organized and interpreted. These results were based on the research sample's responses to the research tool.

Table.4.1. Participants' sociodemographic characteristics
(*N* = 400)

Variable	Frequency	Percent
Age (Years): Mean (SD): 17.75 ± 1.24		
16	72	18.0
17	113	28.2
18	102	25.5
19	69	17.3
20	44	11.0
Class		
Fourth	126	31.5
Fifth	145	36.25
Sixth	129	32.25

Father's level of education		
Unable to read and write	60	15.0
Read and write	34	8.5
Elementary school	98	24.5
Middle school	66	16.5
High school	48	12.0
Diploma	47	11.8
Bachelor's degree	38	9.5
High Diploma	0	0.0
Master's degree	8	2.0
Doctoral degree	1	0.3
Mother's level of education		
Unable to read and write	56	14.0
Read and write	39	9.8
Elementary school	137	34.3
Middle school	78	19.5
High school	29	7.2
Diploma	25	6.3
Bachelor's degree	36	9.0
Family's monthly income (Iraqi Dinar)		
< 300.000	62	15.5
300.000-600.000	79	19.8
601.000-900.000	127	31.8
901.000-1.200.000	60	15.0
1.201.000-1.500.000	42	10.5
≥ 1.501.000	30	7.5
Socioeconomic Class		

Lower class	8	2.0
Upper lower class	214	53.5
Lower middle class	107	26.8
Upper middle class	70	17.5
Upper class	1	0.3
Living Arrangements		
Live with parents	294	73.5
Live with my mother	67	16.8
Live with my father	27	6.8
Live with my relatives	6	1.5
Live with my friends	3	0.8
Other	3	0.8

SD: Standard deviation

The average age is 17.75 ± 1.24 years. Out of the total participants, 28.2% are in the 17-year age group, followed by 25.5% in the 18-year age group, 18.0% in the 16-year age group, 17.3% in the 19-year age group, and 11.0% in the 20-year age group. In terms of grade, the students in the top three classes are as follows: 145 (36.25%), 129 (32.25%), and 126 (31.5%) fifth graders.

In terms of the educational background of the fathers, nearly a quarter have completed elementary school ($n = 98$; 24.5%), followed by those who have completed middle school ($n = 66$; 16.5%), those who cannot read or write ($n = 60$; 15.0%), those who have completed high school ($n = 48$; 12.0%), those with a diploma degree ($n = 47$; 11.8%), those with a bachelor's degree ($n = 38$; 9.5%), those who can read and write ($n = 34$; 8.5%), those with a master's degree ($n = 8$; 2.0%), and one with a doctoral degree ($n = 1$; 0.3%). More than one-third of the mothers have completed elementary school ($n = 137$; 34.3%), then middle school ($n = 78$; 19.5%), none can read or write ($n = 56$; 14.0%), some can read and write ($n = 39$; 9.8%), 36 have a bachelor's degree ($n = 36$; 9.0%), 29 have a high school diploma ($n = 29$; 7.3%), and 1 has a master's degree ($n = 1$; 0.3%).

= 25; 6.3), and a few have a diploma. A little under a third of families reported an income between 601.000 and 900.000 ID (n = 127; 31.8% of the total), followed by 62 families reporting an income below 300,000 ID (n = 60; 15.0% of the total), 42 families reporting an income between 1.201.000 and 1.500.000 ID (n = 42; 10.5% of the total), and 30 families reporting an income of 1.501.000 or more (n = 30; 7.5% of the total). The majority of respondents (n = 294; 73.5% of the total) said they currently reside with their parents. Next came those who currently live with their mothers (n = 67; 16.8% of the total), followed by those who currently live with their fathers (n = 27; 6.8% of the total), then those who currently reside with other relatives (n = 6; 1.5%), and finally, those who currently reside with friends and other individuals (n = 3; 0.8%). Looking at the socioeconomic class breakdown, we find that over half are from the upper lower class (n = 214; 53.5%), followed by 107 people (26.8%), 70 people (17.5%), 8 people (2.0%), and 1 person (0.3%) from the upper class.

Table.4.2. Descriptive statistics for Self-Efficacy of stopping smoking

Item	Not at all tempted	Not very tempted	Moderately tempted	Very tempted	Extremely tempted	M (SD)
	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)
1. With friends at a party	85 (21.3)	59 (14.8)	110 (27.5)	53 (13.3)	93 (23.3)	3.02 ± 1.43
2. When I am desiring a cigarette	59 (14.8)	46 (11.5)	152 (38.0)	99 (24.8)	44 (11.0)	3.05 ± 1.18

3. When things are not going the way I want and I am frustrate	68 (17)	59 (14.8)	134 (33.)	84 (21.0)	55 (13.8)	2.99 ± 1.26
4. With my spouse or close friend who is smoking	75 (188)	62 (15.5)	109 (27.3)	102 (25.5)	52 (13.0)	2.98 ± 1.29
5. When there are arguments and conflicts with my family	98 (24.5)	69 (17.3)	87 (21.8)	75 (18.8)	71 (17.8)	2.88 ± 1.42
6. When I am happy and celebrating	75 (18.8)	57 (14.2)	99 (24.8)	70 (17.5)	99 (24.8)	3.15 ± 1.42
7. When I am very angry about something or someone	87 (21.8)	88 (22.0)	82 (20.5)	102 (25.5)	41 (10.3)	2.80 ± 1.31

8. When I would experience an emotional crisis, such as an accident or death in the family	111 (27.8)	46 (11.5)	86 (21.5)	87 (21.8)	70 (17.5)	2.89 ± 1.46
9. When I see someone smoking and enjoying it	48 (12.0)	65 (16.3)	120 (30.0)	123 (30.8)	44 (11.0)	3.12 ± 1.17
10. Over coffee while talking and relaxing	121 (25.3)	105 (21.9)	99 (20.7)	83 (17.3)	71 (14.8)	2.70 ± 1.37
11. When I realize that quitting smoking is an extremely difficult	101 (25.3)	91 (22.8)	89 (22.3)	62 (15.5)	57 (14.2)	2.90 ± 1.37

task for me						
12. When I am craving a cigarette	88 (22.0)	64 (16.0)	114 (28.5)	66 (16.5)	68 (17.0)	3.00 ± 1.27
13. When I first get up in the morning	91 (22.8)	58 (14.5)	91 (22.8)	95 (23.8)	65 (16.3)	2.96 ± 1.39
14. When I feel I need a lift	76 (19.0)	68 (7.0)	102 (25.5)	84 (21.0)	70 (17.5)	3.01 ± 1.35
15. When I begin to let down on my concern about my health and am less physically active	74 (18.5)	84 (21.0)	100 (25.0)	68 (21.5)	56 (14.0)	2.90 ± 1.32
16. When I wake up in the morning and face a tough day	93 (23.3)	55 (13.8)	74 (18.5)	94 (23.5)	84 (21.0)	3.05 ± 1.46
17. When I am	62 (15.5)	73 (18.3)	82 (20.5)	99 (24.7)	84 (21.0)	3.17 ±

extremely depressed	%)	%)	%)	%)		1.36
18. When I am extremely anxious and stressed	74 (18.5)	76 (19.0)	91 (22.8)	88 (22.0)	71 (17.8)	3.01 ± 1.36
19. When I realize I haven't smoked for a while	104 (26.0)	79 (19.8)	113 (28.2)	47 (11.8)	57 (14.2)	2.68 ± 1.35

f: Frequency, M: Mean, SD: Standard Deviation, %: Percent

The study results reveal that participants scored higher on the items “When I am extremely depressed” (3.17 ± 1.36), “When I am happy and celebrating” (3.15 ± 1.42), and “When I see someone smoking and enjoying it” (3.12 ± 1.17).

Table.4.3.Descriptive statistics for knowledge about smoking consequences

Item	Yes	No	M (SD)
	f (%)	f (%)	
1. Does smoking increase the risk of heart disease?	78 (19.5%)	322 (80.5%)	1.80 ± 0.39
2. Can smoking contribute to erectile dysfunction (erectile dysfunction) in men?	199 (49.8%)	201 (50.2%)	1.50 ± 0.50
3. Is smoking a known cause of lung cancer?	78 (19.5%)	322 (80.5%)	1.80 ± 0.39

4. Can smoking lead to vision loss or vision problems?	175 (43.8%)	225 (56.2%)	1.56 ± 0.49
5. Does smoking play a role in the development of oral cancer?	205 (51.2%)	195 (48.8%)	1.48 ± 0.50
6. Is throat cancer more common in people who smoke?	209 (52.3%)	191 (47.8%)	1.46 ± 0.50
7. Does smoking increase the risk of stroke?	216 (54.0%)	184 (46.0%)	1.46 ± 0.49
8. Can a pulmonary explosion be caused by smoking?	144 (36.0%)	256 (64.0%)	1.64 ± 0.48
9. Can smoking contribute to the development of chronic bronchitis?	112 (28.0%)	288 (72.0%)	1.72 ± 0.44
10. Can exposure to side smoke cause lung cancer in nonsmokers?	188 (47.0%)	212 (53.0%)	1.53 ± 0.49
11. Is side smoke associated with an increased risk of heart attacks in non-smokers?	191 (47.8%)	209 (52.2%)	1.52 ± 0.50
12. Does exposure to side smoke increase the risk of asthma in children?	87 (21.8%)	313 (78.2%)	1.78 ± 0.41

f: Frequency, M: Mean, SD: Standard Deviation, %: Percent

The study results reveal that participants scored higher on items “Does smoking increase the risk of heart disease?” (1.80 ± 0.39), “Is smoking a known cause of lung cancer?” (1.80 ± 0.39), and “Does

exposure to side smoke increase the risk of asthma in children?" (1.78 ± 0.41).

Table.4.4. Stepwise regression for predicting participants' Self-Efficacy

Model		Coefficients				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	51.495	10.492		4.908	.000
	Age	-.212	.573	-.018	-.370	.712
	Socioeconomic Status	.586	.128	.224	4.568	.000
2	(Constant)	63.048	11.446		5.508	.000
	Age	-.257	.569	-.022	-.452	.652
	Socioeconomic Status	.605	.128	.231	4.739	.000
	Knowledge	.571	.233	-.119	-2.447	.015

a. Dependent Variable: Self-Efficacy

B: Beta; t: T-statistics; Sig.: Significance; Std. Error: Standard Error
The stepwise regression model displays that family's socioeconomic status

and knowledge about the consequences of smoking positively predict students' Self-Efficacy for smoking cessation (p-value = .000, .015) respectively.

Table.4.5.Difference in Self-Efficacy for smoking cessation among grade groups

ANOVA					
Self-Efficacy					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	136.453	2	68.226	.320	.726
Within Groups	84652.547	397	213.231		
Total	84789.000	399			

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

The study results reveal that there is no statistically significant difference in Self-Efficacy for smoking cessation among grade groups.

Table.4.6.Difference in Self-Efficacy for smoking cessation among living arrangements groups

ANOVA					
Self-Efficacy					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2285.470	5	457.094	2.183	.055

Within Groups	82503.530	394	209.400		
Total	84789.000	399			

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

The study results reveal that there is no statistically significant difference in Self-Efficacy for smoking cessation among living arrangements groups.

Table.4.7.Difference in Self-Efficacy for smoking cessation among family's socioeconomic class groups

ANOVA					
Self-Efficacy					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5326.133	4	1331.533	6.619	.000
Within Groups	79462.867	395	201.172		
Total	84789.000	399			

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

The study results reveal that there is a statistically significant difference in Self-Efficacy for smoking cessation among family's socioeconomic class groups (p -value = .000).

Table.4.8.Difference in participants' knowledge about the consequences of smoking among grade groups

ANOVA					
Knowledge					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	14.120	2	7.060	.762	.467
Within Groups	3677.440	397	9.263		
Total	3691.560	399			

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

The study results reveal that there is no statistically significant difference in knowledge about the consequences of smoking among grade groups.

Table.4.9.Difference in participants' knowledge about the consequences of smoking among living arrangements group

ANOVA					
Knowledge					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	51.980	5	10.396	1.125	.346

Within Groups	3639.580	394	9.238		
Total	3691.560	399			

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

The study results reveal that there is no statistically significant difference in knowledge about the consequences of smoking among living arrangements groups.

Table.4.10.Difference in participants' knowledge about the consequences of smoking among family's socioeconomic status groups.

ANOVA					
Knowledge					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	53.657	4	13.414	1.456	.215
Within Groups	3637.903	395	9.210		
Total	3691.560	399			

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

The study results reveal that there is no statistically significant difference in knowledge about the consequences of smoking among family's socioeconomic status groups

Chapter Five
Discussion and
Conclusion and
Recommendation

Chapter Five

Discussion and Conclusion, Recommendation

5.1. Discussion

This descriptive predictive correlation study aimed mainly to identify factors that can predict participants' Self-Efficacy of smoking cessation. Smoking is commonly well documented as a significant factor leading to adverse long-term health effects, including lung cancer, respiratory illnesses, and heart disease (Center for Disease Control and Prevention, 2020).

However, smoking is one of the main preventable factors that contribute to morbidity and mortality (Goodchild et al., 2018). The idea of self-efficacy is central to Bandura's social learning theory. It refers to the confidence that an individual has in his or her own abilities to do a given task. (Lopez-Garrido, 2023). Within the framework of the Transtheoretical Model of Change (TTM), Self-Efficacy is described as self-confidence in resisting temptations (Liu et al., 2018).

Research indicates that individuals in the Precontemplation Stage (one of the constructs of the TTM) may have low self-confidence in resisting smoking temptations, but this confidence tends to increase significantly once they become abstinent and maintain abstinence (Charkazi et al., 2013; Murnane & Counts., 2014).

5.2. Descriptive statistics for Self-Efficacy of stopping smoking

The study's findings shed light on adolescents' perceptions of their own ability to stop smoking, especially in different emotional and social situations. Higher scores on items like "When I am happy and celebrating" (3.15 ± 1.42), "When I am extremely depressed" (3.17 ± 1.36), and "When I see someone smoking and enjoying it" (3.12 ± 1.17), indicate that

teenagers believe they can moderately control their smoking behaviour under various conditions.

Moderate self-confidence scores when adolescents were “happy and celebrating” (3.15) or “saw someone smoking and enjoyed it” (3.12) highlight the influence of social and situational factors on smoking behavior. Adolescents appear to have a reasonable belief in their ability to resist smoking even when exposed to positive social cues or emotional experiences associated with smoking. This is consistent with findings from Tseng et al. (2019) that emphasize the importance of social influences and emotional states in smoking behavior.

Recent research has shown that while self-efficacy is a major factor in quitting smoking, it is not the only one. Schane et al. (2017) discovered, for instance, that while self-efficacy-boosting interventions are beneficial, they also need to take social and environmental aspects into account. Similarly, Tseng et al. (2019) emphasised that in order to improve their effectiveness, cessation programs must incorporate emotional and social context tactics.

5.3. Descriptive statistics for knowledge about smoking consequences

The study findings show that participants knew a fair amount about the negative effects of smoking, especially when it comes to its connections to major health problems like lung cancer and heart disease, as well as the negative effects of secondhand smoke on children's health. The average scores for the first two questions were 1.80, and the average score for the third question was 1.78, indicating that adolescents were well aware of these serious health risks. The results of the study, along with the study by Gajewska et al. (2017), support the idea that adolescents' attitudes toward smoking cessation are positively associated with their level of awareness of the health risks associated with smoking. Similarly, Kim et al. (2019) found

that adolescents who knew more about the risks of smoking were less likely to start smoking or more likely to try to quit. According to this research, educating youth about the risks of smoking is crucial to encouraging healthy lifestyle choices.

Although the knowledge ratings are positive, it is important to remember that awareness does not always result in changed behaviour. According to a meta-analysis by McNeill et al. (2019), although teenagers may be aware of the health dangers associated with smoking, they frequently do not take action until their awareness is reinforced by successful intervention programs that support self-efficacy and useful cessation techniques. This draws attention to a possible disconnect between knowledge and behaviour, which calls for focused behavioural and educational interventions.

5.4. Relationship between family's socioeconomic status and Self-Efficacy for smoking cessation

The multiple regression model displayed that family's socioeconomic status positively predicts students' Self-Efficacy for smoking cessation. This finding implies that the better the socioeconomic status the family has, the greater the Self-Efficacy students enjoy. This finding could be explained as having better socioeconomic status enables families to have access to literature that makes them knowledgeable enough to refrain from smoking behavior or striving for its cessation. This finding goes in line with that obtained by Minh et al. (2019) who concluded that the likelihood of having better knowledge was recorded among participants who are classified as of socioeconomic status in second, third, fourth, and fifth quintiles compared to those living in the household ranked at the lowest quintile.

Significant disparities have arisen where individuals from low socioeconomic status (SES) backgrounds exhibit a decelerated decline in

smoking rates, resulting in a higher concentration of smokers within this demographic (Drope et al., 2018).

Despite the fact that lower SES groups have higher tobacco usage rates in general, they are equally inclined to attempt smoking cessation as their higher SES counterparts (Kotz & West, 2009). However, they face lower odds of successfully quitting smoking (Kalkhoran et al., 2018).

5.5. Relationship between knowledge about the consequences of smoking and Self-Efficacy for smoking cessation

On the other hand, knowledge about the consequences of smoking inversely predicted students' Self-Efficacy for smoking cessation. This finding implies that the broader the knowledge the students have, the greater the Self-Efficacy for smoking cessation they enjoy. The literature pinpointed a link between individuals' knowledge and their Self-Efficacy. It was found that the majority of nurses had dissatisfactory Self-Efficacy since they lack the knowledge that can influence their behavior in providing the care to their patients (Anderson et al., 2019; Frouzandeh et al., 2015).

Behavior is a response that emerges from the assimilation of knowledge and self-confidence, which is acquired from either the surroundings or one's own self. It has been established that a mere 46.1% of nurses possess the ability to deliver commendable spiritual care (Mamier & Taylor, 2015).

5.6. Difference in Self-Efficacy for smoking cessation among family's socioeconomic class groups

The study's findings show that the socioeconomic status groups of the families differed in their levels of self-efficacy for quitting smoking in a statistically meaningful way. Further post hoc analysis demonstrated that students who are of families whose socioeconomic class is high enjoy greater Self-Efficacy of Smoking cessation. This finding could be

explained as having better socioeconomic status enables families to have access to literature that makes them knowledgeable enough and then develop greater Self-Efficacy to refrain from smoking behavior or striving for its cessation. Ineson and colleagues (2013) concluded that the prior knowledge individuals have, and ability do positively influence their Self-Efficacy.

5.7. Conclusions

1. Teenagers who score highly on self-confidence are generally confident in their ability to abstain from smoking in a range of contexts. This result supports the need of boosting self-confidence in smoking cessation programs and is in line with other studies. Subsequent studies may investigate the ways in which self-assurance in various settings impacts the achievement of long-term smoking cessation.
2. The results of this investigation show that teenagers are well-aware of the negative effects of smoking. But this information might not be enough on its own to promote quitting habits
3. The lower the socioeconomic status of the family, the greater the self-efficacy that students tend to enjoy. This is because students from less advantaged backgrounds often face greater challenges in their daily lives, which pushes them to develop their self-management skills and resilience. As a result, these difficulties can motivate them to achieve greater accomplishments despite the obstacles they encounter.
4. The broader the knowledge that students possess regarding the health risks and consequences of smoking, as well as effective strategies for quitting, the greater the self-efficacy they experience in their ability to successfully cease smoking. This extensive understanding empowers them to make informed decisions, boosts their confidence in overcoming cravings, and reinforces their commitment to leading a healthier lifestyle. Consequently,

students who are well-informed are more likely to believe in their capacity to change their habits and resist the urge to smoke.

5. Students from families with a high socioeconomic status tend to enjoy greater self-efficacy in smoking cessation. This is largely due to better access to educational resources and support systems that provide them with essential knowledge and strategies. Additionally, their financial stability reduces stress, allowing them to focus on healthier choices. As a result, these factors collectively boost their confidence in successfully quitting smoking.

5.8. Recommendations

1. The study recommended that school health should offer extra attention to students from low-income families, who are at a higher risk for smoking and other health issues.
2. Community health nurses should form interdisciplinary teams to educate adolescents about the dangers of smoking and other health concerns.
3. In order to safeguard teenagers from the harmful consequences of smoking, community health nurses should work together with health authorities from the Ministry of Health and the Ministry of Labour and Social Affairs.
4. Creating an efficient program to discourage smoking on school grounds and enlisting the help of the Ministry of Health in this endeavor.
5. The study recommended conducting future studies to uncover more reasons that influence adolescents to quit smoking.
6. There should be at least one nurse in each school in collaboration with the Ministry of Health, preferably a nurse specialized in community health. Iraq is the only country without nurses in schools to organize

awareness sessions about the harms of smoking for students, particularly adolescents.

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Appendices

Appendix A

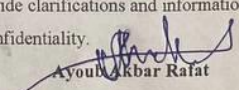
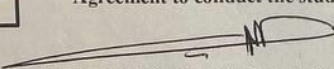
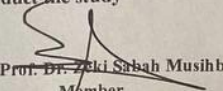
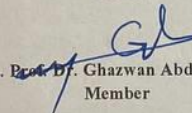
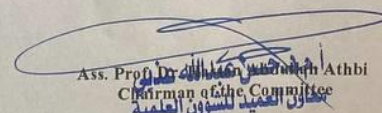
Ethical Consideration

Ministry of Higher Education and Scientific Research
University of Karbala / College of Nursing
Scientific Research Ethics Committee



UoK. CON. 24. 038
Ethical Committee Code:
Date: 11 / 2 / 2024

Research Ethical Approval Form

Title of the research project			
In the English language		In the Arabic language	
Self-Efficacy for Smoking Cessation and Knowledge about Smoking Consequences among Adolescents		الكفاية الذاتية للإقلاع عن التدخين والمعرفة حول عواقب التدخين بين المراهقين	
Data About the Main Researcher /Student:			
Full Name	Scientific Title	Mobile Number	Email
Ayoub Akbar Rafat	Master student	0770096623	Ayoubduger0@gmail.com
Data About the Co-author /Supervisor:			
Full Name	Scientific Title	Mobile Number	Email
Haqi Ismael Mansoor	Instructor	07823511521	Haqi.i@uokerbala.edu.iq
Study objectives			
1. To identify the self-efficacy for smoking cessation among adolescents 2. To assess their knowledge about smoking consequences 3. To find out the relationship between the two variable (self-efficacy, smoking consequences) and their demographic data 3. To identify if participants' age, family's socioeconomic status, duration of smoking initiation, and knowledge about smoking consequences can predict their Self-Efficacy for smoking cessation. 4. To investigate the differences in knowledge about smoking consequences and Self-Efficacy for smoking cessation between the groups of grade, academic achievement, residency, type of smoking, having a smoker family member, and having a smoker peer.			
Time and Setting of the Study			
The study will be conducted for the period from October 2023 to September 2024 in Tuz City.			
Study Design			
Descriptive correlation design			
Sampling method and sample size			
The study will include a convenience sample of 390 adolescents			
Statement of Ethical Commitment			
I am Ayoub Akbar Rafat pledge to conduct the research in accordance with what was mentioned in the protocol above and to commitment that all rules set by the ethical policy are followed in my research process. I also make a commitment to abide by ethical principles, moral values, law and instruction of the institutions. My research carries no bias for ethnicity, gender, regional aspects and is totally impartial and objective. I will have taken an informed consent from participants, and to provide clarifications and information about the study to the sample members. I deal with the data of the sample members in complete confidentiality.			
 Ayoub Akbar Rafat			
Recommendation of the College's Research Ethical Committee			
<input checked="" type="checkbox"/>	Agreement to conduct the study	<input type="checkbox"/>	Disagreement to conduct the study
 Instructor Dr. Sajidah Saadoon Olewi Member		 Ass. Prof. Dr. Zeki Sabah Musihb Member	
 Ass. Prof. Dr. Ghazwan Abdalhussein Member		 Ass. Prof. Dr. Abdulhadi Al-Athbi Chairman of the Committee معاون العميد للعلوم العلمية	

Appendix B1

Administrative Agreements

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: 11 / 11 / 2023

العدد: د.ع / 342

الى / مديرية تربية صلاح الدين - قسم تربية طوز

م/ تسهيل مهمة

تحية طيبة...

يرجى التفضل بالموافقة على تسهيل مهمة طالب الدراسات العليا / الماجستير (أبوب أكبر رفعت) في كليتنا للعام الدراسي (2023-2024) لغرض جمع العينات الخاصة برسالته الموسومة:

"الكفاءة الذاتية للإقلاع عن التدخين ومعرفة عواقب التدخين بين المراهقين"

"Self-efficacy for smoking cessation and knowledge about smoking consequences among adolescents"

** مع التقدير **

أ.م.د. سلمان حسين فارس الكريطي
معاون العميد للشؤون العلمية و الدراسات العليا

2023 / 11 / 11



نسخة منه الى:

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



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



Appendix B2

Administrative Agreements

قسم تربية طوز
التخطيط
مديرية قسم تربية طوز
الوزارة
الى ادارات المدارس الاعدادية والثانوية

العدد: ١٤/٢/٣١ / ٢٧٤٢
التاريخ: ٢٠٢٣/١٧/١٩

م/تسهيل مهمة

تحية طيبة :
يرجى تسهيل مهمة طالب الماجستير (ايوب اكبر رفعت) لغرض جمع
معلومات حول رسالته ((الكفاءة الذاتية للاقلاع عن التدخين ومعرفة
عواقب التدخين بين المراهقين)) مع التقدير .

رياض علي حمد
مدير قسم تربية طوز
١١/١٩

نسخة منه
• التخطيط
• الارشيف

العراق/صلاح الدين/طوز/مقابل مستشفى طوز العام
E-mail:Ayyubtuz@yahoo.com

Appendix C

Questionnaire of the Study- Arabic

استبانة الخاصة لمعرفة الكفاءة الذاتية للامتناع عن التدخين ومعرفتهم حول عواقب التدخين بين المراهقين

ملاحظة: ضع علامة (✓) داخل القوس المقابل للفقرة يرجى عدم ترك اي فقرة دون اجابة لان ذلك يؤدي الى الفائدة المتوخاة من البحث

الجزء الاول: المعلومات الديموغرافية:

العمر سنة

المرحلة الدراسية: رابع () خامس () سادس ()

ترتيبات المعيشة:

أعيش مع الوالدين () أعيش مع والدتي () أعيش مع والدي ()

أعيش مع أقاربي () أعيش مع أصدقائي () أخرى ()

التحصيل الدراسي للأب للأم

لا يقرأ ويكتب ()

يقرأ ويكتب ()

خريج الدراسة الابتدائية ()

خريج الدراسة المتوسطة ()

خريج الدراسة الإعدادية ()

دبلوم فني (خريج معهد) ()

بكالوريوس ()

دبلوم عالي ()

ماجستير ()

دكتوراه ()

الدخل الشهري للأسرة (بالدينار العراقي):

أقل من 300.000	[]	300.000-600.000	[]
900.000-601.000	[]	1.200.000-901.000	[]
1.500.000-1.201.000	[]	1.501.000 أو أكثر	[]

مهنة رب الاسرة

	مهني (وتشمل الأطباء، كبار الموظفين الإداريين، كبار المحاضرين، الأساتذة، المحامين، مدققي الحسابات، محرري الصحف، الموسيقيين الخبراء، المهندسين المعماريين، المدراء الإداريين للشركات الصناعية والتجارية)
	شبه مهني (وتشمل الأشخاص من حملة الشهادة ما بعد المدرسة الثانوية أو التعليم الجامعي مثل المهندسين، المدرسين، الخ.)
	الكاتب، صاحب متجر، مُزارع، العمل ذو الطبيعة المتكررة. كاتب الطابعة، المحاسب، رجل المبيعات، صاحب مزرعة.
	العامل الماهر: العمل المعقد يتطلب تدريباً مفصلاً مثل النجار، عامل البناء، ميكانيكي، سائق سيارة، وما إلى ذلك.
	العامل شبه الماهر - العمل الذي يتطلب بعض التدريب كهربائي، عمال المصانع، مجلد الكتب، النادل
	العامل غير الماهر - العمل الذي لا يتطلب التعليم ولا التدريب مثل الحارس، المنظف، الحمال، الخ.
	لا يعمل

الجزء الثاني: الكفاءة الذاتية

عزيزي الطالب:

المدرجة أدناه هي المواقف التي تدفع بعض الناس إلى التدخين. نوّد معرفة مدى الإغراء الذي تكون عليه للتدخين في كل موقف

اقرأ كل عبارة جيداً وضع علامة "√" في خانة الاختبار الذي يناسبك أو ينطبق عليك. ليس هناك إجابة خاطئة أو صحيحة المهم أن تعبر بصراحة عما تشعر به في الواقع

الفقرة	غير مُعَرَى إطلاقاً	غير مُعَرَى جداً	مُعَرَى لدرجة متوسطة	مُعَرَى جداً	مُعَرَى للغاية
1. مع الأصدقاء في حفلة					

					2. عندما أرغب في النرجيلة.
					3. عندما لا تسير الأمور بالطريقة التي أريدها، أشعر بالإحباط.
					4. مع زوجتي أو صديقي المقرب الذي يدخل للنرجيلة.
					5. عندما تكون هناك خلافات وصراعات مع عائلتي

مُعْرَى للغاية	مُعْرَى جداً	مُعْرَى لدرجة متوسطة	غير مُعْرَى جداً	غير مُعْرَى إطلاقاً	الفقرة
					6. عندما أكون سعيداً وأحتفل
					7. عندما أكون غاضباً جداً بشأن شيء ما أو شخص ما
					8. عندما أعاني من أزمة عاطفية، مثل حادث أو وفاة في الأسرة
					9. عندما أرى شخصاً يدخل النرجيلة ويستمتع بها
					10. تناول القهوة أثناء التحدث والاسترخاء
					11. عندما أدركت أن الإقلاع عن تدخين النرجيلة هو مهمة صعبة للغاية بالنسبة لي
					12. عندما أتوق إلى النرجيلة
					13. عندما أستيقظ في الصباح
					14. عندما أشعر أنني بحاجة إلى رفع المعنويات
					15. عندما بدأت في الشعور بالخذلان بشأن صحتي ولكوني

					أقل نشاطاً بدنياً
					16. عندما أستيقظ في الصباح وأواجه يوماً صعباً
					17. عندما أشعر بالاكئاب الشديد
					18. عندما أكون قلقاً ومتوتراً للغاية
					19. عندما أدركت أنني لم أدخن النرجيلة منذ مدة

الجزء الثالث: المعرفة حول عواقب التدخين

الاسئلة الاتية تستبين معارفك حول عواقب التدخين المطلوب منك ان تضع علامة "√" في خانة

(نعم) او (لا)

لا	نعم	السؤال
		هل يزيد التدخين من خطر الإصابة بأمراض القلب؟
		هل يمكن أن يساهم التدخين في ضعف الانتصاب (عجز الانتصاب) لدى الرجال؟
		هل يُعتبر التدخين سبباً معروفاً لسرطان الرئة؟
		هل يمكن أن يؤدي التدخين إلى فقدان البصر أو مشاكل الرؤية؟
		هل يلعب التدخين دوراً في تطور سرطان الفم؟
		هل يكون سرطان الحلق أكثر شيوعاً في الأفراد الذين يدخنون؟
		هل يزيد التدخين من خطر الإصابة بالسكتة الدماغية؟
		هل يمكن أن يكون الانفجار الرئوي ناتجاً عن التدخين؟
		هل يمكن أن يساهم التدخين في تطوير التهاب الشعب الهوائية المزمن؟
لا	نعم	السؤال
		هل يمكن أن يسبب التعرض للدخان الجانبي لسرطان الرئة في غير المدخنين؟
		هل يرتبط الدخان الجانبي بزيادة خطر حدوث نوبات قلبية في غير المدخنين؟
		هل يزيد التعرض للدخان الجانبي من احتمالية الإصابة بالربو لدى الأطفال؟

Appendix C

Questionnaire of the Study- English

Part 1: Demographic data

1. Age..... Year

2. Educational level: Fourth () Fifth() Sixth()

3. Living arrangements: I live with my parents ()

I live with my mother () I live with my brother () I live with my relatives () I live with my friends () other ()

4.The educational attainment of the:	father	mother
He does not read and write	()	()
Reads and writes	()	()
Primary school graduate	()	()
Middle school graduate	()	()
Preparatory school graduate	()	()
Technical Diploma (Institute Graduate)	()	()
Bachelor's degree	()	()
Higher diploma	()	()
Master	()	()
Doctorate	()	()

5. Family monthly income (in Iraqi dinars):

Less than 300.000 () 300.000—600.000 ()

601.000—900.000 () 901.000—1200.000 ()

1201.000—1500.000 () More than 1500.000 ()

6. Profession of head of household:

Professional (including doctors, senior administrative staff, senior lecturers, professors, lawyers, auditors, newspaper editors, expert musicians, architects, and managing directors of industrial and commercial companies)	
Semi-professional (includes people with post-secondary school or university education, such as engineers, teachers, etc.)	
Writer, shopkeeper, farmer, work of a repetitive nature. Typist, accountant, salesman, rancher.	
Skilled Worker: Complex work requires excessive training such as carpenter, construction worker, mechanic, car driver, etc.	
Semi-skilled worker - work that requires some training electrician, factory workers, bookbinder, waiter	
Unskilled worker - work that does not require education or training, such as a guard, cleaner, porter, etc.	
It doesn't work	

Part 2 : Self efficacy temptation scale:

First paragraph Listed below are what prompt some people to smoke. We would like to know how tempting smoking is in each situation. Please answer each of the following women using a five-point scale (1 = not tempting at all, 2 = not very tempting, 3 = moderately tempting, 4 = very tempting, 5 = Extremely tempted)

paragraph	Not tempting at all	Not very tempting	Moderately tempting	Very tempting	Extremely tempted
1. With friends at a party.					
2. When I am desiring a cigarette.					
3. When things are not going the way I want and I am frustrated.					
4. With my spouse or close friend who is smoking.					

5. When there are arguments and conflicts with my family.					
6. When I am happy and celebrating.					
7. When I am very angry about something or someone.					
8. When I would experience an emotional crisis, such as an accident or death in the family.					
9. When I see someone smoking and enjoying it.					
10. Over coffee while talking and relaxing.					
11. When I realize that quitting smoking is an extremely difficult task for me.					
12. When I am craving a cigarette					
13. When I first get up in the morning.					
14. When I feel I need a lift.					
15. When I begin to let down on my health and am less physically active.					

16. When I wake up in the morning and face a tough day.					
17. When I am extremely depressed.					
18. When I am extremely anxious and stressed.					
19. When I realize I haven't smoked for a while.					

Part3 : Nowledge about smoking concescuences.

Questions	Yes	Not
1. Does smoking increase the risk of developing heart disease?		
2. Can smoking contribute to impotence (erectile dysfunction) in men?		
3. Is smoking a known cause of lung cancer?		
4. Can smoking lead to blindness or vision problems?		
5. Does smoking play a role in the development of mouth cancer?		
6. Is throat cancer more likely in individuals who smoke?		
7. Does smoking increase the risk of strokes?		
8. Is emphysema a potential health consequence of smoking?		

Questions	Yes	Not
9. Can smoking contribute to the development of bronchitis?		
Questions	Yes	Not
10. Can exposure to secondhand smoke cause lung cancer in non-smokers?		
11. Is secondhand smoke linked to an increased risk of heart attacks in non-smokers?		
12. Does exposure to secondhand smoke increase the likelihood of asthma in children?		

Appendix D

قائمة اسماء الخبراء

ت	اسم الخبير	اللقب العلمي	سنوات الخبرة	الاختصاص الدقيق	مكان العمل
1	ا.د. علي كريم خضير	أستاذ	32	تمريض الصحة النفسية والعقلية	جامعة كربلاء \ كلية التمريض
2	ا.د عبد المهدي عبد الرضا حسن	استاذ	44	تمريض الصحة النفسية والعقلية	جامعة بابل \ كلية التمريض
3	ا.د امين عجيل ياسر	استاذ	36	فلسفة تمريض	جامعة بابل \ كلية التمريض
4	ا.د هيو استار صالح	استاذ	24	تمريض صحة مجتمع	جامعة كركوك \ كلية التمريض
5	ا.د رضوان حسين ابراهيم	استاذ	25	تمريض صحة المجتمع	جامعة نينوى / كلية التمريض
6	ا.د علي طارق عبدالحسن	استاذ	24	بورء نفسية	جامعة كربلاء / كلية الطب
7	ا.م.د سلمان حسين فارس	استاذ مساعد	33	تمريض صحة مجتمع	جامعة كربلاء / كلية التمريض
8	ا.م.د جنان اكبر شكور	استاذ مساعد	33	تمريض صحة مجتمع	جامعة كركوك \ كلية التمريض
9	ا.م.د زكي صباح مصيحب	استاذ مساعد	24	تمريض الاطفال	جامعة كربلاء - كلية التمريض
10	ا.م.د غزوان عبد الحسين عبد الواحد	استاذ مساعد	19	تمريض صحة مجتمع	جامعة كربلاء / كلية التمريض
11	ا.م.د محمد باقر حسن	استاذ مساعد	18	تمريض الاطفال	جامعة الكوفة \ كلية التمريض
12	ا.م.د نزار احمد محمود	استاذ مساعد	19	تمريض صحة مجتمع	جامعة كركوك \ كلية التمريض
13	ا.م.د زيد وحيد عاجل	استاذ مساعد	14	تمريض الاطفال	جامعة بغداد \ كلية التمريض
14	ا.د. جاسم ناصر حسين	مدرس دكتور	32	احصاء	كلية الكوت الجامعة

الخبير الاحصائي

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


إقرار الخبير الإحصائي

أشهد بأن الرسالة الموسومة :

" الكفاءة الذاتية للإقلاع عن التدخين ومعرفة عواقب التدخين بين المراهقين "
" Self-Efficacy for Smoking Cessation and Knowledge about Smoking
Consequences among Adolescents "

قد تم الإطلاع على الأسلوب الإحصائي المتبع في تحليل البيانات و إظهار النتائج الإحصائية
وفق مضمون الدراسة و لأجله وقعت .



توقيع الخبير الإحصائي: 
الإسم و اللقب العلمي : ٣٠١-١٥١٢٣٤٥٦٧٨٩٠ عبير كاظم
الإختصاص الدقيق : إحصاء تجمعي
مكان العمل : جامعة كربلاء كلية الإدارة والاقتصاد
التاريخ : 2024 / 6 / 12

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

الخبير اللغوي

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" Self-Efficacy for Smoking Cessation and Knowledge about Smoking Consequences among Adolescents "

قد جرى مراجعتها من الناحية اللغوية بحيث أصبحت بإسلوب علمي سليم خالي من الأخطاء اللغوية و لأجله وقعت .

توقيع الخبير اللغوي :

الإسم و اللقب العلمي : د. حامد كطان حمود
الإختصاص الدقيق : علم اللغة

مكان العمل : جامعة كربلاء | كلية التمريض | المدرس المساعد
التاريخ : 2024 / 07 / 3

العنوان : العراق - محافظة كربلاء المقدسة - حي الموظفين - جامعة كربلاء

Mail: nursing@uokerbala.edu.iq

website: nursing.uokerbala.edu.iq

المستخلص

إن تعاطي التبغ يزيد من خطر الإصابة بالأمراض المزمنة الشديدة، وهو أحد الأسباب الرئيسية للوفاة التي يمكن الوقاية منها. وتعتبر فترة المراهقة فترة محورية للبدء في التدخين والإقلاع عنه. إن الثقة بالنفس والقدرة على الإقلاع عن التدخين والمعرفة بعواقب التدخين تؤثر بشكل كبير على سلوكيات التدخين لدى المراهقين.

اجريت الدراسة وصفية مقطعية من 10 تشرين الاول 2023 الى 20 حزيران 2024 وتهدف الدراسة الى تحديد ما اذا كان عمر المشاركين والحالة الاجتماعية والاقتصادية للأسرة، والمعرفة بعواقب التدخين يمكن التنبؤ بكفائهم الذاتية في الإقلاع عن التدخين، ودراسة الاختلافات في المعرفة حول عواقب التدخين والكفاءة الذاتية للإقلاع عن التدخين بين مجاميع الصف، وترتيبات المعيشية، والوضع الاجتماعي والاقتصادي للأسرة.

وقد شملت الدراسة عينة ملائمة مكونة من 400 طالب من طلاب المرحلة الإعدادية. تتكون اداة الدراسة من الورقة الاجتماعية والديموغرافية للطلاب، ومقياس الحالة الاجتماعية والاقتصادية للأسرة، ومقياس التدخين: الكفاءة الذاتية - الاغراء، ومقياس المعرفة بعواقب التدخين.

وكشفت نتائج الدراسة ان وضع الاجتماعي والاقتصادي للأسرة يتنبأ بشكل ايجابي بالكفاءة الذاتية للطلاب في الإقلاع عن التدخين ومن ناحية اخرى، فان المعرفة بعواقب التدخين تتنبأ سلباً بالكفاءة الذاتية للطلاب في الإقلاع عن التدخين، توجد فروقات ذات دلالة احصائية في الكفاءة الذاتية للإقلاع عن التدخين بين فئات الحالة الاجتماعية والاقتصادية للأسرة

واستنتجت الدراسة الى انه كلما كان الوضع الاجتماعي والاقتصادي للأسرة افضل كلما زاد تمتع الطلاب بالكفاءة الذاتية. كلما اتسعت المعرفة التي يمتلكها الطلاب زادت كفاءتهم الذاتية للإقلاع عن التدخين.

وتوصي الدراسة بضرورة قيام ممرضي صحة المجتمع ببدء تعاون متعدد القطاعات لرفع مستوى معرفة الطلاب حول عواقب الضارة للتدخين. هناك حاجة الى تعاون ممرضي صحة المجتمع مع مسؤولين في وزارة الصحة ووزارة العمل من اجل حماية المراهقين من الاثار الضارة للتدخين.



جامعة كربلاء
كلية التمريض

الكفاءة الذاتية للإقلاع عن التدخين ومعرفة عواقب التدخين بين المراهقين

رسالة تقدم بها
ايوب اكبر رفعت

الى مجلس كلية التمريض - جامعة كربلاء
وهي كجزء من متطلبات نيل درجة الماجستير علوم في التمريض

إشراف
م.د. حقي اسماعيل منصور

حزيران ٢٠٢٤ م

نحو الحجة ١٤٤٦ هـ