NEAR EAST UNIVERSITY
INSTITUTE OF GRADUATE STUDIES
BIOSTATISTICS DEPARTMENT

THE PREVALENCE OF TOBACCO SMOKING AND ITS EFFECT AMONG UNIVERSITY IN TRNC

FRANCIS SESAY

MASTER THESIS

NICOSIA

(2022)

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THESIS SUPERVISOR
PROF.DR. İLKER ETİKAN

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ACCEPTANCE/APPROVAL

We as the jury members certify the "The prevalence of tobacco Smoking and Its Effect among University in Turkish Republic of North Cyprus". "Prepared by Francis Sesay on .....has been found satisfactory for the award of Degree of Masters

Thesis committee:

Chair of the committee: **Prof.Dr. İlker Etikan (Advisor)**
Near East University
Sig……

Member: **Asst. prof. Dr. Özgür TOSUN**
Near East University
Sig……

Member:

Approved by:

DECLARATION

I hereby declare that this is the original work undertaken by Francis Sesay in partial fulfillment of my master of science in Biostatistics, and that the student has not made any utilization of sources, materials, or support that are not explicitly and completely acknowledged in the text Any direct citation or source of ideas has been named in the text by the author, with date and page numbers immediately following, and complete details are supplied in a reference list at the conclusion of the work.

Student Name: Francis Sesay…

ID NO: 20204523…..

Sign:……....

Date:…….

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Dedication

This research work is dedicated to Jesus, the source of my dependency and to my lovely and caring mother Miss. Veronica Isatu Sesay, who has been my Moses to see my dreams come true.

Abstract

This research explored the effects of tobacco smoking among university students on academic performance, health, and the economy. A quantitative study design was used to analyze 393 samples of primary data. Five research aims and objectives and five hypotheses were used to determine the prevalence of tobacco smoking and its effects on academic performance, smokers' health status, and the economic well-being of students. Descriptive statistics, chi-square tests, and frequencies were used to analyze the data. The findings revealed a high prevalence of tobacco use, with a percentage impact on both health and the economy. The result showed a high public health threat to university students' health, academic performance, and economic well-being. This research's findings could serve as a road map for improving overall public health outcomes in the TRNC and other affected countries. Strategies to improve the quality of public health interventions are worthy of further investigation...

Key word: Tobacco smoking, prevalence, academic performance, university students and TRNC.

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Chapter One

Introduction

1.1. Background of the study

Marijuana and hashish are examples of plants that can be smoked. Although it's most popular with tobacco, which is smoked in a cigarette, cigar, or pipe. It is possible for tobacco to cause immediate or long-term damage to a wide range of human tissues. Furthermore, it covers the circulatory system, respiratory system, and epithelial glands, to mention a few (Sweanor et al., 2021). Nicotine, a highly addictive substance with stimulant and sedative properties, may be found in tobacco. Worldwide, there is a major public health concern with young individuals smoking tobacco (Al-Kubaisy, 2012).

There is little doubt that smoking is the major cause of heart disease, cancer, lung illness, and infertility. In addition, it has a significant impact on a wide range of chronic disorders (CDC, 2014). One billion people smoke cigarettes throughout the world, and this figure is expected to rise steadily in the years ahead (a systematic analysis for the Global Burden of Disease Study 2019). Smokers have a 23-fold higher chance of acquiring cancer than nonsmokers, according to studies by (Ullah et al. 2015; Kebede et al. 2018; Heydari et al., 2013). Tobacco use, despite the many health consequences, also has a huge financial impact (Goodchild et al., 2018). There is more than $1 trillion in yearly economic expenses associated with smoking, according to Goodchild et al. (2018) and the GBD 2019 Risk Factors Collaborators and GBD 2019.

A study by Ulus et al. (2012) found that the prevalence of tobacco usage among college students was high. According to a new study (WHO, 2009; Erguder et al., 2009), smokers make up between 7. Because of their youth and the easy availability of tobacco products, undergraduates have a higher-than-average chance of smoking (Pinto et al., 2014). Bad grades are linked to an increased chance of developing a smoking habit, according to research (Pierre-Olivier et al., 2019; Kinnunen et al., 2016; Lampert et al., 2013). According to a recent study (Kaptanoglu et al., 2012), smoking is quite common among Turkish health students. The percentage of Turkish nurses who smoke cigarettes ranges from 40.3% to 68.6% (Kaptanoglu et al., 2012). Tobacco use was found to be 19.2 percent, 17.5 percent, and 25.3% of students at Turkish health high schools and health colleges in studies examining students' smoking behavior (Cilingir et al., 2012).Peer pressure or influence from friends, as well as parental smoking, have been identified as major contributors to high smoking initiation (Afanador, 2012). Furthermore, Ulus et al.,

2012; Muhammad et al., 2018; and many more used cross-sectional and logistic regression methods to determine the prevalence of tobacco smoking.

1.2. Statement of the problem

Northern Cyprus, formally the Turkish Republic of Northern Cyprus (TRNC), is a country's official state that spans the north-eastern part of the island of Cyprus and is solely recognized by Turkey. The island is located in the Mediterranean Sea's eastern region, and it's the region's third biggest island (Griffiths, 2021). The island is well-known for its tourist attractions, and with students from all over the world, it has a diverse culture and social life. Tobacco smoking is seen as one of the most common social activities that most people engage in, especially at university. This is because of the indiscriminate rate of smoking in campuses and public places such as bars, restaurants, hospitals, office buildings, and hotels, to name but a few. In fact, most often during lectures, lecturers do give smoking breaks to students, and this is not a common practice in most parts of Africa. It seems tobacco smoking has become the norm within the TRNC, as tobacco smoking has become part of their daily lifestyle. The world health organization in 2017 indicated that tobacco use is the leading cause of preventable and early death and morbidity worldwide, accounting for around 6 million deaths per year. While Ullah et al. (2019) show in a cross-sectional study that tobacco smoking is linked to poor academic performance among Pakistani students, which is an unnoticed element of the tobacco epidemic,

This study will provide information that will describe the prevalence of tobacco smoking and its effects among university students in TRNC by evaluating students' academic performance, health, economic status, and study time, as well as dependent variables such as cumulative grade point, smoking prevalence, health (frequent coughing, chest pain, difficulty breathing, loss of appetite, and lung cancer), number of cigarettes smoked, and co-occurring diseases.

1.3. Purpose of the study

The purpose of this primary descriptive quantitative study was to evaluate the prevalence of tobacco smoking and it effect among university students in TRNC 2020 – 2021 academic year. This time frame helps the researcher to have recent developed views with regards to tobacco smoking among university students and it effect pose on their studies. The independent variable was weather tobacco smoking can affect students' academic performance, health of the students, and economy of students. The measured dependent variables included the cumulative grade point of the students, the study time, prevalence of smoking, health (frequent coughing, chest pain, difficulty breathing, loss of appetite and lung cancer), number of cigarette smoke, and cost of cigarette. These variables allowed a direct measure of tobacco smoking among university students and it effect on academic performance in a way that has never before been done in Turkish Republic of North Cyprus.

1.4. Study Aims and Objectives

1. To investigate the significant relationship between tobacco smoking and academic performance of TRNC students.
2. To ascertain the prevalence of smoking among Turkish Republic of Northern Cyprus (TRNC) university students.
3. Determine whether there is a significant relationship between tobacco smoking and socioeconomic factors influencing students' academic performance in TRNC.
4. To look into the factors that influence tobacco smoking among TRNC university students.
5. To ascertain the health issues faced by TRNC students who smoke tobacco.

1.5. Hypothesis of research

Using the health belief model, in this research study, I evaluated the prevalence of tobacco smoking and its effect among university students in the Turkish Republic of North Cyprus (TRNC). The outcome of interest is the prevalence of tobacco smoking and its effects on academic performance, health, the economy, influence, and study time; they have been recognized as the most significant contributing elements to students' poor academic performance (Journal et al. 2018).

The research hypotheses are as follows:

1. Ho: Tobacco smoking has no impact on students' academic performance in the Turkish Republic of Northern Cyprus (TRNC).

   H_1: Tobacco smoking has an impact on students' academic performance in the Turkish Republic of Northern Cyprus (TRNC).

2. Ho: There is no significant relationship between who you are living with and tobacco smoking among university students in TRNC.

   H_1: There is a significant relationship between who you are living with and that of tobacco smoking among university students in TRNC.

3. Ho: There is no significant relationship between tobacco smoking and the socioeconomic factors affecting the academic performance of students in TRNC.

   H_1: There is a significant relationship between tobacco smoking and the socioeconomic factors affecting the academic performance of students in TRNC.

4. Ho: There is no health impact of tobacco smoking among university students in TRNC.

   H_1: There is a health impact of tobacco smoking among university students in TRNC.

5. Ho: Tobacco smoking has no effect on students' study time among university students in TRNC.

H_1: Tobacco smoking has an effect on students' study time among university students in TRNC.

1.6. Definitions of terms

TRNC: Turkish Republic of North Cyprus

WHO: world Health Organization

GATS: Global Adult Tobacco Survey

CDC: Centers for Disease Control

GBD: Global Burden of Disease
GDP: Gross domestic product

TOBACCO: is a chemical toxicity capable of causing acute or chronic effects on a variety of body tissues (Sweanor et al., 2021).

COPD: Chronic obstructive pulmonary disease is defined by airflow obstruction and is associated with an exaggerated inflammatory response to noxious stimuli, such as cigarette smoke (Holloway et al., 2013).

DNA: Deoxyribonucleic acid is the hereditary material in humans and almost all other organisms, nearly every cell in a person's body has the same DNA (Arya et al., 2017).

ATP: Adenosine triphosphate is the central metabolite in the energy metabolism of cells and is hydrolyzed to ADP and inorganic phosphate to provide free energy in various cellular processes. (Morciano et al., 2020).

HP : Helicobacter pylori is a major human pathogen that produces inflammation of the stomach and is etiologically related to duodenal ulcer, gastric ulcer, gastric cancer (adenocarcinoma), and mucosa-associated lymphoid tissue (MALT) lymphoma (Mbulaiteye et al.,2009).

1.7. Significance of the Study

This study reveals whether or not tobacco smoking has an effect on students' academic performance, health, study time, and economy. The study might also assist in determining whether or not tobacco smoking affects the academic performance of students, study time, and the health of students. Furthermore, this research could aid in investigations into how tobacco smoking affects university students' study time, cumulative grade point average, economic situation, and health. This evaluation could allow the Turkish Republic of North Cyprus public

health professionals to better assess the program's impact and gather data that might help guide future modifications. This study expands our knowledge of the prevalence of tobacco use, study time, and cumulative grade point. It has the potential to affect societal change since the findings might help policymakers make more evidence-based decisions and, as a result, enhance the quality of life and academic performance of students as a whole, as well as the health of the public sector.

1.8. There are multiple segments to this dissertation's introductory chapter.

A brief review of the statement of the problem in TRNC, in particular, is presented. That was followed by the aims and objectives of the study that formed the basis of this dissertation and the purpose of the study. The research hypothesis that provides the basis for the study was also presented; this gives a quick overview of the study technique described in Chapter.

Next, we'll go through the important definitions employed in this study, which will help you understand how generalizable the findings are. This introductory chapter concludes with a discussion of the study's relevance.

Chapter Two
Literature reviews

2.1. Introduction

Previous research on tobacco smoking among university students has tended to focus disproportionately on the prevalence of tobacco smoking initiatives rather than their effect on academic performance, study time, and social aspects of the students.

This literature review has a number of components. In the beginning, I will go through how to perform a literature review. After that, a look at how common smoking is among college students is shown. Next, we'll take a look at research on the health effects of tobacco use. Following this, studies show that smoking tobacco has a negative impact on academic achievement. In light of previous research examining the prevalence of tobacco use among university students, the next section examines the effect of tobacco use on smokers' economic results and the burden it places on the country's gross domestic product.. The following section considers the impact of the influence of peer pressure. Finally, the literature looks at other factors contributing to youth being involved in tobacco smoking. A list of major research gaps that this research seeks to solve.

2.2. Literature search strategy.

The databases were used to perform this literature search of Google Scholar, Science-direct, Pub-med, Medical Report, to access current journal articles, as well as Academic Search Premier. In addition, current references from the articles found added to the search's depth. To investigate the themes of interest, a variety of search phrases were utilized, including diverse combinations of tobacco smoking, academic students, academic performance, nicotine, university, and so on.

Studies older than 5 years were typically eliminated, while some slightly older papers were included if they were particularly relevant or offered pre-tobacco smoking context and background. All of the publications were sourced from peer-reviewed journals, government agencies, and other reputable institutions.

2.3. The prevalence of tobacco smoking among university students.

Studying university students from Turkey's Republic of North Cyprus is a smart step in addressing smoking among academics before they become experts and role models in their respective areas and communities. Contrary to popular belief, the World Health Organization (WHO) estimates that 1.07 billion people smoke globally, with 908 million men and 162 million women, the majority of whom reside in countries with low and intermediate incomes (W.H.O, 2019).Each year, up to 6 million people die as a result of tobacco use, which is preventable and preventable (WHO, 2017; Tabuchi et al., 2017).

Every six seconds, someone dies from a tobacco-related ailment. More than 80 percent of the world's smokers, including Nigerians, reside in economically challenged countries, where 75 percent of these fatalities occur. (WHO, 2017; Aniwada et al., 2018). According to research (Petro et al., 2017; WHO, 2017), people in lower socioeconomic classes are more likely to smoke, less likely to stop, and more likely to die as a result of smoking than people in higher socioeconomic ranks (Petro et al., 2017).In contrast, a separate study found that 9.6 percent of students had used tobacco at some point in their lives, while a poll of Nigerian medical students discovered that 10.5% had used tobacco and were aware of the dangers (Dania et al., 2015).

A study conducted in Dhaka, Bangladesh found that college students are far more likely than the general population to smoke, with 68.81% of male students and 19.56% of female students reporting that they do so (Hossain et al., 2017). As compared to the general population, New Zealand's university students aged 18–24 (20 percent) and 25–34 (22 percent) had a higher rate of tobacco smoking than the country as a whole (ministry of health New Zealand, 2019). The students' social environments and identities experience substantial shifts as they adapt to university life and acquire new friends. Increasing their level of freedom and interacting with new individuals might increase the allure of smoking among intermittent smokers (Amin et al., 2016).

According to a recent study on the prevalence of tobacco smoking and the factors that influence its initiation (Hossain et al., 2017). A further poll of university students in Sylhet revealed that

37% of them smoked, with around half of the males in that group smoking as well as the predictors of smoking (Hassan et al., 2019).

Most university students begin smoking because of peer pressure, according to a study on the frequency and predictors of tobacco smoking among university students in Sylhet Division and Factors Associated with the Initiation of Smoking among University Students in Dhaka (Hossain et al., 2017). Students who live away from their families and homes, according to Ullah et al., 2019, may be exposed to alternative influences. There are a number of reasons why young people start smoking, including curiosity and the mimicry of their parents and siblings. He came to the conclusion that students with greater living expenses who are away from home more often smoke cigarettes. They claim that not only does smoking have an adverse effect on the country's economy, but it also hinders the health workforce, increasing the disease burden on healthcare systems that are already under strain due to the double burden of disease, as well as affecting academic performance in young people by altering various biological and psychological events.

Adults in Nigeria, particularly university students (aged 15 and above), consume tobacco products in a far greater proportion than women (10 percent of men and 1.1 percent of women). Smoking is used by 3.7% of adults, while smokeless tobacco is used by 1% of adults over the age of 15. Tobacco products are used by 15.4% of 13-to-15-year-olds (boys 19.2%, girls 11.1%) (https://tobaccoatlas.org/country/Nigeria/).

According to the Turkey Global Adult and Youth Tobacco Survey (GATS), conducted in partnership with the CDC (15 and above), an estimated 31. 6% of Turkish university students smoke cigarettes. Males make up 44.1 percent of all smokers, while women make up 19.2 percent. Tobacco use is 17.9% (boys 23.2%, women 12.1%) among 13-to-15-year-olds in Turkey, with cigarettes accounting for 7.3 percent (boys 9.3%, females 5.3%), and other tobacco products accounting for 12.8 percent (boys 17.3%, ladies 8%) (Turkey Global Adult Tobacco Survey (GATS) 2016; Turkey Global Youth Tobacco Survey (GATS) 2017).There are approximately 23.6 million tobacco smokers in Pakistan between the ages of 15 and 45, with students accounting for 63 percent of the population, with 58.5 million aged 20 to 24 (Pakistan National Human Development Report, 2018). According to a study conducted in Karachi, 23 percent of Pakistani university students smoke (Ullah et al., 2019).

2.4. Effect of tobacco smoking on health.

For the most part, tobacco smoking is still a major cause of premature mortality and disease in many countries throughout the globe, according to 2014 global data on addictive behaviors (Gowing et al., 2015). When a person smokes, they put themselves at risk of a wide range of illnesses and diseases, as well as their own health and well-being, as well as the health of others around them (Courtney, 2015). There is a strong correlation between smoking and cancer, respiratory illness (including COPD), and cardiovascular disease, particularly coronary heart disease (CHD) (Action on Smoking and Health, 2016c).

Cigarette smoke exposure has been shown to cause mitochondrial malfunction and mitophagy impairment, as well as the accumulation of damaged mitochondrial DNA (Yao et al., 2020). Toxic damage and death may result from increased mitochondria in airway epithelial cells. This may lead to an increase in airway wall thickness, which can lead to structural problems and an increased vulnerability to infection (Ahmad et al., 2015; Araya et al., 2019). Adenosine triphosphate synthesis in mitochondria is hampered by the reactive oxygen in tobacco smoke, which also impairs respiratory epithelial mitochondrial respiration (ATP), Cellular necrosis and chronic inflammation caused by mitochondrial failure in the lungs increase tissue remodeling and infection susceptibility (Wiegman et al., 2015; Jiang et al., 2020).

On the other hand, studies have shown that cigarette smoke has been proven to cause tumour progression in the oesophagus and gastric membrane, as well as the inner layers of the gastro intestinal tract, affecting the epithelial structure. Smoking has been linked to gastrointestinal metaplasia, persistent gastric mucus atrophy, and cancer-like dysplasia in the stomach (Kim et al., 2019). According to a survey on the impacts of cigarette smoking on immune responsiveness, cell dysfunction and decreased effector molecules can be seen in both innate and adaptive immunity when exposed to cigarette smoke (Qiu et al., 2017). Furthermore, cigarette smoke has been shown to decrease immunological activation as well as the synthesis and production of effector hormones in activated macrophages, resulting in a weakened immune response (Liu et al., 2019).

According to the World Health Organization's Global Tuberculosis Report in 2007, they have shown that tuberculosis is increased by both active and passive smoking and is one of the five key risk factors for tuberculosis infection. The higher risk of developing tuberculosis is attributable to smoking in 830000 people newly diagnosed with the disease; smokers had 1.6–2.5 times the morbidity of nonsmokers for TB (WHO, 2019). There has been a considerable increase in the mortality rate among smokers with tuberculosis in Taiwan. A prospective cohort study of 48,341 people found that smokers have a 9-times higher TB mortality risk than non-smokers (Lin et al., 2015). Infections with Helicobacter pylori (HP) are a major risk factor for digestive disorders such as peptic ulcers, chronic gastritis, and gastric cancer, and smoking is a risk factor for HP infection on its own. Moreover, in a Chinese study, the rate of HP infection in smokers was substantially greater than in non-smokers (Jiang et al., 2020).

According to He et al., 2017, he concluded that the activity of endothelial nitric oxide synthase can be reduced by smoking, which can result in a reduction in lung protective function. Smoking cigarettes increases the quantity of reactive oxygen species (ROS) and reactive nitrogen species (RNS) in the body. ROS and NRS are known to induce DNA damage as well as other cellular damage such as protein and carbohydrate oxidation, apoptosis, and necrosis (Jiang et al., 2020). More than 17% of Saudi college students smoke, which is more than double that of the general population, according to a systematic review and meta-analysis of research done between 2010 and 2018 (Alotaibi et al., 2019). Trichomonas vaginalis was found to rise in occurrence among 350 female sex workers in Kenya who had smoked in the previous two years (Lockhart et al., 2019).

According to studies, smokers have a greater rate of HIV infection and AIDS morbidity than non-smokers. Thus, according to Mdodo et al., 2015, this is confirmed in a cross-sectional survey on "Cigarette smoking prevalence among adults with HIV compared with the general adult population in the United States." That is, 42.4 percent of HIV patients were current smokers, 20.3 percent were previous smokers, and 37.3 percent had never smoked. Tobacco use is the leading cause of cancer in Australia, accounting for 22% of all cancer cases, according to a recent assessment by the Institute of Health and Welfare (Australian Institute of Health and Welfare, 2020).

According to the University of Washington's Institute for Health Metrics and Evaluation (IHME), nearly 85,000 Turkish die each year from smoking-related illnesses. Smoking is responsible for 29.2% of Turkish male deaths and 8.2% of Turkish female deaths (21.1 percent total) (Global Burden of Disease, 2020).As a result, tobacco accounts for one out of every five fatalities in Turkey, along with more than three-quarters of mortality from tracheal, bronchial, and lung malignancies (Global Burden of Disease (GBD) 2017, 2020). According to data from the Institute for Health Metrics and Evaluation (IHME) at the University of Washington's School of Public Health, nearly 259 men and 65 women in Ethiopia die each week from a tobacco-related disease. Fit for Work noted in 2017 that smoking has a significant impact on an individual's physical and mental health, and this is particularly true for high school and university students who are already coping with major health concerns like stress.

2.5. The effect of tobacco smoking on academic performance.

Psychoactive substances, according to the World Health Organization, are any substances that alter mental or bodily functioning (Ullah et al., 2019). Despite the negative consequences, students continue to use psychoactive substances such as tobacco and alcohol. These substances have become serious public health hazards among students, which have negatively impacted those (Deressa et al., 2018).

However, from different surveys, it shows that psychoactive substances used by students are linked to a variety of influences, including peer pressure, age, sex, personal enjoyment, and low academic performance (Hammizada et al., 2015; Ullah et al., 2019). Mekonen et al. (2018) concluded that substance addiction is becoming a serious concern among university students, with the use of substances such as cigarette smoking, which has a strong link to mental distress and, as a result, can have a poor impact on students' academic performance. According to a study on "Understanding the Links between Education and Smoking," smoking is related to education; individuals who are more educated are less likely to be smokers, and the study also found that smoking prevalence reduced as educational levels increased (Maralani, 2014). Pennanen et al. (2011) concluded also that academic performance is negatively correlated with smoking, and smoking has a significantly larger influence on academic performance than marijuana, and students with lower grades were more likely to smoke than those with higher marks. Journal et

al. (2018) prove that one of the biggest indicators of low academic performance among students is tobacco smoking. Makonen et al. (2017) also confirm that smoking is linked to poor academic achievement. In a cross-sectional study, Ullah et al. (2019) show that tobacco smoking is linked to low academic performance among Pakistani students, which is an unnoticed element of the tobacco epidemic. Students' academic and smoking initiation in youths indicates three movement patterns: Morin et al. (2012) found that 7.1 percent of consistently outstanding scorers smoked, 15.1 percent of average academic students smoked, and 49.1 percent of inconsistent and poor students smoked. Recent studies on "Substance Use as a Strong Predictor of Poor Academic Achievement among University Students" show that smoking is also linked to poor academic achievement, risky drinking, illegal drug usage, and risky sexual activity (Mekonen et al., 2017).

2.6. The impact of tobacco smoking on economy.

Smoking was directly responsible for about seven million deaths globally (about five million men and two million women), with low- and middle-income countries bearing the brunt of the disease burden (GBD) in 2015. (GBD 2015 Risk Factors Collaborators, 2016). Healthcare expenditures associated with treating tobacco-related illnesses and productivity losses resulting from morbidity and death have been confirmed by the National Cancer Institute of the United States and the World Health Organization (U.S. National Cancer Institute and World Health Organization, 2016; Goodchild et al., 2018). Medical and non-medical costs, such as physician fees, supplies, medications, and other expenses, are examples of direct costs associated with tobacco use (e.g., transportation, food supplements, etc.). As a consequence of tobacco-related ailments, indirect expenses include the loss of income and life expectancy (Teras., 2016). Tobacco use costs the world economy $1.85 trillion per year, or around 1.8 percent of global GDP, according to GBD's (2015) study on risk factors. The U.S. Department of Health and Human Services stated in their report that the cost of smoking-related illness exceeds $300 billion per year, including adult medical care costs of more than $225 billion and over $156 billion in lost income, which includes $5.6 billion due to second hand tobacco smoking (U.S. Department of Health and Human Services, 2017; Xu et al., 2021).

China is the world's tobacco capital: in 2014, China consumed 44 percent of the world's cigarettes, more than the following 29 nations worldwide; during 2015, China's smoking

population was estimated to be over 315 million people (Luis, 2016).Tobacco use is having a devastating impact on China's health, with at least half of all smokers predicted to succumb to their addiction. Many people are forced into poverty as a result of the health costs and other effects of tobacco-related illness, while others are unable to escape (WHO, 2017).

Approximately 1.5% of the total 3.5 trillion yuan (US $538 billion) spent on health care in 2014 was used to treat tobacco-related illnesses, according to the Chinese health and family planning statistical yearbook, whereas the indirect costs of tobacco use to China's economy, including the value of lost output due to smoking-related diseases, are more than five times higher than the direct costs. These indirect costs totaled about 297 billion (US $48 billion) (Peking Union Medical College Press; 2015). Tobacco use is impeding the achievement of this goal: health-care costs and income loss resulting from tobacco use add up to a considerable drain on the Chinese economy (WHO, 2016).

Tobacco-related illnesses, including medical expenditures and lost productivity, were predicted to cost $1.43 billion in 2012, or almost 1.8 percent of the world's GDP, according to God-child et al. (2018). In 2018, tobacco was responsible for nearly 13.5 percent of all fatalities in Bangladesh. Approximately 1.5 million people and approximately 61,000 children under the age of 15 are now afflicted by illnesses caused by secondhand smoke exposure (Faruque et al., 2019). As a result, these low-middle income countries will progressively bear the massive global health and economic burden of tobacco smoking. According to the conclusions of this study, Bangladesh, a low-middle-income country, has significant and rising tobacco-related economic consequences, which is consistent with global evidence (U.S. National Cancer Institute; World Health Organization, 2016).

An estimated 1.4 percent of Bangladesh's GDP was consumed by the direct healthcare costs of treating tobacco-related disorders in 2018, with the remaining BDT 221.7 billion coming from lost productivity as a result of premature mortality and disability as a result of tobacco use. In 2018–19, second-hand smoke accounted for one-fifth of all tobacco-related expenses (Government of Bangladesh, Ministry of Finance, Finance Division).

There are around 267 million individuals in India who smoke cigarettes (aged 15 and upwards). In the United States, 28.6 percent of men use tobacco products.42% (Global Adult Tobacco Survey-2 Factsheet India, 2016-17, 2019).An estimated 1.2 million Indians lose their lives each year as a consequence of smoking or being exposed to secondhand smoke. 70 percent of the world's smokeless tobacco consumption is attributed to it (Global Burden of Disease, 2017).

According to a recent study by Siddiqi et al. (2015), smokeless tobacco kills approximately 230,000 Indians each year and causes 90 percent of oral tumors in the country. In 2017, INR 1773.4 billion (USD $27.5 billion) was the economic cost of tobacco-related sickness and mortality in India in 2017–2018, with direct health care expenditures accounting for 22% and indirect costs accounting for 78% of the overall cost (INR 387.1 billion, or US $6 billion) (John et al., 2021). A total of INR 132.4 billion ($20.5 billion) was spent on premature mortality, and INR 1.04 percent of India's GDP was spent on tobacco, with direct medical costs accounting for 5.3 percent of the total health spending in India (John et al., 2021).

On a weekly basis, 350 men and 160 women in Nigeria die from smoking-related illnesses, according to the Institute for Health Metrics and Evaluation (IHME) and the University of Washington (Global Burden of Disease (GBD) 2015, 2017).In Turkey, tobacco usage is known to be positively connected with education level in women, although it is known to be adversely correlated with income in males (US National Cancer Institute & WHO, 2016; WHO European Tobacco Use Trends Report, 2019).

2.7. Influence of peer pressure.

Adolescence is a critical period of development during which one's attitudes and views about lifestyle and health practices are formed; it’s also a time when teenagers are most vulnerable to peer pressure, which has been established as a significant component in adolescents' participation in a variety of dangerous activities (Loke et al., 2016). Another study indicated that peer pressure is a major factor in affecting young people's desire for nicotine and their ability to keep smoking, as shown by "Peer Group Pressure, Young People and Smoking" (Denscombe, 2009). During the typical teenage growth period, peer pressure may exert an impact on risk-taking behaviors such as drug usage (Tomé et al., 2012).

Research on the worldwide tobacco pandemic said that an estimated 80 percent of the world's one billion teenage smokers are affected by tobacco-related sickness and death, mostly in low- and middle-income countries (WHO, 2015). Many students at colleges and universities smoke cigarettes for a number of reasons, including alleviating stress, according to Anna Lussier in 2015. Many Cameroonian university students develop the habit of smoking cigarettes because they are males, drink alcohol often, have friends who drink alcohol, and have family members who smoke cigarettes, according to a poll titled "Correlation of Cigarette Smoking among University Students in Cameroon" (Mbatchou et al., 2014).

Peer influence and choices are context-dependent and are frequently influenced by norms in the society, school, or setting where peers congregate (Valente et al., 2013). Although most academics believe that peer pressure and social norms have a role in teenage smoking and drug abuse, peer impact has been studied using teenagers' assessments of their friends' conduct or friends' reports of their behaviour, as well as friendship recommendations from smokers (Fujimoto et al., 2012 and Valente et al., 2013). Considering that youngsters frequently access tobacco products from older peers and that many teenagers begin smoking due to peer pressure (Institute of Medicine of the National Academies, 2015; Haas et al., 2014).

2.8. Other factors contributing to youth involving in tobacco smoking.

Social and physical environments

Health and Human Services and the CDC revealed in 2019 that young people are more likely to use tobacco because the media depicts it as a common behavior, and if they see their friends and parents using tobacco products, they are more likely to do so themselves.

Mental health:

Health and Human Services and the CDC revealed in 2019 that young people are more likely to use tobacco because the media depicts it as a common behavior, and if they see their friends and parents using tobacco products, they are more likely to do so themselves.

Other influencing factors that led to youth tobacco use (social factors)

Health and human services departments and the Centers for Disease Control and Prevention identified a number of social variables that impact the smoking habits of adolescents in 2019. Poor socio-economic status, such as a lack of education or income, being unable to say "no" to the use of tobacco products, parents' disengagement or lack of support, accessible, available, and affordable tobacco goods, poor academic performance, self-esteem or a negative self-image, and seeing tobacco product advertisements in stores, on television, on the Internet, in movies, in publications, and in newspapers. This is particularly true as it is evidenced for many students and young people within the Turkish Republic of North Cyprus as a common lifestyle.

2.9. Gaps in the research.

There are gaps identified during the literature reviews that the researcher takes notice of. These include the location of the research area, academic performance underexplored by the researcher, and the effect of tobacco smoking on the students' study time.

1. **Location of the research area.**

The study was conducted within the Turkish Republic of North Cyprus, an island in the eastern Mediterranean Sea. To my knowledge, none of the studies review tobacco smoking and its effects among university students, especially on academic performance, socioeconomic aspects, and health within the TRNC. The only study that was found by Asut in 2019 only looked at the prevalence of tobacco smoking status of medical students at Near East University.

2. **Underexplored of academic performance.**

There have been few studies on the effect of tobacco smoking on the academic performance of students, and most of these studies did not give detailed information on how tobacco smoking affects students' academic output. For instance, Maralani (2014) only related the prevalence of tobacco smoking to having a negative effect on academic performance, and no details of how tobacco smoking affected academic performance were given. This conclusion was only based on

assumptions. While Asut, 2019, also looked at the smoking status of medical students at Near East University, details on the academic performance of the students were not given.

3. **Effect of tobacco smoking on the students study time.**

According to the researcher's knowledge, no studies have been done on the impact of smoking tobacco has on students' study time. One of the most significant indicators of poor academic performance is the amount of time spent smoking instead of reading, which results in a lower academic output.

Chapter Three

3.0. Methodology of the study

Introduction

The research methodology includes the following: research design, types of data and data collection instruments, the population of the study, sample size, sample and sampling procedures, health belief model, data validity and reliability testing, research scale measurement, ethical consideration, and data analysis.

3.1 . Research Design

A descriptive survey research design method was used for this study. A Descriptive Survey Design is used for gathering data from a population at a certain point in time among university students within the Turkish Republic of North Cyprus identified population, with a carefully selected sample having traits and characteristics of interest. The research design is a general sketch of how you plan to respond to your research question. What you want to do with the data, how you intend to gather and analyze this data, and what ethical issues you intend to address will all be addressed in this document. In addition, it should show that you've taken into account all parts of your research design (Yeomans, 2017).

3.2. Types of data and data collection instruments

Primary data is the sort of information gathered for this investigation. There are a number of ways in which researchers might obtain primary data: via surveys and interviews, for example; through questionnaires; and through experiments. Primary data is typically acquired directly from the source of the data and is considered the most important type of data in research (Hewson & Laurent, 2012). The research instrument used is a close-ended questioner, and questions would be designed to cover the research aims of the study. The questionnaire will be made up of sections A, B, C, and D. Section "A" will seek personal information (demographic) of the respondent; Section "B" will seek information about the socio-economic characteristics of the student's smoking status. Section "C" will seek information about the measurement of academic performance on the contributing factors of tobacco smoking, and Section "D" will seek

information about the measurement of health effects of cigarette smoking. The results of an open-ended questionnaire were utilized to estimate the prevalence of tobacco smoking and its impact on university students in the TRNC. This study examined the impact of tobacco usage among TRNC university students using the descriptive survey research technique. A Descriptive Survey Design was used for gathering data from a population at a certain period of time among university students in TRNC's identified population, with a carefully selected sample having traits and characteristics of interest.

3.3. Population of the Study

The study population is a subset of the target population from which the sample was actually selected by Hu (2014). The population of this study comprises all university students in the Turkish Republic of North Cyprus with a population size of one hundred and ten thousand (110,000) registered university students from the 2020 to 2021 academic years. My intention is to recruit three hundred and ninety-one university students into the study; data was obtained using a closed-end questionnaire administered in their local language (Turkish and English). Data obtained will be entered into and analyzed using the Scientific Package for Social Science (SPSS) statistical software package.

3.4. Sample size

It is the number of individuals or observations included in a study. To estimate the sample size, the formulae for a known population were used. The formulae are estimated as:

$$\text{Sample size} = \frac{\frac{z^2 \times p\,(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

Where

Z Scores =1.96, population proportion P =0.5, Q=0.5, E margin of error = 0.05

Population size N = 110,000.

Sample size =393

3.5. Sample and sampling procedures

Every person in a population has an equal chance of being selected for sampling, which is a random process (Robinson, 2014). All participants in the research were selected using a simple sampling approach. For the purposes of research, a researcher may choose at random a subset of the whole population. There is a one-in-a-million probability that someone will be selected. As much of this random selection as feasible is then used to gather data (Alvi, 2016).

3.6. Data definitions (dependent and independent variables)

The aims and objectives of this primary quantitative study are to evaluate how tobacco smoking affects academic performance, health status, and economic status of university students within the Turkish Republic of North Cyprus (TRNC). The independent variable was whether tobacco smoking has an effect on academic performance, the health of the students, and the economy of the students. The dependent variables measured included the students' cumulative grade point average, study time, smoking prevalence, health (frequent coughing, chest pain, difficulty breathing, loss of appetite, and lung cancer), number of cigarettes smoked, and cigarette cost.

These variables allowed a direct measure of tobacco smoking among university students and its effect on academic performance outcomes in a way that has never been done in the Turkish Republic of North Cyprus.

3.7. Ethical considerations

The researcher examined ethical issues and practices that affect the study and overall research processes both directly and indirectly. When conducting the research, the researcher must consider the following ethical considerations: not abusing the respondents, administering questionnaires at the specified time, avoiding emotion, dishonest and unsuitable behaviors, changing the respondents' responses, informing the respondents that it is purely for academic purposes, and ensuring that the respondents' names are not disclosed.

3.8. Reliability and validity:

Validity of the Instrument.

The validity of the instrument is analysis in chapter four.

3.8. Reliability of the Instrument.

The reliability of the questionnaire was determine by using the Cronbach's Alpha which 58% . The total number of questionnaires used was 27, if the Cronbach's Alpha is below 700% then the data is reliable.

Cronbach's Alpha	N of Items
.578	27

3.9. Measurement and scale

The personal information (demographic):

Gender: Variable but normal Age = normal (1 = 15–18, 2 = 19–21), gender = normal (1 = male, 2 = female). 3 = 22–24. 4 is greater than 25. Academic year: normal variable (1 = 1st, 2 = 2nd, 3 = 3rd, 4 = 4th, 5 = 5th, 6 = 6th). Student status is a normal variable with values of 1 for Turkish students and 2 for international students.

The socio-economic characteristics of students:

Smoking status: normal variable = 1-yes, 2-no. Smoking scale variable: 1 = less than 1, 2 = more than two years but less than five years3 = over the age of five. Variable number of cigarettes sticks smoke scale, 1 = 1-5 cigarettes, 2 = 6-10 cigarettes, 3 = more than 10.People living with normal variables: 1 = friends, 2 = family, 3 = alone. Variable number of friends scale, 1 = less than 1, 2 = 10, 3 = greater than 10. Normal variable: smoking status of a friend; 1 = yes, 2 = no. Normal variable, 1 = friends, 2 = family, 3 = love one, 4 = curiosity, 5 = stress.

Number of smokers among your friends on a normal scale: 1 = less than 10, 2 = 10, 3 = greater than 10, 4 = none.

Health effect on smoking

Descriptive statistics were used for the health analysis. Likeliest scale

An ordinal variable was used to measure (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree).

5-1 equals 4/5 = 0.8

Lower numbers 1-8 indicate strong disagreement.

1.9 – 2.6 = disagree

2.7-3.4 is considered neutral.

3.5- 4.2 = Agree

4.3- 5.0 = strongly agree

Has your health ever been affected by a normal variable? 1=yes, 2=no,

Do you ever think of discounting smoking as a normal variable? 1 = Yes, 2 = No, 3 = Maybe,

4 = Sometimes

The effect of tobacco smoking on academic students

Negative effect of tobacco smoking on academic performance: normal variable, 1 = yes, 2 = no, 3 = maybe. Normal variable smoking effect on study time: 1 = yes, 2 = no, 3 = possibly. Cumulative grade point normal variable: 1 = less than 2.0, 2 = 2.1 to 3.0, 3 = 3.1 to 3.5, and 4 = 3.6-4.0.

Effect of on economy

Source of income normal variable, 1 = parents, 2 = guardian, 3 = work.

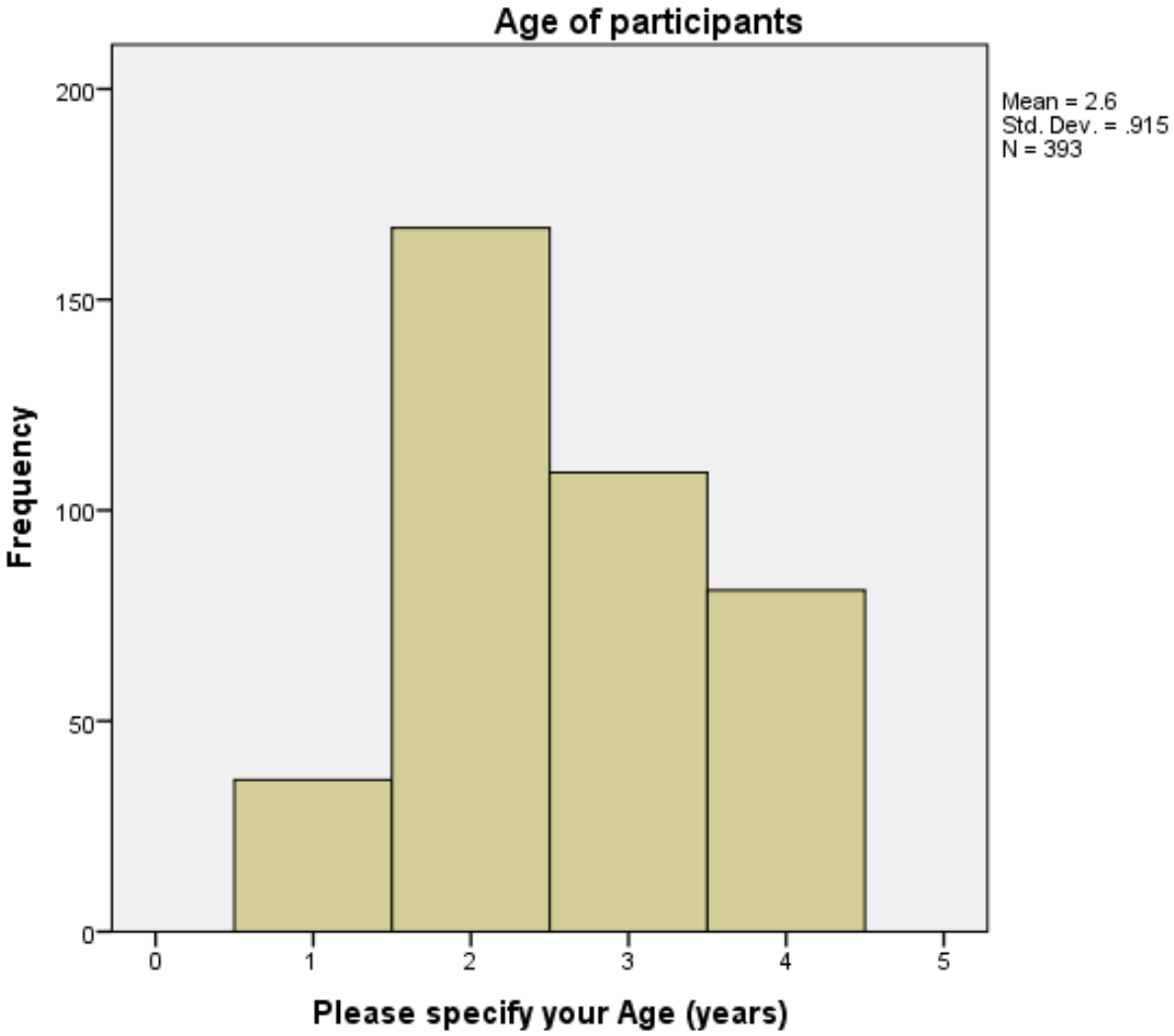
Spending on smoking in a day's normal variable 1 = 10 to 15 TL, 2 = 16 to 20 TL,

3 = greater than 25TL

Chapter Four

4.1 Data Analysis and discussion

Descriptive statistics



1 represents 15–18 years which is 9.2%, that represents 36 students, and 2 represents another 42.5% which falls into the age category of 19–21, which represents 167 students. 3 represents 27.7% fall into the age category of 22–24 years, which represents 109 students. While 4 represents 20.6% of student's falls into the age category of greater than 25 years of age, which represents 81 students.

Table 1: Demography of the respondents

Question and responses		N	Marginal Percentage
Gender	Yes	257	65.4%
	No	136	34.6%
Academic year	1st year	108	27.5%
	2nd year	92	23.4%
	3rd year	88	22.4%
	4th year	83	21.1%
	5th year	12	3.1%
	6th year	10	2.5%
Student status	Turkish	207	97.2%
	International	186	52.7%
Smoking status	Yes	287	73.0%
	No	106	27.0%
Valid		393	100.0%
Missing		0	
Total		393	100%

Source: Field survey December 2021

Table 1 illustrates the demographics of all students who took part in the research. Of the 393 students, 257 were male (65.4%), while 136 were female (34.6%). First-year students totaled 108, which represents 27.5%, while second-year students totaled 92, representing 23.4%. The third-year student population is 88, with a 22.4%, while the fourth-year student population is 83, with a 21.1%, and the fifth-year student population is 12 with a 3.1%, and the sixth-year student population is 10 with a 2.5%, respectively. There are 207 Turkish students (52.7%) and 187 international students (47.3%) among them. The students' smoking status tells us if they smoke

or not. Out of the 393 participants, 287 are tobacco smokers, which represents 73.0%, and 106 are non-smokers, which represents 27.0%

4.20 Analysis of the research questions

Table2: ***The association between tobacco smoking and academic performance. For university students in TRNC.***

			What is your cumulative grade point for your current level?				Total
			Less than 2.0	2.1 to 3.0	3.1 to 3. 5	3.6 to 4.0	
Are you a smoker?	Yes	Count	53	123	88	23	287
		% within What is your cumulative grade point for your current level?	84.1%	86.6%	68.2%	39.0%	73.0%
	No	Count	10	19	41	36	106
		% within What is your cumulative grade point for your current level?	15.9%	13.4%	31.8%	61.0%	27.0%
Total		Count	63	142	129	59	393
		% within What is your cumulative grade point for your current level?	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Field survey December 2021

Table 2 shows the association between tobacco smoking and academic performance of the 393 percipients for study. Of these, 53 of the students who smoke tobacco have less than 2.0 grade points, which represent 84.1%, and 10 of those who are not smokers, which represents 15.9%. 123 of those who smoke have a 2.1 to 3.0 grade point, which represents 86.6%, while 19 of those

who are not smokers have a 2.1 to 3.0 grade point, which represents 13.4%. 88 of the students who smoke have a grade point of 3.1 to 3.5, which represents 68.2%, while 41 of those students who did not smoke have a grade point of 31.8%. Students who smoke have grade points of 3.6 to 4.0, which represents 39.0%, while those who do not smoke have 36 grade points, which represents 61.0%. This association was proven to be statistically significant by using the descriptive chi-square cross-tabulation test. This was confirmed by Ullah et al., 2019, who showed in a cross-sectional study that tobacco smoking is linked to low academic performance among Pakistani students, which is a disregarded element of the tobacco epidemic. The descriptive chi-square table shows that the association between tobacco smoking and academic performance was statistically significant.

Table 3: ***The prevalence of tobacco smoking among university student in TRNC***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	287	73.0	73.0	73.0
	No	106	27.0	27.0	100.0
	Total	393	100.0	100.0	

Source: Field survey December 2021

Table 3 shows the prevalence of tobacco smoking among university students in the Turkish Republic of Northern Cyprus (TRNC). Out of the 393 participants, 287 smoked different types of tobacco products, which represents 73.0% of smokers, while 106 of the participating students were never smokers, which represents 27%. The Male university students who are smokers accounts for 47.3%, while female students who are smokers accounts for 25.7% .

This shows clearly that there is a high prevalence of tobacco smoking among university students and the male students have the highest rate within the Turkish Republic of North Cyprus. This was also confirmed by Hossain et al. (2017) in a survey done in Dhaka, Bangladesh, showing that smoking prevalence is considerably greater among college students, with 68.81 percent of male students and 19.56 percent of female students smoking. While the New Zealand Health Ministry reports that university students aged 18–24 years (20%) and 25–34 years (22%), as compared to the general population, had a high rate of tobacco smoking (ministry of health, New Zealand, 2019). Another finding from the 2018 Pakistan National Human Development Report

confirms the prevalence of tobacco smoking: there are approximately 23.6 million tobacco smokers aged 15 to 45, while students account for 63 percent of the population, with 58.5 million aged 20 to 24. Therefore, the results of this study coincided with many studies to ascertain its relevance.

Table 4: ***The significant relationship between tobacco smoking and the socio-economic factors***

			How much do you spend on smoking in a day?			Total
			10 to 15 TL	16 to 20 TL	Greater than 25 TL	
How many sticks (cigarettes) do you smoke in a day?	1-5 cigarettes	Count	54	25	6	85
		% within How much do you spend on smoking in a day?.	51.9%	19.2%	12.5%	30.1%
	6-10 cigarettes	Count	28	46	11	85
		% within How much do you spend on smoking in a day?.	26.9%	35.4%	22.9%	30.1%
	Greater than 10	Count	22	59	31	112
		% within How much do you spend on smoking in a day?	21.2%	45.4%	64.6%	39.7%
Total		Count	104	130	48	282
		% Within How much do you spend on smoking in a day?	100.0%	100.0%	100.0%	100.0%

Source: Field survey December 2021

Table 4 shows the significant relationship between tobacco smoking and the socio-economic factors affecting the academic performance of students in TRNC. As many as 54 of the students who smoke 1–5 sticks of cigarettes a day spend 10–15 Turkish liras on a daily basis, which

represents 51.90%. Those who spend 16 to 20 Turkish liras per day on cigarettes represent 19.2%, while those who spend more than 25 Turkish liras per day represent 12.5%. Of the 28 students who smoked 6-10 sticks of cigarettes a day, 28 spent 10 to 15 Turkish liars, which represents 26.9%, while those who spent 16 to 20 Turkish liars in a day were 46, which represents 35.4%, and those who spent more than 25 Turkish liars in a day were 11, which represents 22.9%. Of the students who smoke more than 10 sticks of cigarettes a day, 22 of them spend 10 to 15 Turkish liars a day, which represents 21.2%, while those who spend 16 to 20 Turkish liars a day represent 44.4%, and 31 of the students who smoke more than 10 sticks of cigarettes spend more than 25 Turkish liars, which represents 64.4%.

Table 5a: ***Shows various factors that influences tobacco smoking among university students in TRNC***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Friends	220	56.0	78.0	78.0
	Parents	12	3.1	4.3	82.3
	Love one's	29	7.4	10.3	92.6
	curiosity	19	4.8	6.7	99.3
	Stress	2	.5	.7	100.0
	Total	282	71.8	100.0	
Missing	System	111	28.2		
Total		393	100.0		

Source: Field survey December 2021

Table 5a shows various factors that influence tobacco smoking among university students in TRNC. Of these, 220 students were influenced by friends, representing 56.0%, 12 students were influenced by their parents, representing 3.1%, 29 students were influenced by loved ones, representing 7.4%, 19 were influenced by curiosity, representing 4.8%, and 2 were as a result of stress. The descriptive frequency method was used to help determine the frequency and percentage of these factors. From the analysis, the majority of the students were influenced to take up smoking by their friends. This was also confirmed by Anna Lussier in 2015, who indicated that many students at colleges and universities smoke cigarettes for a variety of reasons, including stress relief. In addition, Mbatchou et al. (2014) confirm this in a survey

"Correlates of cigarette smoking among university students in Cameroon". It stated that being male, consuming alcohol, having a friend who drinks alcohol, having a friend who smokes, having family members who smoke, and being older in age are all factors that lead to the continuous use of tobacco. The Institute of Medicine of the National Academies, 2015, also stated that youngsters frequently access tobacco products from older peers and that many teenagers begin smoking due to peer pressure.

Table 5b: ***Shows that those who you are living with can also have a great influence to tobacco smoking among university students in TRNC.***

			Who are you living with?			Total
			With my friends	Family	Alone	
7. Are you a smoker?	Yes	Count	111	120	56	287
		Who are you living with?	68.1%	82.8%	65.9%	73.0%
	No	Count	52	25	29	106
		Who are you living with?	31.9%	17.2%	34.1%	27.0%
Total		Count	163	145	85	393
		Who are you living with?	100.0%	100.0%	100.0%	100.0%

Source: Field survey December 2021

Table 5b shows that those who you are living with can also have a great influence on tobacco smoking among university students in the Turkish Republic of North Cyprus. Of the students who say they smoke tobacco, 111 of them are living with friends, which represents 68.1%. Students who are living with families that are smokers are 120, and this represents 82.8%, while those who live alone are 56, and they represent 65.9%. There are 52 students who are non-smokers who are living with their friends, and they represent 31.9%, while those that are living with families that are none-smokers are 25, and they represent 17.2%, and 29 of those students that are living alone are none-smokers, and they represent 34.1%. These differences were confirmed by the descriptive chi-square test, which is statistically significant and whose p value

is greater than 0.005. This study was also supported by Ahmed et al. (2020), who discovered that students who have more smoker acquaintances are more likely to start smoking themselves because they are away from their families and homes and may be exposed to more influences than students who live with their families. Students begin smoking out of curiosity and to imitate their smoker family members, according to Hassan et al., 2019.He concluded that cigarette smoking was found to be more prevalent in students who live away from home and have higher living expenses.

Table 6: ***Shows the health problems experience by students in TRNC as result of tobacco smoking in TRNC.***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	8	2.0	2.0	2.0
	Disagree	6	1.5	1.5	3.6
	Neutral	18	4.6	4.6	8.1
	Agree	98	24.9	24.9	33.1
	strongly agree	263	66.9	66.9	100.0
	Total	393	100.0	100.0	

Source: Field survey December 2021

Table 6 shows the health problems experienced by students in TRNC as a result of tobacco smoking in TRNC.

The distribution frequency table shows that out of the 393 participants, 8 strongly disagree that smoking is not dangerous to their health, and they represent 2.0%, while 6 students disagree that tobacco smoking is not dangerous to their health, and they represent 1.5%. Another 18 students are just giving a neutral opinion about tobacco smoking's effects on health, and they represent 4.6%. While 98 of the participating students agree that tobacco smoking is dangerous to their health, they represent 24.9%. And those who strongly agree that tobacco smoking is dangerous to their hearth are 263 (66.6%). As a result, this study came to the conclusion that tobacco smoking is harmful to human health. This fact was also in line with other studies, such as the WHO's 2017 report that tobacco smoking is having a devastating impact on China's health. With at least half of all smokers predicted to succumb to their addiction, the health costs and other

effects of tobacco-related sickness plunge many people into poverty, while others are unable to escape it. According to the University of Washington's Institute for Health Metrics and Evaluation (IHME), almost 85,000 Turkish die as a result of smoking-related ailments every year, with smoking accounting for 29.2% of male deaths and 8.2% of female deaths in Turkey (21.1 percent overall) (Global Burden of Disease, 2020).

Table 7: ***Show how tobacco smoking students confirm if their health has been affected as a result of smoking***

			Has your health ever been affected as a result of cigarette smoking?			Total
			Yes	No	maybe	
7. Are you a smoker?	Yes	Count	120	110	57	287
		% within Has your health ever been affected as a result of cigarette smoking?	92.3%	58.8%	75.0%	73.0%
	No	Count	10	77	19	106
		% within Has your health ever been affected as a result of cigarette smoking?	7.7%	41.2%	25.0%	27.0%
Total		Count	130	187	76	393
		% within Has your health ever been affected as a result of cigarette smoking?	100.0%	100.0%	100.0%	100.0%

Source: Field survey December 2021

Table 7 shows how tobacco smoking students confirm if their health has been affected as a result of smoking. Of these, out of the 393 participant students in the study, 120 students who smoked confirmed that their health had been affected as a result of tobacco smoking, with a 92.3 %.

While 110 students who smoke show that their health has never been affected as a result of tobacco smoking, and they represent 58.8%, and 57 students are those with uncertainty (maybe) whether tobacco smoking has affected their health or not, and they represent 75%. Of the students who are not smokers, 10 of them confirm that Tabaco smoking affects their health, with 7.7%, while 77 of the non-smokers say their health has not been affected, and they represent 41.2%. Another 19 non- smokers have uncertainty about whether their health has been affected by tobacco smoking or not, at 25.0%. This study's result concluded on the fact that tobacco smoking has been affecting the health of students within TRNC, and this was proven by the descriptive Pearson chi-square test, which is statistically significant.

Table 8: ***The health problem with tobacco smoking among university students TRNC***

Response	N	Minimum	Maximum	Mean	Std. Deviation
Do you think that smoking cigarette makes you lose weight?	393	1	5	2.89	1.268
Frequently coughing.	393	1	5	3.33	1.186
Breathing difficulties.	393	1	5	3.01	1.197
Chest pain.	393	1	5	2.88	1.217
Lung cancer.	393	1	5	3.20	1.397
Loss of appetite.	393	1	5	3.20	1.149
Valid N (listwise)	393				

Source: Field survey December 2021

Table 8 shows the descriptive analysis of the health status of tobacco smoking among university students in TRNC. Of 393 participants, 289 lost weights as a result of tobacco smoking. They have an average mean of 2.89, which falls into neutral, meaning they do not have an idea of their status. They also have a minimum of 1 and a maximum of 5. Frequent coughing has an average mean of 3.33, which also falls into the neutral category, with a minimum of 1 and a maximum of 5. Breathing difficulties also show an average mean of 3.01, which is neutral with a minimum of 1 and a maximum of 5. Chest pain also has an average mean of 2.88 and falls into neutral with a maximum of 5 and a minimum of 1. Lung cancer has an average mean of 3.20, a minimum of 1, and a maximum of 5, which is also neutral. While loss of appetite, which is also due to tobacco

smoking, has an average mean of 3.20, a minimum of 1, and a maximum of 5, which is also neutral.

4.3. Analysis on the study Hypothesis

Table 9 A: ***Show the effect of tobacco smoking on academic performance among university in TRNC***

			What is your cumulative grade point for your current level?				Total
			Less than 2.0	2.1 to 3.0	3.1 to 3.5	3.6 to 4.0	
Are you a smoker?	Yes	Count	53	123	88	23	287
		% within What is your cumulative grade point for your current level?	84.1%	86.6%	68.2%	39.0%	73.0%
	No	Count	10	19	41	36	106
		% within What is your cumulative grade point for your current level?	15.9%	13.4%	31.8%	61.0%	27.0%
Total		Count	63	142	129	59	393
		% within What is your cumulative grade point for your current level?	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Field survey December 2021

Table 9 B: ***Chi-Square Tests Table determine the significant effect of tobacco smoking on academic performance***

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	53.492[a]	3	.000
Likelihood Ratio	51.111	3	.000
Linear-by-Linear Association	42.196	1	.000
N of Valid Cases	393		

Source: Field survey December 2021

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.91.

Table 9 represents each of the individual participants comparing tobacco smoking and the academic performance of students. A Chi-square test was conducted to determine if there were significant differences in observed count and expected percentages within the academic performance of the students and tobacco smoking. There were significant differences between the observed count and expected percentage within the academic performance of the students, which is statistically significant and tobacco smoking with a p value < 0.00001. Of these, 53 of the students who smoke tobacco have less than 2.0 grade points, which represent 84.1%, and 10 of those who are not smokers, which represents 15.9%. 123 of those who smoke have a 2.1 to 3.0 grade point, which represents 86.6%, while 19 of those who are not smokers have a 2.1 to 3.0 grade point, which represents 13.4%. 88 of the students who smoke have a grade point of 3.1 to 3.5, which represents 68.2%, while 41 of those students who did not smoke have a grade point of 31.8%. Students, who smoke have grade points of 3.6 to 4.0, are 23 which represent 39.0%, while those who do not smoke have 36, which represent 61.0%.

This study was also in line with other researchers. For instance, Ullah et al. (2019) show in a cross-sectional study that tobacco smoking is linked to low academic performance among Pakistani students, which is a disregarded element of the tobacco epidemic. Pennanen et al. (2011) concluded also that academic performance is negatively correlated with smoking, and smoking has a significantly larger influence on academic performance than marijuana, and students with lower grades were more likely to smoke than those with higher marks. Journal et al. (2018) prove that one of the biggest indicators of low academic performance among students is tobacco smoking. Tesfa et al. (2017) also confirm that smoking is linked to poor academic achievement.

Table 10 A: ***Represents each of the individual participants compared tobacco smoking and the person who the students are living with.***

			Who are you living with?			Total
			With my friends	Family	Alone	
Are you a smoker?	Yes	Count	111	120	56	287
		% within Who are you living with?	68.1%	82.8%	65.9%	73.0%
	No	Count	52	25	29	106
		% within Who are you living with?	31.9%	17.2%	34.1%	27.0%
Total		Count	163	145	85	393
		% within Who are you living with?	100.0%	100.0%	100.0%	100.0%

Source: Field survey December 2021

Table 10 B: ***Chi-Square Tests table show the significant of relationship between tobacco smoking and who you live with.***

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.185[a]	2	.004
Likelihood Ratio	11.686	2	.003
Linear-by-Linear Association	.084	1	.772
N of Valid Cases	393		

Source: Field survey December 2021

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 22.93.

Table 10 represents each of the individual participants compared to tobacco smoking and the person who they are living with. A Chi-square test was used to see whether there were any significant differences in the results count and expected percentages within who the student lived with and tobacco smoking. There were significant differences between the observed count and expected percentage within the group that the student lived with, which is statistically significant

for tobacco smoking with a p value <0.005. Of these, 111 are smokers who live with their friends, accounting for 68.2%, while 120 are smokers who live with their families, accounting for 82.8%, and 56 are smokers who live alone, accounting for 65.9%.

Students who are not smokers and are living with their friends are 52 with a 31.9%, while those who are living with their family are 25 and are non-smokers with a 17.2%, and those that are living alone who are not smokers are 29 with a 34.1%. Amin et al. (2016) stated that as students adjust to living away from home (most but not all) and make new acquaintances at university, they undergo significant changes in their social settings and identities, and smoking may become more appealing to intermittent smokers as they gain more independence and meet new people.

According to Hassan et al., 2019, students start smoking out of curiosity and to imitate their smoker family members. He concluded that cigarette smoking was found to be more prevalent in students who live away from home and have higher living expenses.

This study concluded on the fact that there is a significant relationship between what you are living with and tobacco smoking among university students in TRNC. Therefore, the alternate hypothesis was accepted and rejected.

Table 11 A: ***Shows the tobacco smoking and the socio-economic factors affecting the academic performance.***

			How much do you spend on smoking in a day?			Total
			10 to 15 TL	16 to 20 TL	Greater than 25 TL	
How many sticks (cigarettes) do you smoke in a day?	1-5 cigarettes	Count	54	25	6	85
		% within How much do you spend on smoking in a day?	51.9%	19.2%	12.5%	30.1%
	6-10 cigarettes	Count	28	46	11	85
		% within How much do you spend on smoking in a day?	26.9%	35.4%	22.9%	30.1%
	Greater than 10	Count	22	59	31	112
		% within How much do you spend on smoking in a day?	21.2%	45.4%	64.6%	39.7%
Total		Count	104	130	48	282
		% within How much do you spend on smoking in a day?	100.0%	100.0%	100.0%	100.0%

Source: Field survey December 2021

Table 11 B: ***Chi-Square Tests show the statistically significant of tobacco smoking and socio-economic factors.***

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	46.382[a]	4	.000
Likelihood Ratio	46.273	4	.000
Linear-by-Linear Association	39.899	1	.000
N of Valid Cases	282		

Source: Field survey December 2021

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.47.

Table 11 represents participants who are smokers and compares the number of sticks of cigarette smoke per day with how much they spend per day on tobacco smoking. The Pearson chi-square test was conducted to determine if there were significant differences in observed count and expected percentages between how much you spend on smoking in a day and the number of sticks you smoke in a day. There were significant differences between the observed count and expected percentage of how much they spend in a day on tobacco smoking, which is statistically significant compared to the number of sticks of cigarette smoke per day with a p value <0.00001. 54 of the students who smoke 1–5 sticks of cigarettes a day spend 10–15 Turkish liras on a daily basis, which represents 51.9%. Those who spend 16 to 20 Turkish liras per day on cigarettes represent 19.2%, while those who spend more than 25 Turkish liras per day represent 12.5%. Of the 28 students who smoked 6-10 sticks of cigarettes a day, 28 spent 10 to 15 Turkish liars, which represents 26.9%, while those who spent 16 to 20 Turkish liars a day were 46, which represents 35.4%, and those who spent more than 25 Turkish liars a day were 11, which represents 22.9%. Of the students who smoke more than 10 sticks of cigarettes a day, 22 of them spend 10 to 15 Turkish liars a day, which represents 21.2%, while those who spend 16 to 20 Turkish liars a day represent 44.4%, and 31 of the students who smoke more than 10 sticks of cigarettes spend more than 25 Turkish liars, which represents 64.4%. According to the World Health Organization and the US National Cancer Institute, tobacco use has a significant economic effect on a nation, including healthcare expenditures to treat tobacco-related illnesses and productivity losses owing to tobacco-related morbidity and death (U.S. National Cancer Institute and World Health Organization, 2016; Goodchild et al., 2018). Medical and non-

medical costs, such as physician fees, supplies, medications, and other expenses, are examples of direct costs associated with tobacco use (e.g., transportation, food supplements, etc.). As a consequence of tobacco-related ailments, indirect expenses include the loss of income and life expectancy (U.S. National Cancer Institute and World Health Organization, 2016). Tobacco use costs the world economy $1.85 trillion per year, or around 1.8 percent of global GDP, according to GBD's (2015) study on risk factors. The US Department of Health and Human Services reported that the annual cost of smoking-related diseases in this country exceeds $300 billion, which includes more than $225 billion in healthcare costs for adults and more than $156 billion in lost income, including $5.6 billion from secondhand tobacco smoke. (US Department of Health and Human Services, 2017; Xu and colleagues, 2021). This study concluded with the fact that there is a significant relationship between tobacco smoking and the socio-economic factors affecting the academic performance of students in TRNC. Therefore, the alternate hypothesis was accepted and rejected along with the null hypothesis.

Table 12 A: ***Shows the health impact of tobacco smoking among university students in TRNC.***

			Has your health ever been affected as a result of cigarette smoking?			Total
			Yes	No	maybe	
Are you a smoker?	Yes	Count	120	110	57	287
		% within Has your health ever been affected as a result of cigarette smoking?	92.3%	58.8%	75.0%	73.0%
	No	Count	10	77	19	106
		% within Has your health ever been affected as a result of cigarette smoking?	7.7%	41.2%	25.0%	27.0%
Total		Count	130	187	76	393
		% within Has your health ever been affected as a result of cigarette smoking?	100.0%	100.0%	100.0%	100.0%

Source: Field survey December 2021

Table 12 B: ***Chi-Square Tests show the significant health impact of tobacco smoking among university students in TRNC***

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	43.838[a]	2	.000
Likelihood Ratio	48.855	2	.000
Linear-by-Linear Association	14.161	1	.000
N of Valid Cases	393		

Source: Field survey December 2021

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 20.50.

Table 12 represents each of the individual participants compared to tobacco smoking and students whose health has been affected as a result of tobacco smoking. A chi-square was conducted to determine if there were significant differences in observed count and expected percentages among students whose health has been affected as a result of tobacco smoking and non-smoking.

There were significant differences between the observed count and expected percentage of students whose health had been affected as a result of tobacco smoking, which is statistically significant and tobacco smoking with a p value < 0.0001. Of the 393 study participants, 120 students who smoke tobacco accept that their health has been affected as a result of tobacco smoking, which represents 92.3 percent, while 110 of the smoking students say no, their health has never been affected due to smoking, which represents 58.8%, and those who cannot tell whether their health has been affected due to smoking are 57, which represents 75%. Students who are non-smokers whose health has been affected due to tobacco smoking are 10, with 7.7%, while those who are non-smokers and whose health has never been affected as a result of tobacco are 77, with 41.2%, and those who say they may be non-smokers are 19, with 25%.

This study was in line with many other researchers' findings. For instance, the global statistics on addictive behaviors in 2014 show that many nations are making progress in reducing smoking prevalence, but yet still, tobacco smoking remains one of the leading causes of illness and early death worldwide (Gowing et al., 2015). While Courtney (2015) indicated that smoking harms nearly every organ in the human body (including the circulatory, pulmonary, digestive, and musculoskeletal systems), it raises the risk of many diseases and lowers smokers' overall health. As a result, the majority of smoking-related deaths are caused by cancer (mostly lung cancer), respiratory disease (including chronic obstructive pulmonary disease – COPD), and cardiovascular disease, primarily coronary heart disease (Action on Smoking and Health, 2016c). This study concluded with the fact that tobacco smoking has a health impact among university students in TRNC. Therefore, the alternate hypothesis was accepted and rejected.

Table 13 A: ***Show tobacco smoking impact on student's study time among university students in TRNC.***

			Does cigarette smoking affect your study time?			Total
			Yes	No	maybe	
Are you a smoker?	Yes	Count	81	140	41	262
		% within Does cigarette smoking affect your study time?	73.0%	100.0%	57.7%	81.4%
	No	Count	30	0	30	60
		% within Does cigarette smoking affect your study time?	27.0%	0.0%	42.3%	18.6%
Total		Count	111	140	71	322
		% within Does cigarette smoking affect your study time?	100.0%	100.0%	100.0%	100.0%

Source: Field survey December 2021

Table 13 B: ***Chi-Square Tests shows the statistically significant of tobacco smoking impact on student's study time.***

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	63.345[a]	2	.000
Likelihood Ratio	83.418	2	.000
Linear-by-Linear Association	2.063	1	.151
N of Valid Cases	322		

Source: Field survey December 2021

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.23.

Table 13 represents each of the individual participants compared to tobacco smoking and the students who said tobacco smoking affected their study times. A Chi-square was conducted to determine if there were significant differences in observed count and expected percentages among students whose tobacco smoking affected their study time and tobacco smoking.

There were significant differences between the observed count and expected percentage of students whose tobacco smoking affected their study time as a result of tobacco smoking, which is statistically significant as tobacco smoking with a p value < 0.0001.

Out of the 393 participants, 81 of the smoking students show that indeed tobacco smoking affects their study time, as they spend more time smoking than reading, with a 73%, while 140 of the smoking group indicated that smoking is not affecting their studies, with a 100%, and 41 of them are not too sure whether or not tobacco smoking is affecting their study time, with a 57.7 %.

30 nonsmokers are affected by those who smoke (27%), 0% of none-smokers are affected, and another 30 nonsmokers said maybe (42.3%). From various articles reviewed, it is not the knowledge of the researcher that anyone measured the effect of tobacco smoking on students' study time. Therefore, this study concluded on the proven fact that tobacco smoking has an impact on students' study time. The alternate hypothesis was accepted.

4.14. VALIDITY TEST ANALYSIS OF THE INSTRUMENTS

Table 14: ***The validity test result of the research instrument***

			Are you a smoker?	How many sticks (cigarettes) do you smoke in a day?	What is your cumulative grade point for your current level?	How much do you spend on smoking in a day?	Does cigarette smoking affect your study time?
Spearman's rho	Are you a smoker?	Correlation Coefficient	1.000	-.077	.327**	.022	.055
		Sig. (2-tailed)	.	.188	.000	.709	.322
		N	393	290	393	288	322
	How many sticks (cigarettes) do you smoke in a day	Correlation Coefficient	-.077	1.000	.006	.382**	.167**
		Sig. (2-tailed)	.188	.	.921	.000	.007
		N	290	290	290	282	262
	How much do you spend on smoking in a day?	Correlation Coefficient	.327**	.006	1.000	-.059	.149**
		Sig. (2-tailed)	.000	.921	.	.318	.007
		N	393	290	393	288	322
	How much do you spend on smoking in a day?	Correlation Coefficient	.022	.382**	-.059	1.000	-.016
		Sig. (2-tailed)	.709	.000	.318	.	.796
		N	288	282	288	288	261

	Does cigarette smoking affect your study time?	Correlation Coefficient	.055	.167**	.149**	-.016	1.000
		Sig. (2-tailed)	.322	.007	.007	.796	.
		N	322	262	322	261	322

Source: Field survey December 2021

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

The above table shows the validity test analysis for the instruments.

Are you a smoker? What is your cumulative grade point average for your current level? And has your health ever been affected as a result of cigarette smoking?

What is your cumulative grade point average for your current level? Are you a smoker? Does cigarette smoking affect your study time?

Is your study time influenced by cigarette smoking? What is your cumulative grade point average for your current level? How many sticks (cigarettes) do you smoke in a day?

Has your health ever been affected as a result of cigarette smoking? Are you a smoker? And what is your current level's cumulative grade point?

How much do you spend on smoking in a day? How many sticks (cigarettes) do you smoke in a day? How many sticks (cigarettes) do you smoke in a day? Does cigarette smoking affect your study time? How much do you spend on smoking in a day?

All of the above instruments are valid at 0.01.

Chapter Five

Discussion

5.0. Introduction

The goal of this research was to evaluate the prevalence of tobacco smoking and its effects among university students in TRNC. Primary data was used for the analysis to explore the elements of the study. A total of 393 students participated in the study, with 168 from Near East University. Rauf Denktas University 8, Cyprus West University 2, American University of Cyprus 4, University of City Island 3, Cyprus Health and Social Sciences University 2, Cyprus International University 65, Cyprus Science University 2, Cyprus Social Sciences University 3, Eastern Mediterranean University 111, European University of Lefke 3, Final International University 2, Girne American University 6, Istanbul Technical University TRNC Education-Research Campus 2, University of Kyrenia 4, University of Mediterranean Karpasia 1, Middle East Technical University Northern Cyprus Campus 2, Netkent Mediterranean Research and Science University 2, and the University of the West of Scotland 5. The unanimous response from various participants' individuals from different universities within TRNC, represents the views of all students. Additionally, 10 of the participants that were not university students were identified and the data was transferred into an Excel spreadsheet, which was then coded and put into the statistical package for social science (20.0) (S.P.S.S), and which was also coded for analysis.

A descriptive The Pearson chi-square test was used to determine the relationship between tobacco smoking and academic performance, as well as the impact of tobacco smoking on various outcome variables, including cumulative grade point of the students, study time, smoking prevalence, health (frequent coughing, chest pain, difficulty breathing, loss of appetite, and lung cancer), number of cigarettes smoked, and cigarette cost.

By using a descriptive frequency, I also evaluated the contribution of the age of the students, educational level, nationality status, smoking status, and gender.

5.1a. Interpretation of Findings under study aims and objectives

The first goal of this study was to investigate the significant association between tobacco smoking and the academic performance of students in TRNC. The data showed that there is a statistically significant association between tobacco smoking and the academic performance of

students, with a p value < 0.0001. The second goal of this study was to determine the prevalence of tobacco smoking among university students in TRNC. The analysis shows that there is a high prevalence of tobacco smoking among students in TRNC, with male students accounting for 47.3% and female students for 17.9%. The third goal of this study was to find out whether there is a significant relationship between tobacco smoking and the socio-economic factors affecting the academic performance of students in TRNC. The analysis shows that there was a statistically significant relationship between tobacco smoking and the socio-economic factors that affected the academic performance of students in TRNC, with a p value < 0.0001.

The fourth goal of this study was to investigate the factors that influence tobacco smoking among university students in TRNC.

The descriptive frequency analysis shows that one of the major factors influencing students into tobacco smoking is friends, which represents 54%, while 7.4% were influenced by loved ones, 4.8% of the students were into tobacco smoking as a result of curiosity, 3.1% of the students were influenced into tobacco smoking by their parents, and 0.5% of the students were smoking as a result of stress. In addition, another influence factor was that the person who the students were living with could also influence them to smoke. A chi-square analysis shows that students who are smokers, 68.1% of them are living with friends, while 82.8% are living with their families, and 65.9% are living alone. This study was proven to be statistically significant.

The fifth goal of this study was to determine the health problems experienced by students in TRNC who smoke tobacco. From the descriptive statistics analysis, it shows that all the related tobacco smoking health issues identified (lung cancer, breathing difficulties, loss of appetite, weight loss, frequent coughing, and chest pain) have an average mean ranging from 2.89–3.22, which falls under the category of neutral, meaning that the majority of the students cannot be able to tell their actual health status with regards to tobacco smoking. This is because many of the smokers are students from 15–18 and 19–21, which are just beginners. However, the fact remains that the majority of students are suffering from serious health problems as a result of tobacco use.

5.1b. Interpretation of Findings under study hypothesis testing.

The null hypothesis regarding this research states that tobacco smoking has no impact on students' academic performance in the Turkish Republic of Northern Cyprus (TRNC). The descriptive Pearson chi-square analysis reveals that 84.1% of students who smoke have less than 2.0 grade points, and students who are non-smokers with less than 2.0 grade points have 15.9%. This shows that there is a high percentage of students who smoke with lower grades than students who are non-smokers, which shows that tobacco smoking has an impact on the academic performance of students in TRNC. This study proved it to be statistically significant. Therefore, the alternate hypothesis was accepted and rejected along with the null hypothesis. Journal et al. (2018) prove that one of the biggest indicators of low academic performance among students is tobacco smoking. Tesfa et al. (2017) also confirm that smoking is linked to poor academic achievement.

The null hypothesis regarding this research states that there is no significant relationship between what you are living with and that of tobacco smoking among university students in TRNC. The descriptive Pearson chi-square analysis reveals that 68.1% of smoking students are living with their friends, as compared to 31.1% of the non-smokers who are also living with friends. Also, 82.8% of students who are living with their families are tobacco smokers, as compared to 17.2% of students who are non-smokers and are living with their families. This study proves that there is a statistically significant relationship between the students' lives and that of tobacco smoking among students in TRNC. Therefore, the alternate hypothesis was accepted and rejected along with the null hypothesis. Similar studies were conducted by Ahmed et al., 2020, who concluded that students with more smoker acquaintances are more likely to start smoking themselves because they are away from their families and homes and may be exposed to different influences than students who live with their families. Contrary to his studies, this study proves that students who are living with their families have a high tendency to smoke of 82.8% as compared to students who are living away from their homes and families, with 68.1% among students in TRNC.

The null hypothesis regarding this research states that there is no significant relationship between tobacco smoking and the socio-economic factors affecting the academic performance of students in TRNC. The descriptive Pearson chi-square analysis reveals that 64.4% of the students who

smoke more than 10 sticks of cigarettes spend more than 25 Turkish liars a day, while 45.4% of students who smoke more than 10 sticks of cigarettes spend 16 to 20 Turkish liars a day, and 51.9% of students who smoke from 1 to 5 sticks of cigarettes a day spend 10 to 15 Turkish liras a day. Goodchild et al. (2018) stated that tobacco usage has a major economic impact on a country, including healthcare costs to treat tobacco-related diseases and lost productivity due to tobacco-related morbidity and mortality. According to GBD (2015), research on risk factors found that smoking has a global economic impact of $1.85 trillion, or about 1.8 percent of global GDP.

This study concluded with the fact that there is a significant relationship between tobacco smoking and the socio-economic factors affecting the academic performance of students in TRNC. Therefore, the alternate hypothesis was accepted and rejected along with the null hypothesis.

The null hypothesis regarding this research states that there is no significant health impact of tobacco smoking among university students in TRNC. The descriptive Pearson chi-square analysis reveals that 92.3% of students who smoke tobacco accept that their health has been affected as a result of tobacco smoking, compared to 58.8% of those who also smoke and whose health has not succumbed yet to tobacco smoking. Gowing et al. (2015) concluded that tobacco smoking remains one of the leading causes of illness and early death worldwide. Courtney (2015) indicated that tobacco smoking harms nearly every organ in the human body (including the circulatory, pulmonary, digestive, and musculoskeletal systems), raises the risk of many diseases, and lowers smokers' overall health.

This study concluded with the proven fact that there is a statistically significant health impact of tobacco smoking among university students in TRNC with a p value < 0.0001. Therefore, the alternate hypothesis was accepted and rejected along with the null hypothesis.

The null hypothesis regarding this research states that tobacco smoking has no impact on students' study time among university students in TRNC. The descriptive Pearson chi-square analysis reveals that 73% of the smoking students show that indeed tobacco smoking affects their study time, as they spend more time smoking than reading, while another 57.7% of smoking students are not too sure whether or not tobacco smoking is affecting their study time, and 27% of students who are non-smokers confirm that they are affected by those who smoke. The

evidence proven by this research study about the effect of tobacco smoking on students' study time was not measured by any researcher yet, to the knowledge of the researcher. Therefore, this study concluded on the proven fact that tobacco smoking has an impact on students' study time, and it was proven to be statistically significant with a p value < 0.0001. The alternate hypothesis was accepted and rejected along with the null hypothesis.

5.2. The Study's Limitations

The study's omission constituted a significant shortcoming of high school students who are smokers who are not university students. Another limitation was also the omission of other university students outside the TRNC that are smokers and those who are smokers but not students. This caused more delays in the gathering of the data. The study was dependent on the responses of university students in TRNC.

5.3. Conclusions

The purpose of this study was to evaluate the prevalence of tobacco smoking and its effects among university students in TRNC. Several outcome factors were chosen in order to do this: academic performance, health of the students, and economic performance of the students. When comparing university students to non-smokers, a significant increase in percentage was found for poor academic performance and a high prevalence of tobacco smoking. The descriptive chi-square quantitative research design and analysis were suitable to answer the objectives and hypothesis of the study.

The preceding findings highlight the significance of the study and suggest the necessity for more research. The study's findings and limitations demand additional research. This study revealed the effects of tobacco smoking on the academic performance of the students and the health and economy of the smokers. The study further revealed that even when an individual begs to smoke at an early stage; it has an effect on the economy as well as their health.

My conviction is that taking into consideration the recommendations from this research will help to improve the academic performance of smoking students, their health, the economy, and the general good of the public in TRNC.

5.4a. Further Research Recommendations

The findings of this study, together with a review of existing studies on the subject, prevalence of tobacco smoking and its effects, have some research ideas. The following are suggestions from TRNC perceptive that may be useful to nations conducting comparable research. The next sections go through some of these ramifications.

This research comprised gathering data only from university students in TRNC. Further studies should include students from high schools using the same technique as before to enable direct comparison. This would allow for a more complete and accurate depiction of the effect of tobacco smoking among students. In order to assess the impact of other variables that are not included in this study, more research is required to determine the academic performance of students.

5.4b. Recommendations for further actions

This research will aid in decision-making. The action items are based on the public health education among various universities in TRNC and the general public as a whole.

Health providers should focus on enhancing the TRNC's public health system, with a particular focus on tobacco smoking. Another recommendation for action is the collection of data on smokers within the TRNC. Another essential action recommendation is to improve communication among stakeholders—politicians, public health experts, and the general public—about the need for policy changes and the expected outcome in terms of lowering the harmful impacts of tobacco use.

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Appendix: Questionnaires

SAMPLE QUESTIONNAIRES S FOR TOBACCO SMOKING / SIGARA IÇMEK IÇIN ÖRNEK SORULAR

This research is for academic purpose and not for profit making, thus all details of participants shall remain confident / Bu araştırma akademik amaçlıdır ve kar amacı gütmemektedir, bu nedenle katılımcıların tüm detayları güvende kalacaktır.

Personal Information (Demographic)

1. What is your gender / Cinsiyetin ne
   a) Male / Erkek
   b) Female / Kadın

2. Please specify your Age (years) / Lütfen Yaşınızı (yıl) belirtiniz
   a) 15-18
   b) 19-21
   c) 22-24
   d) Greater than 25 / 25'ten daha büyük

3) Are you a student in TRNC? KKTC'de öğrenci misiniz?
   a) Yes / Evet
   b) No / Hayır

If you are not a student, thank you for participating, the other questions do not apply to you. / Öğrenci değilseniz, katıldığınız için teşekkür ederiz, diğer sorular sizin için geçerli değildir**.**

4. If yes then which university? / Evet ise hangi üniversite?
a) Near East University / Yakın Doğu Üniversitesi
b) Eastern Mediterranean University (EMU)
c) Cyprus International University (CIU)
d) Cyprus West University
e) University of Kyrenia
f) American University of Cyprus (AUC)
g) Final International University
h) European University of Lefke
i) Rauf Denktas University
j) Girne American University .
k) Cyprus Science University
l) Thomas Jefferson High School
m) Istanbul Technical University TRNC Education - Research Campus
n) Cyprus Health and Social Sciences University
o) Netkent Mediterranean Research and Science University
p) University of Mediterranean Karpasia
q) Bahçeşehir Cyprus University
r) University of City Island

5. Please specify the academic year. / Lütfen akademik yılı belirtiniz.
a) 1st
b) 2nd
c) 3rd
d) 4th
e) 5th
f) 6th
5b) postgraduate per semester / dönem başına yüksek lisans

Socio-economic characteristics of students smoking status/ Öğrencilerin sigara içme durumlarının sosyo-ekonomik özellikleri

6. Please indicate the following / Lütfen aşağıdakileri belirtin
a) Turkish student
b) International student / Uluslararası Öğrenci

7. Are you a smoker? sigara kullanıyormusun?
a) Yes / Evet
b) No / Hayır

If No you are not a smoker please skip to question 10, 11, 12,13, 15,30,31, and 32 / Hayır ise, lütfen sigara içmiyorsanız sorusuna geçin. 10, 11, 12,13, 15,30,31, and 32

8) If yes, how long have you been smoking for? Cevabınız evet ise ne kadar süredir sigara içiyorsunuz?
a) Less than 1 year / 1 yıldan daha az
b) More than 2 years but less than 5/ 2 yıldan fazla ancak 5 yıldan az
c) Above 5 years / 5 yıldan fazla

9) How many sticks (cigarettes) do you smoke in a day? Günde kaç çubuk (sigara) içiyorsunuz?
a) 1-5 cigarettes /1-5 sigara
b) 6-10 cigarettes / 6-10 sigara
c) Greater than 10 / daha büyük 10

10) Who are you living with? Kiminle yaşıyorsunuz?
a) With my friends / Arkadaşlarım ile
b) Family/ Aile ile
c) Alone / Tek başına

11) How many friends do you have? Kaç arkadaşın var?
a) Less than 10 / 10'dan az
b) 10
c) Greater than 10 / 10'dan büyük

12) Do your friends smoke cigarettes ? Arkadaşların sigara içiyor mu?
a) Yes/ Evert
b) No / Hayir
c) Maybe/ Olabilir
13) How many of your friends are smokers ? Kaç arkadaşın sigara içiyor?
a) Less than 10 / 10'dan az
b) 10
c) Greater than 10 / 10'dan büyük

14) Who influenced you into smoking? Seni sigaraya başlamanda kim etkili oldu?
a) Friends/ Arkadaşlar
B) Parents / Ebeveynler
C) Love one's/ Sevdiğim birisi

15) Do you agree that cigarette smoking is dangerous to your health? / Sigara içmenin sağlığınız için tehlikeli olduğuna katılıyor musunuz?
a) Strongly agree / kesinlikle katılıyorum
b) Agree / Kabul etmek
c) Neutral / Doğal
d) Disagree/ Aynı fikirde olmamak
e) Strongly disagree / Kesinlikle katılmamak

16) Do you think that smoking cigarette makes you lose weight? Sigaranın kilo verdirdiğini düşünüyor musunuz?
a) Strongly agree / kesinlikle katılıyorum
b) Agree / Kabul etmek
c) Neutral / Doğal
d) Disagree / Aynı fikirde olmamak
e) Strongly disagree / Kesinlikle katılmamak

17) Do you think that smoking cigarette makes you gain weight? Sigaranın kilo aldırdığını düşünüyor musunuz?
a) Strongly agree / kesinlikle katılıyorum
b) Agree / Kabul etmek
c) Neutral / Doğal
d) Disagree / Aynı fikirde olmamak
e) Strongly disagree / Kesinlikle katılmamak

18) Has your health ever been affected as a result of cigarette smoking? Sağlığınız hiç sigara nedeniyle etkilendi mi?
a) Yes / Evet
b) No / Hayır
c) maybe / Olabilir

Effect of smoking on your health / Sigaranın sağlığınıza etkisi
How does smoking affect your health? Sigara içmek sağlığınızı nasıl etkiler?

19) Frequently coughing / Sık öksürük?
a) Strongly agree / kesinlikle katılıyorum
b) Agree / Kabul etmek
c) Neutral / Doğal
d) Disagree /Aynı fikirde olmamak
e) Strongly disagree / Kesinlikle katılmamak

20) Breathing difficulties / Nefes alma zorlukları?
a) Strongly agree / kesinlikle katılıyorum
b) Agree / Kabul etmek
c) Neutral / Doğal
d) Disagree /Aynı fikirde olmamak
e) Strongly disagree / Kesinlikle katılmamak

21) Chest pain / Göğüs ağrısı?
a) Strongly agree / kesinlikle katılıyorum
b) Agree / Kabul etmek
c) Neutral / Doğal
d) Disagree /Aynı fikirde olmamak
e) Strongly disagree / Kesinlikle katılmamak

22) Lung cancer / Akciğer kanseri?
a) Strongly agree / kesinlikle katılıyorum
b) Agree / Kabul etmek
c) Neutral / Doğal
d) Disagree /Aynı fikirde olmamak
e) Strongly disagree / Kesinlikle katılmamak

23) Loss of appetite / İştahsızlık?
a) Strongly agree / kesinlikle katılıyorum
b) Agree / Kabul etmek
c) Neutral / Doğal
d) Disagree /Aynı fikirde olmamak
e) Strongly disagree / Kesinlikle katılmamak

24) Do you ever think of discontinuing smoking? Sigarayı bırakmayı hiç düşündünüz mü?
a) Yes / Evert
b) No/ Hayır
c) Maybe / Olabilir
d) Sometimes / Bazen

The Impact of Smoking on Academic Performance / Sigara İçmenin Akademik Performansa Etkisi

25) Do you think the habit of smoking cigarettes has a negative effect on your academic performance? Sigara içme alışkanlığının akademik performansınızı olumsuz etkilediğini düşünüyor musunuz?
a) Yes / Evert
b) No/ Hayır
c) Maybe / Olabilir

26) If yes, how does it affect your academic performance? Evet ise, akademik performansınızı nasıl etkiler?
a) Strongly affected /Güçlü bir şekilde etkilendi
b) Slightly affected /biraz etkilenmiş
c) Not affected / Etkilenmemiş

27) Does cigarette smoking affect your study time? Sigara içmek çalışma sürenizi etkiler mi?
a) Yes / Evert
b) No/ Hayır
c) Maybe / Olabilir

28) If yes, how does it affect your study time? Evet ise, çalışma sürenizi nasıl etkiler?
a) Strongly affected /Güçlü bir şekilde etkilendi
b) Slightly affected /biraz etkilenmiş
c) Not affected / Etkilenmemiş

29) Does smoking really affect your grade point and cumulative grade point average? Sigara içmek notunuzu ve genel not ortalamanızı gerçekten etkiler mi?
a) Yes / Evert
b) No/ Hayır
c) Maybe / Olabilir

30) What has been your grade point the previous semester? Bir önceki dönem notunuz kaç oldu?
a) Less than 2.0 / 2.0'dan az
b) 2.1 to 3.0
c) 3.1 to 3. 5
d) 3.6 to 4.0

31) What is your cumulative grade point for your current level? Mevcut seviyeniz için kümülatif notunuz nedir?
a) Less than 2.0 / 2.0'dan az
b) 2.1 to 3.0
c) 3.1 to 3. 5
d) 3.6 to 4.0

The Economic Effect of Cigarette Smoking /
Sigara İçmenin Ekonomik Etkisi

A brief description on the economic impact of cigarette smoking /
Sigara içmenin ekonomik etkisi hakkında kısa bir açıklama

32) Sources of monthly income / Aylık gelir kaynakları
a) Parent / Ebeveyn
b) Guardian/Uncles & Aunt's / Koruyucu/Amcalar ve Teyzeler
c) Work / İş

33) How much do you spend on smoking in a day ? Sigaraya günde ne kadar harcıyorsunuz?
a) 10 to 15 TL
b) 16 to 20 TL
c) Greater than 25 TL / 25 TL'den fazla