University of Kerbala/ College of Nursing

Healthy Lifestyle Behaviors among Medical and Non-Medical College Students at the University of Kerbala: A Comparative Study

A Thesis Submitted

By

Khamael Ali Ajrash

To

Council of the College of Nursing /University of Kerbala in Partial Fulfillment of Requirement for the Degree of Master in Nursing Sciences

Supervised By

Assist. Prof. Dr. Ghazwan Abdulhussein Al-Abedi

July 2023 AD **Dhul-Hijjah 1444 AH**

بسم الله الرحمن الرحيم

﴿ يَا أَيُّهَا الَّذِينَ آمَنُوا إِذَا قِيلَ لَكُمْ تَفَسَّحُوا فِي الْمَجَالِسِ فَافْسَحُوا يَفْسَحِ اللَّهُ لَكُمْ ۖ وَإِذَا قِيلَ انشُزُوا فَانشُزُوا يَرْفَعِ اللَّهُ الَّذِينَ آمَنُوا مِنكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ ۚ وَاللَّهُ بِمَا تَعْمَلُونَ خَبِيرٌ ﴾

صدق الله العلي العظيم

سورة المجادلة : اية 11

Supervisor Certification

I certify that this thesis titled (**Healthy Lifestyle Behaviors among Medical and Non-Medical College Students at the University of Kerbala: A Comparative Study**) was prepared under my supervision at the College of Nursing/ University of Kerbala in partial fulfillment of the requirements for the Degree of master in Nursing Sciences.

Ghazwan

Supervisor

Assist. Prof. Dr. **Ghazwan Abdulhussein Al-Abedi**

College of Nursing

University of Kerbala

Data: 9 / 10 / 2023

Approval Certification

After reviewing the thesis (**Healthy Lifestyle Behaviors among Medical and Non-Medical College Students at the University of Kerbala: A Comparative Study**), we certify that it fulfills all the requirements for awarding the Degree of master in Nursing Science.

Ghazwan

Head of Community Health Nursing Department

Assist. Prof. Dr. **Ghazwan Abdulhussein Al-Abedi**

College of Nursing

University of Kerbala

Data: 9 / 10 /2023

Selman

Assist. Prof. Dr. Selman Hussain Faris

Associate Dean for Scientific Affairs and Higher Studies

College of Nursing

University of Kerbala

Data: / /2023

Committee Certification

We are, members of the examining committee, certify that we have read this thesis **(Healthy Lifestyle Behaviors among Medical and Non-Medical College Students at the University of Kerbala: A Comparative Study),** which is submitted by (**Khamael Ali Ajrash**), from the department of Community Health Nursing, and we have examined the student thesis in its contents, and what is related to it. We have decided that it is adequate for awarding the degree of Master in Nursing Sciences.

Member

Assist. Prof. Dr. Fatma Makee Mhamood

Data: / / 2023

Member

Assist. Prof. Dr. MansourAbdulah Falah

Data: / / 2023

Chairman

Assist. Prof. Dr. Selman Hussain Faris Al-Kerety

Data: / /2023

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

Prof. Dr. Ali Kareem Khudhair

Dean College of Nursing/ University of Kerbala

Data: / /2023

Dedication

To my father's soul, may God have mercy on him

To my mother, brothers

To my husband and children

who encouraged me to pursue my study

All love and respect

To my dear friends with respect

Khamael

Acknowledgment

Before all, I would like to express my great thanks to Allah, the Most Gracious, and Merciful.

I would like to thank many people who helped me in my endeavors, I would like to express my deep gratitude to **(Professor Dr. Ali Kareem Khudhair)** the Dean of the College of Nursing / Karbala University, and (**Assist. Prof. Dr. Selman Hussain Faris Al-Kerety)** Associate Dean for Scientific Affairs and Higher Studies

I would like to extend my sincere thanks and gratitude to my supervisor **Assist. Prof. Dr. Ghazwan Abdulhussein Al-Abedi**. For his endless guidance, support, valuable suggestions, and frequent reviews throughout the study period.

My sincere gratitude and appreciation to the experts who reviewed and evaluated the study tool.

Thanks, and gratitude is due to all librarians and other staff of the College of Nursing/ University of Kerbala.

Finally, I would also like to thank the students who participated in conducting this study.

Abstract

Healthy lifestyle behaviors are defined as the adoption and implementation of behaviors that will reduce the risk of a serious illness or premature death, as well as protect and improve health levels. This study objectives to compare the healthy lifestyle behaviors between medical and non-medical college students, and find out the relationship between healthy lifestyle behaviors for students with their demographic characteristics. A comparative study was carried out through a selection of (7) Colleges (Medicine, Nursing, Dentistry, Engineering, Pure Science, Education for human sciences, and Law college) at university of Kerbala to meet the study objectives. A non-probability (convenience) sample of 300 fourth-class students has been selected from colleges. The study reveals that healthy life-style behaviors among students at medical and non-medical colleges show moderate levels as reported 79.3%, (M±SD=103.29 ± 9.769), 74% (M±SD=106.00 ± 9. 728) for medical and non-medical colleges students respectively. The results show that there is significant difference in overall healthy lifestyle behaviors at p-value= 0.017, particularly in subdomains of physical activity and nutrition 0.037 and 0.007 between two groups. Also, there was significant relationship between healthy lifestyle behaviors and residency area for non-medical college students. Healthy lifestyle behaviors between students of medical and non-medical colleges are moderate level. While there is a significant difference between medical and non-medical students in the healthy lifestyle behaviors and in subdomains of physical activity and nutrition particular. The study suggests encouraging the deans of the colleges construct exercise facilities for both genders to promote the value of the physical activity.

List of Contents

Subjects		Page No.
Acknowledgements		I
Abstract		II
List of Contents		III
List of Tables		IV
List of Figures		V
List of Appendixes		VI
List of Abbreviations		VI
List of Symbol		VII
Chapter One: Introduction		
1.1	Introduction	2
1.2	Important of the Study	7
1.3	problem statement	9
1.4	Objectives of the Study	11
1.5	Hypothesis	11
1.6	Definition of Terms	11-12
Chapter Two: Review of Literature		
2-1	Overview	14
2-1-1	Historical perspective of Human behavior	14
2-1-2	Understanding of Human behavior	15
2-1-3	Types of Health Behavior	16
2-1-4	Model of healthy behaviors	17
2-1-5	Dimension of healthy lifestyle behaviors	19
2-2	Student Health	30
2-2-1	Concept of the Health	30
2-2-2	Elements of The Health	31
2-3	Previous Studies	39-42
Chapter Three: Methodology		
3-1	Design of the Study	44
3-2	Administrative Agreement	44
3-3	Setting of the Study	44
3-4	Sample and Sampling	45
3-4-1	Inclusion Criteria	45
3-5	The study Instrument	45
3-6	The Validity of the Study Instrument	47

3-7	Pilot Study	47
3-8	Reliability of the Questionnaire	48
3-9	Ethical Considerations	48
3-10	Data Collection Methods	49
3-11	Statistical Data Analysis	49
3-12	Limitations of the study	51
Chapter Four: Results		
	Results of the Study	53-69
Chapter Five: Discussion		
5-1	Discussion of the Demographic Characteristics of the students in the medical and non- medical college	71
5-2	Discussion of Healthy Lifestyle Behavior among Students regarding to the subscale	73
5-3	Discussion Overall of Healthy Lifestyle Behaviors among Students at Medical and Non-Medical Colleges	77
5-4	Discussion of the Difference between Medical Colleges and Non-Medical Colleges in Lifestyle Behaviors	78
5-5	Discussion of the Relationship between Students' Healthy Lifestyle Behaviors with regarding to Demographic Characteristics	80-82
Chapter six: Conclusions and Recommendations		
	Conclusions	84
	Recommendations	85
	References	87-105
	Appendices	

List of Tables

Table No.	Title	Page No.
3-1	Distribution of Students according to Medical and Non-Medical Colleges	**45**
3-2	Reliability of the Study Instrument	**48**
4-1	Distribution of Students according to their Socio-demographic Characteristics	**53**
4-2	Assessment of Healthy Lifestyle Behavior related to Domain of Health Responsibility among Students	**55**

4-3	Assessment of Healthy Lifestyle Behavior related to Domain of Physical Activity among Students	**56**
4-4	Assessment of Healthy Lifestyle Behavior related to Domain of nutrition among Students	**57**
4-5	Assessment of Healthy Lifestyle Behavior related to Domain of Coping with Stress among Students	**58**
4-6	Assessment of Healthy Lifestyle behavior related to Domain of Dealing with Drugs and Substance Use among Students	**59**
4-7	Assessment of Healthy Lifestyle behavior related to Domain of Psychosocial Health among Students	**60**
4-8	Overall Assessment of Healthy Lifestyle Behaviors among Students at Medical and Non-Medical Colleges	**63**
4-9	Significant Difference in Healthy Lifestyle Behaviors with regard to Students at Medical Colleges and Non-Medical Colleges	**64**
4-10	Relationship between Students' Healthy Lifestyle Behaviors with regard to their Gender	**65**
4-11	Relationship between Students' Healthy Lifestyle Behavic with regard to their Marital Status	**66**
4-12	Relationship between Students' Healthy Lifestyle Behavic with regard to their Living Status	**67**
4-13	Relationship between Students' Healthy Lifestyle Behavic with regard to their Residency	**68**
4-14	Relationship between Students' Healthy Lifestyle Behavic with regard to their Monthly Income	**69**

List of Figures

Figure No.	Title	Page No.
2-1	The Health Belief Model	19
2-2	The Dimensions of Health	39
4-1	Domains of Healthy Lifestyle Behavior among Students at Medical Colleges (N=150)	61
4-2	Domains of Healthy Lifestyle Behavior among Students at Non-Medical Colleges (N=150)	62
4-3	Overall Assessment of Healthy Lifestyle Behavior among Students	63

List of Appendices

List	Title
A	Administrative Arrangement
B	Ethical Consideration
C	Questionnaire
D	Panel of Experts
E	Statistical Checker

List of Abbreviations

Items	Meaning
ADL	Activities of Daily Living
CBT	Cognitive Behavior Therapy
CVD	Cardiovascular Disease
Df	Degree of freedom
DM	Diabetes Mellitus
e.g.	Example gratia
et. al.,	And others
Eva.	Evaluation
F	Frequency
G	Good
H	High
H. S	High significant
HBM	The Health Belief model
HLBS	Healthy Lifestyle Behaviors
Hrs	Hours
HTN	Hypertension
IQD	Iraqi Dinars
L	Low
M	Mean
M	Moderate
M.S	Mean of Score
MOH	Ministry of Health
N. S	Not Significant
NCDS	Non-Communicable Diseases
NCEP	National Cholesterol Education Program

No.	Number
P	Page
p.p.	Pages
P	Probability value
RMC	Routine medical checkup
Rpb	point biserial correlation
S	Significant
SD	Standard deviation
SDVs	Socio-Demographic Variables
SPSS	Statistical Package for Social Sciences
SSQ	Social support quality
T- value	T-Test
TV	Television
Vs	Versus
WHO	The World Health Organization

List of Symbol

Items	Meaning
A	Alpha Cronbach
%	Percentage
=	Equals
±	Plus or minus
<	Greater than
>	Less than
&	And

Chapter One

Introduction

Chapter One
Introduction

1.1. Introduction:

The World Health Organization (WHO) defines health as a state of whole physical, mental, and social well-being rather than the lack of sickness or disability. In order to preserve, protect, and promote the health of people, families, and society as a whole, one must adopt a health-oriented approach to care. It is built on developing habits to uphold, defend, and enhance one's overall well-being and making the right judgments regarding one's health (Sengul et al., 2019).

According to the studies, a lot of issues result from how individuals live daily and take care of their bodies. One of the greatest ways for people to maintain and manage their health is to engage in actions that support good health. In actuality, health-promoting habits are one of the most significant health factors and the main cause of immunity to many illnesses. Additionally, these activities have a direct impact on health promotion and illness prevention (Bastani et al., 2018).

In order for the individual to enjoy a quality of life, good health habits must be achieved because essential health determines what a person can do. There are several factors in a person's lifestyle that can make them healthy or unhealthy. Nowadays, health promotion pays increasingly more attention and one of the main challenges of countries is providing health care by health promotion approach. So that people are able to be responsible for their own health and follow –up healthy lifestyle. This practice should start from childhood and adolescence and keep individuals safe against major health risks during their lifetime (Mohamed et al., 2021).

Health depends on awareness, social factors, and personality traits. One of the main causes reasons to focus on these factors is the fact that people play a very important role in the health and well-being of the society.

Health is a basic human need and basis for the successful functioning of individuals and society. Nowadays, all over the world, there is an attempt to expand health through planning and education for community members. Rather than focusing only on therapeutic strategies (Bastani et al., 2018).

Lifestyle refers to how people live that affect their health. Healthy life-styles include behaviors that enable people to control their health. It is strongly associated with health problems and chronic diseases such as cardiovascular disease (CVD), diabetes mellitus (DM), hypertension (HTN), obesity, and cancers. The increasing prevalence of chronic diseases has turned of a public health concern (Mehdizadeh et al., 2018).

Health behaviors are divided into two groups as health-promoting and health-damaging behaviors. Behaviors harmful to health, such as smoking, consuming excess fatty foods, etc., increase the individual vulnerability against negative health consequences. Lack of physical activity is also included in these behaviors (Mertoglu, 2019).

So, lifestyle behaviors greatly influenced by multiple factors including family, social class, culture, technology, the individual's perception, and social media. Although these behaviors are formed in the early years of life, they are experienced in the years (Ali et al., 2020).

Some of the most important health lifestyle behaviors (HLBs) involve a healthy diet, getting regular physical activity, avoidance of destructive behaviors and medications, protection from accidents, timely detection of symptoms of illness in physical terms, controlling feelings, emotions, thoughts, coping with stress, mental problems, and adjustment of interpersonal relationships from the social aspect (Mohamed et al., 2021).

Regarding diet and nutrition, an important aspect of modern lifestyle is the change in eating habit. In most homes, traditional food has given way to fast food, which is high in calories, especially children and young adults are very drawn to fried and oily food that now is readily available. As well

as eating habits, such as eating while watching television (TV), all have contributed to lifestyle diseases (Ali et al., 2020).

All the health behaviors that an individual can do to try and increase their health potential, the literature on this topic distinguishes four groups:- Behavior primarily related to physical health: such as taking care of the body and its immediate surroundings, physical activity, nutrition rationality, or appropriate sleep duration and quality. Behavior primarily related to psychosocial health: such as use and provision of social support, avoidance of excessive stress, or dealing with problems and tensions. Protective behavior: such as self-control in health, self-examination, conducting preventive tests or safe behavior in everyday life. And avoiding risky behaviors: such as not smoking, limited use of alcohol, not misusing non-prescription medications, or not using other psychotropic substances (Lesinska-Sawicka et al., 2021).

Sedentary life is known to be an important risk factor for many diseases such as heart disease, stroke, (HTN), (DM), breast and colon cancer and depression. Regular physical activity has positive effects on improving muscle and skeletal structure, providing weight control, and increasing psychosocial well-being (Sengul et al., 2019).

The level of physical activity is associated with age and gender: older young men and females are less active. The financial situation of the family is affecting on the health of the family. Boys and girls from well-off families typically report a higher level of physical activity and more often follow medical recommendations. Place of residence also affecting on the level of physical activity. Recent research shows that young people who living in the rural and small cities have a higher level of activity than young people from large cities (Martyn & Marc, 2020).

In addition, one of the foundations of a healthy life is sleep. Today disturbances have numerous social, psychological, economic and health

consequences. Lifestyle can have an effect on sleep which has clear impact on mental and physical health. The other side of the modern lifestyle is level of medical services has advanced a lot compared to the past in terms of primary care and prevention, providing health insurances, immunizations, many facilities to examine diseases and treat new diseases and even treat some (Ali et al., 2020).

Unhealthy lifestyles including lake of physical activity, poor nutrition, tobacco smoking, as well as poor mental health, are seen as the main risk factors for chronic diseases and premature deaths. In together, they account for a significant number of preventable deaths worldwide, with smoking alone to 6 million deaths, the lake of physical activity at 3.2 million, overweight and obesity at 2.8 million and dietary risks 11.3 million (Mohamed et al., 2021).

Although young people play an important role in shaping the future generation and health promotion within the society, they are not considered a priority reason health promoting efforts worldwide because they are considered to be in a relatively healthy stage of life (Bastani et al., 2018).

College is an important time when number of challenges to students including changes in the social and built environments, developing social networks, gaining more autonomy, and adapting to new schedules. During this period of life, college students are more likely to engage in risky behaviors known to negatively affect well-being, such as lake physical activity, stress, and poor eating habits (Almutairi et al., 2018).

Five main areas characterize this stage. First, it is an age of identity explorations, especially in areas such as work, as young people learn more about themselves and what they want in life. Second, the constant shift in work makes this period one of constant instability and self-exploration. Third, it is a self-centered stage, in which people separate from their parents and begin to search for their own standards of self-sufficiency, progress, and

achievement. Fourth, it is the age of feeling "in-between" meaning that they do not see themselves as adolescents or adults. The constant exploration of new possibilities and the instability of the transition itself lead to this ambiguous feeling. Finally, this is defined as the age of unlimited possibilities and great expectations, leading to new opportunities for flourishing (Lopez-Madrigal et al., 2021).

Going to college causes a feeling that can affect a student's physical and mental health. Because the special circumstances and universities including being away from family, going into a big and stressful place, financial problems and not having enough money, much course work, etc. Students are at risk of losing their physical and mental health (Shohani & Rasouli, 2018).

University is a period of responsibility regarding lifestyle choices and practices, during which students are exposed to the challenges of adulthood while simultaneously addressing the mental and social issues of student life. College students represent the future of families, communities, and countries. As a result, they also face the pressure of success in their academic goals while being expected to be competitive, adding to the demands and burdens, leading to further stress (Lesinska-Sawicka et al., 2021).

Medical students should have better knowledge and awareness about healthy eating habits and lifestyle, but there is little evidence to support this idea. The translating of knowledge to effective and healthy practice is usually very daunting especially in the wake medical students who are known to lead a stressful life that are completely incompatible with maintaining good health (Alghamdi et al., 2021).

Nursing students are the healthcare providers of the future, and they will play an important role in lifestyle modeling and teaching healthy choices to clients, so promoting and maintaining health among nursing students is

important for them both individually and professionally (Fashafsheh et al., 2021).

However, the big difference between college students in medical and non-medical tended to seek guidance or advice in matters related to their health. In addition, 21% of female medical students reported that they performed a breast self-examination test on a monthly basis, only 16% of female non -medical students performed the test monthly (Bastani et al., 2018).

1.2. Importance of the study:

Healthy lifestyle behaviors are important way to reduce the disease burden. Maintaining a healthy diet, including eating more fruit, vegetables, grains, legumes, and fish and reducing salt, sugar, fats, and red meat, would help avert around 11 million deaths worldwide. Non-smoking and adequate physical activity for leisure time can prevent approximately 7 million and 1 million deaths yearly, respectively. furthermore, a combination of them can lead to greater health benefits, preventing over 60% of premature deaths and increasing the life expectancy for (CVD), cancer, and type 2 diabetes by 7–10 years (Zhang et el., 2021).

A lifestyle is a way of living that could be considered either healthy or unhealthy depending on personal behavioral choices. health lifestyle has been defined as strong pattern of actions and self-perceptions that enhance individuals' level of wellness and self-actualization. HLBs include health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management. It is an important determinant of health status and is recognized as a key factor for the maintenance and improvement of health. Healthy behaviors such as unhealthy eating habits, irregular physical activity, and smoking are significant factors in the development of chronic diseases (Almutairi et al., 2018).

A healthy lifestyle plays an important role in individual's health.

Studies have indicated that a healthy diet, regular physical activity, healthy body weight, alcohol and tobacco control were associated with a lower prevalence of (DM), (CVD), and cancers (Zhou et al., 2022).

Health behaviors, attitudes towards health, and lifestyle have an effect on the overall health of an individual and thus of the entire population. Health behaviors may be beneficial or threatening in nature. Positive health behaviors contribute to maintaining or enhancing human health. Good health depends on the way of eating, physical activity, stress-management skills, and environmental factors. Healthy eating habits are important for the ideal functioning of the body, the type and quality of the food consumed must be taken into consideration. Nutrition plays an important role in the healthy life-style of young people (Martyn & Marc, 2020).

Considering the importance of this topic, the need to identify factors affecting of healthy behaviors in the students and the difficulty of changing unhealthy habits accepted during adolescence in adulthood, and as well as considering the fact that limited studies have been conducted on students, this study was conducted to determine (HLBs) among college students (Bastani et al., 2018).

The important to take care of body and health, and advice to go into health research in the early period. Efforts to health promoting health improvement aim to gain the attitude of individuals who wish to protect improve and maintain their health. In this context, individuals are expected to create and develop healthy lifestyle awareness, to make positive lifestyle change, and to realize individual responsibility and self-awareness to realize this development (Mamak, 2018).

Since university life is a transitional phase stage when students leave home and become independent, some factors such as sticking to tight schedule, moving away from family, skipping meals, using junk foods, dieting, as well as the type and amount of physical activity, may affect the

students' lifestyles. It is very important to establish (HLBs) among college-age students because it is relatively easier to change behavioral patterns during early adulthood. Thus, an effort to improve health promoting behaviors among college students (Fashafsheh et al., 2021).

College students were chosen as the subjects of this study for several reasons. First of all, the fact that they are at an age where they are most amenable. Second, they are good role models for a healthy lifestyle in society, especially the medical students, who are themselves a chord link a sling loop in the health chain. In addition, being a student is a dynamic transition period in everyone's life and it is the best time to create healthy behavior (Shohani & Rasouli, 2018).

1.3. Problem statement:

The problem statement in the current study related to main health problems such as non-communicable diseases (NCD) are related to unhealthy lifestyle behaviors. Many lifestyle behaviors such as not smoking, healthy eating, regular physical activity, and maintaining a normal weight, play an important role in ideal health (Borillo et al., 2020).

The students may be prone to many stressful factors including inability to organize time, the stress of exams and deadlines, disturbance sleeping patterns, relationships with new colleagues, and inability to adapt to the new environment. These factors may lead to decreased level of physical activity and increased consumption of junk food which may lead to changes in body weight. Exposure to these lifestyle changes may effect on individual well-being and overall health (Lesinska-Sawicka et al., 2021).

Non-communicable diseases (NCDs) are the leading cause of morbidity and mortality worldwide, especially in developing countries and account about 60% of all deaths globally. (WHO) has indicated out that 60% of the morbidity and mortality from (NCDs) are dependent on behavioral and lifestyle factors (Alzahrani et al., 2019).

Following (HLBs) is very important, and according to research, about 70% of diseases are related to unhealthy lifestyle behaviors of individuals. Some cardiopulmonary and musculoskeletal disorders and other diseases are directly or indirectly related to the individual's lifestyle behaviors (Bastani et al., 2018).

Many health problems and disabilities in adult can be avoided if related health risk behaviors are identified and changed at an early in life. Since it is also very challenging for adults to change unhealthy behaviors, it is necessary to study lifestyle behaviors and their associated factors and then promote (HLBs) in youth ages. College students represent a large proportion of the youth. Many college students have more choices in health-related behaviors and are more likely to have unhealthy lifestyles, shifting toward smoking, unhealthy nutrition, increased stress, and a sedentary lifestyle (Alzahrani et al., 2019).

Students often have incomplete knowledge about their own health. This lack of knowledge can prevent critical health decision making and lead to a high rate of preventable mortality and morbidity. Limited knowledge of a student's health is of particular concern when severe medium/long-term health risks do not manifest themselves in immediate disease symptoms (Ciancio et al., 2021).

The culture of a particular society plays an important role in shaping all the behaviors related to health and disease. Culture is understood as a system of rules and beliefs, and patterns of behavior. Being born and raised in one culture does not only affect understanding of the person health and diseases but also affects how they interact with it. In this context, health culture is a system of values attributed to physical and mental health, which is subjective and objective, and is also personal and public. Health culture manifested in the conscious regulation of human-environmental relations, and through that influence on responsibility for one's health, and general

health (Lesinska-Sawicka et al., 2021).

1.4. Objectives of the study:

1. To assess the healthy lifestyle behaviors among medical and non-medical college students.
2. To compare the healthy lifestyle behaviors between medical and non-medical college students.
3. To find out the relationship between healthy lifestyle behaviors of students with their demographic characteristics such as: gender, marital status, living status, residency environment, and family monthly income.

1.5. Hypotheses:

1.5.1. Null hypothesis:

There was no significant difference between medical and non-medical college students in healthy lifestyle behaviors.

1.5.2. Research hypothesis:

There was a significant difference between medical and non-medical college students in healthy lifestyle behaviors.

1.6. Definition of Terms

1.6.1 Healthy Lifestyle Behaviors: -

1.6.1.1. Theoretical definition:

It is a behavior that helps people to maintain and improve their own well-being. Healthy lifestyle behaviors are not only behaviors that prevent people from developing a disease and support them to be more healthy, but also behaviors that improve their health throughout their lives (Elif et al., 2019).

1.6.1.2. Operational definition:

It is a way that students are develop healthy behaviors to maintain

health, protect from diseases and avoid risky behaviors such as (health responsibility, physical activity, nutrition, dealing with drug and substance use, coping with stress, and psychosocial health).

Chapter Two:

Literature Review

Chapter Two

Literature Review

This chapter presents previous literatures and studies which are related to procedure underlying the current research. It presents in related to healthy lifestyle behaviors.

2.1. Overview:

2.1.1. Historical perspective of Human behavior:

The science of behavior psychology began with the founding father of experimental psychology, Wilhelm Wundt (1832-1920). Then Sigmund Freud, in the middle of the last century, revolutionized the whole concept of human behavior. These men and others like them provided distinctive views on human behavior by including cultural practices, family upbringing, economic conditions and educational level (Kafaji, 2011).

Behavioral psychology is a multifaceted discipline and a science that deals with the study nature of behavior and experience. As a science, it attempts to study nature and nurture; Cognitive process, a range of behaviors such as normal, abnormal, emotional, social and evolutionary behavior. As well as health and disease behaviors; and how behavior can be modified or changed (Rassool, 2021).

Arab is a collectivist society that means the individual self-image can be derived from community approval or community acceptance and recognition. It is not an individualistic society as in the West, from which man originates of one's self-image according to personal merits, i.e., achievements. Only this factor can model the Arab entity differently than others (Kafaji, 2011).

Plato argued that certain types of knowledge are innate or inborn, while Aristotle believed that each child is born as an “blank slate” and that knowledge is primarily acquired through learning and experience. The school was later known as behaviorism or the behaviorist school of

psychology (Rassool, 2021).

Freud, the dynamics of the self are determined by the generally antagonistic relationship between the Ego, the Id and the Super-Ego. It is tempting to translate Super-Ego (the unconscious conscience). In psychoanalytical thought, the Super-Ego is shaped by social learning and is inherently opposed to the will of the Id: its values are culturally relative (Skinner, 2019).

Ivan Pavlov, the Russian physiologist, was an early contributor to modern behavior theory. Pavlov's original work involved the study of the digestive system in dogs. He noticed that the dogs salivate when they see food as well as when food was put in their mouths. Pavlov soon found that the laboratory worker's presence induced salivation and that ringing a bell or making a tone quickly induced salivation if these events immediately preceded the giving of food. Watson, an American psychologist, soon learned of Pavlov's work. Watson strongly objected to such concepts as mind, consciousness, volition, and feeling. He believed that psychology should be the science of directly observable behavior (Bufford, 1999).

There is a wide of feelings, attitudes and experience that are religious in nature and important to human life; any description of human life that excludes religious experiences will be incomplete in understanding human behavior. The Quran is a guidance for the whole of humanity, not just the believers. The message of the Quran has reference to individual self-care, relationships, family, emotional behaviors, positive social behaviors, spiritual and moral intelligence, character, and the need for learning and knowledge (Rassool, 2021).

2.1.2. Understanding of Human behavior:

Behavior is defined as internal or external actions and reactions that occur under certain conditions. Sometimes behavior is observed and measured objectively or subjectively by individuals or people in groups. Overt

behavior indicates how well a system can adapt while interacting with the environment (Butts & Rich, 2021).

Healthy behavior is defined as any activity undertaken by a person who believes himself to be healthy, with the purpose of preventing disease or detecting it in an asymptomatic stage. Another definition of healthy behavior is patterns of behavior, actions and habits that relate to health maintenance, to health restoration and to improvement of health (Khoso et al., 2016).

2.1.3. Types of Health Behavior:

2.1.3.1. Preventive Behavior:

Preventive health behavior is aims to reduce the risk of disease, injury, and disability. These behaviors include participating in regular exercise, maintaining an appropriate weight and healthy diet, not smoking, and obtaining immunizations against infectious diseases (Weiss, 2015).

In order to maintain and improve prevention, people must act on a combination of thoughts, attitudes, and experiences known as preventive behavior. It is the most effective way to limit the spread of the virus while the vaccine is not available to the general public (Surina et al., 2021).

2.1.3.2. Detective Behavior:

Routine health screening is one of the keys to reducing healthcare burdens associated with chronic diseases. Health screenings can prevent and detect diseases in earlier, more treatable stages. After examination, appropriate preventive treatment is necessary. This would significantly reduce the risks posed by diseases, including disability and premature death, as well as reduce the cost of medical care (Chien et al., 2020).

Today, a wide range of health-screening procedures are available, including periodic physical examinations, eye and dental examinations, blood pressure and cholesterol readings, prenatal care and baby health, and

cancer screenings. These procedures are designed to identify and monitor health problems (Weiss, 2015).

2.1.3.3. Promotive Behavior:

World Health Organization (WHO) defines health promotion as the process of enabling people to increase control over and improve their health. Health promotion covers a broad range of social and environmental interventions that are designed to benefit and protect individual's health and quality of life by addressing and preventing the root causes of ill health, not just focusing on treatment and recovery (Pronk et al., 2021).

2.1.3.4. Protective Behavior:

Health protection activities occur at the societal rather than the individual level and include efforts to make the environment in which people live as healthy as possible. Doing so involves observing the physical and social environments in which people live; physical structures and infrastructures; transportation systems; available food, air, and water; work places; and developing social and economic policies that allow and encourage good health (Weiss, 2015).

2.1.4. Model of Healthy Behaviors:

The Health Belief model (HBM): is a psychological model that focuses on individual attitudes and beliefs in order to explain and predict health behaviors. The HBM was created in the 1950 years by social psychologists working for the Public Health Service to explain why people do not participate in health screening and preventative programs (Devi et al., 2022).

A theoretical framework used as a benchmark for direct planning of disease prevention and health promotion programs Its common use is derived from its competence in explaining and predicting factors that modulate interpersonal changes in health behaviour e.g, it focusses on the role of

psychological factors (e.g., perceptions) in disease severity and susceptibility (Alhaimer, 2022).

Consists this model from six basic constructs: perceived severity and susceptibility of the condition, perceived benefits and barriers to the recommended health behavior, cues to action (immediate prompts for the behavior) and self-efficacy for internalizing the behavior (Figure 2-1). As HBM takes into account factors it can adjust relationships between key constructs (e.g., age group). It was originally developed to understand acceptance of preventive measures or screening for early detection of asymptomatic disease (Bechard et al., 2021).

The definition of model constructs is as follows: perceived susceptibility; beliefs about the likelihood of developing a disease or condition. Perceived severity; beliefs about the seriousness of developing a diseases or condition, including consequences. Perceived benefits; beliefs about the positive aspects of adopting a healthy behavior (e.g., effectiveness of the behavior to reducing risk or adverse consequences). Perceived barriers; beliefs about the obstacles to performing the behavior, and the negative aspects (both tangible and psychological costs) of adopting a healthy behavior. Cues to action; internal and external factors that can lead to the healthy behavior. Self-efficacy; beliefs that one can perform the recommended healthy behavior (Ghorbani-Dehbalaei et al., 2021).

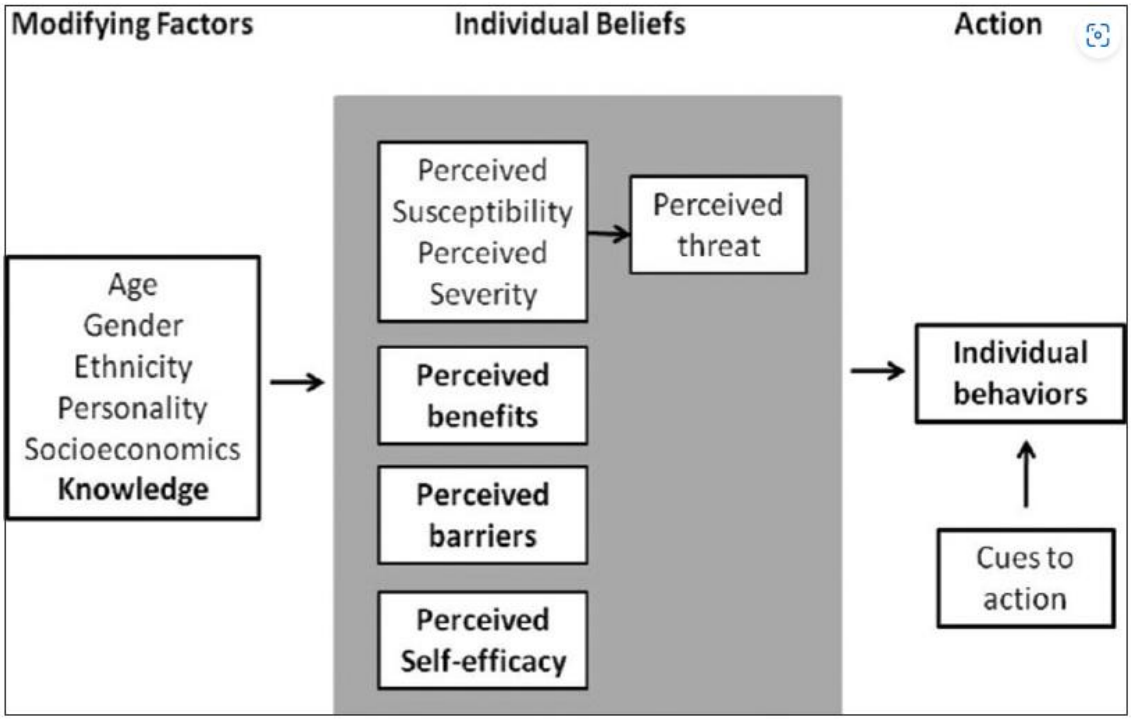

Figure (2-1): The Health Belief Model (Norozi et al., 2020).

2.1.5. Dimension of Healthy Lifestyle Behaviors:

2.1.5.1. Nutrition:

Nutrition has a fundamental physical impact on the physical health of life and it is the source for the main life activities of the human body. Balanced physical nutrition is a physical prerequisite for strengthening the system of college students and improving their health. Most college students' live campus, so it is often difficult to lead a healthy life through diet (Lyu et al., 2022).

A healthy diet is one in which macronutrients are consumed in appropriate proportions to support them vital and physiological needs without overdoing intake while also providing enough micronutrients and hydration to meet the physiologic needs of the body. Macronutrients (i.e., carbohydrates, proteins, and fats) provide the energy for required cellular processes for daily work. Micronutrients (i.e., vitamins and minerals) are required in relatively small amounts for normal growth, development, metabolism, and physiologic functioning (Cena & Calder, 2020).

The importance of dietary carbohydrate intake for disease prevention has been emphasized by health organizations and programs such as the American Cancer Society and the National Cholesterol Education Program (NCEP). The amount of carbohydrate recommended by the NCEP is 50–60% of the total calories (Liu et al., 2021).

Adequate dietary protein intake is important for maintaining lean body mass extension of life. protein plays an important role in preventing age-related loss of skeletal muscle mass, maintenance of bone mass, and reduced risk of fracture. For individuals do not get enough protein from their diets, supplement with amino acids improved strength and functional status (Cena & Calder, 2020).

Eating fruits and vegetables is a major aspect of a healthy diet associated with increase happiness and well-being in young, with more evidences that raw fruits and vegetables consumption may be more beneficial than consumption of cooked or processed fruits and vegetables. Conversely, regular consumption of a typical Western diet, categorized by consumption of refined grains, high intake of sugar, and processed and fried foods, has been associated with increased perceived stress among college, and increased risk of depression (Wickham et al., 2020).

Most global and nutritional recommendations include consumption of at least 2 servings of fruits and 3 servings of vegetables per day for adults. More than 100 countries around the world have developed food-based dietary guidelines adapted to their nutrition situation, culinary cultures, food availability, and eating habits that encourage increased consumption of fruits and vegetables (Wallace et al., 2020).

Fats or lipids are the basic structural components of cellular membranes and cellular energy. Dietary fats fall into 4 categories: monounsaturated fats, polyunsaturated fats, saturated fats, and trans fats. The fat content of food in general mixture of these different species.

Unsaturated fats are found in a variety of foods, including fish and many plant-derived oils, nuts, and seeds, while animal products and some plant-derived oils contribute more of saturated fats (Cena & Calder, 2020).

Water is a vital component of all living cells and extracellular fluids. Water acts as a solvent, regulates body temperature, aids in digestion of food and helps regulate the acid-base balance. The balance between water intake or loss and electrolytes is essential to good health adult. Water deprivation occurs when the balance between water intake and loss is disrupted it causes a state of dehydration (Shaheen et al., 2018).

Also, water is the main component of the body, making up the majority of body mass and total body weight. Water not only provides hydration but also carries micronutrients, including trace elements and electrolytes. Drinking water may save up to 20% of energy recommended daily intake of calcium and magnesium. Our understanding of water requirements and the impact of water on health and disease is limited, despite the global increase in drinking high-calorie drinks has refocused attention on the importance of water for maintaining health and preventing disease (Cena & Calder, 2020).

The requirement of water depends on the climate and a person level of physical activity. the recommended water intake is 1.5 liters (6 glasses) per day, without specifying gender. Daily water intake recommendations vary for men and women, pregnant and lactating women, children, and elderly. The risk of urinary tract infection, kidney stones, dental carries, and constipation increases due to dehydration (Shaheen et al., 2018).

Breakfast is the most important meal of the day, and benefits of eating breakfast for children, adolescents, and adults. This may be more common among certain minority or low socioeconomic groups and appears to be associated with other lifestyle factors that may be detrimental to health (Gao et al., 2021).

Body weight disorder is very common in students and can be traced back to existence overweight in childhood and adolescence. However, one of the most common negative factors external factors that affected the practice of physical activity in the students' population are: the lack of free time due to college schedule, social and family obligations (Kljajevic et al., 2021).

Obesity is a common metabolic disease that involves the overexertion pathological condition accumulation of adipose tissue, which can harm human health. In the past few decades, the number of obese people around the world has increased and become obese. There are more than 190 million overweight and obese people globally (Xie et al., 2020).

2.1.5.2. Physical Activity:

Physical activity is defined as any body movement resulting from the contraction of skeletal muscles that increases energy expenditure above resting metabolic rate, and is characterized by its modality, frequency, intensity, and duration. exercise has been defined as a subcategory of physical activity that is planned, structured, repetitive, and physical activity that favors the maintenance or development of physical fitness (Thivel et al., 2018).

According to Malaysian Dietary Guidelines, physical activity has three main components: Occupational work: Activities that take place during the course of work. Household and other chores: Activities that take place as part of daily life. Leisure-time physical activity: Activities they are conducted at one own discretion or free time. Malaysian Dietary Guidelines were also presented that the physical activity level is a method of measuring or characterizing physical activity, usually depending on its type, frequency, duration and intensity (Ali, 2018).

According to the most recent global guidelines, adults (18-60 years old) should exercise for at least 150 minutes of moderate-intensity, or at least

75 minutes of vigorous-intensity aerobic physical activity at week (Bennie et al., 2020).

2.1.5.2.1. Main types of physical activity:

2.1.5.2.1.1. Aerobic physical Activity:

In aerobic activity (also called endurance or cardio activity), the large muscles move in a rhythmic manner for an extended period. Aerobic activity causes the heart rate to increase and breathing to become more difficult. It has 3 components: intensity, frequency, and duration. Intensity describes how hard a person must work to do the activity. Frequency describes how often a person does aerobic activity. Duration describes how long a person does an activity in any 1 session (Piercy et al., 2018).

2.1.5.2.1.2. Muscle-Strengthening Physical Activity: Referred to as strength/ lifting weight/resistance training or exercise, is a voluntary activity that involves the use of weight machines, exercise bands, hand-held weights, or body weight such as push-ups or sit-ups (Bennie et al., 2020).

2.1.5.2.1.3. Bone-Strengthening Activity: Bone-strengthening activities (also called weight-bearing or weight-loading) produce a force on the bones of the body that promotes bone growth and strength. This force is commonly produced by hitting the ground. Bone-strengthening activities can also be aerobic and muscle-strengthening activity (Piercy et al., 2018).

Physical inactivity is a common health problem among people all over the world. It is well known as a risk factor for developing (NCDs), such as coronary heart disease, type 2 diabetes, breast and colon cancers. Physical inactivity is the fourth leading cause of death worldwide, NCDs accounted for more than 70% of all deaths in 2017 (Inaba et al., 2021).

Sedentary behavior is often defined as energy expenditure of less than 1.5 metabolic-equivalents using that resulting from sitting or lying down. Sedentary behaviors include a variety of activities that involve decreased

energy expenditure including watching TV, playing video games, working on a computer, and spending time driving (Byer, 2019).

Increased engagement with virtual games, cell phones, TV, computers and social media may be an important contributing factor to this trend among youth people. More vehicular transportation and less participation in outdoor activities also contribute to this outcome. Moreover, the incidence of health conditions such as obesity, coronary artery disease, HTN, DM, depression (Verma et al., 2021).

2.1.5.3. Sleeping:

The sleeping is a biological function, and an active, energetic behavior that is vital to brain health and wellbeing at any age. It affects health status, quality of life, performance, independence, and safety. In fact, recent findings indicate that people who sleep well remain cognitively preserved longer, report lower rates of mental illness, and have a higher life expectancy. On the other hand, among individuals with sleep disorders, such as insomnia, mood changes and cognitive dysfunctions can be observed, particularly with regard to anxiety and depression, in attention and memory (Cipriani et al., 2021).

Sleeping is a basic human need for overall health and wellbeing of every person, which is affected by various factors such as physical, mental, and environmental. The evidence indicates that sleep duration and lack sleep are associated with premature mortality and various negative health outcomes such as CVD, immune system suppression, obesity, migraine, etc (Paudel et al., 2022).

College students commonly have sleeping issues, and more than half of them have poor sleep quality. Greater academic and social pressures and irregular schedules make students vulnerable to sleep disorders and deprivation. College students' social lives including a variety of

entertainment opportunities and products that reduce sleep quality (Wang & Biro, 2021).

Sleeping disorders are often considered the most serious consequence of environmental noise by (WHO). The main effects of sleep deprivation include physical effects (sleepiness, fatigue, HTN) cognitive impairment and mental health complications. Such inadequate rest impairs the ability to think, handle stress, maintain a healthy immune system, and moderate emotions (Gandhi et al., 2021).

A clear connection exists between a lack of sleep, heart problems, and the onset of inflammation in the body. People who sleep for less than 5 hrs. per day have the highest risk of developing CVD. People who don't get 7 hrs. of sleep are also more vulnerable to cardiovascular illnesses and mortality due to a disruption in the system works. Thus, a minimum of 7 hrs. should be spent sleeping (Sejbuk et al., 2022).

2.1.5.4. Public Health:

A Routine medical checkup (RMC) is a routine health care process usually performed by health care facilities for both gender and for all age groups at different time interval according to the patient's risk factors. Screening usually involves history taking, physical examination, and laboratory tests by physicians on a regular basis for asymptomatic individuals for continuing self-health care (Al-Kahil et al., 2020).

University campuses provide an ideal breeding ground for infectious disease. Students live in close quarters, congregate in lecture halls, share food and drinks in the dining areas. Outbreaks in these settings can spread very quickly (Shah et al., 2020).

The literature provides strong evidence supporting three approaches that can lead to a reduction in the prevalence of disease within college residence halls: (1) hand washing, (2) lifestyle initiatives, and (3) preventative education. Handwashing is used to decrease the spread of

microbial colonies through physical contact with others (Burkholder et al., 2018).

Personal hygiene can be defined as the practice of maintaining, cleanliness, and promoting body health. The term of hygiene comes from the Greek word "Hygeia," which means goddess of health, cleanliness, and sanitation. Maintaining a high level of personal hygiene can help increase confidence and self-esteem, leading to a healthy lifestyle (Al-Rifaai et al., 2018).

Oral health is an integral part of overall health and oral health should not be viewed isolation. The global policy of (WHO's) for improvement of oral health in the 21st century stated that the promotion of oral health needs to be integrated with public health promotion, as the risks to health are associated, preventable, and related to lifestyle (Baskaradoss et al., 2019).

2.1.5.5. Psychosocial Health:

` Psychosocial well-being is a meta-construct that includes emotional or psychological well-being, In addition to social and group well-being. The term "quality of life is similar to the term psychosocial well-being in that it includes emotional, social and physical components. At the same time, it is often used in healthcare research to determine how the individual's well-being may be affected over time by a medical condition, blurring its clarity and conceptual specificity (Eiroa-Orosa, 2020).

Psychosocial factors are characteristics or aspects that affect an individual psychologically and/or socially. These factors can describe individuals in relation to their social environment and how it affects physical and mental health. Psychosocial resources in the social environment include social network and social support. Central among psychological resources are the ability to adapt or master, a sense of coherence, and self-esteem. However, the risk factors include vital fatigue, depression, hopelessness, and hostility (Thomas et al., 2020).

Psychological well-being includes dimensions of self-acceptance, positive relationships with others, autonomy, environmental mastery, purpose in life, and personal growth. While, distress is usually defined as a state of emotional distress consisting of symptoms associated with depression and anxiety. Both psychological well-being and distress must be considered when researching student's mental health, not least because this holistic approach aligns with (WHO) definition of mental health: a state of well-being in which an individual is aware of his or her own capabilities, can handle the normal stresses of life, can work productively and is able to contribute to his or her community (Tran et al., 2022).

Various conceptual proposals have been made, and even new designs of psychological interventions that place psychological well-being at the center of mental health. Similarly, positive psychology, an approach based on enhancing happiness by focusing on the positive and flourishing, can be argued to represent a paradigm shift away from the paradigms of helplessness that began two decades ago (Eiroa-Orosa, 2020).

2.1.5.6. Copping the Stress:

Stress is defined as a person's psychological and physiological response to the perception of a demand or challenge. Students are frequently affected by stress due to their academic and personal life. Different challenges face them, difficulties and a lot of pressure in today's competitive world. They are trained to deal with stress and must break free from it. Stress is the process by which an individual or a person reacts when opened to external or internal problems and challenges (Hemamalini et al., 2018).

Academic factors there are various challenges that need to be identified, for example, increased academic workload, especially when there are a large number of tasks; lower than expected score, which means, when students receive a lower than expected score and feel seriously disappointed. Excessive amount study hours which mean students spend most their time

studying and have no time to relax with their friends; language difficulties while for some student's educational language is like their mother tongue for other students it is as foreign as a second language (Kassymova et al., 2018).

Physiologically, stress-related diseases in the form reproductive, CVD, metabolism and gastrointestinal diseases are determined by large areas of genetic and developmental factors what differ from person to a person but also the symptoms of this disease can sometimes similar between individuals, stress is physical word what refers to the amount of force applied on something and relates in real life to how some issues that carry force applied to human life (Hemamalini et al., 2018).

University students feel many symptoms and health complaints. Back and shoulder pains, a variety of headaches, a variety of gastrointestinal symptoms, psychiatric symptoms, psychotic episodes, and mental health outcomes such as depression and anxiety, difficulty sleeping, and circulatory/breathing complaints (e.g., Symptoms of shortness of breath, tachycardia, excessive sweating, and menstrual disorders) are all examples of stress-related complaints (Ameer et al., 2021).

2.1.5.6.1. Stress Management:

Behaviors that people often use in the face of stress to help manage painful or difficult feelings. Stress management behaviors include sleeping (6–8 hrs.) each night, using appropriate responses to unreasonable problems, make an effort to identify the source of all stress that occurs, making an effort to spend time each day for relaxing muscle, focus on pleasant thoughts at bedtime, feel content and peace with yourself. Practicing these behaviors are very important in helping people cope with stressful events while helping them maintain their emotional health (Hailu, 2020).

2.1.5.6.1.1. Relaxation Techniques:

A set of strategies for improving physiological response to stress. The

primary goal of all relaxation techniques is to use relaxation to decrease stress or anxiety. There are many types of relaxation techniques including progressive muscle relaxation, relaxation imagery, applied relaxation and autogenic training (Hamdani et al., 2022).

2.1.5.6.1.2. Meditation:

A technique that can help to manage stress. It develops mindfulness and can be especially effective in reducing stress, anxiety, depression, and other negative feelings. Mindfulness is the quality of fully participating in the present moment, without overthinking or analyzing the experience. Instead of worrying about the future or dwelling on the past, mindfulness meditation shifts the focus on what is happening right now (Portoghese et al., 2019).

2.1.5.6.1.3. Cognitive Behavior Therapy (CBT):

An evidence-based psychotherapy, that has been used globally in the prevention and treatment of psychological and physical problems. (CBT) includes methods that aim to help a person to identify his stress levels and modify his beliefs and behaviors and these methods include cognitive restructuring, behavioral changes, and social support. It helps the person to eliminate or reduce symptoms of psychological distress and helps the individual return to normal daily life (Hanani et al., 2022).

2.1.5.7. Drugs and Substance Use:

Drug and substance use is widespread among students. They smoking tobacco (including cigarettes and water pipes, as they are called in the Middle East), chew tobacco, inhale volatile substances (solvents such as gum and benzene), use sedatives such as diazepam (a benzodiazepine), take hypnotics such as amphetamines, and cannabis, or abuse drugs such as cocaine and heroin (Fadhel, 2020).

Anxiety and depression are among the most common problems

reported by people seeking drug addiction treatment. the primary psychological symptoms continue behind detoxification and remission of addictive behavior. From an addiction perspective, there may be significant risks associated with concurrent depression and anxiety symptoms, regardless of etiology (Mohamed et al., 2020).

Tobacco is the most frequently used substance among college students, but the illicit use of other drugs including stimulants, hallucinogens, and opioid pain medications is becoming increasingly common (Auty et al., 2022).

Psychoactive substances are believed to provide pleasure because they confer inner peace and satisfaction, alter perception and heighten sensation. Despite its pleasurable effects, substance use has negative effects on the health, family, social, and professional lives of people, making it a major public health concern (Metuge et al., 2022).

2.2. Student Health:

2.2.1. Concept of the Health:

A state of complete physical, mental and social well-being and not merely the absence of disease or disability. These different dimensions of health and wellbeing ensure that a population's health is assessed in a subjective, reliable and more generalized manner (WHO, 2017).

The welfare of society and its ability to continue has traditionally placed a high priority on health. Although health care is structured within this importance, it has experienced several adjustments and taken various forms to accommodate individuals and societies. While traditional health care approaches sought to improve health, they now place a greater emphasis on disease prevention and health enhancement (Mertoglu, 2019).

People have always had the idea of health since it is essential to living a healthy life . The understanding of health has occasionally revealed

differences between people and societies. Until recently, health and illness were viewed as being synonymous; health was viewed as the absence of illness, while illness was viewed as the state of not being healthy (Ergen & Bolcan, 2020).

2.2.2. Elements of The Health:

2.2.2.1. Physical Health:

Physical health can be broadly described as the organs of the body that properly perform physiological functions, with good physical health, as opposed to the definition preferred by (WHO) that health is more than the absence of illness. Objective physical health outcomes are characterized by measures that can be confirmed by medical (Cross et al., 2018).

Physical health is defined as an organism's ability to function normally at all levels, the regular progression of biological processes necessary for individual survival and reproduction, the dynamic equilibrium of an organism and its processes with the external milieu, participation in socially beneficial work, the accomplishment of crucial social functions, the absence of illnesses and painful situations, and the body's capacity to adapt to the environment's constant change (Villarino et al., 2022).

Countries are gradually paying attention to physical health. because of the bad psychological status of college students and their weak psychological endurance. It is also necessary to modernize school physical education (Lyu et al., 2022).

Physical health is the absence of diseases that impact the body's physiological systems, such as the heart and nervous system. The ability to meet the demands of the day's job and make the best use of free time is a sign of physical well-being. A healthy diet and regular exercise are prerequisites for someone to be in good physical condition (Ergen & Bolcan, 2020).

Academic stress is another major factor that deteriorates the physical of college students. Before entering colleges and universities, students went through three years of serious studies in high school and gave up a lot of practice time in high school, Therefore, even after entering college, most students lost the habit of playing sports, and their physical fitness gradually deteriorated (Lyu et al., 2022).

For young college students, physical health and mental health are equally important, so in physical education, we must not only focus on physical fitness exercises but also, through physical exercise, take appropriate ways to strengthen the mental health of young college students, in order to deeply benefit from the intrinsic value of physical education (Guo & Zhang, 2022).

Improving the physical health of college students and significantly improving the quality of education, physical education in colleges and universities should build a campus culture that advocates sports, organize diverse sports club activities, create second class, create physical health profiles for college students, and conduct dynamic exams to achieve an excellent average in physical fitness tests for students (Lyu et al., 2022).

2.2.2.2. Mental Health:

Mental Health is the successful performance of mental functions related to emotions, thinking, and behaviors that lead to productive activities, good relationships with others, and the ability to adapt, change, and transform coping with adversity. Mental distress is one of the mental health problems that affect society non-differentially. The vaccine doesn’t prevent mental health disorders (Siraji et al., 2022).

Both people and society are heavily burdened by mental health issues, which have a negative impact on many aspects of life, such as family life, professional life, quality of life and the broader social environment. From an

economic perspective, mental disorders lead to high direct and indirect costs to society (Otto et al., 2021).

Students are an essential part that determines economic growth and success of a country. Until recently, little attention has been paid to identifying mental disorders among college students. However, since the college years are a peak period for the emergence of many common mental disorders, particularly anxiety, mood disorders, and substance abuse (Auerbach et al., 2018).

Additional challenges to the student at a time when the transition from adolescence to adulthood is in full swing. Apart from the typical physiological, emotional, and cognitive changes associated with this developmental process. Students must adapt to an increasingly complex regulatory environment where what is expected of them is not always clear or transparent (Ravikumar & Shanmugam, 2022).

Mental health is influenced by complex causes, such as socio-demographic characteristics, lifestyles, as well as self-categorization of health and social networks. Social support quality (SSQ) is another critical determinant of mental health status, and dissatisfaction with insufficient or poor-quality social supports is closely related to mental health problems (Wang et al., 2022).

The stressors put college students at risk of chronic sleep deprivation and poor sleep quality—symptoms associated with anxiety and depression. It has been evident in multiple countries that anxiety, stress, and depression have progressively exacerbated as college students move into their second, third, and fourth years of study. Depression, anxiety, and stress have been shown to be associated with poor academic performances, demonstrating apermanent self-defeat for students with mental health issues (Ratanasiripong et al., 2018).

The entering university represents transition period for young people. Through this transition, students face new challenges, such as making independent decisions about their lives and studies, adapting to the academic demands of an unstructured learning environment, and interacting with a variety of new people. In addition, many students must, often for the first time, leave their homes and distance themselves from their support networks. These challenges can affect the mental health and well-being of higher education students. (Hernandez-Torrano et al., 2020).

Recently, people living standards are improving day by day, the stimuli we face in personal life are complex, and the pressure of life is also increasing. The accumulation of stress has an increasingly significant impact on personal mental health. More and more mental illness and mental disorders begin to appear in people's lives and affect people's normal lives. Therefore, people focus more on mental health (Liang et al., 2021).

Depression and mental health issues are major global causes of disability, according to (WHO). The community pays close attention to the mental health of college students. They are anticipated to be the happiest and in the best mental health. However, experience depression at a higher incidence than the overall population, according to studies. Students experience a variety of social, academic, emotional, and environmental challenges; a lack of psychological recovery may result in depression and other mental problems (Liu et al., 2022).

Mental health is fundamental to an individual's overall well-being and absolutely essential to a productive and efficient life. mental health problems have been found to be associated with many negative effects, such as reduced efficiency, loss of productivity, disability and absenteeism. Given the negative effects, it is critical to investigate the potential factors and mechanisms that can inform improving the mental health (Hou et al., 2020).

2.2.2.3. Social Health:

Social health was defined as the assessment of an individual's circumstances and functioning in the society, specifying that life has a social nature and its challenges are considered criteria for achieving a better quality of life, as derived from the social structure, is viewed through the dimensional model: a) Social integration is the perceived quality of an individual's relationship with their community and society. An individual feels integrated when they have something in common with the other members of their social context; b) Social acceptance includes the meaning built by the individual of their society, based on the characteristics and qualities of others people (Lages et al., 2018).

The Social support is an individual's feeling of support and care from others. For university students and college graduates, the perception of social support specifically includes material and spiritual support received from five types of people: family, friends, relatives, classmates, and others (Si et al., 2022).

Friends give us a great sense of companionship, helping to feel less lonely, and improve our self-esteem and quality of life. A better sense of purpose and control over one's life is related to feeling more support from friends. In comparison to spousal and parent connections, friendship can sometimes predict health to an equivalent and, in some circumstances, greater degree. Also, can assist people in establishing healthy habits in their own life (Lu et al., 2021).

Family support refers to the material and spiritual support that parents and relatives can provide to college students, such as providing capital support, assistance with entrepreneurial decisions, and spiritual incentives. Friends support is basically providing the encouragement and help that friend provide when entrepreneurs encounter difficulties, including emotional support, information support and effective support. Support from others can be understood as the help receive from relatives, teachers, colleagues, and

significant other individuals through social bonds to reduce psychological stress, relieve mental tension, and improve adaptability (Si et al., 2022).

Social relationships are fundamental to human survival and greatly involved in achieving and maintenance good health and well-being. Social relationships have been defined and measured diversely across studies and disciplines. Regardless of the differences, two major components of social relationships have been consistently studied and documented: social networks and social support (Asante & Karikari, 2022).

2.2.2.4. Spiritual Health:

Spiritual health is a sense of meaning and purpose in life, as well as a connection to a higher power that enables people live better lives. When people voluntarily enhance their spiritual powers through relaxation, prayer, communication with like-minded people, and learning from a spiritual guide and study, they achieve spiritual health (Abdolkarimi et al., 2022).

Spirituality, a concept related to soul, and immateriality, includes thoughts, visions, dreams meaning, principles, and beliefs. Further, spirituality is not only seen as pursuits of life, meaning, and purpose but can also may be associated with or separate from any religions (Leung & Pong, 2021).

A psychological resource of conditioning that reduces suffering and leads people to think about traumatic situations or upsetting events from a positive perspective is Spiritual well-being. Although health has been defined based on three physical, mental, and social elements for decades, the spiritual dimension was included in the definition of health (Maazallahi et al., 2021).

College students frequently have spiritual challenges as they reevaluate their religious and spiritual views outside of their family and community surroundings. For example, students may have trouble

integrating new knowledge from their academic courses with their tradition. Students from different religious traditions may clash at the university (Gilbertson et al., 2022).

It is characterized by qualities like peace and harmony, stability in life, a sense of being close to oneself, and a relationship with God, society, and the environment. Spiritual health is comprised of two parts: religious health (feeling of health and relationship with supernatural power) and existential health (relationship with others and the environment) (Abdolkarimi et al., 2022).

A state of spiritual health helps people discover their life's meaning and purpose as well as experience happiness, affection calm, and the beauty of nature. It represents the integration of the body, mind and spirit in an internally harmonious environment, and based on connections with others, nature and the transcendent. A person who is spiritually well experiences coherence and harmony of the mind and body. Spiritual health can also be conceptualized as a part of general health, along with physical and mental health (Leung & Pong, 2021).

2.2.2.5. Emotional Health:

Emotion regulation refers to attempts to influence the experience and expression of feeling. emotion regulation strategies focus on the precedent of how individuals respond to emotion cues and stimuli before emotions occur, such as avoiding or directing attention away from situations that are expected to elicit negative emotions, and altering the assessment of such situations or the individual’s ability to deal with them (Lee et al., 2022).

Their positive and negative experiences during this period affect their result, with their academic performance being one of the most important. Negative emotions such as stress can appear with renewed intensity, motivational, affecting their emotional, and emotional state, thus

conditioning the learning process. Several studies have indicated that stress interferes with cognitive and motivational processes in relation to study and learning (Lopez-Madrigal et al., 2021).

A person who has emotional health is free from emotional and mental diseases such depression. A person's capacity to deal with life's challenges and to express their emotions in a constructive, upbeat, and positive way (e.g., by choosing happiness over depression) is referred to as emotional health. A person who is intellectually healthy is free from diseases that affect the brain and other learning related processes. The capacity to learn and apply knowledge to improve one's quality of life and operating at their highest level is referred to as intellectual wellness (Ergen & Bolcan, 2020).

Multiple studies show that women show greater abilities of emotional intelligence. However, women are also more vulnerable in college settings, having higher levels of stress, anxiety, and depression than males. Women tend to regulate their stress through social support strategies, while men use more planning and positive reappraisal when dealing with stress (Lopez-Madrigal et al., 2021).

Emotional maturation can be defined as a process in which the personality always determined for a better sense of emotional well-being. If a person or a child is emotionally mature, he or she may have the ability to influence and adapt to himself, his or her family members, peers, society and culture and his or her environment itself. He has the ability to fully enjoy his tuning. the most prominent sign of emotional maturity is the ability to withstand stress and will enable to tolerate the frustration. Hence the individual’s ability to control emotions himself or herself (Figure 2-2) (Joy & Mathew, 2018).

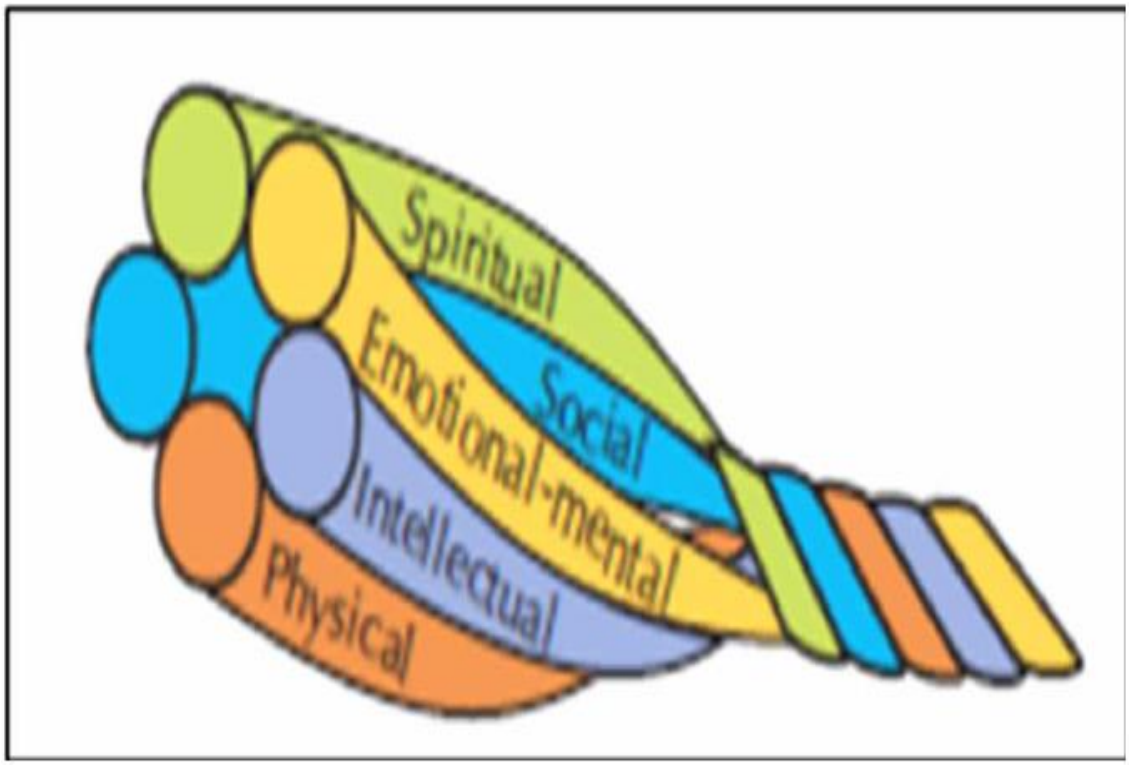

Figure (2-2): The Dimensions of Health (Ergen & Bolcan, 2020).

2.3. Previous Studies:

First Study:

Pasha et al., (2018), the study conducts to compare the healthy life-style of medical and non-medical students in Guilan, Iran. A cross-sectional study using a descriptive-analytical approach that was performed on 1319 students of medical and non-medical sciences. The mean healthy lifestyle among non-medical university students' university was (129.5± 7.17) and (128.1±19) for medical science students. There was a significant difference between the two studied population in terms of health responsibility (p= 0.0001). Students of medical sciences had 3.2 times more favorable health promoting lifestyle (OR = 3.123, 95% CI = 1.57-6.3), married students 6.1 times (OR= 1.55, 95% CI = 1.05-2.32), students with mothers with under diploma degree 2.6 times (OR= 2.6 95% CI = 1.49-4.62), students with fathers with diploma 1.7 times (OR = 1.7, 95% CI = 1.2-2.56), and physical education and sports science students 5.8 times (OR = 8.5, 95% CI = 3.42-20.95) had a more optimal healthy lifestyle. : In this study, health-promoting

lifestyles of students' are in an unfavorable condition. Since the students in the future will be responsible for managing different sectors of the country and will play a role in changing the healthy behavior of other strata of the society, it is important to consider their healthy lifestyles by providing facilities and eliminating the shortcomings.

Second Study

Shohani & Rasouli, (2018), the study was conducted to identify and compare healthy behaviors among students of Iranian medical and human sciences universities. A cross-sectional study, 570 senior medical and human sciences students of Ilam universities. The scores obtained by medical sciences and human sciences students were low. There was no significant relationship between field of study and the score of understanding the concept of health (p=0.289); but the relationship between field of study and the score on health behaviors (p=0.001) and between health behaviors and understanding the concept of health were significant for both medical students (r=0.259, p=0.01) and human sciences students (r=0.493, p=0.001). Students' health behaviors were not at the desirable level. Interventions in the form of research projects have been recommended.

Third Study

Almutairi et al., (2018), the study was conducted to assess the healthy lifestyle of students in health colleges and non-health colleges in Saudi Arabia. A total of 1656 students participated in this descriptive cross-sectional study. The majority of participants were females (70.4%), 20% of the participants were overweight and 11.3%, were obese. The analysis showed that there was a significant difference between health colleges and non-health colleges with regards to the factor of health responsibility. Students in both schools were found to have an insufficient level of adherence to recommendations regarding physical activity and healthy eating habits. The analysis also found that majority of the students in both colleges do not attend health care educational programs. The model

shows that gender, type of college, year in school, and family structure were significant predictors of the healthy lifestyle of students in Saudi Arabia. The results of the current study indicate that university students are live an unhealthy life, where the most of them have unhealthy eating habits and poor level of physical activity. Universities are ideal settings for implementing health promotion programs. Therefore, planning and implementing programs to motivate students to be more responsible for their health, to engage more in physical activity, and to practice healthy eating habits and other forms of wellness are of paramount importance.

Fourth Study

Mehdizadeh et al., (2018), the study designed to determine the health-promoting lifestyle in medical and non-medical students in Zanjan during 2016-2017. the sample size was equal to 680 for non-medical universities. Moreover, the total number of senior students of Zanjan University of Medical Sciences (540 people). The mean and standard deviation of health promoting lifestyle score in medical and non-medical students were 2.52±0.39 and 2.53±0.41, respectively, indicating a moderate level. Based on independent t-test, health accountability was higher in medical students compared to non-medical students although physical activity and the dietary habits of medical students were weaker in this group as compared to non-medical students ($P<0.05$). However, no significant difference was observed between the mean of the other subgroups and the total score of the health-promoting lifestyle of the two groups ($P>0.05$). Based on the findings, more accurate reviewing and planning regarding improving the health-promoting lifestyle, especially in the field of physical activity and dietary habits while removing health promotion lifestyle barriers among students, especially medical students.

Fifth Study

Elif., 2019, the study was designed for the purpose of evaluating the healthy lifestyle behaviors of students at the Faculty of Education of Artvin

Coruh University. The study sample consisted of 300 students who receive education at the college of education. According to the results of the study, the students' point average for the HLBS was determined as 124.86 ± 1.092 points. The healthy lifestyle behaviors of students do not differ according to gender, family type, class, smoking, alcohol use and the presence of a chronic illness. However, as the number of individuals and siblings in the family increases, the healthy lifestyle behaviors of students decrease, and as the educational level of the mother and the economic level increase, the healthy lifestyle behaviors also increase. On the other hand, the educational level of the father is not related to the healthy lifestyle behaviors of students. In the light of the results of the study, it is suggested to conduct comparative studies with wider samples that examine the healthy lifestyle behaviors of the students.

Chapter Three

Methodology

Chapter Three

Methodology

This chapter presents the research design that is used in the present study, and the steps of the study which include the administrative arrangement, instrument construction, setting, sample selection, validity, and pilot study, reliability of the questionnaire, methods of data collection, statistical data analysis, and limitation of the study.

3.1. Design of the Study:

A quantitative design, comparative study was used to assess and compare the healthy lifestyle behaviors of undergraduate medical and non-medical colleges at the University of Kerbala from September 26th,2022, to 9th July, 2023.

3.2. Administrative Agreement:

After the proposal was submitted for approved by the Council of the Collage of Nursing, then before the start of the study and distribution the questionnaires to be completed by the sample an official agreement was taken from the targeted setting from Medical Colleges (Medicine, Nursing, and Dentistry college) and Non- Medical (Engineering, Pure Science, Education for human sciences, and Law college) at University of Kerbala (Appendix A).

3.3. Setting of the Study:

The current study was carried out through a selection of (7) Colleges (Medicine, Nursing, Dentistry, Engineering, Education for human sciences, Pure Science, and Law college) at University of Kerbala was selected randomly through a simple sampling procedure. All Colleges of the University of Kerbala were written on pieces of paper and put into a special container for Medical College and another container for Non – Medical

Colleges pieces. The pieces were shaken-up and then selected one piece from the container of medical colleges and one piece from the non-medical colleges. Participants are distributed according to their colleges as in table (3-1).

Table (3-1): Distribution of Students according to Medical and Non-Medical Colleges

Medical Colleges			**Non-Medical Colleges**			**Neglected**
College	**F**	**%**	**College**	**f**	**%**	
Medicine	52	34.7	Engineering	37	24.7	42
Nursing	55	36.8	History	38	25.3	
Dentistry	43	28.7	Mathematics	40	26.7	
Total	***150***	***100***	Law	35	23.3	
			Total	***150***	***100***	
Overall Sample = 342						

f: Frequency, %: Percentage

3.4. Sample and Sampling:

The students selected throughout the use of a non-probability (convenience) sample of 342 fourth-class students has been selected from colleges. Other than this total number, 42 questionnaires were neglected for not completing all questionnaire information.

The sample is selected according to the following criteria:

3.4.1. Inclusion Criteria:

- Fourth class of the morning study who were available during the data collection.

3.5. Study Instruments:

The questionnaire is one of the means to help collect data that contribute to achieving the results expected by the study, so the investigator adopted this questionnaire depends on (Polat and Celik, 2021), which aims to clarify the study objectives and significance by obtaining answers to the

study's questions. The questionnaire includes the following parts (Appendix C).

Part I: Students Demographic Characteristics:

This part includes (6) items concerning the respondents' general characteristics such as: gender, marital status, living status, residency, and family monthly income.

Part II: The Healthy Lifestyle Behaviors scale:

This part is composed of (48) items, divided to (6) sections: Health responsibility, physical activity, nutrition, coping with stress, dealing with drug and substance use, and psychosocial health. This section includes different numbers of items such as health responsibility composed of (7) items, physical activity composed of (7) items, nutrition composed of (13) items, coping with stress composed of (7) items, dealing with drug and substance composed of (7) items, psychosocial health composed of (7) items.

Rating and Scoring:

For the purpose of scoring the instrument's items, a 3-Likert scale was used and scored as follows: (1) for never, (2) for sometimes, and (3) for always. The overall score of HLBs was estimated by calculating the range score for a mean of total score after calculating the range from minimum score and maximum score; the range score was rated into three levels and scored as follows: Poor= 48– 80, Moderate= 81 – 112, Good= 113 – 144.

The score of each sub-domains was estimated by calculating the range score for mean of total score of that domain after calculating the range from minimum score and maximum score; the range score rated into three levels and scored as follows: 7 – 11.66, Moderate= 11.67 – 16.33, Good= 16.34 – 21, except the domain of "nutrition" which was scored as follows: Poor= 13 – 21.66, Moderate= 21.67 – 30.33, Good= 30.34 – 39

The level of each item in scale was estimated by calculating the cutoff

point for the mean of score and rated into three levels also as follow: Poor= 1– 1.66, Moderate= 1.67 – 2.33, Good= 2.34 – 3.

3.6. The Validity of the Study Instrument:

The content validity of the study instrument is determined by the panel of (15) experts to assess the validity of the content. They are (7) faculty members from the Kerbala University College of Nursing, (2) faculty persons from the Kerbala College of Medical (1) faculty person from the Babylon University College of Nursing, (3) faculty members from the Baghdad University College of Nursing, (2) faculty person from the Kufa University College of Nursing (Appendix D).

Those experts were asked to review the instruments, clarity, relevancy, and adequacy, some items are excluded and some others are added according to their notes and the instrument are considered valid after taking all the comments and recommendations in consideration.

3.7. Pilot Study:

A pilot study was carried out during the period from 15th to 21th on December 2022, the pilot study conducted on (30) students who were selected from fourth class at Medical and Non- Medical Colleges /University of Kerbala. The sample used for the pilot study wasn't included in the study initial sample.

The pilot study was designed to achieve the following purposes:

1. To determine the reliability of the questionnaire.
2. To identify the barriers that may arise throughout the study process.
3. To estimate the amount of time needed for data collection.
4. To determine whether the wording of the questions is clear and easy to be understood.

The results of the pilot study:

1. The questionnaire items were clear and understood.

2. The time required to answer the questionnaire ranged from 15 to 25 minutes
3. The questionnaire is reliable.

3.8. Reliability of the Questionnaire:

The reliability of the instruments is determined through the using Internal Consistency (Cronbach's alpha coefficient test); moreover, this test was done for HLBs questions (table 3-2). Depending on the value of Cronbach's alpha, the test result was (r=0.80) demonstrated satisfactory reliability.

Table (3-2): Reliability of the Current Study Instrument

Scale	Cronbach's Alpha	Standard Value	Assessment
Healthy lifestyle behaviors	**0.80**	**0.70**	**Pass**

3.9. Ethical Considerations:

The most important things that Must be followed and adhered when conducting the study are ethical obligations. Before Collect data from the population, the researcher should clarify the main purpose for study, as well as adhere to the strict confidentiality of the data taken from the sample and an undertaking to use it for scientific purposes related to the study only (Appendix B). The objectives of the current study were clearly explained to the participants, their verbal consent to participate in the study was obtained. On the other hand, the researcher confirmed that all students who are Participants in the study have the right to withdraw from this study

3.10. Data Collection Methods:

A self-report questionnaire was used to collect data. Distributing questionnaires to students allows to study display the instruction before the students begin answering the questions. The questionnaire was provided

after taking the agreement from students to participate in the study except for students who did not want to participate in the study. The investigator collected data after explaining the purpose of the study to the students. The data collection was conducted from the 3rd of January until 26th February 2023, each student spends roughly 15 to 20 minutes filling out the questionnaire form.

3.11. Statistical Data Analysis:

The data were analyzed and interpreted through using of the application of Statistical Package for Social Sciences (SPSS), version 26.0.

3.11.1. Descriptive Statistical Tests:

- **Frequency (f):** In statistics, the frequency of an event is the number of times the event occurred in an experiment or study (Kenny & Keeping, 2022). It was used to describe the sociodemographic characteristics of students as well as their levels of healthy lifestyle behaviors.
- **Percentage (%):** a number or rate that is expressed as a certain number of parts of something divided into 100 parts (Merriam-Webster, 2022). It was used to describe the sociodemographic characteristics of students as well as their levels of healthy lifestyle behaviors.
- **Mean of Score (M.S):** The arithmetic mean is the sum of the individual values in a data set divided by the number of values in the data set (Friis & Chernick, 2003). It was used to determine the levels of healthy life-style behaviors.
- **Standard Deviation:** A measure that is used to quantify the amount of variation or dispersion of a set of data values (Bland & Altman, 1996). It was used to determine the levels of healthy lifestyle behaviors.

3.11.2. Inferential Statistical Tests

- **Cronbach Alpha (α):** Cronbach's alpha coefficient measures the internal consistency, or reliability, of a set of survey items. Use this statistic to help determine whether a collection of items consistently measures

the same characteristic. Cronbach's alpha quantifies the level of agreement on a standardized 0 to 1 scale. Higher values indicate higher agreement between items (Polit & Hungler, 2013). It was used to estimate the internal consistency of the study instrument.

- **Spearman's rank correlation coefficient:** The measure of the strength of the correlation for the measurable and non-measurable features that can be and set in the form of a correlation series. Spearman's coefficient has similar properties as Pearson's linear correlation coefficient, since it shows the force (absolute value) and the direction (sign) of the correlation of the two features of the analyzed population. The value of this coefficient is in the closed interval [-1, 1]. And the closer to the ends of this range, the stronger the correlation between the features (Borowski, 2022). It was used to determine the relationship between students' healthy lifestyle behaviors with their sociodemographic characteristics.
- **Independent t-test:** The independent t-test, also called the two-sample t-test, independent-samples t-test or student's t-test, is an inferential statistical test that determines whether there is a statistically significant difference between the means in two unrelated groups (Leard Statistics, 2019). It was used for determine the significant differences in healthy lifestyle behaviors with regard to medical and non-medical colleges.
- **Point Biserial Correlation:** The point biserial correlation, rpb, is the value of Pearson's product moment correlation when one of the variables is dichotomous, taking on only two possible values coded 0 and 1. The point biserial correlation is a useful measure of effect size, that is, statistical magnitude, of the difference in means between two groups. It is based on Pearson's product moment correlation (Kornbrot, 2014). It was used to determine the relationship among students' healthy lifestyle behaviors with some of their variables.

3.12. Limitations of the study:

During the data collection procedure, this study has several limitations, which include the following:

1. Lack of research studies and literature related to the study especially in Iraq.
2. There was a delay in collecting the sample from medical colleges due to the practical training, as well as the first semester exams for students and then the spring holiday for students.
3. Sampling methods that influence on generalizability of findings.

Chapter Four

Results of the Study

Chapter Four

Results of the Study

This chapter presents the descriptive analysis of the sample related to socio-demographic students at medical colleges and non-medical colleges; and it describes their levels of HLBs, and to compare of HLBs among students at medical and non-medical colleges. This chapter also describes the relationship among students' HLBs with their demographic variables.

The statistical procedures were applied for the purpose of analyzing the results of the present study; the results were organized and interpreted. Those results are based on the sample responses to the study instrument.

Table (4-1): Distribution of Students according to their Socio-demographic Characteristics

No.	Characteristics		Medical		Non-Medical	
			f	%	F	%
1	Sex	Male	47	31.3	76	50.7
		Female	103	68.7	74	49.3
		Total	***150***	***100***	***150***	***100***
2	Marital status	Unmarried	132	88	116	77.3
		Married	18	12	31	20.7
		Divorced	0	0	2	1.3
		Widowed/er	0	0	1	0.7
		Total	***150***	***100***	***150***	***100***
3	Living with	Family	139	92.7	131	87.3
		Relatives	2	1.3	2	1.3
		University housing	9	6	17	7.7

		Total	***150***	***100***	***150***	***100***
4	**Residency**	Urban	58	38.7	55	36.7
		Rural	92	61.3	95	63.3
		Total	***150***	***100***	***150***	***100***
5	**Monthly income (**IQD**)**	≤ 300000	8	5.3	31	20.7
		301000 – 600000	34	22.7	43	28.7
		601000 – 900000	33	22	37	24.7
		901000 ≤	75	50	39	26
		Total	***150***	***100***	***150***	***100***

No: Number, f: Frequency, %: Percentage

Table 4-1 shows that 68.7% of students are females at medical colleges while 50.7% of students are males in the non-medical colleges. The marital status reveals that more students are still unmarried as reported among 88% of them in the medical colleges and 77.3% of them in the non-medical colleges. Regarding living status, 92.7% of students in the medical colleges and 87.3% of students in the non-medical colleges reported that they are living with their families. The residency shows that 61.3% of students in the medical colleges and 63.3% of them in the non-medical colleges are resident in rural and the remaining are resident in urban. The monthly incomes reveal that half of the students (50%) in the medical colleges reported high monthly income (901000 IQD and more), while the highest percentage of students in the non-medical colleges refer to 301000 – 600000 IQD.

Table (4-2): Assessment of Healthy Lifestyle Behavior related to Domain of "Health responsibility" among Students

List	Health responsibility	Medical Colleges (N=150)			Non-Medical Colleges (N=150)		
		Mean	SD	Assess.	Mean	SD	Assess.
1	feel healthy and well	2.36	.583	Good	2.26	.549	Moderate
2	Take the necessary measures to prevent infectious diseases	2.31	.592	Moderate	2.31	.615	Moderate
3	take the necessary measures when you suffer from any pain	2.35	.604	Good	2.36	.616	Good
4	read or watch television programs about improving health	1.76	.692	Moderate	1.85	.718	Moderate
5	Maintain a degree of proportion between your weight and height	2.16	.752	Moderate	1.99	.733	Moderate
6	Take a shower daily	2.63	.523	Good	2.63	.538	Good
7	aware of the health and quality of the water you drink	2.67	.587	Good	2.56	.607	Good
Grand mean		***16.25***	***2.264***	***Moderate***	***16.21***	***2.157***	***Moderate***

SD: Standard Deviation, Assess: Assessment, Poor= 1– 1.66, Moderate= 1.67 – 2.33, Good= 2.34 – 3 Grand mean: Poor= 7 – 11.66, Moderate= 11.67 – 16.33, Good= 16.34 – 21

Table 4-2 presents the items of healthy lifestyle behavior among students related to domain of health responsibility: the findings indicate that students in medical colleges and non-medical colleges show moderate behavior regarding health responsibility as seen with grand mean of two groups (medical= 16.25 ± 2.264 and non-medical= 16.21 ± 2.157).

Table (4-3): Assessment of Healthy Lifestyle Behavior related to Domain of "Physical Activity" among Students

List	Physical Activity	Medical Colleges (N=150)			Non-Medical Colleges (N=150)		
		Mean	SD	Assess.	Mean	SD	Assess.
1	Exercise at least a few times a week	1.79	.720	Moderate	2.00	.655	Moderate
2	Do vigorous exercise for 20 minutes or more at least three times a week, such as brisk walking	1.77	.781	Moderate	1.95	.736	Moderate
3	engage in light to moderate physical activity (such as continuous walking 30-40 minutes 5 or more times per week)	2.14	.742	Moderate	2.07	.757	Moderate
4	Participate in leisure physical activities such as swimming	1.47	.721	Poor	1.58	.688	Poor
5	Do regular walking	2.12	.759	Moderate	2.41	.686	Good
6	Exercising during normal daily activities (such as walking after lunch, using stairs instead of elevators	1.95	.727	Moderate	1.95	.689	Moderate
7	Avoid using the computer more than 3 hours a day	1.92	.773	Moderate	1.93	.748	Moderate
Grand mean		***13.16***	***3.207***	***Moderate***	***13.89***	***2.838***	***Moderate***

SD: Standard Deviation, Assess: Assessment, Poor= 1– 1.66, Moderate= 1.67 – 2.33, Good= 2.34 – 3 Grand mean: Poor= 7 – 11.66, Moderate= 11.67 – 16.33, Good= 16.34 – 21

Table 4-3 presents the items of healthy lifestyle behavior among students related to domain of "physical activity": the findings indicate that students in medical colleges and non-medical colleges show moderate behavior regarding physical activity as seen with grand mean of two groups (medical= 13.16 ± 3.207 and non-medical= 13.89 ± 2.838).

Table (4-4): Assessment of Healthy Lifestyle Behavior related to Domain of "Nutrition" among Students

List	Nutrition	Medical Colleges (N=150)			Non-Medical Colleges (N=150)		
		Mean	SD	Assess.	Mean	SD	Assess.
1	Eat breakfast daily regular	2.11	.787	Moderate	2.29	.698	Moderate
2	eat three main meals and two secondary meals	2.01	.671	Moderate	2.04	.704	Moderate
3	choose a diet low in fat, saturated fat, and cholesterol	1.97	.649	Moderate	2.00	.751	Moderate
4	Reduce the use of sugar and food containing sugar	1.82	.656	Moderate	1.99	.733	Moderate
5	Eat honey or molasses as a substitute for sweets	1.72	.677	Moderate	1.79	.720	Moderate
6	Concentrate in your food on a very small percentage of white salts	1.82	.656	Moderate	1.87	.688	Moderate
7	Avoid soft drinks, tea and coffee	1.73	.732	Moderate	1.98	.790	Moderate
8	Drink water and fluids (6-8) glasses during the day	2.21	.669	Moderate	2.32	.679	Moderate
9	eat 6-11 servings of bread, cereal, rice and pasta each day	1.83	.757	Moderate	1.86	.724	Moderate
10	eat 2-4 servings of fruits every day	2.08	.597	Moderate	2.17	.561	Moderate
11	eat 3-5 servings of vegetables every day	2.08	.597	Moderate	2.19	.587	Moderate
12	eat 2-3 servings of milk, yogurt or cheese every day	1.93	.692	Moderate	2.13	.616	Moderate
13	eat 2-3 servings of meat, poultry, fish, dried beans, eggs, and the nut combo every day	2.24	.587	Poor	2.24	.654	Moderate
Grand mean		***25.53***	***4.138***	***Moderate***	***26.86***	***4.316***	***Moderate***

SD: Standard Deviation, Assess: Assessment, Poor= 1– 1.66, Moderate= 1.67 – 2.33, Good= 2.34 – 3, Grand mean: Poor= 13 – 21.66, Moderate= 21.67 – 30.33, Good= 30.34 – 39

Table 4-4 presents the items of healthy lifestyle behavior among students related to domain of "nutrition": the findings indicate that students in medical colleges and non-medical colleges show moderate behavior regarding nutritional habits as seen with grand mean of two groups (medical= 25.53 ± 4.138 and non-medical= 26.8621 ± 4.316).

Table (4-5): Assessment of Healthy Lifestyle Behavior related to Domain of "Coping with Stress" among Students

List	Coping with Stress	Medical Colleges (N=150)			Non-Medical Colleges (N=150)		
		Mean	SD	Assess.	Mean	SD	Assess.
1	sleep 8 hours a day	2.31	.675	Moderate	2.29	.679	Moderate
2	tend to go to bed earlier than you usual bedtime	1.91	.806	Moderate	2.07	.748	Moderate
3	feel easy to fall back asleep when you wake up at night	2.13	.766	Moderate	2.13	.774	Moderate
4	Focus on pleasant thoughts at bedtime	2.10	.693	Moderate	2.13	.698	Moderate
5	Accept those things in your life that you cannot change	2.24	.610	Moderate	2.31	.625	Moderate
6	use specific techniques to control your stress	2.23	.549	Moderate	2.23	.625	Moderate
7	Practice relaxation or meditation for 15-20 minutes a day	1.75	.675	Moderate	2.01	.803	Moderate
Grand mean		***14.67***	***2.638***	***Moderate***	***15.17***	***2.483***	***Moderate***

SD: Standard Deviation, Assess: Assessment, Poor= 1– 1.66, Moderate= 1.67 – 2.33, Good= 2.34 – 3 Grand mean: Poor= 7 – 11.66, Moderate= 11.67 – 16.33, Good= 16.34 – 21

The table 4-5 presents the items of healthy lifestyle behavior among students related to domain of "coping with stress": the findings indicate that students in medical colleges and non-medical colleges show moderate behavior regarding coping with stress as seen with grand mean of two groups (medical= 14.67 ± 2.638 and non-medical= 15.17 ± 2.483).

Table (4-6): Assessment of Healthy Lifestyle behavior related to Domain of "Dealing with Drugs and Substance Use" among Students

List	Dealing with Drugs and Substance Use	Medical Colleges (N=150)			Non-Medical Colleges (N=150)		
		Mean	SD	Assess.	Mean	SD	Assess.
1	Avoid using any kind of tobacco (cigarettes and water pipes)	2.38	.872	Good	2.44	.839	Good
2	resort to using medicines only when necessary	2.55	.574	Good	2.59	.593	Good
3	Carefully follow the instructions that come with medicine Prescribed by the doctor	2.49	.653	Good	2.39	.663	Good
4	Avoid taking sedatives and hypnotics	2.56	.690	Good	2.45	.765	Good
5	only take medicines prescribed by doctors	2.47	.564	Good	2.45	.563	Good
6	Avoid mixing medicines without a doctor supervi-sion	2.54	.609	Good	2.48	.653	Good
7	Try to know the side effects of any medication you are taking	2.40	.635	Good	2.33	.680	Good
Grand mean		***17.38***	***2.215***	***Good***	***17.13***	***2.595***	***Good***

SD: Standard Deviation, Assess: Assessment, Poor= 1– 1.66, Moderate= 1.67 – 2.33, Good= 2.34 – 3 Grand mean: Poor= 7 – 11.66, Moderate= 11.67 – 16.33, Good= 16.34 – 21

The table 4-6 presents the items of healthy lifestyle behavior among students related to domain of "dealing with drug and substances use": the findings indicate that students in medical colleges and non-medical colleges show good behavior regarding dealing with drugs and substances use as seen with grand mean of two groups (medical= 17.38 ± 2.215 and non-medical= 17.13 ± 2.595).

Table (4-7): Assessment of Healthy Lifestyle behavior related to Domain of "Psychosocial Health" among Students

List	Psychosocial Health	Medical Colleges (N=150)			Non-Medical Colleges (N=150)		
		Mean	SD	Assess.	Mean	SD	Assess.
1	Easily express your feeling to those close to you	2.17	.727	Moderate	2.14	.751	Moderate
2	Meaningful and fulfilling relationships with others	2.47	.599	Good	2.45	.641	Good
3	You have complete confidence in your personal abilities	2.56	.596	Good	2.69	.530	Good
4	You have a person who is trying to engage you in activities that help you forget about your problems	2.18	.686	Moderate	2.22	.793	Moderate
5	enjoy communicating with relatives	1.95	.717	Moderate	2.11	.738	Moderate
6	feel good and at peace with yourself	2.48	.621	Good	2.58	.594	Good
7	Work on long term goals in your life	2.48	.663	Good	2.53	.609	Good
Grand mean		***16.29***	***2.465***	***Moderate***	***16.73***	***2.368***	***Good***

SD: Standard Deviation, Assess: Assessment, Poor= 1– 1.66, Moderate= 1.67 – 2.33, Good= 2.34 – 3 Grand mean: Poor= 7 – 11.66, Moderate= 11.67 – 16.33, Good= 16.34 – 21

The table 4-7 presents the items of healthy lifestyle behavior among students related to domain of "psychosocial health": the findings indicate that students in medical colleges show moderate behavior regarding psychosocial health as seen with grand mean (16.29 ± 2.465), while students in the non-medical show good behavior regarding psychosocial health (Grand mean= 16.73 ± 2.368).

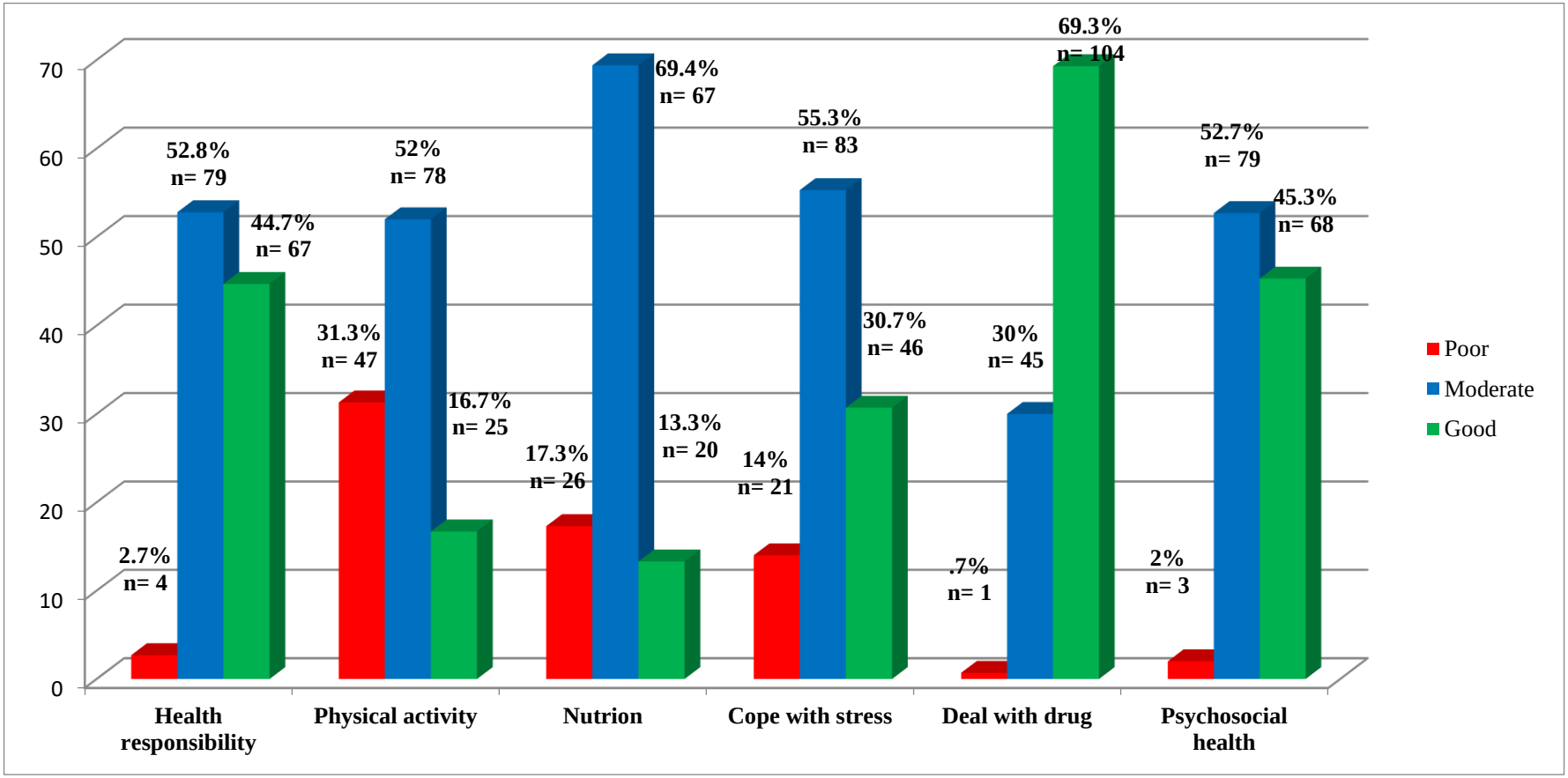

Figure (4-1): Domains of Healthy Lifestyle Behavior among Students at Medical Colleges (N=150)

This figure shows that students at medical colleges show moderate to good healthy lifestyle behaviors; in which they show moderate health responsibility (52.8%), moderate physical activity (52%), moderate nutritional behavior (69.4%), moderate coping with stress (55.3%), good dealing with drugs and substances (69.3%), and moderate psycho-social health (52.7%).

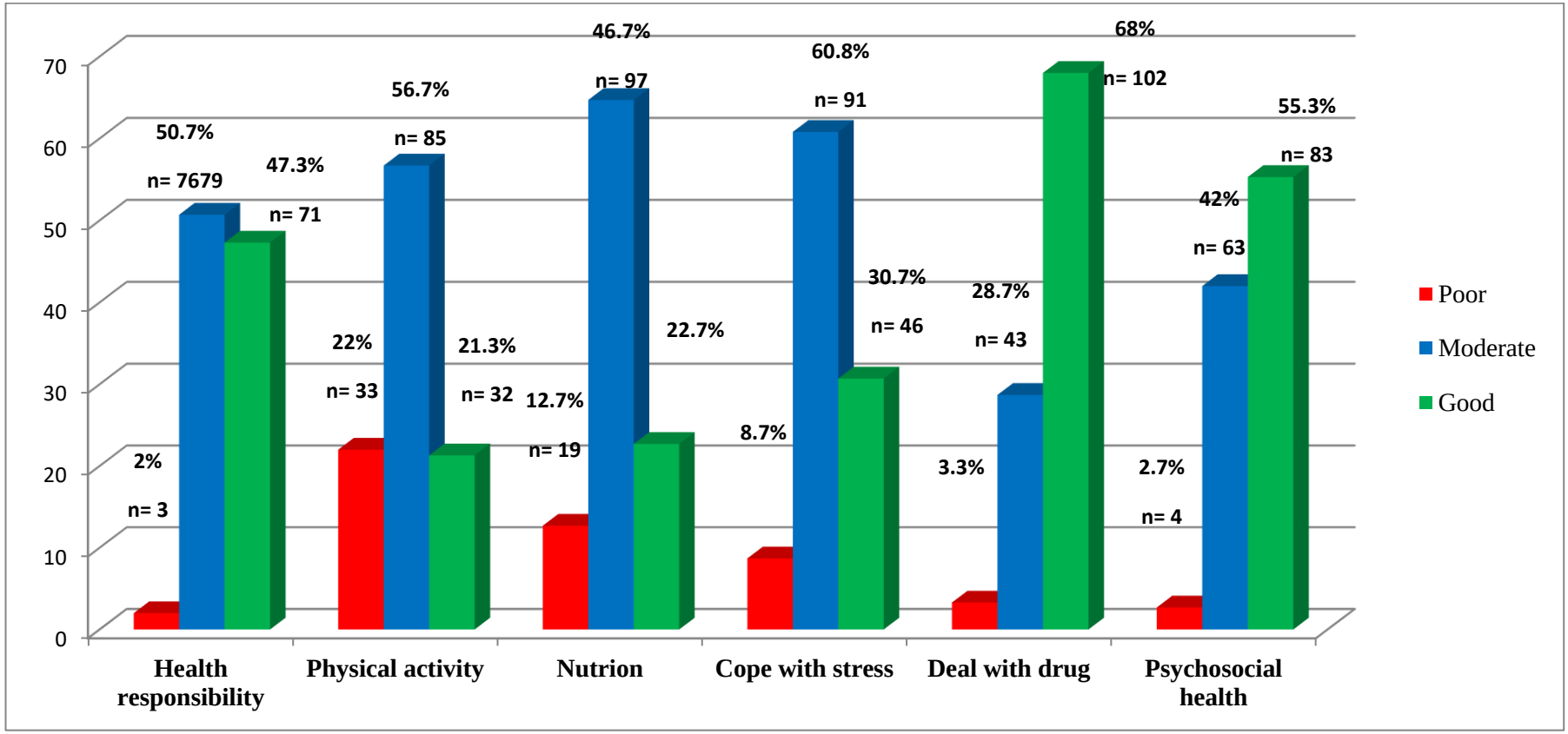

Figure (4-2): Domains of Healthy Lifestyle Behavior among Students at Non-Medical Colleges (N=150)

This figure shows that students at non-medical colleges show moderate to good healthy lifestyle behaviors; in which they show moderate health responsibility (50.7%), moderate physical activity (56.7%), moderate nutritional behavior (46.7%), moderate coping with stress (60.8%), good dealing with drugs and substances (68%), and good psychosocial health (55.3%).

Table (4-8): Overall Assessment of Healthy Lifestyle Behaviors among Students at Medical and Non-Medical Colleges

Levels	Medical colleges				Non-Medical Colleges			
	f	%	M	SD	f	%	M	SD
Poor	4	2.7	103.29	9.769	0	0	106.00	9.728
Moderate	116	79.3			111	74		
Good	27	18			39	26		
Total	***150***	***100***			***150***	***100***		

f: Frequency, %: Percentage, M: Mean of total score, SD Standard deviation

Poor= 48 – 80, Moderate= 81 – 112, Good= 113 – 144

This table displays the overall assessment of healthy lifestyle behaviors; the findings reveal that students at medical and non-medical colleges show moderate the level of healthy lifestyle behaviors as reported among 79.3% of students in medical colleges (M±SD=103.29 ± 9.769) and among 74% of students in non-medical colleges (M±SD=106.00 ± 9. 728).

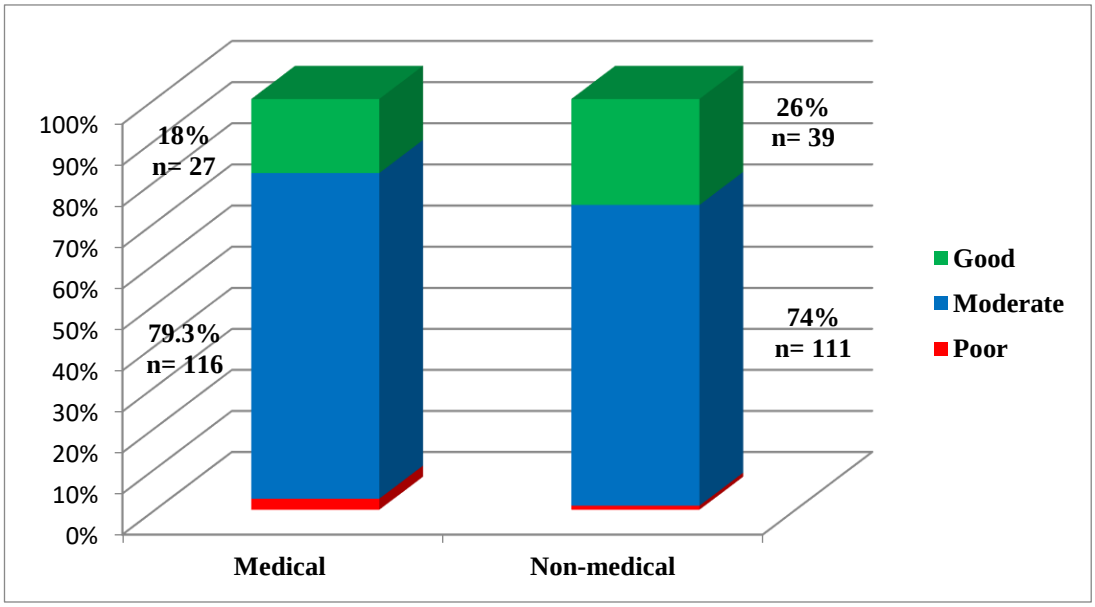

Figure (4-3): Overall Assessment of Healthy Lifestyle Behavior among Students

This figure shows that students show moderate level of healthy life-style behavior as reported among 79.3% of students in the medical colleges and 74% of students in the non-medical colleges.

Table (4-9): Significant Difference in Healthy Lifestyle Behaviors with regard to Students at Medical Colleges and Non-Medical Colleges

Colleges Healthy / Lifestyle Behavior		M	SD	t	df	p≤ 0.05	Sig
Health responsibility	Medical	16.25	2.264	.131	298	.896	N. S
	Non-medical	16.21	2.157				
Physical activity	Medical	13.16	3.207	-2.097	298	.037	**S**
	Non-medical	13.89	2.838				
Nutrition	Medical	25.53	4.138	-2.717	298	.007	**H. S**
	Non-medical	26.86	4.316				
Cope with stress	Medical	14.67	2.638	-1.668	298	.096	N. S
	Non-medical	15.17	2.483				
Deal with drug	Medical	17.38	2.215	.885	298	.337	N. S
	Non-medical	17.13	2.595				
Psychological health	Medical	16.29	2.465	-1.577	298	.116	N. S
	Non-medical	16.73	2.368				
Overall	**Medical**	**103.29**	**9.769**	**-2.410**	**298**	**.017**	**S**
	Non-medical	**106.00**	**9.728**				

M: Mean, SD: Standard deviation, t: t-test, df: Degree of freedom, Sig: Significance, p: Probability value, N.S: Not significant, S: Significant, H.S: High significant

The table above indicates that there is significant difference in overall healthy lifestyle behaviors with regard to medical and non-medical colleges students at p-value= .017, particularly in subdomains of “physical activity” and “nutrition” at p-values= .037 and .007.

Table (4-10): Relationship between Students' Healthy Lifestyle Behaviors with regard to their Sex

Healthy Lifestyle behavior / sex	Medical College (N=150)				Non-Medical College (N=150)			
	Poor	**Moderate**	**Good**	**Total**	**Poor**	**Moderate**	**Good**	**Total**
Male	0	38	9	47	0	58	18	76
Female	4	81	18	103	0	53	21	74
Total	4	119	27	150	0	111	39	150
Correlation	r_{pb} = ***.090***	***p-value = .271***		***Sig = N.S***	r_{pb} = ***.028***	***p-value = .730***		***Sig = N. S***

r_{pb}: Point- Biserial Correlation coefficient, p-value: Probability value, Sig: Significance, N.S: Not Significant, S: Significant, H.S: High significant

This table reveals that there is no significant relationship has been seen between healthy lifestyle behaviors with regard to sex among students in the medical colleges and non-medical colleges.

Table (4-11): Relationship between Students' Healthy Lifestyle Behaviors with regard to their Marital Status

Healthy Lifestyle behavior / Marital status	Medical College (N=150)				Non-Medical College (N=150)			
	Poor	**Moderate**	**Good**	**Total**	**Poor**	**Moderate**	**Good**	**Total**
Unmarried	4	101	27	132	0	82	34	116
Married	0	18	0	18	0	27	4	31
Divorced	-	-	-	-	0	1	1	2
Widowed/er	-	-	-	-	0	1	0	1
Total	4	119	27	150	0	111	39	150
Correlation	r_S ***= .017***	***p-value = .833***	***Sig =N.S***		r_S ***= .069***	***p-value = .398***	***Sig = N.S***	

***r_S**: Spearman Correlation coefficient, p-value: Probability value, Sig: Significance, N.S: Not Significant, S: Significant, H.S: High significant*

This table depicts that there is no significant relationship has been found between healthy lifestyle behaviors with regard to students' marital status among those in the medical colleges and non-medical colleges.

Table (4-12): Relationship between Students' Healthy Lifestyle Behaviors with regard to their Living Status

Healthy Lifestyle behavior / Living with	Medical College (N=150)				Non-Medical College (N=150)			
	Poor	**Moderate**	**Good**	**Total**	**Poor**	**Moderate**	**Good**	**Total**
Family	4	109	26	139	0	98	33	131
Friends	0	1	0	1	0	6	0	6
Relatives	0	2	0	2	0	0	2	2
University Housing	0	7	1	8	0	7	4	11
Total	4	119	27	150	0	111	39	150
Correlation	r_S = .002	***p-value = .983***	***Sig = N.S***		r_S = .065	***p-value = .430***	***Sig = N.S***	

r_S: Spearman Correlation coefficient, p-value: Probability value, Sig: Significance, N.S: Not Significant, S: Significant, H.S: High significant

This table indicates that there is no significant relationship has been reported between healthy lifestyle behaviors with regard to students' living status among those in the medical colleges and non-medical colleges.

Table (4-13): Relationship between Students' Healthy Lifestyle Behaviors with regard to their Residency

Healthy Lifestyle behavior / Residency	Medical College (N=150)				Non-Medical College (N=150)			
	Poor	**Moderate**	**Good**	**Total**	**Poor**	**Moderate**	**Good**	**Total**
Urban	3	46	9	58	0	39	16	55
Rural	1	73	18	92	0	72	23	95
Total	4	119	27	150	0	111	39	150
Correlation	r_{pb} ***= .042***	***p-value = .610***	***Sig = N.S***		r_{pb}***= .160***	***p-value = .050***	***Sig = S***	

r_{pb}*: Point- Biserial Correlation coefficient, p-value: Probability value, Sig: Significance, N.S: Not Significant, S: Significant, H.S: High significant*

This table reveals that there is no significant relationship between healthy lifestyle behaviors with regard to students' residency among those in the medical colleges, but there is significant relationship has found between healthy lifestyle behaviors and students' residency among those in the non-medical colleges at p-value= 0.05.

Table (4-14): Relationship between Students' Healthy Lifestyle Behaviors with regard to their Monthly Income

Healthy Lifestyle behavior / Income	Medical College (N=150)				Non-Medical College (N=150)			
	Poor	**Moderate**	**Good**	**Total**	**Poor**	**Moderate**	**Good**	**Total**
≤ 300000	0	8	0	8	0	25	6	31
301000 – 600000	2	21	11	34	0	34	9	43
601000 – 900000	0	28	5	33	0	23	14	37
901000 ≤	2	62	11	75	0	29	10	39
Total	4	119	27	150	0	111	39	150
Correlation	r_S ***= .030***	***p-value = .715***	***Sig = N.S***		r_S ***= .042***	***p-value = .611***	***Sig =N. S***	

r_S: Spearman Correlation coefficient, p-value: Probability value, Sig: Significance, N.S: Not Significant, S: Significant, H.S: High significant

This table depicts that there is no significant relationship has been found between healthy lifestyle behaviors with regard to monthly income students in the medical colleges and non-medical colleges.

Chapter Five: Discussion of the Study Results

Chapter Five

Discussion of the Study Results

This chapter presents a comprehensive description of both the current study's findings as well as a discussion of those findings, which are supported by relevant literature and studies. Those findings were based on students' responses in the medical and non-medical college on healthy lifestyle behaviors.

5.1: Discussion of the Demographic Characteristics of the students in the medical and non- medical college:

The table (4.1) represents the demographic characteristics of the present study. It shows that more than half (68.7%) of students were female in the medical group and half (50.7%) of students were male in the non-medical group. This study result was consistent with Mehdizadeh et al., (2018) conducted to determine the healthy lifestyle in medical and non-medical students in Zanjan, who reported that more males 58.7% vs. females 58.01% in the medical group and non-medical group respectively.

The present findings are supported by Dortkol & Ozdemi, (2021) who conducted a study to determine the healthy lifestyle behaviors of students in a medical college, who found (54.3%) of participants were female.Study by Celebi et al., (2017) was conducted to determine the healthy lifestyle behaviors of students studying in Turkey. The number of male students was greater than the number of female students.

Regarding to the marital status, results of study show that more than three quarters of medical and non-medical sample (88%) vs. (77.3) were unmarried respectively. These results agree with study by Montazeri et al., (2017) conducted to investigate the healthy behaviors among the students at Kermanshah university of medical sciences, Iran, which demonstrate that (94%)

were unmarried.

The findings of the study are similar to study by Alzahrani et al., (2019) conducted to determine and evaluate all components of the healthy lifestyle and its sociodemographic determinants among medical students. and results revealed the majority (95.1%) were unmarried. Also, these results were supported by Oral and Cetinkaya, (2020) who reported that the majority of participants were unmarried with percentage (97.7%).

To the best of my knowledge, this is due do not thinking about marriage until the completion of the study and the difficulty of compatibility between study and marital life and its responsibilities, as well as the lack of sufficient material income for married life.

Regarding property of the living status, the majority of students living with their families and represented more than three quarters. Findings agree with study done by Almutairi et al., (2018) to assess the healthy lifestyle of students in health and non-health colleges in Saudi. It revealed that most study samples were living with their families which represented (94.9%).

Furthermore, the study findings agree with study by Sok et al., (2020) which reported that the majority of participants in study sample living with their families and represented the percentage (48.4%).

The residency shows that more than half of students in the medical colleges and non-medical colleges are resident in rural area. The present results agree with study by Wang et al., (2013) who conducted a study to assess the healthy lifestyles for university students and association with their socio-demographic variables. They found that (44.56%) of participants are resident in rural areas.

While, the findings of study done by Khaw et al., (2022) who showed that the majority of students living in urban residents (78.9%). Also, the study results study by Gamaleldin et al., (2021) to assess healthy lifestyle among

medical college students in Alexandria. The results show about two-thirds of the studied medical students (63.6%) were living in urban cities.

Concerning the financial income that half of the students in the medical colleges refer (901000 IQD and more), while little more than quarter of students in the non-medical colleges refer to 301000 – 600000 IQD. Mehdizadeh et al., (2018) who reported that the majority of students had moderate level of monthly income which represented (52.0%) non-medical and (60.2%) medical. Alzahrani et al., (2019) showed that more than half of students had a moderate level of monthly income.

5.2: Discussion of Healthy Lifestyle Behavior among Students regarding to:

5.2.1: Health Responsibility:

The analysis of the HLBs scale of the medical colleges and non-medical colleges students showed moderate behavior regarding health responsibility as seen with grand mean of two groups (table 4-3). The findings agree with study done by Azami Gilan et al., (2021) conducted to evaluate the healthy lifestyle of medical sciences students in Iran, who reported that a moderate level for health responsibility subscale of students which represented (2.10 ± 0.54).

Amiri et al., (2019) conducted the study to assess the healthy behaviors and its relation with self-sufficiency, who supported the present study result which reported that the mean score of health responsibility was (34.05 ± 6.97), which is considered as moderate.

The study findings agree with study done by Hwang & Oh, (2020).it stated that the students had moderate level of health responsibility with mean score 2.19(0.59) moderate. Also, the study findings supported by study of Elif et al., (2019) who found that the mean score of health responsibility of students was 19.82 ± .254. which consider as moderate.

The results of the study showed that the majority of university students follow moderate healthy lifestyle towards health responsibility. It turns out that a high percentage of students are not interested in improving their health by reading or watching a TV program about health promotion, and maintaining a degree of proportionality between weight and height, as body weight can urge individuals to impose some strategies to modify their lifestyle. It also plays an important role in body image and its relationship to self-concept. Students in the medical group were expected to care more about their health than students in the non-medical group, being exposed to more information about health promotion in their course of study, and the existence of a relationship between health hazardous lifestyle behavior and the occurrence of a variety of diseases. Where the results showed that theoretical learning may not always be reflected in HLBs.

5.2.2: Physical Activity

The results of the current study indicate that HLBs of the medical colleges and non-medical colleges students showed moderate behavior regarding physical activity (table 4-4). The findings consisted with study of Ifroh et al., (2022) carried out the study to assess the healthy lifestyle among nursing students and the differences in socio-demography and lifestyle, who mentioned that the physical activity scores (2.47) as moderate level.

In this same line Dhiman & Chawla, (2017) carry out the study is to assess the healthy lifestyle among the university students and to examine the relationship between healthy lifestyle and the university student's characteristics. it agrees with our findings who reported that physical activity scores (2.5) were moderate.

While this study disagreed with Gamaleldin et al., (2021) that showed that the lowest mean scores were for physical activity was (1.98±0.60). Mohamed et al., (2022) conducted a study to determine the healthy behaviors

of students at a university in Somalia, who reported that the lowest scores for physical activity was (18.09±4.99). Moreover, Al-Amari and Al-Khamees, (2015) who showed that a high percentage of the students, do not exercise frequently, and suffer from increased body weight.

Point of view this result refers to several reasons, including to lack of time for physical activity in college. Lack of sports facilities in college. Another reason for the low level among females may be cultural restrictions that exist to participate in public outdoor exercise.

5.2.3: Nutrition

The outcome of the present research indicates that the students in medical colleges and non-medical colleges show moderate behavior regarding nutritional habits (table4-5). The current finding agrees with study done by Rahimi et al., (2021) about lifestyle of medical college students inTehran, who stated that the nutrition score (25.08±4.15) was moderate.

The study results similar to the study done by Azami Gilan et al., (2021) who conducted that Nutrition score with percentage (2.16 ± 0.50) were consider moderate. Also, the results consisted with study of Mohamed et al., (2022) who reported that the nutrition scores were (20.107±4.985), which consider moderate. The study results disagree with study done by Masina et al., (2017) who stated that the nutritional habits are high level.

The barriers students face to eating a healthy, balanced diet, including limited time. Also, most university students do not care to drink water, and it was found that most students do not drink milk and its derivatives on a daily basis.

5.2.4: Coping with Stress

The analysis of the of HLBs regarding domain of coping with Stress among medical colleges and non-medical colleges Students showed moderate

behavior (table 4-6). These findings of study agree with study done by Dhiman & Chawla, (2017) whose shows that the stress management were (2.6±0.4) were moderate.

Also, the results of study supported by Azami Gilan et al., (2021) whose reported that stress management scores (2.10 ± 0.46) were consider moderate. Masina et al., (2017) study about healthy lifestyle Among Croatian medical students according to gender and year of study**,** who stated that stress management among medical students was medium level. While, the study disagrees with Mousavi Bazaz et al., (2022) descriptive cross-sectional study was performed on 120 medical students of Mashhad university of medical sciences in 2018-2019, who reported that the stress management scored (29.62±4.45) were high.

The results of the study showed that some of students have sleep problems and do not use stress management techniques such as taking time to relaxation, focusing on interesting ideas because of academic pressure, fear of failing in exams, lack of time management and not taking enough breaks for self-care.

5.2.5: Dealing with Drugs and Substance Use

The analysis of HLBs scale regarding to domain of dealing with drug and substances use indicated that the students in medical colleges and non-medical colleges show good behavior (table 4-7). The results agree with study done by Bastani et al., (2018) who mentioned that the highest mean was observed in avoiding medicines and drugs (5.14 ± 1.08).

Similar to this study done by Mak et al., (2018) about healthy lifestyle and quality of life among students in China, who indicated that the majority of students did not smoke (95%) or used drug (99%). Also, the result supported by Gupta et al., (2013) curry out to a study the prevalence and pattern of substance

use among college students of Chandigarh, who reported that the Prevalence of substance use was seen in (52.7%) students. Gupta et al., (2022) about Magnitude of Substance use and its associated factors among the medical students in India, who conducted the study and stated that the prevalence of any substance use among medical students was (25.9%– 57.4%).

5.2.6: Psychosocial Health

The findings showed that the medical colleges students had moderate behavior regarding psychosocial health while students in the non-medical colleges had good behavior (table4-8). The results of study agree with the study done by Mohamed et al., (2022) whose reported that the interpersonal relations scores 21.33±4.93 was moderate.

Also, the findings supported by Mehri et al., (2016) conduct a study to assess the status of healthy lifestyle and its determinants among students in Iran, who showed that the highest mean (26.46) was for psychosocial. In, addition, Hwang & Oh, (2020) conduct a study to investigate the factors affecting healthy behaviors in nursing students. It indicates that the mean score of interpersonal support was the highest.

5.3: Discussion Overall of Healthy Lifestyle Behaviors among Students at Medical and Non-Medical Colleges

The findings reveal that students at medical and non-medical colleges show moderate level of healthy lifestyle as reported among 79.3% of students in medical colleges (M ± SD= 103.29 ± 9.769) and among 74% of students in non-medical colleges (M±SD=106.00 ± 9. 728) (table 4-2).

The results of the present study agree with study by Dortkol & Ozdemi, (2021) who reported that the students had moderate level healthy behaviors which represented (125.7±17.1).

The results of the study consisted with study of Amiri et al., (2019) Who mentioned that the students had a moderate level of healthy lifestyle with mean score was 127.47 ± 19.78. Also, the study of Rahimi et al., (2021), who stated that the majority of college students' moderate level of lifestyle with mean score was (138.28±21.18). The study findings were supported by study of Masina et al., (2017) who noted that the majority of students for both genders showed moderate level of HLBs.

Moreover, the results of the current study supported by Mousavi Bazaz et al., (2022) about the healthy behaviors among medical college Students in Mashhad, who indicates that the mean score of healthy behaviors in the medical students is moderate. Additionally, to another study conducted by Mehdizadeh et al., (2018) who shows the mean and standard deviation of health lifestyle scores in medical and non-medical students were 2.52±0.39 and 2.53±0.41, respectively, indicating a moderate level.

5.4: Discussion of the Difference between Medical Colleges and Non-Medical Colleges in Lifestyle Behaviors:

The results of the current study reported a significant difference in overall HLBs, particularly in subdomains physical activity and nutrition for medical and non-medical colleges students and no discernible difference regarding to health responsibility, coping with Stress, dealing with drugs and substance use, psychosocial health. medical students were weaker compared to non-medical students table (4-9).

Similar to this study done by Al-Qahtani, (2019) who stated that the significant differences in healthy behaviors between non-health and health profession students. Also, Steffen et al., (2021) who mentioned that the lifestyle behaviors among medical students were significantly different compared to non-medical students.

The results agree with the study done by Mehdizadeh et al., (2018) who reported that the significant differences were observed between medical and non-medical students regarding the sub-groups of physical activity, and nutritional habits. In other words, physical activity and nutritional habits were weaker in medical students than non-medical students.

On the same line of this study result Al-Qahtani, (2019) who stated that significant differences between non-health and health profession students regarding physical activity, non-health profession students showed higher levels of physical activity than health profession students, While, Pasha et al., (2018) reject the conclusions of the current study, they noted that no significant difference between medical and non-medical sciences students.

The dietary dimension based on the results of this study shows that the students of the medical college do not have much awareness of eating healthy food. Most of the medical college students had moderate dietary behaviors (e.g., inadequate consumption of vegetables and fruits, increase intake of fats, sugars, and salt) compared to the non-medical college students. The students tend to choose tasty, and filling foods quickly, this does not follow the concept of balanced nutrition in achieving daily nutrition, and that their diet is not ideal, and it usually consists of cheap and fast meals, snacks, and hot drinks such as tea and coffee due to easy access to unhealthy foods on campus that contribute to weight gain or emotional stress.

The study showed that the medical students do not exercise frequently. Physical activity has many benefits that reduce stress, build confidence, and improve learning and mental health. Due to the nature of the medical curriculum, which involves several lectures, students' competition for better marks, and lack of motivation effectively contribute to moderate physical activity among the students. Because they are busy with their stressful practical training, which takes

up a lot of their time and energy and prevents them from participating in regular exercise programs.

5.5: Discussion of the Relationship between Students' Healthy Lifestyle Behaviors regarding:

5.5.1: Sex

The results of the current study indicate the sex that there is no significant relationship with HLBs among medical colleges and non-medical colleges students (table 4-10). Also, the results agree with Esmaeili et al., (2015) who reported that the mean score of health lifestyle of the women was higher than men, but this difference was not statistically significant. The study of Oral & Cetinkaya, (2020) consistent with the present study findings and reported that their results that there was no significant relationship between students' gender and healthy behaviors scores ($p > 0.05$). The findings supported by study of Shekhar et al., (2022) were found that the difference was found to be non-significant ($P > 0.05$) for gender. While, it does not correspond to the findings of Amiri et al., (2019) who stated there was a significant relationship between healthy lifestyle and gender,

5.5.2: Marital Status

Table (4-11) shows that there is no statistically significant relationship between HLBs with regard to students' marital status in the medical colleges and non-medical colleges (table4-12). According to research by Mousavi Bazaz et al., (2022) who reported that the marital status of students did not have significant relations with healthy lifestyle subscales.

Amiri et al., (2019) back up the current study's findings, which show that the marital status of students has not significant relationship with healthy life-style. Shaheen et al., (2015) consist with the findings of the current study, which

indicates that there was no statistically significant difference was found between healthy behaviors and marital status.

5.5.3: Living Status

Table (4-12) regarding living status, it shows there is no signification relationship between the HLBs and living status among medical colleges and non-medical colleges students. Similar to this study done by Alzahrani et al., (2019) concluded that no significant difference was found in total HLBs scores and the mean scores of the subscales related to living status.

Esmaeili et al., (2015) consist with the findings of the current study, which indicates that the mean score of healthy lifestyles did not have any significant relationship with the students' place of residency. The finding of present study supports the previous study done by Almutairi et al., (2018) that reported there were no significant association in variables of place or residence and HLBs. The results disagree with study by Azami Gilan et al., (2021) that show there are that students who lived with their families had a higher mean overall HLBs.

5.5.4: Residency

Table (4.13) according to results of this table, there is no significant relationship between residency for students and their HLBs in medical and non-medical college at p-value=0.05 (table 4-14). This study was in similarity with Amiri et al., (2019) reported that the place of residence had not significant

relationship with the healthy lifestyle of the student. Khaw et al., (2022) mention that no relationship between residential area and HLBs. These results consistent with the present study.

Result agrees with study by Marques et al., (2019) carry out the study to analyze the healthy lifestyle for students. It stated that no relationship between

residential place and healthy lifestyle. Also, results agree with Zhang et al., (2021) who show that there is significant relationship between residential place and HLBs. The present study agrees with the study done by Shekhar et al., (2022) who reported that the difference was found to be non-significant (P > 0.05) for place of residency.

The region of residency is one environmental factor can influence a person's HLBs. That people may perform better on HLBs when they perceive themselves to be in a compatible environment. Urban communities are able to meet their basic needs more adequately, which leads to less stress and a better life. This also contradicts with many studies conducted in urban and rural areas on people's health status and lifestyle, it is known that people in rural areas have healthy lifestyles such as physical activity and availability of healthy food, but this is a challenge that is access to better health services.

5.5.5: Monthly Income

The result of the current study stated that there is no significant relationship between the monthly income of students and their HLBs in the medical colleges and non-medical colleges (table 4.14). The findings supported by study of Amiri et al., (2019) who stated that there was no significant relationship between the healthy lifestyle of the students, and economic status of their family.

While, another study conducted by Elif et al., (2019) disagrees with present study which noted that there is a significant relationship between economic statuses and mean HLBs scores of students. In state the economic status of students increased their HLBs for them also increased.

According to the results of table (4-9), the study is reject null hypothesis and accept the alterative hypothesis because there is significant difference in healthy lifestyle behaviors between medical and non- medical college students.

Chapter Six: Conclusions and Recommendations

Chapter Six:

Conclusions and Recommendations

This chapter reviews the conclusion according to the interpretation and discussion of the study findings.

Conclusions:

Regarding the interpretation and discussion of the study findings, the study can conclude that:

1. The demographic characteristics of the present study reveal that the majority of students were female in medical colleges, while in the non-medical colleges are males, more of them unmarried, living with their families, resident in rural, and the family monthly income for participants in the medical colleges are high, while participants in the non-medical colleges are moderate.
2. Healthy lifestyle behaviors for the sample showed that moderate level overall and specific in health responsibility, physical activity, nutrition, coping with stress, also, the dealing with drug and substances use are good for the two groups, while the psychosocial health of students is good at the non-medical, and moderate at medical students.
3. There is a significant difference in HLBs between medical and non-medical students as general and in particular for subdomains of nutrition and physical activity.
4. There is a significant relationship between healthy lifestyle behaviors and area of residency at the non-medical colleges.

Recommendations:

Based on the results and conclusions of the present study, the researcher recommends the following:

1. The study recommends promoting the importance of physical activities by urging the presidents of university to build sports facilities for both genders. In addition, providing a closed gym for females.
2. The Ministry of Health (MOH) should conduct educational programs to increase students' awareness about healthy diet through social media.
3. Activating the role of psychological counseling and educational guidance at the university to coping stress among students and try to help them and provide advice to change their behaviors to healthy behaviors.
4. The study suggests including HLBs in the university curriculum.
5. A manual booklet of healthy behaviors should be written in simple words and use attractive pictures given to the university students.

References

المصادر باللغة العربية

- القران الكريم ، سورة المجادلة ، اية (11).

References:

Abdolkarimi, M., Masoomi, M., Lotfipur, S. S., & Zakeri, M. A. (2022). The relationship between spiritual health and happiness in medical students during the COVID-19 outbreak: A survey in southeastern Iran. Frontiers in Psychology, 13.

Al-Amari, H. G., & Al-Khamees, N. (2015). The perception of college students about a healthy lifestyle and its effect on their health. Journal of Nutrition and Food Sciences, 5(6).

Alghamdi, S. A., Alqarni, A. A., Alghamdi, A. F., Alghamdi, T. K., Hasosah, N. M., Aga, S. S., & Khan, M. A. (2021). Knowledge, attitude, and practices regarding dietary habits among medical and non-medical university students. Journal of Family Medicine and Primary Care, 10(9), 3436.

Alhaimer, R. (2022). The health belief model: Evaluating governmental public health messages on social media aimed at preventing a COVID-19 epidemic in Kuwait. Cogent Business & Management, 9(1), 2031682.

Ali, B. M., Mohammed, S., Akram, S., Salar, S., Baxtiar, L., Ismail, L., & Nawzad, S. (2020). Knowledge, Attitude and Practice of Medical Students of Sulaimani Regarding Modern Lifestyle and Its Effect on Health. Kurdistan Journal of Applied Research, 49-62.

Ali, S. K. S. (2018). The important of physical activities in our life. Int Phys Med Rehab J, 3(4), 308-310.

Al-Kahil, A. B., Khawaja, R. A., Kadri, A. Y., Abbarh, MBBS, S. M., Alakhras, J. T., & Jaganathan, P. P. (2020). Knowledge and practices toward

routine medical checkup among middle-aged and elderly people of Riyadh. Journal of Patient Experience, 7(6), 1310-1315

Almutairi, K. M., Alonazi, W. B., Vinluan, J. M., Almigbal, T. H., Batais, M. A., Alodhayani, A. A., ... & Alhoqail, R. I. (2018). Health promoting lifestyle of university students in Saudi Arabia: a cross-sectional assessment. BMC public health, 18(1), 1-10.

Al-Qahtani, M. F. (2019). Comparison of health-promoting lifestyle behaviors between female students majoring in healthcare and non-healthcare fields in KSA. Journal of Taibah University Medical Sciences, 14(6), 508-514.

Al-Rifaai, J. M., Al Haddad, A. M., & Qasem, J. A. (2018). Personal hygiene among college students in Kuwait: A Health promotion perspective. Journal of education and health promotion, 7.

Alzahrani, S. H., Malik, A. A., Bashawri, J., Shaheen, S. A., Shaheen, M. M., Alsaib, A. A., ... & Abdulwassi, H. K. (2019). Health-promoting lifestyle profile and associated factors among medical students in a Saudi university. SAGE open medicine, 7, 2050312119838426.

Ameer, H. A., Pokhrel, S., Dick, M. H., Ahmed, N. R., Abdelgadir, A., Kuilkarni, V., ... & Khan, S. (2021). Association of Perceived Stress and Gastrointestinal Symptoms in College Students: A Systematic Review. Open Journal of Gastroenterology, 11(12), 275-284.

Amiri, M., Chaman, R., & Khosravi, A. (2019). The relationship between health-promoting lifestyle and its related factors with self-efficacy and well-being of students. Osong public health and research perspectives, 10(4), 221.

Asante, S., & Karikari, G. (2022). Social Relationships and the Health of Older Adults: An Examination of Social Connectedness and Perceived Social

Support. Journal of Ageing and Longevity, 2(1), 49-62.

Auerbach, R. P., Mortier, P., Bruffaerts, R., Alonso, J., Benjet, C., Cuijpers, P., ... & Kessler, R. C. (2018). WHO World Mental Health Surveys International College Student Project: Prevalence and distribution of mental disorders. Journal of abnormal psychology, 127(7), 623.

Auty, S. G., Lipson, S. K., Stein, M. D., & Reif, S. (2022). Mental health service use in a national sample of college students with co-occurring depression or anxiety and substance use. Drug and alcohol dependence reports, 2, 100025.

Azami Gilan, B., Janatolmakan, M., Ashtarian, H., Rezaei, M., & Khatony, A. (2021). Health-promoting lifestyle and associated factors among medical sciences students in Kermanshah, Iran: A cross-sectional study. Journal of environmental and public health, 2021.

Bakouei, F., Omidvar, S., Seyediandi, S. J., & Bakouei, S. (2019). Are healthy lifestyle behaviors positively associated with the academic achievement of the university students. Journal of Advances in Medical Education & Professionalism, 7(4), 224.

Baskaradoss, J. K., Geevarghese, A., Al-Mthen, A., Al-Ghamdi, H., Al-Haudayris, R., Al-Obaidy, S., & Al-Saadi, W. (2019). Influence of life-style on dental health behavior. Journal of lifestyle medicine, 9(2).

Bastani, P., Nobakht, S., Yusefi, A. R., Manesh, M. R., & Sadeghi, A. (2018). Students' health promoting behaviors: A case study at shiraz university of medical sciences. Shiraz E-Medical Journal, 19(5).

Bechard, L. E., Bergelt, M., Neudorf, B., DeSouza, T. C., & Middleton, L. E. (2021). Using the health belief model to understand age differences in perceptions and responses to the COVID- 19 pandemic . Frontiers in

psychology, 12, 609893.

Bennie, J. A., Shakespear-Druery, J., & De Cocker, K. (2020). Muscle-strengthening exercise epidemiology: a new frontier in chronic disease prevention. Sports medicine-open, 6(1), 1-8.

Bland, J.M.; Altman, D.G. (1996). "Statistics notes: measurement error". BMJ. *312* (7047): *1654*. doi:10.1136/bmj.312.7047.1654. PMC 2351401. PMID 8664723

Borillo, C. J., Tamanal, J. M., & Kim, C. H. (2020). Determining the Cut Off Score of the Healthy Lifestyle Screening Tool among High School Students. Journal of Lifestyle Medicine, 10(2), 92.

Borowski G. (2022). Spearman's rank correlation coefficient. Statistics Poland. Retrieved from https://stat.gov.pl/en/metainformation /terms-used Bufford, R. K. (1999). Behavioral psychology.

Burkholder, L., Allensworth, K., & Schaffter, H. (2018). Preventing the Spread of Illness in College Residence Hall Populations.

Bufford, R. K. (1999). Behavioral psychology.

Butts, J. B., & Rich, K. L. (2021). Philosophies and theories for advanced nursing practice. Jones & Bartlett Learning

Byer, A. L. (2019). Effects of Healthy Lifestyle on Physical and Mental Health Status.

Çelebi, E., Gündogdu, C., & Kizilkaya, A. (2017). Determination of Healthy Lifestyle Behaviors of High School Students. Universal Journal of Educational Research, 5(8), 1279-1287.

Cena, H., & Calder, P. C. (2020). Defining a healthy diet: evidence for the role of contemporary dietary patterns in health and disease. Nutrients, 12(2), 334.

Chien, S. Y., Chuang, M. C., & Chen, I. P. (2020). Why people do not attend health screenings: Factors that influence willingness to participate in health screenings for chronic diseases. International journal of environmental research and public health, 17(10), 3495.

Ciancio, A., Kämpfen, F., Kohler, H. P., & Kohler, I. V. (2021). Health screening for emerging non-communicable disease burdens among the global poor: Evidence from sub-Saharan Africa. Journal of health economics, 75, 102388.

Cipriani, G. E., Bartoli, M., & Amanzio, M. (2021). Are sleep problems related to psychological distress in healthy aging during the COVID-19 pandemic? A review. International Journal of Environmental Research and Public Health, 18(20), 10676.

Cross, M. P., Hofschneider, L., Grimm, M., & Pressman, S. D. (2018). Subjective well-being and physical health. Handbook of Well-being. Salt Lake City, UT: DEF Publishers.

Devi, B., Devi, R., Pradhan, M. S., & Lepcha, M. N. (2022). Theory at a glance: Health belief modeles in predicting health behaviors.

Dhiman, S., & Chawla, G. K. (2017). A study on health promoting lifestyle of university students. Int J Res Engineering Applied Sci, 7(6), 142-151.

Dörtkol, A., & Özdemir, L. (2021). Evaluation of healthy lifestyle behaviors and related factors in medical students. Cumhuriyet Medical Journal, 43(1), 20-30.

Eiroa-Orosa, F. J. (2020). Understanding psychosocial wellbeing in the context of complex and multidimensional problems. International Journal of Environmental Research and Public Health, 17(16), 5937.

Elif, I. Ş. I. K., Kanbay, Y., & Aslan, Ö. (2019). Healthy lifestyle behaviors of

students at the faculty of education . International Journal of Health Services Research and Policy, 4(1), 1-10.

Ergen, A., & Bolcan, A. E. (2020). Who Lives Healthier in a University: Faculty, Students, or Administrative Staff. In Psycho-Social Perspectives on Mental Health and Well-Being (pp. 217-233). IGI Global.

Esmaeili, A., SALEM, Z., Sheikh, F. M., Rezaeian, M., & Ebrahimi, N. S. (2015). Assessment of health-promoting lifestyle in medical students of Rafsanjan University of Medical Sciences, Iran, in 2014.

Fadhel, F. H. (2020). Exploring the relationship of sleep quality with drug use and substance abuse among university students: a cross-cultural study. Middle East Current Psychiatry, 27(1), 1-9.

Fashafsheh, I., Al-Ghabeesh, S. H., Ayed, A., Salama, B., Batran, A., & Bawadi, H. (2021). Health-Promoting behaviors among nursing students: Palestinian perspective. INQUIRY: The Journal of Health Care Organization, Provision, and Financing, 58, 00469580211018790.

Firis R H and Chernick M R. (2003). Introductory Biostatistics for Health Sciences: Modern Applications Including Bootstrap. John Wiley & Sons. https://books.google.iq/books/about/Introductory_Healt.

Gamaleldin, N., Hagras, E., & El-Weshahi, H. M. (2021). Health-Promoting Lifestyle among Medical Students in Alexandria. Journal of High Institute of Public Health, 51(2), 107-113.

Gandhi, K., Godaria, Y., & Revadi, G. (2021). Evaluation of sleep pattern due to stress in undergraduate medical students and its impact on health and academic performance: A cross-sectional study from tertiary health center of Central India. medRxiv.

Gao, C. L., Zhao, N., & Shu, P. (2021). Breakfast Consumption and Academic

Achievement Among Chinese Adolescents: A Moderated Mediation Model. Frontiers in Psychology, 12, 700989

Ghorbani-Dehbalaei, M., Loripoor, M., & Nasirzadeh, M. (2021). The role of health beliefs and health literacy in women's health promoting behaviours based on the health belief model: a descriptive study. BMC women's health, 21(1), 1-9.

Gilbertson, M. K., Brady, S. T., Ablorh, T., Logel, C., & Schnitker, S. A. (2022). Closeness to God, Spiritual Struggles, and Wellbeing in the First Year of College. Frontiers in psychology, 13.

Guo, Z., & Zhang, Y. (2022). Study on the Interactive Factors between Physical Exercise and Mental Health Promotion of Teenagers. Journal of Healthcare Engineering, 2022.

Gupta, H., Gupta, S., & Rozatkar, A. R. (2022). Magnitude of substance use and its associated factors among the medical students in India and implications for medical education: A narrative review. Indian Journal of Psychological Medicine, 44(3), 218-226.

Gupta, S., Sarpal, S. S., Kumar, D., Kaur, T., & Arora, S. (2013). Prevalence, pattern and familial effects of substance use among the male college students–a North Indian study. Journal of clinical and diagnostic research: JCDR, 7(8), 1632.

Hailu, G. N. (2020). Practice of stress management behaviors and associated factors among undergraduate students of Mekelle University, Ethiopia: a cross-sectional study. BMC psychiatry, 20(1), 1-7.

Hamdani, S. U., Zafar, S. W., Suleman, N., Waqas, A., & Rahman, A. (2022). Effectiveness of Relaxation Techniques ‘as an Active Ingredient of

Psychological Interventions' to Reduce Distress, Anxiety and Depression in Adolescents: A Systematic Review and Meta-Analysis.

Hanani, A., Badrasawi, M., Zidan, S., & Hunjul, M. (2022). Effect of cognitive behavioral therapy program on mental health status among medical student in Palestine during COVID pandemic. BMC psychiatry, 22(1), 1-11.

Hemamalini, R., Ashok, V., & Sasikala, V. (2018). A study on stress management and its impact among students. International Journal of Academic Research in Economics and Management Sciences, 7(3), 101-110.

Hernández-Torrano, D., Ibrayeva, L., Sparks, J., Lim, N., Clementi, A., Almukhambetova, A., ... & Muratkyzy, A. (2020). Mental health and well-being of university students: A bibliometric mapping of the literature. Frontiers in Psychology, 11, 1226.

Hou, T., Zhang, T., Cai, W., Song, X., Chen, A., Deng, G., & Ni, C. (2020). Social support and mental health among health care workers during Coronavirus Disease 2019 outbreak: A moderated mediation model. Plos one, 15(5), e0233831.

Hwang, Y., & Oh, J. (2020). Factors affecting health-promoting behaviors among nursing students. International Journal of Environmental Research and Public Health, 17(17), 6291.

Ifroh, R. H., Imamah, I. N., & Rizal, A. A. F. (2022). The health-Promoting Lifestyle Assessment Among Nursing Students in East Kalimantan. Jurnal Ilmu Kesehatan Masyarakat, 13(2), 168-179.

Inaba, R., Yamakawa, S., Kanamoto, T., Ukimoto, S., Sato, S., Ogasawara, I.,

... & Nakata, K. (2021). Measurement of various intensities of physical activities and categorization of "Locomotive" and "Household" activities provide a subject-specific detailed assessment. Scientific Reports, 11(1), 1-9.

Joy, M., & Mathew, A. (2018). Emotional maturity and general well-being of adolescents. IOSR Journal of Pharmacy, 8(5), 01-06.

Kafaji, T. (2011). The psychology of the Arab: The influences that shape an Arab life. AuthorHouse.

Kassymova, K., Kosherbayeva, N., Sangilbayev, S., & Schachl, H. (2018, September). Stress management techniques for students. In International Conference on the Theory and Practice of Personality Formation in Modern Society (ICTPPFMS 2018) (pp. 47-56). Atlantis Press.

Kenney, J. F.; Keeping, E. S. (2016). Mathematics of Statistics, Part 1 (3rd ed.). Princeton, NJ: Van Nostrand Reinhold. Retrieved from http://onlinebooks.library.upenn.edu. Retrieved from https://en.wikipedia.org/wiki/Frequency_(statistics), accessed by July, 2022.

Khaw, W. F., Nasaruddin, N. H., Alias, N., Chan, Y. M., Tan, L., Cheong, S. M., ... & Yong, H. Y. (2022). Socio-demographic factors and healthy lifestyle behaviours among Malaysian adults: National Health and Morbidity Survey 2019. Scientific Reports, 12(1), 16569.

Khoso, P. A., Yew, V. W., & Mutalib, M. H. A. (2016). Comparing and contrasting health behaviour with illness behaviour. e-Bangi, 11(2), 578-589.

Kljajević, V., Stanković, M., Đorđević, D., Trkulja-Petković, D., Jovanović, R., Plazibat, K., ... & Sporiš, G. (2021). Physical Activity and Physical

Fitness among University Students—A Systematic Review. International Journal of Environmental Research and Public Health, 19(1), 158.

Lages, A., Magalhães, E., Antunes, C., & Ferreira, C. (2018). Social well-being scales: validity and reliability evidence in the Portuguese context. Psicologia, 32(2), 15-26.

Leard Statistics (2019), Independent t-test for two samples, retrieved form https://statistics.laerd.com/statistical-guides/independent-t-test-statistical-guide.php , accessed by January, 2019.

Lee, L. O., Grodstein, F., Trudel-Fitzgerald, C., James, P., Okuzono, S. S., Koga, H. K., ... & Kubzansky, L. D. (2022). Optimism, Daily Stressors, and Emotional Well-Being Over Two Decades in a Cohort of Aging Men. The Journals of Gerontology: Series B, 77(8), 1373-1383.

Lesińska-Sawicka, M., Pisarek, E., & Nagórska, M. (2021). The health behaviours of students from selected countries—a comparative study. Nursing Reports, 11(2), 404-417.

Leung, C. H., & Pong, H. K. (2021). Cross-sectional study of the relationship between the spiritual wellbeing and psychological health among university Students. PloS one, 16(4), e0249702.

Liang, L., Zheng, Y., Ge, Q., & Zhang, F. (2021). Exploration and Strategy Analysis of Mental Health Education for Students in Sports Majors in the Era of Artificial Intelligence. Frontiers in psychology, 12.

Liu, W., Sun, N., Guo, J., & Zheng, Z. (2022). Campus Green Spaces, Academic Achievement and Mental Health of College Students. International Journal of Environmental Research and Public Health, 19(14), 8618.

Liu, Y. S., Wu, Q. J., Lv, J. L., Jiang, Y. T., Sun, H., Xia, Y., ... & Zhao, Y. H.

(2021). Dietary carbohydrate and diverse health outcomes: umbrella review of 30 systematic reviews and meta-analyses of 281 observational studies. Frontiers, 169.

López-Madrigal, C., de la Fuente, J., García-Manglano, J., Martínez-Vicente, J. M., Peralta-Sánchez, F. J., & Amate-Romera, J. (2021). The role of gender and age in the emotional well-being outcomes of young adults. International journal of environmental research and public health, 18(2), 522.

Lu, P., Oh, J., Leahy, K. E., & Chopik, W. J. (2021). Friendship importance around the world: Links to cultural factors, health, and well-being. Frontiers in psychology, 3568.

Lyu, Z., Hou, Y., & Wang, Y. (2022). Research on the Current Situation of College Students' Physical Health under the Background of the Integration of Sports and Medicine. Journal of Healthcare Engineering, 2022.

Maazallahi, M., Ghonchepour, A., Sohrabi, M., Golestani, Z., Parandeh Afshar, P., Malakoutikhah, A., & Dehghan, M. (2021). Spiritual well-being among medical and nonmedical science students. Scientifica, 2021.

Mak, Y. W., Kao, A. H., Tam, L. W., Virginia, W. C., Don, T. H., & Leung, D. Y. (2018). Health-promoting lifestyle and quality of life among Chinese nursing students. Primary health care research & development, 19(6), 629-636.

Mamak, H. (2018). Determination of healthy lifestyle behaviors of students who study at sports high school. European Journal of Physical Education and Sport Science.

Marques, A., Peralta, M., Martins, J., Loureiro, V., Almanzar, P. C., & de

Matos, M. G. (2019). Few European adults are living a healthy lifestyle. American Journal of Health Promotion, 33(3), 391-398.

Martyn, J. and Marć, M. (2020). Self-evaluation of behaviours related to the health of Polish young adults. Family Medicine & Primary Care Review, 22(2), pp.120-125.

Mašina, T., Madžar, T., Musil, V., & Milošević, M. (2017). Differences in health-promoting lifestyle profile among Croatian medical students according to gender and year of study. Acta clinica Croatica, 56(1.), 84-91.

Mehdizadeh, S., Abbasi, S., & Kamali, K. (2018). Comparison of Health-promoting Life Styles among Medical and Non-medical Students in Zanjan during 2016-2017. Preventive Care in Nursing & Midwifery Journal, 8(2), 50-57.

Mehri, A., Solhi, M., Garmaroudi, G., Nadrian, H., & Sighaldeh, S. S. (2016). Health promoting lifestyle and its determinants among university students in Sabzevar, Iran. International journal of preventive medicine, 7.

Merriam-Webster. (2022). Percentage. Retrieved from http://www.merriam-webster.com/dictionary/percentage

Mertoglu, H. (2019). Effects of Interdisciplinery Nutrition Education on Prospective Science Teachers' Development of Healthy Life Style Behaviours. Journal of Education and Training Studies, 7(12), 52-65.

Metuge, C. E., Dzudie, A., Ebasone, P. V., Assob, J. C. N., Ngowe, M. N., Njang, E., ... & Eyoum, C. (2022). Prevalence and factors associated with substance use among students in tertiary institutions in Buea, Cameroon. The Pan African Medical Journal, 41.

Mohamed, I. I., Ahmad, H. E. K., Hassaan, S. H., & Hassan, S. M. (2020). Assessment of anxiety and depression among substance use disorder patients: a case-control study. Middle east current psychiatry, 27(1).

Mohamed, M. G., Hameed, A. E., Sadek, H., Abd Elaal, E. M., & Morsy, H. A. A. (2021). Assessment of Healthy Lifestyle among secondary school Adolescent girls in Iraq. Journal of Nursing Science Benha University, 2(1), 49-58.

Mohamed, M. N. A., Fahmy, A. A., Mohamed, A. E. S. E. H., & Hamed, O. K. (2021). Study of Health Behaviours and Lifestyle Characterstics among Medical Students at Al-Azhar University, Assuit Branch. The Medical Journal of Cairo University, 89(December), 2555-2569.

Mohamed, S. H., Eker, H. H., Ozcoban, K., Hacimustafaoglu, F., & Abdi, İ. A. (2022). Health-promoting lifestyle and its determinants among university students in Mogadish, Somalia. Health, 5(4), 71-86.

Montazeri, N., Kianipour, N., Nazari, B., Ziapour, A., & Bakhshi, S. (2017). Health promoting behaviors among university students: a case-sectional study of Kermanshah University of Medical Sciences. International journal of pediatrics, 5(6), 5091-5099

Mousavi Bazaz, N., Haghighi, M., Boujaran, R., Vakili, V., Mousavi Bazzaz, M., & Haghighi, G. (2022). Assessment of Health-promoting Lifestyle among Medical Students of Mashhad University of Medical Sciences in 2018-2019. Jorjani Biomedicine Journal, 10(1), 4-12.

Norozi, E ., Nazari, F., & Moodi, M. (2020) . The effect of educational intervention based on the health belief model on osteoarthritis-preventive behaviors in middle-aged women. Journal of Education and Health Promotion, 9.

Oral, B., & Cetinkaya, F. (2020). Health perceptions and healthy lifestyle behaviors of Erciyes University students. Medicine, 9(4), 829-36.

Otto, C., Reiss, F., Voss, C., Wüstner, A., Meyrose, A. K., Hölling, H., & Ravens-Sieberer, U. (2021). Mental health and well-being from child-hood to adulthood: design, methods and results of the 11-year follow-up of the BELLA study. European child & adolescent psychiatry, 30(10), 1559-1577.

Pasha, A., Pakseresht, S., Rezaie, K., Rezaie, S., & KazemNejad, E. (2018).

Comparison of Health Promoting Lifestyle in Guilan Medical and Non-Medical Sciences Students. Journal of Research Development in Nursing and Midwifery, 15(1), 45-52.

Paudel, K., Adhikari, T. B., Khanal, P., Bhatta, R., Paudel, R., Bhusal, S., & Basel, P. (2022). Sleep quality and its correlates among undergraduate medical students in Nepal: A cross-sectional study. PLOS Global Public Health, 2(2), e0000012.

Pérez-Rivas, F. J., Rico-Blázquez, M., López- López, C., Domínguez- Fernán dez, S., Cobos-Serrano, J. L., & Ajejas Bazán, M. J. (2023). 'Learning by doing', a model for improving the promotion of healthy lifestyles by student nurses. BMC nursing, 22(1), 236.

Piercy, K. L., Troiano, R. P., Ballard, R. M., Carlson, S. A., Fulton, J. E., Galuska, D. A., ... & Olson, R. D. (2018). The physical activity guidelines for Americans. Jama, 320(19), 2020-2028.

Polat, P. Ö., & Çelik, M. (2021) Investigating the relationship between health-promoting lifestyle behaviors and hopelessness among medical and non-medical students. Journal of Surgery and Medicine, 5(6), 578-582.

Polit, D.F. and Hungler, B.P. (2013). Essentials of Nursing Research:

Methods, Appraisal, and Utilization (8th edn). Philadelphia: Wolters Kluwer/ Lippincott Williams and Wilkins.

Portoghese, I., Galletta, M., Porru, F., Burdorf, A., Sardo, S., D'Aloja, E., ... & Campagna, M. (2019). Stress among university students: factorial structure and measurement invariance of the Italian version of the Effort-Reward Imbalance student questionnaire. BMC psychology, 7(1), 1-7.

Pronk, N., Kleinman, D. V., Goekler, S. F., Ochiai, E., Blakey, C., & Brewer, K. H. (2021). Practice Full Report: Promoting Health and Well-being in Healthy People 2030. Journal of Public Health Management and Practice, 27(6), S242.

Rahimi, F., Alamdar, E., Mirnasab, S., Borjalilu, S., Pouresmaeil, M., & Anbari, M. (2021). Lifestyle of students at Tehran University of Medical Sciences during Corona Epidemic: A cross-sectional study. Iranian Journal of Health Sciences, 9(3), 12-22.

Rassool, G. H. (2021). Islamic psychology: Human behaviour and experience from an Islamic perspective. Routledge.

Ratanasiripong, P., China, T., & Toyama, S. (2018). Mental health and well-being of University Students in Okinawa. Education Research International, 2018.

Ravikumar, P., & Shanmugam, P. L. (2022). A study on mental health of students' teacher in relation to their achievement in education psychol-ogy.

Sejbuk, M., Mirończuk-Chodakowska, I., & Witkowska, A. M. (2022). Sleep Quality: A Narrative Review on Nutrition, Stimulants, and Physical Activity as Important Factors. Nutrients, 14(9), 1912.

Sengul, U. C., Sevda, E., Fatma, Y. K., & Selma, A. (2019). Healthy Life

Behaviors and Physical Activity Level of Health College Students. International Journal of Caring Sciences, 12(1).

Shah, M., Ferra, G., Fitzgerald, S., Barreira, P. J., Sabeti, P. C., & Colubri, A. (2020). Containing the Spread of Infectious Disease on College Campuses [preprint].

Shaheen , A. M., Nassar , O. S., Amre, H. M., & Hamdan- Mansour, A . M. (2015). Factors affecting health-promoting behaviors of university students in Jordan. Health, 7(01), 1.

Shaheen, N. A., Alqahtani, A. A., Assiri, H., Alkhodair, R., & Hussein, M. A. (2018). Public knowledge of dehydration and fluid intake practices: variation by participants' characteristics. BMC public health, 18(1), 1-8.

Shekhar, R., Prasad, N., & Singh, T. (2022). Lifestyle factors influencing medical and nursing student's health status at the rural health-care institute. Journal of Education and Health Promotion, 11.

Shohani, M., & Rasouli, M. (2018). Comparison of health behaviors among students of Iranian medical and human sciences universities. Electronic physician, 10(5), 6836.

Si, W., Yan, Q., Wang, W., Meng, L., & Zhang, M. (2022). Research on the Influence of Non-Cognitive Ability and Social Support Perception on College Students' Entrepreneurial Intention. International Journal of Environmental Research and Public Health, 19(19), 11981.

Siraji, A., Molla, A., Ayele, W. M., & Kebede, N. (2022). Mental distress and associated factors among college students in Kemisie district, Ethiopia. Scientific reports, 12(1), 1-8.

Skinner, R. (2019). Traditions, paradigms and basic concepts in Islamic psychology. Journal of religion and health, 58(4), 1087-1094.

Sok, S., Pal, K., Tuot, S., Yi, R., Chhoun, P., & Yi, S. (2020). Health behaviors among male and female university students in Cambodia : a cross-sectional survey. Journal of Environmental and Public Health, 2020.

Statistic Solution, Paired Sample T-Test, retrieved from https://www.statisticssolutions.com/manova-analysis-paired-sample-t-test/, accessed by February, 2022

Steffen, J., Schlichtiger, J., Brunner, S., & Huber, B. C. (2021). Health promoting behaviour of medical versus non-medical students during COVID-19 pandemic: results from the COLA cross-sectional study. Journal of Translational Medicine, 19(1), 242.

Šuriņa, S., Martinsone, K., Perepjolkina, V., Kolesnikova, J., Vainik, U., Ruža, A., ... & Rancans, E. (2021). Factors related to COVID-19 preventive behaviors: a structural equation model. Frontiers in Psychology, 12.

Thivel, D., Tremblay, A., Genin, P. M., Panahi, S., Rivière, D., & Duclos, M. (2018). Physical activity, inactivity, and sedentary behaviors: definitions and implications in occupational health. Frontiers in public health, 6, 288.

Thomas, K., Nilsson, E., Festin, K., Henriksson, P., Lowén, M., Löf, M., & Kristenson, M. (2020). Associations of psychosocial factors with multiple health behaviors: A population-based study of middle-aged men and women. International journal of environmental research and public health, 17(4), 1239.

Tran, N. T., Franzen, J., Jermann, F., Rudaz, S., Bondolfi, G., & Ghisletta, P. (2022). Psychological distress and well-being among students of health

disciplines in Geneva, Switzerland: The importance of academic satisfaction in the context of academic year-end and COVID-19 stress on

their learning experience. Plos one, 17(4), e0266612

Verma, A. K., Singh, G., & Patwardhan, K. (2021). Patterns of physical activity among the students of an Indian university and their perceptions about the curricular content concerned with health. medRxiv.

Villarino, R. T. H., Villarino, M. L. F., Temblor, M. C. L., Bernard, P., & Plaisent, M. (2022). Developing a Health and Well-Being Program for College Students: An Online Intervention. World Journal on Educational Technology: Current Issues, 14(1), 64-78.

Wallace, T. C., Bailey, R. L., Blumberg, J. B., Burton-Freeman, B., Chen, C. O., Crowe-White, K. M., ... & Wang, D. D. (2020). Fruits, vegetables, and health: A comprehensive narrative, umbrella review of the science and recommendations for enhanced public policy to improve intake. Critical reviews in food science and nutrition, 60(13), 2174-2211.

Wang, C., Yan, S., Jiang, H., Guo, Y., Gan, Y., Lv, C., & Lu, Z. (2022). Socio-demographic characteristics, lifestyles, social support quality and mental health in college students: a cross-sectional study. BMC public health, 22(1), 1-17.

Wang, D., Xing, X. H., & Wu, X. B. (2013). Healthy lifestyles of university students in China and influential factors. The Scientific World Journal, 2013.

Wang, F., & Bíró, É. (2021). Determinants of sleep quality in college students: A literature review. Explore, 17(2), 170-177

Weiss, G. L. (2015). Sociology of health, healing, and illness. Routledge.

Wickham, S. R., Amarasekara, N. A., Bartonicek, A., & Conner, T. S. (2020). The big three health behaviors and mental health and well-being among

young adults: a cross-sectional investigation of sleep, exercise, and diet. Frontiers in psychology, 11, 579205

World Health Organization (WHO): 2017, Constitution of WHO: Principles. Available online: http://www.who.int/about/mission/en/.

Xie, Q., Hao, M. L., Meng, L. B., Zuo, X. Q., Guo, P., Qiu, Y., ... & Lei, M. (2020). Effect of eating habits on obesity in adolescents: a study among Chinese college students. Journal of International Medical Research, 48(3), 0300060519889738.

Zhang, X., Lu, J., Wu, C., Cui, J., Wu, Y., Hu, A., ... & Li, X. (2021). Healthy lifestyle behaviours and all-cause and cardiovascular mortality among 0.9 million Chinese adults. International Journal of Behavioral Nutrition and Physical Activity, 18(1), 1-11.

Zhou, C., Zheng, W., Tan, F., Lai, S., & Yuan, Q. (2022). Influence of health promoting lifestyle on health management intentions and behaviors among Chinese residents under the integrated healthcare system. PloS one, 17(1), e0263004.

Appendices

Appendix A: Administrative agreements

Republic of Iraq
Ministry of higher education & scientific research
University of Karbala
College of Nursing
Graduate studies Division

جمهورية العراق
وزارة التعليم العالي والبحث العلمي
جـــامعة كربلاء
كـلية التـمريـض
شعبة الدراسات العليا

التاريخ : 13 /12/2022

العدد : ع د / 3051

الى / جامعة كربلاء

م/ تسهيل مهمة

تحية طيبة...

يرجى التفضل بالموافقة على تسهيل مهمة طالبة الماجستير السيدة (**خمائل علي عجرش محسن**) لإنجاز رسالتها الموسومة :

"Healthy Lifestyle Behaviors among Medical and Non-Medical College Students at the University of Karbala: A Comparative Study "

((سلوكيات نمط الحياة الصحي لدى طلبة الكليات الطبية والغير طبية في جامعة كربلاء: دراسة مقارنة)).

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

... مع التقدير ...

أ.م.د. سلمان حسين فارس الكريطي
معاون العميد للشؤون العلمية و الدراسات العليا
2022 / 12 / 13

نسخة منه الى :-
- مكتب السيد المعاون العلمي المحترم.
- شعبة الدراسات العليا.
- جامعة كربلاء / كلية الطب.
- جامعة كربلاء / طب الاسنان .
- جامعة كربلاء / كلية التمريض .
- جامعة كربلاء / كلية الهندسة .
- جامعة كربلاء / الآداب .
- جامعة كربلاء / كلية القانون
- جامعة كربلاء / كلية التربية للعلوم الانسانية .
- جامعة كربلاء / كلية التربية للعلوم الصرفة .

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

Appendix B: Ethical Consideration

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

وزارة التعليم العالي والبحث العلمي
جامعة كربلاء / كلية التمريض
لجنة اخلاقيات البحث العلمي

استمارة اخلاقيات البحث العلمي

عنوان مشروع البحث	
Healthy Lifestyle Behaviors among Medical and Non-Medical College Students at the University of Karbala: A Comparative Study سلوكيات نمط الحياة الصحي لدى طلبة الكليات الطبية والغير طبية في جامعة كربلاء: دراسة مقارنة	
بيانات عن الباحث الرئيسي	
الاسم الثلاثي للطالب	**مستوى الدراسة**
خمائل علي عجرش محسن	دراسات عليا /ماجستير
بيانات الباحث او الباحثين المشتركين	
الاسم الثلاثي للأستاذ المشرف	**اللقب العلمي**
غزوان عبد الحسين عبد الواحد	أستاذ مساعد دكتور

اهمية موضوع البحث واهدافه (Importance of the research and its objectives)

Importance of the research: Healthy lifestyle behaviors are the most important factors in preventing disease, death and promoting health. The problem of the non- communicable disease is increasing globally these diseases strongly associated with unhealthy lifestyle behaviors including nutrition, physical activity, and sleeping, physical health social health, spiritual health, environmental health.
Objectives:1-To assess the healthy lifestyle behaviors among medical and non-medical college students.
2-To compare of healthy lifestyle behaviors between medical and non-medical college students.
3_To found out relationship among healthy lifestyle behaviors among students with their socio-demographic characteristics such as: gender, marital status, type of collage, residence, family income.

وقت ومكان اجراء البحث (الاماكن المقترحة لأجراء البحث فيها) Time and Setting of the Research_

Time:26\9\2022-26\9\2023 Setting of the Research: University of Karbala

منهجية البحث (Methodology)

study design :Cross-sectional descriptive

عينة الدراسة Sample of the study

Sample: students in the Medical and Non-Medical College

الاعتبارات الاخلاقية خلال اجراء البحث (Ethical consideration during research)

التعهد

- اني الموقع ادناه خمائل علي عجرش محسن اتعهد بان اقوم باجراء البحث وفقا لما ذكر في البروتوكول اعلاه وان التزم باتباع القوانين والتعليمات فيما يخص اجراء البحوث والالتزام بأخلاقياتها، كما واتعهد باخذ الموافقة من افراد العينة للمشاركة في الدراسة واخذ موافقة من ولي أمر المشارك الشرعي في حال كون عمر الشخص المشارك اقل من ١٨ سنة، او كونه غير قادر على الفهم، وان أقدم الإيضاحات والمعلومات الخاصة بالدراسة لأفراد العينة للمشاركين في حال طلبها. وان اتعامل بسرية تامة مع بيانات افراد العينة.

اسم وتوقيع الباحث
خمائل علي عجرش

توصية لجنة اخلاقيات البحث العلمي في الكلية

قرار اعضاء لجنة اخلاقيات البحث العلمي حسب جلستها المنعقدة بتاريخ / / 202 :

☐ الموافقة على اجراء البحث ☐ عدم الموافقة على اجراء البحث

رئيس اللجنة — عضو — عضو — عضو

Appendix C1: Questionnaire

Questionnaire

Part one: sociodemographic characteristic

1 . Sex: male ☐ female ☐

2 .Marital status

2-1-Single ☐

2-2-Married ☐

2-3-divorced ☐

2-4-Widow ☐

2-5-Separate ☐

3 .College type:

3-1- Medical colleges:

3-1-1- College of Medicine ☐ 3-1-2-College of Nursing ☐

3-1-3-College of Dentistry ☐

3-2-Non-medical colleges:

3-2-1-College of Engineering ☐ 3-2-2 - College of Law ☐

3-2-3- College of Education for Human Sciences ☐

3-2-4-College of Education for Pure Sciences ☐

4 .Place of residence with:

4-1- Family ☐

4-2-Relatives ☐

4-3-University housing ☐

4-4-Alone ☐

5- Residency environment: Urban ☐ rural ☐

6 .Monthly family income: ☐

6-1- Less than 300,000 (IQD) ☐

6-2-301.000-600.000 (IQD) ☐

6-3-601.000 -900.000 (IQD) ☐

6-4- More than 901.000 (IQD) ☐

Part 2: Healthy Lifestyle Behavior Scale

	Items	**Always**	**sometimes**	**never**
Health Responsibility				
1	You feel healthy and well			
2	Take the necessary measures to prevent infectious diseases			
3	You take the necessary measures when you suffer from any pain			
4	You read or watch television programs about improving health			
5	Maintain a degree of proportion between your weight and height			
6	Take a shower daily			
7	You are aware of the health and quality of the water you drink			
Physical Activity				
1	You exercise at least a few times a week			
2	Do vigorous exercise for 20 minutes or more at least three times a week, such as brisk walking			
3	You engage in light to moderate physical activity (such as continuous walking 30-40 minutes 5 or more times per week)			

4	Participate in leisure physical activities such as swimming			
5	Doing regular walking			
6	Exercising during normal daily activities (such as walking after lunch, using stairs instead of elevators			
7	Avoid using the computer more than 3 hours a day			
	Nutrition			
1	Eat breakfast daily regular			
2	You eat three main meals and two secondary meals			
3	You choose a diet low in fat, saturated fat, and cholesterol			
4	Reduce the use of sugar and food containing sugar			
5	Eat honey or molasses as a substitute for sweets			
6	Concentrate in your food on a very small percentage of white salts			
7	Avoid soft drinks, tea and coffee			
8	Drink water and fluids (6-8) glasses during the day			
9	You eat 6-11 servings of bread, cereal, rice and pasta each day			
10	You eat 2-4 servings of fruits every day			

11	You eat 3-5 servings of vegetables every day			
12	You drink 2-3 servings of milk, eat yogurt or cheese every day			
13	You eat 2-3 servings of meat, poultry, fish, dried beans, eggs, and the nut combo every day			
Coping with Stress				
1	You sleep 8 hours a day			
2	You tend to go to bed earlier than your usual bedtime			
3	You feel easy to fall back asleep when you wake up at night			
4	Focus on pleasant thoughts at bedtime			
5	Accept those things in your life that you cannot change			
6	You use specific techniques to control your stress			
7	Practice relaxation or meditation for 15-20 minutes a day			
Dealing with Drug and substance				
1	Avoid using any kind of tobacco (cigarettes and water pipes)			
2	You resort to using medicines only when necessary			
3	Carefully follow the instructions that come with medicine Prescribed by the doctor			

4	Avoid taking sedatives and hypnotics			
5	You only take medicines prescribed by doctors			
6	Avoid mixing medicines without a doctor supervision			
7	Try to know the side effects of any medication you are taking			
Psychosocial Health				
1	Easily express your feeling to those close to you			
2	Meaningful and fulfilling relationships with others			
3	You have complete confidence in your personal abilities			
4	You have a person who is trying to engage you in activities that help you forget about your problems			
5	You enjoy communicating with relatives			
6	You feel good and at peace with yourself			
7	Work on long term goals in your life			

Appendix C2: Questionnaire

استبيان

عزيزي الطالب / عزيزتي الطالبة

نضع بين ايديكم الكريمة هذه الاستبانة المصممة لتقيم "سلوكيات نمط الحياة الصحي لدى طلبة الكليات الطبية وغير الطبية في جامعة كربلاء : دراسة مقارنة "

وضرورة عدم ترك اي سؤال راجين منكم ملئها بحرص وعناية وان تكون الاجابة على جميع الاسئلة علما انه سيتم التعامل مع البيانات الواردة فيها بسرية تامة وستكون مجهولة المصدر ولا تحتوي على فقرة الاسم وتستخدم لأعراض البحث العلمي حصراً مع فائق الود والاحترام.

- هل توافق على الاشتراك في هذه الدراسة العلمية كعينة ..... نعم ☐ كلا ☐

القسم الاول : المعلومات الشخصية

1.الجنس : ذكر ☐ انثى ☐

2.الحالة الزوجية:

2-1- اعزب ☐

2-2- متزوج/ة ☐

2-3- مطلق/ة ☐

2-4-ارمل/ة ☐

2-5 منفصل /ة ☐

3.**نوع الكلية**:

3-1- **مجموعة طبية** : كلية الطب ☐

كلية التمريض ☐

كلية طب الاسنان ☐

3-**2- مجموعة غير طبية:** كلية الهندسة ☐

كلية التربية للعلوم الانسانية ☐ كلية القانون ☐

كلية التربية للعلوم الصرفة ☐

4.مكان الاقامة مع:

4-1-العائلة ☐

4-2الاقارب ☐

4-3-السكن الجامعي ☐

4-4-لوحدك ☐

5-بيئة السكن : الريف ☐ المدينة ☐

6.دخل العائلة الشهري:

6-1-اقل من 300,000 الف ☐

6-2-301.000الف-600.000الف ☐

6-3-601.000الف-900.000الف ☐

6-4-اكثرمن901.000الف ☐

القسم الثاني : مقياس سلوكيات نمط الحياة الصحي لطلاب الجامعة

ت	الفقرة	دائما"	احيانا"	ابدا"
المحور الاول : الصحة العامة				
1	تشعر بانك معافى وبصحة جيدة			
2	تتخذ الاجراءات اللازمة للوقاية من الامراض المعدية			
3	تقوم بالاجراءات اللازمة عندما تعاني من أي الم			
4	تقرأ أو تشاهد البرامج التلفزيونية حول تحسين الصحة			
5	تحافظ على درجة من التناسب بين وزنك وطولك			
6	تواضب على الاستحمام يوميا"			
7	انت على دراية بصحة وجودة المياه التي تشربها			
المحورالثاني: النشاط البدني				
1	تمارس الرياضة على الأقل عدة مرات في الأسبوع			
2	تتمرن بقوة لمدة 20 دقيقة أو أكثر ثلاث مرات في الأسبوع على الأقل مثل المشي السريع			
3	تشارك في نشاط بدني خفيف إلى متوسط (مثل المشي المستمر30-40 دقيقة 5 مرات أو أكثر في الأسبوع)			

4	تشارك في أوقات الفراغ (الترفيهية) الأنشطة البدنية مثل السباحة				
5	تمارس رياضة المشي بشكل منتضم				
6	تمارس الرياضة أثناء الأنشطة اليومية المعتادة (مثل المشي بعد الغداء ، باستخدام السلالم بدلاً من المصاعد)				
7	تتجنب أستخدم الحاسوب اكثر من 3 ساعات يوميا				
المحور الثالث: التغذية					
1	تتناول وجبة الافطار يوميا بانتظام				
2	تتناول ثلاث وجبات رئيسية مع وجبتين ثانوية				
3	تختار نظام غذائي منخفض الدهون ، والدهون المشبعة ، والكوليسترول.				
4	تقلل من استخدام السكريات والأغذية المحتوية على السكر (الحلويات).				
5	تتناول العسل أو الدبس كبديل على الحلويات				
6	تركز في غذائك على نسبة قليلة جدا من الاملاح البيضاء				
7	تتجنب تتناول المشروبات الغازية والشاي الشاي و القهوة				
8	تشرب الماء والسوائل (6— 8) أقداح خلال اليوم				
9	تتناول 6-11 وجبات من الخبز والحبوب والأرز والمعكرونة كل يوم.				
10	تتناول 2-4 وجبات من الفاكهة كل يوم.				
11	تتناول 3-5 وجبات من الخضار كل يوم.				
12	تشرب 2-3 وجبات من الحليب أوتتناول الزبادي أو الجبن كل يوم.				
13	تتناول 2-3 وجبات فقط من اللحوم والدواجن والأسماك والفاصوليا المجففة والبيض ، ومجموعة المكسرات كل يوم.				
المحور الرابع: التغلب على الاجهاد					
1	تنام 8 ساعات يومياً				
2	تميل للنوم المبكر قبل موعدك المعتاد				

3	تشعر بسهولة العودة الى النوم عندما تصحوا في الليل			
4	تركز على الأفكار السارة في وقت النوم.			
5	تتقبل تلك الأشياء في حياتك التي لا تستطيع ان تغييرها.			
6	تستخدم أساليب محددة للسيطرة على ضغوطاتك.			
7	تمارس الاسترخاء أو التأمل لمدة 15-20 دقيقة يوميًا.			
المحور الخامس : التعامل مع الادوية والعقاقير				
1	تتجنب استخدام أي نوع من التبغ(السجائر والنرجيلة)			
2	تلجأ الى استخدام الادوية عند الضرورة فقط			
3	تراعي بدقة التعلميات المرفقة مع الدواء الذي يصفه الطبيب			
4	تتجنب تناول العقاقير المهدئة والمنومة			
5	تتناول الادوية الموصوفة من الاطباء فقط			
6	تتجنب الخلط بين الادوية دون اشراف الطبيب			
7	تحاول التعرف على الاعراض الجانبية لأي دواء تتناوله			
المحور السادس:الصحة النفسية والاجتماعية				
1	تعبر عن مشاعرك بسهولة للقريبين منك			
2	تحافظ على علاقات هادفة ومرضية مع الآخرين.			
3	لديك الثقة التامة بقدراتك الشخصية			
4	لديّك شخص يحاول أن ينخرط في أنشطة تساعدك على نسيان مشاكلك			
5	تستمتع بالتواصل مع الأقارب			
6	تشعر بالرضا والسلام مع نفسك			
7	تعمل على أهداف طويلة المدى في حياتك			

Appendix D: Expert

خبراء تحكيم استمارة الاستبانة

ت	اسم الخبير	اللقب العلمي	مكان العمل	الاختصاص الدقيق	سنوات الخبرة
1	أ.د. أمين عجيل ياسر	استاذ	جامعة بابل/كلية التمريض	تمريض صحة مجتمع	38
2	أ.د. أركان بهلول ناجي	استاذ	جامعة بغداد/كلية التمريض	تمريض صحة مجتمع	36
3	أ.د. علي كريم خضير	استاذ	جامعة كربلاء/كلية التمريض	تمريض الصحة النفسية والعقلية	30
4	أ.د. فاطمة وناس خضير	استاذ	جامعة الكوفة/كلية التمريض	تمريض صحة مجتمع	29
5	أ.د. علي طارق عبد الحسن	استاذ	جامعة كربلاء/كلية الطب	بورد دكتوراه / طب مجتمع	22
6	أ.د. مرتضى غانم عداي	استاذ	جامعة وارث االانبياء /كلية التمريض	تمريض صحة مجتمع	16
7	أ.م.د. سلمان حسين فارس	استاذ مساعد	جامعة كربلاء/كلية التمريض	تمريض صحة مجتمع	32
8	أ.م.د. علي عبد الرضا أبو طحين	استاذ مساعد	جامعة كربلاء /كلية الطب	بورد دكتوراه / طب مجتمع	24
9	أ.م.د. صافي داخل نوام	استاذ مساعد	جامعة كربلاء/كلية التمريض	تمريض الصحة النفسية والعقلية	20
10	أ.م.د. حسن عبد الله عذبي المالكي	استاذ مساعد	جامعة كربلاء/كلية التمريض	تمريض بالغين	20
11	أ.م.د. منصور عبد الله فلاح	استاذ مساعد	جامعة الكوفة/كلية التمريض	تمريض صحة مجتمع	19
12	أ.م.د. قحطان قاسم محمد	استاذ مساعد	جامعة بغداد/كلية التمريض	تمريض الصحة النفسية والعقلية	14
13	م.د. ساجدة سعدون عليوي	مدرس	جامعة كربلاء/كلية التمريض	تمريض صحة الام والوليد	29
14	م.د. أيسن كمال محمد	مدرس	جامعة بغداد/كلية التمريض	تمريض صحة مجتمع	17
15	م.د. حقي اسماعيل منصور	مدرس	جامعة كربلاء/كلية التمريض	تمريض صحة مجتمع	6

Appendix E: Statistical Checker

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

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

اقرار الخبير الاحصائي

اشهد بان الرسالة الموسومة :

Healthy Lifestyle Behaviors among Midiral and non - medical College Student at the university of kerbala ((A comparative Study))

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

توقيع الخبير الاحصائي:
الاسم واللقب العلمي: ا.م.د. ايناس عبد الحافظ محمد
الاختصاص الدقيق: احصاء تطبيقي
مكان العمل: جامعة كربلاء / كلية الادارة والاقتصاد
التاريخ: / / 2023

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

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

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

اقرار الخبير اللغوي

اشهد بان الرسالة الموسومة :

(Healthy Lifestyle Behaviours among Medical and Non-Medical college Students at the University of Kerbala: A Comparative Study

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

توقيع الخبير اللغوي:
الاسم واللقب العلمي: م.د. نبراس حسين نهى الخزرجي
الاختصاص الدقيق: حاكم اللغة / تحليل خطاب
مكان العمل: جامعة كربلاء / كلية التربية للعلوم الإنسانية / قسم اللغة العربية
التاريخ: ٧٨ / ٧ / 2023

المستخلص

عرفت سلوكيات نمط الحياة الصحي على أنها تبني وتنفيذ السلوكيات التي من شأنها أن تقلل من خطر الإصابة بمرض خطير أوالوفاة المبكرة، فضلاً عن حماية وتحسين المستويات الصحية. تهدف الدراسة الى مقارنة سلوكيات نمط الحياة الصحي بين طلاب المجموعة الطبية وغير الطبية ومعرفة العلاقة بين سلوكيات أنماط الحياة الصحية للطلاب وخصائصهم الديموغرافية. تم استخدام دراسة مقارنة اجريت من خلال اختيار (٧) كليات (الطب ، التمريض، طب الأسنان، الهندسة، العلوم الصرفة، التربية للعلوم الانسانية وكلية القانون) في جامعة كربلاء. لتحقيق أهداف الدراسة. تم اختيار عينة غير احتمالية (ملائمة) من٣٠٠ طالبًا من طلبة المرحلة الرابعة من الكليات. تم استخدام مقياس سلوكيات الحياة الصحية المكون من (٤٨) فقرة. اظهرت نتائج الدراسة أن غالبية الطلاب في الكليات الطبية كانوا عند مستوى متوسط من سلوكيات نمط الحياة الصحية (٧٩,٣٪) من الطلاب في الكليات الطبية .بينما (٧٤٪) منهم في الكليات غير الطبية. في حين كشفتت النتائج على وجود دلالة معنوية بين سلوكيات نمط الحياة الصحية الشاملة عند القيمة (٠,٠١٧) ، لا سيما في جوانب النشاط البدني والتغذية عند قيم (٠,٠٣٧) و (٠,٠٠٧٩) بين المجموعتين. كما بينت النتيجة على وجودعلاقة ذات دلالة إحصائية بين سلوكيات نمط الحياة الصحية ومنطقة الإقامة لطلاب الكليات غير الطبية بقيمة ٠,٠٥ . استنتجت الدراسة إن سلوكيات أسلوب الحياة الصحي لدى طلاب الكليات الطبية وغير الطبية متوسطة المستوى. وهناك فرق معنوي بين طلاب المجموعة الطبية وغير الطبية في سلوكيات نمط الحياة الصحي وفي الجوانب الخاصة بالنشاط البدني والتغذية .اوصت الدراسة على حث عمادة كليات المجموعة الطبية وغير الطبية على انشاء قاعات رياضية لتعزيز اهمية النشاط البدني. وتنفيذ برامج تثقيفية لزيادة وعي الطلاب بالنظام الغذائي الصحي عبر وسائل التواصل الاجتماعي.

جامعة كربلاء/ كلية التمريض

سلوكيات نمط الحياة الصحي لدى طلبة الكليات الطبية وغير الطبية في جامعة كربلاء:دراسة مقارنة

رسالة تقدمت بها

خمائل علي عجرش

الى

مجلس كلية التمريض/ جامعة كربلاء

جزء من متطلبات نيل درجة الماجستير في علوم التمريض

إشراف

أ.م.د. غزوان عبد الحسين العابدي

تموز2023م **ذو الحجة 1444 هـ**