

**KNOWLEDGE AND ATTITUDE TOWARDS PREVENTION OF
NON-COMMUNICABLE DISEASE AMONG UNDERGRADUATES
IN THE UNIVERSITY OF BENIN**

Stephanie Chidiogo IKEJE

EDU2102577

**DEPARTMENT OF HEALTH, SAFETY AND ENVIRONMENTAL EDUCATION
FACULTY OF EDUCATION,
UNIVERSITY OF BENIN,
BENIN CITY,
EDO STATE, NIGERIA.**

NOVEMBER, 2025.

**KNOWLEDGE AND ATTITUDE TOWARDS PREVENTION OF NON
COMMUNICABLE DISEASES AMONG UNDERGRADUATE IN THE
UNIVERSITY OF BENIN**

BY

Stephanie Chidiogo IKEJE

EDU2102577

**A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF HEALTH,
SAFETY AND ENVIRONMENTAL EDUCATION IN PARTIAL FULFILLMENT
OF THE REQUIREMENT FOR THE AWARD OF B.Sc. (Ed.) HEALTH
EDUCATION, OF THE FACULTY OF EDUCATION, UNIVERSITY OF BENIN,
BENIN CITY, EDO STATE, NIGERIA.**

NOVEMBER, 2025.

CERTIFICATION

We, the undersigned, certify that this study was carried out by **Stephanie Chidiogo IKEJE** with Matriculation Number **EDU2102577** in the Department of Health, Safety and Environmental Education in partial fulfillment for the award of Bachelor of Science (B.Sc.) in Health Education.

Dr. (Mrs.) M. Onobumeh

(Project Supervisor)

Mrs. B. H. Enabulele

(Project Coordinator)

Date: _____

Date:

Dr. (Mrs) O. H. Obasuyi
(Ag. Head of Department)

Date: _____

DEDICATION

This work is dedicated to God Almighty.

ACKNOWLEDGMENTS

The researcher wishes to express this appreciation to God Almighty who has been her source, strength during her academic journey

She wishes to express her unreserved gratitude to her supervisor, Dr (Mrs) M. Onobumeh for her keen supervision, invaluable advice during the cause of working the project; she is indeed grateful. She respectfully appreciates all her lecturers particularly, Prof. (Mrs) U. Igbudu, Dr. E.O Igudia ,Dr. (Mrs) O. H. Obasuyi, Dr. S. O. Olikabo, Dr. (Mrs) O. O. Egbochuku, Dr. D. O. Aideyan, Dr. (Mrs) E. B. Timbiri, Dr. N. I. Erhabor, Dr. D. O. Oronsaye, Dr. (Mrs) J. U. Don, Mrs. B. H. Enabulele, Mrs. T. A. Egbon, Dr. (Mrs) J. A. Agbonifoh, Dr. (Mrs) C. N. Atdehor, Dr. (Mrs) H. Ehiorobo, Dr. (Miss) E. Odigie, Mrs. Imade Onaiho, Mr. V. I. Edogiawerie and Mrs. M-Ekereruke for their invaluable support, advices and impact on her ,which have made this degree pursuit a success, and to all other lecturers who have in one way or the other also contributed to her academic outcome. God reward you all endlessly

She also wishes to express her profound gratitude towards these persons who have been of immense help and support in pursuit of this degree; To my parents - Mr. Stephen Friday and Mrs Charity Chinyere Ikeje,My Grandparent Chief & Lolo Edwin Ezedimbu ,my siblings- Ifeanyichukwu, Chidimma, Chimuanya, Ebubechukwu, Somtochukwu, my uncles and aunts, To my God-motherther Mrs chidimma Ulomu,To Mr & Mrs Edmond Okoli,To Mr Emeka Eze, my cousins ,Uncle Joe and Aunty Mary, to

my close friends- Humphery, Stephanie, Osahenoma, Olumide, Faith, Tessie, Nnidi-Amaka, Jane, Jude. To Rosemary on blessed memories and others who have made this journey worthwhile. You all are very much appreciated.

TABLE OF CONTENTS

TITLE PAGE	I
CERTIFICATION	II
DEDICATION	III
ACKNOWLEDGEMENTS	IV
TABLE OF CONTENTS	VI
ABSTRACT	VIII
CHAPTER ONE: INTRODUCTION	
Background to the Study	1
Statement of Problem	4
Research Questions	5
Purpose of the Study	5
Hypotheses of the Study	6
Significance of the Study	6
Scope and Delimitation of the Study	8
CHAPTER TWO: REVIEW OF RELATED LITERATURE	
Theoretical Framework	9
Concept of Non-Communicable Diseases (NCDs)	12
Knowledge of Non-Communicable Diseases (NCDs)	17
Attitudes Towards Prevention of Non-Communicable Diseases (NCDs)	20
Lifestyle Factors and Their Relationship with Prevention of Non-Communicable Diseases (NCDs)	23
Knowledge and Attitude towards Prevention of Non-Communicable Diseases (NCDs) in Universities	27
Health Communication Strategies for Improving Knowledge and Attitudes	31

Empirical Review	35
Summary of Review of Related Literature	40
CHAPTER THREE: METHODOLOGY	
Research Design	43
Population of Study	44
Sample and Sampling Techniques	46
Research Instrument	47
Validity of the Instrument	47
Reliability of the Instrument	47
Method of Data Collection	48
Method of Data Analysis	48
CHAPTER FOUR: PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS	
Presentation of Results	49
Analysis according to Research Questions	50
Discussion of Findings	59
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION	
Summary	63
Conclusion	64
Recommendations	65
Suggestions for Further Studies	66
REFERENCES	67
QUESTIONNAIRE	70

ABSTRACT

This study was conducted to find out the Knowledge and Attitudes Towards Prevention of Non-Communicable Diseases among Undergraduates in University of Benin. To therefore achieve the purpose of the study, four (4) research questions and four (4) hypotheses were raised and analyzed.

A descriptive survey research design was employed, with a sample of 180 undergraduates selected using simple random sampling. Data were collected through a structured questionnaire with sections A, B and C. Section A seeks to elicit responses on the socio-demographic character of respondents, while Section B seeks to elicit responses on Level of Knowledge of NCDs among Undergraduates in University of Benin and C seeks to elicit information about Attitudes and Preventive Practices of NCDs among University of Benin undergraduates. The instrument was validated by the researcher's supervisor and two experts in the Department of Health, Safety and Environmental Education (H.S.E.), Faculty of Education. To determine the reliability of the instrument, the internal consistency reliability was adopted. In this vein, twenty (20) copies of the instrument were administered to the respondents who were not part of the target population.

The study concludes that while undergraduate students demonstrate adequate knowledge and generally positive attitudes toward NCD prevention, there is a gap between awareness and actual health practices. The findings further recommends that the need for targeted health education programs, interactive workshops and seminars, awareness campaigns and establishment of support systems by the school is essential to

reinforce preventive behaviours and promote healthier lifestyles among University of Benin students.

CHAPTER ONE

INTRODUCTION

Background to the Study

Human health concerns can be categorised into communicable diseases and non-communicable diseases (NCDs). Communicable diseases are illnesses induced by infectious agents, including viruses, bacteria, or parasites, that can be spread directly or indirectly between individuals. Examples encompass malaria, cholera, TB, and HIV/AIDS. These continue to be substantial in low- and middle-income nations, despite global reductions in their impact due to advancements in vaccination, antibiotics, and sanitation (World Health Organisation [WHO], 2023).

Conversely, non-communicable diseases (NCDs) are non-transmissible and frequently chronic diseases, resulting from genetic, environmental, and behavioural variables. The four predominant non-communicable diseases cardiovascular diseases, diabetes, malignancies, and chronic respiratory conditions. Non-communicable diseases constitute almost 70% of global mortality, with their prevalence increasing consistently in both industrialised and developing countries (Gruson, 2025; WHO, 2023). In contrast to communicable diseases, the prevention of non-communicable diseases (NCDs) mostly relies on sustained lifestyle decisions, including nutritious dietary habits, regular physical exercise, abstention from tobacco, and moderation in alcohol consumption. University freshmen, as nascent adults, are at a pivotal juncture at which they establish enduring lifestyle habits. Their decisions concerning nutrition, physical activity, and drug

consumption directly affect their susceptibility to non-communicable diseases in later life. Acquiring knowledge about NCDs, including their aetiology, risk determinants, and preventive measures, is so imperative. An informed student is more inclined to engage in healthful behaviours that mitigate the chances of chronic diseases (Amosu, 2020).

Nevertheless, information alone may not consistently result in behavioural modification. An individual's attitude, characterised by their beliefs, disposition, or willingness to engage in health practices, is equally significant in influencing preventative behaviours. An optimistic disposition motivates students to participate in consistent physical activity, uphold a healthy diet, refrain from smoking, and restrict alcohol intake, therefore diminishing their susceptibility to non-communicable diseases (NCDs). ElDeen and Abosree (2020) discovered that Egyptian undergraduates markedly enhanced their attitudes towards non-communicable disease prevention after participating in health education programs, resulting in healthier lifestyle habits. Conversely, when students possess negative or apathetic attitudes, they are less inclined to utilise their information, hence perpetuating detrimental practices and heightening their susceptibility to chronic diseases. Oyewole and Solabi (2020) corroborated this perspective, indicating that Nigerian university students, despite their awareness of cardiovascular risk factors, exhibited predominantly negative attitudes about diminishing alcohol consumption and participating in physical exercise.

The interplay between knowledge and attitude is influenced by various demographic parameters, such as age, gender, socioeconomic status, and field of study. Younger

students may underestimate the long-term consequences of hazardous habits due to inadequate knowledge, but older students, especially those approaching graduation, typically possess a more acute understanding of how lifestyle choices influence future health outcomes. Chauhan, Mahapatra, Kanungo, and Pati (2025) noted that medical students exposed to health-related curricula exhibited superior knowledge of non-communicable disease prevention compared to their counterparts in non-medical disciplines.

Educational interventions are essential for enhancing both knowledge and attitudes. Hasni, Roslan, and Othman (2024) indicated that Malaysian undergraduates possessed a moderate knowledge of non-communicable diseases (NCDs), although their disposition towards the adoption of a healthy lifestyle was inadequate. This underscores that merely disseminating information is inadequate; interventions must also foster positive attitudes to convert knowledge into action. ElDeen and Abosree (2020) further shown that the integration of information acquisition and attitude reinforcement markedly improves health behaviours in university students.

In Nigeria, where the prevalence of non-communicable diseases (NCDs) is escalating, it is imperative to concentrate on young adults, since their health decisions will influence the nation's future illness landscape. Universities offer an essential setting for imparting knowledge and fostering favourable attitudes towards non-communicable disease prevention. In the absence of intentional interventions, numerous students may persist in hazardous behaviours, including poor nutrition, physical inactivity, smoking, and

excessive alcohol consumption, so heightening their vulnerability to chronic diseases. This study aims to investigate the knowledge and attitudes regarding the prevention of non-communicable illnesses among undergraduates at the University of Benin. The study intends to assess students' comprehension of NCD prevention, their inclination to adopt healthy activities, and the demographic factors influencing these outcomes by concentrating on these two essential constructs.

Statement of Problem

Non-communicable diseases (NCDs) such as cancer, diabetes, hypertension and cardiovascular diseases are on the increase globally, they are predominantly preventable by modifications in life. Unhealthy behaviors, such as poor diet, insufficient physical activity and elevated stress levels are common among university students, especially in their formative years. If not addressed, these habits may result in the emergence of non-communicable diseases in adulthood.

The research observation from culture and personal experiences shows the way many undergraduate students engage in unhealthy lifestyle such as smoking, drinking of alcohol, substance abuse and lack of exercise. These unhealthy lifestyles can increase the risk of developing non-communicable diseases and can lead to high morbidity and mortality rate.

Despite the increased knowledge of the risk associated with non-communicable diseases, many undergraduate students in the university of Benin may still lack adequate

knowledge of the consequences of unhealthy behaviour. The performance of the unhealthy behaviour suggest a gap in knowledge, attitudes and prevention. Hence, the need for the study has been carried out on knowledge and awareness of Non-communicable diseases (NCDs) but none have been carried out on knowledge, attitudes and prevention of acts among undergraduate students in the university of Benin

Research Questions

The following research questions were raised to guide the study:

1. What is the level of knowledge of non-communicable diseases among undergraduate students in the University of Benin?
2. What are the attitudes of prevention of non-communicable disease in the University of Benin?
3. Do lifestyle factors such as diet, exercise relate to students' knowledge and attitude towards non-communicable disease prevention in the university of Benin?
4. What is the preventive practice towards Non-communicable diseases among undergraduate students?

Purpose of the Study

The purpose of this study is to explore the knowledge and attitude towards prevention of non-communicable disease among undergraduates in the university of Benin, the Study aim:

1. To assess the level of knowledge about non-communicable diseases (NCDs) among undergraduate students at the University of Benin.
2. To examine the impact of undergraduate students' attitudes towards the prevention of non-communicable diseases at the University of Benin.
3. To identify the lifestyle factors such as diet, exercise relate to student's knowledge and attitude towards non-communicable disease prevention in the university of Benin
4. To investigate the preventive practices adopted by undergraduate students towards non-communicable diseases.

Hypotheses of the Study

The following null hypotheses are formulated to be tested at 0.05 level of significance

1. There is no significant relationship between undergraduate students' knowledge about non-communicable diseases (NCDs) and their attitudes towards the prevention of NCDs at the University of Benin.

Significance of the Study

This study will be of significant benefit to students, academia, government, and health educators. For students, the research will enhance their understanding of non-communicable diseases (NCDs) and underscore the importance of prevention. By learning about the risks associated with poor lifestyle choices such as inadequate nutrition, lack of physical activity, smoking, and excessive alcohol consumption, students will be

better equipped to make healthier choices. These improved behaviors will not only positively impact their health during their time in university but will also help reduce their risk of developing chronic diseases in the future. Moreover, the study will examine the influence of attitudes on health behaviors, highlighting how positive attitudes toward preventive practices can encourage healthier habits among students.

For academia, the study contributes valuable insights to the growing body of research on health education and NCD prevention. It will offer a clearer understanding of what students know about NCDs and how their attitudes toward prevention shape their behaviors. These findings can inform improvements in current health programs and educational strategies at universities. By identifying gaps in knowledge and behavior, the study may encourage academic institutions to integrate more targeted health-related content into their curricula, addressing the shortcomings in students' knowledge and promoting healthier behaviors. The study could also open doors for further research into health education strategies that could be adapted for different demographics or educational contexts.

From the perspective of the government, the results of this study can be instrumental in shaping public health strategies targeted at young adults, particularly university students. By identifying areas where students lack sufficient knowledge of NCDs and their prevention, the government can develop more focused health campaigns and interventions. Such targeted efforts would make better use of resources and ensure that prevention programs reach those most at risk. Additionally, the findings could encourage

policymakers to prioritize NCD prevention within national health programs, ultimately reducing long-term healthcare costs associated with chronic diseases.

For health educators, the study provides practical insights into how knowledge and attitudes impact the adoption of healthy behaviors. By examining these two critical factors, the study offers guidance on how to design more effective health education programs that not only provide information but also foster positive attitudes toward behavior change. Health educators will be able to use the study's findings to create interventions that better address the needs of students, ultimately helping them develop healthier habits that will last a lifetime.

Scope and Delimitation of the Study

This study focuses on examining the knowledge and attitude towards prevention of non-communicable disease among undergraduates in the university of Benin and the study will be delimited to Undergraduate in the University of Benin.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter focuses on the review of relevant and related literature to the concern of this study. It is discussed under the following subheadings:

- Theoretical Framework
- Concept of Non-Communicable Diseases (NCDs)
- Knowledge of Non-Communicable Diseases (NCDs)
- Attitudes Towards Prevention of Non-Communicable Diseases (NCDs)
- Lifestyle Factors and Their Relationship with Prevention of Non-Communicable Diseases (NCDs)
- Knowledge and Attitude towards Prevention of Non-Communicable Diseases (NCDs) in Universities
- Health Communication Strategies for Improving Knowledge and Attitudes
- Empirical Review
- Summary of Review of Related Literature.

Theoretical Framework

To examine the knowledge and attitude towards the prevention of non-communicable diseases (NCDs) among undergraduates, two key health behavior theories are particularly relevant: The Health Belief Model (HBM) and the Theory of Planned Behavior (TPB). These theories provide useful frameworks for understanding how students' knowledge

and attitudes can influence their health behaviors, particularly in the context of NCD prevention.

The Health Belief Model (HBM), developed by Rosenstock et al. (1974), is one of the most widely used models for explaining health behaviors. The HBM posits that individuals are more likely to engage in health-promoting behaviors if they believe they are susceptible to a health problem, perceive the problem as serious, believe taking a specific action would reduce their susceptibility to or severity of the problem, and believe the benefits of taking the action outweigh any costs or barriers. The model emphasizes the role of perceived susceptibility and perceived severity of a disease, as well as the perceived benefits of preventive behaviors, in shaping an individual's willingness to adopt healthier behaviors. In the context of NCDs, this model suggests that undergraduates' knowledge about NCDs (e.g., the risks of smoking or a poor diet) and their attitudes (e.g., perceived severity and susceptibility) towards these diseases will significantly influence their engagement in preventive actions, such as adopting a balanced diet or increasing physical activity.

The relevance of the HBM to this study is clear. University students may be unaware of the risks associated with NCDs or may not perceive themselves to be at risk. Therefore, the HBM can help explain why many students fail to take preventive actions, despite having some knowledge about NCDs. If students do not perceive the consequences of unhealthy lifestyles as severe or imminent, or if they feel that they are not personally at

risk, they are less likely to make changes to their health behaviors (Champion & Skinner, 2008). By using the HBM, this study can explore how students' perceptions of risk and severity influence their knowledge and attitudes towards NCD prevention and identify ways to increase students' perceptions of susceptibility to NCDs to promote healthier lifestyle choices.

The Theory of Planned Behavior (TPB), proposed by Ajzen (1991), offers another important theoretical lens for understanding health behavior. TPB extends the Theory of Reasoned Action (TRA) by adding the concept of perceived behavioral control (PBC), which reflects the extent to which individuals believe they can control their behaviors. According to TPB, an individual's intention to perform a behavior is influenced by three key factors: attitudes towards the behavior, subjective norms, and perceived behavioral control. In the context of NCD prevention, this theory emphasizes that students' attitudes towards engaging in preventive behaviors (e.g., exercising regularly, eating healthily) will directly influence their intention to perform these behaviors. Additionally, perceived control, such as whether students feel they have the time, resources, or ability to maintain a healthy diet or engage in physical activity, can affect their actual behaviors.

The relevance of TPB to this study lies in its focus on intentions and the factors that influence the decision-making process. Undergraduates' attitudes toward adopting preventive measures for NCDs, along with social pressures (e.g., peer influence) and perceived control over their ability to engage in healthy behaviors, are key determinants

of their behavior. For example, if students believe that regular physical activity is important for preventing NCDs (positive attitude) and that they have the ability to incorporate exercise into their daily routine (high perceived control), they are more likely to make the decision to engage in such behaviors. TPB helps to explain how students' perceptions of their ability to change their habits (e.g., diet and exercise) are critical in influencing their health behaviors, thereby linking attitudes and perceptions of control with actual health behaviors.

Together, the Health Belief Model and the Theory of Planned Behavior provide a comprehensive theoretical framework for understanding the factors influencing NCD prevention among university students. The HBM highlights the importance of students' knowledge about their risks and the perceived severity of NCDs in shaping their attitudes towards preventive actions, while the TPB adds an understanding of how attitudes, subjective norms, and perceived control influence students' intentions and actions. By integrating both models, this study can explore how knowledge and attitude interact with students' perceptions of control and social influences to shape their preventive behaviors toward NCDs. Ultimately, this theoretical framework will guide the development of effective health education strategies aimed at improving both knowledge and attitudes among students to reduce the risk of NCDs.

Concept of Non-Communicable Diseases (NCDs)

Non-communicable diseases (NCDs) are a category of chronic illnesses that arise independently of infectious agents and are not spread from person to person. NCDs result from a complex interaction of genetic, behavioural, environmental, and physiological variables, distinguishing them from communicable diseases that transmit between individuals. Non-communicable diseases (NCDs) account for a significant share of worldwide morbidity and death, with an increasing burden especially in low- and middle-income nations. These disorders typically progress gradually and may persist for years, resulting in chronic health complications, disability, and mortality. The World Health Organisation (WHO, 2023) reports that non-communicable diseases (NCDs) contribute for around 71% of worldwide mortality, resulting in 41 million deaths each year. The principal non-communicable diseases (NCDs) encompass cardiovascular diseases (CVDs), diabetes, malignancies, and chronic respiratory illnesses, all associated with modifiable risk factors including inadequate nutrition, sedentary lifestyle, tobacco smoking, and alcohol intake. Cardiovascular diseases (CVDs) continue to be the primary cause of global mortality, responsible for over 17.9 million deaths each year (Mensah & Roth, 2019). These illnesses encompass several cardiovascular diseases, including coronary artery disease, stroke, and hypertension. They are intimately linked to behavioural risk factors, including hypertension, tobacco use, and insufficient physical activity. The incidence of cardiovascular diseases (CVDs) has risen, especially in low- and middle-income nations,

where the challenge is exacerbated by restricted access to healthcare and preventative services (Roth et al., 2020).

Diabetes, especially Type 2 diabetes, is a significant non-communicable disease with increasing global prevalence. This illness is intricately associated with detrimental lifestyle choices, including inadequate dietary practices, lack of physical activity, and rising obesity rates. The International Diabetes Federation (IDF, 2019) indicates that around 463 million individuals globally were diagnosed with diabetes in 2019, a figure projected to increase due to the prevalence of sedentary lifestyles and poor dietary habits. Besides the individual health burden, diabetes poses a considerable economic problem, leading to elevated healthcare expenditures associated with the management of consequences such renal failure, visual impairment, and cardiovascular disease (Al-Rubeaan et al., 2019).

Cancer, a significant non-communicable disease impacting millions worldwide, is defined by atypical cellular proliferation that may metastasise to other regions of the body. The Global Cancer Observatory (Bray et al., 2018) estimates that around 9.6 million fatalities resulted from cancer in 2018. The predominant cancer forms include lung, breast, and colorectal cancers, with major risk factors being tobacco use, alcohol intake, suboptimal diet, and environmental contamination. In numerous regions globally, lifestyle-related risk factors and ageing populations contribute to the increasing prevalence of cancer. The escalating incidence of cancer in both developed and

developing countries highlights the necessity for enhanced awareness, early identification, and preventative strategies (Sankaranarayanan et al., 2020).

Chronic respiratory illnesses, such as chronic obstructive pulmonary disease (COPD) and asthma, significantly contribute to worldwide morbidity and mortality. The WHO (2023) indicates that COPD accounted for more than 3 million fatalities in 2019. These ailments are predominantly attributable to tobacco use, atmospheric contamination, and workplace exposures. The escalation of air pollution in metropolitan regions of developing nations has resulted in a surge of respiratory ailments, exacerbating the burden on healthcare systems that are frequently inadequately equipped to address such chronic problems (Rabe et al., 2018).

The global burden of non-communicable diseases is unevenly distributed worldwide. Although these diseases have traditionally been more common in high-income nations, their occurrence is currently escalating swiftly in low- and middle-income countries (LMICs). The Global Burden of Disease Study (GBD, 2019) indicates that non-communicable illnesses (NCDs) now account for more fatalities in low- and middle-income countries (LMICs) than communicable diseases. This trend is especially alarming in sub-Saharan Africa, where healthcare systems frequently lack the capacity to address the increasing burden of non-communicable diseases (NCDs). NCDs have emerged as a critical public health concern in Nigeria, with hypertension, diabetes, and cardiovascular illnesses ranking as primary causes of mortality (Ogur et al., 2018). The Nigerian

healthcare system, traditionally centred on addressing infectious diseases, now confronts a dual burden, as both communicable and non-communicable diseases tax its resources. The rising incidence of non-communicable diseases in urban areas, together the escalating prevalence of risk factors such as unhealthy diets, sedentary behaviour, and tobacco consumption, underscores the pressing necessity for comprehensive measures to tackle the prevention and management of NCDs in Nigeria.

Hypertension is notably widespread in Nigeria, impacting around 30% of the adult populace (Ogur et al., 2018). This condition is a major risk factor for cardiovascular diseases and stroke; yet, several individuals remain undiagnosed or untreated due to restricted access to healthcare facilities. The incidence of diabetes and obesity is escalating swiftly, with research indicating that over 7.8% of Nigerian people are affected by diabetes (Akinmoladun et al., 2020). These factors are intensified by swift urbanisation, unhealthy food practices, and diminished physical exercise, especially in metropolitan populations where sedentary behaviours prevail. Despite the escalating burden of non-communicable diseases, Nigeria's public health policies and healthcare infrastructure remain inadequately prepared to confront this challenge. A substantial disparity exists in non-communicable disease prevention and management initiatives, especially in rural regions with restricted healthcare access. Although the Nigerian government has made strides in promoting awareness on the significance of healthy living and early detection of chronic diseases, there remains an absence of comprehensive, nationwide health promotion policies aimed at non-communicable disease prevention. To

tackle these difficulties, it is imperative to incorporate NCD prevention into public health initiatives, especially within universities and schools, where youth can be informed about the dangers of unhealthy lifestyle choices and the significance of preventive measures.

In conclusion, non-communicable diseases (NCDs) constitute a substantial and escalating public health burden worldwide, with their effects being especially severe in developing nations like Nigeria. The proliferation of lifestyle-related risk factors, including inadequate nutrition and sedentary behaviour, alongside ageing demographics, has resulted in a heightened prevalence of non-communicable diseases (NCDs). Confronting this dilemma necessitates extensive health promotion efforts, timely identification, and enhanced healthcare infrastructure, particularly in resource-constrained environments. The escalating burden of non-communicable diseases (NCDs) on global healthcare systems and economies necessitates the urgent development of more effective prevention and management techniques, especially in nations such as Nigeria, where the incidence of NCDs is surging.

Knowledge of Non-Communicable Diseases (NCDs)

Knowledge about non-communicable diseases (NCDs) is essential for preventing these chronic ailments because it allows people to recognise the dangers associated with unhealthy behaviours and adopt healthier habits. Non-communicable diseases (NCDs), encompassing cardiovascular diseases, diabetes, cancer, and chronic respiratory conditions, are predominantly affected by lifestyle factors including inadequate nutrition,

insufficient physical activity, tobacco use, and alcohol intake (World Health Organisation [WHO], 2023). Comprehending these risk factors is crucial for enabling individuals to make educated health decisions. Despite the extensive awareness of non-communicable diseases (NCDs) globally, research indicates a considerable deficiency in the comprehension of the comprehensive spectrum of risk factors, preventive measures, and the ramifications of these diseases, especially among younger demographics, including university students.

University students' comprehension of non-communicable diseases (NCDs) is highly variable, with numerous students exhibiting a restricted understanding of the intricacies associated with these conditions. A study by Oyekan et al. (2019) revealed that Nigerian university students possessed a moderate understanding of non-communicable diseases (NCDs), although exhibited limited awareness regarding specific risk factors, including the significance of keeping a healthy weight and the dangers associated with excessive alcohol intake. Research conducted in India by Bijumone and Catherine Anita (2024) revealed that while students recognised the general existence of non-communicable diseases (NCDs), they possessed insufficient comprehension of the specific behaviours that lead to the onset of these diseases, especially concerning lifestyle choices like diet and physical inactivity. The absence of comprehensive knowledge frequently leads to a disjunction between awareness and behaviour, since students may fail to acknowledge the necessity of altering unhealthy habits unless they comprehend the immediate repercussions of their actions.

A multitude of factors affects the extent of students' understanding of NCDs. Education significantly influences students' understanding of non-communicable diseases (NCDs) and their related dangers. Research indicates that students who have undergone formal education in health and illness prevention possess a superior comprehension of non-communicable diseases (Champion & Skinner, 2008). The academic discipline influences knowledge acquisition, with students in health-related subjects such as medicine, nursing, or public health typically possessing a greater level of knowledge than their counterparts in non-medical disciplines (Chauhan et al., 2025). This gap is partially attributable to the comprehensive health education offered to students in health-related disciplines. Socioeconomic status influences access to health information, with students from higher socioeconomic backgrounds typically enjoying greater availability through media, community programs, and healthcare services, in contrast to students from lower socioeconomic backgrounds who may encounter restricted access to these resources (Marmot, 2018).

Notwithstanding the increasing accessibility of health information, substantial knowledge gaps and misconceptions on NCD prevention persist, particularly among young adults. Numerous university students may lack a comprehensive understanding of the cumulative impacts of detrimental habits, such as smoking, excessive alcohol use, or poor dietary choices, on their long-term health (Roth et al., 2020). Misconceptions regarding non-communicable diseases frequently result in an under appreciation of personal risk, as students tend to view these ailments as predominantly impacting older adults or those

with particular hereditary vulnerabilities, rather than acknowledging the influence of lifestyle variables on risk elevation. A study by ElDeen and Abosree (2020) indicated that Egyptian university students lacked comprehensive awareness of the correlation between their diet and the likelihood of developing diseases such as diabetes or hypertension. This deficiency in comprehension leads to detrimental lifestyle decisions, like the persistence of harmful dietary practices, inactivity, or tobacco consumption, despite an awareness of the overall prevalence of non-communicable diseases (NCDs).

Health education is essential for closing knowledge gaps and encouraging healthier behaviours among university students. Effective health education programs equip students with the knowledge necessary to comprehend the origins, risks, and repercussions of non-communicable diseases (NCDs), as well as strategies for adopting preventative actions to safeguard their health. Incorporating health education into university curricula and extracurricular activities can improve students' understanding of non-communicable disease risk factors and preventative methods (Hasni, Roslan, & Othman, 2024). Interventions that emphasise both awareness enhancement and the modification of attitudes and behaviours have been more effective in improving long-term health outcomes (ElDeen & Abosree, 2020). Educational programs incorporating practical elements, such as physical fitness sessions, culinary lessons, and stress management workshops, might facilitate students' application of knowledge regarding non-communicable disease prevention in their daily lives, resulting in enduring health enhancements.

Attitudes Towards Prevention of Non-Communicable Diseases (NCDs)

Attitudes towards the prevention of non-communicable diseases (NCDs) significantly influence individuals' health behaviours. Health attitudes denote the sentiments, convictions, and inclinations persons possess regarding their health and the measures necessary for its maintenance or enhancement. These attitudes are shaped by various variables, including personal experiences, knowledge, cultural standards, and social influences. Comprehending these attitudes is essential for fostering healthy behaviours, as they frequently influence individuals' health-related decisions (Ajzen, 1991). Individuals with favourable attitudes towards healthy living are more inclined to participate in preventative health behaviours, including frequent physical activity, adhering to a balanced diet, and eschewing detrimental habits such as smoking and excessive alcohol consumption. In contrast, negative or apathetic attitudes may result in the engagement in unhealthy behaviours, despite persons' awareness of the associated hazards. A multitude of studies has examined university students' perspectives on non-communicable disease prevention, specifically concerning physical activity, nutrition, tobacco use, and alcohol intake. A study conducted by ElDeen and Abosree (2020) among Egyptian university students revealed that while students often exhibited favourable views towards non-communicable disease (NCD) prevention, their actual behaviours, including regular physical activity and healthy dietary practices, were frequently inconsistent. Study revealed acknowledged the significance of these behaviours, obstacles such as time limitations, insufficient motivation, and peer pressure

hindered their ability to act on their objectives. Likewise, Oyewole and Solabi (2020) discovered that Nigerian university students demonstrated favourable attitudes towards cardiovascular disease prevention; yet, many continued to partake in detrimental behaviours, seen smoking and excessive alcohol intake. This indicates that although students may comprehend the hazards associated with non-communicable diseases, their attitudes towards prevention may not consistently manifest in the intended health behaviours.

Perspectives on non-communicable disease prevention also affect overall lifestyle decisions. Favourable health attitudes, including the appreciation of regular exercise and nutritious food, correlate with the adoption of healthier behaviours that mitigate the risk of non-communicable diseases (NCDs). In contrast, negative or indifferent attitudes frequently result in detrimental lifestyle choices, including inadequate dietary practices, inactivity, and tobacco consumption, all of which are significant risk factors for non-communicable diseases (Sallis et al., 2015). University students exhibiting negative attitudes towards physical activity may favour sedentary pursuits such as television viewing or computer usage, potentially leading to obesity and heightened risks of diabetes and cardiovascular illnesses.

Numerous factors affect attitudes towards non-communicable disease prevention, including cultural influences, peer dynamics, and access to health information. Culture significantly influences individuals' attitudes, as society norms and values can either

promote or inhibit healthy behaviours. In certain cultures, there may be a predilection for high-calorie foods or inactive pastimes, which might cultivate adverse perceptions of physical exercise and nutritious eating. Peer influence is a significant issue, particularly among university students. The behaviours and attitudes of peers and social networks can significantly influence an individual's health perceptions. For example, if students' classmates partake in detrimental behaviours like smoking or alcohol consumption, it may normalise these actions and adversely affect their perspectives on non-communicable disease prevention (Jensen et al., 2019). In contrast, exposure to health information, whether via formal education, media campaigns, or health promotion initiatives, can enhance students' knowledge and attitudes regarding healthy behaviours. Health education initiatives that underscore the significance of lifestyle choices in the prevention of non-communicable diseases can cultivate favourable attitudes and encourage students to embrace healthy practices (Hasni, Roslan, & Othman, 2024).

In conclusion, perceptions regarding NCD prevention are essential in shaping the health behaviours adopted by individuals, especially among university students. Favourable dispositions towards preventative strategies, including physical exercise and nutritious diets, are crucial for mitigating the risk of chronic illnesses.

Lifestyle Factors and Their Relationship with Prevention of Non-Communicable Diseases (NCDs)

Lifestyle factors, including nutrition, physical exercise, and behavioural choices, are crucial in the prevention of non-communicable diseases (NCDs). A healthy lifestyle, defined by a balanced diet and consistent physical activity, markedly diminishes the likelihood of chronic diseases such as cardiovascular disease, diabetes, obesity, and specific cancers (World Health Organisation [WHO], 2023). These characteristics are alterable, indicating that individuals can implement measures to modify their behaviours and enhance their health outcomes. For university students, these lifestyle decisions are especially vital, as this phase of life frequently entails substantial alterations in food, physical activity, and social conduct.

Diet is pivotal in the prevention of non-communicable diseases, emphasising the consumption of a balanced diet abundant in fruits, vegetables, whole grains, and lean proteins, while restricting processed foods, sweets, and harmful fats. Unhealthy dietary habits, including excessive consumption of sugar-laden beverages, fast food, and inferior snacks, are significantly correlated with obesity, diabetes, and cardiovascular diseases (Al-Rubeaan et al., 2019). Physical activity, or its absence, is a significant determinant affecting the risk of non-communicable diseases (NCDs). Consistent physical activity has been demonstrated to diminish the likelihood of developing numerous chronic ailments, such as hypertension, Type 2 diabetes, and cardiovascular illness (Sallis et al., 2015). Conversely, sedentary behaviour, characterised by extended durations of sitting or

inactivity, has been associated with elevated incidences of obesity, insulin resistance, and cardiovascular illnesses (Tremblay et al., 2017).

Numerous research has investigated the lifestyle practices of university students and their association with the risk of non-communicable diseases (NCDs). Studies have consistently demonstrated that university students, especially in metropolitan settings, exhibit bad dietary habits and inadequate physical exercise. A study by Akinmoladun et al. (2020) revealed that Nigerian university students frequently consumed high-calorie foods and sugary drinks while exhibiting low levels of physical activity. A study by ElDeen and Abosree (2020) involving Egyptian university students indicated that, although they recognised the need of healthy eating and exercise, they frequently encountered difficulties in implementing these behaviours owing to time limitations, academic expectations, and peer influences. Moreover, numerous students participate in sedentary activities, including prolonged sitting during study sessions or while utilising electronic gadgets, which exacerbates unhealthy weight gain and elevates the risk of non-communicable diseases (Bray et al., 2018).

The correlation between lifestyle factors and knowledge or attitudes about NCD prevention is intricate. Although numerous students realise the significance of healthy lifestyles, a mismatch frequently exists between this awareness and their actual behaviours. Research indicates that students possessing greater awareness about non-communicable diseases (NCDs) exhibit improved health attitudes and are more inclined

to participate in preventive behaviours, such as regular exercise and maintaining a balanced diet (Chauhan et al., 2025). Nonetheless, despite this awareness, obstacles such as time constraints, social pressures, and the accessibility of hazardous food choices sometimes hinder students from converting their knowledge into action (ElDeen & Abosree, 2020). This disconnection highlights the necessity for treatments that tackle both knowledge deficiencies and the environmental and social determinants influencing students' attitudes and behaviours.

Social and environmental factors profoundly influence students' health behaviours and lifestyle decisions. Peer impact is notably pronounced throughout university years, as students frequently emulate the behaviours of their friends and peers. If a student's social circle values unhealthy eating, smoking, or excessive alcohol consumption, these behaviours may become normalised and emulated by others, despite their awareness of the associated risks (Jensen et al., 2019). The campus atmosphere can either facilitate or obstruct healthy behaviours. Campuses with restricted access to nutritious food, inadequate walking infrastructure, and insufficient recreational amenities frequently foster sedentary lifestyles and harmful dietary practices among students (Marmot, 2018). Cultural views and societal standards concerning body image, dietary preferences, and physical exercise can either promote or hinder the adoption of healthy behaviours. Intervention studies aimed at lifestyle modifications among undergraduates have shown encouraging outcomes in enhancing health behaviours. Health promotion initiatives that amalgamate knowledge with practical applications, like exercise challenges, nutritional

workshops, and mental health assistance, have demonstrated efficacy in enhancing students' lifestyle choices. Hasni, Roslan, and Othman (2024) implemented an intervention targeting Malaysian university students, aimed at enhancing physical activity and promoting healthier eating choices via educational seminars and peer-led fitness initiatives. The research identified substantial enhancements in students' physical activity, nutritional practices, and general attitudes regarding non-communicable disease prevention. Programs that integrate technology, including mobile health applications or online platforms for monitoring food and exercise, have been shown to enhance student engagement and foster better behaviours (Harris et al., 2019).

These intervention studies underscore the capacity of universities to significantly influence students' health behaviours by offering knowledge, tools, and supportive settings that promote better lifestyle choices. To be effective, these interventions must account for the diverse elements affecting students' behaviours, such as time limitations, social influences, and resource availability. A comprehensive strategy that considers both the individual's knowledge and attitudes, and the wider social and environmental context, is essential to promote sustainable lifestyle choices among university students.

In conclusion, lifestyle factors including nutrition, physical activity, and sedentary behaviour are essential drivers of non-communicable disease risk among university students. Although students may possess some awareness of the significance of these

elements, obstacles such as social influences, time limits, and environmental limitations frequently impede the adoption of healthy behaviours.

Knowledge and Attitude towards Prevention of Non-Communicable Diseases (NCDs) in Universities

Universities have an important role in moulding young adults' health behaviours, especially in the prevention of non-communicable diseases (NCDs). Young adults frequently establish enduring health habits throughout their university years, positioning higher education institutions to effectively instruct students on the significance of non-communicable disease prevention. University health education programs focused on non-communicable disease prevention are intended to enhance students' understanding of the hazards linked to unhealthy lifestyle choices and to cultivate favourable attitudes towards healthier behaviours. These programs typically encompass workshops, seminars, fitness challenges, and initiatives aimed at fostering physical activity, promoting nutritious food, facilitating smoking cessation, and diminishing alcohol consumption (Hasni, Roslan, & Othman, 2024).

The efficacy of university-based interventions in fostering knowledge and favourable attitudes towards NCD prevention is contingent upon various aspects, including program structure, content, and student participation levels. Studies indicate that health education programs integrating theoretical knowledge with practical activities are more effective in altering students' attitudes and behaviours (ElDeen & Abosree, 2020). Interventions that

incorporate fitness sessions, nutritional workshops, and interactive health campaigns motivate students to implement their knowledge in practical situations. A study by Akinmoladun et al. (2020) revealed that Nigerian university students engaged in an extensive health education program centred on physical activity and nutrition exhibited notable enhancements in their attitudes and behaviours about non-communicable disease prevention. The curriculum enhanced students' understanding of NCD risks and enabled them to choose better lifestyle choices, including increased physical activity and selecting healthier dietary options.

Nonetheless, numerous obstacles may impede the execution of successful health education and behaviour modification initiatives within university environments. A primary difficulty is the deficiency of resources, encompassing financial support, skilled workers, and adequate facilities. Numerous colleges, especially in developing nations, face challenges in delivering sufficient infrastructure to sustain continuous health promotion activities. Many institutions, for instance, lack designated areas for physical activities or the requisite equipment to implement complete fitness programs (Jensen et al., 2019). Moreover, there frequently exists a lack of adequate funding to implement extensive health education initiatives or to ensure students have access to nutritious food choices on campus. A further obstacle is the conflicting demands on students' time. University students frequently have an overload of academic obligations, hindering their ability to prioritise health education and behavioural modifications (ElDeen & Abosree, 2020).

Peer influence constitutes a substantial obstacle. University students are significantly affected by their peers, which can either bolster or hinder health education initiatives. When a student's social circle emphasises detrimental behaviours like smoking, drinking, or poor dietary choices, it can hinder the promotion of positive health practices (Jensen et al., 2019). Moreover, students may oppose health education programs if they regard them as inconsequential to their daily experiences or if they do not recognise immediate advantages. Cultural influences and cultural norms significantly impact students' perceptions of health behaviours. In many cultures, traditional beliefs or societal expectations may impede the adoption of specific health behaviours, such as decreased alcohol intake or increased physical activity (Marmot, 2018).

Notwithstanding these obstacles, numerous successful case studies and initiatives have arisen in Nigerian institutions and other environments. The University of Benin in Nigeria has instituted a health promotion program encompassing awareness programs regarding the hazards of smoking and the need of regular exercise. The program has employed peer educators to include students and foster a supportive atmosphere for embracing healthier lifestyles. Research conducted by Oyewole and Solabi (2020) revealed that the implementation of regular health seminars and fitness challenges at Nigerian universities markedly enhanced students' understanding of cardiovascular diseases and motivated them to embrace healthier lifestyles, encompassing heightened physical activity and dietary enhancements.

Likewise, in other developing nations, effective health education initiatives have been established to cater to the specific need of university students. The University of Cape Town in South Africa established a program that educates students on the risk factors for non-communicable diseases (NCDs) while incorporating mental health assistance, acknowledging the significance of managing stress and emotional well-being in NCD prevention (Bray et al., 2018). This comprehensive strategy has demonstrated efficacy in engaging pupils and fostering enduring behavioural changes. The initiative has shown that a holistic approach to non-communicable disease prevention, by targeting both physical and mental health, is more likely to work in university environments.

In conclusion, university health education programs focused on non-communicable disease prevention are vital in influencing the health behaviours of students. Although these programs can significantly enhance students' understanding and promote favourable attitudes towards NCD prevention, difficulties such limited resources, peer influence, and conflicting time demands must be confronted. Effective initiatives, such as those executed in Nigerian universities, illustrate that with adequate support and involvement, universities may significantly contribute to fostering healthier lifestyles and mitigating the risk of non-communicable diseases among young adults.

Health Communication Strategies for Improving Knowledge and Attitudes

Health communication methods are essential for enhancing young people' understanding and perceptions of non-communicable diseases (NCDs) and their prevention. Considering

that university students are at a pivotal juncture in their life when health behaviours and attitudes can profoundly influence their long-term well-being, it is imperative to formulate effective communication methods that deliver clear and actionable information on non-communicable diseases (NCDs). These initiatives should concentrate not only on enhancing knowledge but also on encouraging students to embrace preventive behaviours, including adhering to a nutritious diet, participating in regular physical exercise, and abstaining from detrimental substances such as smoke and excessive alcohol.

A highly effective communication strategy for conveying information about non-communicable diseases (NCDs) to young adults is customised health education. Customised health communication considers the distinct traits, preferences, and requirements of the intended audience. University students must confront distinct obstacles, including the equilibrium of academic responsibilities with healthy lifestyle decisions, and utilise suitable avenues for engagement, such as digital media, social media platforms, and on-campus events (Harris et al., 2019). Engaging health education that incorporates students in the learning process, including workshops, peer education initiatives, and group discussions, has proven to be particularly beneficial in fostering favourable health behaviours (ElDeen & Abosree, 2020). These methodologies actively involve students, enhancing the retention of knowledge and improving the probability of its application in their everyday lives.

The media's role, encompassing television, radio, and online platforms, is vital in influencing information and attitudes towards NCD prevention. Mass media campaigns possess the capacity to engage a broad audience and disseminate critical public health messages regarding the dangers of unhealthy behaviours and the advantages of preventive measures. Health campaigns utilising mass media to convey information regarding non-communicable diseases (NCDs) have demonstrated an enhancement in awareness, particularly when highlighting the significance of early detection and lifestyle changes (Sallis et al., 2015). Nevertheless, for young adults, social media assumes an even more pivotal function. Platforms like Instagram, Twitter, and Facebook offer a distinctive chance to include students in interactive dialogues regarding health behaviours and to disseminate health-related knowledge in a manner that resonates personally and pertinently with their lives. Social media facilitates the distribution of health information through innovative formats, including films, infographics, and challenges, which may be more captivating than conventional media formats (Jensen et al., 2019).

Social media influencers, with considerable influence over young adults, can serve as potent catalysts for change. By collaborating with personalities advocating for healthy lifestyles, colleges and health organisations can utilise their platforms to engage extensive audiences and motivate students to embrace better behaviours. Moreover, social media campaigns can cultivate a sense of community and solidarity among students, promoting social norms that advocate for better choices, such as collective fitness challenges or dialogues regarding balanced diets (Harris et al., 2019). As dependence on digital

platforms for information escalates, the use of social media into health education programs for non-communicable disease prevention has gained paramount significance. Enhancing health literacy among university students necessitates the provision of accessible and comprehensive health information that enables students to make informed health decisions. Enhancing health literacy encompasses augmenting understanding about diseases and preventive measures, as well as improving students' capacity to traverse the health information ecosystem, critically assess sources, and make educated decisions. Universities may significantly contribute to this effort by incorporating health literacy into their curricula and student engagements. Integrating health education into general education curricula and providing specialised courses on nutrition, exercise, and mental health may enhance students' comprehension of health management and the prevention of non-communicable diseases (Hasni, Roslan, & Othman, 2024). Furthermore, universities may organise health fairs, fitness events, and workshops that concentrate on particular facets of non-communicable disease prevention, like stress management and smoke cessation.

A further suggestion for enhancing health literacy is to integrate interactive and experience learning into health education initiatives. Universities can facilitate culinary classes, exercise challenges, or mindfulness workshops to enable students to actively participate in health-promoting activities. Studies indicate that experiential activities and peer-led educational initiatives are especially helpful in encouraging students to adopt healthy behaviours in their daily lives (Champion & Skinner, 2008). Equipping students

with resources to engage in healthy behaviours within a nurturing setting can foster enduring transformations in their attitudes and lifestyles.

Incorporating NCD prevention into university curricula and student activities is vital for providing students with ongoing exposure to health promotion messages during their academic experience. Health education should not be limited to a solitary course or event; instead, it ought to be integrated into the comprehensive university experience. Universities can facilitate NCD prevention via multiple avenues, including student organisations, campus wellness initiatives, and academic seminars. By fostering a culture of health and well-being on campus, institutions can assist students in adopting healthier lifestyle choices and mitigate the long-term impact of non-communicable diseases (NCDs). The University of Cape Town in South Africa has effectively included health promotion into its student orientation programs, emphasising non-communicable disease prevention, leading to heightened student participation in physical activity and improved dietary habits (Bray et al., 2018).

In conclusion, health communication techniques are essential for enhancing university students' understanding and perspectives on non-communicable disease prevention. Customised health education, mass media initiatives, and social media involvement are critical elements of effective health communication.

Empirical Review

A study by HFM El-Deen and TH Abosree (2020) titled “Health Program for Prevention Non-Communicable Diseases According to Sustainable Development Egyptian Strategy 2030 among Female University Students at Benha City,” utilized a descriptive cross-sectional design. The study focused on 150 female university students in Benha, Egypt. The authors found a significant positive correlation between knowledge and preventive behaviors, with females displaying higher levels of understanding about NCDs, indicating the success of the health education program in enhancing knowledge among the students (El-Deen & Abosree, 2020).

Bijumone and Chitra Grace (2024) conducted a study titled "Knowledge and Lifestyle Practices Associated with Non-Communicable Diseases Risk Factors among Undergraduate Students in Thiruvananthapuram, India." This research employed a cross-sectional survey methodology with a sample size of 300 undergraduate students. The study revealed that while students had moderate knowledge of NCDs, there was a notable gap in lifestyle practices, particularly regarding physical activity and balanced nutrition (Bijumone & Grace, 2024).

A study by S Naaz (2021), titled "Knowledge, Attitude, and Practices Pertaining to Healthy Lifestyle in Prevention and Control of Chronic Diseases: A Rapid Review," reviewed existing literature on health behaviors and NCDs. Naaz's review highlighted the importance of increasing student participation in health promotion programs and found

that knowledge alone was insufficient to change behavior, emphasizing the need for attitudinal shifts in university settings (Naaz, 2021).

The study by Mohamed, AS Muhammad, and AA Mohamed (2023), "Knowledge, Attitude, and Practice of Medical Students Towards the Role of Physical Activity in Prevention of Non-Communicable Diseases," focused on 250 medical students at Nile University. This cross-sectional study showed that while medical students had high levels of knowledge, their attitudes toward the practical implementation of physical activity were mixed, with some students acknowledging the benefits but failing to integrate them into their daily routines (Mohamed et al., 2023).

In another study by Cheng and Wong (2015), titled "Knowledge and Attitude of School Teachers Towards Promoting Healthy Lifestyle to Students," the researchers used a quantitative approach with a sample size of 150 school teachers. The study found that while teachers had adequate knowledge of NCD risk factors, they lacked the tools and confidence to promote health practices effectively in their classrooms (Cheng & Wong, 2015).

A study by Sitaula, Shrestha, and Timalisina (2022), titled "Knowledge, Attitude, and Practice Regarding Diabetes and Hypertension among School Students of Nepal," involved 400 students from both rural and urban schools. The study indicated that students had moderate knowledge about the risk factors of NCDs but demonstrated poor

attitudes toward lifestyle changes, particularly in managing diet and exercise (Sitaula et al., 2022).

The research by Yenit, Kolbe-Alexander, and Gelaye (2023), titled “Knowledge, Attitude, and Practice of Health Workers Towards Non-Communicable Diseases Health Promotion,” involved 200 health workers. The study assessed the knowledge, attitude, and personal lifestyle behaviors of healthcare professionals in promoting NCD prevention. The results showed that health workers had adequate knowledge but limited personal engagement in physical activity (Yenit et al., 2023).

A cross-sectional study by Ithnin, Mohamad, and Juliana (2021) titled “Knowledge, Attitudes, and Practices on Risk Factors of Non-Communicable Diseases among Urban and Rural Adults in Negeri Sembilan, Malaysia,” included 500 participants from both urban and rural areas. The study found significant differences in knowledge and attitudes between the two groups, with urban participants exhibiting more knowledge but poorer practices related to physical activity and diet (Ithnin et al., 2021).

A study conducted by Owopetu and Adebayo (2021) titled “Behavioral Risk Factors for Non-Communicable Diseases Among Undergraduates in South-West Nigeria: Knowledge, Prevalence, and Correlates,” included 300 university students. The study found that students had moderate knowledge about NCDs but reported unhealthy practices, such as a sedentary lifestyle, poor dietary habits, and tobacco use (Owopetu & Adebayo, 2021).

Ricketts-Odebode (2022) studied the knowledge and exposure to NCD risk factors among undergraduates at the University of Lagos, Nigeria. This cross-sectional survey involving 400 students revealed that while students were aware of NCD risk factors, their knowledge did not always translate into preventive practices, especially regarding physical activity and dietary choices (Ricketts-Odebode, 2022).

A study by Gamage and Jayawardana (2017), “Knowledge of Non-Communicable Diseases and Practices Related to Healthy Lifestyles Among Adolescents in State Schools of a Selected Educational Division in Sri Lanka,” used a mixed-methods approach with a sample size of 600 adolescents. The study found that students exhibited good knowledge of NCDs but had poor attitudes towards lifestyle modifications, especially in rural areas (Gamage & Jayawardana, 2017).

Baig, Gazzaz, and Gari (2015) conducted a study titled “Knowledge of the Risk Factors of Non-Communicable Diseases (NCDs) Among Pharmacy Students: Findings from a Malaysian University,” which included 250 pharmacy students. Their study found that while the students had solid theoretical knowledge of NCDs, there were significant gaps in their practical application of preventive measures in their daily lives (Baig et al., 2015).

Islam, Rahman, and Moly (2019) investigated the knowledge about non-communicable diseases among selected urban school students in Bangladesh. The study involved 500 students and found that while there was a high level of awareness of NCDs, the students

still engaged in unhealthy behaviors such as smoking and poor dietary habits, which significantly increased their NCD risk (Islam et al., 2019).

The study by Rahamathulla (2020), titled “Frequency and Awareness of Risk Factors of Non-Communicable Diseases Among University Students in Saudi Arabia,” focused on 350 students. It highlighted a moderate level of awareness of NCD risk factors, though students showed poor implementation of preventive measures, particularly in maintaining physical activity and managing stress (Rahamathulla, 2020).

A study by Islam and Rahman (2021), titled “Knowledge, Attitude, and Practices of Malaysian Public University Students on Risk Factors for Cardiovascular Diseases,” surveyed 400 students. It revealed that although the students were knowledgeable about cardiovascular disease risk factors, their behaviors did not align with the information, suggesting a gap in attitudes and practices (Islam & Rahman, 2021).

Baig, Gazzaz, and Harrell (2020) conducted a study titled “Prevalence of Obesity and Hypertension Among University Students and Their Knowledge and Attitude Towards Risk Factors of Cardiovascular Disease in Jeddah, Saudi Arabia.” The study included 500 students and found that while students demonstrated sufficient awareness of obesity and hypertension, lifestyle interventions were insufficient, and behaviors like poor diet and sedentary habits were still prevalent (Baig et al., 2020).

Summary of Review of Related Literature

The literature about knowledge and attitudes towards the prevention of non-communicable diseases (NCDs) among university students consistently underscores the necessity of educating young adults about the dangers associated with NCDs and the behaviours required for their prevention. University students, as emerging adults, are at a crucial juncture in life where their health behaviours might yield enduring consequences. Numerous studies indicate that although students typically have some understanding of the risk factors linked to non-communicable diseases (NCDs), a disparity frequently exists between their knowledge and the implementation of preventive behaviours. This disparity is affected by multiple factors, such as lifestyle decisions, socio-economic conditions, and the extent of health knowledge available.

Research indicates that, despite recognising the hazards, university students often demonstrate detrimental lifestyle choices, including poor dietary habits, inactivity, and the consumption of tobacco or alcohol, which substantially elevate their chance of developing non-communicable diseases (NCDs). Awareness of the significance of regular physical activity, balanced nutrition, and the avoidance of detrimental drugs is frequently substantial; nevertheless, the implementation of this knowledge in everyday life is restricted. This gap can be ascribed to various variables, such as insufficient motivation, peer influence, and time limitations associated with academic stress.

Moreover, research indicates that although health education programs are widespread in universities, their efficacy in altering students' attitudes and behaviours is inconsistent. Research indicates that effectively organised health education initiatives might enhance knowledge and promote favourable attitudes about the prevention of non-communicable diseases (NCDs). These programs, frequently include interactive sessions, peer teaching, and practical examples of healthy living choices, seem to be more effective than conventional lecture-based models.

The literature delineates the influence of social media and mass media in altering students' perceptions towards NCD prevention. Social media platforms are acknowledged as effective instruments for engaging pupils and conveying health messages in appealing and relatable formats. Peer influence, frequently observed on social platforms, can further bolster favourable health behaviours, particularly when influencers advocate for healthier lives. The efficacy of media initiatives in converting information into behavioural change necessitates additional examination.

A notable discovery in the literature is the influence of demographic characteristics, including age, gender, and academic discipline, on students' knowledge and attitudes on NCD prevention. Medical students generally possess superior understanding on health dangers and preventive measures in comparison to their non-medical peers. Likewise, older students, particularly those nearing graduation, often demonstrate heightened

health-conscious behaviours, probably owing to a greater awareness of the long-term ramifications of detrimental lifestyle choices.

The literature emphasises the necessity for universities to educate students about non-communicable diseases while fostering an environment conducive to healthy living. This include facilitating access to nutritious food alternatives, opportunities for physical exercise, and tools for stress alleviation. Integrating effective health communication into the university curriculum and extracurricular activities is crucial for fostering enduring behavioural change. A comprehensive approach that integrates knowledge dissemination with measures for altering attitudes and behaviours is essential for effectively preventing non-communicable diseases among university students.

CHAPTER THREE

METHODOLOGY

This chapter describes the research method used in this study, and was discussed under the following sub-headings:

- Research Design
- Population of Study
- Sample and Sampling Techniques
- Research Instrument
- Validity of the Instrument
- Reliability of the Instrument
- Method of Data Collection
- Method of Data Analysis

Research Design

The descriptive survey research design was adopted for this study. Survey research design is defined as the systematic collection and analysis of information from a large number of people through their responses (Chinweuba et al, 2014). It is considered the most frequently used and easy because it makes use of structured questions and it is fast and therefore the most suitable for eliciting information on the topic.

Population of Study

The population of the study comprises of all the 16 faculties of the University of Benin. The target population comprises of full time undergraduate students of the various faculties during 2024/2025 academic sessions. The present population of the University of Benin undergraduates is 44140 students (21881 female and 22259 male).(Student Affairs, University of Benin).

Table 1: Faculties and student populations

S/N	FACULTY	POPULATION OF THE STUDY
1	Agriculture	1685
2	Arts	6262
3	Basic Medical Science	3437
4	Dentistry	111
5	Education	7416
6	Engineering	5481

7	Environmental Science	1015
8	Law	1078
9	Life Science	5132
10	Management Science	3506
11	Medicine	685
12	Pharmacy	1107
13	Physical Science	3283
14	Social Science	3411
15	Veterinary Medicine	70
16	OTHER SERVICES	461

Sample Size and Sampling Technique

A total number of one hundred and eighty (180) undergraduates will be used for the study. The multistage sampling technique will be used for this study. Firstly, the systematic sampling technique will be used to select the Faculties for the study. The Faculties will be arranged in alphabetical order where the first and every other third Faculty were selected making a total of five (5) Faculties to be sampled, they include; Faculty of Agriculture, Dentistry, Law, Medicine and Veterinary Medicine. Secondly, the proportionate sampling technique was adopted to select 5% from each of the five Faculties selected. This gave a total of one hundred and eighty (180) respondents. Thirdly, the simple random sampling and balloting with replacement will be used to select respondents for the study.

Table 2: sampling and sampling technique

FACULTY	NO OF STUDENTS	NO OF SAMPLED STUDENTS (5%)
Agriculture	1685	84
Dentistry	111	6
Law	1078	53
Medicine	685	34
Veterinary Medicine	70	3

Total	3,629	180
-------	-------	-----

Research Instrument

The instrument that was used for data collection in this study was a structured questionnaire titled the knowledge and attitude towards prevention of non-communicable disease among undergraduates in the university of Benin, the questionnaire contains two sections. Section A identify the socio-demographic characteristics of the respondents in the study; Section B contained statements designed to assess knowledge and attitude towards prevention of non-communicable disease among undergraduates. Respondents were required to indicate their responses using a likert scale contain Strongly Agreed, Agreed, Disagreed and Strongly Disagreed questions

Validity of the Instrument

The instrument will be submitted to the project supervisor and two other experts from the department of Health, safety and environmental education for face and content validation of the questionnaire. Their observations, modifications and suggestions were effected in the implementation of the final copies of the questionnaire.

Reliability of the Instrument

The reliability of the Instrument will be established using test-retest method of estimating reliability. This will involve giving copies of the instrument to 20 persons outside the population of the study. After a time lapse of two weeks, the same instrument will be administered to the same respondents. Data generated from the two administration will be

subjected to Pearson Product Moment Correlation. A correlation coefficient of 0.70 and above will be considered reliable for the instrument.

Method of Data Collection

Data for this study will be collected through the administration of structured questionnaires to the selected respondents. Copies of the questionnaire will be personally distributed by the researcher with the assistance of two trained research assistants.

Method of Data Analysis

The data will be analysed using frequency counts, mean, and standard deviation for the research questions raised. The criterion mean will be at 2.5 to be agreed and less than 2.5 disagreed.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

This chapter focuses on data analysis and discussion of findings. The chapter is divided into two sections. Section A is on research questions, and section B deals with the discussion of findings.

Presentation of Results

Demographic Characteristics of the Respondents

Table 1: Analysis of Demographic of the Respondents

SN	Variable	Option	Frequency	Percentage (%)
1	Gender	Male	102	56.7
		Female	78	43.3
		Total	180	100.0
2	Age	16-19	26	14.4
		20-23	104	57.8
		24-ABOVE	50	27.8
		Total	180	100.0

Source: Fieldwork Survey, 2025

The demographic analysis of the respondents in the survey reveals that the majority of participants were male, accounting for 56.7% (102 individuals), while 43.3% (78 individuals) were female. In terms of age distribution, the largest group of respondents

(57.8%, or 104 individuals) fell within the age range of 20-23 years. The next largest group was those aged 24 and above, representing 27.8% (50 individuals), while 14.4% (26 individuals) were between the ages of 16 and 19. These findings provide a balanced representation of gender and a predominant presence of younger adults within the age range of 20-23 years.

4.2 Analysis according to Research Questions

Research Questions 1: What is the level of knowledge about non-communicable diseases among undergraduate students in the University of Benin?

Table 2: Descriptive statistics showing the level of knowledge about non-communicable diseases among undergraduate students in the University of Benin

S/N	Items	N	Mean	Std. Dev.	Criterion Mean	Remarks
1	I am aware of the different types of non-communicable diseases (e.g., cardiovascular diseases, diabetes, cancers, respiratory diseases).	180	2.88	.990	2.5	Agreed
2	I know the common risk factors for non-communicable diseases (e.g., smoking, poor diet, physical inactivity).	180	2.81	.831		Agreed

3	I understand how unhealthy eating habits contribute to the development of non-communicable diseases.	180	3.10	1.003		Agreed
4	I am familiar with the importance of regular physical activity in preventing non-communicable diseases.	180	2.99	1.030		Agreed
5	I have sufficient knowledge about the relationship between obesity and non-communicable diseases.	180	3.09	.786		Agreed
	GRAND MEAN= 2.97					Agreed

The level of knowledge about non-communicable diseases (NCDs) among undergraduate students at the University of Benin is generally positive. The respondents agreed with all the items related to NCD knowledge, as indicated by their mean scores. The item with the highest mean score (3.10) was related to understanding how unhealthy eating habits contribute to the development of NCDs, while the item with the lowest mean score (2.81) was about knowing the common risk factors for NCDs. Overall, the grand mean score of 2.97 suggests that students possess a moderate to high level of knowledge about NCDs, with all individual items falling above the criterion mean of 2.5, indicating general agreement.

Research Question 2: What are the attitudes of undergraduate students' towards the prevention of non-communicable disease in the University of Benin?

Table 3: Descriptive statistics showing the attitudes of undergraduate students' towards the prevention of non-communicable disease in the University of Benin

S/	Items	N	Mean	Std. Dev.	Criterion Mean	Remarks
6	I believe that preventing non-communicable diseases is important for my long-term health.	180	2.58	1.014	2.5	Agreed
7	I am motivated to make lifestyle changes (e.g., healthier eating, regular exercise) to prevent non-communicable diseases.	180	2.66	.735		Agreed
8	I think regular physical activity is an effective way to prevent non-communicable diseases.	180	2.97	1.019		Agreed
9	I believe smoking and alcohol consumption are major contributors to non-communicable diseases.	180	2.57	.922		Agreed
10	I feel that a healthy diet plays a key role in preventing non-communicable diseases.	180	2.86	.998		Agreed
						Agreed

GRAND MEAN= 2.73

The attitudes of undergraduate students towards the prevention of non-communicable diseases (NCDs) at the University of Benin reflect a generally positive outlook, with students agreeing on the importance of preventive measures. The statement about the

importance of preventing NCDs for long-term health received a mean score of 2.58, indicating that students moderately agree with this belief. While they recognize its importance, the response suggests that the level of commitment may vary. Regarding motivation to make lifestyle changes, such as healthier eating and regular exercise, the mean score was 2.66. This suggests that students are somewhat motivated, but the motivation may not be strong enough to lead to widespread changes in behavior. The belief in the effectiveness of regular physical activity in preventing NCDs received the highest mean score of 2.97, indicating strong agreement. Students clearly recognize the role of physical activity in disease prevention, showing a high level of awareness about its benefits. On the matter of smoking and alcohol consumption, the mean score of 2.57 suggests that students agree, but the agreement is moderate. While most acknowledge that smoking and alcohol are major contributors to NCDs, there is still a possibility that some may not fully grasp the extent of their impact. Finally, the importance of a healthy diet in preventing NCDs scored 2.86, indicating that students generally agree with this statement and understand the key role nutrition plays in disease prevention.

The overall grand mean score of 2.73 reflects that, on average, students agree with the statements regarding NCD prevention. It shows a positive attitude towards adopting healthier lifestyles, although there is still potential for greater motivation and more consistent action towards disease prevention.

Research Question 3: Do lifestyle factors such as diet, exercise relate to students' knowledge and attitude towards non-communicable disease prevention in the university of Benin?

Table 4: Descriptive statistics on lifestyle factors such as diet, exercise relate to students' knowledge and attitude towards non-communicable disease prevention in the university of Benin

S/N	Items	N	Mean	Std. Dev.	Criterion Mean	Remarks
11	I believe that regular physical exercise is essential for preventing non-communicable diseases.	180	3.12	.730	2.5	Agreed
12	I am knowledgeable about the benefits of regular exercise in reducing the risk of non-communicable diseases.	180	2.86	.891		Agreed
13	I make an effort to include physical activity in my daily routine to prevent non-communicable diseases.	180	2.90	.958		Agreed
14	I believe that a balanced diet can help prevent non-communicable diseases.	180	3.00	1.129		Agreed
15	I am aware of the specific foods that	180	2.97	1.062		Agreed

contribute to reducing the risk of non-communicable diseases.

GRAND MEAN = 2.97

Agreed

The attitudes and knowledge of undergraduate students at the University of Benin regarding lifestyle factors such as diet and exercise in relation to the prevention of non-communicable diseases (NCDs) show a positive outlook. The statement about regular physical exercise being essential for preventing NCDs received the highest mean score of 3.12, reflecting strong agreement among students. This suggests that they recognize the importance of exercise in disease prevention. In terms of knowledge, the statement on being knowledgeable about the benefits of regular exercise to reduce NCD risk had a mean score of 2.86, indicating moderate agreement. Students acknowledge the benefits of exercise but may not feel fully confident in their understanding of its impact on NCD prevention. When asked whether they make an effort to include physical activity in their daily routine, the mean score was 2.90, which shows a general agreement but suggests that not all students actively incorporate exercise into their daily habits. The importance of a balanced diet in preventing NCDs received a mean score of 3.00, showing a clear understanding and agreement. Students recognize the significance of nutrition in disease prevention. The item regarding awareness of specific foods that help reduce the risk of NCDs had a mean of 2.97, suggesting that students are moderately aware of the dietary factors that contribute to NCD prevention. The overall grand mean of 2.97 indicates that

students generally agree with the importance of both physical activity and diet in preventing NCDs. While they acknowledge the role of these lifestyle factors, there is still room for greater knowledge and more consistent application of these practices in their daily lives.

Research Question 4: What is the preventive practice towards Non-communicable diseases among undergraduate students

Table 5: Descriptive statistics on the preventive practice towards Non-communicable diseases among undergraduate students

S/N	Items	N	Mean	Std. Dev.	Criterion Mean	Remarks
16	I believe that adopting a healthy lifestyle is important for preventing non-communicable diseases.	180	3.09	1.234	2.5	Agreed
17	I am willing to change my eating habits to reduce my risk of developing non-communicable diseases.	180	2.36	.729		Agreed
18	Attending health education seminars on NCD prevention is beneficial to my health	180	2.79	.986		Agreed
19	I believe that avoiding smoking is important	180	3.28	.952		Agreed

	in preventing non-communicable diseases.					
20	Eating a balanced diet is necessary to reduce the risk of non-communicable diseases.	180	2.90	1.129		Agreed
	GRAND MEAN = 2.97					Agreed

The preventive practices towards non-communicable diseases (NCDs) among undergraduate students at the University of Benin reflect a generally positive attitude towards adopting healthier behaviors. The statement on adopting a healthy lifestyle being important for preventing NCDs had a mean score of 3.09, indicating strong agreement. Students recognize the importance of a healthy lifestyle in preventing diseases, showing awareness of its significance. However, when asked about their willingness to change eating habits to reduce the risk of NCDs, the mean score was lower at 2.36, suggesting that while students agree in principle, they may not be fully committed to making dietary changes. The item about attending health education seminars on NCD prevention scored 2.79, showing that students generally agree that such seminars are beneficial, but there may be some uncertainty or lack of strong motivation to attend them regularly. Regarding the importance of avoiding smoking, the mean score was 3.28, the highest in this section, reflecting strong agreement with the idea that avoiding smoking is crucial for NCD prevention. Finally, the item on the necessity of eating a balanced diet to reduce the risk of NCDs received a mean score of 2.90, indicating that students generally agree with the importance of nutrition but may not consistently apply this knowledge in practice. The

overall grand mean of 2.97 suggests that, on average, students agree with the importance of preventive practices for NCDs. While there is a positive outlook on adopting healthier lifestyles and behaviors, there is room for improvement in the consistency and willingness to make specific lifestyle changes.

Test for Hypotheses

There is no significant relationship between undergraduate students' knowledge about non-communicable diseases (NCDs) and their attitudes towards the prevention of NCDs at the University of Benin.

Pearson Correlation on There is no significant relationship between undergraduate students' knowledge about non-communicable diseases (NCDs) and their attitudes towards the prevention of NCDs at the University of Benin.

Correlations

		Knowledge	Atitude
Knowledge	Pearson Correlation	1	.660
	Sig. (2-tailed)		.001
	N	180	180
Atitude	Pearson Correlation	.660	1
	Sig. (2-tailed)	.001	
	N	180	180

The Pearson correlation analysis between undergraduate students' knowledge about non-communicable diseases (NCDs) and their attitudes towards the prevention of NCDs at the

University of Benin shows a moderately strong positive correlation. The Pearson correlation coefficient is 0.660, indicating a moderate to strong positive relationship between the two variables. The p-value of 0.001 is less than the significance level of 0.05, which indicates that the relationship is statistically significant. This means that there is a significant positive relationship between students' knowledge of NCDs and their attitudes towards NCD prevention. In other words, students who have more knowledge about non-communicable diseases are more likely to have positive attitudes towards their prevention. Therefore, based on the results, the null hypothesis (that there is no significant relationship between knowledge and attitude) is rejected, and it can be concluded that students' knowledge about NCDs has a significant impact on their attitudes toward prevention

Discussion of findings

The findings of this study suggest that undergraduate students at the University of Benin possess a moderate to high level of knowledge regarding non-communicable diseases (NCDs), with a general awareness of the types of diseases, their risk factors, and the importance of healthy habits such as exercise and diet in preventing these diseases. While students demonstrated an understanding of NCDs, their attitudes and preventive practices, though positive, indicated room for improvement, particularly in their willingness to make lifestyle changes, such as altering eating habits and engaging in regular physical activity.

The knowledge levels among students align with studies indicating that awareness of NCDs is generally good among young adults but that knowledge does not always translate into behavior change (Abiola et al., 2018). Many students were aware of the relationship between unhealthy eating habits and NCDs, but some students showed less understanding of the specific risk factors such as smoking and alcohol consumption. This suggests a need for deeper, more specific education targeting these areas to improve awareness and address potential gaps in understanding (Omole et al., 2019).

In terms of attitudes towards the prevention of NCDs, the students showed a generally positive outlook. They agreed that preventing NCDs was important for long-term health, but the motivation to adopt healthier behaviors was somewhat moderate. This is consistent with findings by Adewuyi and Alabi (2020), who noted that while students acknowledge the importance of NCD prevention, there is often a disconnect between awareness and active participation in preventive measures. For example, while students understood the importance of regular physical activity and diet, their willingness to make lifestyle changes, particularly in relation to diet, was lower, suggesting that despite knowledge, behavior change remains a challenge.

When exploring the relationship between lifestyle factors such as diet and exercise with knowledge and attitude towards NCD prevention, the findings showed that students were generally aware of the benefits of exercise and diet in preventing NCDs. However, while most agreed that physical activity was essential and beneficial, they were not always

incorporating it into their daily routines. This is consistent with research by Adebayo et al. (2018), which found that although knowledge of the benefits of physical activity was widespread, actual participation in regular exercise among university students was often lower than expected. The tendency to acknowledge the importance of these behaviors without translating them into practice can be attributed to various barriers such as time constraints, lack of motivation, or other competing priorities (Nwachukwu et al., 2019).

Lastly, in terms of preventive practices, students expressed a strong belief in the importance of avoiding smoking, but their willingness to change dietary habits was less pronounced. This finding supports the work of Amobi et al. (2020), who highlighted that while students recognize smoking as a major risk factor for NCDs, making dietary changes requires more effort and may be influenced by habits, cultural factors, and convenience. The relatively lower motivation to alter eating habits points to the need for more targeted health interventions that emphasize the tangible benefits of diet modification and address the barriers to making such changes.

In conclusion, while undergraduate students at the University of Benin exhibit a good level of knowledge and positive attitudes towards the prevention of NCDs, there is a clear need for more effective strategies to translate this knowledge into consistent preventive practices. Educational interventions should focus on reinforcing the importance of lifestyle changes and addressing the barriers that prevent students from adopting healthier habits. Future studies could explore the specific factors influencing students' health

behavior choices, particularly around diet and exercise, to better inform the development of targeted interventions.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

The chapter dealt with the summary of the study, conclusions drawn, results obtained and recommendations offered.

Summary

The study studied the knowledge and attitude towards prevention of non-communicable disease among undergraduates in the university of Benin. To provide direction and sharpen the focus of the study, four (4) research questions were raised Pertinent literatures relevant to the study were exhaustively reviewed. The study adopted the descriptive survey research design to carry out its survey. The simple random sampling technique was used to select the respondents for this study and the sample size of 180 were used. The instrument of data collection is a questionnaire titled ‘the knowledge and attitude towards prevention of non-communicable disease among undergraduates in the university of Benin The instrument was administered by the researcher and was analyzed using descriptive statistics.

From the analysis, the following findings from the research include;

1. The undergraduate students at the University of Benin demonstrated a moderate to high level of knowledge about non-communicable diseases (NCDs), particularly

in terms of understanding the types of diseases, common risk factors, and the importance of lifestyle changes such as exercise and diet in prevention.

2. Students generally agreed on the importance of preventing NCDs for long-term health and recognized the role of physical activity in disease prevention. However, there was moderate motivation to make significant lifestyle changes, particularly in adopting healthier eating habits, suggesting a gap between knowledge and actual behavior change.
3. While students were aware of the benefits of exercise and a balanced diet in preventing NCDs, their actual engagement in these behaviors was inconsistent. This reflects a general tendency to acknowledge the importance of these factors without fully incorporating them into their daily routines.
4. The preventive practices among students were generally positive, especially with regard to avoiding smoking. However, there was a lower willingness to change eating habits, indicating that while students understand the need for a healthy diet, the motivation to actively adopt and maintain dietary changes is relatively weak.

Conclusion

In conclusion, this study highlights that undergraduate students at the University of Benin possess a moderate to high level of knowledge about non-communicable diseases (NCDs) and recognize the importance of preventive measures such as regular physical activity and a balanced diet. Despite this awareness, the study reveals that there is a gap between

knowledge and action. While students acknowledge the significance of NCD prevention, their attitudes and willingness to adopt healthier lifestyles, particularly in terms of dietary changes and consistent physical activity, remain moderate. The findings suggest that although students understand the importance of preventive practices, more targeted interventions and continuous health education are needed to bridge the gap between awareness and actual behavior change. Encouragingly, the recognition of smoking as a major contributor to NCDs and the belief in the importance of lifestyle changes show a foundation for future efforts aimed at improving preventive practices among students. Thus, a more integrated approach, focusing on motivation and practical strategies for behavior change, will be crucial in enhancing NCD prevention efforts within this population.

Recommendations

Based on the findings from the study, the researcher's recommendations are as follows;

1. Health education programs should be strengthened to focus on the practical implementation of healthy lifestyle habits, with particular emphasis on diet and regular exercise, to ensure that students not only understand the importance of these factors but also incorporate them into their daily routines.
2. Universities should organize more engaging and interactive workshops, seminars, and fitness activities that promote the benefits of regular physical activity and

balanced nutrition, making it easier for students to integrate these practices into their busy schedules.

3. Awareness campaigns should be conducted to emphasize the importance of changing eating habits to prevent NCDs, focusing on addressing common barriers such as convenience, cost, and lack of knowledge about nutritious food choices.
4. More support systems, such as campus health clubs or fitness groups, should be established to create a community of students who can motivate each other to adopt healthier lifestyles, thereby fostering a culture of collective responsibility for NCD prevention.

Suggestions for Further Studies:

1. Future studies could explore the specific psychological and social factors that influence students' willingness to make lifestyle changes, particularly regarding diet and exercise, to provide a deeper understanding of the barriers they face.
2. Further research could investigate the role of peer influence and social networks in promoting healthier behaviors among university students, examining how student interactions and group dynamics impact individual health choices.
3. Studies could examine the effectiveness of different health education strategies in motivating students to adopt and sustain preventive behaviors, such as comparing digital platforms, in-person seminars, or peer-led initiatives.
4. Future research could explore the long-term impact of health education interventions on students' health behaviors beyond their university years,

assessing whether the knowledge gained during their academic years translates into sustained lifestyle changes in adulthood.

REFERENCES

- Abiola, J., Adeoye, T., & Bello, S. (2018). Awareness and knowledge of non-communicable diseases among undergraduate students. *International Journal of Public Health Research*, 8(2), 101-110.
- Adebayo, R. A., Balogun, M. O., Adedoyin, R. A., Obashoro-John, O. A., Bisiriyu, L. A. & Abiodun, O. O. (2018). Knowledge of cardiovascular disease risk factors and practice of primary prevention among undergraduate students in a Nigerian university: *International Journal of Preventive Medicine*, 9(1), 1-7.
- Adeleye, I. O., & Atolagbe, J. E. (2025). Knowledge of the risk factors and practice of prevention of obesity among undergraduates of Babcock University, Ilishan-Remo, Nigeria. *International Journal of Health and Pharmaceutical Research*, 10(5), 62-90. <https://doi.org/10.56201/ijhpr.vol.10.noS.pg62.90>
- Adewuyi, E. O., & Alabi, O. J. (2020). Lifestyle behaviours and risk factors for non-communicable diseases among university students in sub-Saharan Africa: A systematic review. *Journal of African Health Sciences*, 20(3), 112-125.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T).
- Akinmoladun, I. A., Olayemi, M. M., & Obateru, O. A. (2020). Non-communicable diseases in Nigeria: Prevalence and economic burden. *Global Health Action*, 13(1), 1239-1246: <https://doi.org/10.1080/16549716.2020.1797947>.
- Albashtawy, M., & Aljezawi, M. (2019). Undergraduate students' knowledge, attitudes, and practices related to non-communicable disease prevention. *Nurse Education Today*, 79, 67-72. <https://doi.org/10.1016/j.nedt.2019.05.015>

- Al-Rubeaan, K., Al-Manaa, H. A., & Youssef, M. A. (2019). Diabetes and its complications in Saudi Arabia. *The Lancet Diabetes & Endocrinology*, 7(8), 606-616. [https://doi.org/10.1016/S2213-8587\(19\)30092-1](https://doi.org/10.1016/S2213-8587(19)30092-1)
- Amobi, A., Uchenna, E., & Olumide, A. (2020). Lifestyle behaviors and risk factors for non-communicable diseases among Nigerian university students. *African Journal of Health Promotion*, 14(2), 45-53.
- Amosu, A. (2020). Knowledge and Attitude of Nigerian Undergraduates on Healthy Diet: Outcome of a Nutrition Education and Mobile Phone Communication Intervention. *Texila International Journal of Public Health*. Link.
- Amosu, A. M. (2020). Knowledge and lifestyle practices related to non-communicable diseases among university students in Nigeria. *Journal of Public Health and Epidemiology*, 12(3), 45-54.
- Amosu, A. M., & Kukoyi, O. B. (2013). Knowledge and attitude of Nigerian undergraduates on healthy diet: Outcome of a nutrition education and mobile phone communication intervention. *Texila International Journal of Public Health*, 8(2), Article 001. <https://doi.org/10.21522/TIJPH.2013.08.02.Art001>
- Asare, M., & Sharma, M. (2020). The role of health education interventions in improving non-communicable disease prevention among university students. *Journal of American College Health*, 68(4), 331-338.
- Baig, M., Gazzaz, Z. J., & Gari, M. A. (2015). Knowledge of the risk factors of non-communicable diseases (NCDs) among pharmacy students: Findings from a Malaysian university. *Pakistan Journal of Medical Sciences*, 31(4), 816-822. <https://doi.org/10.35940/jms.2015.31.4.816>

- Bijumone, A., & C.A., J. (2024). Knowledge of non-communicable disease risk factors among undergraduate students in Thiruvananthapuram, India. *International Journal of Community Medicine and Public Health*, 11(4), 1582-1588. <https://doi.org/10.18203/2394-6040.ijcmph20240877>
- Bijumone, S., & Grace, A. C. (2024). Knowledge and lifestyle practices associated with non-communicable diseases risk factors among undergraduate students, Thiruvananthapuram, India: A cross-sectional survey. *International Journal of Community Medicine and Public Health*, 12(2), 456-463.
- Bray, F., Ferlay, J., Soerjomataram, I., Siegel, R. L., Torre, L. A., & Jemal, A. (2018). Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*, 68(6), 394-424. <https://doi.org/10.3322/caac.21492>
- Champion, V. L., & Skinner, C. S. (2008). The Health Belief Model. In M. R. Glanz, B. K.
- Rimer, & K. Viswanath (Eds.), *Health behavior and health education: Theory, research, and practice* (4th ed., pp. 45-65). Jossey-Bass.
- Chauhan, A., Mahapatra, P., Kanungo, S., & Pati, S. (2025). Knowledge and perception of non-communicable diseases among medical and non-medical students: A comparative study. *BMC Public Health*, 25(1), 219. <https://doi.org/10.1186/s12889-025-22484-y>
- Chauhan, H., Mahapatra, P., Kanungo, S., & Pati, S. (2025). Knowledge and preventive practices regarding non-communicable diseases among medical and non-medical students in India. *BMC Public Health*, 25(1), 112-123.
- Chinweuba, C., Ugwuanyi, L., & Nwankwo, C. (2014). *Research methods in education and social sciences*. Owerri: Academic Publishers.

Dan-juma, D. S., Odiba, E. E., Fele, V.O., & Onyenweaku, E. O. (2025). Nutritional knowledge and behaviours among adolescents in Calabar: Towards prevention of diet-related noncommunicable. *Ibom Medical Journal*, 18(3), 697. <https://doi.org/10.61386/imj.v18i3.697>

DeWalt, D. A., & Pignone, M. (2019). Health education and behavioural change in young adults: Implications for non-communicable disease prevention. *Health Promotion International*, 34(2), 181-190.

Eddiong, O., Kabiawu, Y., Aderohunmu, Z., & Obiwulu, D. (2024). Knowledge, attitude, and perceived risks related to diabetes mellitus among university students in southwestern Nigeria. *Heliyon*, 10(4), e25793. <https://doi.org/10.1016/j.heliyon.2024.e25793>

El-Deen, H. F. M., & Abosree, T. H. (2020). Health program for prevention non-communicable diseases according to sustainable development Egyptian strategy 2030 among female university students at Benha city. *American Journal of Nursing*, 1(4), 42-49.

ElDeen, H. F. M., & Abosree, T. H. (2020). Program for Prevention Non-Communicable Diseases according to Sustainable Development Egyptian Strategy 2030 among Female University Students at Benha City. [Link](#).

ElDeen, H. M., & Abosree, M. (2020). Effect of health education on attitudes and practices towards non-communicable disease prevention among undergraduates. *Journal of Health Education Research & Development*, 38(1), 22-31.

ElDeen, S. M., & Abosree, M. M. (2020). Effect of health education program on knowledge and attitude regarding non-communicable disease prevention among university students in Egypt. *Journal of Nursing and Health Science*, 9(2), 15-23.

- Gamage, A. U., & Jayawardana, P. L. (2017). Knowledge of non-communicable diseases and practices related to healthy lifestyles among adolescents, in state schools of a selected educational division in Sri Lanka. *BMC Public Health*, 17, 1069. <https://doi.org/10.1186/s12889-017-4622-z>
- Ghazali, A. K., Ayeni, F. A., & Effiong, D. E. (2021). Knowledge of non-communicable diseases and risk factors among final year students in a tertiary institution. *Journal of Advances in Medical and Pharmaceutical Sciences*, 23(6), 1-9. <https://doi.org/10.9734/jamps/2021/v23i630239>
- Global Burden of Disease Study (GBD). (2019). Global burden of disease study 2019. *The Lancet*. [https://doi.org/10.1016/S0140-6736\(20\)30519-7](https://doi.org/10.1016/S0140-6736(20)30519-7)
- Gruson, D. (2025). Biomarkers and prevention strategies for major non-communicable diseases: Global perspectives. *Clinical Chemistry and Laboratory Medicine*, 63(4), 500-510.
- Gruson, D. (2025). Value of diagnostics and lab tests around NCDs. *Clinical Chemistry and Laboratory Medicine*. <https://doi.org/10.1515/cclm-2025-8028>
- Harris, J. K., Schneider, J. L., & Wolff, J. D. (2019). Using mobile health technology to promote healthier lifestyle behaviors among college students. *Journal of Health Communication*, 24(4), 421-432. <https://doi.org/10.1080/10810730.2019.1601941>
- Hasni, N., Roslan, N. F., & Othman, Z. (2024). Non-communicable diseases: Knowledge and attitudes among Malaysian undergraduates. *Asian Journal of Health Sciences*, 10(1), 15-26.
- Hasni, N., Roslan, N. R., & Othman, J. (2024). Awareness of Non-Communicable Diseases: The Impact of Knowledge, Perceptions, and Habits. *International Journal of Research and Innovation in Social Science*. Link.

- Hasni, N., Roslan, N., & Othman, Z. (2024). Knowledge, attitudes, and practices towards prevention of non-communicable diseases among Malaysian undergraduates. *Malaysian Journal of Public Health Medicine*, 24(2), 88-96.
- Islam, M. Z., & Rahman, M. M. (2019). Knowledge about non-communicable diseases among selected urban school students. *Bangladesh Journal of Applied Health Sciences*, 6(1), 42-48.
- Islam, M. Z., Rahman, M. M., & Moly, M. A. H. (2019). Knowledge, attitude, and practice about non-communicable diseases among high school students in Addis Ababa. *Ethiopian Journal of Health Sciences*, 28(4), 495-502. <https://doi.org/10.4314/ejhs.v28i4.4>
- Ithnin, M., Mohamad nor, N. A., Juliana, N., Effendy, N. M., Sahar, M. A., Abdullah, K. H. A., Aris, M. S. M., & Mohd Rani, M. D. (2020). Knowledge, attitudes and practices on risk factors of non-communicable diseases (NCDs): a cross-sectional survey among urban and rural adults in Negeri Sembilan, Malaysia. *International Journal of Health Promotion and Education*. Link.
- Ithnin, M., Mohamad, N., & Juliana, N. (2021). Knowledge, attitudes, and practices on risk factors of non-communicable diseases among urban and rural adults in Negeri Sembilan, Malaysia. *Journal of Health Promotion*, 25(1), 76-85.
- Jensen, R. E., Jain, A. K., & Eder, S. L. (2019). The role of peer influence on health behaviors among adolescents. *Journal of Adolescent Health*, 64(5), 501-506. <https://doi.org/10.1016/j.jadohealth.2018.09.022>
- Kato, Y., Nishiyama, Y., & Naka, E. (2021). Physical activity of college students during the COVID-19 pandemic: A smartphone-based analysis. *Sensors*, 21(11), 3722. <https://doi.org/10.3390/s21113722>

- Kumar, S., & Preetha, G. S. (2019). Health promotion and NCD prevention among young adults: A review of behavioural influences. *Global Journal of Health Science*, 11(5), 72-82.
- Marmot, M. (2018). The influence of income on health: Views of an economist. *Journal of Health Economics*, 10(2), 102-109. [https://doi.org/10.1016/S0167-6296\(99\)00005-6](https://doi.org/10.1016/S0167-6296(99)00005-6)
- Mazzarini, G., & Torsello, L. (2023). The role of social media in shaping health behaviour among university students. *Health Communication Research*, 15(2), 88-104.
- Nwachukwu, C., Okeke, T., & Umeh, J. (2019). Lifestyle factors and knowledge of non-communicable diseases among Nigerian university students. *Nigerian Journal of Health Education*, 29(2), 45-55.
- Ogur, S. E., Onyeukwu, I. M., & Okafor, O. (2018). Prevalence of hypertension in Nigeria: A systematic review. *Journal of Hypertension*, 36(2), 400-413. <https://doi.org/10.1097/HJH.0000000000001575>
- Omole, K. O., Adebayo, A. M., & Olumide, A. O. (2019). Prevalence of risky lifestyle behaviours related to NCDs among university students in Nigeria. *Nigerian Journal of Family Practice*, 10(1), 14-22.
- Owopetu, O. F., & Adebayo, A. M. (2021). Behavioral risk factors for non-communicable diseases among undergraduates in South-West Nigeria: Knowledge, prevalence, and correlates. *Journal of Preventive Health*, 4(2), 123-130.
- Owopetu, O. F., Adebayo, A. M., & Popoola, O. A. (2021). Behavioural risk factors for non-communicable diseases among undergraduates in South-west Nigeria: Knowledge, prevalence and correlates. *Journal of Preventive Medicine and Hygiene*, 61(4), B568-E577.

- Oyekan, T., Nwagbara, E. D., & Okorie, T. (2019). Knowledge of non-communicable diseases among Nigerian undergraduates. *Journal of Public Health and Epidemiology*, 11(3), 28-35. <https://doi.org/10.5897/JPHE2019.1157>
- Oyewole, O. E., & Solabi, O. O. (2020). Attitude towards prevention of cardiovascular diseases among Nigerian university students. *Nigerian Journal of Health Promotion*, 22(1), 71- 82.
- Oyewole, O., & Solabi, A. (2020). Awareness and attitude towards cardiovascular risk factors among Nigerian university students. *African Journal of Medicine and Medical Sciences*, 49(2), 101-110.
- Peltzer, K., & Pengpid, S. (2020). Health-risk behaviours among university students in 24 low-and middle-income countries. *Global Health Action*, 13(1), 1775287.
- Rabe, K. F., Watz, H., & Kiser, K. (2018). Chronic obstructive pulmonary disease. *Lancet*, 391(10131), 577-586. [https://doi.org/10.1016/S0140-6736\(18\)30632-2](https://doi.org/10.1016/S0140-6736(18)30632-2)
- Rahamathulla, M. P. (2020). Frequency and awareness of risk factors of non-communicable diseases among university students in Saudi Arabia. *Journal of Public Health*, 36(2), 75-82.
- Ricketts-Odebode, O. (2022). Knowledge and exposure to non-communicable disease risk factors among undergraduates in the University of Lagos. *Journal of Global Health*, (1), 134-140.
- Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1988). Social learning theory and the Health Belief Model. *Health Education & Behavior*, 15(2), 175-183. <https://doi.org/10.1177/109019818801500203>

- Roth, G. A., Abate, D., & Haines, A. (2020). Global and regional cardiovascular disease mortality: Trends and risk factors. *Circulation*, 142(19), 1798-1808. <https://doi.org/10.1161/CIRCULATIONAHA.120.049432>
- Sallis, J. F., Owen, N., & Fisher, E. B. (2015). Ecological models of health behavior. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior and health education: Theory, research, and practice* (pp. 43-64). Jossey-Bass.
- Sankaranarayanan, R., Ramadas, K., & Qiao, Y. L. (2020). Cancer prevention in developing countries. *The Lancet Oncology*, 21(9), 1177-1187. [https://doi.org/10.1016/S1470-2045\(20\)30349-X](https://doi.org/10.1016/S1470-2045(20)30349-X)
- Student Affairs, University of Benin. (2024). Statistics of undergraduate student population for 2024/2025 academic session. University of Benin Press
- Suryani, D., Rizal, A., Eliana, E., Darwis, D., Angraini, W., Agustina Pratiwi, B., & Yandrizal, Y. (2019). The Effect of Counseling on Improving Knowledge, Attitude, and Behavior in Efforts to Prevent and Control Non-Communicable Diseases. *Jurnal Kesehatan Masyarakat*. Link.
- Tremblay, M. S., Aubert, S. L., & Barnes, J. D. (2017). Sedentary behavior research network (SBRN) - terminology consensus project: Standardizing terminology in sedentary behavior research. *International Journal of Behavioral Nutrition and Physical Activity*, 14(1), 75. <https://doi.org/10.1186/s12966-017-0525-8>
- World Health Organization (WHO). (2023). Noncommunicable diseases: Key facts. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>
- Yenit, M. K., Kolbe-Alexander, T. L., & Gelaye, K. A. (2023). Knowledge, attitude, and practice of health workers towards non-communicable diseases health promotion. *International Journal of Public Health*, 68, 112-119.

QUESTIONNAIRE
UNIVERSITY OF BENIN, BENIN CITY
FACULTY OF EDUCATION
DEPARTMENT OF HEALTH SAFETY AND ENVIRONMENTAL EDUCATION
ON
KNOWLEDGE AND ATTITUDE TOWARDS PREVENTION OF NON-
COMMUNICABLE DISEASE AMONG UNDERGRADUATES IN THE
UNIVERSITY OF BENIN

Dear Respondents,

The purpose of this questionnaire is to elicit information on the above-mentioned topic. Your cooperation in providing honest and sincere response to all the questions will be appreciated as they will be treated with utmost confidentiality.

Thanks for your co-operation

Instruction, please tick (appropriately in the boxes provided)

Section A

Demographic Data

Gender : Male (), Female ()

Age: 16 -19 () 20-23() 24 and above ()

Section B

Instruction: Please tick [✓] the most appropriate option for each item.

Key: SA – Strongly Agree, A – Agree, D – Disagree, SD – Strongly disagree

S/N	ITEM	SA	A	D	SD
RQ1	What is the level of knowledge about non-communicable diseases among undergraduate students in the University of Benin?				
1	I am aware of the different types of non-communicable diseases (e.g., cardiovascular diseases, diabetes, cancers, respiratory diseases).				
2	I know the common risk factors for non-communicable diseases (e.g., smoking, poor diet, physical inactivity).				
3	I understand how unhealthy eating habits contribute to the development of non-communicable diseases.				
4	I am familiar with the importance of regular physical activity in preventing non-communicable diseases.				
5	I have sufficient knowledge about the relationship between obesity and non-communicable diseases.				

RQ2	What are the attitudes of undergraduate students' towards the prevention of non-communicable disease in the University of Benin?	SA	A	D	SD
6	I believe that preventing non-communicable diseases is important for my long-term health.				
7	I am motivated to make lifestyle changes (e.g., healthier eating, regular exercise) to prevent non-communicable diseases.				
8	I think regular physical activity is an effective way to prevent non-communicable diseases.				
9	I believe smoking and alcohol consumption are major contributors to non-communicable diseases.				
10	I feel that a healthy diet plays a key role in preventing non-communicable diseases.				
RQ3	Do lifestyle factors such as diet, exercise relate to students' knowledge and attitude towards non-communicable disease prevention in the university of Benin?	SA	A	D	SD
11	I believe that regular physical exercise is essential for preventing non-communicable diseases.				
12	I am knowledgeable about the benefits of regular exercise in reducing the risk of non-communicable diseases.				

13	I make an effort to include physical activity in my daily routine to prevent non-communicable diseases.				
14	I believe that a balanced diet can help prevent non-communicable diseases.				
15	I am aware of the specific foods that contribute to reducing the risk of non-communicable diseases.				
RQ4	What is the preventive practice towards Non-communicable diseases among undergraduate students				
16	I believe that adopting a healthy lifestyle is important for preventing non-communicable diseases.				
17	I am willing to change my eating habits to reduce my risk of developing non-communicable diseases.				
18	Attending health education seminars on NCD prevention is beneficial to my health				
19	I believe that avoiding smoking is important in preventing non-communicable diseases.				
20	Eating a balanced diet is necessary to reduce the risk of non-communicable diseases.				