

**INFLUENCE OF PSYCHOSOCIAL FACTORS ON UNHEALTHY
BEHAVIOUR AMONG PATIENTS WITH LIFESTYLE DISEASES IN
KIAMBU COUNTY - KENYA**

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THE AWARD OF MASTER ART IN COUNSELLING PSYCHOLOGY
DEGREE OF KENYA METHODIST UNIVERSITY**

OCTOBER, 2024

DECLARATION

I declare that this thesis is my original work and has not been presented in any other University.

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DEDICATION

I would like to dedicate this thesis to my family, patients, classmates, clients and friends for inspiring me to pursue a cause that is worthwhile.

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ABSTRACT

Unhealthy behaviour such as unhealthy diets, inactive lifestyle, smoking and harmful alcohol use misuse are a significant contributor to lifestyle-related illnesses such as diabetes, cancer, heart diseases, and obesity. However, the influence of psychosocial factors on unhealthy behaviour among persons with lifestyle diseases in Kiambu County was unclear. Consequently, this study sought to establish how psychosocial factors influenced unhealthy behaviour among patients with lifestyle diseases in Kiambu County. Precisely, the study examined the influence of stress coping mechanisms, belief systems and peer pressure on unhealthy behaviour among patients living with lifestyle diseases in Kiambu County. The Theory of Planned Behaviour (TPB) and the Health Belief Model (HBM) guided this research. Descriptive study design with cross-sectional survey was utilized. The study was conducted in three Kiambu County hospitals, Kiambu Level Five Hospital, Thika Level Five Hospital and Kihara Level Four Hospital. The study had a target population of 2,700 patients. The study sample size comprised of 215 patients along with 3 clinicians, 3 doctors and 3 nutritionists. The patients were selected using systematic sampling technique while the healthcare practitioners were selected using purposive sampling technique. Data collection tools were a questionnaire and an interview schedule. The patients responded to the questionnaire while the healthcare practitioners responded to the interview schedule. The study tools were pre-tested on 27 patients at Ruiru Level 4 Hospital. The questionnaire was assessed as reliable as it yielded a Cronbach's alpha value of 0.85. Quantitative data were analysed using various descriptive statistics namely frequency, percentages, mean and standard deviation as well as inferential statistics in the form of Pearson correlation analysis using SPSS version 28. Qualitative data was analysed via content analysis with results reported verbatim. A total of 215 patients took part. From the findings, 61% of the patients ate unhealthy foods often; 73% were physically inactive and 69% engaged in harmful use of alcohol. When stressed out, 61% (mean = 3.21, SD = 0.765) of the patients tended to sleep more; 54% (mean = 2.72, SD = 0.999) tended to eat a lot; 52% (mean = 3.43, SD = 0.987) drank alcohol excessively while 48% (mean = 2.62, SD = 0.963) engaged in self-isolation. On belief systems, 70% (mean = 3.88, SD = 0.591) believed that consuming expensive/fashionable diets, smoking and alcohol use was trendy while 68% (mean = 3.75, SD = 0.883) and 63% (mean = 3.71, SD = 0.772) agreed that meat consumption and alcohol use were part of their family celebrations. On peer pressure, 58% (mean = 3.89, SD = 0.821) ate more meat when with friends; 55% (mean = 3.71, SD = 0.905) took a lot of alcohol when with friends during weekends; 60% (mean = 3.43, SD = 0.749) agreed that their use of alcohol and cigarettes was influenced by friends; 61% (mean = 3.75, SD = 0.916) were at greater odds of excessive substance use (smoking or using alcohol) when with friends and 64% (mean = 3.63, SD = 0.735) were likely to eat unhealthy foods when out with friends. The study concluded that maladaptive stress coping mechanisms, unhealthy belief systems and peer pressure influenced unhealthy behaviour among the participants. The study recommends that health care providers should sensitize patients living with lifestyle diseases on the dangers of unhealthy lifestyle behaviour to their condition and should advocate for adoption of healthy living behaviours among these patients.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
CVD	Cardiovascular Diseases
FA	Factor Analysis
HBM	Health Belief Model
HIV	Human Immunodeficiency Virus
KEMU	Kenya Methodist University
KMO	Kaiser-Meyer-Olkin
KNBS	Kenya National Bureau of Statistics
MoH	Ministry of Health
NACOSTI	National Commission for Science, Technology and Innovation
NCDs	Non-Communicable Diseases
PCA	Principal Component Analysis
SDGs	Sustainable Development Goals
SPSS	Statistical Package for Social Sciences
SSA	Sub-Saharan Africa
TPB	Theory of Planned Behaviour
UK	United Kingdom
UN	United Nations
US	United States
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Unhealthy behaviour is a significant contributor to lifestyle diseases world over (Glass et al., 2021). Unhealthy behaviours, according to Cartwright (2020), is any conduct that has negative consequences on a person's health including physically, mentally and/or emotionally. According to the World Health Organization (WHO), unhealthy behaviour refers to certain actions or habits that can be detrimental to a person's physical or mental wellbeing (World Health Organization [WHO], 2019). There's general consensus that unhealthy behaviours are any behaviour that has negative effects on a person's health and general wellbeing (Balwan & Kour, 2021). In this study, unhealthy behaviours mean any habit or conduct that harms one's health and increases a person's risk of acquiring lifestyle diseases. Common unhealthy behaviours include physical inactivity, smoking, harmful use of alcohol and unhealthy diets. According to the WHO, 41 million people die from non-communicable illnesses each year, representing 71% of all deaths worldwide. Further, about 41.4% of these deaths (about 17 million persons) occur before age 70. The bulk of these non-communicable diseases (NCDs) deaths occur in middle and low resource nations (WHO, 2022).

Several reviews conducted across the world demonstrate that, to a large extent, the lifestyle sicknesses could be prevented and managed through adoption of healthy behaviours which include not smoking, exercising regularly, following a healthy diet and keeping a healthy weight (Keku et al., 2023). Many people want to live healthy lives but have behaviours and attitudes that are hidden in the subconscious mind that inform their everyday habits that affect health (Boltayevna, 2021). They want clean

lungs without the risk of cancer but refuse to quit smoking. They want a functionally healthy liver without the risk of cirrhosis, but they continue to drink alcohol. They have longed to enjoy the warm, beating heart in their chests for years, but insist on eating foods high on cholesterol, fat and high protein intake and too much sugar (Gyasi & Phillips, 2020), they seek a clear mind that allows them to make well-informed decisions in a complex world, but insist on denying it the necessary hours of rest (Yang et al., 2011), they want an attractive, functional figure and strong muscles, bones, and joints that allow them to move freely from place to place, but never take the time for a regular exercise regimen that brings them closer to such a worthy goal (Mathur & Mascarenhas, 2019).

Psychosocial factors refer to cultural, social, and environmental phenomena and influences that have an effect on mental health and behaviour. These factors include stress, belief systems and peer pressure, technological change and work pressure (Egger et al., 2019). Mehta and Kapoor (2018) define ‘psychosocial’ as the influence of structural and social factors on an individual's psychological properties such as attitudes, beliefs and perceptions whose interrelationships shape behaviour and ultimately one's health. Cartwright pointed that people are capable of modifying their unhealthy behaviour through appropriate behavioural changes in turn improving their overall health (Cartwright, 2020). However, it's hard to achieve a sustained behaviour change because individual health behaviours and lifestyles are associated with various psychosocial factors (Paulsson-Do et al., 2017). These psychosocial factors influence an individual's decision-making capacity. For example, while most people realize that having unhealthy diet is not good for their health, many continue to engage in such behaviours irrespective of the possible negative consequences (Marmot & Bell, 2019).

In an Australian probe, Sahle et al. (2020) identified that psychosocial attributes including peer pressure, belief systems and stress management did have notable effect on behaviour of persons with lifestyle related ailments. Similarly, in an empirical probe conducted in United Kingdom (UK), psychosocial distress was found to contribute to unhealthy behaviours among persons diagnosed with lifestyle ailments. The study therefore averred that health promotion efforts should be based on a solid understanding of the psychosocial context for successful behaviour change to help people adopt and maintain healthy behaviours (Dennison et al., 2018). Similarly, in a Swedish review, Paulsson-Do and others suggested that understanding human health must take into account not only biological attributes but also psychological and social-cultural factors. These include psychological behaviours such as thoughts, emotions and psychological distress, fear/avoidance beliefs, current coping methods, attribution, and social (socio-environmental, socioeconomic), and cultural factors for instance family circumstances, work issues and benefits/economics (Paulsson-Do et al., 2017). Therefore, examining psychological factors that influence these healthy behaviours is key to understanding what motivates people to continue practising unhealthy behaviours (Rokach, 2019).

Existing evidence suggests that psychosocial status and illness are often interrelated. For instance, a review by Cardol et al. (2021) showed that people exposed to high levels of stress were more likely to contract lifestyle related ailments than their less stressed counterparts. In another Australian study, George et al. (2022) argued that psychosocial factors such as hostility, job control, depression, stress, hopelessness and isolation appeared to be associated with lifestyle related health conditions particularly heart disease. Similarly, a study conducted in Sweden attributed various unhealthy behaviours, precisely smoking, not being physically active, inappropriate use of alcohol and unhealthy eating habits among persons with chronic noncommunicable ailments to

psychosocial problems such as stress, depression, hopelessness, despair and suboptimal social support (Thomas et al., 2020). According to Rokach (2019) addressing psychosocial factors contributing to unhealthy behaviour constitutes an important pathway to promoting healthy conducts in individuals suffering from lifestyle related ailments. According to Pengpid and Peltzer (2019), high levels of stress or chronic stress and other psychosocial problems such as anxiety, pessimism, hostility, unhappiness, worry and depression can encourage unhealthy behaviours and poor lifestyle habits such as overeating and poor choice of diet, substance abuse, or physical inactivity. This in turn contributes to rising incidences of lifestyle related diseases.

Across Africa and particularly the sub-Saharan Africa (SSA), there's been notable rise in non-infectious illnesses' burden over the past several years. Indeed, it's projected that deaths attributable to the non-infectious ailments will surpass the aggregate of those attributable to infectious, neonatal, maternal and nutritional ailments in SSA by 2030 (Gouda et al., 2019). The notable surge in these lifestyle related ailments and associated deaths in SSA have been attributed to increase in unhealthy conducts including inappropriate or harmful use of alcohol, not being physically active, smoking and unhealthy dietary patterns (Bigna & Noubiap, 2019). Various practitioners and scholars across SSA including Mudie et al. (2019), Alkhatib et al. (2021), Glass et al. (2021) and Boakye et al. (2023) have sought to understand how mental and social elements affect people's health and health-related behaviours. The focus has been on the impact of social norms such as taking alcohol, smoking, food consumption, and physical activity levels on healthy actions with a view of designing interventions to reduce unhealthy lifestyle activities (Kassa & Grace, 2019). Indeed, a survey of residents in select SSA countries did find that their dietary beliefs were based on ingrained cultural beliefs and values that were very difficult to change (Alkhatib et al.,

2021). Similarly, Abebe et al. (2020) did also establish unhealthy behaviours precisely smoking, not being physically active, inappropriate or harmful use of liquor and unhealthy eating habits as significantly contributing to the growing challenge of non-infectious ailments in the SSA region.

Evidence drawn from reviews across the SSA region demonstrates that psychosocial attributes can play a positive or negative role in initiating and maintaining healthy or unhealthy behaviours (Mkuu et al., 2021). A survey performed in South Africa found that both healthy eating habits and physical activity were strongly influenced by social norms. The study observed that women who moved to healthier circles tended to eat better and exercise more and in turn had reduced odds of acquiring lifestyle illnesses (Samodien et al., 2021). Similarly, a study by Shiferaw et al. (2019) in Ethiopia demonstrated that addressing various psychosocial attributes such as peer pressure, stress coping mechanisms and social norms could help in reducing unfavourable habits that were contributing to the rising NCDs burden in local communities. Likewise, probes by Boakye et al. (2023) and Glass et al. (2021) in Ghana and South Africa respectively did reveal that adverse psychosocial attributes such as unhealthy social norms motivated individuals to engage in unhealthy habits such as eating less healthy foods, engaging in binge drinking, taking cigarettes and failing to engage in physical exercises which in turn injured their health.

Even though a significant proportion of Kenyans know the risk factors associated with lifestyle diseases, they continue to indulge in unhealthy habits. However, prevalence of lifestyle diseases threatens progress towards the country's Vision 2030 (United Nations [UN], 2021). Although Kenya has set national targets for 2025 and 2030 considering the nine global non communicable diseases targets and the global Sustainable

Development Goals (SDGs) targets for 2030, it needs to bolster its efforts to achieve the SDGs. Lifestyle affiliated ailments account for 39% of all deaths and more than 50% of all hospitalizations in Kenya, imposing a huge economic burden, pushing individuals, households and communities into poverty and slowing the country's economic development (Ministry of Health [MoH], 2022).

In Kiambu County, about 50 per cent of patients admitted to hospitals in Kiambu County are suffering from NCDs, women under the age of 60 being the most affected (Kiragu, 2021). Kiambu County Health Department's latest statistical abstract pointed out that pneumonia, cancer and diabetes were the main causes of deaths in Kiambu County for the last 2 years. Cancer complications claimed 783 people while 568 succumbed to diabetes. The report also noted that hypertension was more rampant in Thika, Ruiru and Kiambu towns respectively where fast foods have taken over restaurants (Department of Health, Kiambu County, 2021). This clearly demonstrates that unhealthy behaviours are prevalent among residents of the county which also corresponds with a documented surge in lifestyle affiliated ailments incidences in the county.

Changing habits is, nevertheless, easier said than done. Health promotion efforts need to be grounded in a solid understanding of the psychosocial precursors to successful behaviour change in order to help people adopt and maintain healthy behaviours (Mudie et al., 2019). Myers et al. (2022) espoused that knowing the role of psychosocial issues in influencing lifestyle behaviour among people with lifestyle disease is important for behaviour change and development of appropriate intervention programs to eliminate hypertension, diabetes, obesity, cardiac diseases and cancer, and reduce mortality rates.

The intention of this research is to study influence of psychosocial factors on unhealthy behaviour among patients with lifestyle diseases in Kiambu County, Kenya.

1.2 Statement of the Problem

Unhealthy behaviours that include poor nutrition, excessive alcohol uptake, physical inactivity and smoking are to blame, by a large extent, for the rising burden of lifestyle diseases in Kenya (Mkuu et al., 2021). Evidence drawn from the Kenya Demographic and Health Survey 2022 showed that approximately 26% of men and 5% of women engaged in harmful use of alcohol. Additionally, approximately 11% of men and 1% of women engaged in smoking. The survey also indicated that as many as 35% of adults were physical inactive and that less than 30% consumed healthy diets consistently (Kenya National Bureau of Statistics [KNBS], 2023). It was thus evident that unhealthy behaviours were prevalent in the country. Left unaddressed, the Ministry of Health in Kenya acknowledges that unhealthy behaviours among Kenyans would lead to an explosion of lifestyle diseases that would significantly strain the healthcare system and limited available resources in the country's health sector (MoH, 2022).

Among individuals living with lifestyle diseases, the ideal position would be complete avoidance of the unhealthy behaviours including harmful use of alcohol, smoking, being physically inactive and eating unhealthy foods as continued engagement in these unhealthy behaviours only exacerbates their health conditions (Myers et al., 2022; Yang et al., 2011). Indeed, the WHO recognizes cessation of unhealthy behaviours as one of the most important health interventions towards addressing the growing burden of lifestyle ailments (WHO, 2022). In Kenya, several attempts to get people to desist from engaging in these unhealthy behaviours have been made. These include programs encouraging those who smoke to quit smoking, public warnings against excessive

alcohol consumption, programs encouraging persons with alcohol use disorders to seek appropriate care, programs encouraging persons with lifestyle diseases to eat well and engage in exercising and development of general national policies and action plans against unhealthy behaviours (MoH, 2023). This notwithstanding, it was still unclear as to how psychosocial factors influenced unhealthy behaviours among patients with lifestyle diseases locally necessitating this study.

1.3 Purpose of the Study

The aim of this study was to establish the influence of psychosocial factors on unhealthy behaviour among patients with lifestyle diseases in Kiambu County.

1.4 Objectives

The following objectives directed the study:

- i. To examine the influence of stress coping mechanisms on unhealthy behaviour among patients living with lifestyle diseases in Kiambu County
- ii. To determine the extent to which belief systems influence unhealthy behaviour among patients with lifestyle diseases in Kiambu County
- iii. To establish the influence of peer pressure on unhealthy behaviour among patients living with lifestyle diseases in Kiambu County

1.5 Research Questions

The research questions below guided this study:

- i. How do stress coping mechanisms influence unhealthy behaviour among patients with lifestyle diseases in Kiambu County?

- ii. How does the belief system of patients with lifestyle diseases influence their unhealthy behaviour in Kiambu County?
- iii. What is the influence of peer pressure on unhealthy behaviour among patients with lifestyle diseases in Kiambu County?

1.6 Justification of the Study

The surging burden of lifestyle diseases in Kenya warrants keen attention. The influence of unhealthy behaviours including excess alcohol consumption, unhealthy eating habits, lack of physical exercises and cigarette smoking on this rising health challenge cannot be overemphasized. Of grave concern is that patients living with lifestyle diseases continue to engage in unhealthy behaviour that exposes them to more harmful effects of the diseases. Doctors and other health professionals mainly focus on providing medication and advising the patients to stop these unhealthy habits. However, the influence of psychosocial factors on these patients' continued engagement in the unhealthy behaviours remained an area with little to no focus yet these attributes are known to impact an individual's behaviour.

For Kenyans to have healthy lives and wellbeing, they need to be aware of the underlying factors that predispose one to lifestyle diseases. To achieve this, together with the set SDGs, this research examined the influence of select psychosocial factors on the unhealthy behaviour among the patients and how these factors could be addressed to reduce the unhealthy behaviours. This investigation was informed by the appreciation that when these psychosocial factors are addressed, it would help in preventing and managing lifestyle diseases and reduce the associated burden on patients, their households, the health care system and economy.

1.7 Limitations of the Study

The study was undertaken among patients with lifestyle diseases attending select hospitals in Kiambu County and hence the findings could be limited in terms of generalizability. A wider study on the research subject involving such patients drawn from across the nation would be helpful to allow derived insights to be universalized. Further, given that the study relied heavily on self-reports of the patients living with lifestyle diseases, this could have resulted to over/under reporting of the unhealthy behaviours such as alcohol consumption, smoking, physical activity and eating habits, and hence the findings included potential preconception. To tackle this problem, several tools such as questionnaires and personal interviews were used for data collection.

1.8 Scope of the Study

This study was done in the following hospitals in Kiambu County: - Thika Level-Five Hospital, Kiambu Level-Five Hospital, and Kihara Level-Four Hospital. Data for the study was obtained for the month of March 2022. The researcher collected data from the patients that attended clinics in these hospitals and were suffering from non-communicable diseases for instance cardiovascular diseases, diabetes, arthritis, human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) and respiratory diseases to investigate how patient's stress coping mechanisms, belief systems and peer pressure influenced his or her unhealthy behaviour and its effect on their health.

1.9 Significance of the Study

The findings are consequential to patients with lifestyle ailments as it provides insights that psychosocial factors including maladaptive coping mechanisms, unhealthy belief

systems and peer pressure could be leading to unhealthy behaviour among them and hence the need to remain alert to these psychosocial variables. The results are also valuable to healthcare professionals working in hospitals in Kiambu County as they may inform their focus and emphasis on giving due consideration to psychosocial factors and advocating against unhealthy behaviours while caring for patients with lifestyle diseases. The research findings would also be insightful to healthcare policy makers in the county through informing formulation of appropriate policies and interventions on advocacy against unhealthy behaviours that include smoking, harmful use of alcohol, sedentary lifestyles along with unhealthy diets and particularly among individuals with lifestyle diseases in the county. The research can be useful in improving general public health care among residents of Kiambu County through creation of awareness on unhealthy behaviours and their link to lifestyle diseases.

1.10 Assumption of the Study

This research assumed that:

- i. That the information given by the patients was true about them.
- ii. That the selected psychosocial attributes influenced how the patients managed their unhealthy behaviour.
- iii. That the patients attending selected facilities would willingly take part in the study.

1.11 Operational Definition of Terms

Lifestyle diseases	These are diseases related to the way of life of an individual or group of people. They include stroke, heart disease and atherosclerosis; type 2 diabetes, obesity and diseases associated with smoking, alcohol and substance abuse.
Belief system	These are a set of beliefs or principles about events, people or things that are believed to be true by individuals or groups.
Peer pressure	This is the feeling that one must do the same as other people in order to be liked and respected by people of one's social group and age.
Stress coping mechanisms	These are the various ways, adaptive or maladaptive, that patients with lifestyle ailments use to deal with or manage stress or stressful events in their lives.
Counselling services	Behavioural, cognitive, systemic psychoeducation and support implemented within the framework of therapeutic relationships.
Sedentary lifestyle	This is a lifestyle in which there is little or no physical activity.
Psychosocial factors	Are attributes of individuals that relate to their mental states and their social contexts which potentially affect the way they behave. The psychosocial factors considered in this study were stress coping mechanisms, belief systems and peer influence.
Unhealthy behaviour	Refers to any habit or conduct that harms one's health and increases a person's risk of acquiring lifestyle diseases. Such behaviours include physical inactivity, smoking, unhealthy diets and harmful use of alcohol.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter discussed literature associated with the study and the knowledge gaps that existed. It examined how stress coping mechanism influences behaviour of patients living with lifestyle diseases, influence of belief systems and influence of peer pressure on an unhealthy behaviour of patients with lifestyle diseases. It also explored theoretical and conceptual framework of the study.

2.2 Unhealthy Behaviour

Unhealthy behaviour, according to the World Health Organization, is any act, habit or conduct that is deleterious to one's mental or physical health. It therefore represents any behaviour with the potential of harming one's wellbeing be it mentally or physiologically (Yang et al., 2011). Unhealthy behaviours are known to negatively affect people's health status with the adverse effects being short term and/or long term largely depending on how long an individual has practised the unhealthy habit(s) (Peer & Kengne, 2022). The world can no longer turn a blind eye on the harmful effects of unhealthy behaviours especially given their significant association with major serious lifestyle related ailments (Myers et al., 2022).

The emergence of lifestyle-related diseases is attributed to four major problems namely modern lifestyles associated with economic change, unhealthy diet, rapid urbanization, lack of exercise, and excessive tobacco and alcohol consumption (Franklin et al., 2020). Balwan and Kour (2021) consider lifestyle diseases to be illnesses that are largely based on people's daily habits and are the outcome of inappropriate relationships between

people and their environment. Lifestyle diseases with a few exceptions are those conditions brought about by the way we eat, work, and go about our everyday lives for instance unhealthy food habits, physical inactivity, smoking, and alcohol taking (Boltayevna, 2021). Even though health practitioners promote healthy behaviours that help prevent or control many lifestyle diseases, numerous patients as well as healthy individuals are ill prepared to initiate or maintain these appropriate healthy changes. Most individuals understand why they should practice healthy habits and the adverse effects of maintaining a healthy lifestyle (Cartwright, 2020).

However, though they understand what constitutes a healthy lifestyle, they lack the behavioural skills they need to apply daily to maintain these good habits. Many people understand the relationships between lifestyle behaviour choices and lifestyle diseases, yet some may not be quite sure how personal habits affect their health. Furthermore, millions of people are cognizant of the link between poor health habits and diseases but decide to continue practicing unhealthy behaviours (Habib & Saha, 2019). While factors such as eating patterns, physical activity, smoking, and alcohol consumption tend to aid development of lifestyle illnesses, it's important to find out why even after an individual understands that certain behaviours tend to cause the lifestyle diseases, they still engage in the risky behaviours. Even though experts have recommended that the best way to help people make healthy lifestyle changes is through public health efforts and policy changes, lifestyle diseases cases continue to rise (Mathur & Mascarenhas, 2019).

Virtually all people are faced with the decision of whether to eat healthy/unhealthy diet, to smoke or not, to drink alcohol or not or to lead an active or sedentary life. But why do some individuals choose to practice healthy behaviours and others not? Why do

some people and not others engage in unhealthy behaviours and why is it so hard for some people to quit despite the warning signs (Puri & Singh, 2022). In addition to studies about the risky factors, there is a need to focus on psychosocial factors to understand why individuals continue to engage in unhealthy behaviours' despite understanding the dangers. This is in recognition that psychosocial factors are all issues that affect physical health through psychological mechanisms (Cardol et al., 2021). Kamalden et al. (2019) argue that obesity is both a psychological and a physical problem and that mental health issues cannot only signal the progression of obesity, but also trigger unending struggles to control weight.

Psychosocial factors play a significant part in catalysing unhealthy behaviours. They include personality and cognitive, family, peers and other environmental aspects that intensify the risk of developing lifestyle diseases such as hypertension, obesity, diabetes and high cholesterol (Marttila-Tornio et al., 2020). The relationship between psychological aspects and the body can be influenced by social factors, whose influence is mediated by psychological understanding. Psychological issues include processes and meanings at the individual level that affect mental states, while social factors deal with social structures and social processes that affect individuals in general at the human-societal level (Thomas et al., 2020).

2.3 Influence of Stress Coping Mechanisms on Unhealthy Behaviour

Individuals experience stress in their daily life due to work pressure, busy schedules, and strained relationships, pursuit of our goals and dreams and unmet needs. While a little stress is normal, continuous stress can be destructive to your physical and mental health (Rokach, 2019). Egger et al. (2019) posits that chronic stress is associated with various health behaviours. That people's health behaviours are strongly influenced by

their stress levels, as they employ specific health behaviours to manage stress. Some individuals unable to cope proactively with stress often act in ways that increase their risk for developing lifestyle diseases. They resort to habits such as eating/ overeating a particular type of food (junk food), drinking alcohol or smoking, working too much, oversleeping to calm down any time when stressed; habits that catalyse lifestyle diseases (Sahle et al., 2020).

Stress is a feeling of being tense, wound-up, worried, and overloaded which occurs when one faces a situation she feels she cannot cope with. Given that stress is burdening, individuals attempt to look for mechanisms to cope with stress to survive. These coping mechanisms can either be positive or negative. Coping refers to the thoughts and actions people take to cope with the external and internal demands of circumstances considered stressful (Mehta & Kapoor, 2018).

Basically, coping implies activities one does in attempt to solve stressful situations that occur because of stressors. Marttila-Tornio et al. (2020) also observes coping includes the behaviours and thoughts a person uses to deal with stressful situations. The coping can either be reactive or proactive, healthy, or unhealthy, conscious, or unconscious (Lerma-Castaño et al., 2021). Coping mechanisms are produced by a person's consciousness, but this does not mean that they all produce positive coping. There are several types of maladaptive coping mechanisms. Unhealthy coping mechanisms can provide immediate relief but are far more harmful in the long run (George et al., 2022). Kamalden et al. (2019) observed that patients with unhealthy coping mechanisms were more likely to take on health-risk behaviours such as use cigarettes or alcohol than those with appropriate mechanisms.

People with weight problems often use food as a coping method, especially when they feel stressed, sad, irritable, lonely, and anxious turning to food to deal with the discomforts. Such comfort foods can temporarily relieve distressed feelings, weight gain can cause discomfort because the source of stress is out of control. This leads to a continuing pattern of using food to manage your emotions (Paulsson-Do et al., 2017). According to Farhud (2015), diet is the most important lifestyle factor, directly and positively related to health. Consequences such as malnutrition and obesity are among the most common health problems in urban societies. An unhealthy lifestyle leads to nutritional problems such as fast-food use and an unbalanced diet, which leads to problems such as obesity and cardiovascular disease (Low et al., 2019).

A survey report by Bliese et al. (2017), states 61% of employees with high stress levels are more likely to eat unhealthy, exercise less, smoke and suffer from sleep deprivation. The study found that more than three-quarters (77%) of high-stressed workers had unhealthy diets, compared to less than half (46%) of low-stressed workers. This implies that the adverse physical, emotional, and psychological impact of stress on people can be significant causing low energy levels, muscle tension, headaches and anxiety. Such effects only discourage healthy behaviours such as exercise. Therefore, individuals end up leading unhealthy routines. According to WHO, 60% of factors associated with an individual's quality of life and health status is lifestyle related. Because of living unhealthy lifestyle, individuals experience problems such as cardio-vascular diseases, hypertension, cancer, and obesity (Ndubuisi, 2021).

Another way that individuals use to cope with stress is the use of technology. This is aided by evolving technologies such as the Internet and virtual communication networks such as the social media. When stressed, individuals tend to overuse the new

technologies to escape stressful situations. As such, it leads to sedentary life that leads to physical and mental health problems (Farhud, 2015).

There have been remarkable advances in the prevention and management of chronic lifestyle diseases through focusing on how healthy lifestyle behaviours such as healthy diet, physical activity and moderate alcohol drinking and smoking help keep lifestyle diseases away. This has been through health promotion efforts through health change behaviour at individual and community level (Narain et al., 2021). Health promotion, according to WHO (2019) refers to “the process of enabling people to increase control over their health and its determinants, and thereby improve their health”. Evidence from both epidemiological studies show that cessation from unhealthy behaviours seem to be beneficial for the improvement of individual’s health and quality of life (Kassa & Grace, 2019).

Offering counselling for healthy lifestyles involves guiding and supporting patients toward making changes in certain behaviours to reduce the risk of heart attack, stroke and other conditions (WHO, 2019). However, Marmot and Bell (2019) acknowledged that in many primary care settings, in both advanced and developing economies, structured lifestyle counselling was still not integrated into everyday clinical practice. Insights derived from empirical investigations by Marttila-Tornio et al. (2020) in Finland and Paulsson-Do et al. (2017) in Sweden showed that providing counselling services was a productive means of tackling unhealthy conducts among persons in teen age. According to Rokach (2019), offering counsel around healthy behaviours is also instrumental in helping adults to change their unhealthy conducts. Budreviciute et al. (2020) averred that physicians can play an instrumental role in improving patient

response in adopting healthy behaviours through counselling them on appropriate lifestyle adjustments.

According to Pengpid and Peltzer (2019), evidence justifies integrating behaviour change counselling into clinical management for clinicians to operationalize the concept of self-management support. However, few clinicians have been trained in behaviour change counselling and there is a lack of standardization on how to implement behaviour change counselling. Investigations by Sahle et al. (2020) and Kamalden et al. (2019) shared similar view on the role of counselling in addressing unhealthy habits. The studies avowed that provision of counselling services on healthy behaviours was essential in helping guide persons away from deleterious behaviours such as inappropriate alcohol use, use of tobacco, being physically inactive and excessive indulgence in inappropriate foods. Egger et al. (2019) concurred that persons with lifestyle ailments could be counselled on how to avoid unhealthy habits through creating awareness on the harmful effects of these habits to their health.

However, most health professional do not have adequate knowledge on counselling individuals suffering from or prone to lifestyle diseases. They recommend one to just to do more exercises and eat well without telling how to exercise and how to eat well (Thomas et al., 2020). For instance, in South Africa, according to Samodien et al (2021), counselling about non-communicable diseases and the underlying risk factors has been particularly inadequate. The health professionals are ill equipped to provide more than ad hoc advice on how to adopt a healthy lifestyle. In the long run, the advice does not have impact on the enduring health beliefs and behaviours. Similar sentiments were shared by Boakye et al. (2023) who in a probe done in Ghana also found that there was suboptimal application of counselling on behaviour change as an intervention to

address known lifestyle related behaviours that occasioned the rising cases of noncontagious ailments in the country. According to the study, most focus of the health care practitioners was offering medication-based treatments while rarely the domain of unhealthy behaviour was rarely tackled.

Obwogo (2017) observes that “... health workers are quick to prescribe medications without offering advice on lifestyle changes such as diet, exercise, stopping smoking, reducing their weight or moderating their consumption of alcohol.” This is given that health care workers have been trained to focus more on diagnosing and treating diseases while matters relating to nutrition are often left to dietitians and nutritionists.

2.4 Influence of Belief Systems on Unhealthy Behaviour

One of the factors that affect people behaviour is belief system. A society is made of human beings who are influenced by many ideas that are governed by its belief system. Little (2016) posits that belief system symbolizes the practices, material artifacts and beliefs of a group. He further argues that belief system is a site of two opposing predispositions as it either establishes a set of rules or norms that limit, habituate, and modify forms of life or create endlessly innovative and diverse solutions to problems such as nutrition. Thus, belief system is a complex interplay of factors that give people their ethnicity and influence their lifestyle activities and predisposition to chronic diseases (Agrawal et al., 2016). It begins with the initial incidents of childhood, many of which is not consciously taught by anybody and are so systematically internalized that they become unconscious ‘to the depths’. One of the products of belief system is food: choice of diet, and habits of consumption (Boltayevna, 2021). They are ingrained aspects of various belief systems and cannot be easily altered. Some of these food habits could have positive or negative effects on one’s life (Reddy & Anitha, 2015).

Healthy behaviour choices are not made in response to purely medical considerations and assessments of the risk factors relating to lifestyle diseases. Nor are they made in a social and cultural vacuum. But are the outcome of a complex interaction of ideas, belief and value systems, and cultural contexts which define belief systems and influence a lifestyle (Boakye et al., 2023). As individuals grow and interact in a community, they modify and adopt the dietary beliefs of their communities. For example, in belief systems where food is limited, weight is perceived as a positive thing and eating junk food is seen as status. During festivities or at an event, people tend to consume lots of roasted meat, soft drinks, and carbohydrates in quantities as a measure of celebration (Alkhatib et al., 2021). Reddy and Anitha (2015) observe that in many belief systems, food plays a ritual or social role, and some foods are held in high esteem while others are reserved for special holidays and religious celebrations. Still others are signs of social status.

Consumption of meals such as fried potato chips, cakes and processed foods in supermarket portrays high living standards. Al-Jawaldeh and Abbass (2022) observe that in several developing countries and primitive societies, obesity is seen as a symbol of wealth. For example: “Obesity and overweight are signs of increasing wealth, especially among Nairobi residents living in poorer settlements” that when the economic status of many city dwellers begins to improve one starts to gain weight (Gathura, 2018). According to Franklin et al. (2020), some individuals in a society harbour belief that being overweight does not indicate that you are unhealthy or have health problems, quite the opposite. To some, that big stomach and extra weight is a sign of good health and good status in the society. They therefore do not engage in weight loss behaviour (Boltayevna, 2021).

Certain belief systems misunderstand or misinterpret medical expert advice about “diet” and “dieting” as slimming and refer proper foods suggested as “bland” and “unpalatable”. Some also consider physical activity as adversely impacting health or worsening illness by growing physical weakness (Keku et al., 2023). Some consider ill health as the work of fate. When one’s organs such as the heart, liver, or kidney fail, it is because of fate, something beyond their control and not because of unhealthy lifestyle choices. They believe that God already pre-ordains the illnesses. Some also perceive that death will always come. If they do not die from lifestyle diseases, they will die from other diseases or accidents, therefore, proper lifestyle choices do not matter (Gyawali et al., 2020).

Irrational beliefs also may play a role in other unhealthy lifestyle choices as well because of cognitive distortions. Cognitive distortions refer to prejudiced perspectives individuals take on themselves and the world round us. They are unfounded thoughts and convictions that are unknowingly reinforced over time. They are observed in many disorders and associated with mood, can create conditions for independent cycles (Ackerman, 2020). The cognitive distortions have a powerful effect on the health decisions people make. For instance, you learn that you have overweight related problems such as diabetes, blood pressure and heart diseases that require change of lifestyle behaviour. Your doctor suggests that you need to feed on balance diet, reduce alcohol consumption and exercise regularly. You find yourself thinking, "I cannot survive without alcohol and meat, I have to enjoy life" (Low et al., 2019).

The irrational beliefs are opinions, attitudes, or ideas that oppose scientific evidence that may contribute to poor self-care and medical decision-making. In cognitive-behavioural therapy, irrational beliefs is believed to be a major trigger of

psychopathologies such as anxiety, depression, eating disorders, and alcohol abuse (Nolan & Jenkins, 2019). These irrational beliefs, according to Myers et al. (2022), stem from the central process of perfectionism or absolutism and the idea that you need to be very upset if something goes wrong and that it is important to be successful and accepted by all. This absolutism negative thinking inevitably leads to anxiety and can lead to unfounded coping tactics such as substance use and uncontrolled eating characterized by emotional eating and binge eating.

In delineating irrational health beliefs, scientists point to a kind of optimistic bias in people's judgments about how likely their health is to be affected. As a result, they behave more unhealthily, believing that they will not get sick under any circumstances, but are more at risk and prone to physical illness (Anderson & Emery, 2014). For instance, people who smoke, abuse alcohol, consume trendy diets may rely on irrational beliefs to justify their health decisions. They are less likely to follow recommended treatment or preventive strategies towards healthier lifestyle. They believe that food and alcohol was made for the stomach and therefore, they consume for stomach's sake. Some see doing physical exercise less important than norms such as group socialization, watching movies/television and shopping, sleeping as a way of resting. They take exercises as tiring work (Kassa & Grace, 2019). This is also coupled by lack of awareness on the importance of being physically active. That when you drive towards work or shopping instead of sparing a few minutes to walk as a way of keeping fit, shows that you are well to do while those who walk are poor. The understanding here is that a people's health actions and decisions are influenced by their unfounded information and judgements about their health or distorted information (Narain et al., 2021).

Research performed in United States (US), to look at how irrational health beliefs and depressive symptoms can affect whether people remain in cardiac rehabilitation programs found out that that irrational health beliefs were a significant predictor of how many cardiac rehabilitation sessions patients completed, even when age and income were taken into consideration (Cardol et al., 2021). Focusing on irrational health beliefs, Cartwright (2020) also suggested that health behaviour and decisions were affected by both a person's information about health-related situations and by irrational evaluations or prejudices of that information. Habib and Saha (2019) argue that human thinking is susceptible to cognitive biases that lead to false conclusions that affect how individuals perceive situations. And when these situations are misunderstood, the distortion amplifies the effects of the misunderstanding, creating a self-perpetuating cycle. Therefore, the ability to understand the relationship between cognitive biases and unhealthy behaviours can provide important knowledge of how information processing patterns influence daily behaviours of patients with lifestyle diseases (Abebe et al., 2020).

2.5 Influence of Peer Pressure on Unhealthy Behaviour

Peer pressure has influence in many social situations regarding lifestyle activities ranging from what one eats, how much he/she eats, work-life balance, and leisure activities (Boltayevna, 2021). Gyawali et al. (2020) defines peer pressure as the influence exerted by an individual who encourages peer groups or other people to change their values, attitudes, or patterns of behaviour so as to conform to the norms of the group. It occurs when we are convinced to adopt similar goals, values, and beliefs or to contribute in the same activities as a group of peers. It does not only affect children but also adults (Ndubuisi, 2021).

Social environment influences individuals' habits because people are socially interconnected, and so their health behaviours are also interconnected. Therefore, the social networks a person is rooted in are associated with their health and health behaviours (Shin et al., 2014). For instance, in a social environment that is prevalent with alcohol, drugs and activities that encourage sedentary lifestyle such as video gaming/watching, one is likely to be socialized into such unhealthy habits hence leading to lifestyle diseases (Marmot & Bell, 2019). Studies have shown that peer exposure is more associated with unhealthy behaviours than healthy behaviours (Shin et al., 2014). Agrawal et al. (2016) in a probe of attributes of lifestyle that were connected to various non-infectious illnesses among adult Indians noted that peer influence played a notable part in influencing unhealthy habits such as excessive alcohol indulgence, cigarette smoking and indulgence with inappropriate foods in surveyed participants.

Food consumption, an important form of socialization, presents a scenario in which peer pressure may play a role. Individuals are all susceptible to follow the direction of the group to fit in to a status no matter how popular and unhealthy a diet is. For example, consumers may be criticized by their peers for consuming foods that are socially considered inferior and thus individuals will probably pick unhealthy foods, which are more socially acceptable, to avoid being negatively criticized by their peers (Paulsson-Do et al., 2017). According to Al-Jawaldeh and Abbass (2022), peers do play a consequential role in influencing adoption of inappropriate health behaviours such as unhealthy eating habits, indulgence with alcohol and tobacco use and suboptimal involvement in physical acts which in turn contribute to increased risk for acquiring the lifestyle related ailments. This is especially so for younger persons.

During the dealings, individuals tend to observe and imitate the social behaviour of their peers trying to fit into social context so they never feel left out on social networks. A survey using cross-sectional network data collected in Australia found that males of the same age were more likely to share high-calorie food consumption patterns (Rokach, 2019). This may apply to other an unhealthy lifestyle and a disease-causing behaviour such as smoking, alcohol drinking and sedentary life. Alcohol drinking often occurs in situations where social influence by others is possible and is entrenched in many social customs. They drink to "catch up" with a particular level of alcohol consumption, to socialise and to fit in (Morris et al., 2020). For instance, nowadays it is cool to go watch a movie in an upmarket for more than three hours while consuming snacks and soft drinks. Then there are those who watch a football match in a pub drinking alcohol and eating meat and engage in buying 'rounds' in the pub (Peer & Kengne, 2022).

Peer pressure has also shown to influence unhealthy food consumption in adolescents. As adolescents interact with their peers, they often start smoking cigarettes and drinking alcohol. They absolutely want to be fashionable and look 'cool' or 'tough' to their peers. Then as they grow up, they carry on with the same behaviour (Shiferaw, et al., 2019). In a review of possible actions required to address the growing challenge of non-contagious illnesses in Iran, Azadnajafabad et al. (2021) opined that due consideration must be offered to the role of peer pressure in fuelling unhealthy behaviour. They added that peer influence remained one of the psychosocial domains which impacted persons' habits and particularly their propensity to engage in health harming habits. Similar views were espoused by Budreviciute et al. (2020) that peer influence was one of the psychosocial related aspects that had notable effects on adoption of inappropriate health

behaviours in both young and older persons in turn contributing to the rising cases of lifestyle-based illnesses.

2.6 Theoretical Framework

Based on the research aims and questions, this study employed the Health Belief Model (HBM) along with the Theory of Planned Behaviour (TPB).

2.6.1 Health Belief Model (HBM)

The Health Belief Model (HBM) is a theoretical model that was developed in the 1950s by social psychologists Hochbaum, Rosenstock and Kegel. The model hypothesizes that health-related behaviour depends on the combination of several factors, namely, perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy. It deals with decision making in the health domain (Green et al., 2020). Health behavioural science is an interdisciplinary science which aims to: understand and describe the nature of human behaviour and also investigate the relationship between behaviour and health, with emphasis on looking for the barriers and facilitators which influence behaviour (Abraham & Sheeran, 2015). The model tries to explain the circumstances under which a person engages in individual healthy habits such as seeking medical examinations and treatment for health conditions (Sulat et al., 2018).

For instance, an individual's beliefs about illness and the personal threat posed by illness, and an individual's beliefs about the effectiveness of recommended health behaviours and actions, predict the individual's likelihood of adopting those behaviours (Sheeran et al., 2017). HBM states that two factors of health-related conduct are the desire to avoid illness or, conversely, the desire to recover when one is already ill, and

the desire for specific health behaviours to prevent or cure illness (Sulat et al., 2018). It stems from psychological and behavioural theories, based on the belief that ultimately, a person's plan often depends on their assessment of the benefits and barriers associated with health behaviour (Abraham & Sheeran, 2015).

The HBM was relevant to the current study given that it is a framework that encourages people to engage in positive health behaviours, primarily motivated by a desire to avoid adverse health consequences. For instance, diabetes is a detrimental health condition, and the longing to avoid diabetes can be used to motivate individuals with risky or poor lifestyle behaviour into practicing healthy lifestyle activities. Similarly, in the current study, the HBM provides a useful framework for examining how patients with lifestyle diseases can adopt adaptive stress coping mechanisms, and utilize positive belief systems and positive peer influence as well as counselling services to avoid or curtail unhealthy behaviours and hence safeguarding their wellbeing. Therefore, this theory offers a useful framework for evaluating patient behaviour including factors that influence them to adopt healthy lifestyle behaviours in their efforts either to avoid or recover from ill health. However, this theory does not elaborate on how these patients' behavioural intentions influence their behaviour hence the adoption of the Theory of Planned Behaviour.

2.6.2 The Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB) was developed by Icek Ajzen in 1991 as part of an effort to foretell human conduct. TPB assumes that attitudes toward perceived behavioural control, subjective norms and behaviour shape/guide behavioural intentions (Ajzen, 2020). The first component of the theory is behavioural intentions, the motivating factors that influence behaviour. The clearer the intentions to participate

in each action the more likely an individual is to perform that action. Behavioural intention thus is a leading determinant of one's social conduct (Tornikoski & Maalaoui, 2019).

The second component is the attitude with respect to behaviour which is the degree to which a person evaluates a particular behaviour positively or negatively. Attitudes consist of behavioural beliefs and consequences assessments (Conner & Sparks, 2015). Subjective norms are his third construct which is social pressure to perform or not to perform a particular action. The combination of motives to follow and normative beliefs forms the subjective norms (Hardeman et al., 2019). Perceived behavioural control also plays an important role in TPB and is related to people's view of how easy or difficult it is to perform desired behaviours (Bosnjak et al., 2020). According to this theory, intentions are the best indicators of how people will behave if they have time to plan how they will behave. In other words, you need to know what you are trying to do for instance planning what to eat and drink (Tornikoski & Maalaoui, 2019).

Planned behaviour theory which is designed to predict intentional behaviour, states that humans are rational analysts of situations and that our intentions actually drive attitude and behaviour (Ajzen, 2020). Therefore, the theory of planned behaviour was critical in this study as it helped the researcher investigate how the participants' behavioural intentions and attitudes as informed by their stress coping mechanisms, belief systems and peer pressure influenced their adoption of unhealthy behaviour.

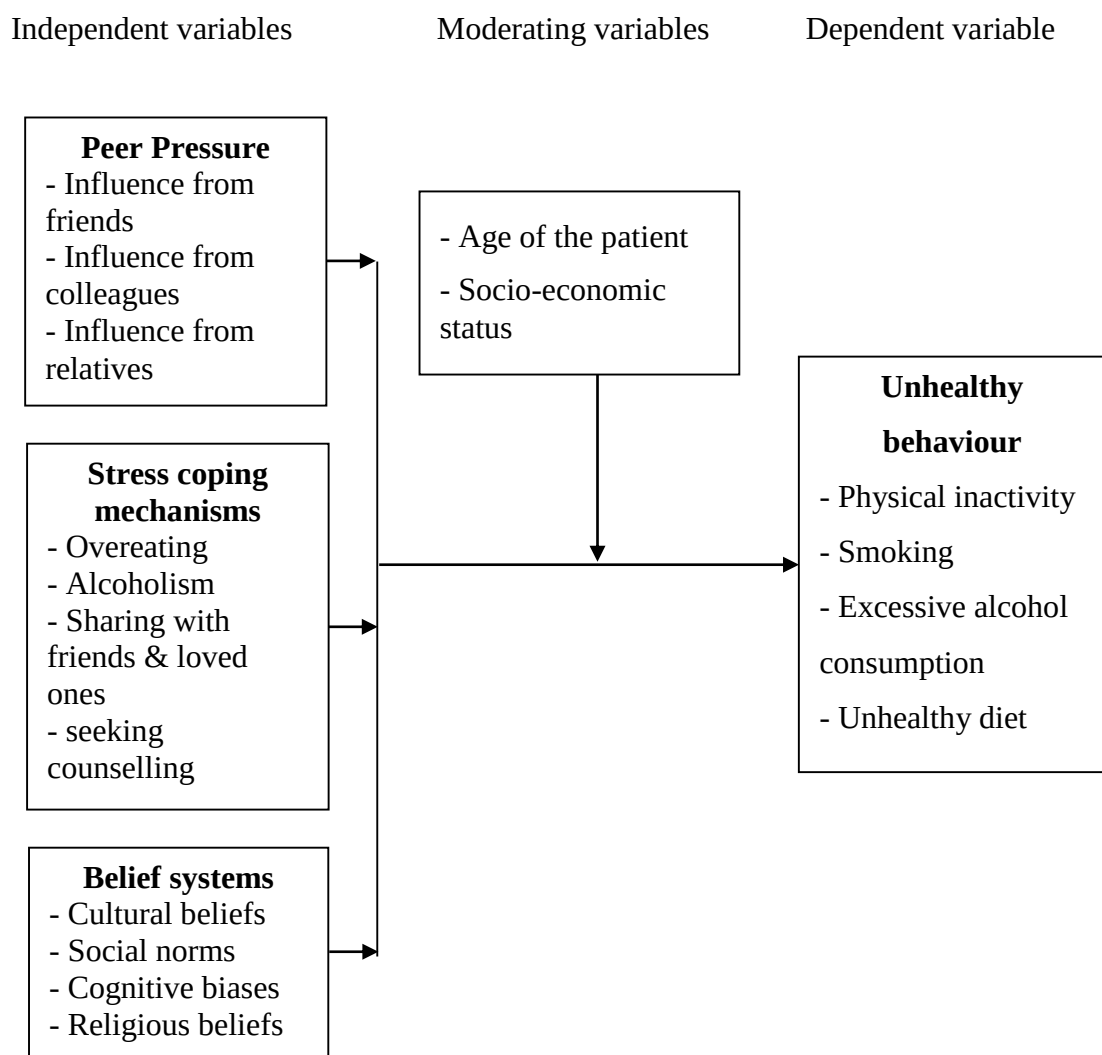
2.7 Conceptual Framework

A graphical or narrative conceptual framework presents the main things under study that is the key concepts or variables and the presumed relationships between them in the study (Mugenda & Mugenda, 2003). Conceptual frameworks serve as the basis for

understanding causal or correlated patterns of connections between variables being investigated (Pandey & Pandey, 2021). Figure 2.1 illustrates this study's conceptual framework.

Figure 2.1

Conceptual Framework



The conceptual framework displays the various variables of the study. The explanatory variables comprised of peer pressure, stress coping mechanisms and belief systems. The intervening (modifying) variables were the age of the patient and social economic status of the patient. The dependent variable was unhealthy behaviour among the patients.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter concentrated on the methodological approach, discussing the description of the research design, survey area, population, sampling methods, data collection and data analysis methods.

3.2 Study Design

A descriptive study design using cross-sectional survey was used in this study. Descriptive design obtains the general overview about the behaviour. Descriptive design is a research approach in which a researcher seeks to gain a deeper understanding of the phenomenon under study from a group of targeted individuals at a particular moment in time. The study involved use of both qualitative and quantitative methods to collect data from respondents which was recorded in numeric format. This approach was used to test how the psychosocial factors were related with unhealthy behaviour. Statistical techniques were utilized to probe the numerical data (Creswell, 2014).

The researcher asked the participants to report directly on their thoughts, feelings, and behaviours. And secondly, is use of random sampling. The researcher tried to get a large random sample to arrive at the most accurate estimates of what is factual in the population. The researcher collected data from patients living with lifestyle diseases to find out the relationship between the psychosocial factors and unhealthy behaviour and the counselling intervention that can improve healthy behaviour.

3.3 Location of the Study

The survey was conducted in Kiambu County. Kiambu County is located in Central Kenya and covers a total area of 2,538.7 km². It borders several counties including Nairobi and Kajiado to the south; Machakos to the east; Murang'a to the north and north east, Nyandarua to the north west, and Nakuru to the west. Its population is diverse though Kikuyus are the majority. It has huge potential in agricultural, commercial, manufacturing and service sectors (County Government of Kiambu, 2023). Within Kiambu County, the study was performed in three hospitals located within Kiambu County which were Kiambu Level Five Hospital, Thika Level Five Hospital and Kihara Level Four Hospital. Kiambu County was selected as the study site due to noted high prevalence of unhealthy behaviours among its residents. For instance, data from the Kenya Demographic and Health Survey 2022 showed that the prevalence of smoking and harmful use of alcohol was on average higher in Kiambu county than the national average. Further, the three hospitals were selected because they had clinics where patients with lifestyle diseases visited on regular basis.

3.4 Target Population

According to the records at the three hospitals, about 30 patients attend the clinics, in each of the hospitals, every day which gives a total of 90 patients for the three hospitals in a day (Kiambu County's Thika, Kiambu & Kihara Hospitals' Lifestyle Clinics, 2022). Therefore, the target population for this empirical investigation was patients with lifestyle diseases seen in the three hospitals' clinics in a month. Therefore, a total of 2700 adult patients with lifestyle diseases who visited the hospitals in the month in which data were collected constituted the target population. This group of patients was selected for study owing to growing concern over rising incidence of documented

unhealthy behaviours among this cohort in Kiambu County (Kiambu County Government Department of Health Services, 2022).

3.5 Sample size and Sampling Method

According to Mugenda and Mugenda, for descriptive studies, a sample size of 10% of the target population is sufficient for statistical analysis and reporting (Mugenda & Mugenda, 2003). Therefore, the sample size for this study comprised of 10% of the 2,700 patients that constituted the study's target population. The study therefore had an anticipated sample size of 270 patients though the final sample (depicting those who actually took part) was 215 as depicted in Table 3.1. Patients were the main participants in this study. However, for the purposes of triangulation, information was also collected from key informants who were health professionals including clinicians, doctors and nutritionists. Consequently, three clinicians, three doctors and three nutritionists, one from each hospital were the study's key informants. In each of the three hospitals, the Lifestyle Clinic was manned by a single doctor supported by one clinician and one nutritionist hence making up the 3 doctors, 3 clinicians and 3 nutritionists included in this study as participants. These healthcare professionals were included as key informants owing to their experiences while caring for patients with lifestyle illnesses and knowledge on the phenomenon under probe. The healthcare professionals were selected using purposive sampling technique. For the patients, the study employed systematic sampling technique to recruit them. Using this method, a sampling interval of 10, determined by dividing the target population by the anticipated sample size ($2700/270$), was used. The first patient was randomly selected and then every tenth patient until the sample size was achieved was selected to participate. The sampling frame consisted of patients living with lifestyle diseases attending the three hospitals.

Table 3.1*Sample Population*

Study Participants		Total Population	Actual sample
Respondents	Patients	2700	215
Key informants	Clinicians	3	3
	Doctors	3	3
	Nutritionists	3	3

3.6 Data Collection Tools

The methods used for collecting data in this study were interviews and questionnaires to get information from the patients. For triangulation and collection of more data, clinicians, doctors, and nutritionists were also interviewed.

3.6.1 Questionnaires

A questionnaire is a study tool that consists of a sequence of questions written with the intention of gathering data from respondents (McLeod, 2018). According to Mugenda and Mugenda (2003), questionnaires are widely used to get information about populations quickly and are easy to administer. A pretested self-administering questionnaire was used. The questionnaire elicited information on influence of psychosocial factors on unhealthy behaviour among patients with lifestyle diseases. It examined how stress coping mechanisms, peer pressure and belief systems influenced unhealthy behaviour among patients with lifestyle diseases. The questionnaire constituted the primary data collecting tool.

Questions were administered to patients aged 20 years and above visiting the respective hospitals. It was structured into five sections. Section A produced participants' personal information for instance age, gender, level of education, duration with the disease along

with health status. Section B elicited information on unhealthy behaviours among the participants. Section C was designed to elicit information on how stress coping mechanisms influenced unhealthy behaviours among the study participants. Section D was designed to extract information on patients' belief system and how it influenced unhealthy behaviour in them while Section E was designed to elicit information on how peer pressure influenced unhealthy behaviours among the study participants. The questionnaire was relevant in this study as it allowed inclusion of large samples from different hospitals and individuals with minimal cost and time.

3.6.2 Semi-Structured Interview Schedules

The semi-structured interview schedule was a tool to gather both quantitative and qualitative data. The interview model was applied to get in-depth data from the interviewees who are the health professionals (doctors, clinicians, and nutritionists) from the three selected hospitals in Kiambu County, namely: - Kiambu Level V Hospital, Thika Level V Hospital, and Kihara Level IV Hospital. The interview guide was made up of open-ended questions which were aligned with the goals of the research. The interview guide also allowed researchers to extract and validate the data provided in the questionnaire that had been presented by the respondents. According to Pandey and Pandey (2021), interviews allow in depth research and enable the respondents give reason for their answers. The health professionals provided information on the experiences that they had with the patients and the challenges they faced in healthy behaviour change. The researcher sent the interview schedule to the respective respondents in advance and made an appointment for a day to do the face-to-face interview. Responses to the questions asked during the interviews were recorded with written responses, tape-recorded responses, or a combination of both.

3.7 Pretesting of the Study Tools

Pretesting of the study questionnaire was conducted among twenty seven (27) patients living with lifestyle ailments at the Ruiru Level 4 Hospital which equalled to 10% of the study's sample. This was in accordance with Mugenda and Mugenda (2003) shared view that at least ten percent of the targeted sample respondents are sufficient for aims of pre-evaluation of a study's data gathering tools. Results of the study tool piloting were utilized to refine the study questionnaire.

3.7.1 Validity of the Research Instruments

Validity signifies the extent to which proof and theory reinforce the interpretation of test results generated through the use of the test. The validity of a measuring instrument is the extent to which it measures what it intends to measure. According to Mugenda and Mugenda (2003), validity is the accuracy and rationality of conclusions based on research findings. This is the extent to which the results gotten from analysing the data actually represent the variables of the study.

The study equipment was validated in terms of content and appearance. Content validity measures how well a question reflects the area covered. Enhancing validity of the research tools included improving measurement method, increasing randomization to reduce sample bias and blinding the research. Content and construct validation of the questionnaire was evaluated by supervisors from the Theology, Religious Studies and Counselling department of Kenya Methodist University (KEMU) and thorough review of the literature to ensure that the content of the study tools was adequately reflective of the subject being examined and the variables in question.

3.7.2 Reliability of the Research Instruments

Reliability is the ability of a research instrument to consistently measure relevant properties over time. This is the extent to which a research tool produces unswerving results or data after repeated trials. If researchers give a subject her test twice and obtain similar score on the second test as on the first, the tool is reliable (Mugenda & Mugenda 2003). Dependability refers to the consistency, reliability, or stability of a test (Pandey & Pandey, 2021). The researcher measured questionnaire reliability to determine consistency in testing by using the test-retest methodology for assessing equipment reliability. This involved running the same test twice on the same group of subjects and correlating the two data sets collected from similar questionnaire using Cronbach alpha coefficient with acceptable threshold set at ≥ 0.7 in line with Mugenda and Mugenda (2003) exposition.

3.8 Data Collection Procedure

The researcher obtained a letter of introduction from KEMU that was handed over to the National Commission for Science, Technology and Innovation (NACOSTI) to request for research permit. After obtaining the permit, this was presented to the Kiambu County Director of health to obtain permission to collect data. The researcher clarified the purpose of the survey to the hospital administrators and the participants. Questionnaires were administered to the patients and collected after they filled them. The interviews were administered to the healthcare professionals: the clinicians, doctors and nutritionists. This was through one-on-one interviews between the research assistants and the healthcare professionals whereby they were asked the questions as contained in the interview schedule. The interviews were audio recorded using a tape recorder and Field notes were also taken during the interviews to complement the data

collected through the audio recordings. The interviews ended with the interviewer thanking the participant for their time and for accepting to take part in the interview.

3.9 Data Analysis Procedures

Data collected in the study was both qualitative and quantitative. Computer software, Statistical Package for Social Sciences (SPSS) latest version (28) was used to analyse the quantitative data. Prior to the analysis of quantitative data with SPSS, the returned questionnaires were checked for completeness. Data cleaning was performed and then the data was entered into Ms Excel. Once the data was cleaned, it was transferred to SPSS for actual analysis. The questionnaire was coded then followed by the data being entered. Variation in percentages of respondents' on how coping mechanisms, belief systems and peer pressure influenced one's unhealthy behaviour was also gauged. Descriptive statistics such as frequencies, mean, standard deviation and percentages were useful in analysing the quantitative data. In addition, Pearson correlation analysis was used to establish the relationship between psychosocial factors namely belief systems, stress coping mechanisms and peer pressure as explanatory variables and the participants' unhealthy behaviour as the dependent variable. Results were displayed in the form of graphs, pie charts and frequency tables.

Qualitative data obtained from the health professionals' interview were analysed using content analysis that entailed data being transcribed and decomposed into meaningful units of analysis. These units were then divided into various groups and coded for scrutiny by identifying patterns and connections which were then categorized into appropriate themes. Qualitative data findings were presented in narrative form and helped enrich the quantitative study outcomes.

3.10 Ethical Considerations

The researcher was issued with Ethical Clearance Letter from the Ethical Clearance Board of Kenya Methodist University and NACOSTI gave the research permit for the research. Further approvals were sought from respective hospitals in Kiambu County and additional approvals from each department where the research was conducted. An informed written consent from each respondent was sought and confidentiality was kept for the information given as no names or individual identification was used. Data collected was treated with confidentiality through use of codes in questionnaires. Once the data was collected and the final report compiled, it was availed to the applicable institutional department and other relevant entities such as the hospitals and the county health department of Kiambu County. Safe custody was ensured for all the data tools returned.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This section outlines results of the study as set out in the methodology and in accordance to the study aims. It covers response rate of the study; analysis of participants' demographic data along with descriptive and inferential analysis findings for the study variables.

4.2 Response Rate

A total of 270 patients and 9 health professionals (comprising of three clinicians, three doctors and three nutritionists) were targeted as study respondents. The response rate was as presented in Table 4.1.

Table 4.1

Rate of Response

<i>For the patients</i>			<i>For the health professionals</i>		
	Frequency	Percent		Frequency	Percent
Responses	215	79.6	Responses	9	100.0
No responses	55	20.4	No responses	0	0.0
Total	270	100.0	Total	9	100.0

Source: Research Data (2022)

As indicated in Table 4.1, the rate of response for the patients was 79.6%. Additionally, the three clinicians, three doctors and three nutritionists were also interviewed translating into 100% response rate for the health professionals. The codes for the health professionals were as follows - C01 to C03 for the clinicians, D01 to D03 for the doctors and N01 to N03 for the nutritionists. This feedback rate was considered to be adequate

and illustrative based on Mugenda and Mugenda (2003) view that rates of 70% plus are exceptional while rates of 50% and above are sufficient.

4.2.2 Reliability Tests

Reliability test was conducted for each key variable and the results were as presented in Table 4.2.

Table 4.2

Reliability Tests

Construct	No of items	Cronbach's Alpha	Conclusion
Stress coping mechanisms	11	.904	Acceptable
Belief Systems	12	.890	Acceptable
Peer Pressure	7	.956	Acceptable
Aggregate	30	.850	Acceptable

Source: Research Data (2022)

The results showed that the items meant to measure one construct actually converged together which is a strong indication of construct validity. The strong loading (greater than 0.6) of each of the remaining item to their construct in the final FA model is a strong indication of construct reliability. The researcher also used the Cronbach's alpha to test the dependability (internal consistency) of the instrument with values higher than 0.7 being acceptable. On this basis of results, the instrument was reliable.

4.2.3 Reliability Index

Factor Analysis (FA) was performed to identify the number of main study variable items of distinct factors in the data arrangement. The suitability of the data for reliability index was checked using the Kaiser-Meyer-Olkin (KMO) and Bartlett's test. The suitability outcomes were as given in Table 4.3.

Table 4.3*Bartlett and KMO Test Results*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.881
Bartlett's Test of Sphericity	Approx. Chi-Square	1635.516
	Df	136
	Sig.	.000

Source: Research Data (2022)

The KMO was larger than 0.8 and the Bartlett's Test of Sphericity was substantial; an indication that the data set is suitable to be subjected to FA. This further suggests that data was adequate to separate out into distinct structures. Because of this necessary conclusion, factor analysis was conducted.

The results indicated that a five structure was supported by the data set. The five factors accounted for 73.498% of variance in the original data set of which factor one contributed the highest variance of 17.864%. It is followed by factor two with 16.867%, factor three with 14.397% and factor four with only 12.506% of variance. Only a factor with Eigen values greater than 1 were extracted.

4.3 Participants Demographic Analysis

Demographic information of the study participants was analysed to ascertain the study participant's demographic characteristics. The demographic analysis focused on the patients' age, gender, educational level, years with disease, health status and physical health. The results were as shown in Table 4.4.

Table 4.4*Participants' Demographic Findings*

Variable	Category	Frequency (n)	Percent (%)
Age of patient	20-25 years	12	6%
	25-30 years	32	15%
	30-35 years	81	38%
	Over 35 years	90	42%
	Total	215	100%
Gender	Male	159	74%
	Female	56	26%
	Total	215	100%
Level of education	Primary	32	15%
	Secondary	80	37%
	College	43	20%
	University	60	28%
	Total	215	100%
Years with disease	Under 5 years	71	33%
	5 - 10 years	81	38%
	Over 10 years	63	29%
	Total	215	100%
Health status	Poor	52	24%
	Moderate	92	43%
	Better	71	33%
	Total	215	100%
Physical health	Normal	70	33%
	Overweight	92	43%
	Obese	53	25%
	Total	215	100%

On the participants' age, majority were aged 30 years and above with 38% aged 30-35 years while 42% were aged over 35 years. This demonstrated that the study participants were adult patients with lifestyle diseases. Being adults could have influenced the participants' engagement in unhealthy behaviour as they were only responsible to themselves and not accountable to anyone else in relation to how they behaved. Essentially, they were at liberty to behave in any way they deemed fit on account of

being an adult. Similarly, in studies by Nurwanti et al. (2018) and Sahle et al. (2020), the study participants were adults with chronic lifestyle related ailments, the same case with participants in an empirical study performed by Thomas et al. (2020).

Results in Table 4.4 also demonstrate that most of the study participants were male (74%) while 26% were female. This showed that the study participants were both male and female patients with lifestyle diseases attending the three select hospitals in Kiambu County, though male patients were dominant pointing to possible higher odds of lifestyle diseases in men compared to women. Gender, also tends to play a role in unhealthy behaviours, as the primary unhealthy behaviours (smoking and alcohol use) tend to be more prevalent in males than in females. Similarly, an empirical study conducted in India had patients of both gender taking part with the number of participants of male gender being higher than that of female participants as reported by Agrawal et al. (2016). Likewise, in studies by Balwan and Kour (2021) and Boakye et al. (2023), patients of male and female gender constituted the study respondents with more male respondents than female respondents as is the case in the current study.

Regarding the participants' education level, slightly over half of the participants had basic education level (Secondary - 37%; Primary - 15%) while the rest had tertiary level of education (University - 28%; College - 20%). This showed that most of the study participants had tertiary education. This implies that, in general, a significant proportion of the study participants had a sound educational background and hence were in a position to provide insightful information for the study. While both educated and less-educated persons engage in unhealthy behaviours such as smoking and alcoholism, having lower levels of education could increase one's odds of engaging in these behaviours possibly due to inability to understand or appreciate the extent of their

harmful effects on their health. However, this is not always the case as educated individuals do also engage in these unhealthy behaviours. Similar findings were reported in studies by Gyawali et al. (2020), Thomas et al. (2020) and George et al. (2022) in which the proportions of participants with both basic and tertiary levels of education were significant. Likewise, a significant proportion of participants in studies by Dennison et al. (2018) and Kamalden et al. (2019) had tertiary education background.

Results in Table 4.4 also indicate that, a third (33%) of the study participants had had the lifestyle disease for under 5 years while the rest (67%) had had the lifestyle ailment for at least five years. This denoted that most of the study participants had lived with the lifestyle diseases for a considerable duration. Having lived with a lifestyle disease for longer could possibly influence reduced engagement in unhealthy behaviours due to appreciation of the implications of these behaviours on disease progression and deterioration of one's health status. Similar observations were made in studies by Al-Jawaldeh and Abbass (2022) as well as Boakye et al. (2023) whose participants were patients who had lived with lifestyle health conditions for over 5 years. Equally, in a study performed by Abebe et al. (2020), majority of those who took part had lived with a lifestyle ailment for 5 or more years. Similar observation was also made in a cross-sectional empirical study by Glass et al. (2021) in which most of the participants reported as having lived with the lifestyle ailment for considerable duration.

In terms of health status, only a third (33%) of the participants rated their health as better, with 43% rating it as moderate while 24% rated it as poor. Further, 43% of the study participants were overweight while quarter (25%) was obese. These results illustrate that most of the study participants had poor health status. Being in poor health

status could possibly influence reduced engagement in unhealthy behaviours due to appreciation of the implications of these behaviours on disease progression and deterioration of one's health condition. The findings agreed with those of Alkhatib et al. (2021) and George et al. (2022) who reported that a considerable proportion of surveyed patients with lifestyle health conditions were in poor health status. Likewise, in studies by Abebe et al. (2020) and Agrawal et al. (2016), most of the participants who were patients living with lifestyle diseases were reported to have poor health status.

4.4 Unhealthy Behaviours among the Participants

The study examined whether the participants engaged in unhealthy behaviours which included smoking, harmful use of alcohol, eating unhealthy diets and being physically inactive. The results were as presented in Table 4.5.

Table 4.5

Unhealthy Behaviours among the Participants

Unhealthy behaviour indicators	Category	Frequency (n)	Percent (%)
Eats unhealthy foods	Always	10	5%
	Often	132	61%
	Sometimes	57	27%
	Rarely	16	7%
	Total	215	100%
Physically active	Yes	57	27%
	No	158	73%
	Total	215	100%
Current Smoker	Yes	134	62%
	No	81	38%
	Total	215	100%
Problematic Alcohol Use	Yes	149	69%
	No	66	31%
	Total	215	100%

From the findings, a significant proportion of the study participants said they were current smokers (62%) and engaged in problematic use of alcohol (69%). Further, 61% of the participants indicated that they often ate unhealthy foods while 27% indicated that they ate unhealthy foods sometimes. Only 7% said they rarely ate unhealthy foods. The results also indicate that most of the participants were physically inactive (73%). This clearly illustrated that most of the study participants engaged in unhealthy behaviours including smoking, harmful use of alcohol, eating unhealthy diets and being physically inactive which, if left unaddressed, could worsen their health status. The implications of these findings were that unhealthy behaviour was rampant among the patients with lifestyle ailments in Kiambu County.

The findings concurred with those of Myers et al. (2022) who in a study conducted among patients of diverse racial backgrounds in the US found that unhealthy behaviour in form of smoking, eating unhealthy diets such as junk foods, excessive alcohol consumption as well as physical inactivity were highly prevalent among their study population. In a similar survey investigating non-infectious ailments among patients in South-East Asia, the high burden of chronic lifestyle related ailments among surveyed patients was attributed to high prevalence of unhealthy behaviour including smoking, low levels of physical activity, harmful use of alcohol and eating foods of low quality as reported by Narain et al. (2021). Equally, in a study performed in Ethiopia by Shiferaw et al. (2019), a significant proportion of surveyed patients that lived with lifestyle health conditions were found to engage in unhealthy behaviour including harmful use of alcohol and smoking as well as unhealthy feeding patterns and low physical activity levels. In a longitudinal study exploring the patterns and determinants of chronic non-infectious ailments among adults in India, Puri and Singh (2022) did also report that unhealthy behaviour including unhealthy diets, high levels of physical

inactivity, tobacco smoking and harmful use of alcohol constituted a leading determinant of lifestyle diseases among the surveyed study participants.

4.5 Stress Coping Mechanisms and Unhealthy Behaviour

The first objective of the study sought to determine the influence of stress coping mechanisms on unhealthy behaviour among patients living with lifestyle diseases in Kiambu County. The respondents' level of agreement with various statements on stress coping mechanisms were rated on a scale of 1-5 where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. The results were as outlined in Table 4.6.

Table 4.6

Stress Coping Mechanisms and Unhealthy Behaviour

Statements on stress coping mechanisms	Mean	SD	Freq.	%
I have gone through a stressful event in my life (such as sickness, death of a family member, loss of a job and divorce/separation).	3.96	0.927	149	69%
I regularly consult a counsellor when I am stressed out.	1.17	0.980	43	20%
When stressed up, I do talk to my close family members and friends.	3.58	0.915	142	66%
When stressed out, I tend to sleep more.	3.21	0.765	131	61%
I tend to eat a lot when I am stressed out.	2.72	0.999	116	54%
When stressed out, I am more likely to eat junk foods	3.54	1.038	138	64%
I do close myself in the house when I am stressed out.	2.62	0.963	103	48%
I tend to drink alcohol much more while stressed	3.43	0.987	112	52%
I do smoke cigarettes at a much higher rate when I am stressed out.	2.04	0.988	45	21%
I tend to be more physically inactive while I am stressed out.	3.45	0.704	125	58%
I tend to overuse social media while I am stressed out.	3.50	1.116	129	60%

SD - standard deviation; Freq. - frequency; % - percentage

Source: Research Data (2022)

As illustrated in Table 4.6, 69% of the respondents indicated that they had gone through a stressful event in their life such as sickness, death of a family member, loss of a job and divorce/separation. The respondents explained that these stressful situations were very painful and some were still in the healing process. Of the respondents, only 20% of them consulted a counselor regularly when they were stressed out. When stressed out, a significant proportion (66%) of the respondents said they talked to close family members and friends; 61% said they tended to sleep more; 54% said they ate more food while stressed while 64% said that they were more likely to eat junk foods. Further, when stressed out, 48% indicated that they closed themselves in the house; 52% resulted to excessive alcohol consumption; 58% became more physically inactive while 60% acknowledged that they tended to overuse social media while stressed out. Additionally, 21% said they did smoke cigarettes at a much higher rate when they were stressed out. This clearly demonstrated that a significant proportion of the patients with lifestyle diseases in Kiambu County engaged in maladaptive stress coping mechanisms whenever they were stressed such as resorting to alcoholism, smoking, excessive use of social media, overeating including indulging in unhealthy foods, over-sleeping, not sharing with others including the healthcare team and self-isolation. The maladaptive stress coping mechanisms seemed to largely characterize unhealthy behaviours among the respondents.

These findings were collaborated by responses offered by the healthcare professionals in discussions held during the interviews with the clinicians, physicians and nutritionists. The healthcare professionals unanimously agreed that some of the patients with lifestyle diseases seen in hospitals in Kiambu County adopted unhealthy coping mechanisms while they were stressed. They cited these as including harmful use of alcohol, smoking, overeating including increased indulgence with unhealthy foods,

over-sleeping, self-isolation and failing to seek help from professionals such as counsellors. As such, maladaptive stress coping mechanisms emerged as the overarching theme in relation to ways in which patients with lifestyle ailments dwelt with stress or stressful events in their lives. This is clearly demonstrated in the following few excerpts;

“I have noted in my interactions with some of the patients I see that a good number of them use negative ways to cope with stressful circumstances in their lives such as smoking, taking alcohol excessively and poor eating habits, all of which risk exacerbating their health status.” (N01)

“In my work as a nutritionist, I encounter on numerous occasions patients with lifestyle ailments who resort to poor eating habits such as excessive indulging with junk foods and other low-quality foods, while others engage in overeating, which is not the right way to deal with stress in our everyday lives.” (N02)

“Only very few of the patients with lifestyle diseases I have interacted with use the right ways to cope with stress in their lives such as seeing a counsellor and sharing with close family members and friends. Most use unhealthy coping mechanisms including indulging in alcoholism and smoking, poor sleep patterns and poor eating habits such as overeating or even failing to eat completely.” (D02)

“I do agree that a significant proportion of the patients with lifestyle illnesses do use unhealthy habits to cope with stressful events in their lives, say, smoking, harmful use of alcohol and not seeking help from professionals such as counsellors.” (C01)

“In many instances, very few patients see a counsellor for counselling when they are stressed or face difficult moments in their lives. Most, and especially men resort unhealthy coping methods such as alcoholism, smoking, self-isolation and poor eating habits, all of which are unhelpful really.” (N03)

It was evident from the findings, therefore, that a significant proportion of the patients confessed to having experienced stressful situations in their life but only a small number of them had sought the services of a counsellor. It was also evident that many of the patients adopted maladaptive stress coping mechanisms. These maladaptive stress coping mechanisms seemed to spur or increase unhealthy behaviours among the participants. Similar views were espoused by Mathur and Mascarenhas (2019) who noted that some individuals are unable to cope proactively with stress and often act in

ways that increase their risk for developing lifestyle diseases by resorting to habits such as overeating junk foods, drinking alcohol or smoking, working too much or oversleeping; habits that catalyse lifestyle diseases. Similar findings were also reported by Park and Iacocca (2014) who posited that it was not uncommon to find persons with chronic lifestyle ailments engaging in unhealthy behaviours like poor diets, physical inactivity, alcohol consumption and smoking cigarette to manage stress. Similarly, in studies by Thomas et al. (2020) and Agrawal et al. (2016) did also establish that utilization of maladaptive stress coping mechanisms including indulging in alcoholism, tobacco smoking, unhealthy eating habits such as eating junk foods, self-isolation and failure to seek help from professional counsellors were common among patients with lifestyle health conditions and which risked worsening their health status. Similar views were shared by Yang et al. (2011) along with Balwan and Kour (2021) who also acknowledged poor stress coping mechanisms such as smoking, harmful use of alcohol, excessive meat consumption, eating of junk foods such as chips and sweet beverages like sodas, failing to exercise and self-isolation constituted major unhealthy behaviours with significant implications on ill health among affected individuals. As part of the global strategy to combat lifestyle ailments, WHO acknowledges that efforts and actions are needed against maladaptive stress coping mechanisms constituting unhealthy behaviours especially unhealthy foods, smoking, harmful use of alcohol and physical inactivity (WHO, 2019).

4.6 Patients' Belief System and Unhealthy Behaviour

The second objective of the study sought to determine the influence of belief systems on unhealthy behaviour among patients living with lifestyle diseases in Kiambu County. The respondents' level of agreement with various statements on their belief

system were rated on a scale of 1-5 where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. The results were as presented in Table 4.7.

Table 4.7

Patients' Belief System and Unhealthy Behaviour

Statements on patients' belief systems	Mean	SD	Freq.	%
I am aware what a balanced diet is.	3.84	0.840	149	69%
I am aware of the importance of maintaining a balanced diet.	4.02	0.709	153	71%
Persons who regularly eat meat are considered as eating well.	3.69	0.918	131	61%
I regularly celebrate my life achievements with meals having meat products.	3.75	0.883	146	68%
Alcohol use is a common occurrence in my family feasts and celebrations	3.71	0.772	135	63%
Sweet snacks, drinks and chips are considered a normal part of my celebrations with friends and family.	3.27	0.849	97	45%
I do not see any problem with having alcohol and meat from time to time.	3.80	0.716	144	67%
To some people, being slender or lean is a sign of being unhealthy while adding weight is equated to being healthy	4.11	0.646	164	76%
Consuming expensive/fashionable diets, smoking and alcohol use is associated with being trendy	3.88	0.591	151	70%
I perceive engaging in physical exercises as tiring and bothering work	3.76	1.067	142	66%
I believe my health status is affected by what I eat or take into their body.	3.64	0.704	125	58%
One's belief system influences their behaviour choices	3.67	1.130	110	51%

SD - standard deviation; Freq. - frequency; % - percentage

Source: Research Data (2022)

As illustrated in Table 4.7, a significant proportion (69%) of the respondents understood what a balanced diet was while 71% of the respondents indicated that they were aware of the importance of maintaining a balanced diet. In addition, 58% said they believed

that their health status was affected by what they ate or took into their body and about half (51%) acknowledged that one's belief system influenced their behaviour choices. However, this notwithstanding, 61% acknowledged the view that persons who regularly ate meat were considered as eating well; 68% indicated that they did regularly indulge in meals with meat to celebrate their life achievements while 63% acknowledged that alcohol use was a common occurrence in their family feasts and celebrations. In addition, 45% of the respondents agreed that sweet snacks, drinks and chips were considered a normal part of their celebrations with friends and family while 67% said they did not see any problem with having alcohol and meat from time to time. Additionally, 76% of the respondents indicated that to some people being slender or lean was a sign of being unhealthy while adding weight was equated to being healthy; 70% said that consuming expensive/fashionable diets, smoking and alcohol use was associated with being trendy while 66% perceived engaging in physical exercises as tiring and bothering work. The findings clearly demonstrated that some of the patients' belief systems did influence unhealthy behaviour among the study participants.

The findings were collaborated by feedback received from the clinicians, physicians and nutritionists in held interview discussions as is demonstrated in the following excerpts;

“I am of the view that patients' belief systems play a critical role in their unhealthy behaviour. Take for instance, the belief that meat and alcohol consumption are associated with sophistication and are taken as a mark of good living, contrary to known evidence that their excessive consumption impairs one's health.” (D01)

“Unfortunately, despite being aware of and acknowledging the significance of balanced diet in their health wellbeing, some patients with lifestyle ailments continue to indulge in harmful behaviours such as smoking and alcoholism due to their distorted belief systems.” (C02)

“More needs to be done to challenge existing belief systems around feeding an physical activity behaviours among all persons but particularly among those

with lifestyle diseases. Smoking, alcohol consumption, overindulging in consumption of meat and related products and being physical inactive are dangerous unhealthy behaviours, irrespective of one's socioeconomic status.” (N01)

“Too many patients living with lifestyle ailments continue to indulge in unhealthy behaviours such as smoking, binge drinking and poor dietary habits partly due to their belief systems. Guess, it's time we challenged these distorted norms.” (C03)

“I strongly agree that patients' belief systems have a role in the continuation of unhealthy behaviours such as harmful use of alcohol, unhealthy eating habits, smoking among others because most are aware of the harm these has on their health yet still continue to engage in these behaviours.” (D03)

The findings demonstrated that patients' belief systems did influence their engagement in unhealthy behaviour despite most being aware of the negative effects of these unhealthy behaviours on their health status including possible deterioration of the ailments they suffered from. The findings concurred with those of Boltayevna (2021) as well as Reddy and Anitha (2015) who argued that certain aspects relating to people's eating habits and ways in which they celebrate certain events in their lives are deeply ingrained in many belief systems and cannot be easily changed. That is why unhealthy behaviours such as drinking of alcohol and smoking cigarette persist, especially among men, even after getting diagnosed with lifestyle diseases. In a study executed by Al-Jawaldeh and Abbass (2022), patients' belief systems were found to have a strong mediating role in the relationship between unhealthy dietary habits and increased risk of lifestyle related ailments among surveyed patients in the eastern Mediterranean frontier. Balwan and Kour (2021) did also establish that the strong connection between contemporary unhealthy lifestyle behaviours such as smoking, poor dietary habits and excessive alcohol use and increased burden of lifestyle diseases in the general public could partly be attributed to prevailing belief systems that tolerate these unhealthy behaviours. Ajzen (2020) observed that planned behaviour theory states that the greater the intention to participate in a particular action, the more possible it is to carry out that

action. In this study, this is confirmed by how patients continue engaging in some unhealthy behaviour although they know the health effects but their belief in the behaviour overcome their desire to change. Little (2016) pointed that belief system represented views and practices of a group that establishes a set of rules, beliefs and norms that constrain, limit, habituate, and/or modify people's habits and hence have a significant influence on their indulgence in unhealthy behaviour.

4.7 Peer Pressure and Unhealthy Behaviour

The third objective of the study sought to determine the influence of peer pressure on unhealthy behaviour among patients living with lifestyle diseases in Kiambu County. The respondents' level of agreement with various statements on peer pressure were rated on a scale of 1-5 where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. The findings were as presented in Table 4.8.

Table 4.8

Peer Pressure and Unhealthy Behaviour

Statements on peer pressure	Mean	SD	Freq.	%
I tend to eat a lot of meat when with friends	3.89	0.821	125	58%
I take a lot of alcohol when with friends during weekends.	3.71	0.905	118	55%
I discuss health implications of taking substances with friends.	3.04	1.005	62	29%
My use of alcohol and cigarettes is influenced by friends.	3.43	0.749	129	60%
I am at greater risk of taking excess substances such as smoking and alcohol when I am with friends.	3.75	0.916	131	61%
I am likely to eat unhealthy foods when out with friends.	3.63	0.735	138	64%
My friends influence my behaviour choices	3.81	0.822	151	70%

SD - standard deviation; Freq. - frequency; % - percentage

Source: Research Data (2022)

From the findings, 58% of the respondents indicated that they tended to eat lots of meat when with friends. On alcohol consumption, 55% of the respondents said they took a lot of alcohol when with friends during weekends. Further, 60% of the participants also did acknowledge that their use of alcohol and cigarettes was influenced by their friends. Additionally, 61% of the participants acknowledged that the risk of taking excess substances such as smoking and alcohol increased when they were with their friends. Likewise, 64% of the respondents acknowledged that they were likely to eat unhealthy foods when out with friends while 70% acknowledged that their friends influenced their behaviour choices. Further, only 29% of the participants agreed that they discussed the health implications of taking substances with friends. The findings denoted that unhealthy behaviour among the patients with lifestyle diseases in Kiambu County could be attributed to peer pressure. It was evident from the findings that most of the patients engaged in unhealthy behaviour such as smoking, harmful alcohol use, excessive uptake of meat and indulgence with unhealthy foods while they were with their friends and most did acknowledge that their peers had a significant influence on their indulgent in these unhealthy behaviours. It was thus clear that peer pressure was a notable psychosocial factor that influenced unhealthy behaviour among the patients living with lifestyle ailments in Kiambu County.

The patients' views regarding the influence of peer pressure on their indulgent in unhealthy behaviour were also espoused by the interviewed healthcare professionals, all of whom unanimously agreed that peer pressure had a significant influence on unhealthy behaviour observed in these patients. The findings were as indicated in the excerpts;

“I have no doubts that most patients with chronic lifestyle illnesses fail to stop unhealthy behaviour such as alcohol use and smoking due to negative peer influence.” (N02)

“The patients I interact with and who still smoke and drink alcohol despite knowing that it harms their health, note that they often engage in these habits while with their friends. So, peer influence is central to their unhealthy behaviour patterns.” (C02)

“Despite our efforts to counsel patients of the negative effects of alcohol use, poor eating habits and smoking on their health wellbeing, many still continue to engage in these unhealthy habits and many do due to the influence of their friends.” (D02)

“Many of the patients I see do not hide the fact that they slide back into unhealthy behaviours largely due to their friends’ influence; so it is true that peer influence plays a major role in propagation of unhealthy behaviour among people including those with lifestyle related ailments.” (C01)

“In my role as a counsellor, I regularly advise my clients against indulging in unhealthy behaviours. Unfortunately, many are unable to leave these harmful lifestyle behaviours simply because their friends and close associates, people with whom they interact closely, are into these behaviours.” (C03)

“In most patients that I interact with, changing their unhealthy behaviours including smoking, excessive drinking habits and unhealthy diets despite its associated health benefits, remains a challenge partly because they are unable to break ranks with their friends and peers who engage in these unhealthy habits.” (N03)

“I strongly applaud the view that peer pressure is a constant threat to patients’ with lifestyle diseases desire to refrain from engaging in unhealthy behaviours such as smoking, harmful use of alcohol and poor dietary habits. This is particularly so, if these friends and peers do themselves engage in these unhealthy behaviours. No doubt there is a contagion effect which in turn perpetuates the patients continued indulgence in these unhealthy behaviours.” (D01)

These findings demonstrated that peer influence had a major influence on unhealthy behaviour among patients with lifestyle ailments in Kiambu County given that a significant proportion of the patients who engaged in the unhealthy behaviour acknowledged that their indulgent in these behaviours was due to peer influence. The implication of these findings is that the role of peer pressure in propagation of unhealthy behaviour among patients with lifestyle diseases cannot be ignored. Similarly, Azadnajafabad et al. (2021) in a study performed in Iran opined that due consideration

must be offered to the role of peer pressure in fuelling unhealthy behaviour. They added that peer influence remained one of the psychosocial domains which impacted persons' habits and particularly their propensity to engage in health harming habits. Similar views were espoused by Budreviciute et al. (2020) that peer influence was one of the psychosocial related aspects that had notable effects on adoption of inappropriate health behaviours in both young and older persons in turn contributing to the rising cases of lifestyle-based illnesses. Likewise, studies by Peer and Kengne (2022), Shiferaw et al. (2019) as well as Paulsson-Do et al. (2017) did also acknowledge that peer influence played a critical role in influencing persons' indulgent in unhealthy behaviours such as smoking cigarettes and drinking alcohol as individuals seek a sense of belonging among their peers and friends. Agrawal et al. (2016) in a probe of attributes of lifestyle that were connected to various non-infectious illnesses among adult Indians also noted that peer influence played a notable part in influencing unhealthy habits such as excessive alcohol indulgence, cigarette smoking and indulgence with inappropriate foods among the surveyed participants. Reviews by Gyawali et al. (2020) and Ndubuisi (2021) were also unanimous that peer influence played a major role in individuals' indulgence in unhealthy behaviours and hence should not be ignored.

4.8 Inferential Analysis

Pearson's correlation analysis was performed to evaluate the association between the study's independent variables and the dependent variable at 5% significance level. This inferential statistic was helpful in indicating the kind of influence that stress coping mechanisms, belief systems as well as peer pressure had on unhealthy behaviour among the study participants. The results of the correlation analysis were as summarized in Table 4.9.

Table 4.9*Correlation Matrix*

	Unhealthy behaviour	Maladaptive stress coping mechanisms	Unhealthy belief systems	Peer pressure
Unhealthy behaviour (r)				
Sig. (2 tailed)	1.000			
Maladaptive stress coping mechanisms (r)	0.717*	1.000		
Sig. (2 tailed)	0.000			
Unhealthy belief systems (r)	0.623*	0.237	1.000	
Sig. (2 tailed)	0.012	0.121		
Peer pressure (r)	0.681*	0.115	0.196	1.000
Sig. (2 tailed)	0.000	0.207	0.125	

* denotes statistically significant at 5% significance level

Source: Research Data (2022)

A person correlation coefficient value (r) of 0.717 and $p = 0.000$ was established in relation to the association between maladaptive stress coping mechanisms and unhealthy behaviour. This implied that there was a strong positive and significant association between maladaptive stress coping mechanisms and unhealthy behaviour among the study participants. This finding implies that adoption of maladaptive stress coping mechanisms among patients with lifestyle diseases in Kiambu County positively influenced their unhealthy behaviour in a significant way. As such, part of the unhealthy behaviour among the participants could be attributed to their use of maladaptive stress coping mechanisms. Similar observations were made by Egger et al. (2019), Alkhatib et al. (2021) and George et al. (2022) who attributed increased incidence of unhealthy behaviour among persons living with lifestyle ailments to their adoption of maladaptive stress coping mechanisms. Similarly, Balwan and Kour (2021) attributed noted unhealthy behaviour among patients living with lifestyle ailments to their use of

inappropriate and harmful stress coping mechanisms such as tobacco use, harmful use of alcohol and social isolation.

A person correlation coefficient value (r) of 0.623 and $p = 0.012$ was established in relation to the association between unhealthy belief systems and unhealthy behaviour. This implied that there was a strong positive and significant association between unhealthy belief systems and unhealthy behaviour among the study participants. This finding implies that adoption of unhealthy belief systems among patients with lifestyle diseases in Kiambu County positively influenced their unhealthy behaviour in a significant way. There was evidence therefore that part of the unhealthy behaviour among the participants could be attributed to unhealthy belief systems that they held. Likewise, in studies by Sahle et al. (2020) alongside Puri and Singh (2022) unhealthy belief systems such as overindulgence in alcohol use and meat consumption during celebratory moments were found to significantly contribute to unhealthy behaviour among persons living with lifestyle ailments. Similar views were expressed by Yang et al. (2011) and Thomas et al. (2020) who attributed unhealthy behaviour among individuals living with lifestyle ailments to their unhealthy belief systems.

A person correlation coefficient value (r) of 0.681 and $p = 0.000$ was established in relation to the association between peer pressure and unhealthy behaviour. This implied that a strong positive and significant association existed between peer pressure and unhealthy behaviour among the study participants. This finding signifies that peer pressure had a significant positive influence on unhealthy behaviour among patients with lifestyle diseases in Kiambu County. It was thus evident that part of the unhealthy behaviour among the participants could be attributed to peer pressure. Similarly, in studies by Kamalden et al. (2019), Cardol et al. (2021) and Boakye et al. (2023), peer

pressure was reported as having a consequential favourable influence on unhealthy behaviour among individuals living with lifestyle ailments. Equally, individuals living with lifestyle health conditions also attributed their indulgent in unhealthy behaviours such as harmful use of alcohol, unhealthy eating habits, smoking and being physically inactive to peer pressure as reported in studies by Glass et al. (2021) and Lerma-Castaño et al. (2021).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section contains a summary of study results, conclusions, and recommendations of the study.

5.2 Summary of the Findings

This section outlines the summary of the study's key findings organized as per the study objectives.

5.2.1 Demographic Information of the Respondents

From the findings, both male and female patients with lifestyle ailments took part in the study though male respondents were prevalent. The respondents were all adults with 42% aged over 35 years, 38% aged 30 - 35 years while the remaining were aged between 20 and 30 years. Further, close to half of the respondents had tertiary education (48%) while the remaining had a basic education background (52%). According to the findings, a third (33%) of the respondents had had the illness for under 5 years, 38% for 5 - 10 years while 29% had had the illness for over 10 years. Most (43%) of the respondents assessed their health status as being moderate, 33% said it was better while 24% said it was poor. Most of the respondents were also either overweight (43%) or obese (25%) with only a third (33%) being of normal weight. The results therefore depicted that the study respondents possessed diverse demographic attributes.

5.2.2 Unhealthy Behaviours among the Participants

From the findings, a significant proportion of the study participants said they were current smokers (62%) and engaged in problematic use of alcohol (69%). Further, 61% of the participants indicated that they often ate unhealthy foods while 27% indicated that they ate unhealthy foods sometimes. Only 7% said they rarely ate unhealthy foods. The results also indicate that most of the participants were physically inactive (73%). This clearly illustrated that most of the study participants engaged in unhealthy behaviours including smoking, harmful use of alcohol, eating unhealthy diets and being physically inactive which, if left unaddressed, could worsen their health status. The implications of these findings were that unhealthy behaviour was rampant among the patients with lifestyle ailments in Kiambu County.

5.2.3 Stress Coping Mechanisms and Unhealthy Behaviour

Results of the study indicated that 69% of the respondents indicated that they had gone through a stressful event in their life such as sickness, death of a family member, loss of a job and divorce/separation. Of the patients, only 20% of them indicated that they regularly consulted a counselor when stressed out. It was evident that a significant proportion of the patients adopted maladaptive stress coping mechanisms which involved unhealthy behaviours. This was given that, when stressed out, 61% said they tended to sleep more; 54% said they ate more food while stressed while 64% said that they were more likely to eat junk foods. Further, when stressed out, 48% indicated that they closed themselves in the house; 52% resulted to excessive alcohol consumption; 58% became more physically inactive; 60% acknowledged that they tended to overuse social media while 21% said they did smoke cigarettes at a much higher rate when they

were stressed out. Additionally, when stressed out, a significant proportion (66%) of the respondents said they talked to close family members and friends.

Further, a statistically significant and positive association was established between maladaptive stress coping mechanisms and unhealthy behaviour among the participants ($r = 0.717$, $p\text{-value} = 0.000$) denoting that maladaptive stress coping mechanisms were a significant predictor of unhealthy behaviours among the participants. These findings were also collaborated by responses offered by the healthcare professionals in discussions held during the interviews with the clinicians, physicians and nutritionists unanimously agreeing that some of the patients with lifestyle diseases seen in hospitals in Kiambu County adopted maladaptive stress coping mechanisms while they were stressed including harmful use of alcohol, smoking, overeating, self-isolation and failing to seek help from professionals such as counsellors. This clearly demonstrated that a significant proportion of the patients with lifestyle diseases in Kiambu County engaged in maladaptive stress coping mechanisms which in turn constituted part of their unhealthy behaviour.

5.2.4 Patients Belief System and Unhealthy Behaviour

From the findings, patients' belief system was found to influence their indulgence in unhealthy behaviours. For instance, 61% acknowledged the view that persons who regularly ate meat were considered as eating well; 68% indicated that they did regularly indulge in meals with meat to celebrate their life achievements while 63% acknowledged that alcohol use was a common occurrence in their family feasts and celebrations. In addition, 45% of the respondents agreed that sweet snacks, drinks and chips were considered a normal part of their celebrations with friends and family while 67% said they did not see any problem with having alcohol and meat from time to time.

Additionally, 76% of the respondents indicated that to some people being slender or lean was a sign of being unhealthy while adding weight was equated to being healthy; 70% said that consuming expensive/fashionable diets, smoking and alcohol use was associated with being trendy while 66% perceived engaging in physical exercises as tiring and bothering work. This was despite a significant proportion (69%) of the respondents indicating that they understood what a balanced diet was while 71% indicated that they were aware of the importance of maintaining a balanced diet. Additionally, 58% said they believed that their health status was affected by what they ate or took into their body and about half (51%) acknowledged that one's belief system influenced their behaviour choices. A statistically significant and positive association was established between unhealthy belief systems and unhealthy behaviour among the participants ($r = 0.623$, $p\text{-value} = 0.012$) denoting that unhealthy belief systems were a significant predictor of unhealthy behaviour among the participants. The findings demonstrated that some of the patients' belief systems did influence unhealthy behaviour among the study participant, sentiments also echoed by the interviewed healthcare practitioners.

5.2.5 Peer Pressure and Unhealthy Behaviour

From the findings, peer pressure emerged as an important psychosocial factor that influenced unhealthy behaviours among the participants. For instance, 58% of the respondents indicated that they tended to eat lots of meat when with friends; 55% said they took a lot of alcohol when with friends during the weekends while 60% said their use of alcohol and cigarettes was influenced by their friends. Additionally, 61% of the participants acknowledged that their odds of taking excess substances such as smoking and alcohol consumption increased when they were with friends while 64%

acknowledged that they were likely to eat unhealthy foods when out with friends. Further, 70% acknowledged that their friends influenced their behaviour choices. Only 29% of the participants said that they discussed the health implications of taking substances with friends. Further, a statistically significant and positive association was established between unhealthy behaviour among the participants and peer pressure ($r = 0.681$, $p\text{-value} = 0.000$) denoting that peer pressure was a significant predictor of unhealthy behaviour among the participants. The findings therefore denoted that unhealthy behaviour among the patients with lifestyle diseases in Kiambu County could be attributed to peer pressure. The patients' views regarding the influence of peer pressure on their indulgent in unhealthy behaviour were also espoused by the interviewed healthcare professionals, all of whom unanimously agreed that peer pressure had a significant influence on unhealthy behaviour observed in these patients.

5.3 Conclusions

Based on the findings of the study, the following conclusions were drawn;

1. A significant proportion of the patients living with lifestyle diseases in Kiambu County adopted maladaptive stress coping mechanisms and which were a significant positive predictor of the patients' unhealthy behaviour.
2. Unhealthy behaviour among the patients living with lifestyle ailments in Kiambu County could also be attributed to unhealthy belief systems.
3. Peer pressure was also a significant contributor of unhealthy behaviour among the patients living with lifestyle diseases in Kiambu County.

5.4 Recommendations of the Study

The study makes the following recommendations;

- i. Ongoing campaigns, actions and efforts by various stakeholders against maladaptive stress coping mechanisms and which constitute unhealthy behaviours including smoking, excessive alcohol use, sedentary lifestyle and consumption of unhealthy diets need be supported and intensified at all levels. The patients should be educated on positive ways of coping with stress.
- ii. Healthcare providers should sensitize patients living with lifestyle diseases on the dangers of unhealthy belief systems and that promote unhealthy behaviours among the patients.
- iii. Healthcare providers should counsel patients with lifestyle diseases against adverse peer influence and advocate for positive peer influence as part of efforts to help them cease unhealthy behaviours.

5.5 Recommendations for Further Research

The suggestions on areas for further review are as follows;

- i. An investigation of other factors, other than the ones addressed by the current study, on unhealthy behaviour among persons with lifestyle diseases would equally be informative.
- ii. An investigation on the effects of incorporating mental health specialists and counselors on fostering healthy behaviours among persons with lifestyle diseases would also be desirable.

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APPENDICES

Appendix I: Informed Consent Form

Form Code _____

Dear Respondent,

CONSENT STATEMENT

Hello, my name is Anne Karambu. I am a student pursuing a Master of Master of Counselling Psychology at Kenya Methodist University. As part of my course requirements, I am currently conducting a research study on the Influence of Psychosocial Factors on Unhealthy Behaviour Among Patients with Lifestyle Diseases in Kiambu County. To meet this objective, I kindly request you to participate in this study by volunteering to provide information asked. The findings of this research will provide useful information to the stakeholders on how to address factors that escalate lifestyle diseases. Whatever information you provide will be kept confidential and will not be shared or discussed with other persons. Thank you very much in advance.

Will you volunteer to participate in this study?

YES.....

NO.....

For the Respondent

Consent granted _____

Signature

Appendix II: Questionnaire for the Patients

Instructions

Kindly answer all the questions, tick or fill in the appropriate answer in the space provided.

Preliminary section

Name of the Hospital-----

Section A: Demographic characteristics of the respondents

1. Age (in years):

2. Gender: Male () Female ()

3. Level of Education:

Primary () Secondary () College () University ()

4. Years you have had the illness:

Under 5 years () 5 - 10 years () Over 10 years ()

5. How would you rate your current health status:

Poor () Moderate () Better ()

6. Physical health status: Normal () Overweight () Obese ()

Section B: Unhealthy Behaviour

7. How regularly do you eat unhealthy foods:

8. Rarely () Sometimes () Often () Always ()

9. Are you physically active? Yes () No ()

10. Currently smokes cigarettes: Yes () No ()

11. Drinks alcohol excessively: Yes () No ()

Section C: Stress Coping Mechanisms

Kindly indicate your level of agreement with the following statements regarding the influence of stress coping mechanisms on unhealthy behaviour. Kindly rate using a scale of 1 - 5 where 1 = strongly disagree, 2 = disagree; 3 = neutral, 4 = agree and 5 = strongly agree.

Statements on stress coping mechanisms	1	2	3	4	5
I have gone through a stressful event in my life (such as sickness, death of a family member, loss of a job and divorce/separation).					
I regularly consult a counsellor when I am stressed out.					
When stressed up, I do talk to my close family members and friends.					
When stressed out, I tend to sleep more.					
I tend to eat a lot when I am stressed out.					
When stressed out, I am more likely to eat junk foods					
I do close myself in the house when I am stressed out.					
I tend to drink alcohol much more while stressed					
I do smoke cigarettes at a much higher rate when I am stressed out.					
I tend to be more physically inactive while I am stressed out.					
I tend to overuse social media while I am stressed out.					

Section D: Patients Belief System

Kindly indicate your level of agreement with the following statements regarding the influence of one's belief system on unhealthy behaviour. Kindly rate using a scale of 1 - 5 where 1 = strongly disagree, 2 = disagree; 3 = neutral, 4 = agree and 5 = strongly agree.

Statements on patients' belief systems	1	2	3	4	5
I am aware what a balanced diet is.					
I am aware of the importance of maintaining a balanced diet.					
Persons who regularly eat meat are considered as eating well.					
I regularly celebrate my life achievements with meals having meat products.					
Alcohol use is a common occurrence in my family feasts and celebrations					
Sweet snacks, drinks and chips are considered a normal part of my celebrations with friends and family.					
I do not see any problem with having alcohol and meat from time to time.					
To some people, being slender or lean is a sign of being unhealthy while adding weight is equated to being healthy					
Consuming expensive/fashionable diets, smoking and alcohol use is associated with being trendy					
I perceive engaging in physical exercises as tiring and bothering work					
I believe my health status is affected by what I eat or take into their body.					
One's belief system influences their behaviour choices					

Section E: Peer Pressure

Kindly indicate your level of agreement with the following statements regarding the influence of peer pressure on unhealthy behaviour. Kindly rate using a scale of 1 - 5 where 1 = strongly disagree, 2 = disagree; 3 = neutral, 4 = agree and 5 = strongly agree.

Statements on peer pressure	1	2	3	4	5
I tend to eat a lot of meat when with friends					
I take a lot of alcohol when with friends during weekends.					
I discuss health implications of taking substances with friends.					
My use of alcohol and cigarettes is influenced by friends.					
I am at greater risk of taking excess substances such as smoking and alcohol when I am with friends.					
I am likely to eat unhealthy foods when out with friends.					
My friends influence my behaviour choices					

End

Thank you

Appendix III: Interview Schedule for Healthcare Professionals

Interview Schedule for Clinical Officers

- i. What are some of the unhealthy behaviours of the patients living with lifestyle diseases?
- ii. Do you inform the patients of the risks involved if they continue with the unhealthy behaviour?
- iii. What are some of the risks involved?
- iv. What are some of the challenges you face as blocks to behaviour change?
- v. Have you ever involved a counsellor in the management process of your patients?
- vi. When a patient continues with the unhealthy behaviour what step do you take?
- vii. Comment on the issue of patient beliefs, stress coping mechanism and peer pressure as factors influencing unhealthy behaviour in patients?
- viii. Do you focus more on the medication the patients is taking and whether they are following their dosage?
- ix. When a patient confides to you that they have psychological issues affecting them where do you refer them?

Interview Schedule for Doctors

- i. What are the risk factors of lifestyle diseases?
- ii. Do you inform your patients how unhealthy behaviour affects their health?
- iii. Do you refer your patients to counsellor for psychological support?
- iv. What are some challenges that you face while dealing with patients living with lifestyle diseases on the issue of unhealthy behaviour?
- v. Do you think health education and promotion is necessary to this population?

- vi. Do you always work with a nutritionist while treating a patient with lifestyle diseases?
- vii. What feedback (both negative and positive) do you receive when you explain to the patient the effects of unhealthy behaviour to their health?

Interview Schedule for the Nutritionists

- i. Do you always work together with a clinician or the doctor during the management of patients?
- ii. Are there patients who come to the clinic and are not able to access your services?
- iii. How many sessions do you hold with these patients?
- iv. What challenges do you face while trying to guide the patient on proper nutrition and physical activity?
- v. Do you refer your patients to a counsellor when they have psychological issues?
- vi. Are you able to attend to all patients who attend the clinics and those who are in the wards?
- vii. What advice would you give on how to manage unhealthy eating habits among patients living with lifestyle diseases?

Thank you for your Cooperation

Appendix IV: Research License

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 622640	Date of Issue: 15/November/2021
RESEARCH LICENSE	
	
This is to Certify that Ms. Anne Karambu of Kenya Methodist University, has been licensed to conduct research in Kiambu on the topic: INFLUENCE OF PSYCHOSOCIAL FACTORS ON UNHEALTHY BEHAVIOUR AMONG PATIENTS WITH LIFESTYLE DISEASES IN KIAMBU COUNTY-KENYA for the period ending : 15/November/2022.	
License No: NACOSTI/P/21/14149	
622640 Applicant Identification Number	 Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Verification QR Code	
	

Appendix V: Clearance to Conduct Research in Kiambu County

COUNTY GOVERNMENT OF KIAMBU DEPARTMENT OF HEALTH SERVICES

All correspondence should be addressed to HEAD
HRDU – HEALTH DEPARTMENT
Email address: hrdukiambu@gmail.com
mkwasa@live.com
Tel. No: 0721641516
0721974638



HEALTH RESEARCH AND DEVELOPMENT
UNIT
P. O. BOX 2344 – 00900
KIAMBU

Ref. No.: KIAMBU/HRDU/21/11/23/RA_KARAMBU

Date: 23rd Nov 2021

TO WHOM IT MAY CONCERN

RE: CLEARANCE TO CONDUCT RESEARCH IN KIAMBU COUNTY

Kindly note that we have received a request by Ms. Anne Karambu of Kenya Methodist University to carry out research in Kiambu County, the research topic being on "Influence Of Psychosocial Factors On Unhealthy Behaviour Among Patients With Lifestyle Diseases In Kiambu County, Kenya"

We have duly inspected her documents and found that she has been cleared by NACOSTI to carry out the research for a period ending 15th November 2022. She thus does not need any further clearance with another regulatory body in order to conduct research within the county of Kiambu.

However, it is incumbent upon the institution where she is carrying out research to ensure that she receives adequate supervision during the process of conducting the research. This note also accords her the duty to provide a feedback on her research to the county at the conclusion of her research.

DR. MWANCHI KWASA
COUNTY CLINICAL RESEARCH OFFICER
KIAMBU COUNTY

Appendix VI: Approval Letter from Kiambu County

COUNTY GOVERNMENT OF KIAMBU
DEPARTMENT OF HEALTH SERVICES

Telephone: +254722106797
Email address: thika5hospital@gmail.com
When replying please quote:
Ref: TL5H/TREC/VOL. 1/536



THE MEDICAL
SUPERINTENDENT,
P. O. BOX 227 – 01000,
THIKA

Date: 11th February, 2022

APPROVAL TO CARRY OUT RESEARCH

PRINCIPLE INVESTIGATOR: ANNE KARAMBU

**RE: INFLUENCE OF PSYCHOSOCIAL FACTORS ON FACTORS ON
UNHEALTHY BEHAVIOR AMONG PATIENTS WITH LIFESTYLE DISEASE IN
KIAMBU COUNTY – KENYA**

Following deliberations by Thika Level 5 Hospital's Training, Research and Ethics Committee (TREC), and subject to provision of all the necessary licenses and ethical approvals, your proposal to carry out the above referenced research, at this facility, has been approved.

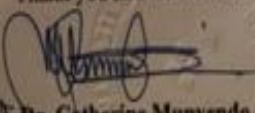
This approval is subject to the following mandatory conditions:

1. You shall submit a copy of the abstract of the final report, through the above contact details.
2. Where called upon, you shall be expected to make a feedback presentation to the hospital's Training, Research and Ethics Committee.
3. You shall maintain ethical consideration and the research subjects' confidentiality as outlined in your proposal.
4. Any patient confidential information that you may access during your research should not be used without consent.
5. You shall make payments of applicable research fees to the hospital before commencing research activities.

This letter is valid up to June, 2022.

For any queries feel free to contact the committee chair through the Medical Superintendent's office or Training, Research and Ethics Committee Office.

Thank you and all the best.



Dr. Catherine Munyendo
Chairperson, Training Research & Ethics Committee,
THIKA LEVEL 5 HOSPITAL

COUNTY GOVERNMENT OF KIAMBU
DEPARTMENT OF HEALTH SERVICES

Telephone: (066) 2022191
Email address:
kiambudistricthospital@yahoo.com
When replying please quote:



KIAMBU COUNTY REFERRAL
LEVEL 5 HOSPITAL
P. O. BOX 39 – 00900,
KIAMBU

Ref No: KBU/STAFF.17A/VOL XLIV/6

Date: 14th December, 2021

Anne Karambu

P.O.Box 1605-009

KIAMBU

0723168166

RE: REQUEST TO CONDUCT RESEARCH

We are in receipt of your letter dated 6th December, 2021 refers.

Kiambu Hospital has no objection to your request.

DR CYRUS MUMBURA

MEDICAL SUPERINTEDENT

KIAMBU COUNTY REFERRAL HOSPITAL

