ACCESS TO NUTRITION EDUCATION AND COUNSELLING BY PEOPLE LIVING WITH HIV AND AIDS IN LUSAKA DISTRICT ZAMBIA: A HERMENEUTIC PHENOMENOLOGY APPROACH

BY

ESTHER MALAMA

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AUTHOR'S DECLARATION

I, **Esther Malama,** do hereby solemnly declare that this thesis represents my own work, except where otherwise acknowledged, and that it has never been previously submitted for a degree at the University of Zambia or any other university.

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CERTIFICATE OF APPROVAL

This thesis of **Esther Malama** is hereby approved as fulfilling the requirements for the degree of Doctor of Philosophy in Home Economics : Nutrition by the University of Zambia.

Examiner 1

_____Signed:_____Date:_____

Examiner 2

_____Signed:_____Date:_____

Examiner 3

_____Signed:_____Date:_____

Chairperson of the Board of Examiners

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Supervisor

_____Signed:_____Date:_____

ABSTRACT

Proper nutrition plays a crucial role in the well-being of people living with HIV (PLWHIV), impacting their immune system, overall health, and quality of life. Nutrition education and counselling (NEC) are essential components of comprehensive HIV care and support. However, there is limited research exploring how PLWHIV access NEC and how this access influences their nutritional knowledge, motivation, and behavioural skills. The purpose of this hermeneutic phenomenological study was to uncover the lived experiences of PLWHIV regarding their access to NEC. The study used a qualitative approach and applied hermeneutic phenomenological research design. A purposive homogenous sample of 25 PLWHIV was used in this study. Semi-structured interviews were conducted with 25 PLWHIV receiving care at a health care center. The collected data was analysed using Ajjawi & Higgs six stages of data analysis. The study revealed eight major themes which include: knowledge of nutrition education, acquired nutrition knowledge and skills, accessibility and acceptability of nutrition education and counselling, the benefit of nutrition education, types of nutrition counselling, frequency of nutrition counselling, challenges in accessing nutrition education and counselling, and recommendations from participants. Participants demonstrated a good understanding of nutrition education and reported acquiring knowledge and skills related to healthy eating and dietary practices through NEC. The accessibility and acceptability of NEC varied among participants, with some experiencing positive and others negative aspects. Participants received nutrition counselling, including group and individual sessions, focusing on food intake, health conditions, screening, and maintaining a balanced diet. Transportation issues, a shortage of health personnel, and the limited availability of nutritionists were significant barriers for many participants in accessing healthcare. Participants recommended enhancing nutrition education and counselling access, increasing patient-nutritionist interaction, and integrating nutrition support with trained community health workers to address manpower limitations. Overall, participants perceived NEC as beneficial, leading to improved health and nutritional status. The study demonstrates that nutrition education and counselling play a significant role in improving the dietary practices and overall well-being of PLWHIV. While challenges related to accessibility and acceptability exist, participants generally found nutrition education to be informative and beneficial, leading to positive health outcomes. This study contributes to understanding the strengths and challenges of NEC implementation, supporting the Information-Motivation-Behavioural Skills Model (IMB). It emphasises the importance of tailoring NEC services to meet the specific needs of PLWHIV and enhance their nutritional knowledge, motivation, and behavioural skills. By addressing these aspects, NEC can be an effective tool for promoting better dietary practices and improving the quality of life for PLWHIV. The study's findings offer guidance for improving the accessibility and effectiveness of nutrition education and counselling programmes for PLWHIV. The findings have implications for HIV care and support programmes in Zambia and similar settings, highlighting the significance of NEC in comprehensive HIV care.

DEDICATION

I dedicate this thesis to my family. To my parents, Mr. and Mrs. Malama, for encouraging me to pursue my dreams and to be resilient. To my lovely husband, Enoch Kalenga Mutti, who provided constant support and endless encouragement to ensure that I completed this project successfully. To my handsome, lovely boys Muzambalika, Kalenga, and Miracle, and my siblings Edward, Bwalya, Selita, Barbra, Chitendwe, James, and my later brother Raymond.

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TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

ABBREVIATION AND ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral
BMI	Body Mass Index
CD4	Helper T-Cell of the Human Immune System
CDC	U.S. Centers for Disease Control and Prevention
CIDRZ	Centre for Infectious Disease Research in Zambia
CSO	Central Statistical Office
FANTA	Food and Nutrition Technical Assistance Project
FAO	Food and Agriculture Organization
HBM	Health Belief Model
HCPs	Health Care Providers
HIV	Human Immunodeficiency Virus
ICF	ICF (originally, Inner City Fund)
IDNT	International Dietetics and Nutritional Terminology
IMB	Information Motivation Behaviour
KAP	Knowledge Attitude and Practice
MoH	Ministry of Health
MUAC	Mid-upper arm circumference
NAC	National AIDS Council
NAC	National AIDS Council
NACS	Nutrition assessment, counselling and support along the continuum of care
NACS	Nutrition assessment, counseling and support) programme,
NAIDS)	Nutritionally Acquired Immune Deficiency Syndromes
NEC	Nutrition Education and Counselling
NFNC	National Food and Nutrition Commission
NFNC	National Food and Nutrition Commission
NASF	National AIDS strategic framewrok
OIs	Opportunistic Infections

PEPFAR	The U.S. President's Emergency Plan for AIDS Relief
PLWHIV	People Living with HIV
UNAIDS	Joint United Nations Programme on HIV/AIDS
USAID	United States Agency for International Development
WFP	World Food Programme
WHO	World Health Organization
ZDHS	Zambia Demorgraphic and Health Survey

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter presents the introduction to the study. The general context of the study is described. It includes the statement of the problem, the purpose of the study, the research objectives and research questions. The chapter further explains the significance of the study, theoretical framework, delimitation and limitation of the research and the definition of key terms**.**

1.2 Background

Human immunodeficiency virus (HIV) is a serious communicable disease characterized by immunodeficiency and other complications that increase mortality rates. In 2022, it was estimated that the number of people living with HIV was 39 million worldwide, and 1.3 million people became newly infected with HIV (UNAIDS 2023). Of the estimated 39 million people living with HIV, 25.6 million live in the Africa region. Among all countries worldwide, those in sub-Saharan Africa have the highest rates of HIV. Zambia was ranked among the countries with the highest prevalence of HIV in 2000 and 2022 (Elflein, 2023). Malnutrition is prevalent among individuals living with HIV, exacerbating immune suppression and disease progression due to increased energy requirements for combating infection. Adequate nutrition, encompassing macronutrients and micronutrients, is crucial for enhancing immunity, maintaining nutritional status, and delaying HIV progression, thereby improving quality of life. Nutrition interventions, including supplementation, education, counselling, and food assistance programmes, are vital in developing countries to address poor nutrition status, reduce viral load, and mitigate susceptibility to infectious diseases and the transmission of HIV (Rezazadeh et al., 2023)

Nutrition education and counselling (NEC) plays a crucial role in comprehensive nutrition intervention in Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) management and care support. Integrating nutrition interventions in HIV and AIDS care programmes prolongs patient survival and reduces death due to malnutrition (UNAIDS,

2014). NEC empowers people living with HIV and AIDS (PLWHIV) to modify their diets using locally available nutrient-dense and culturally acceptable foods to maintain good health (United Nations Programme on HIV/AIDS (UNAIDS, 2014; Piwoz, 2004). The integration of nutrition education and counselling has been recommended to improve the quality of lives of PLWHIV (FANTA, 2016; MOH, 2011; UNAIDS, 2014). The Government of the Republic of Zambia recognises that nutrition is an essential component in providing quality care and support to people living with HIV and AIDS. This is per the National Health Strategic Plan 2017–2021, embedded in the 7th National Development Plan 2017–2021, which identifies the importance of a healthy nation in attaining middle-income status by 2030 (NFNC, 2017). This has been emphasised in the National Health Strategic Plan of 2022–2026, which aims to tackle health sector challenges, accelerate progress towards national and global health goals, and ensure equitable access to quality healthcare for all Zambians. To contribute to the national development agenda, as outlined in the Eighth National Development Plan (8NDP) and Vision 2030 (MOH, 2022). Through the Ministry of Health and other line ministries, the Government of Zambia has developed and integrated nutrition education and counselling programmes in all the health care centres in the country as part of a critical component for comprehensive nutrition intervention for PLWHIV (MOH, 2011).

1.2.1 Impact of Nutrition on People Living with HIV and AIDS

Nutrition and HIV and AIDS are strongly related and complement each other. HIV causes immune impairment leading to malnutrition, further immune deficiency, and the rapid progression of HIV infection to AIDS (Duggal, Chugh, & Duggal, 2012). After acquiring HIV, a malnourished person is likely to progress faster to AIDS because his or her body would be too weak to fight infection, whereas a well-nourished person may fight the illness better. From the studies conducted, it has been proven that good nutrition increases resistance to infection and disease, improves energy, and thus makes a person more robust and productive (Rezazadeh et al., 2023; S, 2022). According to the WHO, nutritional support is an integral part of a comprehensive response to HIV and AIDS, helping to maintain the immune system and sustain healthy physical activity levels (WHO, 2014). Many HIV-related conditions affect and are affected by the body's nutritional status. Maintaining excellent dietary quality is essential to supporting people's overall health and immune function while living with HIV and AIDS (PLWHIV) (Banwat et al., 2013). Adequate nutrition refers to the intake of a diet that meets the particular individual's specific nutritional needs during that specific period of time (Banwat, 2013). Adequate nutrition helps maintain and improve the

nutritional and immunological status of a person with HIV and AIDS and delays the progression from HIV to AIDS-related diseases. It can therefore improve the quality of life for PLWHIV. The sole aim of adequate nutrition is to meet a unique, specific individual's body's growth and developmental demands (Aishwarya, 2015).

When people are infected with HIV, they fail to meet their nutritional needs. The decreased immunity associated with both the virus itself and malnutrition leads to increased susceptibility to opportunistic infections, leading to more malnutrition. Both malnutrition and lowered immunity are predictors of poor health and the possible progression of HIV to AIDS (Thimmapuram et al. 2019). Inadequate nutrition in people with HIV infection may result from many factors, including nausea, vomiting, and anorexia that may prevent adequate intake of nutrients and medications; diarrheal illnesses that prevent absorption of nutrients and drugs (Food and Nutrition Technical Assistance FANTA, 2014; Maertens, 2011). Addressing nutrition among people living with HIV and AIDS (PLWHIV) is essential because nutrition plays a vital role in caring for and managing HIV and AIDS. It is intrinsically linked to immune function. This can be enhanced by nutrition counselling so that PLWHIV acquire knowledge of good nutrition and proper dietary practices (Nti, Hayford & Obiswa, 2012).

1.2.2 Impact of Nutrition Education and Counselling on People Living with HIV and AIDS

Many nutritional problems among PLWHIV can be managed through nutrition education and counselling, which are often available in primary healthcare. Nutrition education and counselling may help individuals, families, and communities make informed choices about food and lifestyles that support their physiological health and economic and social well-being (USDA, 2012b). Nutrition education and counselling may be delivered in multiple ways and involve activities at the individual, community, and policy levels (Contento, 2011). The activities may include individual and group counselling. McNulty (2013) confirms that nutrition education and counselling have been found to be effective in modifying dietary practices that affect chronic disease. Nutritional counselling has also been proven to influence health outcomes in HIV and AIDS-infected people effectively (Hudayani & Sartika, 2016). Access to nutrition education and counselling coupled with the Antiretroviral Therapy (ART), psychosocial support, treatment of Opportunistic Infections (OIs), and recommended medical nutrient supplementation may lead to the improved nutritional status of PLWHIV (Tushemerirwe, 2016; UNAIDS, 2014). Lack of or

inadequate access, or indeed, poor knowledge and dietary practices, by PLWHIV may significantly contribute to the rapid progression of HIV to AIDS. The Ministry of Health and National Food and Nutrition Commission (MOH and NFNC) outlined the goals of nutrition care support for adults with HIV as follows: 1) Ensure adequate nutrient intake by improving eating habits and building stores of essential nutrients needed for the immune system to function. 2) Prevent nutritional deficiencies. 3) Prevent the loss of weight and muscle mass. 4) Improve response and adherence to ART. 5) Prevent food-borne and water-borne illnesses. 6) Minimise the nutritional impact of secondary infections. 7) Manage HIV-related symptoms and medication side effects that affect food intake.8) Promote well-being, self-esteem and a positive attitude to improve the quality of life, (MOH and NFNC, 2017). MOH/NFNC further state that to achieve these goals of nutrition care and support, nutrition education and counselling should be included as a package in any programme serving people with HIV.

In recognition of the importance of nutrition education and counselling in the improvement of quality of life in PLWHIV, the Government of Zambia has taken up unprecedented mitigation steps; firstly, the launch and implementation of the first national HIV and AIDS Council Strategic Framework of 2006 – 2010 aimed at scaling up ART , and secondly the launch and implementation of the 2011-2012 nation HIV and AIDS Council Strategic Framework identified for promotion of appropriate nutrition and positive living action and the current National AIDS Strategic Framewrok (NASF) 2017 -2021. This coupled with the commencement of National Nutrition Surveillance in 2007 (MOH, 2011 MOH, 2022; MOH,NCFN & FANTA, 2017). The government also formulated national nutrition guidelines which highlight the importance of good nutrition in HIV and AIDS intended for health care managers, health service providers, nutritionists, policy makers, and for training institutes to standardise management of HIV related malnutrition (MOH, 2011).

Despite this, it is not known how PLWHIV access nutrition education and counselling in selected health centres in the Lusaka district. The amount of nutrition education and counselling provided to PLWHIV is cardinal if their lives are to be prolonged. CSO and MOH reports show that many adults living with HIV/AIDS and receiving treatment have low body mass index (BMI.) (CSO & MOH, 2015). The ZDHS of 2013-2014 revealed an increased prevalence of malnutrition, making ten per cent of women age 15 - 49 found underweight; that is, they fall below the body mass index

(BMI) cut off of 18.5 (CSO & MOH, 2015). In addition, research conducted by the Centres for Infectious Disease Research in Zambia (CIDRZ), the World Food Programme (WFP), and the U.S. Centres for Disease Control and Prevention (CDC) found that malnutrition among people living with HIV (PLWHIV) was much higher than in the general population, (MOH, 2011). Most recent Demographic and Health Survey (DHS) (Central Statistical Office (CSO) of (Zambia), Ministry of Health (MOH) of (Zambia), and ICF International, 2018) has indicated higher rates of malnutrition among HIV-infected individuals than the general population (Zambia Statistics Agency, Ministry of Health (MOH) Zambia, and ICF International, 2019). Such a situation makes it imperative to explore access to nutritional education and counselling by PLWHIV. UNAID (2014) reports further indicate that in most districts of Zambia, nutrition education, counselling, and support (NECS) were not integrated into HIV services, making it difficult for PLWHIV to access nutrition education and counselling in Zambia. The national guidelines for providing nutrition support services to HIV-positive adults and adolescents in Zambia indicates that the comprehensive NACS package includes nutrition education, therapeutic foods, referral to community services, and integration with clinical HIV care to enhance nutritional status, support treatment adherence, and slow disease progression (MOH, NFNC & FANTA, 2017). With the high rates of malnutrition among the PLWHIV , one would wonder how adults living with HIV and AIDS access nutritional education and counselling. Records show that nutrition support services are usually directed towards children who are malnourished and/or have HIV infection, creating a knowledge gap about how people living with HIV and AIDS access nutritional education and counselling . Therefore, this study sought to establish the experiences of PLWHIV on access to nutrition education and counselling in Lusaka district of Zambia.

1.3 Statement of Problem

Access to nutrition education and counselling is integral to comprehensive HIV care for PLWHIV (USAID 2017, UNIADS, 2014, WHO, 2014, MOH, 2011, Piwoz et al., 2004). In recognition of the critical role nutrition education and counselling play in improving the quality of lives of PLWHIV, the Government of Zambia formulated the national nutritional policy, national HIV and AIDS council framework, nutritional guidelines for care and support for PLWHIV and nutritional surveillance to be used by health care providers, (MOH, 2022; MOH: NFNC, 2017). While the Government of Zambia has established nutritional protocols to guide the provision of nutrition

education and counselling to people living with HIV (PLWHIV) in healthcare centres, there is a lack of understanding regarding how PLWHIV actually access and receive this crucial nutrition education and counseling (NFNC, 2020). This gap in knowledge raises concerns about the effectiveness and accessibility of the services provided to PLWHIV, potentially hindering their overall health and well-being . Against this backdrop, the study sought to explore the experiences of PLWHIV on how they accessed nutrition education and counselling in health care centres in the Lusaka district.

1.4 Purpose of the Study

This study aimed to establish the lived experiences of PLWHIV on how they access nutrition education and counselling as part of their care and support in Lusaka district of Zambia.

1.5 Objectives of the Study

The research objectives that guided this study were :

1. To describe lived experiences of PLWHIV on how they access nutrition education and counselling.
2. To establiseh existing types of nutrition counselling received by PLWHIV.
3. To explore the challenges faced by PLWHIV in accessing nutrition education and counselling.
4. To Suggest a framework on how PLWHIV can better access nutrition education and counselling.

1.6 Research Questions

The study sought to have the following questions answered;

1. What are the lived experiences of PLWHIV on how they access nutrition education and counselling?
2. What types of nutrition counselling do PLWHIV receive?
3. What challenges do PLWHIV face when accessing nutrition education and counselling?
4. How can PLWHIV better access nutrition education and counselling from the health care centres?

1.7 Significance of the Study

The results from the study may provide insights on how nutrition education and counselling services are accessed in health care centres by PLWHIV. It may also be helpful to know what nutrition counselling health providers give to PLWHIV in health care centres. The results may further help policymakers, healthcare providers, health workers, information providers, professionals, and other stakeholders in the health and nutrition sectors to respond positively to the nutrition needs of PLWHIV and exploring avenues to improving access to nutrition education and counselling to PLWHIV. In addition, the study may contribute to the scanty existing literature on how PLWHIV access nutrition education and counselling. The growing addition to knowledge made by this research study through scholarly publications and international conferences is exemplified by what is described below:

Malama, E., & Ndhlovu, D. (2019). Nutrition Education, Counselling and Assessment Support Approach for People Living with HIV and AIDS: A Literature Review. *International Journal of Contemporary Applied Researches*. 6(10) 13-35 (ISSN: 2308-1365)

Malama, E & Ndhlovu, D. (2023). Lived Experiences of PLWHIV Accessing Nutrition Education and Counselling: Exploring the Benefits, Barriers and Strategies, *British Journal of Multidisciplinary and Advanced Studies: Education, Learning, Training & Development*, 4(6),53-64. doi: https://doi.org/10.37745/bjmas.2022.0364

Malama, E & Ndhlovu, D. (2023). Comprehensive Nutrition Counselling for People Living with HIV and AIDS in Lusaka District Zambia: Types and Impact. *International Journal of Research and Innovation in Social Science* 7(11): 905-912. DOI: https://dx.doi.org/10.47772/IJRISS.2023.7011069

1.8 Delimitation of the Study

This study's scope was restricted to determining how PLWHIV in the Lusaka district access nutrition education and counseling as part of care and support for the HIV and AIDS epidemic. Only individuals aged 20 to 60 who had been receiving ART for the previous three years were included in the sample. Due to the inaccessibility of people living with HIV in the community, the researcher chose to involve people living with HIV who were already registered at the Comprehensive ART Clinic or Health Center. The researcher interviewed the participant without the presence of the health workers because they did not feel comfortable around them to maintain confidentiality.

1.9 Theoretical Framework

This section discusses the theoretical framework related to the current study within the context of behavioural change in PLWHIV. Many theories have been applied to the study of health behaviour change. Behavioural change is a core component of self-management and adherence to people with chronic illness such as HIV. Behavioural approaches have been frequently used to develop behavioural intervention. Several theories have been used in recent years . In particular, the Health Belief Model and the Information Motivation Behaviour skill model have been used. The Information-Motivation-Behavioural Skills Model (IMB) is a general social psychological model for understanding and promoting health-related behaviour. The constructs of IMB are based on relevant social and health psychology theories (Fisher & Fisher, 2003).

Choosing an appropriate social theory is an essential step towards addressing research questions that involve the social world. In phenomenology, Edmund Husserl's transcendental approach emphasises the analysis of the structures of consciousness, while Martin Heidegger's hermeneutic approach focuses on understanding lived experiences and the interpretation of being in the-world (Creswell, 2014: Gill, 2014). The critical difference between the Husserlian and the Heideggerian approaches is found in Husserl’s descriptive method, which suggests that a social researcher suspends his/her preconceived views to avoid influencing the process of finding empirical data (Fendt et al., 2014). Husserl (1997) coined the term 'epoch' to signify the act of setting aside

preconceptions about the social world, known as 'phenomenological reduction', in order to directly engage with pure phenomena as they appear in consciousness. In contrast, the Heideggerian approach proposed that researchers use different types of data, including ones' own experience.

In this current study, the researcher used hermeneutic phenomenology to explore how PLWHIV access nutrition education and counselling as part of the care and support. As shown in the literature, the hermeneutic phenomenology school of thought is guided by a IMB theoretical framework in the study. According to Van Manen (1990), a hermeneutic phenomenology is an approach in which the researcher goes beyond the words of the participants to achieve obstruction through interpretation. The researcher uses understanding or appropriate prior experience when reflecting on exposing the meaning of data and elucidating implication. In addition, the proponents of hermeneutic phenomenology argue that it is beneficial to build upon earlier theories and literature. Hence the inclusion of a theoretical framework with attention to build upon previous works and expand the discourse on how PLWHIV access nutrition education and counselling in Lusaka district.

1.9.1 Information Motivation Behaviour (IMB) model

The IMB provides a relatively simple explanation for complex health behaviours and identifies constructs (including information, motivation, and behavioural skills) needed for successful self-management or adherence among patients with chronic disease. The IMB model was proposed by Fisher and Fisher (1992) to explain HIV-related behaviours and recognises three constructs—information, motivation, and behavioural skills—needed to engage in given health behaviours as specific individual determinants of behaviour and behavioural change (Fisher & Fisher; Norton, 2009). The constructs of this model are based on relevant social and health psychology theories, including the Health Belief Model, Transtheoretical Model, AIDS Risk Reduction Model, Theory of Reasoned Action, Theory of Planned Behaviour, and Social Cognitive Theory. However, the IMB conceptualization was developed to address limitations encountered in social and health psychology theories, such as the description of relationships. This model was designed to be easily translated into intervention programmes (Fisher, Fisher & Harman, 2003) and has been previously utilised to effectively change behaviours related to diet and physical activity in adults and adolescents (Kelly, Melnyk, & Belyea, 2012; Osborn et al., 2010). Therefore, the IMB model is employed in this study as a feasible and appropriate model to establish how PLWHIV access

nutrition education and counselling as part of their care and support from health care centres in Lusaka district.

According to this model, information is defined as "an initial prerequisite for enacting a health behaviour." (Fisher and Fisher, 1992). Motivation is composed of two factors which are: personal motivation, which includes beliefs about the intervention outcome and attitudes towards a particular health behaviour, and social motivation, which consists of the perceived social support or the social norm for engaging in a specific behaviour (Fisher et al. 2003). Behavioural skills, the third determinant in the IMB model, are skills necessary for performing a particular health behaviour.

The Information Motivation Behaviour (IMB) model of adherence focuses comprehensively on the information, motivation, and behavioural skills that are conceptually and empirically linked to HIV-related health behaviours in both conceptual and health promotion intervention efforts (Fisher and Fisher, 1992). The model has been extensively used to understand and predict adherence to ARV medication regimens (Geocze et al., 2010; Lovejoy & Suhr, 2009; Malta et al., 2010).

Such research is central to the current study because ARV medication adherence may be related to people's tendency to adhere to other behaviours necessary for HIV management, including nutrition management through nutrition education and counselling. The IMB model asserts that health-related information, motivation, and behavioural skills are fundamental determinants of the performance of health behaviours. To the extent that individuals are well informed, motivated to act, and possess the requisite behavioural skills for effective action, they will likely initiate and maintain health-promoting behaviours and experience positive health outcomes. In contrast, when individuals are poorly informed, unmotivated to act, and lack the behavioural skills required for effective action, they tend to engage in health risk behaviours and experience adverse health outcomes (Fisher et al., 2006; Fisher, Fisher & Harman, 2003).

At its most basic level, the IMB model purports that information, motivation, and behavioural skills are fundamental determinants of behaviour change among HIV-infected individuals. This, therefore, means that if HIV-positive individuals are well-informed, motivated to act, and have the behavioural skills required to work effectively, they will be more likely to engage in proactive and preventative behaviours that will delay the progression of HIV.

An increase in awareness of appropriate diets improves the nutrition status of PLWHIV. Nutrition education and counselling are ways to raise awareness, change attitudes, and modify wrong behaviours in nutrition. When PLWHIV have access to nutrition education and counselling, they will be provided with the knowledge and skills to choose and select an appropriate diet that includes locally available foods and is socially acceptable to improve their nutrition status. The motivational behaviour will enable PLWHIV to modify their dietary practices and engage in conduct that promotes good health. Figure 1 below illustrates how nutrition education and counselling using the three constructs (information, motivation, and behavioural skills) can lead to changes in dietary practices to improve the quality of life of PLWHIV.

Figure 1 Information, Motivation and Behavioural Skills mode

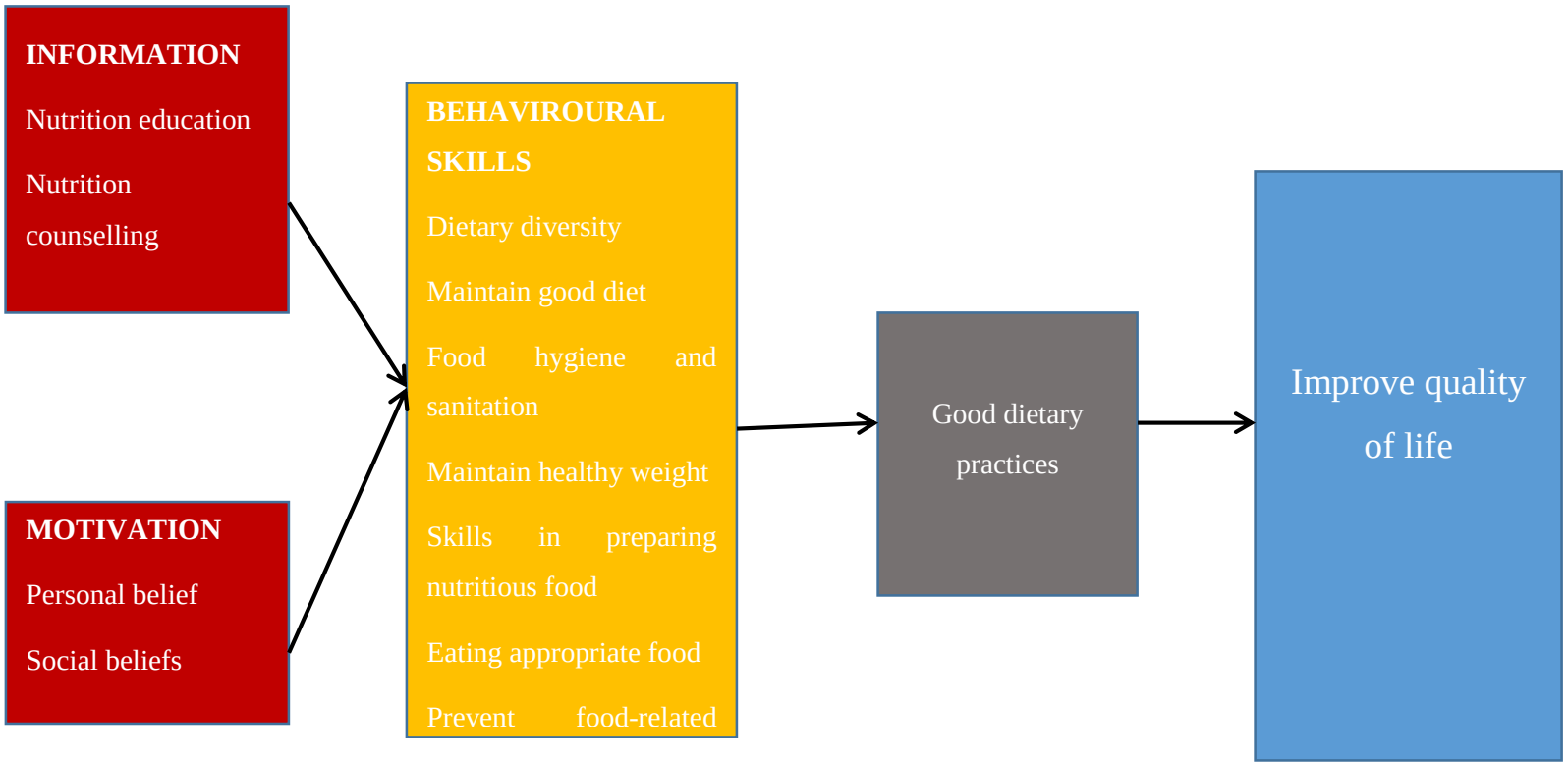

Figure 1: Theoritical framework

Figure 1

Source: Own illustration based on current study

Figure 1 IMB constructs with nutrition behaviour in dietary practice to improve quality of life

Following the three constructs comprising the information-motivation behavioural skill model (IMB), it is expected the nutrition education and counselling is provided to all PLWHIV by:

1. Providing information about the importance of and how to obtain an adequate nutritional status
2. Motivating PLWHIV to maintain good nutrition and dietary practice.
3. Providing the behavioural skills to improve eating habits.

As alluded to above, the three constructs focus on behavioural change through information and motivation. This information and motivation can be achieved through nutrition education and counselling. The importance of nutrition education and counselling for PLWHIV is to improve nutrition, health, quality of life, and survival duration. Therefore, this theoretical lens brings out the relationship of nutrition education and counselling to behavioural change in dietary practices, consequently preventing malnutrition, boosting the immune system, improving nutrition status, and overly improving the quality of life for PLWHIV. The importance of nutrition education and counselling cannot be overemphasised. Hence, access to nutrition education and counselling plays a critical role in the lives of PLWHIV.

The study used the Information-Motivation-Behavioural Skills (IMB) model to understand the complexities of nutrition education and counselling (NEC) for people living with HIV (PLWHIV). The model emphasizes the importance of providing accurate information, motivation, and behavioural skills to promote behaviour change. It identifies gaps in information dissemination and awareness, allowing for tailored interventions to improve access to NEC. The model also highlightes the role of motivation in driving behaviour change, identifying areas where motivation could be enhanced.

1.10. Definitions of Terms

Access: refers to the link with the degree of availability and ease with which PLWHIV obtain nutrition and health care services in health institutions. Access to Nutritional Education and Counseling (NEC) is crucial for HIV patients, involving factors like availability, accessibility, and quality of services. It includes trained professionals, facilities, and quality evaluations to improve nutritional status and overall health.

Dietary practice refers to habits and structured behaviors related to food consumption, including selection, meal patterns, portion sizes, and nutrient intake. These practices can be influenced by dietary restrictions, cultural preferences, and social and cultural influences, and their nutritional quality changes over time.food and drink taken for purposes of nourishment.

Health Outcomes: It evaluates the impact of nutrition on the health and well-being of PLWHIV. This can include health outcomes such as immune system function, opportunistic infections, antiretroviral therapy response, and overall quality of life.

Nutrition counselling is an intervention in which a service provider (health or community worker) helps patients develop strategies to address their nutrition goals and overcome their barriers. This is provision of individualisd advice and guidance to PLWHIV who are are at nutrtion risk because of their dietary intake and is done by a health professional which can be a nutrtion counsellor, a nurse at the facility

Nutrition in HIV refers to assessing an individual's nutritional status, dietary practices, intake, and adherence to recommendations. It evaluates parameters like BMI, weight changes, and micronutrient levels, identifying malnutrition and undernutrition.

Nutritional education It is a formal process to instruct or train a client, to assist the client in managing or modifying food choices and eating behaviour to improve or maintain the nutritional well-being

Nutritional Status: Nutritional status in HIV refers to the overall health and well-being of individuals, encompassing anthropometric measurements, body composition assessments, biochemical parameters, CD4 count, viral load, dietary intake, food security, gastrointestinal symptoms, medication adherence, quality of life, mental health, and disease progression.

People with HIV/AIDS (PLWHIV) refer to people above the age of 20 who have undertaken an HIV test and have been declared positive whether they show any infection or AIDS disease symptoms.

Quality of life: refers to an overall assessment of personal wellbeing, which includes physical, mental, emotional, social dimension as well as stress level, sexual function and self-perceived health and nutrition status**.**

1.11 Structure of the Thesis

This thesis is summarised in the chapter summaries that are provided below:

The context, problem statement, study purpose, research objectives, research question, and justification are presented in Chapter 1. A theoretical foundation for the study is also offered, with a focus on one main theoretical model: the information motivation behaviour model. A review of the relevant literature on nutrition education and counselling in PLWHIV is presented in chapter two. Chapter three explains the justification of the hermeneutic research design and methods used in this research. Highlights of Chapter 3 include the philosophical assumptions underpinning the study, the consideration of ethical issues, and the description of the research setting. Chapter four presents the findings of the study. Research findings are presented according to research questions. Chapter five focuses on the discussions of the findings, their implications for nutritional care, and their support for PLWHIV. Chapter six provides the conclusions of the thesis and recommendations based on the findings of the study.

1.12 Summary

This chapter has provided the background information needed to understand the nature of this study. The chapter has provided the statement of the problem, research questions and objectives and has also highlighted the purpose of the study. In the chapter the significancy of the study and theoretical approaches that were adopted in the study were also mentioned. In the next chapter a detailed review of literature has been given so as to further understand the issue under study.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

2.1 Overwiew

This chapter presents reviewed literature related to the study on access to nutrition education and counselling by PLWHIV. This literature review aims to provide a qualitative assessment and synthesis of access to nutrition education and counselling. The chapter is structured into several units, namely: the rationale for the literature review, an overview of the relationship between HIV and AIDS, and the literature reviewed related to the study. The literature review gives an account of recent studies that have investigated access to nutrition education and counselling by PLWHIV. A discussion of the key themes that emerge from the literature synthesis, all of which are directly aligned with this study's research questions, will be embedded in this review. Lastly, a concluding statement that signifies the importance of this study will be provided.

2.2 Rationale for Literature Review

According to Streubert and Carpenter (2011), having fewer preconceptions promotes a greater openness to the phenomenon under study when using a phenomenological approach. Streubert and Carpenter (2011) support superficial scoping of the literature before data collection to gain insights, but not in-depth knowledge, about the phenomenon to enhance data collection and analysis. However, some scholars with a more practical perspective (Creswell, 2017; Fry et al., 2017) argue that literature review helps set the platform for a deeper explanation, conceptual development, and theoretical refinement. To this effect, the study subscribes to the latter school of thought, in line with hermeneutics phenomenology. This study sought to build upon previous work to expand the discourse highlighted above. As a result, the reflections that follow represent what was previously known in the literature before the present study was conducted.

2.3. An overview of HIV and AIDS as it Relates to Nutrition

Acquired Immune Deficiency Syndrome (AIDS) is caused by the Human Immune Deficiency Virus (HIV), which attacks and impairs the body's natural defence system against disease and infection. Its effects on the immune system occur in distinct phases: the asymptomatic period, where there are no visible symptoms; the early symptomatic period, when signs of a weakened

immune system begin to show; and the late symptomatic period, which constitutes what is officially called Acquired Immune Deficiency Syndrome phases (Cohen, Gay, & Hecht, 2010; Naif, 2013). The first HIV and AIDS cases were identified in the United States of America in 1981 and in Africa in 1982. In Zambia, it was first diagnosed in 1984 (MOH/NAC, 2014). Zambia now has a generalised epidemic, with HIV spreading throughout the population instead of being concentrated in specific populations. Adult HIV prevalence peaked in the 1990s and was estimated at 14.3% in 2007 (CSO, 2009). According to the recent 2018 Zambia Demographic Health Survey (ZDHS), 11.1 percent of adults age 15–49 are infected with HIV (15.1 percent of women and 7.5% of men) (ZDHS, 2019). The magnitude of the problem becomes clear when one considers the number of people infected.

Research has claimed that if HIV-infected persons ensure that they have good nutrition and take care of their health, the progression from HIV to AIDS-related diseases is delayed, thus improving the quality of life (Berhe, Tegabu, & Alemayehu, 2013; Kendall et al., 2014; MOH, 2011; NFNC, 2004). Therefore, it can be argued that it is essential to provide nutritional care and support as part of the comprehensive care and treatment of persons infected with HIV.

The relationship between HIV and nutrition is multifaceted and multidirectional. HIV can cause or worsen malnutrition due to decreased food intake, increased energy requirements, and poor nutrient absorption. Malnutrition further weakens the immune system, increasing susceptibility to infections and worsening the disease's impact (UNAIDS, 2014). Research has indicated a strong relationship between HIV and nutrition (Gaikwad et al., 2013; Duggal et al., 2012). Nutrition is critical in the care, treatment, and support of PLWHIV since energy and nutrient requirements are increased to meet the increased metabolic rate, better manage the disease, and maximise ART benefits (Kendall et al., 2014; Berhe Tegabu & Alemayehu, 2013; Tang et al., 2015). Research has further indicated that an HIV-infected person is more at risk for malnutrition due to several reasons (De Pee & Semba, 2010). Firstly, due to reduced food intake, HIV and AIDS people suffer from appetite loss (anorexia) and have difficulty eating; thus, they eat less and fail to meet their daily requirements. Reductions in food intake are an important cause of slow and progressive weight loss. Secondly, HIV affects how the body absorbs food and eventually uses the food consumed. Poor absorption of nutrients accompanied by diarrhoea results in weight loss, loss of lean muscle tissue, and increased damage to the immune system. Thirdly, HIV increases energy requirements

due to increased nutritional needs because of infections, metabolic changes, viral replication, and poor nutrient absorption. There is hypermetabolism (an abnormal increase in metabolic rate) and catabolism (the metabolic breakdown of complex molecules into simpler ones, often resulting in a release of energy).

The literature reviewed has illustrated the importance of nutrition in PLWHIV. It has further shown that good nutrition is a critical component in maintaining and improving the nutrition status and quality of life of PLWHIV. Despite the essential role nutrition plays in the management of HIV, access to nutrition education and counselling is inadequate, especially in resource-limited settings. One major gap is the inadequacy of access to nutrition education and counselling, particularly in resource-limited settings where the prevalence of HIV is often high. In addition, nutrition programmes for people living with HIV have not been sufficiently evaluated for efficacy, and this study was conducted to address this gap. This being the case, the current study aims at establishing how PLWHIV can access nutrition education and counselling as nutrition management to improve their nutrition status and quality of life. This review of literature on the relationship between nutrition and HIV and AIDS is relevant to the study of establishing the experiences of PLWHIV on access to nutrition education and counselling.

2.4 Access to Nutrition Education and Nutrition Counselling by PLWHIV

Nutritional management is integral to the care of all patients infected with HIV (MOH 2011). Nutrition management should include nutrition education, nutrition, and nutrition counselling (NEC). Access to NEC in many countries has proved critical to the care and support of HIV and AIDS patients. Research on nutrition education and nutrition counselling has increased over the past decade. Existing literature shows that research on access to nutrition education and counselling has been conducted in different contexts using different study methods (sampling frames, measurement instruments, and analysis methods). Many studies have indicated that NEC can lead to changes in knowledge and availability of resources at the individual and household levels, influencing dietary practices and food access (Anand & Puri, 2019; Bello et al., 2019).

Studies on the effectiveness of nutrition education and counselling as an intervention to improve health outcomes for PLWHIV have shown that nutrition education and counselling improve health

and nutritional status, allowing people with HIV and AIDS to lead longer and better quality lives (Martinez, 2014; Tabi & Vogel, 2006; Derose, 2015). A quantitative cross-sectional study was done in Nepal, India, to estimate the prevalence of undernutrition among people living with HIV and AIDS who had no access to nutrition education and counselling. The study revealed that one in five PLWHIV was found to be undernourished. It further revealed that nutrition intervention through nutrition education and counselling was lacking. The study concluded that nutrition intervention through nutrition education and counselling should form an integral part of HIV care programmes (Thapa et al., 2015). This study supports the current research on establishing access for PLWHIV to nutrition education and counselling.

Related to the Thapa (2015) study, Piwoz et al. (2004), in their study, focused on the effectiveness of nutrition education and counselling in PLWHIV. They reported that nutrition education and counselling (NEC) allows PLWHIV to modify their diets by using locally available, nutrient-dense, and culturally acceptable foods to maintain good health and improve their nutritional status. In addition, Bukasuba et al. (2010) conducted a cross-sectional survey study in Eastern Uganda to investigate the gaps in nutritional knowledge, attitudes, and practices among women living with HIV and AIDS. Their study indicated the importance of NEC in improving knowledge, attitudes, and practice and thus allows PLWHIV to utilise the limited resources, modify diets to boost their immunity, and improve response to ART and other treatments.

The studies conducted by Thapa (2015) and Bukasuba et al. (2010) provided valuable insights into the significance of nutrition education and counselling (NEC) for people living with HIV/AIDS (PLWHIV). Both studies employed quantitative approaches and emphasised the positive impact of NEC on modifying diets, improving nutritional status, and enhancing knowledge, attitudes, and practices among PLWHIV. However, despite these contributions, there remains a significant research gap that the current study aims to address using a qualitative approach. The current study will use a qualitative approach to fill a knowledge gap by establishing the lived experiences of PLWHIV with access to NEC. A key gap lies in comprehensively understanding the lived experiences of PLWHIV regarding their access to and utilisation of NEC. Qualitative research methods, unlike quantitative approaches, allow for a deeper exploration of individual narratives, perceptions, barriers, and facilitators related to accessing and engaging with NEC services.

Another study in Africa by Kaye & Moreno-Lequizama (2010) explored the role and use of nutrition education and counselling as a strategic intervention to improve health outcomes through better health behaviour in adult outpatients with HIV. The study established that outcomes of nutrition interventions led to: an increase in fat-free and lean body mass; offsetting the adverse effects of HIV infection in patients with a low CD4 cell count; significant improvement in dietary patterns with resultant greater adherence to HIV medications and fewer side effects; and agreement on the importance of addressing nutrition concerns. They concluded that providing HIV-positive adults with culturally relevant and practical nutrition strategies can improve health outcomes, health behaviour, and quality of life. It could be argued that nutrition education and counselling can support treatment, promote adherence to therapy, and improve overall health. It can also help the recovery of PLWHIV, improve the prognosis of dietary changes that promote long-term health, and improve quality of life. However, despite these identified benefits, there remains a gap in understanding the nuanced experiences of PLWHIV concerning their access to and utilisation of nutrition education and counselling services. The study conducted by Kaye & Moreno-Lequizama (2010) provided valuable quantitative insights into the impact of these interventions. Yet, a qualitative approach is necessary to explore deeper into the personal narratives associated with accessing and engaging with nutrition education and counselling among PLWHIV. This qualitative exploration would offer a more comprehensive understanding of how PLWHIV accesses NEC. In this study, to appreciate the identified benefits of nutrition education and counselling, the researcher established the experiences of PLWHIV and how they accessed nutrition education and counselling.

However, some studies done where nutrition education and counselling have been implemented as part of critical care have shown otherwise. Sackey et al. (2018) conducted a cross-sectional study in Accra, Ghana. The aim of the study was to evaluate the implementation of the nutrition assessment, counselling, and support (NACS) programme and to assess whether the level of implementation of NACS was associated with the body mass index (BMI) of PLWHIV. The study showed the poor performance of NACS in the NACS-designated HIV clinics surveyed. It was concluded that poor implementation was due to a lack of nutrition counselling in NACS-established HIV clinics and the inability to provide on-site food. This suggests that access to the NACS programme by PLWHIV, which is not well implemented, does not bring out the expected

outcome, which is improved quality of life. The Accra study suggests that poor implementation of nutrition programmes may not lead to the expected positive outcomes in terms of improved quality of life for PLWHIV. Therefore, there is a need to investigate whether the accessibility and quality of nutrition education and counselling in Lusaka are associated with better health outcomes. In light of this study, it is unknown how nutrition education and counselling are implemented in Lusaka and whether PLWHIV have access to it . It therefore becomes critical to establish the experiences of PLWHIV on how they access nutrition education and counselling in Lusaka district.

In another related study, Tushemeriwe (2016) conducted a pilot study on nutrition education and counselling programmes to improve nutrition knowledge, attitudes, and practices among PLWHIV in Uganda. The study indicated that nutrition education and counselling activities were not planned for from the start of the care programme, and not all clinics received practical session. The gap that existed was the lack of staff to roll out the programme to other clinics and staff training in nutrition intervention. To fill this gap, the current study will examine how health care providers conduct nutrition education and counselling in ART centres.

The studies highlighted were consistent with a cross-sectional descriptive study conducted by the Ministry of Health and Social Science in Nambia to review the implementation of nutrition assessment, counselling, and support for people living with HIV (PLWHIV) using the operational guidelines throughout the country. The study found that the ART health centres lacked adequate staff. The results indicated that storage conditions for specialised food products were inadequate. The study further revealed that health centres did not have all the items on the checklist recommended for nutrition education and counselling programme. It further revealed that health providers only assessed clients who looked malnourished because they were too busy to evaluate each client on each visit. The clients indicated the need for clear therapeutic counselling in nutrition (Ministry of Health and Social Science, 2013). This illustrates that the availability of any nutritional facility alone cannot bring fruitful results if the implementation is not done correctly.

Mengie et al. (2018) conducted a cross-sectional study to assess the nutritional knowledge, dietary practice, and associated factors among adult PLWHIV on anti-retroviral therapy (ART) in Ethiopia. The study illustrated that most respondents had poor, average, or good nutritional knowledge. They concluded that good nutritional knowledge is significantly associated with

dietary practice. They further contend that nutrition education and counselling should be given by health care workers to patients on ART to improve their nutritional knowledge. This study is limited in its application. It focused on assessing nutrition knowledge and dietary practice, not how the respondents had access to nutrition education and counselling to improve their dietary behaviour. Despite the available literature, there remains a knowledge gap on how PLWHIV access nutrition education and counselling in the Lusaka district.

Most studies tend to focus on the implementation, evaluation, and effectiveness of nutrition education and counselling. The current study aimed at establishing the experiences of PLWHIV on how they access nutritional education and counselling (NEC). It is anticipated that access to nutrition education and counselling by PLWHIV will have potential factors. The factors associated with influencing adequate dietary intake and, vice versa, inadequate dietary intake to reduce malnutrition, thereby prolonging life and enhancing optimum nutrition status in PLWHIV. Nutritional interventions can help transform the cycle of malnutrition and HIV into a process of improved nutritional status and a more robust immune response. In response to this multifaceted relationship between HIV and nutrition, a range of food and nutrition interventions can be used to address the disease and its impacts among infected and affected populations.

2.5. Nutrition Education for People Living with HIV and AIDS

Nutrition education refers to providing information by service providers to clients about nutritional needs, dietary practices, nutrient content of foods, meal planning, symptom management, and other topics. It is also a planned information exchange that is designed to improve or maintain the nutritional well-being of individuals, groups, and populations (IDNT, 2014). It is a formal process to instruct or train a client to assist the client in managing or modifying food choices and eating behaviour. It is teaching people about nutrition. Education sessions are often presented in a group setting and involve providing nutrition information by trained staff to PLWHIV. Education focuses on nutritional needs, dietary practices, healthy eating, the nutrient content of foods, meal planning, food hygiene, food preparation and storage, and symptom management. Nutrition education provides an overview of nutritional issues, often in an informal setting such as a group meeting or camp. It offers an opportunity for greater involvement by PLWHIV, who can share their personal experiences to provide practical applications for the information.

According to UNIDS (2014), the objectives of nutrition education are to: increase knowledge about nutrition and its importance in health maintenance; improve skills in the preparation and selection of nutritious foods; and assist in changing food consumption practices. The literature reviewed showed that nutrition education plays a critical role in dietary patterns by enabling individuals to develop altitude and confidence in the food and amount of food they need to eat to improve their nutritional status. It has also been found to be effective in modifying dietary practices that affect a chronic disease. Research has also shown that a higher level of nutrition knowledge is positively and significantly associated with better dietary quality (Mengie, 2018).

Olive, Mwangi, & Mbugua (2014) conducted a study in Nairobi titled The Effects of Nutritional Knowledge on the Dietary Practices of PLWHIV. The purpose of the study was to establish the association between nutrition knowledge and individual dietary practices. The study revealed that nutritional knowledge influences dietary practices and behaviour. It further explained that nutritional knowledge affects the choice of nutrient-dense foods that are high in nutrients compared to weight and meals consumed in a day. They concluded that there is a strong relationship between nutrition knowledge and dietary practices. This practice consequently addresses the poor appetite and other opportunistic infections that contribute to reduced quantities. In addition, it enables individuals to make more informed choices regarding food intake. A related cross-sectional descriptive study in Nigeria by Banwat (2014) reported that a good knowledge of nutritional requirements for an individual with chronic disease has been vital for proper management of the disorders and preventing complications. In India, Baghel et al. (2015) examined the impact of nutrition education on the nutritional knowledge, attitude, and practices of HIV patients attending the ART centre at Tiwari Hospital, India. Nutrition education showed a significant effect on the knowledge, attitude, and practice (KAP) of people living with HIV/AIDS.

Olive et al. (2014), Banwat (2014), and Behel et al. (2015) findings present further opportunities for research considering that their studies were conducted in Nairobi, Nigeria, and India, a different context from Zambia. In addition, though the studies were independently conducted, they applied quantitative approaches to arrive at the findings. The studies were conducted in different regions—Nairobi, Nigeria, and India—potentially limiting the generalizability of their findings to Zambia.

This geographical disparity prompts the need for a study within the Zambian context to understand how nutrition education impacts dietary practices among PLWHIV in this specific setting. To fill this gap, the present study will establish the lived experience of PLWHIV on the benefits of nutrition education using a hermeneutics phenomenology approach.

To show the significance of nutrition education to PLWHIV, Martinez et al. (2014) conducted a study titled Tailored Nutrition Education and Food Assistance to Improve Adherence to HIV Antiretroviral Therapy in Honduras. In their study (Martinez et al., 2014), they compared two groups on the effect of a monthly household food basket plus nutrition education versus nutrition education alone. The results of the study showed that there was improved ART adherence for the group that received a household food basket plus nutrition education compared to the group that received nutrition education only. The researchers recommended establishing best practices for comprehensive care to include nutrition education activities as part of the regular comprehensive care at HIV centres. Similarly, prior studies have highlighted that once individuals are equipped with appropriate nutrition knowledge, they will improve dietary practices (S. 2022; Rezazedeh, 2023). Even research findings that showed that adequate nutritional knowledge did not have an impact on diet quality and nutritional status recommended that governments and other stakeholder groups prioritise nutrition education intervention programmes for PLWHIV (Nti et al., 2012). This is a clear indication that nutrition knowledge influences the nutritional practices of PLWHIV. While the above studies have revealed the valuable benefits of nutrition education, the question regarding how PLWHIV access nutrition education and counselling in Lusaka district remains unanswered, thereby necessitating a study of this nature.

Though Martinez et al.'s (2014) study focused on household food baskets and nutrition education, the conclusion was in line with Banwat's (2014), Olive, Mwangi, & Mbugua's (2014), and Baghel's (2015) studies. The researchers indicated that nutrition information should be a key component of the care of PLWHIV and should be initiated at the entry point to comprehensive care. Therefore, it should be continuous throughout care. These studies warrant further research, as acknowledged by the authors, and further research should be conducted to measure the actual impact of nutrition education on the nutrition status of PLWHIV. Therefore, this study fills a gap by exploring the lived experiences of PLWHIV and how they access nutrition education and counselling as part of their care and support in Lusaka district.

The literature on access to nutrition education by PLWHIV in Zambia remains scanty. Most of the studies done in Zambia are conducted on food security and food supplements for PLWHIV. For example, Cantrell et al. (2009) conducted a non-randomised pilot study of food supplements. The WFP provided monthly food rations for six months to PLWHIV without nutrition education linked to community health work, which indicated that that food supplement encourages ART adherence and not dietary practices. Another study, conducted by Tirivayi et al., found that a food basket provided at the clinic for adherence for 6 to 12 months to HIV-infected adults on long-term ART positively affected patients seeking timely ART refills. Zulul et al. (2011) conducted research with the aim of assessing the impact of food supplements on nutritional status using a comprehensive anthropometric protocol. DeVera Masa (2016) conducted a pilot study on food security and antiretroviral therapy adherence among PLWHIV in Lundazi district with the aim of expanding the literature on food security and adherence in resource-limited settings. Masa et al. (2018) conducted a study on Chuma na Uchizi, a livelihood intervention to increase the food security of PLWHIV. Banda-Nyrienda et al. (2009) study the impact of nutrition and fish supplements on responses to art therapy in Zambia. The research gap lies in the scarcity of studies specifically focusing on the provision, accessibility, and impact of structured nutrition education and counselling for PLWHIV in Zambia. These gaps suggest the need for research that explicitly investigates the role and effectiveness of nutrition education in influencing dietary practices, nutritional status, and overall health outcomes among this population. A closer look at the literature reveals several gaps and shortcomings. Although many authors have conducted studies, access to nutrition education by PLWHIV is still insufficiently explored. The current research does bridge that gap through a phenomenological hermeneutic approach.

2. 6. Nutrition Counselling in HIV and AIDS

Nutrition education alone for PLWHIV or patients is not always enough to improve their nutritional status. People face many barriers to improving their nutrition, including cost, time, family responsibilities, and illness. However, education may present other unique benefits, such as creating peer support networks through group interaction. Nutrition counselling strategies based on the nutrition assessment results have been shown to improve body weight for PLWHIV, primarily when provided early in the disease process. Nutrition counselling refers to an interactive process between provider and client to assess nutritional status and needs, understand client preferences, constraints, and options, and plan a feasible course of action that supports healthy

dietary practices (MOH 2011). Counselling helps identify client preferences, barriers to behaviour change, and possible solutions to overcome those barriers (FANTA, 2012). Nutritional counselling is effective and has led to improved health outcomes in HIV infection. When dietary counselling is combined with oral dietary supplements, there is additional evidence for its value. Nutritional counselling also facilitates access to adequate nutritional intake (Hudayani & Sartika, 2016). The nutrition counselling process involves developing a specific management plan that considers the broad range of factors that influence food intake (UNAIDS, 2014).

UNAIDS highlighted the objectives of nutrition counselling as: to develop an individual nutrition strategy to address the nutrition requirements of PLWHIV identified during the assessment; facilitate behaviour change concerning nutrition and food; and provide ongoing, individualised support and guidance in the maintenance phase of the disease (UNAIDS, 2014). For PLWHIV who are already on treatment, adequate nutrition counselling can significantly assist in improving individuals' nutritional knowledge and understanding of the importance of nutrition in their lives. Such involvement through individual or group counselling sessions might enable patients to take charge of their nutritional conditions and make wise decisions about their eating habits depending on their financial situation and access to food (Kaye & Moreno-Leguizamon, 2012). Research has demonstrated that nutritional counselling can improve health outcomes for people with HIV infection (WHO, 2003; Alo et al., 2014; Ivers et al., 2010; Tang et al., 2015). When dietary counselling is combined with oral nutritional supplements, there is additional evidence for its value. Nutritional counselling also facilitates access to adequate nutritional intake. The President's Emergency Plan for AIDS Relief (PEPFAR, 2006) asserts that nutritional counselling should be an essential component of all HIV care and treatment programmes. It further explains that additional efforts are needed to focus on appropriate strategies and programme models for nutritional assessment, counselling, and management of PLWHIV in resource-limited settings, including non-clinical settings. According to Chan (2008), nutritional counselling for HIV has demonstrated effectiveness as it is more sustainable and is associated with behavioural change. He further stresses that counselling should be clinic-based, home-based, and community-based, with appropriate nutritional counselling materials.

Alo et al. (2014) investigate the effect of nutritional counselling and monitoring, using personalised dietary prescriptions, on the body mass index (BMI) and haemoglobin of patients

who are HIV-infected and also receiving highly active antiretroviral drugs. A quantitative approach using a quasi-experimental design was used to study HIV-infected patients who were receiving treatment with HAART and who also accessed care from the HIV clinic in Nigeria. The results showed that nutrition counselling had a substantial impact on body mass index and haemoglobin in HIV-positive individuals. It further revealed that people living with HIV who were offered regular nutritional assessment and counselling had better nutritional outcomes than those who were not. The researchers came to the conclusion that nutrition intervention, which may be accomplished through nutrition counselling and monitoring, is crucial in the management of patients living with HIV and AIDS.

Related to Alo et al. (2014), Gwidakad (2013) conducted a quantitative study on the impact of nutritional counselling on dietary practices and body mass index among people living with HIV and AIDS at a tertiary care teaching hospital in Mumbai. The results showed that there was a significant increase in dietary practices, such as using boiling water for drinking, not eating left-over foods, and an increase in the BMI of participants. The researchers concluded that individual nutritional counselling was effective in improving dietary practices in adults living with HIV and AIDS. It was also effective in improving nutrition status (weight and BMI).

Another study from Uganda found that nutritional counselling, when provided as part of a package of nutritional and other interventions like nutritional support, is helpful in enhancing the overall quality of life of people living with HIV (Weiser et al., 2010). In another related study, Aishwarya (2015) documented that nutrition counselling helps PLWHIV receive appropriate treatment, care, and nutritional support. The study showed that nutritional counselling and support could delay or even prevent the development of Nutritionally Acquired Immune Deficiency Syndromes (NAIDS) and improve both the quality and length of life for PLWHIV. It was further reported that screening for nutritional status and assessment of dietary intake should be included routinely in HIV treatment and care for adults.

Following studies by Alo et al. (2014), Gwidakad (2013), Aishwarya (2015), and Weiser et al. (2010), the effectiveness of nutritional counselling on dietary patterns was examined using a quantitative approach. The views of the patients regarding how to obtain dietary counselling were not addressed in this research. Additionally, the patients' changing behaviour was not addressed in

their studies. Using the hermeneutical phenomenology approach and the information motivational behaviour theory, the current study will bridge this gap.

One large study by Tang et al. (2015) identified and analysed articles published between 2005 and 2014 on the effectiveness of nutrition assessment and counselling support interventions, particularly their impact on five outcomes: mortality, morbidity, retention in care, quality of life, and prevention of on-going HIV transmission. These studies were conducted in several countries, which included Malawi, Uganda, Cameroon, Niger, Kenya, Zambia, India, Nigeria, Haiti, Ethiopia, and Mozambique. From the six studies examined, they concluded that the use of food supplements did not affect the change of CD4+; only two studies were involved: a study by Nyamathi et al. (2013) in India and a study by Saddler et al. (2013) in Ethiopia. Seven studies were examined on the effect of food supplementation on adherence to ART, and the majority of these studies indicated that food supplementation had a positive impact on compliance with food (Tirivayi, 2013; Serrano, 2010; Nyamathi, 2013; Ivers, Jerome & Freedberg, 2010; Ivers et al., 2014; Cantrell, 2008). Further, seven studies were examined on the effect of a food supplement on quality of life. Most studies showed improvement (Greenaway et al., 2012; Kemri, 2010; Bahwere, 2009). The finding indicated that the impact of nutrition assessment care support was weak because the implementation did not encompass the entire spectrum of nutrition interventions. They stated that none of the studies reviewed evaluated a comprehensive nutrition assessment and care support programme; each had only a component. This study points to the complex role comprehensive nutrition interventions play in addressing nutrition problems in HIV and AIDS. They concluded that nutrition counselling could play an essential role in the chronic care and treatment of PLWHIV, who now have life expectancies of decades rather than months or years.

A study was conducted in Ghana to investigate the effectiveness of nutritional counselling to improve health outcomes for HIV-positive patients using secondary data. It was reported that the patients responded favourably to nutritional counseling. The findings showed that nutrition is effective in improving weight gain in HIV-positive patients in the absence of antiretroviral therapy (Tabi & Vogel, 2006). However, due to the use of secondary data and the cross-sectional nature of the data collection, the findings cannot be generalised beyond the population involved. In a comparable study, an experimental study was undertaken to determine the impact of nutritional counselling on HIV patients' knowledge, attitude, and practice (KAP) in the Indian district of

Udupi. The findings of this interventional trial demonstrated that improvements in KAP and nutritional status indicate individualised nutrition and health education counselling should be an integral part of HIV management (Pokharel & Shettigar, 2019).

Hudayani & Sartika (2016) aimed to determine the influence of nutrition education and counselling on the knowledge and behaviour of PLWHIV in their study. This study was conducted with a quasi-experimental design using treatment and control groups. The results of this study showed that there was an effect in the form of knowledge change for the treatment group after receiving nutrition education and counseling. This study shows that nutrition education and counselling using media of education that are more complete and continuously provided may improve knowledge and change behaviour in PLWHIV (Hudayani & Sartika, 2016). Despite the potential benefits of nutritional counselling to PLWHIV, there is little evidence of the experience of beneficiaries in the care centres. Therefore, this current study is anchored on a qualitative methodology with a focus on a phenomenology approach, whose agenda is to explore the lived experiences of PLWHIV.

A study in Zambia by Sadoki et al. (2022) examined the impact of nutrition on the treatment outcomes of individuals living with HIV in Muchinga Province, Zambia. The study utilised routine programme data from EQUIP-supported health facilities from October 2019 to March 2020 to assess undernutrition among HIV-positive clients. The analysis revealed that over a third of the population studied was undernourished, while others fell into the categories of normal, overweight, or obese. Factors such as age, residency, occupation, marital status, income, educational level, viral load, ART regimen, and duration on ART were evaluated to determine associations with undernutrition. The study highlighted the importance of Nutrition Assessment and Counselling Services (NACS) in identifying individuals needing specialised care for improved health outcomes among PLWHIV. It can be suggested that this integration could enhance the overall effectiveness of treatment and contribute to improved health outcomes among PLWHIV. However, the data collected from health facilities might not be representative of the entire population living with HIV in the region. It could overrepresent individuals who have access to healthcare services or underrepresent marginalised or hard-to-reach populations.

While some studies have backed up the significance of nutrition counselling, others have found conflicting results about the advantages of counselling for the management of diet in HIV care. Tefese (2013) documented the nutritional care and support services to determine the challenges facing adults living with HIV in southern Ethiopia. Findings highlighted that PLWHIV were unsatisfied with their nutritional care and support services and expressed difficulty disclosing their HIV status for fear of stigma and discrimination. The nutritional care and support services for people living with HIV were not well coordinated. They focus mainly on the monthly supplementation of antiretroviral drugs and occasional handouts of food. The need to provide health education on antiretroviral drugs and nutrition and to emphasise strategies aimed at improving the nutritional status of people living with HIV is critical. Furthermore, the study recommended strengthening the initiatives of some organisations regarding sustainable income-generating activities.

Similary, in Brazil Bacelo et al. (2015) carried out a 180-day observational follow-up study of HIV adult patients receiving tuberculosis treatment using serum biomarkers, body composition (using BMI, TSF, and MUAC measurements), and nutritional advice were all given to the respondents. The results showed that 85.7% of HIV+ patients receiving TB medication and 71.4% of HIV patients had micronutrient deficiency. Utilising BMI as an indicator of malnutrition, it was discovered at baseline in 23.9% of HIV-negative patients and 27.3% of HIV+ patients using TSF. 70.1% and 85.3% of all patients had malnutrition, respectively. Combining all biomarkers, all patients had malnutrition at the end of the follow-up. The findings did not show that nutrition counselling is useful for helping the population recover from malnutrition, despite the small number of patients. The study, on the other hand, found that providing nutritional counselling to undernourished people living with HIV and tuberculosis did not improve their nutritional status. Though it is possible that tuberculosis infection might have undermined the positive impact of nutritional counseling, In the Zambian context, Bacelo et al. (2015) findings regarding their experiences with how nutritional counselling is available remain unconfirmed.

Tesfya et al., (2021) conducted qualitative study in the Tigray area of Ethiopia on the effectiveness of counseling in nutritional programs for HIV care and the degree to which counseling policies and guidelines were translated into practices and utilized by individuals with HIV. The Results of showed that nutritional counselling was acceptable to participants, but a number of obstacles made

it difficult for participants to implement the suggestions from the counselling in their daily lives. The lack of consistency in the content, length, and mode of delivery of nutritional counselling; the lack of refresher training for providers; the absence of socioeconomic considerations in nutritional counselling; the participants' poor comprehension of a variety of issues related to nutrition counselling and the nutrition programme; and others were among the challenges that were identified. Researchers draw the conclusion that the nutritional counselling offered to HIV-positive individuals lacks thoroughness and consistency and is inconsistent in terms of scope, topic, and duration. Counselling standards and practices should be set up in a way that takes a holistic picture of the patient's life and takes socioeconomic and cultural circumstances into account in order to achieve the programme's aim of improving nutritional status. Okori & Okorie's (2022) argue that socioeconomic variables have a significant effect on the health of PLWHIV, which correlates with Tesfy's (2021) conclusion that a holistic approach to PLWHIV should take into account both its socioeconomic and cultural components. Investigating whether these factors are taken into account when PLWHIV gets nutritional guidance will be relevant for the current study. As such, it's critical to fill up these gaps in regards to PLWHIV experiences accessing nutritional counselling in the Zambian setting.

Therefore, early and intensive dietary interventions should be a fundamental part of the care management of HIV-infected individuals at the level of the ART centre itself. Consequently, it can be argued that such interventions as nutrition counselling geared towards improving nutritional practices are essential in mitigating some dietary practice issues in PLWHIV and may help in the prevention of the rapid progression of HIV to AIDS. Moreover, nutrition counselling for HIV patients has demonstrated that it is an effective tool to manage HIV/AIDS problems. Health care providers should provide appropriate counselling and support during the initiation of ART to overcome mood changes like anxiety and depression that result in suppressed appetite, which in turn result in low dietary intake and low dietary diversity. It is expected in the study that access to adequate nutrition counselling will show improvement in the quality of lives of PLWHIV. However, it is not known how PLWHIV access nutrition counselling from health care providers in the Lusaka district.

2.7 Constraints to Access of Nutrition Education and Counselling (NEC)

According to UNAIDS (2010), integrating nutrition into HIV care in a busy HIV clinic is a challenge; it can be hard to find time to address nutrition issues adequately. Since patients are not likely to die of malnutrition in the short term, health providers tend to prioritise acute conditions and disregard or undertreat chronic problems such as nutrition (UNAIDS, 2010). Lack of time among primary care physicians is one of the most strongly identified barriers to providing any kind of preventive care to patients during appointments (Drainoni et al., 2009; Kolasa & Rickett, 2010; Pollak et al., 2008; Wynn et al., 2010).

Researchers have documented the challenges associated with access to nutritional treatment that PLWHIV experience in healthcare centers. Dzinamarira et al. (2020) conducted a qualitative study to explore the perspectives of health care providers (HCPs) working with PLWHIV on nutritional challenges faced by their clients in Kigali, Rwanda. The findings of the study revealed that lack of resources, food insecurity, and a lack of feeding supplements were challenges faced in the nutritional management of their clients. They reported that there is a need to improve healthcare institutions capacity to manage the nutritional challenges faced by PLWHIV. The study revealed the views of the health workers; the current study will explore the experiences of the clients in regards to the challenges they experience accessing the NEC.

Another A hermeneutic (interpretive) phenomenological study was conducted to explore nutrition management challenges among people living with HIV on antiretroviral therapy (ART) in primary health centres in Addis Ababa, Ethiopia (Ewune et al., 2021). The result showed that PLWHIV had challenges managing their nutrition. Among the challenges were behavioural changes in eating patterns, experience with food insecurity issues, nutrition knowledge, and support. In addition, Tesfay et al. (2021) highlights lack of consistency in content, duration, and mode of delivery of nutritional counselling and inadequate refresher training for providers as challenges in their study; challenges to nutrition management among patients using antiretroviral therapy in primary health care are also highlighted.

Some studies have shown that the use of peer counselling in nutrition has produced effective results; one such study was conducted in Honduras, where a peer-delivered nutritional counselling

intervention for PLWHIV was associated with improvements in dietary quality and decreased food insecurity. Their study filled a crucial gap in the literature on nutrition education and counselling interventions for PLWHIV in resource-limited settings. It proposed that future studies should rigorously test the effectiveness of peer-led nutritional education models on ART adherence and HIV outcomes (Derose et al., 2015). In relation to the Derose (2015) study, the current study will establish the lived experiences of PLWHIV by exploring the challenges they encounter in accessing nutrition education and counselling.

Recent research has highlighted that nutrition education and counselling can remain weak components of nutritional interventions for PLWHIV without human capital (Abeman, 2014). Most reported studies of nutritional counselling interventions for PLWHIV have relied on professional staff (Almeida et al., 2011; Serrano et al., 2010; Martinez et al., 2014;Vasiloglou et al., 2019). This type of support is limited in low-resource settings. Therefore, it can be argued that the integration of nutrition support through NEC should involve trained community health workers. Not only will this represent a possible solution to enhance its effectiveness, but it also offers the linguistic, cultural, and community-building skills to establish rapport with PLWHIV. Besides, using the community health worker may help reduce stigma, improve retention in care, and improve the quality and outcomes of HIV care.

A study by Mwai et al. (2013) asserts that community health workers were reported to enhance the quality of HIV services and the dignity, quality of life, and retention in care of PLWHIV, contribute to HIV delivery, and strengthen human resources capacity in sub-Saharan Africa. Another related study by Banwat reported that health workers, the media, and governmental and non-governmental organisations in nutrition education would enhance improvement in the knowledge and practice of adequate nutritional intake among studied HIV/AIDS patients (Banwat, 2013). According to the studies revealed, health care providers are crucial in the provision of nutritional counselling. This current study will be interested in knowing the type of nutrition counselling healthcare providers give to PLWHIV in the Lusaka district.

2.8 Summary and Knowledge Gap

In summary, it is clear from the reviewed literature that nutrition education and counselling plays a crucial role in improving the quality of lives of people living with HIV and AIDS. It is also clear

that this can only be achieved if PLWHIV have access to nutrition education and counselling in ART care centres. The majority of the studies on nutrition education and counselling have aimed to establish the effects of nutrition education and counselling in dietary practice and adherence to HIV antiretroviral therapy. However, such a focus has not fully shown how PLWHIV access Nutrition education and counselling as part of their care and support in Lusaka district. Existing studies primarily focus on the effectiveness, implementation, and outcomes of nutrition education and counseling in various regions such as Nepal, India, Nigeria, and Honduras. However, there is a scarcity of research explicitly investigating the provision, accessibility, and impact of structured nutrition education and counseling for PLWHIV in specific regions, notably in Lusaka district, Zambia. In addition, all the data from the studies reviewed were not generated using the hermeneutic phenomenology approach. This would have helped to elicit the experiences of PLWHIV on how they access nutrition education and counselling in Lusaka district. The subsequent chapter presents the methodological approach applied in the present study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

This study aimed to establish the experiences of PLWHIV on how they access nutrition education and counseling as part of the care and support of the pandemic in the Lusaka district. The study was undertaken within a qualitative framework, especially drawing on phenomenological understanding to establish how PLWHIV access nutrition education and counseling in Lusaka District, Zambia.

This chapter aims to describe the research paradigm, research design, and methods used to conduct this study. The chapter begins by briefly discussing the philosophical paradigm for research and then proceeds to examine the concept of phenomenology and why this methodology is appropriate for this study. The research design, a hermeneutic phenomenology, is described along with the rationale for this design. Finally, the chapter presents the outline of the research method, the data sources, sampling procedures, the methods of data collection, the methods of data analysis, and ethical considerations.

3.2 Philosophical Assumption of Phenomenology

Before discussing the research design and methods that this study employed, it is necessary to explain the underlying philosophical research framework that formed the foundation of this study. Philosophy is concerned with views about how the world works and, as an academic subject, focuses primarily on reality, knowledge, and existence. Our personal view of the world is closely linked to what we perceive as reality. Philosophical foundations are beliefs and assumptions about knowledge that inform a study (Matta, 2022; Guba & Lincoln, 2005). It is essential to mention that philosophical ideas influence research. Although they may be hidden in the study, they affect the research practice; therefore, they need to be stated. Philosophical foundations, or worldviews, can be described as theoretical lenses through which the social world can be understood and appropriate ways of studying it. They comprise the ontological and epistemological assumptions upon which research is constructed (Creswell, 2014; Descombe, 2014). They consequently guide inquiry and determine the direction of research regarding research design, methods, and analysis

(Descombe, 2014). The ontological viewpoint concerns the nature of social phenomena to be studied and what can be known about them, while epistemology is how humans create knowledge about the social world (Descombe, 2014).

In social science research, the position taken by the researcher relates to their understanding of reality (ontological standpoint) and the nature of knowledge (epistemological perspective) (O'Leary, 2010). The two research paradigms most commonly utilised in contemporary social, organisational, and management research are positivistic and interpretivist or naturalistic (Neuman, 2014; O'Leary, 2010).

Positivism, commonly known as the scientific method, is based on a rationalistic, empiricist philosophy originating from the works of Aristotle, Francis Bacon, and Emmanuel Kant (Creswell, 2014). Positivist epistemology is objectivism, where the assumption is that the researcher can study the object without being influenced by it. If rigorous procedures are followed, values and biases prevent outcomes (Lincoln et al., 2011). Research that applies the positivistic paradigm predominantly uses quantitative approaches for data collection and analysis (Rahi, 2017; Punch, 2013).

The interpretivist paradigm arose from Edmund Husserl's philosophy of phenomenology and Wilhelm Dilthey's study of interpretive understanding, called hermeneutics (Mertens, 2005). The interpretivist paradigm has as its philosophical foundation that there are numerous truths and several realities; it is associated with research approaches that provide an opportunity for the voice of research participants to be heard (Punch, 2013; Weaver & Olson, 2006). It is concerned with understanding the world as it is through the subjective experiences of individuals. Generally, interpretivism assumes that reality, as it is known, is constructed intersubjectively through meanings or understanding developed socially. It also considers that we cannot completely exclude ourselves from what we know (Lincon & Guba, 2000). The researcher and the object of investigation are linked in such a way that who we are and how we understand the world are central parts of how we understand ourselves, others, and the world. The researcher's choice of research methods is influenced by his/her ontological and epistemological perspective. In this research, the interpretive paradigm was adopted in line with phenomenology philosophy.

Phenomenology may refer to either a research method or a philosophy (Creswell, 2017). Rooted in philosophy and psychology, phenomenology is a qualitative research approach that explores the experiences of those living with a particular phenomenon. Generally, and as a methodology, phenomenology is qualitative. In principle, phenomenology focuses on people's perceptions of the world or the perception of the 'things in their appearance' (Langdridge, 2007, p. 11). Phenomenology is fundamentally concerned with understanding the lived experiences of individuals. It allows researchers to delve deeply into the subjective experiences of individuals, capturing the nuances, emotions, and meanings attached to their encounters with the phenomenon. In this study, this qualitative research approach was suitable as it supports the purpose of the study, which is to establish the lived experience of PLWHIV on access to nutrition education and counselling. According to Creswell (2017), the main aim of phenomenological studies is to examine human experiences. In other words, the research topic in phenomenological studies is human experience, and researchers seek to reveal the meanings individuals attribute to their lived experiences (Denscombe, 2014). The need for describing or interpreting a phenomenon experienced by the individual forms the core of phenomenological research (Bakanay & Cakir, 2016).

The roots of phenomenology are found in Plato, Socrates, and Aristotle as a philosophy of human beings. Subsequently, during the first decade of the twentieth century, Edmond Husserl, a German philosopher, became successful in establishing phenomenology as an approach to studying the lived experiences of human beings at the conscious level of understanding (Eddlies-Hirsch, 2013). Edmund Husserl (1859–1938) is regarded as the originator of phenomenology.

Following Husserl, Heidegger improved the phenomenological philosophy considerably and focused from epistemology to existential ontology. Heidegger (1985) called every individual's action "in being", and according to him, phenomenology is not accessible, but it is more difficult (p. 161, p. 12). After Husserl and Heidegger, philosophers such as Maurice Merleau-Ponty, Jean-Paul Sartre, Adaemo Giorgi, Hans Georg Gadamer and Max van Manen combined or improved the concepts and procedures of phenomenology (Langdridge, 2007). There are two types of phenomenology: descriptive or transcendental phenomenology and hermeneutic or constructivist

or existential phenomenology (Cilesiz, 2010). While transcendental philosophy is often connected with being able to go outside of experience, as if standing outside of ourselves to view the world from above, existential philosophy reflects a need to focus on lived experience (Langdridge, 2007). On the other hand, hermeneutic phenomenology emphasises interpretation as opposed to just description. This study will use the hermeneutic-phenomenological framework developed by Heidegger.

Phenomenological research aims to reach the essence of the phenomenon's lived experience while ascertaining and defining the phenomenon (Cilesiz, 2010). van Manen (1990: 10) states, "The essence of a phenomenon is universal, which can be described through a study of the structure that governs the instances or particular manifestation of the essence of that phenomenon. A universal or essence may only be intuited or grasped through a study of the particulars or instances as they are encountered in lived experiences". Therefore, the general purpose of the phenomenological study is to understand and describe a specific phenomenon in depth and reach the essence of participants' lived experience of the phenomenon. When applied to studying access to nutrition education and counselling for PLWHIV, this philosophical approach helped uncover the fundamental aspects of these experiences. It allowed the researcher to identify what truly matters to individuals when accessing these services.

As a research method, phenomenology is an approach that attempts to understand the hidden meanings and essence of an experience and how participants make sense of it. As a research method, it is a rigorous, critical, and systematic investigation of phenomena (Streubert Speziale & Carpenter, 2007). Creswell (2013) mentions that the standard philosophical assumptions in phenomenological research are: the study of lived experiences; whether the lived experiences are conscious; and describing the essences of the lived experiences. Laverty (2003) also states that phenomenological research mainly focuses on consciousness—the individual's conscious perception of things and contexts arising from life experiences. The researcher explores the conscious perceptions of the participants in an attempt to understand the meanings of their experience or find the essence of this experience. Phenomenology is ideal for penetrating deep into affective, emotional, and intense human experience, searching for the nature and illumination of an experienced phenomenon (Kafle, 2013; Merriam, 2014).

The term essence refers to the essential meanings of a phenomenon, which make a thing what it is (Van Manen, 1990). Heidegger (1977, p. 3) describes the essence of a phenomenon as “how it remains through time as what it is." Hermeneutic phenomenology is concerned with human experience as it is lived. The focus is to illuminate particulars and seemingly trivial aspects of the experience that may be taken for granted in our lives, construct meaning, and achieve a sense of understanding. According to Giorgi (2012, p. 6), “phenomenology wants to understand how phenomena present themselves to consciousness, and the elucidation of this process is a descriptive task" A hermeneutic phenomenological inquiry, according to Creswell (2017), illustrates the significance of many people's varied perspectives on a concept or phenomenon. In the human domain, this typically translates into obtaining "deep" information and perceptions using inductive qualitative research techniques like interviews and observation, which represent the data and perceptions from the viewpoint of the research participants. While hermeneutic phenomenological inquiry offers deep insights from diverse perspectives, it may suffer from subjectivity, limited generalizability, and complexity in analysis.

3.3 Philosophical Assumptions Underpinning this Study

The study adopted a paradigm, epistemology and ontology (Patton, 2015) as per diagram below.

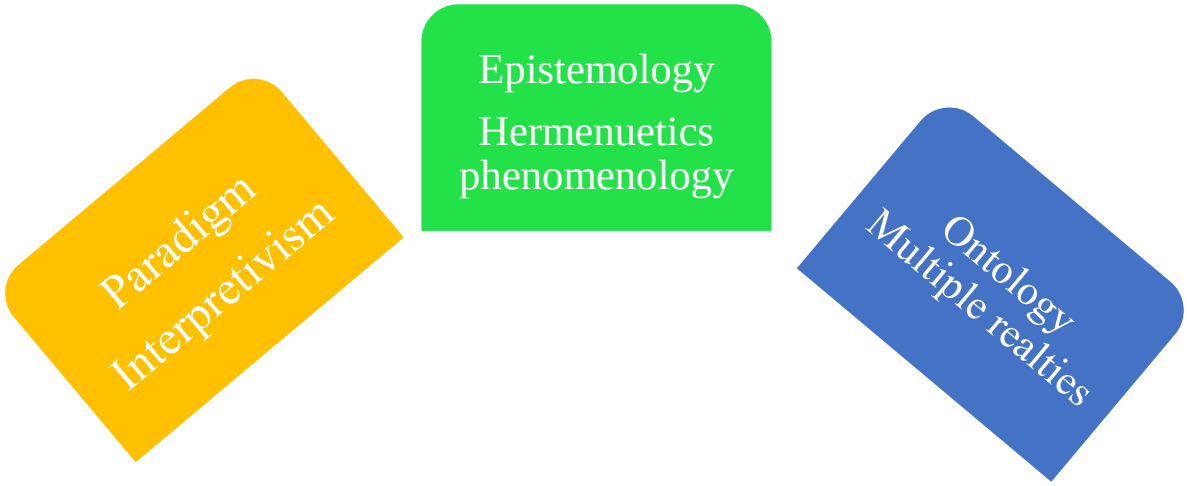

Figure 2: Paradigm, Epistemology and Ontology

One of the tenets of hermeneutic phenomenology is interpretivism. The interpretivist paradigm is also called the "anti-positivist" paradigm (Umaima et al., 2020). It is also referred to as constructivism because it emphasises the ability of the individual to construct meaning. Therefore, the philosophical assumptions underlying this study come from the interpretive. The interpretive paradigm has a subjectivist approach in its analysis of the social world (Ajjawi & Higgs, 2007). It recognizes that reality is subjective and socially constructed. This implies a subjective epistemology and the ontological belief that reality is socially constructed and only understood by examining the perceptions of human actors (Cresswell & Porth, 2018). This paradigm stipulates that individuals seek to understand the world they live in by giving meaning to their experiences. These meanings are varied and multiple and are embedded in people's experiences (Dibley et al., 2020; Moyo, 2022). An interpretivist approach was seen as most suited to meeting the objectives of this study because of the researcher's view that multiple realities exist, that elements of reality can be shared, and that the researcher and the phenomenon are linked through experience. As a result, the researcher searched for this diversity of views and reduced meanings into ideas. The researcher relied as much as possible on the participants' opinions and experiences in their interactions with health providers in healthcare centres regarding access to nutrition education and counselling. Crotty, 1998; Lincoln and Guba, 2000; and Schwandt, 2007 summarised this paradigm by stating that meaning is constructed through interactions with others, hence social constructs. In addition, the interpretive paradigm was considered to be the most relevant for this study because of its capacity to generate a new understanding of complex multidimensional human experiences such as those explored in this study (access to nutrition education and counselling). In the current study of access to nutrition education and counselling for PLWHIV, an interpretivist approach allowed the researcher to explore how individuals perceive and interpret nutrition education and counselling services, considering their lived experiences, cultural backgrounds, and contextual influences. It acknowledges that access to nutrition education and counseling (NEC) among HIV patients varies based on individual perspectives and social contexts.

Ontology, within interpretivism, views reality as multiple and socially constructed. In the context of the current study, this suggests that the nature of access to nutrition education and counselling for PLWHIV is not a singular, objective reality but rather a complex, multifaceted phenomenon influenced by diverse personal experiences and societal contexts. The study adopted the

ontological assumption of the social phenomena under study, access to nutrition education and counselling by PLWHIV, and embraced the fact that they are different realities as the individuals being studied had other realities. Therefore, the researcher reported on these multiple realities. Evidence of numerous realities was evident in themes using the actual words of different individuals and presenting different perspectives.

Ajjawi and Higgs (2007) state that the interpretive research paradigm is rooted on the epistemology of idealism (in idealism, knowledge is considered to be socially constructed - and its main aim is to interpret the social world). Epistemologically, interpretivism suggests that knowledge is subjective and context-dependent. It acknowledges that understanding is generated through interactions, interpretations, and social constructions. The epistemological position regarding this study can be formulated as follows: Data are contained within the perspectives of PLWHIV and are accessing nutrition education and counselling as truth lies within the human experience. The researcher engaged with the participants in collecting the data. Epistemologically, the researcher assembled the evidence based on the individual's views through their experience with the healthcare providers in healthcare centres on access to nutrition education and counselling. In this study, this means that knowledge about access to nutrition education and counselling for PLWHIV is derived from the perspectives, experiences, and interpretations of the individuals accessing these services.

3.4 Choosing Phenomenological Inquiry among the Qualitative Approaches

Phenomenology falls within the continuum of the qualitative research approach. Creswell (2014) argues that the qualitative approach places emphasis on exploring and understanding "the meaning individuals or groups ascribe to a social or human problem" (P. 4). The literature reviewed indicated that there are different qualitative approaches. Creswell (2014) outlined them as ethnography, grounded theory, narrative, case study, and phenomenology. The researcher shows the difference between these approaches by justifying the selection of phenomenology inquiry.

3.4.1 Ethnography

Ethnography inquiry has its roots in cultural anthropology, where the researcher immerses him/herself with the culture. It is the study of small societies' beliefs, social interactions, and behaviours, involving participation and observation over a long time and interpreting the data

collected (Denzin & Lincoln, 2018). In this type of research, behaviours, values and interactions among the group are deeply studied, described and interpreted by the researcher (Creswell, 2014). It uses the concept of culture as a lens through which to interpret results (Haradhan, 2018). In this type of inquiry, the researcher studies beliefs, social interaction and behaviour by describing and analysing practices and beliefs, whereas the current study which focuses on lived experiences by PLWHIV on access to nutrition education and counselling. Using ethnongraph would have contradicted the researcher's focus, which was on the experiences of PLWHIV having access to nutrition education and nutrition counselling, as ethnography is intrinsically linked to the researcher's experience (Naido, 2012).

3.4.2 Grounded Theory

A grounded theory study focuses on generating or discovering a theory (Creswell, 2014). The researcher uses primarily interviews and existing documents to build a theory based on the data, with a large sample size of 20 to 60. Whereas a phenomenological study looks to describe the essence of an activity or event, grounded theory looks to provide an explanation or theory behind the events. Therefore, this makes phenomenology an appropriate approach for this study, which aimed to describe the phenomenon of access to nutrition education and counselling by PLWHIV.

3.4.3 Narrative Research

Narrative research focuses on people's narratives, either about themselves or a set of events. Instead of looking for themes that emerge from an account, it concentrates on the sequential unfolding of someone's story, emphasising character (Haradhan, 2018). In narrative research, data are collected by observation, diaries, letters, interviews, artefacts, and photographs (Lenbergy et al., 2017). Narrative research, which focuses on individual stories and the sequential unfolding of events, was not employed in this study; instead, phenomenology was chosen to emphasise the typical experiences of several individuals through interviews as the primary data collection method

3.4.4 Case Study

According to Creswell (2013), in a case study, the researcher explores in depth a programme, an event, an activity, a process, or one or more individuals. A case study involves a deep understanding of multiple types of data (Haradhan, 2018). In support, Creswell (2009) states that

it is conducted by using various sources like questionnaires, interviews, observation, written accounts, and audio-visual materials. In contrast, phenomenology involves in-depth interviews to collect data. In addition, case studies can be exploratory, explanatory, or describe an event, whereas phenomenology consists of describing and interpreting the phenomenon.

The core focus of phenomenology is to attempt to understand the meanings of human experiences as they are lived (Laverty, 2003). Given the foregoing contrast between the qualitative approaches, the objectives of this study did not encompass generating theories or models of the phenomenon being studied; therefore, the use of a case study or grounded theory approach was discounted in favour of employing a phenomenological approach. The phenomenological approach was selected as the most suitable approach for this study, in which it is essential to understand the individuals' experiences of the phenomena explored (Creswell, 2013). Crotty (1996) states that the purpose of phenomenology is to "describe the experience as it is lived by the people" (p. 5), in order to understand experience from an individual's perspective, point of view, or frame of reference. The goal of a phenomenology study is to identify subjective experience, describe it, and then understand it. Furthermore, the phenomenology approach is a highly appropriate approach to researching human experience. Therefore, it is best suited for this research to explore the experiences of PLWHIV on access to nutrition education and counselling because it is congruent with the purpose of the study to establish the experiences of PLWHIV on access to nutrition education and counselling.

3.4.5 Descriptive versus Interpretive Phenomenology

In essence, there are two schools of phenomenology: transcendental phenomenology (known as descriptive phenomenology), based on the original work of Husserl, and hermeneutic phenomenology (known as interpretive phenomenology), espoused by Martin Heidegger, Husserl's student (Creswell, 2013). Although the descriptive and interpretive approaches share the epistemological foundations laid by Husserl, methodological differences exist between the approaches (Matua & Van Der Wal, 2015).

Transcendental phenomenology, or descriptive phenomenology, is focused on the description of the participant's experiences rather than the researcher's interpretation (Creswell, 2013). The researcher attempts to uncover what it is like to experience a particular phenomenon, focusing on

accurately describing the first-hand experience under investigation so that others can see and feel it (Matua & Van Der Wal, 2015). According to Wojnar and Swanson (2007), if the actual structure of the phenomenon is identified, anyone who has experienced the phenomenon should be able to identify their own experience in the description. Factors such as religious or cultural thoughts and beliefs can influence how phenomena are understood. To describe the true essence of the 'lived experience', it is first necessary for any preconceived ideas to be cast aside (Converse, 2012; Tuohy et al., 2013). Phenomenological epoche, or 'bracketing', is a method used by researchers to achieve a state of subjectivity and understand the experience in its purest form (Wertz, 2005). Descriptive phenomenology aims to describe a phenomenon's general characteristics rather than the individual's experiences to determine the meaning or essence of the phenomenon (Touhy et al., 2013). Descriptive phenomenology methods attempt to ensure that pre-understandings the researcher may have do not slip into the study's findings. The knowledge generated reflects the phenomenon as experienced by participants' firsthand (Finlay, 2008). This type of phenomenology was not selected for this study since it might have detached the researcher from the research, disregarding interpretivism, which promotes subjectivity, or the researcher being a participant in the research. On the other hand, Dibley et al. (2020) argue that it is impossible for the researcher to negate their perception of reality and approach scenarios without having any preconceived notions. Moreover, the researcher agreed with Heidegger's notion that a person's social and cultural context and history cannot be removed or set aside from his or her understanding of the world.

Hermeneutic interpretive phenomenology was chosen as a suitable methodology for this study, informed by the works of Van Manen (1997). The hermeneutic phenomenology approach is seen as an interpretive process and a description that the researcher interprets, and it is through the explanation of the experience that meaning is discovered (Creswell, 2013). To understand the 'lived experience' of PLWHIV on access to nutrition education and counselling, this study was guided by hermeneutic phenomenology, which provided participants with the opportunity to describe their perceptions of their own experiences. Using hermeneutic phenomenology, the researcher's interpretation will not be seen as the absolute truth but as a different way of understanding and making sense of the phenomenon (Patton, 2016). This method enabled the researcher to better comprehend the participant's experiences and to analyse and reinterpret them

(Dibley et al., 2020). It gave the researcher an opportunity to share a story about what it was like for the participants to benefit from nutrition education and counselling.

According to Van Manen (1990), hermeneutic phenomenology is an approach in which the researcher goes beyond the words of the participants to achieve abstraction through interpretation. As such, he stated that when one is engaged in the process of understanding an experience, that process will always be an interpretive one(Laverty, 2003). Therefore, the researcher focused on establishing commonalities that emerged from the participant interviews as they shared their lived experiences.

3.5 Research Design

The study used a hermeneutics phenomenology research design to establish the experiences of people living with HIV and AIDS in nutrition education and counselling. A research design is the foundation and framework of the study and helps find answers to the proposed research question (Maxwell, 2013; Miles, Huberman & Saldan, 2020). The phenomenological design is a qualitative method. Qualitative methods are used to gain a deeper understanding of people's perceptions regarding a particular phenomenon (Merriam, 2014). Yin (2014) described qualitative research as collecting data from various resources, evaluating the data, analyzing evaluations to produce findings, and presenting the results.

The researcher used hermeneutic phenomenology research design to gain an understanding of individuals' experiences and provide a universal description of all participants experiences as a whole (Nigar, 2020). This design permited gathering data from each participant while simultaneously capturing the core experience for all participants.This study used a hermeneutic phenomenology design to explore the lived experiences of individuals with PLWHIV in nutrition education and counseling. It used Van Manen's reflective thematic areas on lived experience as a guiding framework. The areas included engagement, embodiment, lived time, and spatiality. Engagement examines participants' emotional, cognitive, and behavioural engagements with nutrition education and counselling. Embodiment investigates participants' physical and emotional experiences. This thematic area explored the physical and emotional experiences of participants within the context of accessing nutrition education and counseling. It aimed to uncover how individuals perceived and experienced their bodies in relation to their health and well-being. while

lived time assesses the rhythm and impact of their engagement. This dimension investigated the temporal aspects of participants' experiences with nutrition education and counseling. It sought to understand how time was experienced, perceived, and valued within the context of their health journey. Spatiality examined physical, social, and cultural spaces that influenced participants' experiences of accessing nutrition education and counseling. It aimed to uncover the environmental and contextual factors that shaped their interactions with these interventions. The study also incorporated the dimension of human relations, which explores the relational aspects of participants' experiences. It aimed to understand the interpersonal dynamics and social connections that influenced their engagement with nutrition education and counselling, including interactions with healthcare providers, peers, and support networks.

By using this design, the researcher wished to understand lived experience and how participants themselves make sense of their experiences and explore the perception of PLWHIV on access to nutrition education and counselling instead of attempting to produce an accurate record of access to nutrition education and counselling. Interpretative phenomenology was an appropriate design for the current study. It will attempt to use personal, in-depth detail derived from individual interviews among the PLWHIV on access to nutrition education and counselling by PLWHIV. The researcher examined how this phenomenon works within the framework of the IMB model. The open-ended interview among the PLWHIV were used to derive in-depth details to describe their experiences of accessing nutrition education and counselling.

Phenomenology was relevant to the study. The researcher collected data from people who had experienced the same phenomenon of interest and developed a composite description of the essence of the experience for all individuals (Creswell, 2013). In addition, the use of this design is based on its flexibility, allowing for more freedom during the interview to explore the essences of other experiences (Mile, Huberman, & Saldana, 2020).

The hermeneutic phenomenology research design has certain limitations: first, it is biased (Creswell, 2014, Patton, 2015). The role of the researcher must include the integration of biases, beliefs, and values up-front in the study (Janesick, 2011). Therefore, in this study, much effort was made to remain as objective as possible by combining own and participants’ perspectives through a triangulation of information obtained from different sources. A second limitation is that the process can be time-consuming and labour intensive (Creswell, 2014; Janesick, 2011, Miles,

Huberman, & Saldana, 2020). Given that the healthcare centres operate within a set time of day and in-depth interviews require much time to conduct, Thirdly, the data collected from research cannot be generalised (Maxwell, 2013). However, since most qualitative investigations are context-bound, they are exempt from emphasising generalisation (Kumar, 2014).

3.5.1 Research Design Matrix

The researcher used a research design matrix with research objectives, data type, data sources, and data collection tool and data analysis to illustrate the data generation process as shown in table 1.

Table 1 Research Matrix

Research objectives	Data type	Sources of data	Data collection tool	Data analysis
1. To describe lived experiences of PLWHIV on how they access nutrition education and counselling.	Qualitative	PLWHIV	Semi structured interview guide	Thematic analysis
2. To explore types of nutrition counselling received by PLWHIV	Qualitative	PLWHIV	Semi structured interview guide Document Analysis guide	Thematic analysis
3. To explore the challenges faced by PLWHIV in accessing nutrition education and counselling.	Qualitative	PLWHIV	Semi structured interview guide	Thematic analysis
4. How can PLWHIV better access nutrion education and counselling from the health care centres?	Qualitative	PLWHIV	Semi structured interviewguide	Thematic analysis

3.6 Research Setting

The research was conducted at the largest government health care center in Lusaka district. The health care facility has more people and clients than other districts and has a high number of facilities offering HIV and AIDS services. The health center also has a high number of clients, and it is the largest facility offering ART services in the district, province and indeed country. According to the ART Report (2006), Lusaka has the highest number of health facilities offering ART services. According to van Manen (2016), it is crucial for qualitative research to be conducted within the natural setting (van Manen, 2016; Mertens, 2015). The researcher interacts with the participants in their natural setting over a period of time, which allows the researcher to build a relationship with each participant and obtain rich data that provides a thick description of the

phenomenon (Creswell, 2014; Mertens, 2015; Ritchie et al., 2013). The natural setting for this study was the health care center. Permission was granted by the director of the center, and interviews were conducted within the nutrition counseling room.

3.7 Study Population

Utilising Heideggerian hermeneutic and phenomenological terminology, the study population was identified as Dasein, the entity with the "lived experience of the phenomenon. Van Manen (1990) asserts that phenomenology requires research participants have personal experience of the phenomenon under investigation and accurately represent the population. The population was made up of individuals who shared characteristics that served as established principles and were used to choose the study sample (Davidsen, 2013). In this study, the population of interest was the people living with HIV and AIDS accessing health services from the health care centre in the Lusaka district. The population consisted of PLWHIV, who are on ART therapy and are 20 to 60 years of age.

3.8 Study Sample

The sample consisted of 25 PLWHIV (11 males and 14 females aged between 20 and 60). A phenomenological framework requires a relatively homogenous group of participants (Creswell, 2014). Therefore, in a phenomenological study, participants should have experience with the same phenomenon. Individuals selected to participate in the phenomenological study should have significant and meaningful experiences of the phenomenon being investigated (Creswell, 2014). The focus of interpretivist research is to get the most detailed experiences from participants who have the most information. As a result, choosing the right sample size should not be dependent solely on how many participants to include in the study. For qualitative work, the quality of the information gained is important (Patton, 2015). The number of participants can depend on the shape and form of the data collected (Neuman, 2014). While there is no specific limit on the number of participants in a hermeneutic phenomenological study, sample sizes range from two to 25. Creswell (2013) recommends a participant size range of five to 25 as adequate for a phenomenological study. Streubert & Carpenter (2011), however, believe it is impossible to predetermine the number of participants required for a given task and recommend data collection

continue "until the researcher believes saturation has been achieved, and saturation is when no new themes or essences have emerged from the participants and the data are repeating" (p. 95).

O'Leary (2010) argues that saturation is a technique to ensure thoroughness during data collection and a strategy to achieve credibility in qualitative research. In this study,the size of the sample was guided by the principles of saturation, homogeneity, and variety of experiences. Saturation ensured a comprehensive range of perspectives and experiences related to access to nutrition education and counselling (NEC) among PLWHIV. Homogeneity ensured participants shared relevant characteristics, such as being PLWHIV receiving care at the center. A purposive homogenous sampling approach was used to select participants with common characteristics, enhancing the coherence and relevance of the findings. The study aimed to capture diverse experiences and perspectives related to access to NEC among PLWHIV, ensuring a comprehensive understanding of the complexities and nuances of the issue from a range of perspectives, despite focusing on homogeneity. Thus, the sample size for this study was 25 PLWHIV between the ages of 20 and 60. The age range of 20 to 60 was based on the fact that this range is at the adulthood stage of development.

4.8.1. Partcipants' Brief Profile

The sample size of the study involved 25 PLWHIV. Table 2 provides the demorgraphic characteristics of this sample. In order to maintain particpants confidentiality and anonymity due to ethical considerations , psuedonyms were employed to identify each participant.

Table 2 Particapants's Brief Profile

Pseudonym	Profile
Participant 1: *John*	A 56-year-old widowed man who had been on ART for 6 years at the time of the study. He is self-employed.
Participant 2: *Rocky*	A 44-year-old unemployed and divorced man who had been on ART for three years.
Participant 3: *Martina*	A 30-year-old woman who has been on ART for five years. She is single and self-employed.
Participant 4: *Vincente*	A 46-year-old married man with 10 years on ART. He is self-employed.

Participant 5: *Aurelia*	A 48-year-old self-employed woman. She is married and has been on ART for six years.
Participant 6: *Vincenta*	A 29-year-old single woman who had been on ART for five years at the time of the study. She is unemployed.
Participant 7: *Steel*	A 60-year-old married man. He is self-employed and has been on ART for 20 years now.
Participant 8: *Froy*	A 36-year-old single man. He is self-employed and has been on ART for three years.
Participant 9: *Spike*	A 38-year-old married woman who has been on ART for four years. She is self-employed.
Participant 10: *Brid*	A 28-year-old unemployed married woman. She has been on ART since she was 4 years old.
Participant 11: *Nei*	A 43-year-old married woman. She is in formal employment and had been on ART for 6 years at the time of the study.
Participant 12: *Tau*	A 52-year-old married man who has been on ART since he was 40 years old. He is in formal employment.
Participant 13: *Ken*	A 50-year-old self-employed married man. He has been on ART for 11 years
Participant 14: *Kan*	A 54-year-old unemployed man. He is single and has been on ART for 10 years.
Participant 15: *Solochi*	A 51-year-old widow had been on ART for seven years at the time of the study. She is self-employed.
Participant 16: *Gift*	A 60-year-old widow who has been on ART for six years. She is self-employed.
Participant 17: *Floreen*	A 38-year-old married woman. She is in formal employment and has been on ART for seven years.
Participant 18: *Gulo*	A 56-year-old unemployed widow. She had been on ART for 10 years at the time of the study.
Participant 19: *Feby*	A 55-year-old married woman She is unemployed and has been on ART for nine years

Participant 20: *Matt*	A 36-year-old married man who has been on ART for five years. He is in formal employment.
Participant 21: *Binkay*	A 33-year-old woman who has been on ART for five years. She is divorced and self-employed.
Participant 22: *Gloren*	A 56-year-old divorced woman. She is in formal employment and had been on ART for 16 years at the time of the study.
Participant 23: *Devvoy*	A 51-year-old married man who has been on ART for five years. He is in formal employment.
Participant 24: *Gwelena*	A 43-year-old married woman. She has been on ART for 11 years, and she is formally employed.
Participant 25: *Wilien*	A 48-year-old married man who has been on ART for six years. He is in formal employment.

3.9 Sampling Procedures

Homogeous Purposive sampling procedure was used to select the participants. Purposive sampling focuses on specific population characteristics that allow the researcher to most effectively answer the study questions (Ploit & Beck, 2018). The most relevant to this study was purposive sampling. Purposive sampling was considered for this study because it allowed the researcher to select interviewees whose qualities or experiences permit an understanding of the phenomenon in question (Streubert & Carpenter, 2011). Purposeful sampling seeks information-rich cases to acquire relevant knowledge depth in the study (Patton, 2015). The sole basis for sampling in a phenomenology study is to select participants who have first hand experience of the phenomenon of interest.

There are various purposive sampling methods, each with different goals. The study used homogenous purposive sampling and some snowballing sampling to select the PLWHIV. Participants were selected from a homogenous sample pool; this was done in an effort to maximize the extraction of rich information from participants. A homogenous purposive sample selects members of the sample who share specific or similar characteristics (Bryman, 2016 ;Patton, 2015). The essence was to get a better gauge and understanding of the overall perception among the PLWHIV's lived experiences. It was also essential because the participants had similar experiences

with access to nutrition education and counseling. Homogenous sampling is consistent with the hermeneutic phenomenology data analysis method. For example, PLWHIV were the participants with the same condition and visiting similar health care centers. The idea was to focus on this exact similarity and how it relates to the topic being researched. The researcher, with the assistance of the health care providers, identified the participants for the study. This is due to the stigma surrounding the condition. To trace additional participants or informants, the researcher used snowball sampling. Snowballing is a method of expanding the sample by asking one informant or participant to recommend others for interviewing who could form part of it (Creswell, 2014; Kumur, 2014)

3.9.1 Inclusion and Exclusion Criteria

The study included people living with HIV and AIDS adults aged between 20-60 years. The researcher also took into consideration the duration on ART of the particpants. Only particpants who have been on ART treatment for more than three years were included in the study. It was in antipation that the participants would have experienced the nutrtion education and counselling activities and services at the health care centres. It will exclude HIV positive people under 20 years old or more than 60 years old, all pregnant and lactating women and those on TB treatment as indicated in (Table 3) below;

Table 3. Participants Inclusion and Exclusion Criteria

Inclusion Criteria
Participants who volunteered to participart in the study PLWHIV attending ART health service at the health centre Aged between 20-60 years Been on ART treatment for more than three years Participants who were aware wiling to consent and speak about their experience.
Exclusion Criteria
PLWHIV under the age of 20 Pregnant and lactating women living with HIV

PLWHIV on TB treatment

3.10 Research Instruments

Data collection instruments in research are used to gather the information that is then analysed and interpreted. The common and data collection instrument for the phenomenological study are interview, observation and document analysis. A popular data source for interpretive phenomenology studies is a semi- structured interview. In this study the researcher used the semi structured interview guide and document analysis guide as research instruments. Phenomenological research relies on the researcher's interpretive abilities, reflexivity, and engagement with participants and data. The researcher guided the inquiry, facilitated interviews, and conducted document analysis. The researcher's subjectivity, biases, and perspectives shaped data interpretation. Active engagement with participants allowed for a rich exploration of lived experiences and meanings, making the researcher both an active participant and a lens through which data was interpreted.

3.10.1. Semi-structured Interview Guide

Phenomenological research studies typically consist of data being collected via in-depth interviews (Creswell, 2013; Merriam, 2014). Interviewing is a form of discourse between two or more people to reconstruct their experience. (Creswell, 2013; O'Leary, 2010). The degree to which an interview is structured, that is, employing a questionnaire, or open, that is, utilizing unstructured dialogue or an autobiographical interview, varies significantly in phenomenological research depending on the aims, objectives, and nature of the study. In line with this (Elham, 2022; Punch , 2013) classifies interviwes into three types; unstructured, structured and semi structured.

In this study, the researcher used the semi-structured interview guide. Magaldi & Berler (2020) define the semi-structured interview as an exploratory interview. They further explain that the semistructured interview is generally based on a guide and that it is typically focused on the main topic that provides a general pattern. According to Ruslin, et. al., (2022) semi- structured interviews should lead to concreteness and specific details with questions being concrete and open-ended. Many researchers suggest that an interviewee should create an interview schedule in advance and ask as few direct questions as possible to ensure participants responses stay close to the lived experiences. Semi-structured interviews are suitable to explore the perceptions and

opinions of participants and enabled probing and clarification of answers. Busetto et al., (2020)) argues that research requires an 'in-depth' response to explore the real world; the semi-structured interview is a crucial instrument because it involves both closed and open-ended. The interviews were conducted by face to face conversion with the respondents. The semi structured interviews guided the partcipants to help answer the research questions , but allowed them some room to add their personal meanings to the interview questions that were open –ended (see Appendix A). The open-ended question facilitated further probing to enable respondents to elaborate their views, perceptions, feelings, values and perspectives. It was anticipated that the researcher would be able to learn from the participants facts and trends regarding access to nutrition education and counselling through the interviews. Interviews were recorded using the audio tape and the phone and later installed on the computer and notes were taken during the interview.

3.10.2 Document Analysis Guide

Document analysis guide was necessary for exploring the nutrition services and activities employed to enable PLWHIV to have access to nutrition education and counselling in the ART centres. The ART files for PLWHIV were reviewed to establish access to nutrition counselling and types of nutrition counselling provided by nutrition counsellors. These documents were helpful in areas where participants had difficulties answering the question, for example, on nutrition counselling information. Documents analysis guide was used as a compliment to the interview guide and as a way to ensure that the investigation is critical and comprehensive. Documents also supplemented and supported data from interviews. The researcher was able to also cross check data where information contradicted the actual practice expressed by the participants. The rationale for using this analysis in this study was to triangulate the different methods and create a confluence of evidence to create credibility. The document analysis guide provided a means of tracking change and development in nutritional status of the participants as well as providing corroborative evidence with the interviews. However, the only limitation the researcher encountered was insufficient details for nutrition education activities. The first step was to identify the patients' files or medical records that contain information related to nutrition education and counselling received by PLWHIV. Inclusion criteria included may files of PLWHIV who had received nutrition education or counselling services for three years while exclusion criteria may include files with incomplete or missing information, or files of patients who have not received such services. Data

related to nutrition education and counselling was gathered from the files which included the type and frequency of counselling sessions, topics covered during counseling, any educational materials provided to the patients, and documentation of patient outcomes or responses to counselling. then analyzed to identify patterns, trends, and themes related to access to nutrition education and counselling by PLWHIV, barriers to access, types of counselling received, or perceived benefits of counselling.

3.11 Data Collection Procedure

3.11.1 Ethical Clearance

The research was approved by the university of Zambia ethical clearance committee. After ethical clearance, the researcher visited the healthcare facilities to submit consent forms to the respondents and obtain signed consent forms from willing respondents (appendix B).

3.11.2 Interviews

Participants who expressed an interest in participating in the study were interviewed using the semi-structured interview guide. Face-to-face interviews were conducted to allow for a naturalistic setting while investigating the phenomenon. The interview occurred within the facility premises. All interviews were audio recorded and notes were made for the purpose of data analysis. There were two audio recrders in case of equipment failure. Gestures, physical expressions and physical posturing were recoreded during the interviews in forms of field notes and later added to the transcripts. The interviews lasted between 20-45 minutes.. At the conclusion of the interview, the possibility of a follow-up interview if needed to clarify responses was discussed with the participants.

The recording were subsquently transcribed verbatim. Data collected was verifiefied with the participants in person and stored in a secure place in accordance with ethical guideline. Given the sensitive nature of the participants, the data was coded anonymously and stored in a secure, password-protected electronic database accessible only to the researcher. A total of 25 in-depth interviews were conducted using the semi structured interviews. The data was only used for the purposes of the doctoral study. This procedure of recording and transcription ensured that the data

collected during interviews was maintained in its entirety and that particpants provided lived experiences were accurately captured. Consenquently, this provided the data needed for interpretation during the data analysis process.

3.11.3 Document Analysis

Document analysis involves skimming, reading and interpretation. As a tool for data collection, the procedure included reading the documents thoroughly; selecting the themes pertinent to the phenomenon (access to nutrition education and counselling by PLWHIV). The codes that were used in the interview schedule applied to the content of the documents.

According to Flood (2010). The phenomenology interview should be a reflective experiences because it engages both the researcher and the participants in the meaning making process. This suggest that interview dialogue should be guided by participant experiences to avoid researchers preconceived notions. Therefore reflexibility was used throught the data collecting process (Francisco, et al., 2023).

3.12 Data Analysis Procedure

According to the methodology used in this study, data analysis techniques were created using phenomenological and hermeneutic concepts as well as recommendations found in the literature for methodical, practical methods of analysing research data. The literature suggests that information gathered subjectively and textually from individuals presents an opportunity to understand the meaning of human experience. In hermeneutic phenomenology, it is recommended that data be processed, uncovering the thematic aspects (van Manen, 1997; 2017a; Grbich, 2013; Järvinen & Mik-Meyer, 2020). Literature has further indicated that interpretive work lacks a prescribed method for analysing data, but hermeneutic phenomenological approaches are based on a body of knowledge and understandings (Alsaigh & Coyne, 2021).

Van Manen (1990) takes a flexible approach to hermeneutic phenomenology. He does not introduce a rigid structure to it, allowing the researcher to incorporate their own hermeneutic and phenomenological ideas. This suggests that the current researchers' version of hermeneutic phenomenology can never be exactly the same as any other, and there are indications that there are as many versions of it as the number of researchers who have used it (Patton, 2015; Dibley et al., 2020). Importantly, the fundamental tenet of hermeneutic phenomenology is the analysis and

interpretation of lived experiences. (Paley 2018; Zahavi 2019a). The majority of hermeneutic phenomenology researchers provide data analysis in phases, although there is inconsistent reporting of the precise steps used at each stage. This research study adapted Ajjawi & Higgs (2007) data analysis through six stages; this model is presented in Tables 4.

Table 4 Ajjawi & Higgs six stages of data analysis

Stages	Ajjawi & Higgs	Steps followed
1	Immersion	Gaining understanding through dialogue with participants
2	Understanding	Transcribing interpretation of texts to facilitate coding/identifying first order (participant's horizon) constructs
3	Abstraction	Identifying second order (researcher) constructs Grouping second order constructs into sub-themes
4	Synthesis and theme development	Grouping sub-themes into themes Further elaboration of themes Comparing themes
5	Illumination and illustration of phenomena	Linking the literature to the themes identified above Reconstructing interpretations into stories
6	Integration and critique	Critique of the themes by the researchers and externally Reporting final interpretation of the research findings

Stage One: Immersion

The first stage in this process is immersion in the data. Ajjawi and Higgs (2007) outline three steps in the stage: Organising the data set into texts; Iterative reading of texts: Van Manen's Detailed Reading Approach; preliminary interpretation of texts to enable coding.

The researcher first transcribed the text from each interview's audio tape in order to begin to be "immersed" in the data. The researcher then applied Van Manen's (1990) detailed reading approach by reading and re-reading the texts, effectively examining every word, sentence, or group of sentences, with time allotted to set the transcribed text aside and reflect on what had been said. The transcripts were read and re-read to get a sense of the meanings of the lived experience. Additionally, there was a critique of the interview process to identify missing or unclear data and identify concepts that need further exploration. The researcher became immersed in the data to

become familiar with the depth and breadth of the content. In order to gain an in-depth understanding of the entire text, the interviews were transcribed completely and read several times. The goal of the study was to grasp the entire text because this helped the researcher understand the meaning of each individual text segment. The researcher went through the texts and listened to the recordings several times. Van Manen (1997) argues that this stage involves engaging with the meaning of the texts with the aim to get a "sense" or preliminary interpretation of the texts, which then facilitates coding. Smith et al. (2009) calls this step reading and rereading in their interpretative phenomenology analysis. Repeated reading allowed the researcher to search for meaning, patterns, participant tones, emotions, and nuances that could be connected to the transcriptions.

Step Two: Understanding

Rather than using abstractions, the researcher looked into the real-world experiences of PLWHIV with access to nutrition education and counselling as they were described in their own words (van Manen, 1990). This is where a more detailed understanding was attained. To comprehend the subject, it was necessary to examine each and every section or sentence (the portion) to determine its significance. First order "participant constructs" (open codes) were identified in order to accomplish this. The researcher generated codes from the data. Coding is not simply a method of data reduction, it is also an analytic process, so codes captured both the semantic and conceptual reading of data. (Braun & Clarke 2013). These constructs represented the participant's horizon, referring to participants' ideas expressed in their own words or phrases, which captured the precise detail of what the person was saying. Overall, there was a systematic analysis of the whole to gain perspective and depth of understanding. This broad understanding was then used to gain an understanding of the parts. The global perspective was then reviewed in light of the understanding gained from the parts.

Step Three: Abstraction

Segments of individual interviews or summaries were then grouped together in order to create themes and sub themes (Ajjawi & Higgs, 2007). Here, second-order 'researcher constructs' (categories) were identified. Then, open codes were manually generated into categories and subcategories. Subsequently, core categories and subcategories were grouped manually into sub-

themes. These sub-themes represented the researcher's horizon, which was generated using the researcher's theoretical and personal knowledge; these were abstractions of the first-order constructs (integration). Thematic analysis offers a way of uncovering the underlying themes in a given data set. The transcription of the data and the coding are the main steps that follow with regards to the process of thematic analysis (Michelle & Lara, 2020; Braun & Clarke, 2019).

Step Four: Synthesis and Theme Development

According to Ajjawi and Higgs (2007), phenomenological themes provide an in-depth description of what happened and can be regarded as structures of experience. According to Braun and Clarke (2019), themes are defined as patterns of shared meaning across data items that are supported or connected by a central concept, are related to the research question, and are fundamental to understanding a phenomenon. Ten relational themes were identified from the subthemes, reflecting shared practice and common meanings. This stage involved reviewing and rereading all the data in order to further explore themes and sub-themes and clarify their relationships. Afterwards, further elaboration of themes and relating them to the overall meaning of the whole text was used to try to expand the meaning of the whole. This movement from the parts back to the whole text is the core of the hermeneutic circle. (Ajjawi & Higgs, 2007). The 'parts' refer to the data, and the 'whole' refers to the ever-changing understanding of the phenomenon (Ajjawi & Higgs, 2007). The hermeneutic circle was used in the interpretation stage by moving forward and backwards circularly and spirally with the data (Figure 3). It encompassed reading, reflective writing, and interpretation in an extremely thorough and careful manner (Laverty, 2003). Van Manen (2016) says that in exploring themes and insights, the researcher can treat texts as sources of meaning at the level of the whole story, the level of the separate paragraph, and the level of the sentence, phrase, expression, or single word. Using the hermeneutic circle, the researcher analysed the account of PLWHIV lived experiences and examined the account as influenced by the researcher's own life experience and beliefs. Seeking to gain a deeper understanding of the experience of PLWHIV in accessing nutrition education and counselling, the researcher revisited the interview text and again analysed it through the researcher's lens. This cycle was repeated until saturation, where there was no emerging of new meaning, no new themes or information. The interpretation of the research phenomenon of access to nutrition education and counselling developed as a result of this procedure.

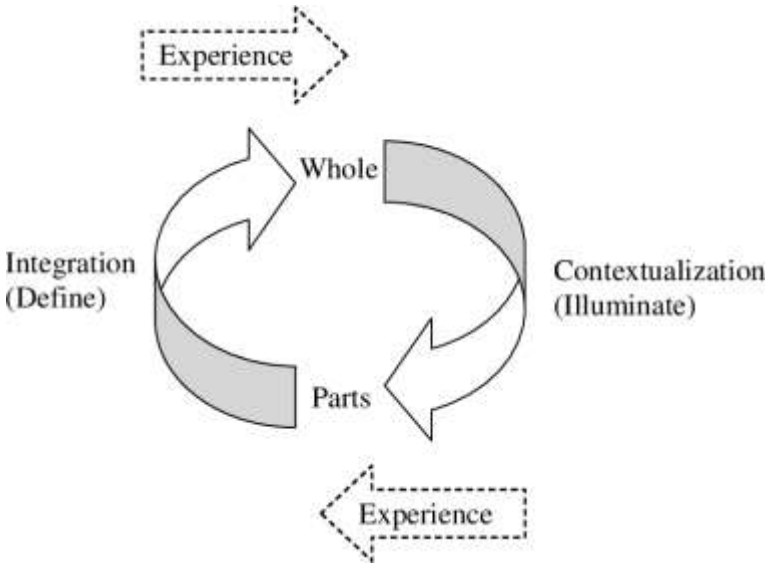

Figure 1 The Basic form of the Hermeneutic Circle Source: Ajjawi & Higges, (2007)

Step five: Illumination and illustration of phenomena

Here, the researcher started connecting the themes and sub-themes obtained from the entire data set to the literature. In order to shed light on the issue and highlight significant findings from the data, the researcher reconstructed the experiences of PLWHIV into narratives using their own words (or first-order constructs), using the themes, sub-themes, and their interrelationships as a base (Ajjawi & Higges, 2007). The supervisor provided feedback on the quality of the stories. The data were examined for the emergence of a constitutive pattern that linked all the themes and illuminated a shared meaning of the data.

Step Six: Integration and Critique

The themes were analysed, and the final interpretation of the research results (a fusion of horizons) was provided, as shown in (Figure 4).The interpreted findings were reviewed, reflected upon and discussed with the supervisor, who was familiar with both the content and research method. The findings of the study are presented in Chapter 4.

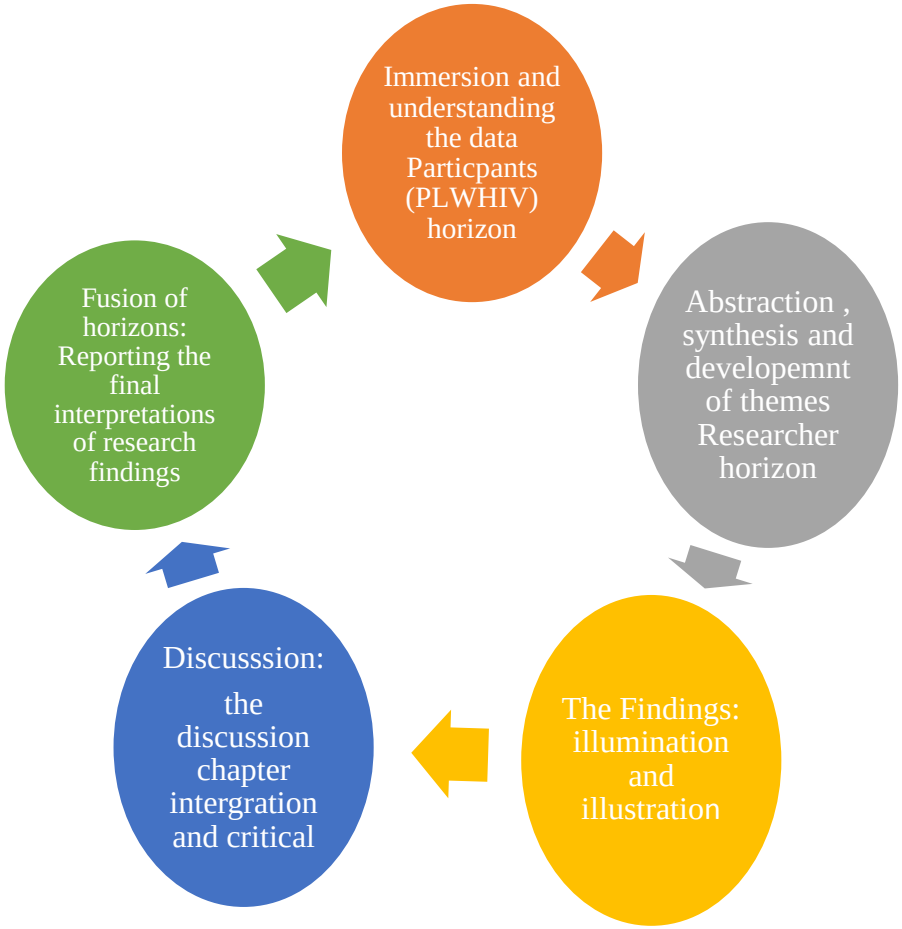

Figure 2 Data analysis and conceptualisation process

Source: Alsaigh, & Coyne (2021).

Figure 2 outlines the data analysis and conceptualization process by Alsaigh and Coyne (2021), which involves data collection, transcription, coding, categorization, and iterative reflection. The diagram guided the researcher in organising and understanding the data, contributing to the generation of new knowledge.

3.13 Trustworthiness

In qualitative research, the matter of trustworthiness is of importance. It is the criteria used to judge if the elements of the inquiry, such as design, methodology and analysis, are sound. (Lincoln & Guba, 1985). The criteria for trustworthiness in phenomenological inquiry were operationalized by Lincoln & Guba (1985) as credibility, transferability, dependability, and confirmability. These elements serve as the standard for establishing rigour in a phenomenological inquiry as well as in the interpretive paradigm. The researcher used the first step in establishing credibility as the

audiotapes and verbatim transcriptions of PLWHIV on access to nutrition education and counselling.

3.13.1 Credibility

According to Lincoln and Guba (1985), credibility can be established through prolonged engagement, reflexivity, triangulation, peer and participant debriefing, and the process of member checking to test the findings and interpretations with the participants. In this research, these activities were followed to establish and demonstrate credibility through the participants' behavioral experiences and their original data.

Guba (1981) claims that triangulation ensures that the research findings are credible. Triangulation encompasses the application of diverse methods, such as observation, focus groups, discussions, and individual interviews, which form the primary data generation strategy for qualitative research. Credibility can be achieved by ensuring that the voices of both the researcher and the participants are clearly evident in the text (Ajjawi & Higgs, 2007). Ajjawi & Higgs (2007) provide an example of how this can be achieved, for example, through the use of the participants' exact words, thus giving them a voice and allowing them to speak for themselves (Noble & Smith, 2015). In line with the above guide, the current study deployed the following data generation approaches: individual interviews and document analysis, conducting interviews until saturation confirmed the findings and similarities between participants of PLWHIV lived experiences; describing categories and themes using direct quotes. Another tool was the member check; follow-ups were made for clarity and feedback from some participants. This was done through phone calls. This allowed multiple perspectives to be given to validate the study.

Researchers such as (Olmos-Vega, 2023; Peddle, 2022; Darawsheh, 2014) recommended reflexivity to strengthen the credibility of the study. Qualitative researchers engage in reflexivity to account for how subjectivity shapes their inquiry. Reflexivity is tied to the researcher's ability to make and communicate nuanced and ethical decisions amid the complex work of generating real-world data that reflect the messiness of participants' experiences and social practice (Olmos-Vega, 2023).

Reflexibility was adopted in the study as the researcher has a masters degree in food science and nutrition and has been involved in nutrition education programmes. It would have been unrealistic

to pretend that the researcher did not know anything about nutrition education and counselling, as she has knowledge, beliefs, and views about them. The researcher was aware that reflexivity is anchored in an orientation that values subjectivity and requires researchers to explore their influence on research, as its meaning is actively constructed through the research process. Nevertheless, subjectivity does not require the elimination of objectivity; therefore, the notion of objectivism still applies (Fritzson, 2018; Hier, 2019). Subjectivity allowed the researcher to be part of the research and feel that they somehow owned it. However, the researcher had to be reflexive in terms of discussion and thinking by engaging in continuous self-appraisal and self-critique and explaining how her own experience has or has not influenced the research process. In this study, reflexivity was applied as seen through the process of data analysis.

3.12.2 Transferability

Transferability in qualitative research refers to the extent to which findings might be relevant to other situations; it occurs when the original context has been 'described adequately so that a judgment of transferability can be made by readers' (Koch, 2006, p. 92). The foundation for qualitative analysis and reporting is the use of "thick descriptions" that contain vivid, concrete descriptions capable of invoking feelings and images that extend our understanding of the meanings and significance of the phenomena (Lincoln & Guba, 1985; Patton, 2015). Lincoln et al. (2011) describe using thick description as a way of achieving a type of external validity; by describing a phenomenon in sufficient detail, one can begin to evaluate the extent to which the conclusions drawn are transferable to other times, settings, situations, and people. A thick description provides the specific information a reader needs to know to understand the findings (Lincoln et al., 2011). To promote transferability, the researcher provided a detailed description of the context and environment of the participants while maintaining confidentiality. Patton (2015) added that the triangulation of qualitative resources allows for the testing of consistency to understand the strength and confidence of the conclusions drawn. In this study, having 25 interviews provided sufficient evidence to reach thematic saturation and ensure transferability.

3.12.3 Dependability

Dependability refers to the stability of data collected over time and under different conditions and relies on credibility (Lincoln et al., 2011). The reliability of a study is evident when the process and data can be audited, and the information is found to be accurate. Lincoln et al. (2011) suggest

an audit trail as a method for showing dependability, which involves maintaining adequate records such that another researcher might arrive at the same or similar conclusions. An audit trail in this study was the researcher's detailed interviews, transcripts, and interpretive notes, which supported the dependability of this research. Additionally, the researcher used consent forms, an information letter to participants, and an interview guide to make explicit the information provided to participants.

3.13.4 Confirmability

Confirmability refers to the degree to which the research findings can be confirmed or validated by others. Thus, confirmability involves ensuring data can be traced to its originator. Its interpretation and conclusions are logical, with the findings being the result of the research rather than the researcher's prior assumptions. Confirmability of a study occurs when credibility, transferability, and dependability are achieved (Nowell et al., 2017). The confirmability of a study arises from the elements of the research study. Such aspects in this study included audiotapes of the interviews, detailed transcripts, notes taken during the interviews detailing participants' postures and nonverbal expressions, and a clear trail of analyzing the data and interpreting the participants' experiences. To demonstrate confirmability, the researcher documented how conclusions and interpretations arose from the data. The researcher presented the findings at 2nd ERAZ International annual conference November, 2023 and 21st ARAHE Biennial International August 2023 and received feedback indicating that the findings were consistent and could be repeated.

3.14. Limitation of the Study

The hermeneutic phenomenology approach and the interpretive phenomenology design was the limitation of the study. The purposive sampling design and small sample size from ART health centre do not allow the generalisation of the study's conclusions.

3.13. Ethical Considerations

The researcher sought approval of the proposal from the University of Zambia Ethics Committee to proceed with the study. This process allowed for clarification and clearance of some of the study's contentious issues, particularly the data collection instruments. Permission to conduct the study was obtained from the University of Zambia's ethics committee. The ethical clearance reference for the study was REF HSSREC 2020-MAR-008 . This was a procedural requirement to get permission from the Ministry of Health in Zambia and permission from a health care institution.

All participants were asked for their informed consent (Ajjawi & Higgs, 2007; Groenewald, 2004) and were informed that their participation was voluntary prior to participating in this research (Groenewald, 2004). The informed consent process included a verbal explanation describing the purpose of the study, potential risks and benefits of participating, procedures for maintaining confidentiality, and the participants' right to refuse to participate. Each participant was allowed to provide verbal consent, and the researcher recorded this. Informed consent and a signed consent form were obtained from the participants before data collection (Bryman, 2016; see Appendix C). Informed consent is described as a voluntary and revocable agreement by an able person to participate in research with their full understanding of the nature and use of the study and its implications (Ajjawi & Higgs, 2007). Groenewald (2004) notes that the use of deception might deprive the researcher of authentic insights, whereas truthfulness and confidentiality may better promote sincere responses while reducing suspicion. All participants were informed of the purpose of the research and made aware of their right to withdraw from the interview at any time (Ajjawi & Higgs, 2007; Groenewald, 2004).

The participants were additionally informed of the measures that would be taken to ensure confidentiality. The researcher seriously considered the following ethical issues; anonymity, confidentiality, and violation of privacy. Anonymity: participants views remained anonymous in all cases. The pseudonyms were assigned to all the participants. Any quotes used in the research used a pseudonym and not the participants names. In addition, the name of the health care institution where the participants were drawn was not mentioned. This was intended to make it difficult to identify any of the participants. It is important to say that some readers might be able to guess where the study was done. However, due to the use of pseudonyms, it is unlikely that any

individual participants could be identified. The researcher identified participants' responses but did not do so publicly except for academic purposes. The researcher ensured that no breach of privacy was done at all cost. The participants were made to understand the potential benefits, and their privacy was respected.

The data collected from the participants was only used for the purpose of this doctoral study. Data was stored on both a secure personal laptop and the university laptop with encrypted and protected passwords. It was only shared with my supervisors, examiners, and the participants of the study. The other materials related to the research were locked up in the cabinet at home. The transcriptions were stored on the flash stick. All the data was destroyed when it was no longer needed for the study within two years, as suggested by Miller et al. (2012).

The diagram (Figure 7) below shows sequential steps taken to gain ethical approval in this study.

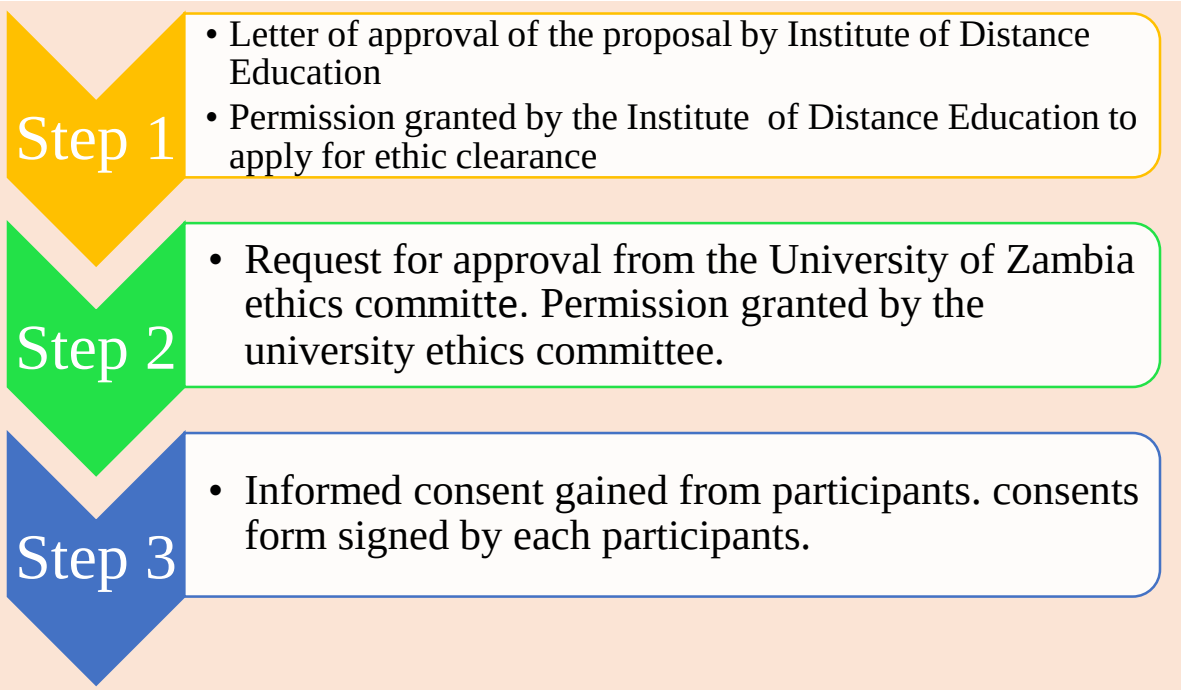

Figure 3 : Sequential steps taken to gain ethical approval

Source: Researchers own illustration

3.14 Summary

This chapter highlighted the methodology that was employed to conduct this research to answer the research questions. Research paradigms are explored and discussed, leading to the development of a theoretical perspective that provides context for the chosen methodology. The researcher has discussed interpretivism as a research paradigm and hermeneutic phenomenology as the chosen research methodology. This chapter has also described the research methods and the selection process of the participants. The study setting, participants, purposive homogeneous sampling, and data analysis have also been discussed. The data collection process was conducted via semi-structured interviews. The study setting, participants, purposive homogeneous sampling, and lastly, ethical considerations were taken into account, and informed participant consent was strictly adhered to. The following chapter, Chapter 4, provides a detailed account of the study's findings, outlines the emerging themes, and gives a summary.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1 Overview

The purpose of this study was to to establish the lived experiences of PLWHIV on how they access nutrition education and counselling as part of their care and support in the Lusaka district. The following research questions guided this study;

1. What are the lived experiences of PLWHIV on how they access nutrition education and counselling?
2. What types of nutrition counselling did PLWHIV receive?
3. What challenges do PLWHIV face when accessing nutrition education and counselling?
4. How can the PLWHIV better access nutrition education and counselling in Lusaka district?

The four research questions above formed the reflection point throughout this chapter and chapter five, as demonstrated by the themes that emerged subsequently. The findings are therefore presented according to the themes that emerged.

4.2 Emerged Themes

After interacting with PLWHIV, the following themes emerged namely: (i) knowledge of nutrition education by partciapnts (ii) Accessibility and acceptability of nutrition education; (iii) Acquired nutrition knowledge and skills; (iv) Benefits of nutrition education; (v) knowledge of nutrition counselling; (vi) Accessibility and acceptability of nutrition counselling; (vii) Types of nutrition counselling participants received; (viii) Frequency of nutrition Counselling; (ix) Challenges in accessing nutrition education and counselling, and (x) Recommendations. What follows below is a detailed presentation of findings based on the ten (10) themes as guided by the above research questions. These themes and sub- themes are also represented in Table 5.

Table 5 Main Themes and Sub-themes

Main themes	Sub- themes
Knowledge of nutrition education;	A process of teaching about food and nutrition; A process of learning and acquiring knowledge about food and nutrition; Learning of diet; Lesson of knowing how to eat food that is healthy
Accessibility and acceptability of nutrition education;	Positive accessibility Negative accessibility.
Acquired nutrition knowledge and skills	
Benefits of nutrition education;	Following a balanced diet Being able to manage weight Change in eating habits and adopting health lifestyles; Become healthy
Knowledge of nutrition counselling	A process of being advised about food; Getting help from nutritionist; Same as nutrition education.
Accessibility and acceptability of nutrition counselling	Easily accessible Positive experience Negative experience
Types of nutrition counselling participants received	Individual nutrition counselling, Group nutrition counselling
Frequency of nutrition education and counselling	
Challenges in accessing nutrition education and counselling	Challenges related to transportation Inadequate time to attend to the patients Inadequate health personnel
Recommendations	More regular counselling sessions Provision of food

4.3 Knowledge of Nutrition Education

The study findings revealed that participants had a good understanding of what nutrition education is. The participants had a varied range of what they considered nutrition education. There were varying interpretations of what nutrition education is. A total of four sub-themes emerged from

the participants' own narratives regarding what nutrition education is: (1) a process of teaching about food and nutrition; (2) a process of learning and acquiring knowledge about food and nutrition; (3) learning about diet; and (4) a lesson of knowing how to eat healthy food.

4.3.1 A Process of Teaching about Food and Nutrition

When asked 'What do you understand by the term nutrition education?, several participants expressed that it is a process of teaching about food and nutrition. To them, nutrition education is the process by which nutritionists teach them about food and nutrition, including the different types of food and what it does to their bodies. The following were their comments regarding their understanding of what nutrition education is "*A process of teaching about food and nutrition*…" (Participant 11). *"Education is teaching us about nutrition* " (Participant 3). *"Talking about food and how they work on our bodies*…" (Participant 17). "*Teaching about different types of food*…" (Participant 1*). "Teaching about food values*" (Participant 20). "*Teaching me on types of food and what it does to my body* "(Participant 21*). "Teaching of foods, diet and how to eat* …" (Participant 22) "*Telling us about food and diet*"(Participant 9).

4.3.2 A Process of Learning and Acquiring Knowledge about Food and Nutrition

Other participants understood nutrition education to be a process of learning and acquiring knowledge about food and nutrition. Participants felt that nutrition education is the way of learning about food and nutrition. A 43-year-old married female who had been on ART for over 11 years explained that:

> *Nutrition education is when you learn about the food you are supposed to eat as a patient who has HIV. The nurses at the hospital tell you what you can eat and not to eat. It is about a balanced diet that we are taught at the centre.* (Participant 24)

The following were views from some of the participants who held similar views on what nutrition education is "… *learning about food and diets*" (Participant 4). "*It is a process of acquiring knowledge about nutrition*". (Participant 2. "*It is a process of learning about food and nutrition*". (Participant 23). "*Learning of diet and understanding its benefits*". (Participant 6). "*Learn about the foods to eat and what they do in our bodies*". (Participant 2). "*Nutrition education is learning about food that you are supposed to eat when you are HIV positive*". (Participant 5)

4.3.3 Lesson of Knowing how to Eat Healthy Food

The other theme that emerged was that nutrition education is a lesson of knowing how to eat food that is healthy. Participants indicated that nutrtion education is about learning the different types of food and eating healthy to promote good health. Participants expressed that nutrition education is about learning to eat healthy. The following were their comments*; "It is a lesson of learning how to eat food that is health at a particular time and according to the health condition of the person…"* (Participant 10). "*It is about eating habits*…" (Participant 14). "*It is the process of eating health foods…"* (Participant 15). "*It is the process of learning how to eat* (Participant 25*). "Learning how to eat good food"* (Participant 6)

It is clear from the study findings above that PLWHIV understand and know what nutrition education is. Though they have varying understanding in terms of what nutrition education is, their views clearly reflect that they know what nutrition education is all about. This is encouraging because improved understanding of what nutrition education may somehow positively influence them (PLWHIV) to access it.

4.4 Accessibility and Acceptability of Nutrition Education

This theme represents the experience of PLWHIV in accessing nutrition education. It was found out that the majority participants had access to nutrition education at the health facility. Participants explained that when they visit a health facility, health personnel (nutritionists) teach them before meeting the doctor. One adult married male participant commented that, "*Yes, I have access to nutrition education because when I come to the centre the staff teach us before the doctor comes*". (Participant 25).

> *When I started talking the medicine, they use to counsel me on the effects of the medication, if I had diarrhea or was vomiting and they would screen me by getting my blood sample so that they know how the medicine is working. They would advise us to eat a balanced diet, drink clean water and if you are sick you come to the centre so that they help you. They also would tell me the types of food to eat. But now it is not like that, I only talk to the nutritionist when I take my measurements of my weight for them to record and would advise if I need to lose some weight or exercise*. (Participant 9)

Emerging from the PLWHIV lived experiences were two sub-themes emerged namely: positive accessibility and negative accessibility. Participants expressed that accessibility to nutrition education was both good and bad.

4.4.1 Positive Accessibility

The findings revealed that most of the participants have had a positive experience with accessing nutrition education at a health facility centre. Participants revealed that nutrition education is always available and easily accessed at the health facility. They said that every time they vist the health centre they are taught on how they can stay healthy and live a quality life. The following were their narrations on their experiences with accessing nutrition education at the health facility:

> *I would say it has been good, good because the nutritionist come to talk to us every visit, but they say the same things every time I go there. And I only go to the centre after every six months because my CD4 and viral load is good. The nutritionist asks for our weight and then she advises if you are overweight, they will tell you to exercises and if you are underweight, they will give you supplements of soya porridge. She records on the card the information*. (Participant 25)
>
> *Occasionally, when I come early for my routine check-up. There is a talk by the nutritionist in morning before the doctors come to review us. They tell us what to eat, why we should eat certain foods and benefits of eating a balanced diet.* (Participant 8)

"*Nutrition education is usually easily accessible; a nutritionist is always present on revie*w *dates. I always get talks from the nutritionists whenever I come for my review*". (Participant 3). "*It is easy to access, we get it on individual basis every time you come to the centre*" (Participant 12). "*It is available and easily accessible, accessing it has been easy... They teach well about nutrition"* (participant 24).

Several other participants also had similar experiences with accessing nutrition education in the health facilities. Participants explained that accessing nutrition education has been easy and that health professionals (nutritionist) have been very helpful to all the patients. The following were their views with regards to accessing nutrition education: participants 4 explained that, "*It is very accessible, sometimes we are just being reminded to see the nutritionist*…" (Participant 4). "*It's always available and accessible*" (Participant 7). "*It's easy because they are very helpful to each person, they talk to*". (Participant 15). *"It's easy to access very informative*". (Participant 11). "*It's very much accessible and they teach well about nutrition*". (participant 21).

It is evident from the participants views that they have had a positive experience with regards to accessing nutrition education. Participants explained that accessing nutrition education has been easy and good as it is free and nutritionist are always available. According to them, it is good because people are told about types of food. It was discovered that PLWHIV accessed nutrition education through health workers and sometimes through fliers.

4.4.2 Negative Experience

On the contrary, some participants had some negative experiences with accessing nutrition education. Participants expressed that their experience with accessing nutrition education was not pleasant at all. They complained that in some cases it is not easy to access nutrition education because of a lack of time, as there is usually only one nutritionist to attend to all the patients on a particular day. The following were their expressions. "*It is not easy to access nutrition education at the health facility because of lack of time, as there is usually only one nutritionist for a large number of patients*" (Participant 1). *And another particapat stated that, " It has been bad because when you come late after 8 hours, you will find that the talk is finished, so you miss the information"* (Participant 19). Paticpant 17 complained vehemently that,

> *My experience with accessing nutrition education, is that it is very bad because there are so many of us and there is only one person who talks to us, and sometimes the space is too small for all of us to sit, so we sit far apart from each other, like in the section where they put some benches*. (Participant 17)

It is clear that, though a large proportion expressed a good and positive experience in relation to accessing nutrition education, not all the participants have had a positive experience with accessing nutrition education at the health facility. Others complained that it is not easy because there was usually less manpower, as in most cases there was only one nutritionist to carter to a relatively large number of clients.

4.5 Acquired Nutrition Knowledge and Skills

It was established that PLWHIV acquired various knowledge and skills through nutrition education. The nutrition education knowledge and skills mostly acquired included eating health foods, eating fruits and vegetables, exercising regularly, eating a balanced diet, and drinking plenty of clean and safe water. Other reported nutrition education knowledge and skills acquired included

good food hygiene and sanitation, avoiding alcohol and smoking, reducing high fat foods, and eating regularly. One participant during the interview narrated that:

> *From the lessons I have attended, I have learnt a lot about a balanced diet and the importance of eating a balanced diet when you are HIV positive. I have learnt about the foods to eat, such as fish, kapenta, beans, and vegetables and fruits, and to buy foods that are available and cheap. Because the food is very expensive, some foods I cannot afford. I learnt to boil my drinking water and ensure that when I am preparing food, the place and pots are clean so that I don't get sick. I now know the foods that I should not eat, such as fried foods, junk foods, alcohol, and smoking. I have also started exercising because I was overweight*. (Participant 21)

Participants shared insights from their experiences with nutrition education, illustrating the impact of this knowledge on their dietary habits and overall well-being. These insights included a shift towards a more balanced diet, incorporating locally available and affordable foods. An example is Participant 6 who explained that "*I have knowledge and skills of the different groups of food that we are supposed to eat and that are locally and readily available, and those we are not supposed to eat that can destroy our bodies*".

Another participant added;

> *I have learnt that a good diet is not only meat, because I used to eat a lot of meat, but now I know that vegetables and fruits are good for my health. I have also learnt that exercise is very good. I never used to exercise, but now I walk a lot. I know that food should be prepared in such a way that it does not have a lot of fat or cooking oil because too much fat is bad for me.* (Participant 10)

The qualitative findings underscore the significance of nutrition education in empowering PLWHIV to make informed choices regarding their diets and lifestyles. Participants demonstrated a greater awareness of dietary diversity, exercise, and food preparation techniques conducive to their health. These outcomes emphasize the effectiveness of nutrition education in enhancing the nutritional status and overall health of PLWHIV.

4.6 Benefits of Nutrition Education

The study established ways in which the acquired nutrition education knowledge and skills benefited PLWHIV. It was found out that nutrition education knowledge and skills benefited participants in several ways. From the participants, among the benefits were improvements in health and nutritional status; some participants said their CD4 count improved tremendously; they were able to eat healthy foods; and they generally experienced a measurable change in their lifestyle habits. Most participants reported improved knowledge about food and nutrition as a benefit of the nutritional counselling. Four themes emerged describing the benefits PLWHIV gained from nutrition education knowledge and skills. These included, (1) following a balanced diet; (2) being able to manage weight; (3) changing eating habits and adopting healthy lifestyles; and (4) becoming healthy.

4.6.1 Following a Balanced Diet

Participants articulated that as a result of the nutrition education knowledge and skills acquired, they are now able to follow a balanced diet as it has helped them choose the right types of food to eat. The following were the expressions of the participants: "*It has helped me to know the right food to eat or take*". (Participant 10). "*I have benefited a lot in that now I know what types of foods to eat and how they function in our body*". (Participant 18). Participant 11, who has been on ART for six years, explained that;

> *I have benefited because I now understand the importance of food in my condition. I eat a balanced diet, prepare my own food and exercise every week; this has helped me to maintain a good weight and reduce my high blood pressure.* (Participant 11).

In agreeing with the views of the above participants, other participants commented that nutrition education knowledge and skills have benefited them a lot in that they are now able to adhere to a healthy diet. The following were their comments; "*I am able to eat a balanced diet. I am able to eat more fruits and vegetables*" (Participant 11). "*I did not know what type of foods to eat but now have an idea of eating a balanced diet*" Participant 13). "*It has helped me to know the right food to eat or take* (Participant 23). "*Nutrition education knowledge has helped me in terms of balancing my diet because now I know what types of foods to eat and how they function in our bodie*s" (Participant 20).

It is evident from the participants narratives that the acquired nutrition education knowledge and skills have helped them to follow a balanced diet and to choose the right types of food. They understand that following a balanced diet by eating different types of food enables them to stay healthy.

4.6.2 Being able to Manage Weight

The findings also revealed that as a result of nutrition education knowledge and skills acquired, participants were able to control and manage their weight. Participants explained that they were able gain and/or reduce on their weight. This was evident from the following expressions by the participants; "I have managed to reduce on overweight"(Participant 5). "*I have managed to control my weight therefore, maintaining good health*" (Participant 9). "*I know how to control my weight by being careful on what type of food to eat. But I also know that I need to eat a blanced diet as I control my weight* "(Participant 24).

> *It helped me by reducing a bit of weight because they tell us that we need to have a good BMI for us to be being sick. This will help us not to have disease such heart problems, high BP and diabete diseases*. (Participant 19)

It is evident from the study findings that nutrition education knowledge and skills has enabled PLWHIV to be able to control and manage their weight and stay healthy.

4.6.3 Changing Eating Habits and Adopting Health Lifestyles

Participants also acknowledged that the knowledge and skills acquired in nutrition education have helped them change their eating habits and adopt healthy lifestyles, such as regular exercise. This was noted by participant 4 when he said that "*I have managed to change in my eating habits from eating junk food, especially meats, to eating a lot of fruits and vegetables*" (Participant 4), and participant 8 shared that "*I now know how important it is to regularly exercis*e; *I make sure I exercise three times a week by walking because I have knee problems.*" (Participant 8)

Other participants shared that, "*I eat the foods that I have been told are healthy for me and prepare them myself, because I have stopped taking a lot of fat and meat." I eat vegetables with groundnuts and kapenta too much*". (Participant 7). "*I have improved in the way I eat healthy food and do some exercises*". (Participant 23)

4.6.4 Becoming Healthy

The findings also revealed that nutrition education knowledge and skills have helped them stay healthy as they are now able to follow a balanced diet. This was made apparent by the participants' comments, which were as follows; "*A balanced diet helps us be healthy; we don't get sick regularly*"(Participant 14). "*Because I was able to follow what we learned at the nutrition desk, I am no longer getting sick easily*" (Participant 15). "*I am healthy now because I eat a healthy and balanced diet*" (Participant 22). "*I have benefited a lot by improving my body. I am now healthy and feel well*" (participant 21). "*In many ways, by being healthy and keeping up good healthy always …*"(participant 11). "*No getting sick easily, I have enough energy after being taught about nutrition.* (Participant 9). "*No more body pains because I learned to eat a balanced diet*. (Participant 1). Particpant 25 similary, explained that "*I am able to choose the good food that can help me not get sick. And I eat my food for breakfast, lunch, and supper... The education has helped me buy only foods that will help me get healthy*"(Participant, 25).

Participant 6 also revealed that,

> *It has helped me, because when I started my medication, I was just eating anyhow, so my viral load was going up and my CD4 count was going down. So now, after learning about nutrition education , at least I am able to follow and eat dry fish, kapenta, and those foods that ...build my immune system, like porridge with ground nut*s. (participant 6).

It is clear from the study findings that nutrition education has really benefited PLWHIV. It has benefited them by keeping them healthy. Due to the nutrition education knowledge and skills acquired, PLWHIV are now able to follow a balanced diet and choose the right types of food. They are now also able to manage their weight and have managed to change their eating habits and adopt healthy lifestyles. Consequently, this has led to an improvement in quality of life.

4.7 Knowledge of Nutrition Counselling

A clear understanding of nutrition counselling is crucial since it could affect how PLWHIV access and accept this service. Participants in the study generally showed a good understanding of what nutrition counselling entails. Nevertheless, several people were unable to tell the difference between nutrition counselling and nutrition education. Although participants did it in different

ways, the majority of participants understood what nutrition counselling was. The results showed that the participants' interpretations of nutrition counsellimg varied significantly.

Six themes emerged through interaction with participants: (1) Process of educating people on food; (2) Learning about different types of food; (3) A process of providing information on food; (4) A process of being advised about food; (5) Getting help from nutritionist; and (6) Same as nutrition education.

4.7.1 Process of Educating People on Diet

Under this theme, participants understand nutrition counselling to be a process whereby a trained nutritionist educates people on how they can work on their diet. The following were their comments. "*I understand that it's a process by which a trained nutritionist helps patients make changes to their diet...* " (Participant 13). Particapnt 18 stated that, "*nutrition counselling is about trained personnel in nutrition helping patients make health choices...*". In the same vein, Participant 7) expressed*, is where a nutritionist teaches patients to make changes to their diet.* (Participant 7). "*It's the process where they educate people on how they can work on their diet*" (Participant 21).

4.7.2 Learning about Different Types of Food

Other research participants were of the opinion that nutrition counselling involves learning about different types of food and what they do to their bodies. They explained that nutrition counselling is a process of learning how, when, and what to eat. Participant 11 proudly stated that "*it is the process of understanding your nutrition diet" (Participant* 11). Participant 19 added that "*it's the process of learning how, when, and what to eat*" (participant 19). In agreement, participant 21 said nutrition counselling is "*learning about different types of f*ood" (Participant 21).

4.7.3 Process of Providing Information on Food

It was revealed from the study findings that participants understood nutrition counselling to be a process where nutritionists provide information on food to patients. Participants mentioned that nutrition counselling is all about providing information on the different types of food that PLWHIV should eat. The following were their comments on what nutrition counselling is. Participant 2 stated that "*Nutrition counselling is learning about the foods that we are supposed to eat with a counsellor*". (Participant 2). *It's the process of listening to what the nutritionists has to*

change to my diet. (Participant 8). Others mention that "*nutrition counselling It is all about providing information about food...* (participant 12). "*Sharing knowledge on types of food and exchanging ideas*" (Participant 15).

4.7.4 A Process of Being Advised about Food

Participants also viewed nutrition counselling as the process of being advised about food, as well as the types of food. They explained that nutrition counselling is where a nutritionist advises patients on the different types of food and their benefits to their bodies. The following were their views. "*It's a situation of being advised to eat healthy diets by trained personnel in nutrition…"* (Participant 17). "*It is Advise on diet by a nutritionist what type of diet means for good health*"...(Participant 21). "*It is a process of being advised by the nutritionist and reaping the benefits"*. (Participant 23). "*It's a process whereby you are advised and benefit from it*" (Participant 7).

4.7.5 Getting Help from Nutritionist

The findings also revealed that participants understood nutrition counselling as the act of getting help from nutritionists. The following were their comments regarding what nutrition counselling is: "*It is about trained personnel in nutrition helping patients make health choices*." (Participant 1) "*I think this is when you talk to the nutritionist so that they know your proble*ms" (Participant 12). "*It's a process by which a nutritionist helps you make healthy food choices...* (Participant 4). "*It's a process of getting help from a trained nutritio*nist "(participant 6). "*It's the process by which the nutritionist has helped me or us gain weight because I was underweight*." (Participant 14).

4.7.6 Same as Nutrition Education

Some participants were of the view that nutrition counselling is the same as nutrition education. These participants did not see any difference between nutrition education and nutrition counselling. To them, the two were just the same. The following were their comments: "*I think nutrition counselling is just the same as nutrition education*" (Participant 2). "*It is almost the same as education"* (Participant 9). "*Almost the same as education* (Participant 8). Participant 25 elaborated more by providing this statement.

I think it is the same as nutrition education, where you are told what to eat. I have seen the nutritionist talking to us when we go to give her our weight. It is also about balanced diets and eating healthy foods. (Participant, 25).

From the study findings, it seems that PLWHIV have a good understanding of what nutrition education is. They clearly know and understand what nutrition counselling is, although some think that it is the same as nutrition counselling which it is not. Generally, it was established that all the participants had access to nutrition counselling.

4.8 Accessibility and Acceptability of Nutrition Counselling

Determining the acceptability of nutrition counselling involves evaluating how well it was accepted by the participants. It also involves evaluating how well it may have met their need for nutritional support and care. The majority of participants felt that the nutrition counselling they received was acceptable, accessible, and beneficial in terms of providing information about nutritional support.

It was also established that through accessing nutritional counselling participants saw a positive change or improvement in their diet. They did acknowledge that nutrition counselling is very informative and beneficial. Three sub-themes emerged from the data based on participants' experiences with accessing nutrition counselling. These are: (1) easily accessible, (2) good for improving diet, (3) very informative and beneficial.

4.8.1 Easily Accessible

When describing their experiences with accessing nutrition counselling, most participants shared that it was easy to access nutrition counselling because there is always a nutritionist each time they go for reviews. One respondent stressed that, "Yes, *it is easy because they teach us there, and I think they help us so that we know what to eat. And there is a nutritionist every time I go there who talks to us at her des*k. (Participant, 25). Participants 23 also added that "*nutrition counselling is accessible easily because there is always a nutritionist in the clinic who measures our weight and records it on the card…if you are found to be underweight or overweight, you are helpe*d" (Participant 23). Relatedly, Partciapnats 16 narrated that, "*Yes, I have because every time I go for my checkup, I will pass through the nutritionist's weight recording. (Participant* 16).

Similar views were shared by other participants; the following were their views: "*It's easily accessible and always available*" (Participant 17). "*It is easily accessible. I am able to get information about healthy diets"* (Participant 24). "*It is easy to access nutrition counselling, and it is very informative. Every time you are given the opportunity to ask questions, the nutritionist gives us guidelines"* (Participant 3). "*It is easy to access nutrition counselling because every time we go to the centre, we are attended to, and..."* (Participant 13).

4.8.2 Positive Experience

Participants were asked to describe their experiences with accessing nutrition counselling. The responses largely showed that participants had positive experiences. Participants felt that accessing nutritional counselling had enabled them to improve their diet. When asked about their experiences in relation to accessing nutrition counselling, participants commented that: "*Now I know what types of food to eat and why exercising is very important because we used to say that when you are fat, things are okay*" (Participant 1). Others respondents shared their experiences by narrating that:

> *Ok, I would say that for me, when I go to the desk to give my weight, the nutritionist will tell me my BMI and tell me if I need to lose or gain weight. But I have not been underweight since I started the medication. So they tell me to exercise and eat a balanced diet. But for people who are underweight, they give them soya porridge. The other time, I was told to reduce my weight by 5kg so that my health and nutrition status would improve*. (Participant 25).

> *I have always accessed nutrition counselling each time I come for my review, and this has helped me know what to eat and not. I know the foods I am suppose to eat which are found on the market and are cheap for me to buy* (Participant 3)

> *I can say that nutritional counselling has helped me improve my knowledge of food types and how to balance my diet. I now know what types of food to eat and in what quantities. The interaction with the people at this centre is good and helpfu*l.(Participant 16)

> *Yes, I think so. When I just started, I used to have talks with the nutritionist every time I came here. But now I only have a talk with the nutritionist when she is recording my weight.*

She would ask me about the foods I was eating and how I was taking care of myself with regards to food. That's my experience. So, she will counsel me on what I should eat and tell me the benefits of the foods. (Participant 20).

4.8.3 Negative Experience

Regarding their lived experiences with nutrition counselling, some individuals had different views. Their encounters were in some way negative. They explained that though nutrition counselling is easily available and accessible, it is mostly done in a hurry. There is usually one nutritionist at the desk. The participants noted with concern that the huge numbers of people coming to the center create an overwhelming environment for the nutritionist. One participant asserted that:

It's accessible, but sometimes it's done in a hurry because sometimes there are many patients and there is only one nutritionist to attend to all of us. You find that nurses become overwhelmed and only focus on people that are sick, while those that look better are hardly attended to (Participant 8).

The above assertion by participant 8 was echoed by other respondents, including participants 2, 5, and 10, who all acknowledged that the sessions were hastily done.

It is easy to access, but it is done in haste because of so many patients. I remember at my last visit, they just took my weight and told me to go and see the doctor. From the doctor's office, I went straight to the pharmacy and went back home (Participant 2).

It is easy to access, but it is done in a hurry because there are so many patients. We come at 7 hours and they start teaching as a group. When the doctors come, everyone wants to be the first to be attended to, so they go early. So the health workers are busy. (Participant 5).

There are a lot of people waiting to be attended to by one health worker. And most of us go to work, and we don't want to spend the whole day at the hospital. So I don't want to waste much time here. It has been a long time since I talked to the nutritionist. (Participant 10).

Participants' experiences with nutrition counseling can be summarized as having both positive and negative aspects. The findings discussed above, however, made it evident that the pleasant encounters outweighed the negative ones.

4.9 Types of Nutrition Counselling Participants Received

Nutrition counselling should be a face-to-face interaction between the patient and the health worker. The findings in this study showed that during their visits to health facilities for nutrition counselling, participants narrated that they received various types of nutrition counselling. They stated that they had group counselling and individual counselling.

4.9.1 Group Nutrition Counselling

Participants described that there was only one nutritionist who talked to them about food and nutrition. This was the first activity that they usually had at the center when they just arrived. One male participant explained that:

> *In the morning, when we come, there is only one person who speaks to all of us. They tell us that if we have diarrhea or are vomiting, we should eat a certain type of food. And during the talk, they tell us to go for screening for cervical cancer and tuberculosis.* (Participant 25)

Another responded further and stated that "*They give us a group talk in the morning and they tell us about a balanced diet and the foods to eat. And then we go to have our weight recorde*d". (Participant 19).

4.9.2 Individual Counselling

Individual counseling was given to participants based on the nutrition assessment done on the BMI of the PLWHIV. The participant stated that this type of counselling was given when weight and screening were done. For example, participant 1 *explained that when I was measured using my weight, which was 48 kg, the nurse said I was underweight, and I was told to go in the office of the nurse, where the nurse talked to me about the foods to eat" (*participants 1). Other participants also said that there was individual counseling based on the nutrition status of the person or if the person was underweight or had health problems like vomiting and diarrhea as indicated below;

When you get your weight, they record the weight, and that's where you talk to the nutritionist. The nutritionist will ask some questions, like how many people are at home and what food you eat, and then tell you what you can eat to improve your health. When the nutritionist sees that you are not improving, they will tell you what foods you should be eating(Participant 7).

I was here 3 months ago, and when I came, the nurse told me I was underweight, She told me I needed to gain some weight to avoid getting sick. From the desk, she took me to the office and explained to me the foods that I was supposed to eat and how to cook them, for example, "fisashi" vegetables with groundnuts. She also gave me soy porridge to make at home (Partcipants 20).

*When my weight was taken, I was told I was overweight and that my blood pressure was very high. The nutritionist advised me to lose some weight through exercise and gave me guidance on the foods to eat that would help me with my high B*P. (Participant 11).

My weight has been low since the last time I came, so every time I come, the nurse will talk to me and encourage me to eat well, but the problem is that I usually have diarrhea; maybe it is because of the drugs (Participant 4).

As noted from the lived experience narratives of participants, it is clear that the respondents are counseled through face-to-face interaction as well as group counselling.

4.10 Frequency of Nutrition Counselling

For the purpose of this study, the frequency and duration of nutrition counselling relate to the frequency of nutrition counselling over the course of participants' enrollment in the nutrition programme. Listening to the lived experiences of PLWHIV on how often they access nutrition counselling, it was established that nutrition counselling ranged from no counselling at all to more than one counselling. Generally, PLWHIV receive nutrition counselling twice over the course of their enrollment in the nutrition programme. However, in some cases, it happens one or two times a year. This experience was shared across participants of varying characteristics. The majority of study participants noted that the nutrition counselling was provided as a one-off session, commonly at the beginning when they first enrolled in the nutrition programme.

I would say that in a year, once and again, it depends on the time I came to the centre, if I came later, I would miss it, and I would only talk with the nutritionist when they went to record my weight. Now that they give us medicine for six months... I only come here two times a year. But others who have low CD4 come maybe after 2 or 3 months, just like that. (Participant 25).

When I just started the medication, they used to counsel me, but now no... maybe it is because I come late and I find the teaching finished. Otherwise, I have not come across any counselling of teaching sessions for over 3 years now. They only give us health talks about what to eat. (Participant 18).

A small number of participants reported receiving no nutrition counselling at all and said that they had only received nutrition education. Participant 19 and 7 provided further insights,"*I have never done a one-on-one talk with the nutrition counsellor, I have only had the education as a group, and they taught us what to eat*" (Participant 19). "*I have never experienced a one-on-one talk with a nutritionist, only the general teaching , so I do not have any experience with nutrition counselling* (Partcipant 7).

4.11 Challenges in Accessing Nutrition Education and Counselling

The findings showed that, though nutrition education and counselling were very accessible, accessing these services did not come without challenges or barriers. Emerging from the PLWHIV lived experiences were some barriers that accounted for hindrances to both nutritional education and counselling. Despite the reported accessibility and acceptability of nutrition education and counselling by most participants, most participants acknowledged that there were challenges in accessing nutrition education and counselling. From the participants' narratives, three (3) themes emerged and were used to present the barriers to accessing nutritional education and counselling. Participants described several challenges related to accessing these services. These challenges were grouped into three categories: (1) challenges related to transportation, (2) inadequate time to attend to the patients, and (3) inadequate health personnel.

Others were lack of awareness of the presence of nutritional table or desk at the health centre, and lack of nutritional tables or desk in the health centre.

4.11.1 Challenges Related to Transportation

This is one challenge that emerged from the participants' responses. Some participants complained that transportation from home to the health facility was a challenge. The following were some of the complaints from the participants' own point of view:"*I can say that really the challenge is the lack of transport to come to the hospital and have a chat with a medical worker*" (Participant 3). "*Making a move from the community to health care is really a challenge, as sometimes I have to walk a long distance to the facility*."(Participant 11).

4.11.2 Inadequate Time to Attend to too many Patients

What emerged from the study findings was that the time needed to attend to all the patients was inadequate because of the large number of people seeking the services compared to the few health personnel. This forces people to wake up at unusual times just to be on the front lines when accessing nutrition education and counselling. In some cases, they forget to access nutrition counselling just to rush to see the doctor.

> *The challenge is that there are many of us, like me. I came on Tuesday; if I came at 07:00 hours, I would be number 70, so we usually come very early so that you do not spend the whole day here*. (Participant 25).

> *They give us the same talk, but we have different problems, so they should find a way of helping us individually. And the other thing is that there are some people attending the services there, so they fail to provide adequate counselling because of time. Everyone seems to be rushing.* (Participant 18).

> *It is easy to access nutrition counseling; however, there is less time taken to be talked to... the nurses have to attend to so many people that come for check up and to the pharmacy, and because of this we leave this place sometimes at 14 hours*. (participant 14).

> *It was a long time since I was counselled by the nutritionist, every time I come, they asked me to take my weight and when I go at the desk of the nutritionist they say I was okay. They pay much attention to those who are very sick and underweight.* (Participant 3)

In addition, participant 7 and participant 15 shared similar views that stating that "*We don't always pass through the nutritional table because we rush to see the doctor...* (participant 7). "*Sometimes we don't spend quality time with the nutritionist because we are rushing to see the doctor*". (Participant 15)

It is evident from the narratives above that both health personnel and patients lack quality time due to the overwhelming number of patients seeking nutrition education and counselling services.

4.11.3 Inadequate Health Personnel

Another challenge that emerged from the participants' own expression was inadequate health personnel to care for a large number of patients seeking nutrition education and counselling services. Participants complained that, in some cases, information is unavailable and they just go without accessing the services.

> *Another thing is that there are few staff to attend to us quickly, so we spent more time here. These numbers also make the nurses spend more time with those who are unwell or sick than us. Most of the time, I just see the doctor to get my medication and go home*. (Participant, 25).

> *It's easy to access, but sometimes we don't pass through the nutrition table because we patients are told to rush and see the doctor if there are few doctors in the clinic. Sometimes the information is not available due to a lack of health personnel"* (Participant 22).

The study has established that, though nutritional education and counselling are available and easily accessible, patients do face a number of challenges when accessing these services at health facilities. Other challenges that came out included a lack of nutritional tables or desks in some health centers and a lack of awareness of the presence of nutritional tables or desks at the health centre. Participants stated that not all health centres have this provision**.**

4.12 Recommendations

Based on the experiences of PLWHIV a number of suggestions were put forward:

4.12.1 Suggestions on Access to Nutrition Education

Participants provided several suggestions on how PLWHIV can access nutrition education in health facilities. The following were some of their suggestions; "*There is a need to have more regular nutrition education and counselling sessions for PLWHIV, and the provision of food is also necessary*" (Participant 24). "*There is also a need for more nutritionists at the nutritionist table for patients to have quality time and get the much-needed information they need*" (Participant 20). Another participant stated that,

> *Maybe they should put us in small groups where we can talk to each other and share experiences. It encourages us, and we can learn from one another so that we can help each other. I find it difficult even to talk to the person next to me on the line. I think they should help us interact with each other*. (Participant 25).

4.11.2 Suggestions on Access to Nutrition Counselling

Participants suggested more time between the patients and the nutritionist in order for them to get much-needed counselling.

> *I think the nutritionist should also help us because, like many people, they are too fast and don't spend time talking to you. Once they get your weight and record it, they tell you if you are overweight or underweight*. (Participant 25)

In addition, participants indicated that they should also provide some food items because some of the participants were food insecure. An example is from participant 3, who vehemently said that *they should give all of us the soya porridge, because not all the people that come here have enough food at home, You know, food is very expensive, especially meal mealie. ...*You may have a good CD4 count but have problems finding food at home, so they should give all of us the food...It will help us.

4.12 Summary

The current study was designed to establish the lived experiences of PLWHIV on how they access nutrition education and counselling as part of the care and support of the HIV and AIDS pandemic. According to the findings, participants described their experience with nutrition education and counselling as acceptable, accessible, and beneficial because they acquired skills and knowledge

that helped them improve their diet and maintain a healthy lifestyle. The study established that the participants had group and individual counseling. However, the participants highlighted challenges in accessing nutrition education and counselling, such as inadequate time for patients and healthcare personnel and a lack of transport to the centre. In the findings in this chapter, the following themes emerged: (i) knowledge of nutrition education by partciapnts (ii) Accessibility and acceptability of nutrition education; (iii) Acquired nutrition knowledge and skills; (iv) Benefits of nutrition education; (v) knowledge of nutrition counselling; (vi) Accessibility and ccceptability of nutrition Counselling; (vii) Types of nutrition counselling participants received; (viii) Frequency of nutrition Counselling; (ix) Challenges in accessing nutrition education and counselling, and (x) Recommendations.

CHAPTER FIVE

DISCUSSION

5.1 Overview

The study aimed to establish the lived experiences of PLWHIV on how they access nutrition education and counselling as part of their care and support in Lusaka district of Zambia. The previous chapter presented phenomenological themes that emerged from uncovering the meaning of the participants' experiences. In this chapter the discussion of major findings is developed in relation to the Information Motivation Behaviour (IMB) model, literature and the research questions. The chapter is structured and broken into four research questions. Each sub section is expanded into emergent themes that address the research questions. The chapter contains discussion to help answer the research questions:

1. What are the lived experiences of PLWHIV on how they access nutrition education and counselling?
2. What types of nutrition counselling did PLWHIV receive?
3. What challenges do PLWHIV face when accessing nutrition education and counselling?
4. How can PLWHIV better access nutrition education and counselling from the health care centres?

5.2 Knowledge of Nutrition Education

The study found that participants had a good understanding of nutrition education, with four sub-themes emerging: (1) teaching about food and nutrition; (2) learning and acquiring knowledge about food and nutrition; (3) learning about diet; and (4) knowing how to eat healthy food. According to the study by Ewune et al. (2021), nutrition knowledge was found to be essential for PLWHIV and relevant to immunity and improving ones living conditions. Knowledge of nutrition has also been found to improve the quality of life and general wellbeing of PLWHIV (UNIDS, 2014). Several participants understood nutrition education as a process of teaching about food and nutrition, including different types of food and their effects on the body. Others believed it was a process of learning and acquiring knowledge about food and nutrition, such as learning about a

balanced diet taught by hospital nurses. Still, other participants expressed that nutrition education is about learning how to eat healthy food at a particular time and according to the person's health condition, eating habits, and the process of eating healthy foods. This was important as it provided an insight into their lived experiences with access to NEC.

The study findings thus suggest that PLWHIV demonstrated understanding of nutrition education as they shared their experience, which could positively influence their access to it. The findings of this study corroborate well with the findings of Anand & Puri (2019), who noted that PLWHIV possessed knowledge concerning nutrition; however, the study noted that most of them did not score very high when it comes to the practice section. The study noted that while individuals had proper knowledge about nutrition education, they did apply it in their daily practices. Some studies are not conclusive that the understanding of knowledge about nutrition can translate into behaviour change (Sackey et al., 2018; Tushemeriwe, 2011). This study has established that nutrition education knowledge translates to behavioural changes. This study provided new knowledge to the body of literature and signifies the need for further exploration of this phenomenon.

5.3 Acquired Nutrition Knowledge and Skills

The findings of this study revealed that participants acquired various nutrition knowledge and skills through nutrition education, which included healthy eating, exercising, eating a balanced diet, and drinking plenty of clean water. Exposure to information concerning good nutrition ultimately improves nutritional knowledge and skills. On the other hand, poor knowledge and practice of nutrition in the face of HIV infection can negatively affect treatment response and outcomes, especially in resource-poor countries where people often consume a monotonous diet consisting of starchy staples (Banwat, 2013). The study findings are similar to those of a study carried out in Nairobi titled the effects of nutritional knowledge on the dietary practices of PLWHIV. The study showed that nutritional knowledge influences dietary practices and behaviour. The researchers concluded that there is a strong relationship between nutrition knowledge and dietary practices (Olive, Mwangi, & Mbugua, 2014). Although the current findings are generally similar to the Olive et al. (2014) study, there are several areas in which they differ: these include the methodological orientation, the application of quantitative approaches to arrive at the findings, and the fact that the study was conducted in a different context from Zambia. Whereas the current study used a qualitative approach to arrive at the study findings.

Second, participants also described knowledge and skills acquired that relate to food hygiene, food preparation, and the avoidance of certain habits, such as avoiding alcohol and smoking, which could have both a health and nutrition impact on their well-being. As observed from the experience of *participant (6),* who explained that "*I have knowledge and skills of the different groups of food that we are supposed to eat and that are locally and readily available, and those we are not supposed to eat that can destroy our bodies"*. According to Bello, et al. (2019), behavioural capability entails the knowledge and skills required to perform appropriate behaviours. Participants' direct quotes that they learnt healthy eating planning and preparing varieties of meals even with limited resources revealed behavioural capability, for example (Participant 21).

> *From the lessons I have attended, I have learnt a lot about a balanced diet and the importance of eating a balanced diet when you are HIV positive. I have learnt about the foods to eat, such as fish, kapenta, beans, vegetables, and fruits, and to buy foods that are available and cheap. Because the food is very expensive, some foods I cannot afford. I learnt to boil my drinking water and ensure that when I am preparing food, the place and pots are clean so that I don't get sick. I now know the foods that I should not eat, such as fried foods, junk foods, alcohol, and smoking. I have also started exercising because I was overweight*. (Participant 21)

These findings suggest nutritional knowledge and skills are significantly associated with dietary practice. The improved knowledge help PLWHIV to start good dietary practices and in turn help them to have a good nutritional status. Evidence from the Mengie (2018) study suggests that a higher level of nutrition knowledge is positively and significantly associated with better dietary quality. The study is congruent with a study conducted in Nigeria by Ezechi et al. (2016), which contends that good nutritional knowledge is one of the prerequisites for ensuring good dietary practice. On the contrary, some studies have shown otherwise (Fadeye et al., 2016; Devika & Thahira Banu, 2016). There appears to be an inconsistence in the findings on acquired nutritional knowledge and skills by PLWHIV. The differences may be due to research approaches, the frequency of nutrition education, and other sociocultural and economic factors. According to Mwangome et al. (2010), nutritional knowledge does not necessarily translate into practice, emphasising the importance of taking into account broader social, cultural, and economic variables. This finding needs to be explored to determine if these factors can enhance behavioural change in dietary practice.

It is generally worthy to note that the findings of the present study and other research (Ezechi et al., 2016; Mengie, 2018; S et al., 2022) showed that acquired nutrition knowledge and skills through nutrition education improved dietary practices. It has further shown that nutrition education has a strong link to improving nutritional knowledge and behaviour change in relation to dietary practice.

5.4 Accessibility and Acceptability of Nutrition Education

Acceptability measures an intervention's success in fulfilling the needs of the target population and the organisational setting. Many participants described nutrition education as appropriate. They explained that they received support and benefited from the nutrition and health care services, and their expectations were satisfied. The participants revealed that they had access to nutrition education before meeting a doctor, with nutritionists teaching them about medication side effects, diet, and exercise. As noted by Participant 25, "yes, I have access to nutrition education because, when I came to the centre, the staff teach us before the doctor comes". However, not all the participants had the same experience. The current findings are significant in at least two ways: the participants' acceptance and accessibility experiences were both positive and negative.

5.4.1 Positive Experience

Some participants described their experience with accessing nutrition education as easy, free, and informative, with nutritionists always available. Positive accessibility was found to be the most common, with nutritionists providing guidance on staying healthy and living a quality life. Nutrition education has been argued to bring about change in behaviour and dietary practice. (Anand & Puri, 2019; Ezenwosu et al., 2022). The participant's perception of the benefit of good nutrition could have been attributed to their acceptability of nutrition education (Bello et al., 2019). Participants also reported that they received nutrition education on a group basis, with nutritionists always being available to discuss food types and the benefits of eating a balanced diet. Hudayani & Sartika (2016) discovered that group education was easier, cheaper, and required less skill or professionalism than individual counselling, and that it contributed to the acquisition of nutrition information. Scholars have confirmed that the facilitator, mode, and structure of nutrition education delivery all play a significant role in the effectiveness of a nutrition education programme's implementation (Bello et al., 2019; Contento, 2007). The impact of nutrition education on the quality of life of PLWHIV is well documented (Bello et al., 2019; Deprose et al.,

2015). However, the acceptability of nutrition education is not well documented. This current study contributes to the scanty literature on the acceptability and accessibility of nutrition education designed for PLWHIV.

5.4.2 Negative Experience

On the other hand, some participants described having negative experiences with accessing nutrition education at health facilities. They cited time constraints as a major issue, as there is usually only one nutritionist for a large number of patients. The current study findings are supported by Maertens (2011), who reported that limited appointment time is a significant obstacle for healthcare providers, particularly primary care physicians, in delivering nutrition education and providing preventive care. More studies had indicated that lack of time among primary care physicians is one of the most strongly identified barriers to providing any kind of preventive care to patients during appointments (Drainoni et al., 2009; Kolasa & Rickett, 2010; Pollak et al., 2008; Wynn et al., 2010).

The participants also complained about the limited number of nutritionists available and the cramped spaces. Some participants felt that the lack of manpower and the small space made it difficult to interact with others. The majority of documented studies of nutritional counselling interventions for PLHIV have depended on professional staff, which is limited in low-resource settings (Deprose, 2015; Martinez et al., 2014). Abeman (2014) supports the idea that, without human capital, nutrition education can remain an inadequate component of nutritional interventions for PLWHIV. Similar to the current study, this might be attributed to the problem of inadequate staff to attend to the clients. In relation to professional staff, Mwai et al. (2013) and Banwat (2013) affirm that community health workers are reported to improve HIV services, dignity, and life quality for PLWHIV, as well as enhance human resources capacity and improve nutritional intake among patients through nutrition education, media, and governmental organisations. From this stand point, it can be argued that integrating nutrition support through NEC with trained community health workers can enhance effectiveness and establish rapport with PLWHIV, enhancing linguistic, cultural, and community-building skills.

The participants in the current study observed time constraints, limited manpower, and a limited number of nutritionists to contribute to their negative experience. This finding is consistent with other studies that reported a lack of time among primary care physicians as one of the most strongly

identified barriers to providing any kind of preventive care to patients during appointments (Drainoni et al., 2009; Kolasa & Rickett, 2010; Pollak et al., 2008; Wynn et al., 2010). In conclusion, while a substantial proportion of participants had a positive experience with nutrition education, not all participants had a great experience due to inadequate manpower and time constraints at health facilities.

5.5 Benefit of Nutrition Education

A perceived benefit is a personal opinion or an individual's conclusion on a new behaviour and can lead to the adoption of healthier behaviours (Lee et al. 2016). The participants described their experience with nutrition education as beneficial because they acquired knowledge and skills that improved their health and nutritional status. The study findings revealed that nutrition education significantly improved the health and nutritional status of people with PLWHIV. It led to improved CD4 count, healthy eating habits, and lifestyle changes. Similar studies (Thapa 2015; Martinez 2014; Tabi 2012; Derose 2015) have acknowledged that nutrition education greatly improves health outcomes for those living with HIV and AIDS, allowing them to enjoy longer, more fulfilling lives. Tafadzwa et al. (2019) also noted that nutrition information is crucial for PLWHIV to improve their overall quality of life, strengthen their immune system, and effectively manage HIV symptoms and complications, thereby enhancing their abilities. For example, participants learned to choose healthy foods, manage their weight, and avoid junk food. They also learned to buy only healthy food, avoid viral load and CD4 count issues, and feel better. A case of participant 21: who said "I have managed to control my weight, therefore, maintaining good health."

The current study findings are identical with prior research that revealed the valuable benefits of nutrition education for chronic illnesses such as HIV and AIDS. For instance, in Nigeria, Banwat (2014) study suggested that NE is vital for proper management of disorders and preventing complications. In India, Baghel et al. (2015) study supports that nutrition education significantly impacts the knowledge, attitude, and practice (KAP) of individuals living with HIV/AIDS, which consequently improves their wellbeing. Further Bukasuba et al.(2010) study in Eastern Uganda highlighted the significance of nutritional education (NEC) in enhancing knowledge, attitudes, and practices, thus allowing PLWHIV to utilise the limited resources, modify diets to boost their immunity, and improve their response to ART and other treatments. In Ghana results showed that

nutrition education and counselling positively influenced the intake of dietary iron and vitamin C-rich foods and reduced the prevalence of anaemia and low serum ferritin (Wiafer et al., 2023).

Overall, in the current study, nutrition education significantly benefited PLWHIV. This analysis supports the information motivation behaviour (IMB) model, which stipulates that individuals with health and nutrition problems, when given nutrition information, are motivated to change their behaviour, and the change in behaviour leads to improved quality of life (Fisher, 1992). According to the IMB model of health behaviour change, to the extent that HIV-positive individuals are well-informed, (through NEC) motivated to act, and have the behavioural skills required to act effectively (acquired skills and knowledge), they will be more likely to engage in both proactive and preventative behaviours that will delay the progression of HIV to AIDS (health dietary practice). These findings suggest that receiving nutrition education improves dietary intake, nutritional status, and clinical outcomes in people living with HIV (PLWHIV). Consequently, this leads to an improved quality of life.

5.6 Knowledge of Nutrition Counselling

One interesting and important finding of the study was that the participants were unable to distinguish between nutrition education and nutrition counselling. Some participants described nutrition counselling as a process that involves a trained nutritionist helping patients make health choices and learn about food types. For instance, Participant 13 described nutrition counselling by stating that "*it's the process by which the nutritionist has helped me or us gain weight because I was underweight.* While other participants observed that nutrition counselling and nutrition education were the same, both emphasising balanced diets and a healthy lifestyle. From the shared views of participants, the researcher observed that nutrition counselling was described as nutrition education. This may suggest that there was no clear distinction in the way nutrition education and counselling were conducted at the health facility. Vasiloglou et al. (2019) argued that nutrition counselling is a patient-centred approach to managing chronic diseases that is best delivered by dietitians, nutritionists, nurses, and other healthcare professionals. UNAIDS (2014) declared that the aim of nutrition counselling is to develop individual strategies for PLWHIV, facilitate behaviour change, and provide ongoing support and guidance in the maintenance phase of the disease.

The current study findings suggest that most of the participants had more frequent exposure to nutrition education than nutrition counselling. Tesfay et al. (2020) revealed that a lack of understanding of nutrition intervention programmes may not benefit the clients. The data contributes to a clear understanding that nutrition counselling is not frequently conducted as an individualised approach based on individualised nutrition needs. Hence, nutrition counselling is not conducted in line with the objectives of nutrition counselling, which is more holistic and comprehensive as provided in the Zambia nutrition guidelines by the National Food and Nutrition Commission (NFNC, 2017).

5.7 Accessibility and Acceptability of Nutrition Counselling

Given that the participants equated nutrition education and counselling, their opinions on nutrition education were similar to those discussed under nutrition education. Participants thought nutrition counselling was appropriate, accessible, and helpful. The primary objective of nutrition counselling in individuals with HIV is to provide sufficient amounts of nutrients either from diet or supplements as needed that will help improve nutritional status and improve outcomes associated with HIV disease progression. According to this finding nutrition counselling was well received by participants. They noticed improvements in their diets and indicated it was useful and enlightening. Three related themes emerged: readily available, beneficial for improving diet. It is evident from these findings that there is a positive relationship between nutrition counselling and improved nutrition and health outcomes in PLWHIV. In conformity with these findings, a number of research studies have shown that nutrition counselling can improve the nutritional status of people living with HIV and AIDS, allowing them to live longer, more fulfilling lives. (Tesfay et al., 2021; Anand & Puri, 2013; Bello et al., 2019; Derose, 2015; Martinez, 2014; Tabi, 2012). The acceptability of nutrition counselling is evaluated based on the participants' acceptance and satisfaction with the information provided. Nutrition counselling was deemed acceptable and accessible by most participants for providing nutritional support information (Pokharel & Shettigar, 2019). The findings also support the argument of Thapa et al. (2015) that HIV care programmes should include nutrition intervention through nutrition counselling. This provides more evidence to back up the assertion made by participants based on lived experience, who believed that getting nutritional counselling had helped them change their diets.

This finding is contrary to previous studies, for instance, Tefese (2013) found that PLWHIV were dissatisfied with their nutritional care and support services due to poor coordination, focusing mainly on monthly drug supplementation and occasional food handouts. Further, Tesfay (2021) demonstrated ineffective nutrition counselling because of the lack of consistency in the content, duration, and delivery method; the lack of refresher training for practitioners; the exclusion of socioeconomic factors; and the participants' inadequate comprehension of various issues. Also, Bacelo et al. (2015) research findings did not show nutrition to be useful in helping the population recover from malnutrition. The contradictory results may be related to the research methods and setting.

An important issue emerging from these findings is that some participants acknowledged negative experiences with nutrition counselling, citing problems such as the hasty nature of sessions and the overwhelming environment created by the large number of patients. It is possible to hypothesise that the pleasant encounters with nutrition counselling outweighed the negative ones. Participants felt that the information provided was informative and beneficial, and they were able to make informed decisions about their diet.

One of the noticeable differences in the results of this study was the emphasis on providing insights into the lived experiences of participants using the interviews compared to existing studies, which tend to focus on the implementation, evaluation, and effectiveness of nutrition counselling and use quantitative methods (Alo et al., 2014; Ivers, 2014; Tang et al., 2015). Thus, the findings of the study provide insights on the accessibility and acceptability of nutrition education and clearly support the literature insofar as there is a strong positive link between nutrition counselling and improved quality of life in PLWHIV.

5.8 Types of Nutrition Counselling Participants Received

From the participant's experience, the study showed that participants received various types of nutrition counselling during their visits to health facilities, including group and individual counselling. According to Vasiloglou et al. (2019), nutrition counselling interventions have changed significantly over time. Nutrition counselling can be provided in individual or group sessions and includes two-way interactive education linked to promoting specific behaviour. This pattern of results is consistent with the previous literature by Tesfay et al. (2021) that individual

or group counselling sessions can empower patients to make informed decisions' about their eating habits based on financial and food availability and control their nutritional circumstances.

5.8.1 Group Counselling

Regarding group counselling, participants reported a single nutritionist discussing food and nutrition at the centre, advising on food intake for diarrhoea or vomiting, screening for cervical cancer and tuberculosis, and providing a balanced diet. They also recorded their weight during a group talk. Studies support the use of group and individual counselling based on the nutrition assessment done on the BMI of the patient (Alo et al., 2014; Tesfay et al., 2021). Research has indicated that nutrition counselling is vital to enhance and maintain the nutritional status of PLWHIV (Derose et al., 2015; Tang et al., 2015; Kaye & Moreno-Leguizamon, 2012). For instance, a study by Bolognese et al. (2020) investigated the effects of group counselling vs. individual dietary prescription on physical, nutritional, and metal health in overweight women and found that both nutritional interventions were effective in improving food intake. However, their study did not show significant differences between individual and group counselling in BMI. The present findings support the premise that group counselling is one of the key nutrition interventions for improving the well-being of patients and is crucial in the management of patients living with HIV and AIDS.

5.8.2 Individual Counselling

The most significant finding of the study was that individual counselling was provided to participants based on their BMI and nutrition assessment. This result ties well with a previous study by S. et al. (2022) which asserts that individual nutrition counselling was found to be useful in modifying eating habits in HIV-positive individuals. It was also beneficial in improving nutritional condition (weight and BMI) through counselling. Overall, their study highlights the importance of face-to-face interaction and nutrition counselling for patients with PLWHIV.

The findings of this study also highlighted that the counsellors discussed the person's nutritional status, their health problems, and what foods to eat to improve their health. Further advising participants to gain ideal weight, avoid illness and lose weight through exercise, and consume foods that help with high blood pressure. A trial by Alo et al. tested the effectiveness of monthly, individualised nutrition counselling in Nigeria and found that individualised nutrition counselling

had clinically significant benefits in terms of reducing malnutrition, weight loss, body mass index (BMI), and haemoglobin concentration (Alo et al., 2014).

The findings further showed that participants who had low weight and diarrhoea were advised and encouraged to eat well. The study validates previous studies by demonstrating the benefits of individualised dietary counselling-based nutritional assessment results based on the individual dietary requirements of the patient. According to Aishwarya (2015), nutrition counselling helps PLWHIV receive appropriate treatment, care, and nutritional support. Health promotion programs aimed at changing dietary behaviors at the individual level are more likely to be successful in improving nutritional outcomes if they also consider the social, cultural, and environmental context in which the behaviors occur (Fleetwood, 2015).

This study found that individual counselling was more preferred by participants, however that was not the case by most participants. A possible explanation for this might be that it was effective in addressing the nutrition issues of the participants and improving their nutrition status. A study in Brazil conducted by Lazzaretti et al. (2012) showed that individualized nutrition counseling improved dietary intake by decreasing daily calories, cholesterol and percentage of dietary fat. A similar conclusion was reached by Gwidakad (2013), who concluded that individual nutritional counselling was effective in improving dietary practices in adults living with HIV and AIDS. The research findings could provide insights on the effectiveness of individualised nutrition counselling in PLWHIV. In terms of future research, it would be useful to extend the current findings by comparing the effectiveness of individualised nutrition counselling and group counselling.

5.9 Frequency of Nutrition Counselling

The majority of participants reported receiving nutrition counselling twice during their programme enrolment, with some sessions occurring once or twice a year, with most participants reporting one-off sessions. Other participants reported a lack of counselling and teaching sessions for over three years, with only health talks and nutrition education. Some participants had one-on-one discussions with nutrition counsellors, while others only received group education. It is interesting that the frequency and duration vary, with most counselling being one-off sessions. The current findings are in line with the findings of the Tesfay et al. (2021) study, which found that a limited

number of sessions and short durations, with the majority of participants reporting one-off sessions, hinder the effectiveness of nutrition counselling.

It has been suggested that nutritional counselling in HIV care is varied in scope, content, and length, with inconsistent content, duration, and mode of delivery being challenges in implementation. Consequently, the short duration of nutritional counselling sessions can hinder its effectiveness (Tesfay et al., 2020). The short duration also reduces focus on prevention information, as reported by Tafesea et al. (2013). An implication of this is the possibility that the impact that nutrition counseling and therapy have on an individual depends on the type and duration of nutrition counseling and the nutritional status of the individual. This differs from the findings presented in the current study, which highlights the issue of insufficient nutrition counselling sessions, with most participants reporting only one session. Very little was found in the literature on the question of how long nutritional counselling should last in order to spur the expected behavioural change in PLWHIV.

To improve nutritional intervention effectiveness, factors like consultation duration, frequency-set goals, patient feedback, and goal achievement can influence adherence. Vasilglou et al. (2019). In this line, Wong et al. (2022) recommend a standardised frequency of counselling methods and adherence to determine counselling effectiveness. According to Hudayani and Sartika (2016), continuous education is a sustainable and effective method for patients to change unhealthy dietary habits, prevent nutritional issues, and maintain their health. It involves continuous, long-term support. In the current study, this was reflected in a lack of consistency in dietary counselling provided by nutritionists and health providers. It is difficult to explain this outcome, but it may be related to the fact that nutritional counselling is inadequately structured and lacks suitable parameters to provide a holistic approach.

5.10 Challenges in Accessing Nutrition Education and Counselling

The study found that despite the accessibility and acceptability of nutrition education and counselling services at the health centre, many participants experienced some challenges. The major barriers include challenges related to transportation, (2) inadequate time to attend to the patients, and (3) inadequate health personnel.

5.10.1 Challenges Related To Transport

The majority of the participants recognised transport as a major challenge to go to the centre. Participants reported challenges in accessing healthcare due to a lack of transport and difficulty moving from the community to the hospital, often having to walk long distances. The study findings concur with previous studies conducted in developing countries that indicated the continuous struggle faced by older adults' management of HIV. Distance to the facility, cost of travelling to access care, and times have all been cited as barriers to accessing HIV care among HIV older adults (Kiplagat et al., 2019; Schatz et al., 2019; Mwai et al., 2013; Martinez et al., 2014; Van Wyk & Moomba, 2019). Further, Bajunirwe et al. (2018) argued that distance is a significant barrier to accessing services and treatments, even for routine blood collection. This is a common issue in most underdeveloped nations, where distance and transport costs pose insurmountable obstacles for individuals seeking healthcare services.

5.10.2 Inadequate Time to Attend to the Patients

The study found that due to the high demand for services, the time needed for patient care is inadequate, leading to people waking up early to receive care and support services. This was observed by participant 3, who reported that "*They pay much attention to those who are very sick and underweight. Sometimes we don't spend quality time with the nutritionist because we are rushing to see the doctor*". (Participant 15). The narratives reveal that health personnel and patients often struggle to allocate quality time to nutrition education and counselling services due to the overwhelming demand. Researchers have observed that one of the most prominently acknowledged obstacles to providing any form of preventative care to patients during appointments is a primary care physician's lack of time (Drainoni et al., 2009; Kolasa & Rickett, 2010; Pollak et al., 2008; Wynn et al., 2010). Maertens (2011) also noted that time constraints and low patient education can lead to clinicians relying on personal intuition, chronic illness triggers, and patients requests for preventive services.

5.10.3 Inadequate Health Personnel

Participants expressed challenges with inadequate health personnel for numerous patients seeking nutrition education and counselling services. Similar findings have been demonstrated in previous studies. A study was carried out in Ethiopia to explore barriers and facilities for implementing nutrition education assessment and counselling (Degefa et al., 2021). Among the barriers cited was

a lack of an adequate workforce. Other than that, the evaluation of Nutrition Assessment and Counselling Services (NACS) monitoring in developing countries discovered a shortage of workforce as a barrier to NACS integration into the existing health system (Evaluation, 2018).

The study also noted that participants complained that information was unavailable, there were delays in service access, and nurses spent more time with sick patients than with seemingly healthy individuals. Most studies focused on the perceptions of the health workers about the challenges faced by PLWHIV. Dzinamarira et al. (2020) study found that lack of resources, food insecurity, and a lack of feeding supplements were challenges health workers faced in the nutritional management of their clients, highlighting the need for improved institutional capacity. A study in Addis Ababa, Ethiopia, found that people living with HIV face challenges in nutrition management, including behavioural changes in eating patterns, food insecurity issues, lack of nutrition knowledge, and lack of support (Ewune et al., 2021). Research shows nutrition education and counselling for PLWHIV are weak without human capital, often relying on professional staff, which is limited in low-resource settings. (Almeida et al., 2011; Serrano et al., 2010; Martinez et al., 2014). The findings of this study suggest that the implementation of NEC in health facilities faces challenges due to an inadequate workforce and the high work burden of care providers, limiting their ability to serve all clients.

5.11 Recommendations from Participants

Participants offered various suggestions for enhancing access to nutrition education and counselling in health care settings based on their personal experiences. Participants suggested more regular nutrition education and counselling sessions, as well as the provision of food. This finding supports previous research that has highlighted the importance of food assistance in nutrition education and counselling programmes for PLWHIV. According to Thapa et al. (2015), food insecurity remains a prevalent issue among PLWHIV patients, despite advancements in treatment and survival. Martinez et al. (2014) study found that a monthly household food basket combined with nutrition education improved ART adherence compared to a nutrition education-only group. Similarly, a study by Ezenwosu et al. (2022) supports the idea that food assistance programmes should be introduced to PLWHIV, who have many children, to improve their diet quality. Tafadzwa et al. (2020), in their study, also noted food insecurity and a lack of feeding supplements as causes of malnutrition among people living with HIV in Kigali, Rwanda, and concluded that

there was a need to address food insecurity among PLWHIV to improve outcomes. In addition, the Maertens (2011) study cited physical availability of food as a barrier to following nutrition recommendations from healthcare experts. The inability to buy nutritionally appropriate and safe diets is rather frequent among persons living with HIV, and it has been identified as a significant factor in poor health outcomes among HIV-positive individuals. Participants also suggested increased time between patients and nutritionists for counselling, as they often rush and do not spend enough time talking to patients. Ewune et al. (2021) suggested that small groups can encourage interaction and learning from each other and might enable sharing experiences and support. It may also be argued that greater time spent on counselling between patients and nutritionists is essential for enhancing nutritional status.

5.12 A Constructed Framework for Effective Nutrition Education and Counselling for PLWHIV

This section addresses the last research objective, which aimed to propose a framework for improving PLWHIV access to nutrition education and counselling. It is an extension of the findings and discussion chapters. The study findings highlighted challenges and recommendations from the lived experiences of PLWHIV. After a deep reflection of the challenges and recommendations from the lived experiences of PLWHIV, Malama's Access to Nutrition Education and Counselling Based on the Information-Motivation-Behaviour (IMB) Model (MANEC) framework was developed (Figure 6).

5.12. 1 What is the MANEC Framework?

The MANEC framework provides an intervention approach that embraces many factors. Following this proposed framework, an effective nutrition education and counseling program may be established to address the unique needs of the target population and contributes to improved nutritional knowledge and dietary practices, ultimately enhancing overall health and well-being. The aim is to empower individuals with the information, motivation, and behavioural skills needed to make informed dietary choices and maintain healthy eating habits. The framework is divided into four segments. The first segment is input/information, which is the human, financial, and/or material resources needed to implement an intervention. The second segment of the process/motivation involves the use of resources, activities, and the processes of how the interventions are used to achieve the expected Thirdly, there is the outcome or behaviour; these

are the changes that occur as a result of an intervention at the process stage. The fourth and last segment is the impact. These are the long-term results or effects of an intervention, achieved by changing practices, knowledge, or attitudes.

5.12.2 Input -Informatiom

The input can be money, energy, resources, facilities, data, knowledge, or any other resource that has been invested in the program. Input consists of personal and environmental elements. In this framework, input refers to: 1) human resources or health personnel at the centre: nutritionists, doctors, nurses, counsellors, community health workers, and axillary staff. 2) It also refers to the facilities, policies, and nutrition guidelines used by health personnel, as well as the person's values related to social, cultural, and economic factors. Strategies include creating and distributing evidence-based nutrition materials, utilising various communication channels, and collaborating with healthcare professionals and nutrition experts to ensure accuracy. The policy aims to promote access to nutrition education and counselling by collaborating with policymakers, raising awareness, and mobilising community members to advocate for improved access to nutritious foods and services.

5.12.3 Process/motivation

These are activities carried out to achieve the programme objectives. In this framework, the processes are the functions, activities, and interventions that are carried out by the use of resources to achieve the expected outcomes and impact. In this framework, the intervention activities include nutrition education, nutrition counselling, nutrition assessment, coordinated nutrition care, food supplements, supervision and monitoring, cultural competence and diversity, evaluation, and feedback. Nutrition education is a formal process designed to enhance knowledge about nutrition, improve food preparation skills, and encourage healthier eating habits. It often involves group settings to build supportive peer relationships.

Individualised counselling helps patients address nutrition goals and barriers, focusing on behaviour change related to nutrition and food (S.et al., 2022). Nutrition counselling aims to develop an individual nutrition strategy for HIV, facilitate behaviour change related to nutrition and food, and provide ongoing support and guidance in the maintenance phase. Key messages are tailored to the individual's specific cultural, family, and social situation, addressing their specific needs.

Nutrition assessment aims to determine an individual's nutritional status, develop an individualised nutrition care plan for HIV, identify the need for specific nutrition interventions, and determine eligibility for food assistance (UNAIDS, 2014). A nutrition assessment is conducted when risk factors like low BMI or food insecurity are identified during a screening, soon after an HIV diagnosis, or at periodic intervals. Nutrition assessments involve anthropometry, biochemical, clinical, and dietary intake. Anthropometry measures body composition, including height, weight, BMI, and mid-upper arm circumference, while biochemical assessments identify deficiencies in the blood, including anaemia and indicators of lipid, protein, and glucose metabolism. Clinical assessments examine signs of abnormalities such as dehydration, oedema, undernutrition, ascites, taste changes, swallowing difficulties, skin, fingernails, hair, and fatigue. Dietary intake assesses an individual's or family's intake of specific foods, nutrients, and supplements.

The objective is to provide easy access to nutrition education and counselling resources through community-based centres, integrated healthcare, user-friendly online platforms, and flexible scheduling options. The objective is to address cultural and demographic factors influencing dietary choices by training nutrition educators, tailoring programme materials and content to be culturally sensitive and relevant to the target population, and respecting cultural dietary preferences and traditions.

Incorporating food assistance into nutrition education and counselling programmes can enhance the impact of the interventions, especially in populations where access to nutritious food is a challenge. Food assistance is a crucial component in nutrition education and counselling programmes, as it addresses food insecurity, improves nutritional outcomes, enhances learning, encourages behaviour change, promotes sustainability, and can be tailored to specific nutritional needs. Food assistance is significant in nutrition education and counselling programmes because it addresses immediate nutritional needs, enhances the effectiveness of educational interventions, and has the potential to bring about long-lasting improvements in the health and well-being of individuals and communities (Thapa et al., 2015). It is a holistic approach that combines practical support with educational strategies to promote better nutrition and overall health.

Monitoring involves collecting, analysing, and interpreting programme data to equip individuals with skills and resources for effective knowledge implementation, healthy eating, and support. It aims to assess performance, improve programmes, and establish a system for ongoing reporting.

Through monitoring and evaluation, the programme shares success stories with stakeholders and the community.

Evaluation and feedback are crucial in nutrition education and counselling programmes for assessing effectiveness, identifying areas for improvement, tailoring interventions, allocating resources efficiently, providing accountability, assessing long-term impact, identifying barriers, enhancing participant engagement, fostering stakeholder collaboration, providing documentation and reporting, and fostering continuous learning. They ensure programme relevance and value.

5.12.4 Outcomes/ behaviour

The goal is to equip individuals with skills and resources to translate knowledge into action using strategies like meal planning, healthy eating, goal setting, monitoring, and problem-solving. In this framework, it refers to modified nutrition knowledge and skills, Good dietary practices, skills in food preparation, increased motivation for change of behaviour in dietary intake and diversity, increased knowledge on the importance of a good diet, maintaining good food hygiene and sanitation, eating appropriate food, and avoiding habits that can lead to poor nutrition and health Nutrition education and counselling programmes aim to enhance nutritional health and well-being by promoting specific behaviours such as improved dietary knowledge, healthy eating habits, balanced meal planning, portion control, dietary diversity, cooking techniques, food safety practices, weight management, increased physical activity, and mindful eating. These programmemes should align with the programme's objectives and target population, with regular assessment and evaluation to determine effectiveness and make necessary adjustments (Mengie et al., 2018; Tesfay et al., 2020; Martínez et al., 2014).

5.12.5 Impact

Refers to the long-term results or effects of an intervention achieved by changing practices, knowledge, or attitudes. The impact is improved nutrition behaviour, improved nutrition status, improved quality of life, improved health outcomes, and reduced mortality. Dietary changes can significantly improve the health and well-being of individuals living with HIV/AIDS. These changes can enhance immune function, weight maintenance, nutrient absorption, medication efficacy, opportunistic infections, increased energy levels, gastrointestinal health, mood and mental health, and metabolic disorders. They can also improve the overall quality of life, including physical, emotional, and social well-being. Overall, dietary changes are an essential aspect of

comprehensive care for individuals with HIV/AIDS, and their health outcomes and quality of life can be significantly improved (Derose et al., 2015).

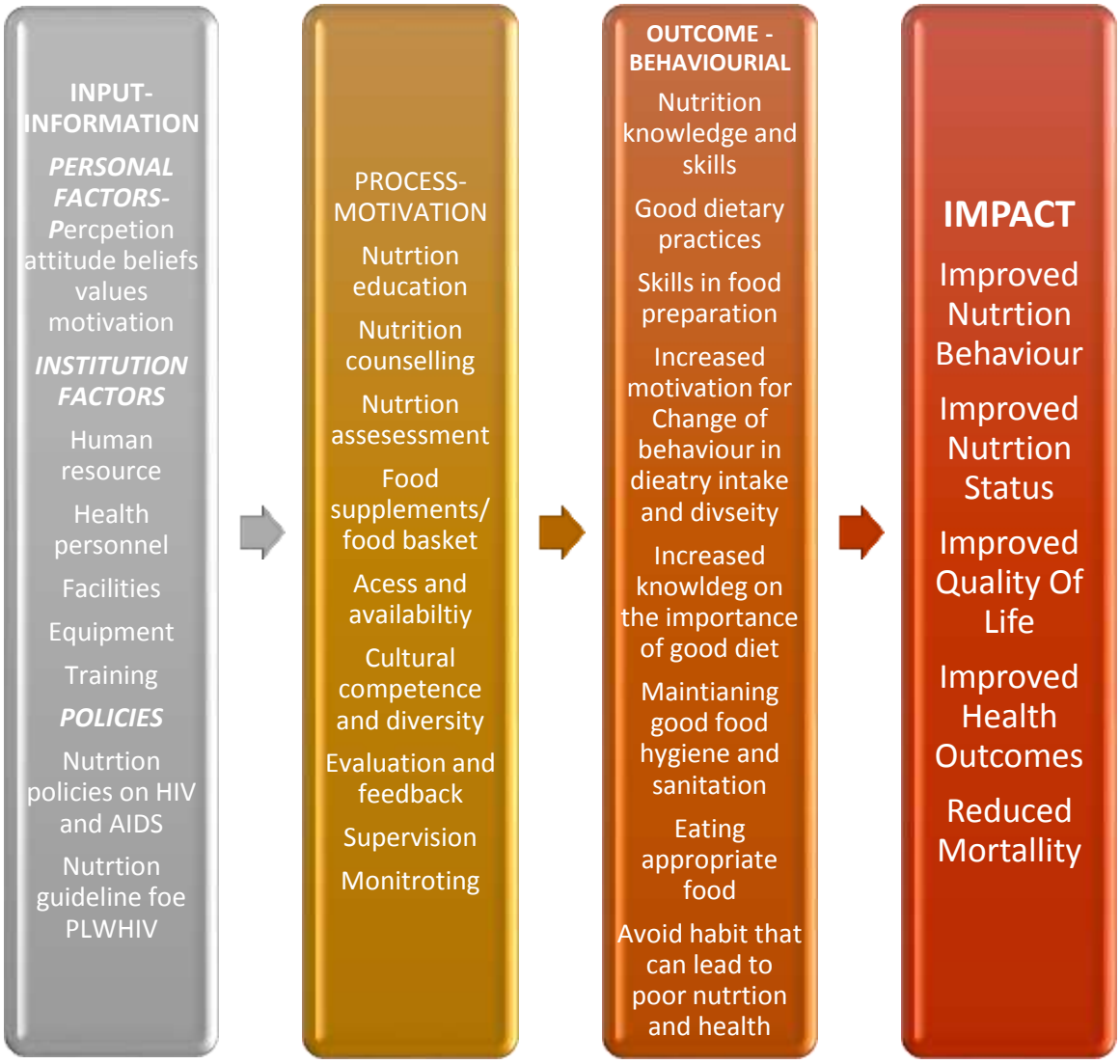

Figure 4 : Malama's Access to Nutrition Education and Counselling(MANEC) Framework

5.12.6 The significance of the MANEC framework

The proposed framework for improving access to nutrition education and counselling for people living with HIV (PLWHIV) in the Lusaka district of Zambia is significant for addressing a critical health issue of malnutrition and poor dietary practices among PLWHIV and improving health outcomes by enhancing access and acceptability of NEC services, promoting equity and inclusivity, incorporating innovative approaches like mobile nutrition clinics and telehealth services, and fostering a client-centred approach. The framework is an evidence-based approach based on the Information Motivation Behaviour (IMB) model, providing insights into specific challenges and opportunities related to nutrition education and counselling for PLWHIV. It also emphasises equitable access to services, promoting cultural competency, and tailoring services to diverse needs. The framework's ongoing monitoring and evaluation ensures effective interventions and contributes to the body of knowledge on nutrition education and counselling for PLWHIV. Its success can lead to improved health and quality of life, reduced healthcare costs, and increased productivity. The framework's principles can serve as a model for addressing similar challenges in other regions and countries.

5.6 Summary

This proposed framework for access to nutrition education and counselling based on the IMB model provides a comprehensive approach to empower individuals to make healthier dietary choices. By addressing the key components of information, motivation, behaviour, access, cultural competency, evaluation, and policy advocacy, this framework aims to enhance the overall health and well-being of individuals and communities. Implementation of this framework should be tailored to the specific needs and contexts of the target population

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Overview

This chapter presents the conclusion of the findings of the study. It provides the purpose and the research questions that guided the study. It also presents the major findings and draws some implications based on the information motivation behavioural model. The chapter concludes with recommendations and suggests future research.

6.2 Study Summary

The purpose of this study was to establish the lived experiences of PLWHIV on how they access nutrition education and counselling as part of their care and support in the Lusaka district. It is clear from the reviewed literature that nutrition education and counselling play a crucial role in improving the quality of life of people living with HIV and AIDS. It is also clear that this can only be achieved if PLWHIV have access to nutrition education and counselling in ART care centres. The following are the research questions and summary of the study:

1. What are the lived experiences of PLWHIV on how they access nutrition education and counselling?
2. What types of nutrition counselling did PLWHIV receive?
3. What challenges do PLWHIV face when accessing nutrition education and counselling?
4. How can the PLWHIV better access nutrition education and counselling in Lusaka district?

The participants demonstrated a good understanding of nutrition education, including knowledge about different types of foods, a balanced diet, and the importance of nutrition for PLWHIV. This knowledge was seen as essential for improving their overall health and quality of life. The study findings show that participants acquired various nutrition knowledge and skills through nutrition education, including healthy eating practices, food preparation, and hygiene. This acquisition of knowledge was associated with positive changes in dietary practices and nutritional status. In terms of accessibility and acceptability of nutrition education, it is important to note that the participants had mixed experiences with accessing nutrition education. Some found it easy, free, and informative, while others faced challenges such as time constraints and the limited availability of nutritionists. These experiences influenced their perceptions of nutrition education. Overall,

participants perceived nutrition education as beneficial. It improved their health outcomes, including their CD4 count, healthy eating habits, and lifestyle changes. They reported better management of their weight and overall well-being as a result of nutrition education.

The study revealed that the participants often could not distinguish between nutrition education and nutrition counselling, perceiving them as similar processes focused on balanced diets and a healthy lifestyle. The participants had limited exposure to nutrition counseling**.** Most participants reported more frequent exposure to nutrition education than nutrition counselling, which raised concerns about the delivery of individualised nutrition support. Despite the confusion, participants generally had positive perceptions of nutrition counselling, noting improvements in their diets and health outcomes.

The study further revealed that participants experienced both individual and group counselling once or twice a year, with individual sessions being preferred by some. The frequency of counselling sessions varied, with most participants receiving one-off sessions, which may hinder the effectiveness of counselling. The results also indicated multiple challenges that impede access to nutritional education and counselling. Barriers to accessing nutrition education and counselling included transportation challenges, inadequate time for counselling, and a shortage of health personnel. The participants recommended more regular counselling sessions, the provision of food assistance, and increased time for counselling to improve the accessibility and effectiveness of nutrition support.

6.3 Conclusion

Based on the research findings, it can be concluded that nutrition education plays a crucial role in improving the lives of PLWHIV in Lusaka district, Zambia. The participants in the study demonstrated a good understanding of nutrition concepts and benefited from the knowledge and skills acquired through nutrition education. However, there are challenges in terms of accessibility and acceptability that need to be addressed. It emphasises the importance of ensuring that nutrition education is not only informative but also easily accessible and tailored to the specific needs of PLWHIV. The study highlighted the importance of distinguishing between nutrition education and counselling and the need for clearer implementation guidelines. While participants generally had positive perceptions of nutrition counselling, challenges related to frequency, access, and human resources were evident. Addressing these challenges and incorporating participant

recommendations could improve the quality of nutrition support for PLWHIV. In summary, the research provides valuable insights into the experiences of PLWHIV regarding nutrition education in Lusaka district, Zambia. The findings offer guidance for improving the accessibility and effectiveness of nutrition education programmes for this vulnerable population.

6.4 Theoretical Implication of the Study

The alignment of the study's findings with the Information-Motivation-Behavioural Skills (IMB) model is significant in several ways:

1. Theoretical Foundation: The IMB model provides a well-established theoretical framework for understanding and addressing health behaviour change. By demonstrating how the study's findings relate to the IMB model, it strengthens the theoretical foundation of the study.
2. Information Dissemination: The findings highlight the role of nutrition education and counselling in providing essential information to PLWHIV. This information is not only about the importance of nutrition but also practical knowledge on how to achieve and maintain good nutritional status. This aligns with the "information" construct of the IMB model.
3. Motivation Enhancement: The study's results indicate that nutrition education and counselling served as motivational factors for participants. It motivated them to adhere to nutrition guidelines and make positive dietary changes. This corresponds to the "motivation" construct of the IMB model, which emphasises the importance of motivation in driving behaviour change.
4. Behavioural Skills Development: The study shows that participants acquired behavioural skills related to food preparation, hygiene, and making healthier food choices through nutrition education and counselling. This relates to the "Behavioural Skills" construct of the IMB model, which underscores the significance of skill acquisition for behaviour change.
5. Practical Implications: By emphasising the role of access to nutrition education and counselling in improving PLWHIV's nutritional status and health outcomes, the study provides practical insights. It underscores the importance of integrating these services into the care of PLWHIV to achieve better nutritional outcomes and overall well-being.

6. Policy and Programme Development: The findings support the development of policies and programmes that prioritise nutrition education and counselling as essential components of HIV care. This aligns with the broader goal of improving the quality of care and life for PLWHIV.
7. Research Continuation: The study's alignment with the IMB model suggests avenues for further research. It encourages future studies to explore the mechanisms through which information, motivation, and behavioural skills interact to drive positive health behaviour changes among PLWHIV.

In summary, the study's alignment with the IMB model enhances its theoretical and practical significance. It underscores the importance of nutrition education and counselling in improving the health and nutritional status of PLWHIV, highlighting the role of information, motivation, and behavioural skills in driving positive dietary behaviour changes. This alignment also suggests potential strategies for interventions and policy development in the context of HIV care and nutrition education.

6.5 Strengths and Limitations of the Study

6.5.1 Strength of the Study

This study has several strengths. The study's use of hermeneutic phenomenology allowed for a deep exploration of the lived experiences of PLWHIV regarding access to nutrition education and counseling. This qualitative approach provided rich, detailed insights into participants' perspectives. The study's findings were strengthened through triangulation methods, enhancing the credibility and validity of the results. This approach involved cross-verifying information from multiple sources or methods, increasing the reliability of the findings. The other major strength was that continuing interviews until data saturation occurs is a strength, as it ensures that a comprehensive range of participant experiences and perspectives are captured, enhancing the completeness of the study's findings. Using semi-structured interview guides allowed participants to express their experiences and views in their own words, contributing to a higher level of authenticity and participant-centred research.

6.5.2 Limitation of the Study

This study had some limitations. The study's sample size was small and limited to PLWHIV from one centre in Lusaka district. This restricts the generalizability of the findings to a broader

population of PLWHIV in Zambia or internationally. The study's findings may not be representative of PLWHIV in different contexts. Despite signing consent forms, individuals were hesitant to be interviewed due to fear of potential stigma. To address this limitation, participants were assured of anonymity and confidentiality to enable them willingly participate in the study. Subjectivity of interpretation: hermeneutic phenomenology involves interpretation, which can introduce subjectivity into the analysis. To mitigate this, the researcher's interpretations were discussed with supervisors and presented at a conference. Overall, while the study provided valuable insights into the lived experiences of PLWHIV regarding nutrition education and counselling, it is important to consider these limitations when interpreting the findings and their applicability to broader populations or contexts.

6.6 Implications

The significance of this study is multi-faceted and has several important implications:

1. Improving Nutrition Support for PLWHIV**:** One of the most significant contributions of this study is its potential to inform and enhance the nutrition education and counselling (NEC) services provided to people living with HIV (PLWHIV). By identifying the strengths and challenges of NEC implementation, health care facilities and policymakers can tailor their programmes to better meet the specific needs of PLWHIV, ultimately leading to improved nutritional status and quality of life.
2. Supporting the Information-Motivation-Behavioural Skills Model (IMB): The study's findings align with the IMB model, demonstrating how access to NEC can provide information, motivation, and behavioural skills to PLWHIV. This model suggests that when individuals have the necessary information, motivation, and skills, they are more likely to adopt healthier behaviors. In this case, NEC serves as a valuable tool to facilitate behaviour change in dietary practices and nutrition knowledge.
3. Filling Knowledge Gaps: This study addresses a notable gap in the existing literature by providing a detailed exploration of how PLWHIV access NEC in Zambia. While previous research has emphasised the importance of nutrition in the context of HIV, this study goes further by delving into the lived experiences of individuals accessing these services. This deep understanding can contribute to more targeted and effective interventions.

4. Contribution to Research Methodology: The use of hermeneutic phenomenology in this study contributes to research methodology. As mentioned, each scholar's interpretation and application of this approach may vary, and the study adds to the body of literature by providing a unique perspective on its application. This enriches the field of qualitative research.
5. Comprehensive Research Approach: The comprehensive approach taken in this study, from the title to the conclusion, ensures a thorough examination of the research topic. The critical literature review helps to identify gaps and build upon existing knowledge, while the research design and discussion sections provide a nuanced understanding of the findings in relation to previous research.
6. Potential for Replication and Expansion: This study can serve as a foundation for further research in Zambia and other similar contexts. Replicating or expanding upon this study's findings can help confirm its results and identify potential variations in NEC access among different populations or regions.

In summary, this study's contribution lies in its potential to improve the quality of nutrition education and counselling services for PLWHIV, its alignment with the IMB model, its focus on lived experiences, and its methodological contributions. It adds valuable insights to the field of HIV care and nutrition support, benefiting both researchers and practitioners working in this area.

6.7 Recommendations

Based on the findings of this study, the researcher provides nine (9) recommendations: The recommendations are categorised into practical application and policy implementation. These are the classification practices: enhanced patient care practices, service improvement, and policy: resource allocation and health policy, monitoring, and evaluation.

Enhanced patient care practices

1. To address the issue of limited availability of nutritionists and time constraints, health facilities should ensure adequate availability of trained nutritionists and allocate sufficient time for nutrition counselling sessions to enhance the quality of care. Allocating more time for one-on-one counselling sessions between patients and nutritionists will ensure comprehensive support and understanding of dietary recommendations.

2. Nutrition education should be tailored to the specific needs and preferences of PLWHIV. This could involve personalised dietary plans and counselling to address individual challenges and dietary restrictions.
3. There is a need to involve community health workers in nutrition education programmes, which may help bridge the gap and improve accessibility. These workers can provide support and education at the community level. Implement community-based nutrition education and counselling programmes to reach patients who face transportation challenges.
4. Health facilities should consider more frequent nutrition counselling sessions to better meet the individualised needs of PLWHIV.

Service improvement

5. Health care facilities should regularly evaluate the effectiveness of their nutrition education programmes to ensure that they are meeting the needs of PLWHIV. This can help identify areas for improvement and refine the delivery of nutrition education.
6. Health facilities should ensure a clear distinction between nutrition education and counselling to avoid confusion among patients and provide appropriate services.

Policy: resource allocation and health policy

7. The ministry of health and other stakeholders dealing with the nutrition of PLWHIV should integrate food assistance programmes with nutrition education and counselling to help address food insecurity and improve dietary adherence among PLWHIV.
8. To address the shortage of health personnel, the Ministry of Health and other aligned ministries should provide adequate training and hire more staff, including dietitians and nutritionists, to deliver effective nutrition counselling services.

Monitroting and evaluation

9. There is a need to establish monitoring and evaluation mechanisms to assess the effectiveness of nutrition education and counselling programmes and make necessary improvements.

6.8 Suggestions for Future Studies

The study has provided valuable insights into the experiences of PLWHIV regarding nutrition education in Lusaka district, Zambia. Future studies on the current topic are therefore recommended.

1. This study explored the lived experience of PLWHIV among NECs but did not investigate the perspectives of the health professions. Based on this, future studies should investigate the implementation of NEC programmes at the centre by health professionals.
2. Further investigation is needed to evaluate the improvement in PLHIV's knowledge of nutrition, health, and quality of life among those with low educational achievement and economic levels.
3. The study suggests that there is a need for further exploration of the relationship between nutrition knowledge and behavioural change among PLWHIV. Future research can delve deeper into the factors that influence the translation of knowledge into practice.

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APPENDICES

Appendix A: Interview guide for Respondents

THE UNIVERSITY OF ZAMBIA

INSTITUTE OF DISTANCE EDUCATION

Interview guide for Respondents

Research Title: Access to nutrition education and counselling by people living with HIV/AIDS in Lusaka district of Zambia: A hermeneutic phenomenology approach

This study aims to establish the experiences of PLWHIV on they they access nutrition education and counselling as part of the care and support in the Lusaka district. This interview guide provides collect data onhow nutrition education and counselling services are accessed in health care centres, and all information will be treated confidentially. Your cooperation will be sincerely appreciated.

1. **Bio data**

Age	
Gender	
Employment status	
Number of years on art	
Marital status	

1. What do you understand by the term nutrition education?
2. What experience would you share in relation to how you accessed nutrition education?
3. Describe the nutrition knowledge and skills you have acquired from healthcare providers and nutrition counsellors.
4. In what ways has the nutrition knowledge and skills benefited you health and nutrition-wise?
5. What do you understand by the term nutrition counselling?
6. What experience can you share in relation to how you accessed nutritional counselling?

7. What types of nutrition counselling did you receive?
8. How would you describe the frequency of nutrition counselling?
9. What is your experience with counsellors on nutrition counselling?
10. Describe the challenges you experienced in accessing nutrtion education.
11. Describe the challenges you experienced in accessing nutrition counselling
12. What suggestions would you make in relation to how PLWHIV can access nutrition education and counselling.

Thank you very much for your participation in this interview.

Appendix B Informed Consent Form

University of Zambia

Access to Nutrition Education and Counselling by People Living with HIV and AIDS in Lusaka District Zambia: A Hermeneutic Phenomenology approach

This is to confirm that I am conducting this study for educational purposes only. That, no harm will come to you; and that all information will be treated with confidentiality and anonymity. You may withdraw from the study at any time if you wish without any penalty. Upon completion of the study you will receive a draft copy of the research findings for your review. You may also see the data and anything I write at any time during the course of this study.

Signed: _____

Affirmation of Intent

To be completed by participants:

I, _____ agree to participate in this study.
I understand that the information collected during this study will be used for educational purposes, and I can withdraw from the study at any time without any penalty. By signing this document, I affirm that I understand the intent of this study.

Signed: _____

Date: _____

Appendix C Invitation to Participate (Research Interview)

University of Zambia

Access to Nutrition Education and Counselling by People Living with HIV and AIDS in Lusaka District Zambia: A Hermeneutic Phenomenology approach

Letter of Invitation & Informed Consent for Research Interview

Dear _____,

You are invited to participate in a Research Interview being conducted by Esther Malama in fulfillment of a Doctorate of Philosophy in Home economic –Nutrition degree through the University of Zambia. I am conducting a study regarding Access to Nutrition Education and Counselling by People Living with HIV and AIDS in Lusaka District Zambia: A Hermeneutic Phenomenology approach

The purpose of this study is to establish the experiences of PLWHIV on access to nutrition education and counselling as part of care and support of the pandemic in Lusaka district.

Specifically, the study will seek to achieve the following objectives:

i. To explore lived experiences of PLWHIV on access to nutrition education and counselling.
ii. To describe nutrition counselling nutritional counsellors provide to PLWHIV.
iii. To design a framework on access to nutrition education and counsellingg by PLWHIV

In exploring the objectives above, you are being asked to participate in this interview because you are:

(i) you are accessing health care and support services at the centre

Participation is completely voluntary. There are no anticipated risks associated with your participation in this interview. You are free to withdraw your consent to participate and may

withdraw your consent at any time throughout the study without prejudice. The interview will be held at a mutually agreeable place and time for approximately 60 minutes. You do not have to respond to these questions or to specific questions if you wish. At a later date, I will send you a draft copy of the discussion for feedback to ensure I have accurately captured your perspective and you are comfortable with how it is represented in the draft report.

With your permission, I would like to record the discussion with a digital audio recording device for purposes of documenting and transcribing the data into written form. For purposes of maintaining privacy and confidentiality, you will be assigned a code during the interview to remove any personally identifying information during the discussion.
As the only researcher, I will be personally transcribing the audio file and field notes utilizing this code for identification purposes only. The audio file contents, field notes and transcripts will be password-protected and stored on the University of Zambia server in the researcher's personal file or in a locked cabinet in the researcher's office.

This data will only be accessible to the researcher. The final manuscript will not reflect any personally identifying information. Audio files and electronic files of the transcripts will be destroyed upon completion of the study by means of erasing software, which will permanently remove the files from the SD card and the researcher's computer. Any hard copies of the transcripts will be destroyed through confidential shredding provided through the University after ten years.

As this research involves humans, it will be carried out with oversight from the University of Zambia Research Ethics

There are no direct benefits from participating in this study and you will not be compensated for your time. However, your participation may help policy makers, healthcare providers, health workers, information providers, the professionals, and other stakeholders in the health and nutrition sectors to respond positively to the nutrition needs of PLWHIV and exploring avenues to improving access to nutrition education and counselling to PLWHIV. Further, as a topic understudied 'Access to Nutrition Education and Counselling by People Living with HIV and AIDS in Lusaka District Zambia: A Hermeneutic Phenomenology approach contribute to the literature in distance education.

If you have any questions about this research, you may contact Esther Malama by email at esther.malama@unza.zm or phone +260 977 473 628