# PALLIATIVE CARE INTERVENTIONS ON ENHANCING THE QUALITY OF LIFE FOR CANCER PATIENTS IN TRANSNZOIA COUNTY

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## DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.



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# DEDICATION

I dedicate this research to my family, my colleagues and friends.

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## ABSTRACT

Amidst the escalating burden of cancer cases in Trans-Nzoia County and Kenya at large, this study addresses the critical issue of the deteriorating quality of life among cancer patients due to the taxing nature of medical treatments. The study aimed to evaluate the effect of palliative care interventions on the quality of life of cancer patients in Trans-Nzoia County by assessing the factors that promote the availability and accessibility of palliative care services, identifying the barriers to implementation, and evaluating the effectiveness of these interventions on the physical, emotional, and social well-being of patients. Through a descriptive research design, primary data were collected from 169 nurses at Kitale Level 5 Hospital using online surveys. The study employed descriptive statistics, including the mean, median, and mode, to analyze the collected data. Additionally, inferential analyses such as correlation and regression analysis, conducted using SPSS version 25, provided deeper insights into the relationships between variables. Notably, correlation analysis clarified the associations between the availability of palliative care, barriers, effectiveness, and patients' quality of life, while regression analysis facilitated the exploration of predictive relationships. The study identified factors enhancing accessibility to palliative care services, delineated barriers to implementation, and evaluated the interventions' effectiveness on patients' quality of life. While healthcare infrastructure and geographical accessibility were identified as promoting factors for palliative care interventions, affordability and government support emerged as significant concerns hindering equitable access. Furthermore, barriers such as inadequate training among healthcare professionals and financial constraints faced by patients were highlighted, emphasizing the complexity of delivering effective care. Despite these challenges, the study demonstrated the positive impact of palliative care interventions, with patients reporting improvements in symptom management, overall comfort levels, and emotional well-being. Key recommendations included the implementation of individualized care plans, adopting a multidisciplinary approach, and establishing mechanisms for continuous evaluation and improvement of palliative care services. By addressing these recommendations, stakeholders could strive to enhance the overall well-being of cancer patients in Trans-Nzoia County and inform broader healthcare strategies in Kenya, ultimately fostering a more compassionate and effective approach to palliative care delivery.

## LIST OF ABBREVIATIONS

| | |
|---|---|
| **CBPC** | Community-Based Palliative Care |
| **HPNA** | Hospice and Palliative Nurses Association |
| **HRQoL** | Health-Related Quality of Life |
| **LMIC** | Low- and Middle-Income Countries |
| **NCDs** | Non-Communicable Diseases |
| **PC** | Palliative Care |
| **PHCT** | Palliative Health Care Team |
| **QOL** | Quality of Life |
| **TASH** | Tikur Anbesa Specialized Hospital |
| **WHO** | World Health Organization |

# CHAPTER ONE: INTRODUCTION

## 1.1 Introduction

This chapter presents an overview of the background of the study, statement of the problem, purpose of the study, research objectives, which consist of both general and specific objectives, research questions, scope of the study, and the significance of the study.

## 1.2 Background of the Study

Cancer, a major Non-Communicable Disease (NCD), has become one of the leading causes of death globally, contributing significantly to the global disease burden. In 2020, the World Health Organization estimated that cancer accounted for nearly 10 million deaths worldwide. The incidence of cancer is expected to rise to 28 million new cases per year by 2040 (World Cancer Research Fund International, 2020). This growing burden of NCDs is placing substantial pressure on health systems, especially in low- and middle-income countries, where health infrastructure is often insufficient.

To address the rising burden of cancer, countries have implemented various control strategies, including prevention, early screening, accurate diagnostics, and curative treatment options such as surgery, chemotherapy, and radiotherapy. These approaches aim to reduce cancer-related mortality by detecting the disease early and initiating timely treatment (WHO, 2017). However, disparities in access persist, especially in low- and middle-income countries like Kenya, where most patients are diagnosed at advanced stages. According to global cancer statistics, over 19.3 million new cancer cases and nearly 10 million cancer-related deaths were recorded in 2020 alone, with future projections indicating a rise to 28 million new cases annually by 2040 (Sung et al., 2021).

In many sub-Saharan African countries, including Kenya, over 70% of cancers are diagnosed at stage III or IV due to late presentation, limited diagnostic capacity, and inadequate referral systems (Fitzmaurice et al., 2018). The country's radiotherapy infrastructure remains insufficient, with only a few functional public radiotherapy centers serving millions of patients. Moreover, financial barriers persist; fewer than 20% of women in Kenya have health insurance coverage, significantly limiting access to timely cancer treatment (Kimani et al., 2014). As curative options become limited at late stages, the focus of care often shifts to symptom control and quality-of-life

improvement through palliative care interventions (Knaul et al., 2018). These services are essential exit points from the formal curative health system and are vital for supporting patients with advanced disease when treatment is no longer viable.

Palliative care interventions are essential for enhancing the overall quality of life for individuals with chronic illnesses, addressing a range of psychosocial factors (Gómez-Batiste et al., 2017). These interventions aim to alleviate symptoms such as pain, fatigue, and nausea, promoting comfort and well-being. Moreover, palliative care extends beyond the physical aspect by offering emotional and psychological support through counseling. Integrating palliative care into chronic illness treatment plans is vital for comprehensive support, addressing both the emotional and physical dimensions of the patient's journey (Dalgaard, 2014). Emotionally, palliative care provides counseling services, encouraging open communication to help patients cope with the psychological challenges of their illness. This emotional support also extends to family members, creating a strong support network. On the physical side, palliative care concentrates on managing symptoms like pain and fatigue, contributing not only to greater comfort but also to an improved overall quality of life (Bookbinder & McHugh, 2010).

In 2020, new cancer cases averaged at about 18.1 million cases worldwide, impacting 9.3 million men and 8.8 million women. Estimates divulge that about 14% of individuals globally who require palliative care receive it (WHO, 2020). Projections indicate a significant increase to 28 million new cases annually by 2040 (World Cancer Research Fund International, 2020; World Cancer Research, 2020). This alarming trend necessitates urgent and comprehensive attention. A cancer diagnosis profoundly impacts patients and their families, reshaping their lives with emotional turmoil (Gorman, 2018). Beyond the physical toll, those suffering from cancer grapple with fear, anxiety, and uncertainty, leading to a range of emotions from shock to grief. Coping with treatment side effects, managing pain, and confronting existential questions becomes overwhelming (Cancer Net, 2021). The family, too, undergoes a transformation, balancing unwavering support with their emotional challenges (Gorman, 2018). The imperative is paced on the well-being of patients diagnosed with cancer considering the nuance of the challenges that present themselves to both the patient and relatives.

As seen in the United States, approximately 50% of individuals that were recognized to be ailing with lung cancer and 19% of 26,961 breast cancer patients receive care for mitigate the suffering

associated with this disease (Chang et al., 2022; Kim et al., 2023). In Germany, only one-third of cancer patients access palliative care, with over half receiving support towards the last lap of their lives (Dasch et al., 2017). Challenges in Germany include insufficient funding, undefined responsibilities among health sectors, and interdisciplinary competition. Palliative care structures, especially in the outpatient sector, are deemed insufficient, contributing to unclear responsibilities (Behmann et al., 2009). In China, the accessibility of palliative care for cancer patients is limited, with only 0.7% of hospitals offering such services, leaving 9 out of 10 cancer patients without access (Yin et al., 2022). Nevertheless, recent efforts show improvement, as a substantial percentage of hospitals, including 82.8% of cancer hospitals and 84.3% of general hospitals, now provide some level of palliative care (Li et al., 2023). Despite these positive changes, challenges persist in the availing of palliative care for individuals diagnosed with cancer in China. Constraints include cultural stigma related to conversations about death, limited public awareness of PC, a shortage of trained professionals in this field, and difficulties in integrating this care into the medical system (Hahne et al., 2022).

The quality of life for cancer patients is a significant concern. Nevertheless, in Nigeria, initiatives have been undertaken to address the issue of home-based Palliative care for adults who have been assessed and found to be suffering from cancer at a low cost. This approach has demonstrated positive outcomes for patients, contributing to an improvement in life's caliber (Omoyeni et al., 2014). The percentage of cancer patients having been found to have a poor quality of life stands at 44.8% (Esan et al., 2021), while a good percentage of 55.1% had a good quality of life. Despite this positive impact, palliative care for cancer patients in Nigeria continues to face significant challenges, including a shortage of trained healthcare professionals, inadequate pain management, late presentation and inadequate referral systems, a high rate of advanced disease presentation, and limited educational opportunities for palliative care training. Nonetheless, strides have been made to improve the circumstances through home-based PC for adults offered at a minimal cost. This approach is advantageous to patients and has improved their quality of life (Omoyeni et al., 2014). In Uganda, the annual number of new cancer patients is around 4,000, with over 75% diagnosed at stages 3 and 4 (Low et al., 2019). The limited provision of Palliative care in Uganda is influenced by factors such as limited training of medical professionals, insufficient pain treatment, late diagnosis and referral systems, a high prevalence of advanced at presentation, restricted availability of Palliative care in rural areas, and financial support. (Mah et al., 2023).

The quality of life (QOL) among cancer patients in Kenya, including Trans-Nzoia, is a significant concern. Empirical research undertaken in Kenya examined the quality of life in 768 cancer patients, revealing that 82.3% of them experienced very low levels of QOL across various aspects, including general well-being across the board, ranging from psychological and physical. Palliative care for cancer patients in Kenya encounters substantial challenges, especially as cancer is the third leading cause of mortality in the country (Malloy et al., 2017). Merely 10% of the population living with cancer have access to care, hindered by limited awareness of cancer symptoms, a scarcity of diagnostic and treatment centers, and insufficient services, particularly in the outpatient sector, across the 43 public hospitals offering palliative care. Despite these challenges, Kenya has emerged as one of the first African nations to officially integrate palliative care into healthcare policies and national cancer strategies (Malloey et al., 2017). The Kenyan Hospices and Palliative Care Association (KEHPCA) is playing a crucial role in enhancing palliative care accessibility by collaborating with healthcare providers, governments, development partners, local communities, and patients and families to enhance the QOL of patients (Malloy et al., 2017).

### 1.2.1 Palliative Care

This is a principle committed to improving the quality of life for individuals, including both adults and children, as well as their family members who are grappling with the realities linked to chronic diseases. Its objective is to lessen suffering by swiftly recognizing and accurately a range of issues, covering both physical and mental aspects (WHO, 2020). As per the Hospice and Palliative Nurses Association (HPNA), palliative care is a specialized form of medical care designed for individuals facing serious illness. In this way, it is centered around presenting solutions for signs and stress, aiming to enhance the overall quality of life for both patients, independent of their prognosis. It is suitable for any age and any stage and can be administered alongside curative treatments. The efficacy of PC is most noticeable when its incorporation is conducted at the early progression of the disease. This not only enhances the quality of life for these people to avoid unnecessary hospital visits and health care utilities but also reduces unnecessary hospitalizations and healthcare service utilization (WHO, 2020).

Each year, approximately 56.8 million individuals, deprived of (PC), and among them 25.7 million are in the last cancer stages and this is especially the case in low- and middle-income countries.

Unfortunately, only around 14% of those requiring Palliative care receive it globally. When it comes to children in need of such care, a staggering 98% are situated in these countries, with nearly half of them in Africa (WHO, 2020). The World Health Organization (WHO) is integral to integrated, people-centered health services, and palliative care specializes in relieving pain and other symptoms, augmenting the overall standard of living for families and their patients. WHO emphasizes its applicability to anyone with a consequential, progressive illness that puts their lives in danger, including children and young adults, and underscores its compatibility with curative treatment, starting at the time of diagnosis. The palliative care team, consisting of diverse healthcare professionals, works together to attend to the physical, psychological, and social needs (WHO, 2020). (PC) Strategies include precise pain management, symptom control, and psychosocial support. Physically, it focuses on easing pain, nausea, and fatigue, tailored to individual patient needs. Emotionally, PC provides counselling, fostering open communication to discuss fears, aspirations, and preferences, and creating a supportive environment for those who are infirm and their relatives. Additionally, palliative care coordinates healthcare across providers, ensuring smooth transitions between different treatment approaches.

Palliative care interventions, as emphasized by Gómez-Batiste et al. (2017), have a crucial role in enhancing the standard of wellbeing and living for patients with chronic illnesses. These interventions primarily target physical aspects by addressing symptoms like pain, fatigue, and nausea, thereby promoting comfort and overall well-being. Dalgaard (2014) extends the scope of palliative care to encompass emotional and mental support through counselling for both the infirm and their families. This emotional backing includes open communication to help individuals cope with the psychological challenges of their illness, creating a robust network of support. In addition to emotional aspects, Bookbinder and McHugh (2010) emphasize the importance of mitigation cover in managing physical symptoms. This research undertaking operationalizes palliative care using the following indicators, availability and accessibility of palliative care, barriers to the implementation of PC and the effectiveness of PC.

### 1.2.2 Quality of Life

Quality of life (QOL) is a nuanced and a subjective notion that includes different dimensions of an individual's general well-being and life contentment. It goes beyond solely measuring economic

or health-related factors and considers the broader aspects that contribute to a person's sense of happiness, fulfilment, and contentment. Key nuances as it relates to the standard of well-being often include physical health, mental and emotional well-being, social relationships, economic circumstances, personal safety, and the environment (National Library of Medicine, 2023). WHO defines quality of life as an individual's subjective assessment of their standing in the prevailing conditions divulging the relative worth as well as the cultural context not forgetting their ambitions, prospects, and considerations (WHO, 2024).

Improving the QOL for cancer patients encompasses a holistic approach that addresses their physical well-being (Dow et al., 1996). From a medical perspective, effective pain and symptom management are paramount, utilizing medications and interventions as needed (National Cancer Institute, 2024). Regular medical check-ups contribute to the early detection and management of complications, promoting overall health. Emotionally, counselling and psychotherapy offer essential support, assisting patients in coping with the psychological challenges that accompany a cancer diagnosis (Rosewell Park, 2020). Additionally, participation in support groups facilitates a sense of community and understanding among individuals facing similar struggles (Gorman, 2018). By integrating these elements into the care plan, healthcare professionals strive to enhance the overall quality of life for cancer patients, fostering a comprehensive approach that goes beyond mere medical treatment (Gorman, 2018). This study operationalizes (QOL) using physical well-being, psychological well-being, and emotional well-being.

### 1.2.3 Health Facility Level System in Kenya

In Kenya, the healthcare system utilizes a six-tiered classification for hospitals, with each level offering varying degrees of healthcare services and facilities. Level 1 hospitals are community health units (MOH, 2022). Community Health Units primarily focus on delivering preventive healthcare services, emphasizing basic sanitation, vaccination programs, childcare, first aid, and health education initiatives. These units play a crucial role in promoting public health and preventing the spread of diseases within communities. However, it's important to note that they do not typically provide cancer treatment or palliative care services. Instead, their mandate revolves around preventive measures and early intervention to maintain community health and well-being (MOH, 2022).

Level 2 health facilities are basic dispensaries and clinics (MOH, 2022). They offer primary healthcare services such as outpatient care, maternal and child health services, immunizations, and basic laboratory tests, but they notably lack palliative care provisions. Resources and facilities are limited, and they may not have specialized medical personnel or advanced medical equipment. Additionally, handling serious illnesses at this level is quite limited, and patients may need to be referred to higher-level facilities for specialized care. Level 3 health facilities on the other hand, are usually health centers, providing basic outpatient and inpatient services, including minor surgeries, obstetrics, and general medical care. Limited resources and facilities are available compared to higher-level health facilities. While they may be able to manage some illnesses, chronic cases like cancer often require referral to higher-level facilities. Notably, palliative care services for cancer patients remain deficient at this level, limiting comprehensive support for patients (MOH, 2022).

Level 4 health facilities are typically county hospitals. They offer a wider range of services compared to lower-level facilities, including emergency care, surgery, obstetrics, paediatrics, and basic diagnostic services (MOH,2024). This level has more resources and facilities, including better-equipped laboratories and imaging services. They can handle a broader range of medical conditions, but chronic illnesses may still require referral to higher-level facilities for specialized care. While some Level 4 health facilities may offer basic palliative care services, the availability and extent of palliative care for cancer patients can vary significantly depending on the specific hospital and its resources (MOH, 2022).

Level 5 health facilities are county referral hospitals and teaching and referral hospitals. These hospitals offer highly specialized medical services, including advanced diagnostic procedures, complex surgeries, critical care, and specialized treatment for various medical conditions (MOH, 2022). They have state-of-the-art medical equipment and a team of specialist doctors, surgeons, and other healthcare professionals. They are well equipped to handle a wide range of serious illnesses, such as advanced cancer treatment and medical emergencies. The integration of palliative care services in public hospitals in Kenya has primarily focused on Level 5 health facilities and provincial hospitals, which have become centers for palliative care, benefiting over 30,000 patients annually (MOH,2022).

Lastly, the level 6 hospitals are national referral hospitals, such as Kenyatta National Hospital in Nairobi. They are the apex medical facilities in the country and provide the highest level of specialized medical care. Level 6 hospitals offer highly advanced medical treatments, including organ transplants, cardiac surgery, neurosurgery, and advanced cancer treatment (MOH, 2022). They have the most advanced medical technology, facilities, and highly skilled medical professionals capable of handling the most complex and serious medical conditions. Level 6 hospitals are expected to provide the most comprehensive and advanced services available in the country. They typically have specialized departments or units dedicated to palliative care, staffed by multidisciplinary teams consisting of palliative care physicians, nurses, social workers, psychologists, and other specialists. (MOH,2022; Medicareexcel, 2023).

### 1.2 Problem Statement

Cancer remains one of the most significant health challenges globally, with substantial physical, emotional, and social consequences for patients and their families. In Kenya, cancer is the third leading cause of death, accounting for approximately 42,116 new cases annually, most diagnosed at advanced stages (Malloy et al., 2017). A cancer diagnosis often triggers anxiety, uncertainty, and emotional distress among patients and their families (Gorman, 2018; Williams et al., 2016). The concept of life quality for individuals battling cancer is multifaceted, involving physical health, mental stability, and social interactions (Van Leeuwen et al., 2018). These dimensions are frequently disrupted by both the disease itself and its treatment interventions, including surgery, radiotherapy, and chemotherapy. Interventions such as psychological support and palliative care can contribute positively by managing symptoms and enhancing emotional strength and comfort (Roswell Park, 2020).

Kenya has made various policy commitments aimed at strengthening cancer care and improving quality of life. These include the Health Act 2017, Kenya Vision 2030, and the Kenya Health Policy 2014–2030, all of which promote universal access to preventive, curative, and palliative services. The Kenya Palliative Care Guidelines (2013) specifically outline strategies to enhance access and equity in palliative care delivery. However, the gap between policy and actual service provision remains stark, with only 3% of health facilities offering palliative care (Zubairi et al.,

2017). Additionally, a national study of 768 cancer patients revealed that 82.3% experienced very low quality of life (Malloy et al., 2017), highlighting the limited impact of current interventions.

In Trans Nzoia County, access to cancer care is constrained by geographic, economic, and systemic barriers. Specialized services are concentrated in major cities, leading to inequalities in access (Saiyoki, 2020; Moturi et al., 2022). According to KNBS (2021), 36.3% of the county's population lives below the poverty line. Cancer treatment costs, estimated between Ksh 119,000 and Ksh 333,000 per year, are unaffordable for many (Atieno, 2018). Infrastructural challenges such as poor road networks, further prevent timely access to care (Moturi et al., 2022). Additionally, gaps in trained personnel, low community awareness, and persistent stigma all contribute to reduced access and diminished quality of life for cancer patients in the region (Ali, 2018; Ginjupalli et al., 2022).

Although studies have investigated cancer readiness and medicine availability in Trans Nzoia County, no research has explicitly examined the impact of palliative care interventions on patient quality of life. Saiyoki (2020) assessed hospital preparedness for breast and cervical cancer treatment, while Itsura et al. (2021) reported that 23% of NCD medicines were unavailable, with cancer drug stock-outs lasting up to 334 days annually. However, there remains a critical empirical gap regarding how palliative care services affect well-being outcomes for cancer patients in Trans Nzoia County. This study, therefore, seeks to address that gap.

Thus, this study aims to determine the answer to the research question: "What are the effects of palliative care interventions on enhancing the quality of life for cancer patients in Transnzoia County?"

## 1.3 Study Objectives

### 1.3.1 Main Objectives

The main objective of the study is to evaluate the effect of palliative care interventions on enhancing the quality of life for cancer patients in Trans-Nzoia County.

### 1.3.2 Specific Objectives

i. To assess the factors promoting the availability and accessibility of palliative care services for cancer patients in Trans-Nzoia County.

ii. To identify the barriers to the implementation of palliative care interventions for cancer patients in Trans-Nzoia County.
iii. To evaluate the effectiveness of palliative care interventions on the quality of life of cancer patients in Trans-Nzoia County.

**1.4 Research Questions**

i. What are the factors promoting the availability and accessibility of palliative care services for cancer patients in Trans-Nzoia County?
ii. What are the barriers to the implementation of palliative care interventions for cancer patients in Trans-Nzoia County?
iii. What is the effect of palliative care interventions on the quality of life for cancer patients in Trans-Nzoia County?

**1.5 Scope of the Study**

This study focuses on evaluating the effect of palliative care interventions on enhancing the quality of life for cancer patients within Trans-Nzoia County. It narrows its geographical scope to Kitale County Referral Hospital, a Level 5 facility that offers both specialized cancer treatment and palliative care services. The hospital's capacity to deliver advanced clinical interventions and supportive care makes it a suitable setting for assessing the integration and impact of palliative care within the broader continuum of cancer management.

The study is limited to assessing palliative care in terms of three core dimensions: availability and accessibility of services, barriers to implementation, and the effectiveness of interventions in addressing patients' physical, emotional, and social needs. It concentrates on collecting data from frontline nursing staff who are directly involved in palliative care delivery. The research timeframe, tools, and analysis methods are designed to remain within this institutional and conceptual boundary.

**1.6 Significance of the Study**

This research carries a substantial relevance for healthcare institutions and medical professionals striving to enhance the standard of well-being of patients suffering from cancer through PC. The insights derived from this research will serve as a valuable guide for healthcare managers in

making well-informed decisions about implementing, managing, and optimizing palliative care programs. Moreover, medical professionals can acquire an all-encompassing knowledge of the possible advantages and difficulties linked with incorporating PC into the comprehensive treatment strategy for cancer patients.

Regulatory authorities and health makers of policy, will find utility in this research offers a vital understanding into the influence of PC strategies on improving the life quality for individuals diagnosed with cancer. Policymakers will leverage these findings to shape healthcare policies that support and promote the integration of palliative care into cancer treatment protocols. Recognizing the contributions of palliative care to the overall well-being of cancer patients can inform the development of frameworks that encourage healthcare providers to adopt and prioritize palliative care services.

The study establishes a foundation for future research in the field by identifying gaps and proposing recommendations for further exploration. Future researchers will build upon these insights to delve into specific aspects of palliative care, contributing to a comprehensive grasp on the aspects as they relate to the association between interventions and the quality of life for cancer patients. Academic institutions can benefit from the study's theoretical insights and practical implications, incorporating this knowledge into healthcare curricula to enhance the understanding of palliative care interventions and their impact on improving for individuals facing cancer diagnoses.



**1.7 Dissemination of Findings**

The findings of this study will be published in the university repository, where researchers, policymakers, and students can access it. The researcher may later decide to publish the study in medical journals, where it can reach a broader audience, including medical professionals, public health experts, researchers, and policymakers in the country and worldwide. The information obtained in this study will be relevant for healthcare institutions and medical professionals aiming to enhance the well-being standards of cancer patients through palliative care (PC). The findings from this study will offer valuable guidance for healthcare managers in decision-making regarding the implementation, management, and optimization of palliative care programs.

Furthermore, medical professionals will gain comprehensive insights into the potential benefits and challenges associated with integrating palliative care into the overall treatment approach for cancer patients. Regulatory authorities and policymakers will find utility in understanding how palliative care strategies influence the quality of life for individuals diagnosed with cancer, informing the development of healthcare policies that support the integration of palliative care into cancer treatment protocols. Recognizing the contributions of palliative care to cancer patients' overall well-being can facilitate the development of frameworks encouraging healthcare providers to prioritize and adopt palliative care services. Additionally, this study will help identify gaps in palliative care for cancer patients, prompting action to increase palliative care services accordingly.

# CHAPTER TWO: LITERATURE REVIEW

## 2.1 Introduction

This chapter examines the existing body of literature presented by researchers, emphasizing various contributions made in the domain of palliative care and how it impacts of cancer patients. Consequently, it delves into a comprehensive review of pertinent theories that will serve as the foundation for conducting the study. Additionally, the chapter conducts an empirical review to evaluate the existing research gap that the current research undertaking aims to fil. The conceptual framework of the study is also developed within this chapter.

## 2.2 Theoretical Review

The theoretical review involves a comprehensive assessment of the principal theories that will serve as the underpinning or foundational framework for the study. Each theory's proposition is scrutinized, encompassing an examination of its proponents, relevance to the study, and the criticisms it has garnered. The identified theories in this study encompass person-centred care theory, health-related quality of life model and ecology system theory.

The selection of the Person-Centered Care Theory, Ecological Systems Theory, and Health-Related Quality of Life (HRQoL) Model was driven by their collective ability to capture the multifaceted nature of palliative care—spanning individual, environmental, and outcome-based dimensions. The Person-Centered Care Theory aligns with the study’s focus on individualized interventions, while the Ecological Systems Theory accounts for the broader systemic and contextual factors influencing care access and delivery. The HRQoL model, on the other hand, provides a framework to measure the impact of interventions on patients' well-being across physical, psychological, and social domains. Although other models such as the Biopsychosocial Model and the Donabedian Model of Care Quality were considered, they were excluded due to their more limited scope in explaining accessibility, implementation challenges, and patient-reported outcomes in a rural healthcare context. The selected theories therefore offered the most comprehensive alignment with the study’s objectives, scope, and conceptual framework, ensuring both analytical depth and practical relevance.

### 2.2.1 Person-Centered Care Theory

The person-centered care theory prioritizes the individual's unique needs, preferences, and values in healthcare settings. Unlike traditional approaches like the biomedical model, which primarily focuses on diagnosing and treating diseases or conditions based on physiological factors that may prioritize clinical outcomes, person- centered care theory emphasizes the importance of understanding the subjective experiences and perspectives of patients. It posits that effective care involves fostering a supportive environment that honors patients' autonomy, promotes empathy, and facilitates collaborative decision-making between patients and healthcare providers. By adopting a person-centered approach, healthcare practitioners can better address the holistic needs of patients, leading to improved outcomes and greater patient satisfaction.

The Person-Centered Care Theory posits that effective healthcare involves a profound focus on the individual patient's unique experiences, values, and preferences. This theory emphasizes tailoring care to the needs, values, and preferences of the cancer. It recognizes that each patient is unique, and their experiences, goals, and values should guide the palliative care interventions (McCormack, & McCance, 2006).

This postulation is particularly underpinned by the study's objectives as it emphasizes the individualized approach to palliative care interventions, aligning with the principles of person-centered care theory. When evaluating the effectiveness of palliative care interventions on the quality of life of cancer patients in Trans-Nzoia County, the theory suggests that tailoring care to the unique needs, values, and preferences of each patient may result in improved outcomes. By focusing on the emotional, social, and physical dimensions of patient care, the study aims to address the holistic well-being of cancer patients, promoting a sense of autonomy, respect, and meaningful involvement in their care decisions.

Several scholars have critiqued the Person-Centered Care Theory. Mechanic (1996), explored the complexities of implementing person-centered approaches in healthcare settings, emphasizing challenges in achieving genuine patient involvement and shared decision-making. While Salamon, (2000) discussed hurdles in translating person-centered principles into practical healthcare delivery, focusing on issues within healthcare systems and organizational structures. On the other hand, Stange et al. (2010) highlighted the need for refining person-centered care to better integrate

it into primary care practices, pointing towards areas for improvement in the practical application of person-centered approaches.

This theory highlights the significance of understanding patients' preferences, values, and circumstances, including their geographical location, cultural background, socioeconomic status, and health literacy levels, all of which can influence their ability to access palliative care services. By recognizing and addressing these individual-level factors, healthcare providers and policymakers can design and implement interventions to improve accessibility and availability. For instance, understanding patients' transportation challenges or financial constraints can inform the development of transportation assistance programs or financial support services to help patients access palliative care facilities. Furthermore, the Person-Centered Care Theory emphasizes the significance of nurturing cooperative relationships among patients, caregivers, and healthcare professionals. Such associations can augment communication and coordination initiates aimed at boosting accessibility. In this way embracing this methodology, healthcare infrastructures can more effectively address the varied requirements of patients, thus encouraging increased accessibility and usage.

### 2.2.2 Ecological Systems Theory

Ecological Systems Theory provides comprehensive and dynamic framework for comprehending human development within diverse environmental systems. The concept considers multiple nuanced tiers of influence, including the microsystem (the person's direct surroundings), mesosystem 9 interactions among microsystems), ecosystem (external environments that directly affect the person), and macrosystem (broader cultural context). By considering these multiple levels, Ecological Systems Theory offer a nuanced perspective on human behaviour and development. It is particularly valuable in explaining complex phenomena such as how individuals' development is shaped by their family, peers, community, and broader societal factors. Moreover, this theory provides actionable implications for policies and interventions that are designed to push a pragmatic development by addressing the multiple layers of influence on individuals' lives, making it a valuable framework

Developed by Bronfenbrenner (1979), the postulation argues that people do not operate as isolated entities bur are instead influenced by a series of nested systems, each with its unique dynamics.

The microsystem, representing immediate and direct environments like family and school, has the most direct impact on an individual. The mesosystem entails the interconnections between components of the microsystem, while the exosystem thus can assess environments externally thus has an indirect implication, such as the workplace or community services. The macrosystem includes the wider cultural and societal context, which impacts all other systems. Lastly, the chronosystem acknowledges the significance of time and historical shifts in moulding a person's development. This theory examines how individuals are influenced by various systems or environments, ranging from the microsystem (individual level) to the macrosystem (cultural context). It emphasizes the interconnectedness of these systems.

This theory emphasizes the nested systems of influence on individuals' development, ranging from the microsystem (direct surroundings) to the macrosystem (cultural context). By applying this theory to the objective of assessing factors promoting palliative care accessibility, one can analyse how factors at different levels, including individual, community, and societal factors, contribute to the availability and accessibility of palliative care services in the county. Similarly, the theory facilitates the identification of barriers to palliative care implementation by examining interactions between these systems and revealing challenges related to individual awareness, healthcare infrastructure, and community support services.

Elliott and Davis (2020) scrutinized the theory and pointed out that the theory is difficult to test empirically, and several concepts remain ambiguous in terms of definition. Additionally, the theory ignores the consideration of human-nature interconnections.

### 2.2.3 Health-Related Quality of Life (HRQoL) Model

The health-Related Quality of Life (HRQoL) model has a holistic approach when it comes to understanding health outcomes, encompassing various dimensions of well-being. Unlike traditional biomedical models, the HRQoL model acknowledges that health is not solely ascertained by the absence of illnesses but also by individuals' subjective experiences and functional abilities. By incorporating measures of subjective well-being, health status and satisfaction with life, the HRQoL model provides a comprehensive framework for assessing the impact of healthcare interventions on patients' overall standard of well-being.

The Health-Related Quality of Life (HRQoL) model is a framework that assesses an individual's well-being by considering various aspects related to their health. It encompasses physical, emotional, social, and functional dimensions, providing a comprehensive understanding of an individual's overall quality of life in the context of their health status and healthcare experiences. The HRQoL model posits that health is not solely determined by the absence of disease or illness but also by the individual's subjective perception of their well-being. Therefore, it goes beyond traditional clinical indicators and incorporates the individual's assessment of their health and its impact on their life (Fayers & Machin, 2015).

In the context of PC for patients with cancer, the HRQoL model guides interventions to improve various aspects of well-being. This may involve pain management, emotional support, social services, and assistance with daily activities. By addressing these dimensions comprehensively, the model helps enhance the overall quality of life for cancer patients undergoing palliative care.

The Health-Related Quality of Life (HRQoL) model provides a solid foundation for underpinning the objective of evaluating the effectiveness of palliative care interventions on the quality of life of cancer patients. This model emphasizes that health outcomes should be assessed not only based on clinical indicators but also by considering individuals' subjective experiences and overall well-being. By incorporating measures of subjective well-being, emotional, social, and functional dimensions of health, the HRQoL model offers a comprehensive framework for evaluating the impact of palliative care interventions on patients' overall quality of life. Therefore, in evaluating the effectiveness of palliative care interventions, the study can assess various aspects of patients' well-being, including physical comfort, emotional support, social connectedness, and functional abilities, thus providing a holistic understanding of the intervention's impact on improving the quality of life for cancer patients.

Feeny et al. (1995), highlighted the complexities of health utility measurement and its potential impact on the accuracy of HRQoL assessments. Hays et al. (1994) discussed challenges related to the cultural adaptation of HRQoL measures, emphasizing the difficulties in ensuring cross-cultural validity.

**2.3 Empirical Review**

Previous researchers have taken an interest in palliate care, and they have made important contributions concerning their specific issues of interest, but there are notable gaps that are yet to be addressed, and this study would seek to address some of these gaps, to ensure that new knowledge is enhanced. The empirical reviews are classified according to the research objectives of this study.

### 2.3.1 Availability and Accessibility of Palliative Care Services for Cancer Patients

Alonos-Babarro et al., (2013) explored the correlation between death of in-patients, utilization of resources within hospitals, and the presence of PC for those diagnosed with cancer. The research undertaking aimed to evaluate in-patient hospital deaths and resource usage among two Madrid Region areas, comparing those with and a Palliative Home Care Team (PHCT). Analyzing 549 patients who died 2005, the results suggested that this care is associated with a decrease in in-patient deaths and a reduction in overall hospitalizations during the final two months of life. While the research provides valuable insights, its primary focus was in examining the availability of PC without delving into the aspect of accessibility. Moreover, the research undertaking was conducted in Madrid limiting the generalizability of its findings.

Lakew et al., (2015) conducted research undertaking on the comprehension, accessibility and usage of all PC services among adult cancer at Tikur Anbesa Specialized Hospital, Ethiopia. This cross-sectional research undertaking involved 384 respondents concentrating exclusively on TASH as the sole referral center for mitigative effect and cancer care in Ethiopia. The findings revealed a notable challenge in the accessibility of PC services, with a significant number of respondents reporting difficulties. Despite this, a higher-than-average number of participants indicated prior knowledge about these services. Factors such as previous knowledge, physical and social well-being, income, and marital status were. The study, while providing valuable insights, concentrated on exploring aspects related to knowledge, accessibility, and utilization of palliative care, neglecting to investigate its overall availability. Additionally, it's crucial to note that the research was conducted in Ethiopia, thereby introducing a contextual gap.

Abu-Odah, Molassiotis, and Liu (2020) explored in this research undertaking is the access to PC among patients at a Comprehensive Cancer Center. In intention the research was to assess the [percentage of individuals living with cancer and identify determinants in the scenario of referrals.

The focus was on patients with advanced cancer who passed away between September 2009 and February 2010 in the Houston region. The methodology included a retrospective chart review of consecutive patients at MD Anderson Cancer Center. Their findings indicated that a significant majority of these patients did not acess these services before their demise, suggesting a delayed referral in the illness process with numerous missed opportunities for timely mitigative intervention. The research solely addressed the accessibility of palliative care overlooked its availability aspect, creating a conceptual gap that this research endeavors to fill.

### 2.3.2 Barriers to the Implementation of Palliative Care Interventions for Cancer Patients

Haines et al. (2018) investigated the obstacles in delivering PC to patients in low-and middle-income nations. This review sought to thoroughly scrutinize the difficulties and potential enablers in offering PC services in these countries. Adhering to PRISMA guidelines, a systematic review of the reviews was undertaken, encompassing literature published from 2000 to 2018. Fourteen reviews were analyzed using a modified socioecological model to categorize challenges into personal, system, policy, and organizational levels. Identified challenges encompassed knowledge gaps among patients, families, and healthcare providers, along with an insufficiently trained workforce, limited physical infrastructure, drug shortages, and a lack of national PC implementation plans. The study provides valuable information though there is a methodological gap since the study employs systematic review. Quality of the systematic review depends heavily on the quality of the included studies, and the potential for publication bias or selective reporting can impact the overall validity of the synthesized evidence. Therefore, this study seeks to fill this gap by utilizing primary data collected through a questionnaire and an interview guide.

Hui et al., (2012) performed an assessment of the obstacles in accessing PC for young cancer patients. This review aimed to amalgamated existing literature on the hurdles in accessing pediatric palliative care in the States, where the evidence is sparse despite its potential benefits for the roughly 16,000 infants diagnosed with cancer annually. A literature search was conducted using PubMed, CINAHL, and Web of Science databases, and the authors reviewed 71 articles. Obstacles were classified across four levels of a revised socioecological model: policy/payment, health systems, organizations, and individuals. Principal themes included inadequate funding mechanism, a scarcity of pediatric PC programs workforce, difficulties integrating into existing

oncology models and individual-level factors such as a lack of awareness about cultural and care differences. The study provides valuable information however, it is important to acknowledge that the study was done in the USA and therefore its findings cannot be generalized to other regions. This study therefore aims to fill this gap by focusing on Trans Nzoia County.

Sommerbakk et al. (2016) explored the obstacles and aids for executed quality enhancements in palliative care. The ultimate objective of this research endeavor carried out as a part off the EU-funded IMPACT project was to pinpoint factors perceived as hindrances or aids for enhancing palliative care in settings dealing with cancer and dementia in Norway. The methodology comprised 20 staff members across various healthcare services. Thematic analysis, employing both inductive and theoretical methods to derive these insights from focus groups. The findings revealed both hindrances and enablers across multiple domains, with specific challenges unique to PC being identified. The study used interviews, which have limitations related to a high degree of participant involvement. The Current research uses both an interview guide and a self-administered questionnaires to allow a larger group of participants (respondents) which allows for generalizations to be drawn from the sample to the population.

### 2.3.3 Effectiveness of palliative care interventions in addressing the physical, psychological and social, needs of cancer patients

Mateo-Ortega et al., (2018) carried out an examination of the efficacy of psychosocial interventions in complex PC patients. This quasi-experimental research endeavour was designed to assess the efficacy of particular psychosocial interventions in reducing discomfort in palliative care patients, especially those suffering from intense pain or emotional turmoil. The research undertaking involved 8,333 patients and utilized a prospective, multicentre, single-group pretest/ post-test design. The findings indicated that psychosocial interventions significantly reduced suffering in PC patients, with greater effectiveness observed in complex cases. The study focused exclusively on assessing the effectiveness of palliative care in addressing the psychosocial needs of cancer patients, neglecting to investigate its impact on addressing their physical needs. This limitation underscores the necessity for further research to comprehensively explore the overall effectiveness of PC in addressing healthcare needs. This study bridges this gap by investigating the effectiveness of palliative care in addressing the physical, psychological and social aspect.

Yang et al. (2016) assessed the effectiveness of hospital palliative care teams inpatients through a systematic literature review. The review involved a thorough search of two electronic databases, PubMed and CINAHL Plus, for articles published from 2005 to 2015. Additional searches were conducted through specific journal hand-searches and examination of reference lists in identified articles. The review identified 14 pre-post studies evaluating patient outcomes, with only 2 having a control group, and seven studies examining other aspects of palliative care intervention. Despite the absence of randomized controlled trials, the studies provided insights into the broader benefits of palliative care interventions, emphasizing the need for more robust research to confirm their efficacy in the acute inpatient hospital setting for cancer patients. The quality of the systematic review depends heavily on the quality of the included studies and the potential for publication bias or selective reporting can impact the overall validity of the synthesized evidence**.** This study aims to bridge this gap by utilizing primary data collected through mixed method.

Vernon, Hughes and Kowalczyk, (2022) assessed the efficacy of community-based palliative care programs. This systematic review aimed to divulge the optimization of community-based palliative care (CBPC) programs, reviewing 61 articles published through August 2021. Quantitative findings suggested that CBPC programs improve end-of-life care outcomes, including increased home deaths, reduced hospitalizations, shorter hospital stays, and lower healthcare costs. Qualitative studies highlighted positive outcomes and identified areas for improvement, emphasizing the need for communication and skills training for staff and volunteers. Research gaps were noted for CBPC programs in low-income countries and their impact on vulnerable populations globally. While findings support the cost-effectiveness of CBPC, further research and collaboration are crucial to enhance program effectiveness and share best practices worldwide. There is a methodological gap. this study utilized secondary data from articles which may contain inconsistencies due to variations in data collection processes across different sources. additionally, secondary data might be incomplete, limiting its reliability and validity. This study aims to bridge this gap by utilizing primary data collected through mixed method.

## 2.4 Research Gap

**Table 2. 1: Summary of Literature Review and Research Gap**

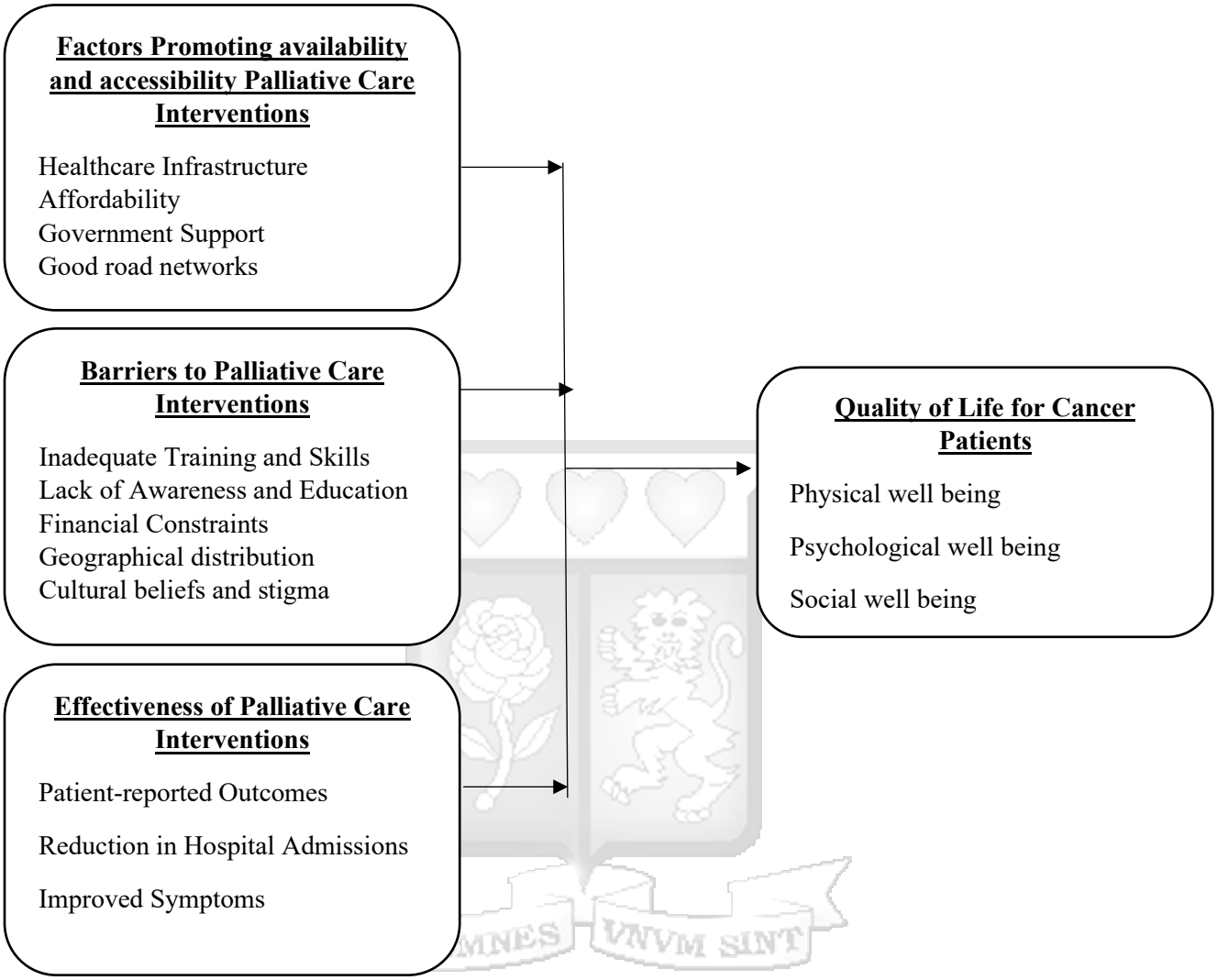
| Author | Study | Methodology | Findings | Gap |
|---|---|---|---|---|
| Alonso-Babarro et al. (2013) | Challenges in the provision of palliative care for patients with cancer in low- and middle-income countries. | Questionnaire | presence of a Palliative Home Care Team (PHCT) is linked to a decrease in in-patient deaths and a reduction in overall hospitalization during the final two months of life. | Primarily focused on examining the availability of palliative care without delving into the aspect of accessibility, more over the study was conducted in Madrid and therefore its findings cannot be generalized |
| Lakew et al. (2015) | Assessment of the knowledge, accessibility and utilization of palliative care services among adult cancer patients at Tikur Anbesa Specialized Hospital, Addis Ababa, Ethiopia. | Cross-sectional Study | Notable challenge in the accessibility of PC services, with a significant number of respondents reporting difficulties. | The study, while providing valuable insights, concentrated on exploring aspects related to knowledge, accessibility, and utilization of palliative care, neglecting to investigate its overall availability. Additionally, it's crucial to note that the research was conducted exclusively in Ethiopia, thereby introducing a contextual gap |

| | | | | |
|---|---|---|---|---|
| Abu-Odah, Molassiotis and Liu, (2020) | Access to Palliative Care Among Patients Treated at a Comprehensive Cancer Center. | Retrospective chart review | A significant majority of cancer patients did not access PC before their demise, indicating a delayed referral in the disease process with numerous missed opportunities for timely PC intervention. | The study only delved into the accessibility of PCs and overlooked its availability aspect creating a conceptual gap that this gap endeavors to fill. |
| Haines et al. (2018) | Challenges in the provision of palliative care for patients with cancer in low- and middle-income countries. | systematic review | challenges encompassed knowledge gaps among patients, families, and healthcare providers, along with an insufficiently trained workforce, limited physical infrastructure, drug shortages, and a lack of national PC implementation plans. | The study provides methodological gap since the study employs systematic review. Quality of the systematic review depends heavily on the quality of the included studies, and the potential for publication bias or selective reporting can impact the overall validity of the synthesized evidence. |
| Hui et al. (2012) | Barriers to accessing palliative care for pediatric patients with cancer. | systematic review | Barriers include insufficient funding mechanisms, a lack of pediatric palliative care programs and workforce, challenges integrating palliative care into existing pediatric oncology models, and individual-level factors such as a lack of | Contextual gap. The study was done in the USA and therefore its findings cannot be generalized to other regions |

| | | | | |
|---|---|---|---|---|
| | | | knowledge about pediatric palliative care and cultural differences. | |
| Sommerbakk et al. (2016) | Barriers to and facilitators for implementing quality improvements in palliative care. | Interviews | Specific barriers unique to PC were identified, such as the poor general condition of patients requiring PC, non-validated symptom assessment tools, lack of PC expertise, and conflicts with the staff's care philosophy. | The study utilized interviews which are limited to the large participant involvement. The Current research uses elf-administered questionnaires to allow a larger group of participants (respondents) which allows for generalizations to be drawn from the sample to the population. |
| Mateo-Ortega et al. (2018) | Effectiveness of Psychosocial Interventions in Complex Palliative Care Patients. | prospective, multicenter, single-group pretest/post-test design | The findings indicated that psychosocial interventions significantly reduced suffering in PC patients, with greater effectiveness observed in complex cases. | The study focused exclusively on assessing the effectiveness of palliative care in addressing the psychosocial needs of cancer patients, neglecting to investigate its impact on addressing their physical needs. |

| | | | | |
|---|---|---|---|---|
| Yang et al. (2016) | Effectiveness of Hospital Palliative Care Teams for Cancer Inpatients. | systematic review | Need for more robust research to confirm PC efficacy in the acute inpatient hospital setting for cancer patients. | The quality of the systematic review depends heavily on the quality of the included studies and the potential for publication bias or selective reporting can impact the overall validity of the synthesized evidence. |
| Vernon, Hughes and Kowalczyk, (2022) | Effectiveness in community-based palliative care programs. | systematic review | While findings support the cost-effectiveness of CBPC, further research and collaboration between researchers, health systems, and governments are crucial to enhancing program effectiveness and sharing best practices worldwide | There is a methodological gap. this study utilised secondary data from articles which may contain inconsistencies due to variations in data collection processes across different sources. additionally, secondary data might be incomplete, limiting its reliability and validity. This study aims to bridge this gap by utilizing primary data collected through mixed method. |

## 2.5 Conceptual Framework




The conceptual framework for this study is anchored in the interplay between palliative care interventions and the quality of life of cancer patients, guided by the three theoretical perspectives previously discussed. Drawing from the Person-Centered Care Theory, the framework emphasizes individualized care that respects patient values and preferences as central to palliative practice. The Ecological Systems Theory supports the inclusion of structural and contextual factors—such as facility resources and health system organization—that influence the accessibility and delivery of palliative care. Meanwhile, the Health-Related Quality of Life (HRQoL) model provides an outcome-oriented lens, allowing for the assessment of how these interventions affect patients' physical, emotional, and social well-being.

The framework posits that the availability and accessibility of palliative care services, the barriers encountered during implementation, and the effectiveness of these interventions directly influence the quality of life of cancer patients. The theoretical perspectives underpin each of these variables: the Person-Centered Care Theory explains how patient engagement shapes care outcomes, the Ecological Systems Theory contextualizes systemic challenges, and the HRQoL model captures the multidimensional nature of quality of life as an endpoint. This integrated framework thus not only aligns with the study objectives but also offers a structured lens through which the relationship between care processes and patient outcomes can be examined and empirically tested.

**Table 2. 2: Operationalization Table**

| Variable | Constructs | Measurement | Type | Source |
|---|---|---|---|---|
| Quality of Life for Cancer Patients | Physical well being<br>Psychological well being<br>Emotional well being | Correlation and Regression analysis | 5-point Likert Scale | Russell & Potter, (2002). |
| Factors promoting Accessibility of Palliative Care Services | Geographical Distribution<br>Healthcare Infrastructure<br>Affordability<br>Wait Times | Correlation and Regression analysis | 5-point Likert Scale | Evans, Hsu & Boerma (2013) |
| Barriers to The Implementation of Palliative Care Interventions | Geographical Distribution<br>Healthcare Infrastructure<br>Affordability<br>Wait Times | Correlation and Regression analysis | 5-point Likert Scale | Bahl et al., (2020). |
| Palliative Care Interventions | Patient-reported Outcomes<br>Caregiver Satisfaction<br>Reduction in Hospital Admissions<br>Improved Symptoms | Correlation and Regression analysis | 5-point Likert Scale | Saksena, Hu & Evans, (2014) |

# CHAPTER THREE: RESEARCH METHODOLOGY

## 3.1 Introduction

The chapter focused on the methodology that was adopted in undertaking the research, and which helped in meeting the research objectives. Hence, the research methodology concentrated on the research philosophy employed, research design, population and sampling, method of data collection, data analysis, research quality, and ethical considerations.

## 3.2 Research Philosophy

Research philosophy, other than the colloquial term also known as research paradigm, encompasses a set of beliefs, assumptions, and perspectives that guide the researcher's approach to conducting research and influence how they interpret and understand the world (Creswell & Creswell, 2018; Saunders et al., 2019). Research philosophy served as the foundation upon which a researcher built their research design, methodology, and data collection methods (Bryman, 2016). This study employed a positivism research philosophy, which was rooted in the belief that the world was external to the researcher and could be studied objectively (Cohen et al., 2018). This was a more appropriate philosophy for the study as it aimed for objectivity and the use of deductive reasoning in the analysis of observable and measurable phenomena, particularly those relating to the availability and accessibility of services, the structural and institutional barriers to care, and the effectiveness of interventions all of which demanded empirical inquiry grounded in the scientific method capable of uncovering causal relationships (Saunders et al., 2019).

## 3.3 Research Design

The research utilised a cross-sectional survey research design. Cross-sectional survey research involves gathering data from a sample of individuals or entities at a particular moment to examine relationships between variables or investigate a phenomenon (Creswell, 2014). This approach was deemed appropriate as it enabled the collection of data from a large sample all at a single point in time. The research employed a questionnaire as its primary data-collecting tool as they are efficient in gathering standardized responses from a large number of participants. They allowed for the collection of data from diverse populations while ensuring consistency in the questions asked. Additionally, questionnaires offered anonymity to participants, encouraging honest responses,

especially on sensitive topics. Furthermore, questionnaire data was easily quantified and analysed, enabling researchers to identify patterns, trends, and associations within the dataset.

### 3.4 Population

A study population refers to the whole group of individuals or elements that meet the criteria of a research study. The population in this study comprised 169 nurses of the Kitale County referral hospital. The research focused on Kitale County Referral Hospital because it is a Level 5 facility that offers extensive cancer treatments and palliative care services. Nurses were targeted for assessing palliative care interventions for cancer patients because they had both access to the information being explored and valuable experience in providing palliative care about cancer patients. Their direct involvement in patient care affords them firsthand access to patient experiences, needs, and challenges. Additionally, their training and experience equipped them with the knowledge and skills necessary to effectively evaluate the impact of palliative care interventions on cancer patients' quality of life and overall well-being.

### 3.5 Sampling Technique and Sample Size

Sampling involved the methodical selection of a portion of individuals or elements from a broader population for examination or analysis. Sampling aimed to conclude the entire population using observations or measurements gathered from the selected sample. For this study, a census approach was adopted, wherein every individual within the target population was included. A census involved collecting data from all members of a population rather than selecting a representative sample (Kothari, 2004). It was most suitable when the population was small, accessible, and manageable, as it allowed for the collection of comprehensive and highly accurate data without sampling bias (Etikan et al., 2016). This approach was appropriate for the study since the target population comprised 169 nurses at Kitale Level 5 Hospital, a number small enough to enable full coverage within the available resources and timeframe. Furthermore, by including the entire population, the study ensured complete representation, enhanced the reliability of the findings, and avoided the potential limitations of sampling error often associated with probability or non-probability sampling techniques (Creswell & Creswell, 2018).

### 3.6 Data Collection Methods

The study employed a questionnaire as the primary data collection instrument, and it was administered online to participants through a Google Forms link shared via both email and WhatsApp platforms to maximize reach. The questionnaire consisted of close-ended questions on a 5-point Likert scale and was organized into four sections aligned with the study's key concepts: the first section captured demographic information; the second section addressed issues related to the availability and accessibility of palliative care; the third focused on identifying barriers to implementation; and the fourth examined the effectiveness of palliative care in improving the quality of life for cancer patients. To enhance response rates and ensure reliable data, two follow-up reminders were sent through WhatsApp and email, and participants were assured of confidentiality and anonymity. These efforts contributed to the achievement of a 95% response rate, which is considered high for an online-based survey.

### 3.7 Research Quality

In this section, the quality of the research was taken into consideration. The validity, reliability and piloting of the research was explained.

#### 3.7.1 Reliability

Reliability pertained to the steadiness and uniformity of measurement, indicating the extent to which a research instrument yielded consistent results when repeatedly used under similar conditions (Creswell & Creswell, 2018). In research, ensuring reliability was essential as it enhanced the trustworthiness and credibility of the study findings (Taherdoost, 2016). It was conducted to establish the dependability of measurements and to reduce the influence of variability or random error, thereby enabling researchers to draw accurate and meaningful conclusions from the data (Heale & Twycross, 2015). In this study, Cronbach's alpha was employed to assess the internal consistency of the research instrument. Cronbach's alpha was considered suitable for evaluating the reliability of Likert-type scales, as it measured how closely related a set of items were as a group (Taber, 2018).

### 3.7.2 Validity

Validity was defined as the degree to which the outcomes obtained from a data analysis aligned with the aim of the research (Creswell & Creswell, 2018). Guaranteeing validity in a study was crucial, as it pertained to the precision and appropriateness of the research tool in measuring what it was intended to measure (Heale & Twycross, 2015). Validity was essential for maintaining the integrity of study results and for ensuring that the conclusions drawn from the collected data were meaningful and accurate (Taherdoost, 2016). In this study, the Kaiser-Meyer-Olkin (KMO) test was employed to assess the validity of the research instrument. The KMO test was appropriate for this purpose, as it evaluated sampling adequacy for factor analysis and indicated whether the variables were sufficiently correlated to justify such analysis (Field, 2018). By applying the KMO test, the study ensured that the measurements and variables selected were both conceptually and statistically aligned with the study objectives, thereby enhancing the credibility and trustworthiness of the findings.

### 3.7.3 Piloting

Piloting constituted the initial phase of the research process and typically involved a smaller-scale study used to inform the design and refinement of the main research (van Teijlingen & Hundley, 2001). It assisted in assessing the validity and reliability of the instrument, provided feedback on whether the study was feasible for full-scale implementation, clarified the scope, and helped to estimate time and resource requirements (Hassan et al., 2006). In this study, the questionnaire was pretested on a sample different from the actual study population. It was shared with a group of 10 nurses at Kenyatta National Hospital in Nairobi County, who offered constructive feedback that contributed to improving the data collection tool. Questions that were not easily understood were reworded to enhance clarity and ensure that they could be interpreted accurately by the intended respondents.

## 3.8 Data Analysis

Data analysis entails the interpretation of collected data through logical and analytical thought processes to identify patterns, trends, or associations. Quantitative data collected from the questionnaire was analysed for completeness using SPSS version 25. Descriptive analysis was

employed in this study, and it was presented in tables, showcasing key statistical measures such as mean, median, mode, and standard deviation. This approach facilitated a comprehensive understanding of the central tendency within the data, offering a clear and organised representation for effective interpretation and analysis. Furthermore, the study incorporated inferential analysis, specifically employing correlation and regression analysis. These statistical techniques were utilized to explore and infer relationships and dependencies within the data, allowing for a deeper understanding of potential associations between palliative care and quality of life of cancer patients and supporting the formulation of meaningful conclusions.

### 3.9 Research Ethics

Ethical considerations in research involve the examination and adherence to moral principles and guidelines, ensuring that the rights, well-being, and privacy of participants are safeguarded throughout the study. The study obtained the required ethical approval from the Institutional Review Board, as a fundamental requirement for conducting the research. Additionally, the research permit was sought from the National Commission for Science, Technology, and Innovation (NACOSTI). Before collecting data from nurses, the researchers sought explicit authorization from the management of the Kitale level 5 health facility, affirming the commitment to ethical and legal compliance throughout the research process. Informed consent was obtained from the participants as they were assured of their voluntary participation, with no risks to them individually or professionally. The participants were also explained the purpose of the data they provided and were assured of the security and privacy of any personal information collected.

# CHAPTER FOUR: ANALYSIS AND PRESENTATION OF RESEARCH FINDINGS

## 4.1 Introduction

The chapter represented the findings of the analysis undertaken on the data collected. This entailed a description of research participants, the results for the validity and reliability tests. Descriptive statistics of the study was also undertaken before inferential analysis that took the form of correlation and regression analysis. The findings of the study were also discussed and the chapter summary.

## 4.2 Research Participants

The study had targeted a total of 169 nurses operating at Kitale Level 5 Hospital. A response rate of 95 respondents that represented 61% of the target population was adequate for undertaking research analysis (Curtin et al., 2000).

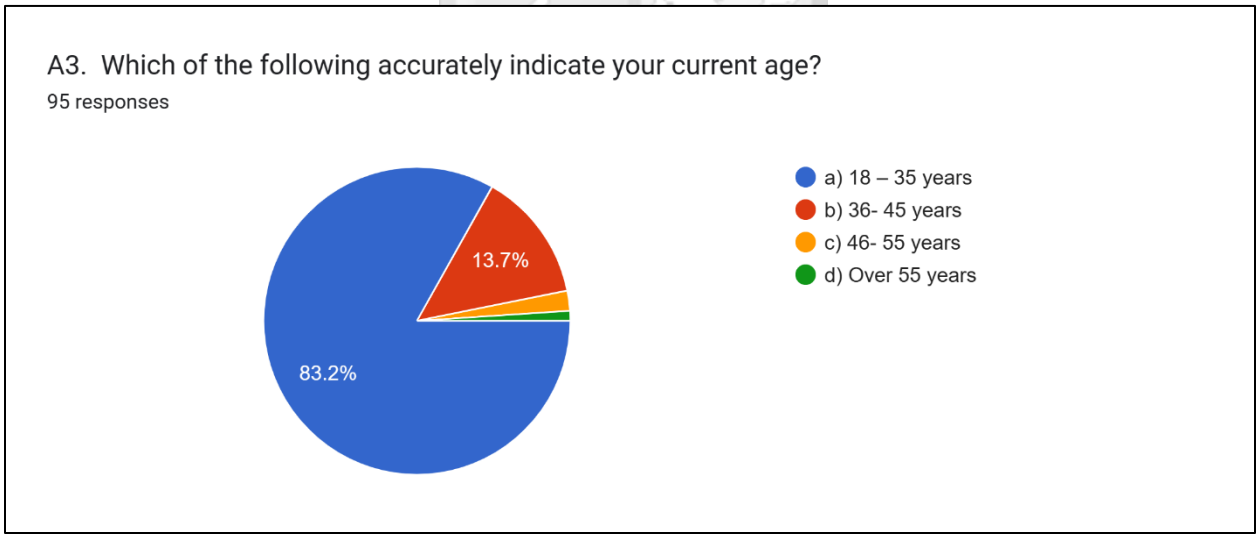



**Figure 4. 1: Age of Respondents**

Figure 4.1 indicated that majority of the respondents (83.2%) were in the age bracket 18-35 years. The higher the age bracket, the lower were the respondents with only 1% of the respondents falling in the category of respondents over 55 years.

Majority of the respondents had worked as nurses for a period ranging from 1 to 5 years. Only 6% of the respondents had worked as nurses for over 10 years. This is indicated in Figure 4.2.

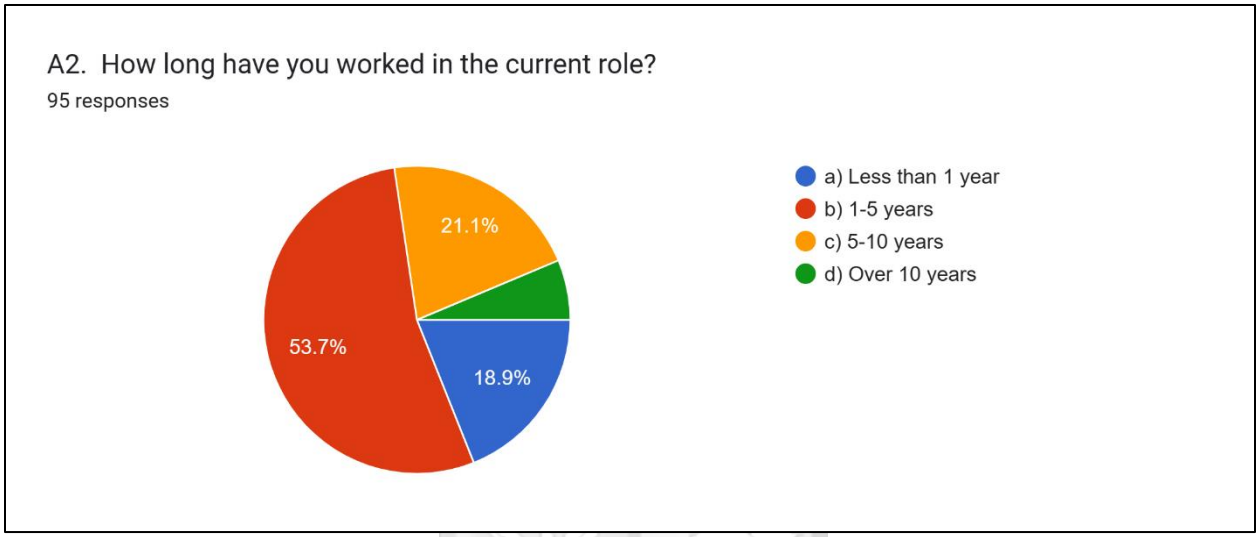



**Figure 4. 2: Years of Experience Working as a Nurse**

The education qualifications of the respondents indicated that 71% of the respondents had qualified with a college diploma certification, while only 25% had Bachelors Degree qualification. 2% of the respondent had a post graduate degree and an equal number had only attained secondary level qualification as their highest academic qualifications as indicated in Figure 4.3.

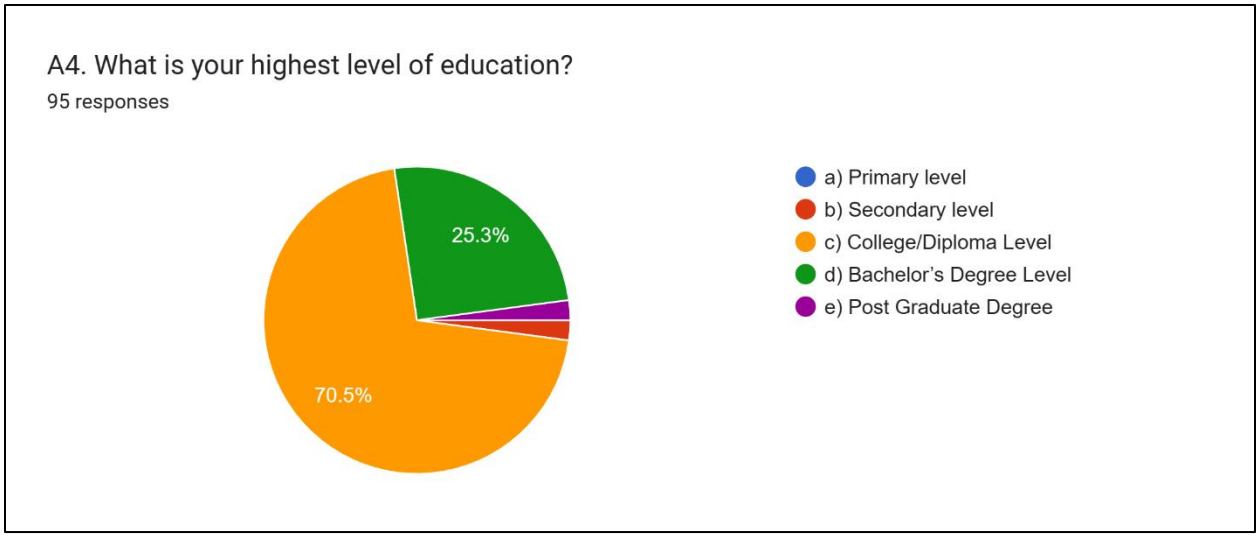



**Figure 4. 3: Highest Level of Education**

### 4.3 Reliability and Validity Tests

Validity refers to the extent to which the study measures what it intends to measure, while reliability assesses the consistency and stability of the measurements over time. Kaiser-Meyer-Olkin (KMO) test is a measure of sampling adequacy, indicating whether the variables in your study are suitable for factor analysis. Typically, a KMO value above 0.6 is considered acceptable, suggesting that your data is appropriate for factor analysis (Roberts & Priest, 2006).

Cronbach's alpha was used to assess reliability. It measures the internal consistency of the scale or questionnaire items, indicating how closely related a set of items are as a group. Generally, a Cronbach's alpha value above 0.7 is considered acceptable for research purposes, though some researchers may consider values as low as 0.6 acceptable. The decision rule for Cronbach's alpha is that higher values indicate greater reliability. However, if the alpha coefficient is too high (close to 1.0), it may suggest redundancy among the items, indicating that some items could be removed to improve the scale's efficiency (Hancock & Mueller, 2010). The results for reliability and validity tests undertaken in this study, indicated that the research instrument was both consistent and reliable as the KMO and Cronbach's tests undertaken were within the required parameters as indicated in Table 4.1.

**Table 4. 1: Reliability and Validity Test**

| Variable | N of Items | Cronbach's Alpha | KMO Statistics | Decision Rule |
|---|---|---|---|---|
| Availability and Accessibility of Palliative Care | 6 | .894 | .880 | Accept |
| Barriers to Palliative Care | 7 | .907 | .838 | Accept |
| Effectiveness of Palliative Care | 5 | .931 | .888 | Accept |
| Quality of Life | 6 | .924 | .863 | Accept |

Source: Researcher (2024)

### 4.4 Descriptive Statistics

The mean, standard deviation, and the mode of the responses for statements in each variable were assessed so as to describe the responses provided. It indicated what majority of the respondents viewed each of the study variables and issues such as high deviations or exceptional findings were identified in the study. The overall responses was also indicated for each variable.

#### 4.4.1 Availability and Accessibility of Palliative Care

Respondents were required to assess the factors that enhanced availability and accessibility of Palliative Care for cancer patients in TransNzoia County. The respondents were required to assess on the extent to which they disagreed or agreed with each of the following statements (B1 – B5).

As indicated in Table 4.2, the highest mean score was observed for B6 (mean = 3.03), suggesting general agreement that awareness and education programs enhanced access to palliative care. B4 (mean = 2.97) and B5 (mean = 2.88) also showed relatively positive perceptions of geographical location and transportation services, with a mode of 4 in each case indicating agreement among most respondents. In contrast, B2 (mean = 2.34) recorded the lowest score, with a mode of 2, showing that most respondents disagreed that palliative care was affordable. B3, which addressed government support, had a mean of 2.96 and a mode of 3, indicating neutrality, while also recording the highest standard deviation (1.279), implying a wide variation in responses.

As further indicated in Table 4.2, B1 (mean = 2.92) and B3 also showed relatively high standard deviations, at 1.260 and 1.279, respectively, suggesting inconsistent experiences among

respondents regarding infrastructure and government support. These results indicated that while awareness programs, transport systems, and geographical access were generally perceived as supportive of access to palliative care, significant challenges remained in terms of affordability and institutional backing. The findings point to a need for targeted interventions focused on improving the financial accessibility of services and reinforcing government support to enhance equity and effectiveness in palliative care provision.

**Table 4. 2: Descriptives on Accessibility of Palliative Care**

| | | B1. | B2. | B3 | B4 | B5 | B6 |
|---|---|---|---|---|---|---|---|
| N | Valid | 95 | 95 | 95 | 95 | 95 | 95 |
| | Missing | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | | 2.92 | 2.34 | 2.96 | 2.97 | 2.88 | 3.03 |
| Mode | | 4 | 2 | 3[a] | 4 | 4 | 4 |
| Std. Deviation | | 1.260 | 1.251 | 1.279 | 1.216 | 1.202 | 1.216 |

a. Multiple modes exist. The smallest value is shown

### 4.4.2 Barriers to Palliative Care of Cancer Patients

Respondents were asked to evaluate seven statements (C1–C7) designed to assess the barriers to palliative care delivery for cancer patients in TransNzoia County. These statements addressed issues such as healthcare provider training, awareness, financial constraints, geographical distribution, cultural beliefs, stigma, and infrastructure limitations. As indicated in Table 4.3, the mode for all statements was 4, reflecting general agreement among respondents that these are common barriers, with C3 (financial constraints) having the highest mode of 5, meaning most respondents strongly agreed that cost was a critical impediment. This was further supported by C3's high mean score of 3.95, the highest among the seven statements, suggesting that financial challenges were viewed as the most severe barrier to accessing timely and effective palliative care in the region.

Moreover, statements C2, C4, C6, and C7 had mean values above 3.5, reflecting a moderately strong agreement with barriers such as awareness gaps, geographic inaccessibility, cultural stigma, and infrastructure inadequacy. Standard deviations across the items ranged between 1.155 and 1.243, indicating a reasonable spread in responses but consistent perceptions overall. These results implied that financial burdens, inadequate awareness, and system-level limitations were among

the most prominent obstacles facing cancer patients in accessing palliative care in TransNzoia County. The findings underscore the importance of addressing these structural, cultural, and economic barriers to ensure equitable access to end-of-life care.

**Table 4. 3: Frequencies for Barriers to Palliative Care**

**Statistics**

| | | C1. | C2 | C3 | C4 | C5 | C6. | C7 |
|---|---|---|---|---|---|---|---|---|
| N | Valid | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| | Missing | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | | 3.34 | 3.61 | 3.95 | 3.57 | 3.46 | 3.64 | 3.80 |
| Mode | | 4 | 4 | 5 | 4 | 4 | 4 | 4 |
| Std. Deviation | | 1.243 | 1.205 | 1.224 | 1.155 | 1.236 | 1.175 | 1.208 |

Source: Researcher, (2024)

### 4.4.3 Effectiveness of Palliative Care Interventions

To evaluate the effectiveness of palliative care for cancer patients in TransNzoia County, respondents rated five statements (D1–D5) focused on core outcome areas such as symptom relief, patient comfort, hospital admissions, and management outside of clinical settings. As presented in Table 4.4, D1 received the highest mean score of 3.94, showing strong agreement that palliative care interventions had positively impacted the management of patients' symptoms, which is a primary goal of such care. D2 had a mean of 3.79, suggesting that respondents agreed patients experienced improved overall comfort after receiving palliative care. D3, which examined whether these interventions led to a reduction in hospital admissions, received the lowest mean of 3.58, indicating that although respondents generally agreed, the effect on hospital readmission may not have been as pronounced as in other domains.

**Table 4. 4: Frequencies of Effectiveness of Palliative Care**

| | | D1 | D2 | D3 | D4 | D5 |
|---|---|---|---|---|---|---|
| N | Valid | 95 | 95 | 95 | 95 | 95 |
| | Missing | 0 | 0 | 0 | 0 | 0 |
| Mean | | 3.94 | 3.79 | 3.58 | 3.84 | 3.87 |
| Mode | | 4 | 4 | 4 | 4 | 4 |
| Std. Deviation | | 1.029 | 1.184 | 1.135 | 1.133 | 1.142 |

Source: Researcher (2024)

In addition, D4 and D5 also showed relatively high mean scores of 3.84 and 3.87 respectively, confirming that respondents agreed patients were able to manage conditions outside hospital settings and had experienced noticeable symptom relief. All five statements had a mode of 4, indicating that the majority of respondents consistently agreed with each item. Although standard deviations ranged from 1.029 to 1.184, implying some variation in responses, the general pattern reflected widespread perceived effectiveness of palliative care interventions. These results emphasized that such interventions were not only contributing to symptom relief and comfort but also supporting patients in managing their care more independently—an important step in improving quality of life among cancer patients in TransNzoia County.

### 4.4.4 Quality of Life

The study assessed the quality of life of cancer patients using six statements labeled E1 to E6, focusing on physical health, emotional well-being, social support, and community inclusivity. As indicated in Table 4.5, all six items had a mode of 4, showing that most respondents agreed with each statement, suggesting an overall positive perception of cancer patients' quality of life. E1, which had a mean of 3.56 and a mode of 4, indicated that respondents agreed cancer patients showed improved physical functioning and mobility over time. E5, which had a mean of 3.55 and also a mode of 4, reflected that patients felt supported and valued by their families, peers, and communities. In contrast, E2 received the lowest mean score of 3.22, though its mode remained 4, suggesting that while the majority agreed, some respondents were less convinced that pain management and comfort measures were consistently effective.

**Table 4. 5: Frequencies for Quality of Life**

| | | E1 | E2 | E3 | E4 | E5 | E6 |
|---|---|---|---|---|---|---|---|
| N | Valid | 95 | 95 | 95 | 95 | 95 | 95 |
| | Missing | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | | 3.56 | 3.22 | 3.37 | 3.45 | 3.55 | 3.41 |
| Mode | | 4 | 4 | 4 | 4 | 4 | 4 |
| Std. Deviation | | 1.127 | 1.281 | 1.230 | 1.183 | 1.137 | 1.198 |

Source: Researcher, (2024)

E3, with a mean of 3.37 and mode of 4, related to emotional stability, suggesting that respondents agreed cancer patients were generally able to manage anxiety and depression. Similarly, E4, with a mean of 3.45 and mode of 4, indicated that patients had accepted their diagnoses and were actively involved in treatment decisions. E6, addressing inclusivity within the community, had a mean of 3.41 and mode of 4, showing agreement that the community was largely supportive of cancer patients. The standard deviations across all items ranged from 1.127 to 1.281, indicating moderate variation in responses. Collectively, the results showed that while physical and social aspects of quality of life were rated positively, more effort may be required in addressing pain management and psychological support to ensure a more holistic care experience for cancer patients in TransNzoia County.

### 4.5 Correlation Analysis

Correlation analysis was conducted to examine the strength and direction of the relationships between palliative care variables and the quality of life among cancer patients in TransNzoia County. It is important to note that the analysis did not aim to establish causality but rather to identify how the availability, barriers, and effectiveness of palliative care interventions were statistically associated with the quality of life. As shown in Table 4.6, the correlation between availability and accessibility of palliative care and quality of life was moderate and positive ($r = 0.388$, $p < 0.01$), indicating that better access to care was moderately associated with improved quality of life for cancer patients. This finding suggested that infrastructure, awareness, and ease of reaching services played a significant role in enhancing patient outcomes.

**Table 4. 6: Correlation Table**

**Correlations**

| | A. Quality of Life | B. Availability and Accessibility of Palliative Care | C. Barriers to Palliative Care | D. Effectiveness of Palliative Care Interventions |
|---|---|---|---|---|
| A. Quality of Life | 1.000 | | | |
| B. Availability and Accessibility of Palliative Care | .388** | 1.000 | | |

| | | | | |
|---|---|---|---|---|
| C. Barriers to Palliative Care | .281** | .170 | 1.000 | |
| D. Effectiveness of Palliative Care Interventions | .484** | .221* | .478** | 1.000 |

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

*. Correlation is significant at the 0.05 level (2-tailed).

In addition, a moderate positive correlation was observed between effectiveness of palliative care interventions and quality of life ($r = 0.484$, $p < 0.01$). This indicated that when palliative care was perceived as effective—e.g., in symptom relief, comfort, and reduced admissions—patients were more likely to report a better quality of life. Conversely, the correlation between barriers to palliative care and quality of life was weaker but still significant ($r = 0.281$, $p < 0.01$), suggesting that even though barriers like financial constraints or lack of trained staff negatively influenced access to care, they still had a measurable though limited association with patient well-being. These results collectively emphasized that enhancing availability and ensuring effectiveness of palliative care services were more strongly linked to improved outcomes, compared to simply mitigating barriers.

### 4.6 Regression Analysis

Regression analysis was conducted to assess the extent to which palliative care interventions, specifically availability and accessibility, barriers, and effectiveness, predicted the quality of life among cancer patients in Trans Nzoia County. The goal was to evaluate the combined influence of these factors on patients' well-being. As shown in Table 4.7, the regression model yielded an R-value of 0.610, indicating a moderate positive correlation between the independent variables and the dependent variable (quality of life). More importantly, the R Square value of 0.372 suggested that approximately 37.2% of the variance in quality of life could be explained by the combined effects of the three palliative care dimensions.

**Table 4. 7: Regression Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | .610[a] | .372 | .351 | 4.909 |

a. Predictors: (Constant), D. Effectiveness of Palliative Care Interventions, B. Availability and Accessibility of Palliative Care, C. Barriers to Palliative Care

This finding indicated that palliative care interventions**,** when taken together**,** contributed meaningfully to improving the quality of life for cancer patients, though a significant proportion (62.8%) of the variation remained unexplained, possibly due to other external or patient-specific factors. The Adjusted R Square of 0.351 further confirmed the model's predictive strength while accounting for the number of predictors. The standard error of the estimate (4.909) reflected the average deviation of the observed values from the regression line, indicating moderate accuracy in the model's predictions. Overall, the results highlighted the importance of investing in effective and accessible palliative care, while also addressing barriers to care delivery, **to** significantly enhance patient outcomes in the region.

**Table 4. 8: ANOVA TABLE**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 1296.373 | 3 | 432.124 | 17.931 | .000[b] |
| | Residual | 2193.058 | 91 | 24.100 | | |
| | Total | 3489.432 | 94 | | | |

a. Dependent Variable: E. Quality of Life

b. Predictors: (Constant), D. Effectiveness of Palliative Care Interventions, B. Availability and Accessibility of Palliative Care, C. Barriers to Palliative Care

As shown in Table 4.8, the results of the ANOVA test indicated that the regression model was statistically significant, with a p-value of 0.000, which was well below the threshold of 0.05 ($p < 0.05$). This confirmed that the combined palliative care intervention variables—availability and accessibility, barriers, and effectiveness—had a statistically significant effect on the quality of life of cancer patients in TransNzoia County. The F-statistic value of 17.931 further supported the strength of the model, demonstrating that the relationship between the independent variables and the dependent variable was unlikely to have occurred by chance. Although Table 4.8 confirmed overall model significance, further insights from the coefficients table (Table 4.9) revealed that availability and accessibility of palliative care and the effectiveness of palliative care interventions

had statistically significant positive effects on the quality of life ($p < 0.05$), while barriers to palliative care exhibited a negative regression coefficient, indicating an inverse relationship. This suggested that as systemic or social barriers increased, the quality of life for cancer patients decreased. Together, the results underscore the importance of strengthening supportive and effective palliative care mechanisms while reducing access-related obstacles to optimize patient outcomes.

**Table 4. 9: Coefficients**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 5.066 | 2.347 | | 2.159 | .034 |
| | A. Availability and Accessibility of Palliative Care | .275 | .089 | .271 | 3.092 | .003 |
| | B. Barriers to Palliative Care | -.019 | .094 | -.021 | -.201 | .841 |
| | C. Effectiveness of Palliative Care Interventions | .593 | .128 | .485 | 4.618 | .000 |

a. Dependent Variable: E. Quality of Life

As presented in Table 4.9, the regression analysis examining the predictors of quality of life (QoL) among cancer patients showed that both the availability and accessibility of palliative care and the effectiveness of palliative care interventions had statistically significant positive effects on QoL. Specifically, availability and accessibility recorded a standardized beta coefficient of $\beta = 0.271$ with a p-value of 0.003, indicating that improved access to services was associated with better patient-reported quality of life. The effectiveness of interventions was the most influential factor in the model, with a standardized beta of $\beta = 0.485$ and a p-value of 0.000, meaning that patients receiving effective palliative care reported significantly higher QoL outcomes. In contrast, barriers to palliative care had a negative but statistically insignificant coefficient ($\beta = -0.021$, $p = 0.841$), suggesting that although barriers may impact care, they did not independently predict QoL within the model. The constant value ($B = 5.066$, $p = 0.034$) indicated the baseline level of QoL when all predictors were held at zero. These results emphasized that improving the quality and reach of palliative care services had a far greater impact on patients' well-being than simply reducing

perceived barriers, underscoring the importance of service delivery effectiveness in end-of-life care planning.

### 4.7 Chapter Summary

The chapter presented data that was analysed to provide insights into the effectiveness of palliative care interventions on quality of life for cancer patients in TransNzoia County. Demographics data of the participants indicated that nurses were mainly young (from age of 18-35) and were highly educated (college/diploma level). The geographical location as well as educational and support programs enhanced accessibility and availability of palliative care interventions. However, there was poor government support and financial constraints limited palliative care interventions.

The study delved into the barriers hindering their effective implementation. It revealed significant challenges such as inadequate training among healthcare professionals and financial constraints faced by cancer patients, which impeded the delivery of palliative care services. Despite these barriers, the study demonstrated the effectiveness of palliative care interventions in enhancing the quality of life for cancer patients in TransNzoia County. By addressing these barriers and leveraging factors that enhance accessibility and effectiveness, healthcare stakeholders can strive to improve the care and support provided to cancer patients, ultimately fostering better quality of life outcomes.

# CHAPTER FIVE: DISCUSSION OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

## 5.1 Introduction

The chapter encompasses a discussion of findings of the study. It then makes relevant conclusion in regard to the study variables, while making study recommendations. The chapter also includes the limitations of the study, taking care to indicate the effort that was undertaken in the study to address the limitations. The study then indicates the relevant areas for future research.

## 5.2 Summary

The study aimed to comprehensively investigate the landscape of palliative care interventions for cancer patients in TransNzoia County, focusing on their availability, accessibility, barriers to implementation, and effectiveness in enhancing patients' quality of life. Through a rigorous analysis of data collected from 169 nurses at Kitale Level 5 Hospital, the study provided valuable insights into the demographic characteristics of healthcare professionals involved in palliative care provision, revealing a predominantly young and highly educated workforce. This demographic context set the stage for understanding the nuances of palliative care delivery in the region.

In assessing the availability and accessibility of palliative care services, the study uncovered a mixed landscape. While strengths in healthcare infrastructure and geographical accessibility were acknowledged, significant concerns regarding affordability and government support emerged. These findings resonated with previous research, underlining the importance of timely access to palliative care in reducing hospitalizations and improving end-of-life care outcomes. However, challenges in accessibility, particularly in low-resource settings, were also highlighted, echoing the need for concerted efforts to address systemic barriers to care.

The study further illuminated the barriers hindering the effective implementation of palliative care interventions, identifying factors such as inadequate training among healthcare professionals and financial constraints faced by patients. These findings underscored the multifaceted challenges inherent in delivering quality palliative care and emphasized the need for targeted interventions at both the individual and systemic levels. Despite these barriers, the study demonstrated the

significant contributions of palliative care interventions in addressing the physical, psychological, and social needs of cancer patients, thereby enhancing their overall quality of life.

### 5.3 Discussion of Findings

The research participants, primarily nurses from Kitale Level 5 Hospital, provided a rich pool of data, with 61% of the target population represented in the responses. The demographic characteristics of the respondents provided context to interpret the findings. It's notable that a significant portion of the respondents were in the younger age bracket and held college diploma certifications, suggesting a relatively young and educated workforce in the nursing sector. They provided insights into the study on the palliative care interventions on quality of life for cancer patients in the county, which was presented per each objective of the study as indicated.

#### 5.3.1 Accessibility and Availability of Palliative Care

The availability and accessibility of palliative care services and QOL for cancer patients in TransNzoia County were evaluated. The correlation findings indicated a moderate positive relationship ($r=0.388$, $p < 0.01$). The regression analysis further confirmed this relationship, indicating a statistically significant positive effect ($\beta = 0.271$, $p < 0.05$), meaning that as these factors improve, accessibility to palliative care also increases. This finding underscores the critical role of a well-developed healthcare system, financial affordability, and supportive policies in ensuring that cancer patients receive timely and adequate palliative care. Improved infrastructure reduces physical barriers to care, affordability ensures that financial constraints do not hinder treatment, government involvement facilitates policy implementation and funding, and awareness programs empower patients with knowledge about available services. These create a more inclusive and efficient palliative care system, ultimately improving the quality of life for cancer patients in the county.

These findings aligned with the study by Alonos-Babarro et al. (2013), which also highlighted the importance of availability of palliative care in reducing in-patient deaths and overall hospitalisations. However, unlike the current study, Alonos-Babarro et al. focused primarily on availability without delving into accessibility issues. Similarly, Abu-Odah, Molassiotis, and Liu (2020) also emphasised on the significance of timely access to palliative care, albeit in a different

setting. Conversely, Lakew et al. (2015) identified challenges in accessibility, particularly in low-resource settings, aligning with the concerns raised in the current study regarding affordability and government support.

The findings on the availability and accessibility of palliative care services align with the Person-Centered Care Theory, which underscores the need to tailor healthcare services to patients' unique needs, values, and preferences. These findings support the theory's assertion that a well-developed healthcare system, financial affordability, and supportive policies foster improved patient outcomes.

### 5.3.2 Barriers to Palliative Care

The study investigated barriers to the implementation of palliative care interventions for cancer patients. The correlation analysis underscored a positive correlation with the quality of life of cancer patients ($r = 0.281$, $p < 0.01$). However, their overall effect is not statistically significant ($\beta = -0.021$, $p > 0.05$). This suggests that while these barriers exist and may slightly influence patient experiences, they do not independently substantially determine the quality of life. The weak correlation implies that factors such as the availability and accessibility of palliative care services play a more decisive role. For instance, while financial constraints and geographical distribution can pose challenges, their impact may be mitigated if healthcare systems ensure well-distributed facilities and financial support mechanisms. Similarly, cultural beliefs and stigma may limit service utilization, but targeted awareness campaigns and professional training could help bridge these gaps. The lack of statistical significance further suggests that addressing these barriers alone may not significantly improve quality of life unless accompanied by broader systemic reforms, such as policy improvements, infrastructure development, and increased funding for palliative care services. Therefore, a multi-faceted approach that integrates both barrier reduction and service enhancement is essential for improving the overall well-being of cancer patients.

The findings of this study contrast with those of Haines et al. (2018), who emphasized knowledge gaps among healthcare providers and insufficient physical infrastructure as major barriers to palliative care. This discrepancy may be attributed to methodological differences, as Haines et al. employed a systematic review approach, which may introduce biases related to study selection and interpretation, whereas the current study relied on primary data, offering direct insights from the

study population. However, the findings align with Sommerbakk et al. (2016), who highlighted organizational challenges in palliative care delivery, reinforcing the importance of system-level barriers such as inadequate training, financial constraints, and limited geographical distribution. Additionally, the contrast with Hui et al. (2012), which focused on pediatric palliative care in the USA, underscores the necessity of context-specific research, as barriers may vary across regions and healthcare systems. These comparisons highlight the complexity of palliative care challenges and the need for tailored interventions that consider both systemic and contextual factors.

The study's findings on barriers to palliative care implementation align with Ecological Systems Theory, which emphasizes the interconnected influences of individual, community, and societal factors on human behavior. The findings indicated that limited awareness, inadequate infrastructure, and financial constraints significantly hinder palliative care accessibility. By applying Bronfenbrenner's (1979) framework, the study reveals that the microsystem (patients and healthcare providers), mesosystem (family and community support), exosystem (healthcare policies and services), and macrosystem (socioeconomic and cultural factors) collectively shape palliative care accessibility.

### 5.3.3 Effectiveness of Palliative Care Interventions

The moderate positive correlation ($r = 0.484$) indicates a meaningful association between effective palliative care and improved patient outcomes, while the strong statistical significance ($\beta = 0.485$, $p < 0.001$) confirms that these interventions have a direct and substantial impact. This implies that when palliative care services are well-structured integrating comprehensive symptom management, psychological support, and patient-centered approaches patients experience notable improvements in pain relief, emotional well-being, and overall comfort. Furthermore, effective palliative care contributes to reducing hospital admissions by providing adequate symptom control in home or community settings, allowing patients to receive care in familiar environments rather than relying on frequent hospital visits.

This aligned with the findings of Mateo-Ortega et al. (2018), who demonstrated the efficacy of psychosocial interventions in reducing patient suffering. However, unlike the current study, Mateo-Ortega et al. focused solely on psychosocial aspects, neglecting to explore the broader impact of palliative care interventions. Similarly, Vernon, Hughes, and Kowalczyk (2022)

highlighted the positive outcomes of community-based palliative care programs, indicating improvements in end-of-life care outcomes. Nevertheless, the methodological gap in utilizing secondary data from articles introduced potential inconsistencies and incompleteness, unlike the primary data approach used in the current study.

The study's evaluation of the effectiveness of palliative care interventions aligns with the Health-Related Quality of Life (HRQoL) Model, which posits that health outcomes should be assessed beyond clinical indicators to encompass subjective well-being and functional abilities (Fayers & Machin, 2015). The findings showed that effective palliative care interventions improved patients' physical comfort, emotional well-being, and social connectedness. These align with the HRQoL model's emphasis on holistic care that considers psychological and social dimensions alongside medical treatment.

### 5.3.4 Relationship of the Findings with Theoretical Perspectives

The findings of this study strongly align with the theoretical foundations laid out in the study, particularly the Person-Centered Care Theory, Ecological Systems Theory, and the Health-Related Quality of Life (HRQoL) Model. The Person-Centered Care Theory, which emphasizes individualized care based on respect for patients' values and preferences (McCormack & McCance, 2017), is reflected in the study's observation that effective palliative care interventions significantly enhance patients' emotional and physical well-being. Nurses who prioritized empathetic communication, individualized pain management, and psychosocial support contributed to better patient outcomes—underscoring the practical validity of this theory in the context of palliative care.

The Ecological Systems Theory by Bronfenbrenner (1979), which posits that human development and experience are shaped by multiple layers of environmental influences, also resonates with the study's findings. The challenges reported in the implementation of palliative care—such as limited institutional resources, insufficient staffing, and infrastructural deficits—highlight the influence of the broader healthcare ecosystem on the delivery of palliative services. These systemic barriers align with the theory's assertion that macro- and exo-system factors (such as health policies, hospital governance structures) profoundly affect individual experiences and outcomes.

Furthermore, the study's evidence that palliative care significantly improves patients' social, psychological, and physical quality of life corroborates the relevance of the HRQoL Model. This model, which focuses on health outcomes across multiple life domains (Ferrans et al., 2005), provides a useful evaluative lens for understanding how comprehensive palliative interventions translate into holistic well-being. By demonstrating that targeted palliative strategies directly improve life quality dimensions, the study affirms the HRQoL model as an appropriate and valid framework for outcome assessment in cancer care. Collectively, the findings not only support the application of these theories but also extend their relevance to rural healthcare contexts like Trans-Nzoia County.

### 5.4 Conclusion

The study's findings shed light on several key variables related to palliative care interventions for cancer patients in TransNzoia County. The variable on accessibility and availability of palliative care services, the study found mixed findings. While healthcare infrastructure and geographical accessibility were perceived as strengths that enhanced palliative care of cancer patients, significant concerns regarding affordability of palliative care and government support emerged. This suggested that while there were resources in place to support palliative care provision, financial constraints and inadequate support mechanisms hindered access and availability of palliative care to cancer patients. Consequently, efforts to improve affordability and strengthen government support systems are imperative to ensure equitable access to palliative care services for all cancer patients in the region.

The study also highlighted various barriers to the implementation of palliative care interventions. Factors such as inadequate training among healthcare professionals, financial constraints faced by patients, and cultural beliefs were identified as significant obstacles. These findings underscored the complexity of delivering effective palliative care and highlighted the need for targeted interventions to address systemic challenges. Strategies to enhance training programs for healthcare professionals, alleviate financial burdens on patients, and promote cultural sensitivity are essential to overcome these barriers and improve the delivery of palliative care services.

The study also demonstrated the effectiveness of palliative care interventions in enhancing the quality of life for cancer patients. Patients reported improvements in symptom management,

overall comfort levels, and emotional well-being following the implementation of palliative care interventions. These findings underscored the invaluable role of palliative care in addressing the holistic needs of cancer patients and improving their overall well-being. By providing comprehensive support that addressed physical, psychological, and social aspects of care, palliative care interventions have the potential to significantly enhance the quality of life for cancer patients in TransNzoia County.

### 5.5 Recommendations of the Study

To enhance the availability and accessibility of palliative care, the study recommends that policy measures focus on increasing public funding to improve infrastructure, supply chains, and human resource capacity for palliative services. Government support should also include subsidized care packages and insurance schemes specifically covering palliative care services. On the practice side, healthcare institutions should prioritize inter-facility collaboration and task-shifting strategies to optimize limited resources and bring services closer to communities. Regular public awareness campaigns and training of frontline healthcare workers should also be implemented to improve knowledge about available palliative care services, ensuring equitable access across TransNzoia County.

Regarding barriers to palliative care, policy recommendations include integrating palliative care modules into national medical and nursing curricula and establishing continuous professional development programs. Policymakers should also address legal and regulatory challenges, such as restrictive opioid policies and insufficient budgeting for terminal care. In practice, healthcare providers should build culturally sensitive service models by engaging community and religious leaders in sensitization campaigns to dispel myths and stigma. Facilities should also develop patient assistance programs and linkages with non-state actors to provide medication subsidies, negotiate treatment costs, and support financially constrained patients through social welfare initiatives.

To improve the effectiveness of palliative care interventions, policies should support the standardization of care through national clinical guidelines and quality benchmarks tailored to end-of-life care. There should also be investment in health information systems that monitor care delivery outcomes and enable data-driven planning. On the practice side, hospitals should

implement personalized care plans that reflect the physical, emotional, and psychosocial needs of patients. A multi-disciplinary approach bringing together oncologists, nurses, counselors, nutritionists, and chaplains should be adopted to ensure comprehensive and coordinated care. Routine feedback from patients and caregivers should be incorporated into care planning to continuously improve service delivery.

Moreover, to strengthen the overall quality of life for cancer patients receiving palliative care, policymakers should include quality-of-life metrics as performance indicators in national health monitoring systems. These indicators should guide policy adjustments and resource allocations. Practically, healthcare providers should adopt holistic and compassionate care approaches that go beyond physical symptom control to include emotional well-being, dignity, and family support. End-of-life care protocols should promote inclusion, respect for patients' values, and community reintegration programs for families' post-bereavement. Together, these policy and practice efforts will ensure that the intended outcomes of palliative care, improved well-being, dignity, and comfort, are consistently achieved.

### 5.6 Limitations of the Study

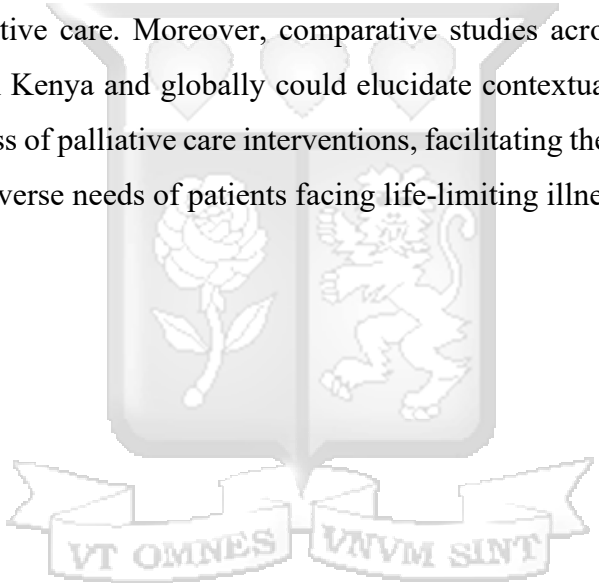
Despite the value and significance of the study in providing insights, various limitations engulfed the study. The reliance on a sample of nurses from a single hospital limited the generalisability of the findings. The study's focus on healthcare professionals from Kitale Level 5 Hospital might overlook perspectives from other healthcare settings or regions within the county, potentially missing diverse viewpoints and experiences. Additionally, the study's exclusive reliance on self-reported data introduces the possibility of response bias, where participants may provide socially desirable answers or inaccurately recall information, thereby influencing the study outcomes.

While the study employed robust statistical analyses to assess reliability and validity, inherent limitations persist in survey-based research methodologies. The cross-sectional nature of the study design restricts the ability to establish causality or capture temporal changes over time. Longitudinal studies could offer a more comprehensive understanding of the long-term impact of palliative care interventions on cancer patients' quality of life. Moreover, the study's focus could overlook the experiences of individuals with other terminal illnesses or non-cancer-related conditions, limiting the applicability of the findings to a broader patient population.

### 5.7 Areas for Future Research

Future research endeavours could explore the efficacy of palliative care interventions beyond the scope of cancer patients, encompassing diverse terminal illnesses and non-cancer-related conditions, thereby broadening the understanding of palliative care's impact across various patient populations. Additionally, longitudinal studies could offer valuable insights into the long-term effects of palliative care interventions on patient outcomes, providing a more comprehensive understanding of the evolving needs and challenges faced by individuals receiving palliative care.

Investigating the role of cultural competence and community engagement in palliative care delivery could shed light on effective strategies for addressing cultural barriers and enhancing access to culturally sensitive care. Moreover, comparative studies across different regions and healthcare settings within Kenya and globally could elucidate contextual factors influencing the provision and effectiveness of palliative care interventions, facilitating the development of tailored approaches to meet the diverse needs of patients facing life-limiting illnesses.

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# APPENDICES

## Appendix 1: Letter of Introduction

Ole Sangale Rd, Madaraka Estate,
P.O Box 59857-00200, Nairobi, Kenya.
Cell: +254 703 034 567, Twitter: @SBS Kenya
Email: info@sbs.ac.ke or visit www.sbs.strathmore.edu

Strathmore UNIVERSITY BUSINESS SCHOOL

19th February 2024

To Whom it May Concern,

RE: FACILITATION OF RESEARCH - BIRGEN ABRAHAM KIPCHIRCHIR

This is to introduce Birgen Abraham Kipchirchir, a Master of Business Administration in Healthcare Management (MBAHCM) student at Strathmore University Business School, student number 138921. As part of our MBAHCM Programme, Abraham is expected to do applied research and undertake a project. This is in partial fulfillment of the requirements of the MBAHCM course. To this effect, he would like to request for appropriate data.

Abraham is undertaking a research paper on "Palliative Care Interventions in Enhancing the Quality of Life for Cancer Patients in Transzoia County." The information obtained shall be treated confidentially and shall be used for academic purposes only.

Our MBA-CM Programme seeks to establish links with industry, and one of the ways of doing so is directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value.gg

We appreciate your support and shall be willing to provide any further information if required.

Yours sincerely,

Njoki Kiagiri
Manager – Graduate Programmes

Strathmore Business School is a Proud member of:

**Appendix 2: Questionnaire**

**Informed Consent**

I have understood that participating in this study is entirely on voluntary basis and no financial gain is expected on participating. I also understand that giving consent does not mean that I cannot pull out from participating in the study at any one time without any consequences on my part. The researcher agrees to protect any confidential information and will only use the information provided for academic purposes only. The participant will always remain anonymous and no personal details will be shared that may breach anonymity of the participant.

I hereby understand and agree to participate in the study titled: **PALLIATIVE CARE INTERVENTIONS ON ENHANCING THE QUALITY OF LIFE FOR CANCER PATIENTS IN TRANSNZOIA COUNTY**

Signature of Study Participant _____ Date _____

Signature of Researcher _____ Date _____

**SECTION A: Personal Details**

1. What is your current role? (Tick Appropriately)

   Nurse ☐

2. How long have you worked in the current role?

   a) Less than 1 year

   b) 1-5 years

   c) 5-10 years

   d) Over 10 years

3. Which of the following accurately indicate your current age?

   a) 18 – 35 years

b) 36- 45 years

c) 46- 55 years

d) Over 55 years

5. What is your highest level of education?

a) Primary level

b) Secondary level

c) College/Diploma Level

d) Bachelor's Degree Level

e) Post Graduate Degree

**Section B: Factors Promoting Accessibility to palliative care of cancer patients in Transzoia County**

In this section indicate the extent to which you would rate each statement in a scale of 1-5, 1 indicating strong disagreement while 5 indicates strong agreement.

| Statements | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| The healthcare infrastructure in the area adequately supports the accessibility of palliative care interventions for cancer patients. | | | | | |
| Palliative care interventions for cancer patients are affordable and within financial reach for individuals in the county. | | | | | |
| Government support plays a significant role in promoting accessibility to palliative care interventions for cancer patients in Transnzoia County. | | | | | |
| The geographical location of healthcare facilities in Transnzoia County does not pose a barrier to cancer patients seeking palliative care interventions. | | | | | |
| Transportation services in Transnzoia County facilitate easy access to palliative care interventions for cancer patients. | | | | | |
| The awareness and education programs on palliative care for cancer patients in Transnzoia County are effective in promoting accessibility. | | | | | |

**Section C: Barriers to Palliative Care of Cancer Patients**

In a scale of 1-5 with 1 being strongly disagree and 5 strongly agree, rate each of the statements in regards to barriers to palliative care of cancer patients.

| **Statements** | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Inadequate training and skills among healthcare professionals in Transnzoia County hinder the effective delivery of palliative care interventions for cancer patients. | | | | | |
| Lack of awareness and education about palliative care options contributes to barriers in accessing appropriate interventions for cancer patients in Transnzoia County. | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Financial constraints significantly impede the ability of cancer patients in Transnzoia County to access necessary palliative care interventions. | | | | | |
| The geographical distribution of healthcare services poses a considerable obstacle for cancer patients in accessing timely palliative care interventions in Transnzoia County. | | | | | |
| cultural beliefs play a significant role in how cancer patients are perceived and treated within society. | | | | | |
| stigma associated with cancer patients' cultural beliefs often leads to misconceptions and barriers to accessing proper care and support. | | | | | |
| Limited availability of resources and infrastructure exacerbates the challenges associated with providing prompt palliative care interventions for cancer patients in Transnzoia County. | | | | | |

**Section D: Effectiveness of Palliative Care Interventions**

In a scale of 1-5 with 1 being strongly disagree and 5 strongly agree, rate each of the statements in regards to effectiveness of palliative care to cancer patients.

| **Statement** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Palliative care interventions have positively impacted the management of patients' symptoms. | | | | | |
| Patients have reported an improvement in their overall comfort levels after receiving palliative care interventions. | | | | | |
| Palliative care interventions have led to a noticeable decrease in the number of hospital admissions among patients. | | | | | |
| Palliative care interventions have assisted patients in managing their conditions effectively outside of hospital settings. | | | | | |
| Patients have experienced noticeable relief from their symptoms following the implementation of palliative care interventions. | | | | | |

**Section E: Quality of Life**

Rate the statements accordingly in a scale of 1-5 with 1 being strongly disagree and 5 strongly agree, rate each of the statements in regards to QOL of cancer patients.

| **Statements** | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Cancer patients in the community demonstrate an improvement in their physical functioning and mobility over time, indicating a positive response to treatment and support | | | | | |
| Cancer patients in the community receive effective pain management and comfort measures, minimizing their discomfort and enhancing their overall well-being | | | | | |
| The emotional stability demonstrated by cancer patients in the community enables them to manage feelings of anxiety, depression, and fear effectively. | | | | | |
| Cancer patients in the community demonstrate acceptance of their diagnosis and treatment, while actively participating in decision-making regarding their healthcare | | | | | |
| Cancer patients in the community feel supported and valued by their family, friends, and peers | | | | | |
| The community environment fosters inclusivity and acceptance of cancer patients | | | | | |

Thank you for your time!

**Appendix 3: Study Budget**

| **Description** | **Amount (Kshs)** |
|---|---|
| Printing Costs | 10,000 |
| Binding Costs | 5,000 |
| Internet | 6,000 |
| Airtime | 5,000 |
| Transport | 15,000 |
| Data Collectors | 30,000 |
| Miscellaneous | 10,000 |
| **Total** | **81,000** |

**Appendix 4: Proposed Timelines**

| Activity | Duration | Time Period |
|---|---|---|
| Proposal Presentation | 3 months | January 2024 |
| Defense of Proposal | 1 month | February 2024 |
| Ethical Application | 1 month | March 2024 |
| Data Collection | 1 month | April 2024 |
| Final Analysis | 1 month | May 2024 |
| Graduation | 1 month | June 2024 |