ASSESSING MONITORING AND EVALUATION SYSTEM FOR MANAGING HIV/AIDS RELATED PROJECTS AMONG HEALTHCARE PROVIDERS AT THIKA LEVEL 5 HOSPITAL, KIAMBU COUNTY, KENYA

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DECLARATION AND APPROVAL

DECLARATION AND APPROVAL

This research Thesis is my original work and has not been presented in any other college or university for any award

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DEDICATION

I dedicate this work to my family and friends for their unwavering support and encouragement. Your guidance and belief in me have been my greatest motivation.

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I would like to express my heartfelt gratitude to everyone who has supported me throughout this journey.

A special thank you to my family for their constant encouragement, to my friends for their unwavering support, and to my mentors for their invaluable guidance. Your belief in me has been my greatest source of strength, and I truly appreciate every effort and kindness shown along the way.

Thank you all.

ABSTRACT

Monitoring and Evaluation (M&E) systems play a pivotal role in assessing the effectiveness and impact of projects, programs, or interventions by providing a structured framework for data collection, analysis, and decision-making. This study investigates the Monitoring and Evaluation (M&E) systems implemented in managing HIV/AIDS-related projects at Thika Level 5 Hospital, with a focus on enhancing healthcare delivery and patient outcomes. Grounded in Systems Theory, the research evaluates the effectiveness of current M&E frameworks and identifies areas for improvement within the hospital's healthcare infrastructure. Drawing from a comprehensive literature review, this study contextualizes the importance of M&E systems in HIV projects. Within the healthcare landscape of Kenya, where HIV/AIDS remains a significant public health challenge, tailored M&E systems are crucial for optimizing resource allocation and improving service delivery (NASCOP, 2020). Utilizing a mixed-methods approach, including structured questionnaires, and focus group discussions, this research aimed to capture diverse perspectives from healthcare providers, M&E specialists, and administrators. By integrating quantitative data on system effectiveness and qualitative insights on challenges and opportunities, the study developed actionable recommendations for refining M&E systems at Thika Level 5 Hospital. Ethical considerations, including informed consent, confidentiality measures, and participant welfare protocols, were integral to ensuring the integrity of the research process. This study underscored the importance of upholding ethical standards in research involving human participants, prioritizing their rights and well-being. Data was coded, cleaned and analysed using SPSS version 28 objective wise. The findings of the study revealed that there was a high level of effectiveness (78.2%) of the current M&E system in place at Thika Level 5 Hospital. The training and capacity-building efforts provided to healthcare providers regarding M&E practices on HIV/AIDS project were high and the improvement after M&E training was effective (100%). Some of the challenges and barriers faced in the implementation of the M&E system for HIV/AIDS projects were inadequate financial resources, inadequate staffing, need for additional funds, and lack of technological advancement. In conclusion, a high level of effectiveness of the M&E system for managing HIV projects among healthcare providers in a hospital signifies that the system is well-structured, data-driven, and capable of producing meaningful insights that enhance patient care and program outcomes. The study recommends that health facilities should develop and implement comprehensive training programs focused on M&E principles, methodologies, and tools for healthcare staff.

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LIST OF ABBREVIATIONS AND ACRONYMS

M&E - Monitoring and Evaluation

NCDs - Non-Communicable Diseases

PMTCT - Prevention of Mother-to-Child Transmission

UNAIDS - Joint United Nations Programme on HIV/AIDS

HIV - Human Immunodeficiency Virus

AIDS - Acquired Immnudefficient Syndrome

CHAPTER ONE: INTRODUCTION

1.1 Background to the study

In the dynamic field of global healthcare, monitoring and evaluation (M&E) has emerged as a critical tool in assessing and improving health interventions. Its impact is particularly evident in managing HIV/AIDS-related projects in Kenya, as highlighted by Nyongesa et al. (2019), and extends to broader global health initiatives. Various studies underscore the transformative role of M&E in healthcare, demonstrating its effectiveness in disease prevention, resource allocation, and policy formulation.

One prominent area where M&E has been instrumental is in global immunization programs. Peterson et al. (2016) emphasize the role of M&E in tracking vaccination coverage, identifying gaps, and ensuring equitable vaccine distribution. By leveraging M&E frameworks, health organizations can pinpoint regions with low immunization rates and implement targeted interventions, thereby advancing the global fight against preventable diseases.

Similarly, M&E has played a pivotal role in maternal and child health programs worldwide. Black et al. (2016) highlight how M&E systems facilitate progress tracking in maternal and child health goals, enabling policymakers to allocate resources strategically, identify effective interventions, and reduce maternal and child mortality rates.

Beyond infectious diseases, non-communicable diseases (NCDs) also benefit from robust M&E frameworks. The Global Burden of Disease study (GBD) employs comprehensive M&E approaches to evaluate the impact of NCDs globally (GBD 2017 Causes of Death Collaborators, 2018). By assessing risk factors and intervention strategies, policymakers can develop evidence-based approaches to mitigate the growing burden of NCDs.

The global HIV/AIDS response is another compelling example of M&E's transformative influence. UNAIDS (2021) relies on strong M&E systems to track progress toward international targets, measure intervention effectiveness, and guide resource allocation. These efforts have been critical in ensuring that HIV/AIDS resources are distributed efficiently and interventions are targeted where they are most needed.

In summary, M&E has proven to be an indispensable component of global healthcare strategy. From immunization programs to maternal health initiatives and chronic disease management, M&E enhances the efficiency of interventions, ensuring data-driven decision-making and context-specific solutions.

Kenya's healthcare landscape is shaped by diverse cultural practices and socio-economic factors that significantly influence health-seeking behaviors. Nyongesa et al. (2019) offer key insights into managing HIV/AIDS-related projects, complementing existing scholarly discourse. Ochieng and Muthami (2017) examine the role of cultural beliefs in health-seeking behaviors, while Kamau and Chege (2020) highlight the socio-economic barriers affecting healthcare access and treatment adherence in Kenya.

This discussion aligns with global health literature, which underscores the need for culturally competent healthcare interventions (Patel & Brown, 2018). By recognizing and adapting to cultural and socio-economic intricacies, Kenyan health authorities and partners can improve HIV/AIDS interventions while contributing to global health efforts.

M&E frameworks traditionally emphasize quantitative metrics, but qualitative insights are equally crucial in understanding socio-cultural contexts. Green and Heaton (2016) argue for a holistic M&E approach that considers cultural and economic dimensions influencing program success. Grembowski et al. (2019) further emphasize incorporating context-specific indicators to refine M&E systems and enhance program impact.

In Kenya, these principles are particularly relevant for HIV/AIDS program management. Effective M&E systems must go beyond mere statistical tracking and integrate local realities, ensuring interventions resonate with affected populations. This aligns with Bekker et al. (2018), who advocate for culturally sensitive public health strategies to combat HIV/AIDS effectively.

At Thika Level 5 Hospital, the primary challenge lies in customizing M&E systems to address local healthcare needs. A one-size-fits-all approach may not effectively manage HIV/AIDS-related projects within this specific setting. As Mannell et al. (2014) suggest, tailored M&E frameworks are crucial for ensuring relevance, effectiveness, and sustainability in healthcare interventions.

By refining M&E systems to incorporate local socio-cultural and economic factors, Thika Level 5 Hospital can optimize HIV/AIDS program management and contribute to broader health system improvements. This study, therefore, seeks to evaluate and enhance the M&E framework at the hospital, ensuring it aligns with both global best practices and local healthcare realities.

1.2 Statement of the Problem

The existing Monitoring and Evaluation (M&E) system for HIV/AIDS-related projects at Thika Level 5 Hospital reveals significant gaps that hinder its overall effectiveness. Despite the need for targeted and context-specific M&E frameworks, the current system does not adequately address the hospital's unique challenges and the healthcare needs of the surrounding community.

One major issue is the misalignment between current M&E protocols and the socio-cultural and economic realities of the local population. The system follows a generalized approach that does not fully consider health-seeking behaviors, cultural beliefs, and financial constraints, leading to interventions that may not effectively address community needs. Currently, M&E strategies implementation stands at a low level, which negatively impacts healthcare outcomes (Thika Level 5 Hospital HR Statistics, 2014). Furthermore, the hospital’s five-year strategic plan anticipated a significant reduction in mortality rates; however, these rates have not declined as expected, raising concerns about the quality of healthcare services.

Another limitation is the data collection and analysis process, which relies heavily on quantitative measures while overlooking qualitative aspects such as patient experiences and socio-cultural influences. This lack of comprehensive evaluation makes it difficult to assess the true impact of HIV/AIDS-related programs. In addition, limited community engagement in the M&E process further weakens its effectiveness. The absence of structured feedback

mechanisms prevents the integration of local perspectives, making interventions less responsive to actual needs.

Technological limitations also contribute to the challenges facing the M&E system. Outdated data management tools hinder efficient tracking, analysis, and reporting of health outcomes, making it difficult to monitor progress in real-time. This restricts the hospital's ability to make timely adjustments to improve service delivery.

Overall, the gaps in Thika Level 5 Hospital's M&E framework, including its lack of contextual alignment, insufficient qualitative insights, minimal community involvement, and outdated data management systems, have limited the effectiveness of HIV/AIDS-related programs. Addressing these issues is crucial to enhancing healthcare interventions and improving patient outcomes.

1.3 Purpose of the Study

The overarching purpose of this study is assessing monitoring and evaluation system for managing HIV/AIDS related projects among healthcare providers at thika level 5 hospital, kiambu county, kenya.

This evaluation is driven by a set of key objectives that collectively aim to enhance the effectiveness and impact of healthcare interventions within the unique context of this hospital. Another purpose of this study is determine how effectively the current M&E system is being implemented in managing HIV/AIDS-related projects.

1.4 Objectives of the Study

1.4.1 Main Objective

The main objective of this study was to assess monitoring and evaluation system formanaging HIV/AIDS related projects among healthcare providers at Thika level 5 hospital, Kiambu county.

1.4.2 Specific Objectives

1. To evaluate the level of effectiveness of the current M&E system on HIV/AIDS project in place at Thika Level 5 Hospital.
2. To assess the training and capacity-building efforts provided to healthcare providers regarding M&E practices on HIV/AIDS project Thika Level 5 Hospital.
3. To identify the challenges and barriers faced in the implementation of the M&E system for HIV/AIDS projects.

1.5 Research Questions

1. What is the level of effectiveness of the current M&E system On HIV/AIDS project in place at Thika Level 5 Hospital?
2. What are the training and capacity-building efforts provided to healthcare providers regarding M&E practices on HIV/AIDS project Thika Level 5 Hospital?
3. What are the key challenges and barriers faced in the implementation of the monitoring and evaluation system for HIV/AIDS projects at Thika Level 5 Hospital?

1.6 Significance of the Study

The Monitoring and Evaluation (M&E) system for HIV/AIDS-related projects at Thika Level 5 Hospital has notable gaps that hinder its effectiveness. While M&E is essential for assessing the impact of interventions, the current system does not adequately address the hospital's specific needs or the socio-cultural dynamics of the local community.

One major challenge is the mismatch between M&E strategies and the hospital's operational context. The system follows a broad, standardized approach that does not fully consider the cultural beliefs, health-seeking behaviors, and socio-economic conditions of the surrounding population. As a result, interventions may fail to address the actual challenges faced by patients. The hospital's statistics indicate that M&E implementation remains low (Thika Level 5 Hospital HR Statistics, 2014). Additionally, despite efforts outlined in the hospital's five-year strategic plan, mortality rates have not decreased as expected, suggesting gaps in healthcare quality and service delivery. Low-effectiveness of M&E systems can be directly connected with high mortality rates because the system is needed to trace health outcomes and determine the gaps that should be closed further on with the help of appropriate interventions. When M&E is poor, significant information on patient progress, medication adherence and program impact is skipped or misread and this leads to delayed reaction and poor resource mobilization. As a

result, there are more complications and deaths that could be prevented. Without an effective M&E, healthcare providers will not have sufficient insights to improve their service delivery, focus on populations at risk, and employ evidence-based approaches, which ultimately lead to consistently high mortality rates in spite of interventions that significantly mitigate them.

Another issue is the limited scope of data collection and analysis. The current M&E system primarily relies on quantitative measures, overlooking qualitative factors such as patient experiences and community perspectives. Without incorporating these insights, it is difficult to fully assess the impact of HIV/AIDS programs. Furthermore, there is inadequate community involvement in the M&E process. The absence of structured feedback mechanisms prevents the integration of local input, making interventions less responsive to the actual needs of patients.

Technological limitations also affect the efficiency of M&E processes. The hospital lacks modern data management systems, which hinders real-time monitoring and timely decision-making. Without up-to-date technology, tracking project outcomes and making necessary adjustments become challenging.

In summary, the M&E system at Thika Level 5 Hospital faces significant challenges, including poor alignment with the local healthcare context, inadequate qualitative assessments, limited community engagement, and outdated technology. Addressing these issues is essential for improving the effectiveness of HIV/AIDS-related interventions and enhancing overall healthcare outcomes.

1.7 Scope of the Study

This study focused on assessing and improving the Monitoring and Evaluation (M&E) system for HIV/AIDS-related projects at Thika Level 5 Hospital. The research examined various aspects of the existing framework to identify gaps and recommend enhancements.

The study was conducted at Thika Level 5 Hospital, a major healthcare facility in Thika, Kenya. The hospital was chosen due to its critical role in HIV/AIDS management, diverse healthcare stakeholders, and representation of broader national healthcare challenges. As a referral hospital, it provides comprehensive medical services, making it a suitable site for analyzing

M&E systems. The findings from this study, while specific to Thika Level 5 Hospital, offer insights applicable to similar healthcare institutions.

The research explored key elements of the M&E system, including data collection and analysis methods, community involvement, and the alignment of the current framework with the hospital's operational needs. Both qualitative and quantitative aspects were considered to provide a comprehensive understanding of existing challenges.

The study was conducted within a specific timeframe, ensuring that data collection, analysis, and proposed improvements were systematically implemented. This allowed for a real-time assessment of the effectiveness of recommended changes.

Stakeholder participation was a crucial component of the study. Healthcare workers, hospital administrators, and community members were engaged through interviews, workshops, and discussions. This collaborative approach ensured a well-rounded evaluation of the M&E system, incorporating different perspectives to enhance its effectiveness.

Additionally, the research contributed to the broader academic discussion on M&E in healthcare. By addressing the challenges at Thika Level 5 Hospital, the study provided insights that could guide other healthcare institutions in optimizing their M&E practices.

In summary, this research was structured to examine the M&E system at Thika Level 5 Hospital from multiple perspectives, including its geographical context, thematic focus, timeframe, and stakeholder engagement. The goal was to improve local healthcare outcomes while contributing valuable knowledge to the wider field of healthcare M&E.

1.8 Limitations and delimitations of the Study

Limitations

1. Resource limitations, such as time and funding, may restrict the scope of the study, potentially impacting the depth of analysis or the extent of data collection.
2. Integration of the qualitative and quantitative approaches to draw comprehensive and coherent conclusions from the different data sets was quite challenging and difficult.

Delimitations

1. To address the limitation of sample size constraints, the study employed a targeted sampling strategy focusing on specific key roles within Thika Level 5 Hospital. By prioritizing key stakeholders such as healthcare providers, Monitoring and Evaluation (M&E) specialists, and administrators/managers, the study ensures a comprehensive representation of perspectives within the available sample size.
2. To address limited generalizability, the study focused on contextualizing findings within the unique characteristics of Thika Level 5 Hospital, including its organizational structure, M&E systems, patient demographics, and location. This approach ensures readers can evaluate the relevance of the findings to their own settings. Additionally, the study provided context-specific interpretations and recommendations while leveraging rich qualitative data to enhance the transferability of findings to similar healthcare environments.
3. To mitigate the possibility of response bias in self-reported data collected through questionnaires and FGDS several strategies was employed. Firstly, anonymity and confidentiality measures were emphasized, assuring participants that their responses remained confidential. Clear instructions were provided to participants, emphasizing the importance of honest and accurate responses. Additionally, triangulation of data from multiple sources was utilized to validate findings and reduce bias. Moreover, validation measures were implemented, such as cross-checking quantitative data with objective indicators or external sources, further enhancing the credibility of the data collected.
4. To mitigate the impact of resource constraints, the study maximized the utilization of available resources, including existing institutional support, research facilities, and partnerships with local stakeholders. By leveraging existing infrastructure and collaborating with relevant partners, the study aims to optimize data collection and analysis efforts within the available resources.

1.9. Assumption of the Study

The study on the Monitoring and Evaluation (M&E) system for HIV/AIDS-related projects at Thika Level 5 Hospital operates on several key assumptions. It assumes that stakeholders, including healthcare professionals, community members, and decision-makers, will actively participate and provide accurate insights into the M&E system (Nyongesa et al., 2019). Additionally, it presumes that relevant data necessary for evaluating the system is accessible,

comprehensive, and includes both quantitative project outcomes and qualitative community perspectives.

The study also assumes that the sampled community perspectives collected through focus groups accurately represent broader community opinions. While efforts were made to incorporate diverse viewpoints, the findings are based on the assumption that the selected participants reflect the general sentiments of the larger population. Furthermore, the study assumes stability in community dynamics during the research period, as significant changes could influence the relevance of the findings.

Another assumption is that insights from previous studies remain applicable, with the expectation that factors influencing the M&E system identified in past research continue to be relevant within the current healthcare context. If gaps or challenges are identified, it is assumed that the proposed enhancements will lead to improved project management and better healthcare outcomes.

Although the study is specific to Thika Level 5 Hospital, it assumes that the insights gained may be relevant to other healthcare facilities facing similar challenges in M&E systems. Finally, the recommendations provided are assumed to be feasible within the hospital's existing infrastructure, policies, and resource constraints, ensuring their practicality for implementation.

1.10 Operationalization of terms

Community Engagement:

Community engagement, in the context of this research, involves the active involvement of the local community served by Thika Level 5 Hospital in decision-making processes related to HIV/AIDS-related projects. This includes participation in forums, advisory groups, and collaborative initiatives to ensure that community perspectives are considered in project planning and evaluation.

Context-Specific M&E Systems:

Context-specific M&E systems denote customized frameworks designed to align with the socio-cultural and healthcare context of Thika Level 5 Hospital. These systems are tailored to accommodate the unique dynamics, challenges, and community nuances, ensuring that the M&E processes resonate with the local context.

Disparities:

Disparities, as used in this research, refer to inequalities, variations, or inconsistencies within the Monitoring and Evaluation system for HIV/AIDS-related projects at Thika Level 5 Hospital. These could manifest in terms of data collection methods, community engagement practices, resource allocation, or any other aspect that influences the effectiveness of the M&E system.

Effectiveness of Interventions:

Effectiveness, in the context of this research, refers to the degree to which HIV/AIDS-related projects achieve their intended goals and objectives. It involves assessing the impact of interventions on healthcare outcomes and evaluating the success of the M&E system in providing meaningful insights for continuous improvement.

Enhancements to the M&E System:

Enhancements denote proposed changes, improvements, or modifications identified through the evaluation of the M&E system. These recommendations are specific to addressing the disparities uncovered during the research, refining the M&E framework, and ultimately optimizing project management and healthcare outcomes.

Healthcare Outcomes:

Healthcare outcomes refer to the tangible and measurable results of HIV/AIDS-related projects at Thika Level 5 Hospital. This includes indicators such as the reduction in HIV transmission rates, improved access to healthcare services, enhanced treatment adherence, and overall improvements in the health and well-being of the local population

HIV/AIDS-Related Projects:

HIV/AIDS-related projects encompass a range of interventions initiated by Thika Level 5 Hospital specifically targeting the prevention, treatment, and management of HIV/AIDS. These projects may include awareness campaigns, treatment programs,community engagement initiatives, and infrastructure development dedicated to addressing the challenges posed by the HIV/AIDS epidemic.

Monitoring and Evaluation (M&E) System:

In the context of this research, the M&E system refers to the structured framework employed by Thika Level 5 Hospital to oversee and assess the implementation, progress, and impact of HIV/AIDS-related projects. This includes mechanisms for data collection, analysis, and feedback, with the overarching goal of improving project management and healthcare outcomes.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

The literature review plays a crucial role in this research by exploring existing knowledge and theories related to Monitoring and Evaluation (M&E) systems in healthcare, with a specific focus on HIV/AIDS-related projects at Thika Level 5 Hospital. It begins by analyzing M&E from a global perspective, highlighting its role in enhancing healthcare outcomes across different settings. The review then transitions to the Kenyan healthcare landscape, examining how cultural practices, socio-economic factors, and contextual elements shape the effectiveness of M&E systems.

Key studies, including those by Nyongesa et al. (2019), Ochieng and Muthami (2017), and Kamau and Chege (2020), provide insights into the challenges and opportunities in managing HIV/AIDS projects in Kenya. The literature review further narrows its focus to Thika Level 5 Hospital, underscoring the importance of tailoring M&E strategies to meet the institution's specific needs and address local healthcare challenges.

By identifying knowledge gaps, establishing relevance, and providing a theoretical foundation, the literature review lays the groundwork for this study’s examination of the M&E system at Thika Level 5

2.1 Empirical Literature

The literature review serves as a crucial component of this study, offering an in-depth examination of existing research on Monitoring and Evaluation (M&E) systems in managing HIV/AIDS-related projects. This section situates the study within the broader academic discourse on M&E in healthcare, drawing from global perspectives, experiences in developed nations, and Kenya's unique healthcare context.

M&E has become an essential tool in shaping the effectiveness of healthcare interventions worldwide. Its role extends beyond managing HIV/AIDS-related projects in Kenya, as highlighted by Nyongesa et al. (2019), to influencing global health programs. M&E frameworks support various health initiatives, including immunization efforts, maternal and child health programs, and strategies for controlling non-communicable diseases. This review underscores the broad applicability of M&E in improving healthcare outcomes and guiding evidence-based decision-making.

Research has demonstrated that M&E provides a structured approach to assessing and refining health interventions. For instance, Peterson et al. (2016) highlight the importance of M&E in monitoring vaccination programs and ensuring equitable distribution. Similarly, Black et al. (2016) emphasize the role of M&E in tracking progress toward global maternal and child health goals.

Transitioning from the global perspective to Kenya's healthcare system—shaped by diverse cultural practices and socio-economic realities—Nyongesa et al. (2019) contribute valuable insights into the complexities of managing HIV/AIDS-related projects. Their research aligns with findings by Ochieng and Muthami (2017) and Kamau and Chege (2020), who explore the socio-cultural and economic factors that influence healthcare delivery in Kenya.

Understanding these contextual elements is essential for developing effective M&E frameworks. Patel and Brown (2018) argue that cultural competence is critical in healthcare interventions, asserting that tailoring strategies to the cultural characteristics of a population enhances their effectiveness. This perspective reinforces the need for localized approaches to HIV/AIDS interventions, ensuring that healthcare programs address the unique needs of affected communities.

Beyond the national context, Nyongesa et al. (2019) also highlight how Kenya's experiences in M&E contribute to global efforts in combating HIV/AIDS. By integrating cultural and socio-economic considerations into intervention strategies, Kenya's healthcare stakeholders can not only enhance the effectiveness of domestic programs but also inform best practices in other regions facing similar public health challenges.

M&E frameworks often emphasize quantitative metrics; however, incorporating qualitative dimensions is equally important for capturing the socio-cultural and economic contexts of

health programs. Green and Heaton (2016) advocate for a more holistic M&E approach that considers these factors, while Grembowski et al. (2019) recommend the integration of context-specific indicators to improve the accuracy of program evaluations.

Ultimately, this literature review enhances the understanding of managing HIV/AIDS-related projects in Kenya while offering insights for refining M&E systems. By integrating local and global perspectives, the study contributes to the development of more effective and culturally responsive public health interventions.

Examining existing studies on M&E systems in managing HIV/AIDS-related projects provides valuable insights into different contexts. This section reviews research conducted in developed nations before narrowing the focus to Kenya and the specific case study of Thika Level 5 Hospital.

In developed nations, M&E plays a vital role in public health initiatives related to HIV/AIDS management. In the United States, for instance, Smith et al. (2018) emphasize the significance of comprehensive M&E frameworks in evaluating the success and challenges of HIV/AIDS programs. Their study provides insights into best practices and obstacles encountered in implementing health interventions.

In the United Kingdom, Jones et al. (2020) highlight the importance of context-specific M&E frameworks, stressing that socio-economic and cultural factors influence healthcare delivery. Their findings underscore the necessity of designing adaptable M&E systems that cater to the unique needs of different populations.

Singapore, known for its advanced healthcare infrastructure, has also contributed to the field of M&E for HIV/AIDS programs. Lim and Tan (2019) explore the role of technology in improving M&E processes, demonstrating how digital platforms can enhance data collection and analysis, ultimately increasing the efficiency and accuracy of health interventions.

In the Kenyan context, HIV/AIDS remains a significant public health concern. The government, in collaboration with international partners, has implemented numerous projects to curb the spread of the disease. Nyongesa et al. (2019) emphasize the importance of developing M&E systems that account for socio-economic and cultural influences on healthcare delivery.

Their study is particularly relevant to the case of Thika Level 5 Hospital, where M&E frameworks must be tailored to local realities. Insights from their research provide a foundation for understanding the broader healthcare context in which the present study is conducted.

Focusing on Thika Level 5 Hospital, the review examines prior evaluations of M&E systems in similar healthcare settings. This analysis informs the study's assessment of the hospital's M&E framework, identifying existing challenges and proposing strategies for improvement. By drawing on empirical literature, this section establishes a solid foundation for evaluating the effectiveness of M&E in managing HIV/AIDS-related projects at Thika Level 5 Hospital.

2.2 Literature Gap

Research on Monitoring and Evaluation (M&E) systems for HIV/AIDS-related projects has provided valuable insights into various aspects of project management. However, several gaps remain that require further investigation. While studies from developed countries such as the United States, Britain, and Singapore have contributed significantly to understanding M&E frameworks, limited research focuses on developing nations. The healthcare systems in countries like Kenya face unique challenges that necessitate a more tailored approach to M&E to enhance effectiveness (Nyongesa et al., 2019; Ochieng & Muthami, 2017; Kamau & Chege, 2020).

Despite recognizing the need to customize M&E frameworks to fit specific socio-economic and cultural contexts, existing literature lacks an in-depth analysis of how this customization is implemented, particularly in localized settings like Thika Level 5 Hospital. A deeper exploration is necessary to understand how M&E frameworks are adapted to local healthcare dynamics, including cultural practices and economic factors, to improve project implementation and outcomes.

Additionally, while some studies, such as Lim and Tan (2019), have acknowledged the role of technology in enhancing M&E systems, comprehensive research on how digital tools can be effectively integrated into M&E processes in developing countries is still insufficient. More studies are needed to examine the best practices, challenges, and impact of technology on improving the accuracy and efficiency of M&E processes in resource-limited settings.

Furthermore, while research highlights the broader Kenyan context in relation to HIV/AIDS interventions, there is a shortage of case-specific studies evaluating M&E systems in hospitals or similar healthcare facilities. Investigating the successes, challenges, and overall effectiveness of M&E frameworks in institutions like Thika Level 5 Hospital would provide valuable insights for refining monitoring and evaluation strategies in comparable settings.

Another gap in the literature concerns the heavy reliance on quantitative indicators to assess the impact of M&E systems. While these indicators provide measurable outcomes, they do not capture the qualitative aspects that influence program effectiveness, such as cultural perceptions and social dynamics. Green and Heaton (2016) argue for a more holistic approach to M&E that incorporates qualitative measures, an area that remains underexplored, especially in the context of developing countries.

In summary, addressing these literature gaps will contribute to a more comprehensive and practical understanding of M&E systems for HIV/AIDS-related projects. Conducting more localized, context-specific research will help refine M&E frameworks to better align with the realities of healthcare settings in Kenya, ultimately improving public health interventions and project outcomes. Additionally, the literature review should align with the study's specific objectives, ensuring that subtitles reflect key research areas.

2.3 Theoretical Framework

Systems Theory, developed by key scholars such as Ludwig von Bertalanffy (1968), Kenneth Boulding (1956), Anatol Rapoport (1953), and Ervin Laszlo (1972), provides a comprehensive framework for analyzing complex and interconnected systems. This theory is particularly relevant in understanding the functioning of Monitoring and Evaluation (M&E) systems within healthcare, specifically in managing HIV/AIDS-related projects.

A fundamental principle of Systems Theory is the interdependence of various components within a system (Bertalanffy, 1968). In healthcare, this means that elements such as data collection, analysis, and feedback mechanisms do not operate in isolation but rather interact to influence project outcomes. Changes in one aspect of the M&E system can have widespread effects on the entire framework, making it essential to consider their collective impact rather than evaluating them separately.

Another key aspect of Systems Theory is its emphasis on a holistic approach (Boulding, 1956). Rather than viewing M&E components as independent entities, this perspective encourages examining them as part of an integrated system. In the context of HIV/AIDS-related projects, the effectiveness of interventions relies on the coordination and synergy between different elements within the broader healthcare system.

Feedback mechanisms, a crucial concept in Systems Theory, play a significant role in M&E (Laszlo, 1972). These mechanisms facilitate continuous adaptation and improvement, ensuring that projects evolve in response to new data. In healthcare settings, M&E processes generate valuable information that can inform real-time adjustments, enhancing project effectiveness and efficiency.

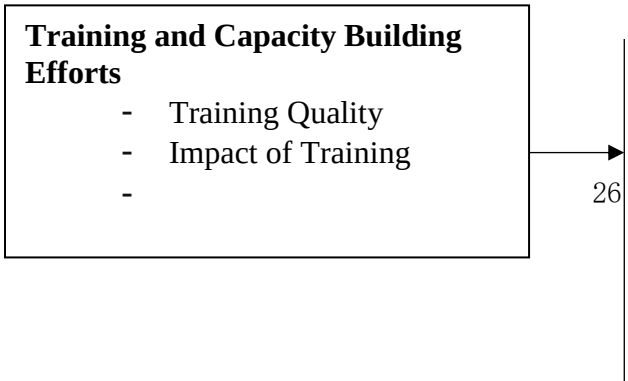
Applying Systems Theory to M&E in healthcare allows for a deeper understanding of the relationships between different components of project management. Instead of assessing data collection methods in isolation, this approach considers the interconnected nature of data analysis, interpretation, and subsequent interventions. Viewing M&E systems as dynamic and interrelated helps identify potential inefficiencies and areas for improvement in HIV/AIDS-related project management.

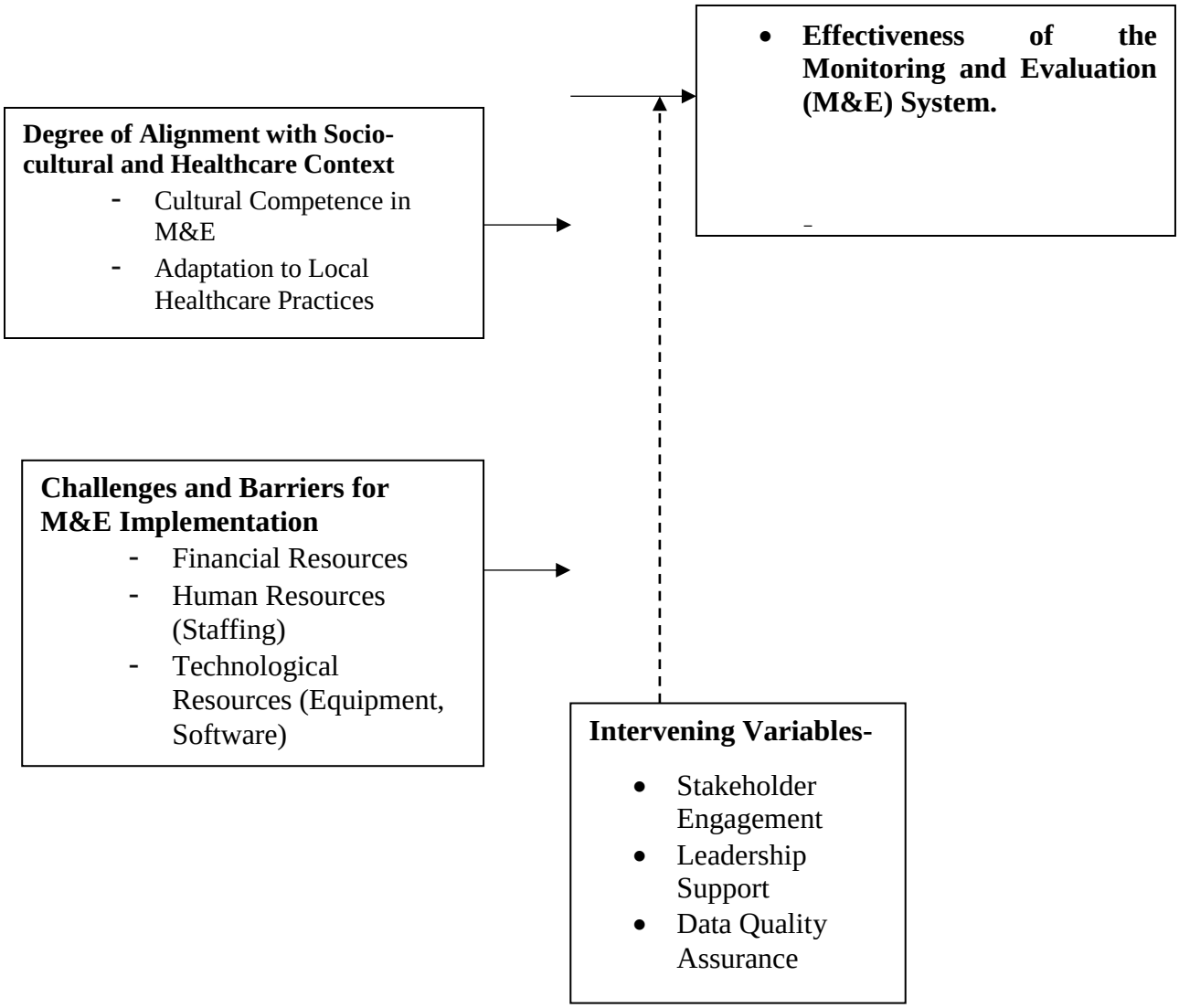
The contributions of Bertalanffy, Boulding, Rapoport, and Laszlo have significantly shaped the development and application of Systems Theory. Bertalanffy's General Systems Theory laid the foundation for analyzing systems across various disciplines, while Boulding, Rapoport, and Laszlo expanded its relevance to social sciences and organizational structures.

In summary, Systems Theory provides a valuable lens for examining M&E systems in healthcare. It underscores the importance of interconnectedness, holistic analysis, and adaptive feedback mechanisms in improving the management of HIV/AIDS-related projects. By adopting this perspective, healthcare practitioners and policymakers can develop more effective and responsive M&E frameworks that enhance project outcomes.

2.4 Conceptual Framework

Conceptual Framework: Evaluation of M&E Systems in HIV/AIDS Project Management





Independent Variables **Dependent Variable**

2.4.1 Dependent Variable

Effectiveness of the Monitoring and Evaluation (M&E) System.

2.4.2 Independent Variables

1. **Degree of Alignment with Socio-cultural and Healthcare Context**: The independent variable encompasses two key components: cultural competence in monitoring and evaluation (M&E) and adaptation to local healthcare practices. Cultural competence in M&E refers to the hospital's proficiency in incorporating cultural considerations into its M&E practices for HIV/AIDS projects, including sensitivity in data collection methods and the inclusion of culturally appropriate indicators. On the other hand, adaptation to local healthcare practices assesses the hospital's ability to align its M&E approaches with local norms and healthcare systems, which may involve integrating traditional healing methods, collaborating with community health workers, or incorporating indigenous knowledge systems into M&E strategies. These components together capture the extent to which the hospital's M&E system is tailored to the socio-cultural and healthcare context in which it operates, influencing its effectiveness in managing HIV/AIDS-related projects.
2. **Training and Capacity Building Efforts** plays a crucial role in enhancing healthcare providers' skills and knowledge for effective monitoring and evaluation (M&E) of HIV/AIDS-related projects. High-quality training, characterized by well-structured content, experienced trainers, and relevant material, ensures that participants are well-prepared to implement M&E activities. The impact of this training can be seen through improved performance assessments, where healthcare providers demonstrate better competency in M&E tasks post-training. Additionally, sustained knowledge retention and the practical application of training concepts in their daily work, as measured through follow-up surveys and qualitative feedback, indicate the long-term benefits of high-quality training. This comprehensive approach ensures that training not only meets immediate educational needs but also fosters lasting improvements in M&E practices.

3. **Challenges and Barriers for M&E Implementation**: In the context of monitoring and evaluation (M&E) implementation for HIV/AIDS-related projects, challenges and barriers primarily revolve around financial, human, and technological resources. Financial constraints often impede the proper funding necessary for comprehensive M&E activities, leading to incomplete data collection and delayed reporting. Insufficient staffing levels coupled with a lack of specialized skills can strain existing resources, resulting in slower processing times and increased error rates. Additionally,

outdated or inadequate technological tools hinder efficient data management and analysis, undermining the accuracy and timeliness of M&E outcomes. Addressing these challenges is essential for ensuring the effectiveness of the M&E system, thereby improving decision-making processes and ultimately enhancing the delivery of healthcare services for HIV/AIDS prevention and treatment.

2.4.3 Intervening variables

1. **Stakeholder Engagement**: The extent to which stakeholders, including healthcare providers, administrators, and community members, actively participate in M&E activities, offering diverse perspectives and insights that enrich data collection, analysis, and interpretation, thereby fostering a sense of ownership and collaboration in project management.
2. **Leadership Support**: The level of commitment and advocacy demonstrated by organizational leaders, such as hospital administrators and project managers, towards M&E initiatives, including providing resources, promoting staff engagement, and advocating for the integration of M&E practices into organizational processes, thereby influencing the organizational culture and facilitating successful M&E implementation.
3. **Data Quality Assurance**: The systematic processes and procedures implemented to ensure the accuracy, reliability, and integrity of data collected and analyzed within the M&E system, including data verification, validation, and cleaning protocols, as well as staff training and capacity-building initiatives, thereby enhancing the trustworthiness and credibility of M&E findings and supporting evidence-based decision-making processes.

2.5 Recap of Literature Review

The literature review presents a thorough examination of existing knowledge and theoretical perspectives on Monitoring and Evaluation (M&E) systems in healthcare, with a particular focus on managing HIV/AIDS-related projects at Thika Level 5 Hospital. It begins with a global outlook, showcasing the significant role of M&E in various healthcare sectors, including the management of infectious diseases, maternal and child health, non-communicable diseases, and the broader global response to HIV/AIDS.

The discussion then shifts to the Kenyan healthcare setting, exploring cultural, socio-economic, and contextual factors that shape healthcare service delivery. Key studies by Nyongesa et al.

(2019), Ochieng and Muthami (2017), and Kamau and Chege (2020) provide insights into both the challenges and opportunities associated with HIV/AIDS project management in Kenya. The review further narrows its scope to Thika Level 5 Hospital, underscoring the necessity of customizing M&E systems to effectively address the institution's specific challenges and meet the needs of the surrounding community.

By identifying research gaps, establishing the significance of the study, and contextualizing the discussion, the literature review lays a strong foundation for analyzing the M&E system at Thika Level 5 Hospital. It highlights the complexities of managing HIV/AIDS-related projects and emphasizes the importance of developing M&E frameworks that are both culturally sensitive and tailored to the local healthcare context.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

3.1 Study Design

This study employed a mixed-methods design, integrating both quantitative and qualitative approaches to gain a comprehensive understanding of the subject.

A stratified random sampling strategy was utilized to select participants from Thika Level 5 Hospital staff involved in HIV/AIDS project management. This ensured representation across different roles, including healthcare providers, M&E specialists, and administrators.

Quantitative data were gathered through structured survey questionnaires administered to the selected participants. These surveys focused on assessing the perceived effectiveness of M&E systems, technology adoption, and socio-economic factors influencing project management. The collected data were analyzed using descriptive and inferential statistical methods, including regression analysis to determine associations between variables.

In addition to the quantitative approach, qualitative data were obtained through focus group discussions (FGDs) with key stakeholders such as hospital administrators and M&E specialists. Healthcare providers also participated in FGDs to share insights on cultural competence, organizational culture, and the implementation of M&E frameworks. The qualitative data underwent thematic analysis, involving coding and categorization to identify key themes.

The study measured the dependent variable, "Effectiveness of HIV/AIDS-related Project Management," alongside independent variables such as M&E Systems, Cultural Competence in M&E, Technology Adoption for M&E, Implementation of M&E Frameworks, Socio-economic Factors, and Organizational Culture.

3.2 Location of the Study

The study was conducted at Thika Level 5 Hospital, which is located in Thika, Kenya. Thika is a town situated in the central part of Kenya, approximately 40 kilometres north-east of Nairobi, the capital city. Thika Level 5 Hospital serves as a prominent healthcare facility in

the region, providing essential medical services, including the management of HIV/AIDS-related projects.

Geocode

Latitude: -1.0417268824486157

Longitude: 37.07858326491281

The choice of this location is strategic, as it allows for a focused investigation into the specific context and challenges faced by the hospital in the management of HIV/AIDS projects. The findings from this study are intended to contribute valuable insights that can inform improvements in Monitoring and Evaluation (M&E) systems within the unique healthcare setting of Thika Level 5 Hospital and the community it exists in.

The community in this context refers to the broader population served by Thika Level 5 Hospital and the surrounding area in Thika, Kenya. This population comprises individuals who seek healthcare services at the hospital, including those residing in Thika and its neighbouring areas. Additionally, the community encompasses various stakeholders beyond patients, such as local authorities, community leaders, non-governmental organizations (NGOs), and other entities involved in healthcare initiatives and community development efforts within the catchment area of the hospital.

The inclusion of the community perspective is crucial for contextualizing the challenges and opportunities related to HIV/AIDS project management and Monitoring and Evaluation (M&E) systems at Thika Level 5 Hospital. By considering the broader impact of healthcare interventions and involving community stakeholders, the study aims to ensure that research findings are relevant and applicable to the local context.

3.3 Target Population

The target population for this study consists of specific individuals directly involved in managing HIV/AIDS-related projects at Thika Level 5 Hospital. This includes healthcare providers, Monitoring and Evaluation (M&E) specialists, and administrators/managers. The study aims to capture a comprehensive perspective on the dynamics and challenges associated with project management within the hospital by focusing on these key roles.

Healthcare providers, including doctors, nurses, and other medical professionals, play a crucial role in the care and treatment of HIV/AIDS patients. Their experiences and insights are essential for understanding the clinical aspects of project management, patient outcomes, and the overall impact on healthcare delivery.

M&E specialists within the hospital form another vital segment of the target population. These professionals are responsible for designing, implementing, and overseeing the M&E systems that track the effectiveness and impact of HIV/AIDS-related interventions. Their perspectives contributed valuable insights into the technical aspects of M&E frameworks and the challenges faced in ensuring accurate and meaningful data collection.

Administrators and managers, including hospital leadership and project managers, are pivotal in coordinating and overseeing the implementation of HIV/AIDS-related projects. Their roles involve strategic decision-making, resource allocation, and overall project coordination. Including this group in the study provides a broader organizational perspective and sheds light on the challenges faced at the managerial level.

By encompassing these distinct roles within the target population, the study aims to offer a nuanced understanding of the multifaceted aspects of managing HIV/AIDS-related projects at Thika Level 5 Hospital. This inclusive approach ensures that the research findings can inform recommendations and interventions that address the diverse challenges faced by different stakeholders within the healthcare system of the hospital.

3.4 Sampling Techniques and Procedures

The study utilized a stratified random sampling technique to ensure a thorough and representative selection of participants from different key groups at Thika Level 5 Hospital. This approach is deemed appropriate to capture diverse perspectives within the hospital's framework of HIV/AIDS-related project management.

Initially, the identification of strata was conducted based on the distinct roles involved in project management. Three primary strata were delineated: healthcare providers, Monitoring and Evaluation (M&E) specialists, and administrators/managers. These strata are essential as they represent the primary stakeholders with varying responsibilities and perspectives in the context of the study.

Within each stratum, the stratification process was meticulous to ensure a proportional representation of the respective roles. This involved categorizing participants based on their roles within the hospital, considering factors such as clinical responsibilities, M&E expertise, and managerial duties.

The next step involves random sampling within each stratum. This ensures that the selection of participants is not biased and that individuals from all relevant roles have an equal chance of being included in the study. The randomness of the sampling process enhances the generalizability of the findings to the broader population within each stratum.

The determination of the sample size was a critical consideration, involving statistical calculations to ensure sufficient representation from each stratum. Factors such as the size of each stratum, anticipated variability in responses, and the desired level of precision guided the determination of an appropriate sample size.

In summary, the stratified random sampling approach enabled the study to gather insights from diverse roles within Thika Level 5 Hospital. This methodological choice aims to enhance the study's validity and ensure that the findings are reflective of the varied experiences and challenges associated with managing HIV/AIDS-related projects and Monitoring and Evaluation (M&E) systems within the hospital.

3.5 Sample Population

The sample population for this study consisted of individuals directly involved in the management of HIV/AIDS-related projects at Thika Level 5 Hospital. The sample was drawn from three primary strata: healthcare providers, (M&E) specialists, and administrators/managers. These strata encompass various roles within the hospital, ensuring a comprehensive representation of perspectives. The research aimed to interview approximately 385 participants. These participants were selected through a stratified random sampling technique to ensure representation across different key groups at Thika Level 5 Hospital, including healthcare providers, (M&E) specialists, and administrators/managers.

To determine the sample size for the study the researcher used the formula for calculating sample size in quantitative research:

$n = Z^2 * p * (1-p) / E^2$

Where:

n = sample size

Z = Z-score corresponding to the desired level of confidence (e.g., for a 95% confidence level, Z = 1.96)

p = estimated proportion of the population with a particular characteristic (0.5 is used for maximum variability unless an estimate is available)

E = margin of error (the acceptable difference between the sample and population proportions)

Let's assume I want a 95% confidence level (corresponding to Z= 1.96) and a margin of error of 5% (corresponding to E= 0.05). For p, since I don't have an estimate, I can use 0.5 for maximum variability.

Substituting these values into the formula:

$n = 1.96^2 * 0.5 * (1-0.5) / 0.05^2$

n = 0.9604/0.0025

n = 384.16

Healthcare Providers

This stratum included doctors, nurses, and other medical professionals directly engaged in the care and treatment of HIV/AIDS patients within the hospital. They play a critical role in the clinical aspects of project management.

Monitoring and Evaluation (M&E) Specialists

Individuals involved in designing, implementing, and overseeing M&E systems within the hospital was part of this stratum. Their insights are crucial for understanding the technical aspects of project monitoring and evaluation.

3.6 Construction of research tools

The construction of research instruments for this study draws inspiration from various scholars in the field of research methodology. Creswell's methodology frameworks (Creswell, 2014; Creswell & Creswell, 2017) provide a foundational guide for designing tools that effectively collect data from stakeholders at Thika Level 5 Hospital.

Structured questionnaires, guided by Creswell's principles, align with the clarity and precision recommended by the author for effective participant responses. This approach is consistent with Creswell's emphasis on the systematic collection of quantitative data.

GDs, following Creswell's qualitative inquiry principles, also integrate insights from other scholars in qualitative research methodology (Silverman, 2016; Patton, 2015). This approach allows for a more nuanced exploration of stakeholders' perspectives on M&E challenges and potential solutions.

Focus Group Discussions (FGDs) adhere to Creswell's recommendations for group interactions and also draw on insights from Krueger and Casey (2014) for guiding discussions within the group setting. This approach fosters open dialogue among healthcare providers, capturing collective insights.

Document analysis, in line with Creswell's mixed methods research strategies, incorporates ideas from Bowen (2009) and other researchers emphasizing the value of document reviews in research (Bowen, 2009). This aligns with Creswell's endorsement of triangulation using multiple data sources.

Observations, guided by Creswell's principles of qualitative inquiry, draw on the works of Denzin and Lincoln (2018) and other qualitative researchers highlighting the importance of

direct engagement with the research setting (Denzin & Lincoln, 2018). This method allows for firsthand exploration of M&E activities.

Scale development for perceived effectiveness incorporates insights from DeVellis (2016) and other experts in scale development. The use of Likert-scale questions aligns with Creswell's mixed methods research design and complements qualitative insights with quantitative measures.

The construction process, encompassing a thorough literature review, expert validation, and pilot testing, reflects Creswell's commitment to methodological rigor (Creswell, 2014). This comprehensive approach ensures the reliability and validity of the instruments, drawing on the expertise of various scholars in the field of research methodology.

In summary, the construction of research instruments for this study integrates Creswell's methodology frameworks while drawing on insights from a diverse array of scholars in the field, ensuring a robust and well-founded approach to data collection at Thika Level 5 Hospital.

3.7 Testing for validity and reliability/trustworthiness

The process of testing for validity and reliability/trustworthiness of the research instruments in this study was essential to ensure the quality and accuracy of the collected data (Creswell & Creswell, 2017).

Validity Testing:

The validity of the research instruments, which refers to the accuracy and precision of the measurements, was assessed through various methods:

Content Validity: Subject matter experts and researchers in the field reviewed the instruments to ensure that the questions accurately capture the key variables related to HIV/AIDS project management and M&E systems.

Construct Validity: Statistical techniques, such as factor analysis, was employed to examine the underlying structure of the instruments and assess how well they measure the intended constructs.

Criterion-Related Validity: Where applicable, the instruments were compared against established criteria or external measures related to HIV/AIDS project management and M&E effectiveness.

Reliability/Trustworthiness Testing

Reliability, or the consistency and stability of the measurements, was evaluated through the following approaches:

Test-Retest Reliability: A subset of participants were asked to complete the instruments on two separate occasions, and the consistency of their responses was analyzed using test retest reliability measure in SPSS

Internal Consistency: Cronbach's alpha coefficient was calculated for scales and questionnaires to assess the internal reliability of the items within each instrument. A value of 0.84 was obtained for the Cronbach's alpha indicating that the variables under this study were reliable.

Inter-Rater Reliability: For qualitative data obtained through focus group discussions, multiple coders independently analyzed a subset of the data to ensure consistency in interpretation.

Ensuring the validity and reliability/trustworthiness of the research instruments enhanced the robustness of the study's findings and contribute to the overall quality of the research process. Regular checks and adjustments was made based on the feedback from pilot testing and expert reviews to refine and improve the instruments before full-scale data collection.

3.8 Data collection methods and procedures

The data collection methods and procedures for this study adopted a mixed-methods approach, incorporating both quantitative and qualitative research techniques. This comprehensive strategy aimed to capture a holistic understanding of the management of HIV/AIDS-related projects and the (M&E) systems at Thika Level 5 Hospital (Creswell & Creswell, 2017).

Quantitative Data Collection

Structured questionnaires were distributed to three primary strata within the hospital: healthcare providers: Doctors, Nurses, clinical officers, health record officers Laboratory officers , Monitoring and Evaluation (M&E) specialists, and administrators/managers. These instruments, designed based on Creswell's methodology frameworks,featured closed-ended questions. The aim was to collect quantitative data regarding the perceived effectiveness of the M&E system, challenges encountered, and recommendations for improvement (Creswell, 2014).

In addition to structured questionnaires, Likert-scale questions were incorporated. These enabled participants to express their agreement or disagreement with specific statements, providing numerical data for quantitative analysis (Creswell & Creswell, 2017).

Qualitative Data Collection: Focus group discussions were conducted with 15 key stakeholders, including M&E specialists and administrators/managers. These FGDs followed

a semi-structured format, allowing for open-ended questions and flexibility in exploring participants' perspectives on challenges and potential solutions related to M&E (Creswell & Creswell, 2017). Data from the focus group discussion and document analysis were tabulated in thematic tables and presented accordingly after cleaning and coding

3.8.1 Data Collection Procedures

Before full-scale implementation, the research instruments underwent pilot testing with a small group of participants. This pilot testing phase aims to identify and address any issues related to the clarity, comprehensibility, and relevance of the instruments.

Informed consent was obtained from all individuals participating in the study. Participants was informed about the study's purpose, the voluntary nature of their participation, and the confidentiality of their responses.

Sampling procedures involved a random selection within each stratum (M&E specialists, administrators/managers) to ensure a diverse representation of perspectives within the study.

The data collection process adhered to a specific timeline, allowing for a systematic and organized approach to gathering both quantitative and qualitative data within the designated period.

By combining these various data collection methods and procedures, the study aims to provide a nuanced and comprehensive understanding of the challenges and effectiveness of HIV/AIDS project management and M&E systems at Thika Level 5 Hospital, aligning with the principles outlined in Creswell's methodology frameworks.

3.8.2 data analysis techniques and procedures

The proposed data analysis techniques and procedures for this study involved a systematic approach to both quantitative and qualitative data, aligning with Creswell's mixed methods research design (Creswell & Creswell, 2017).

Quantitative Data Analysis

Descriptive Statistics: Basic descriptive statistics, including means, frequencies, and percentages, was calculated to summarize key quantitative variables obtained from the structured questionnaires and Likert-scale questions. This provided a general overview of participants' perceptions of the M&E system's effectiveness.

Inferential Statistics: Inferential statistical techniques, such as correlation analysis, was employed to examine relationships between different variables. For example, correlation

analysis can be used to explore the relationship between the perceived effectiveness of the M&E system and the challenges identified by participants.

Comparative Analysis: For the comparative analysis, chi-square analysis was used to determine the association between different strata, including healthcare providers, M&E specialists, and administrators/managers. These statistical analyses aim to identify any significant variations in perceptions and experiences among the groups, providing valuable insights into how different stakeholders perceive the effectiveness of M&E systems and the challenges they encounter. The results of these analyses contributed to a nuanced understanding of the diverse perspectives within Thika Level 5 Hospital and inform targeted interventions to address specific needs based on stakeholders' roles and responsibilities.

Qualitative Data Analysis

Thematic Analysis: Thematic analysis was applied to analyse qualitative data from Focus Group Discussions (FGDs), and document analysis. This involved identifying recurring themes and patterns within the qualitative data, providing a rich and nuanced understanding of participants' experiences and perspectives.

In the FGDs with 15 participants, where I served as the moderator, I began by ensuring reliable recording equipment was in place and obtained informed consent for the recording. During the session, I facilitated the discussion using open-ended questions, encouraged all participants to share their views, and took brief notes on key points and non-verbal cues. After the discussion, I transcribed the audio recording into text, verifying the accuracy of the transcript by reviewing it for clarity, especially given the informal nature of the conversation. Next, I coded the data by identifying recurring themes and patterns, using qualitative analysis software for a comprehensive examination. This thematic analysis allowed me to group similar responses and interpret the findings relative to my research questions. In reporting the results, I organized the themes and integrated participant quotes to enrich the narrative, ensuring to provide contextual information about the participants and the FGD setting to enhance clarity and depth in my analysis.

Integration of Quantitative and Qualitative Findings

Following the separate analyses of quantitative and qualitative data, the results were integrated to provide a comprehensive understanding of the research questions. This involves comparing and contrasting findings, seeking convergence, validation, or expansion of insights obtained from different data sources (Creswell & Creswell, 2017).

Validation and Trustworthiness

To enhance the validity and trustworthiness of the study, member checking was employed. This involves sharing preliminary findings with participants to gather their feedback and ensure the accuracy and authenticity of the interpretations. Additionally, triangulation was used by comparing data from multiple sources (questionnaires, FGDsguide , document analysis) to strengthen the overall credibility of the study (Creswell, 2014).

By employing these data analysis techniques and procedures, the study aimed to provide a robust and comprehensive analysis of the challenges and effectiveness of HIV/AIDS project management and M&E systems at Thika Level 5 Hospital, contributing valuable insights to both the academic and practical domains.

Data management

Data management for this study ensured the systematic organization, security, and integrity of collected data. All data, including survey responses, interview transcripts, and observational notes, was securely stored in electronic format on password-protected devices or servers. Data was systematically coded and labelled for easy identification and retrieval during analysis. Thorough data cleaning procedures was conducted to address errors and inconsistencies, ensuring the accuracy and reliability of the dataset. Statistical analysis was performed using SPSS software, with version control implemented to track changes. Measures was taken to protect participant confidentiality and comply with ethical standards throughout the data management process.

3.9 Ethical Considerations

Voluntary participation, rooted in informed consent, forms a cornerstone of ethical practice. Furthermore, a commitment to safeguarding participants' privacy through confidentiality and anonymity measures was inherent in the study. Collected data underwent anonymization, and identifying details was securely stored to minimize the risk of unintended disclosure. Respectful treatment of participants, ensuring their autonomy and the right to withdraw from the study without adverse consequences, is non-negotiable. Conscious efforts were directed at minimizing potential harm, with provisions made to offer support and resources should participants express distress during or after their involvement. The study sought approval from an ethical review board, ethical clearance was obtained from NACOSTI and MKU, aligning rigorously with prescribed ethical standards. Transparency and honesty in communication with participants fostered trust in the research process, while an inclusive guided participant recruitment, embracing diversity and enriching the study's perspectives. Community involvement, if applicable, was pursued through active engagement,

acknowledging the collaborative nature of research within community contexts. An ongoing monitoring mechanism was in place to identify and promptly address any emerging ethical concerns, ensuring the ethical integrity of the research throughout its duration. In matters of publication, adherence to ethical standards continued, with proper authorship credit, acknowledgment of contributions, and reporting of research findings with accuracy and transparency. These ethical considerations collectively underscore the study's commitment to ethical conduct, prioritizing participants' well-being and upholding the principles of responsible research.

CHAPTER FOUR: RESEARCH FINDINGS/RESULTS AND DISCUSSIONS

4.0 Introduction

This chapter typically deals with the presentation and analysis of the research findings. It plays a crucial role in elucidating the results obtained through the methodology described in earlier chapters.

4.1 Response Rate

Questionnaire return rate it indicates the percentage of distributed questionnaires that were completed and returned by participants. A higher return rate typically enhances the credibility and reliability of the study results. Generally, a response rate above 70% is considered good in social science and healthcare research, as it suggests a well-received survey and strong engagement from participants. A high response indicates that the data collected is likely to be representative of the population studied.

Table 1 Questionnaire return rate

Category	**Valid**	**%**
Returned	372	96.9
Not returned	12	3.1
Total	**384**	**100**

The response rate for our survey is 96%. Thus, 96% of the people the researcher sent the questionnaire filled it in and returned back. Our results indicate that sending questionnaires to more participants generated a higher response rate. According to (Hendra & Hill, 2019) the higher responses represent the intended survey population, which implies data quality.

4.2 Demographic characteristics of respondents

Table 2 Demographic characteristics

Category	**N**	**%**
Gender		
Male	243	65.3
Female	129	34.7
Position		

Doctors	19	5.1
Monitoring & evaluation specialist	50	13.4
Nurses	55	14.8
Clinical officers	248	57.5
Age		
18-25	5	1.3
26-35	56	15.1
36-45	110	29.6
46-55	145	39.0
56 and above	56	15.1

The findings of the study showed that there were more male participants (65.3%) than female counterparts (34.7%). Majority of the participants were clinicians (57.5%), nurses were (14.8%), some were doctors (5.1%), and the M&E specialists at the facility were (13.4%). In terms of age, majority of the participants were aged between 46-55 years, (39%), followed by those aged 36-45 years (29.6%). Those aged between 26-35 years and 56+ years were both represented by 15.1%. There were fewer participants aged 18-25 years, (1.3%).

Discussion

This study findings revealed there were more healthcare providers combined (doctors and nurses) than M&E specialists at Thika level 5 hospital. However, having more healthcare providers than monitoring and evaluation (M&E) specialists to manage HIV strategies in a hospital can have several implications, both positive and negative. Some of the positive influences include; enhanced clinical care, an abundance of healthcare providers can lead to better clinical services for HIV patients, as there are more professionals available to deliver care, support adherence to treatment, and address comprehensive patient needs. More healthcare providers mean that patients may receive more personalized attention, which can improve patient satisfaction and engagement in their treatment. With a larger workforce,

healthcare providers can take on multidimensional roles that incorporate aspects of M&E into their practice, ensuring that patient outcomes are considered in their day-to-day work. Some of the disadvantages of having more healthcare providers than M&E specialists were that the valuable data collected on HIV management might have not been effectively analyzed or utilized. This led to missed opportunities for improving interventions and patient care based on real-time data insights. M&E specialists are trained to monitor program effectiveness and ensure compliance with the established protocols and guidelines. Without adequate oversight, programs might drift from their intended goals, impacting outcomes. Healthcare providers typically prioritize patient care over program evaluation. This can lead to a lack of emphasis on systematically assessing the effectiveness of HIV strategies and adapting them as needed based on measurable outcomes. Without enough M&E specialists to analyze data and assess program performance, resources may not be allocated efficiently, potentially leading to wastage or misallocation of funds and effort. M&E specialists play a critical role in reporting progress and outcomes to stakeholders, including funders and policymakers. In their absence, there may be delays or gaps in reporting, impacting accountability and funding. Healthcare providers may not receive adequate training on M&E practices, leading to a lack of skills necessary to collect and use data effectively in their practice, potentially short-changing the impact of the programs. When healthcare providers are overwhelmed with administrative and reporting tasks typically managed by M&E specialists, it can lead to burnout and reduced efficiency in patient care. Younger providers were more adept at using new technologies, including digital health tools and data management systems, which enhanced the collection and analysis of M&E data but more experience was dominant with the older population. Younger healthcare workers brought more energy and enthusiasm to their roles, potentially leading to innovative approaches and a strong commitment to improving patient care and health outcomes. They had fresher understanding of contemporary public health challenges, such as HIV, and were inclined to integrate preventive strategies into their practice. However, younger healthcare providers may lack the extensive clinical experience that comes with age, which can impact their ability to manage complex cases or make informed decisions in dynamic healthcare environments. They required guidance and mentorship from more experienced professionals to navigate challenges in HIV management effectively, especially regarding M&E practices.

With majority of participants aged between 46-55 years, this means that majority of respondents had more experience in work and able to understand the research variables. Our

findings are supported by Maijo (2020) study which found that majority of respondents 41(51.2%) were aged between 36-45 years. Older healthcare providers often possess a wealth of experience and clinical knowledge, which can enhance patient care and contribute to better decision-making in complex cases. They may have a strong understanding of established protocols and historical trends in HIV treatment, which can be valuable for evaluating ongoing programs. Experienced providers can serve as mentors to younger staff, fostering professional development and knowledge transfer within the team. Even so, older providers may be less inclined to adopt new technologies or innovative practices, which could hinder the implementation of modern M&E methodologies and data management tools. They might not be as familiar with the latest research and advancements in HIV care, which can impact the implementation of current best practices in both clinical care and program evaluation.

Age and position significantly influence monitoring and evaluation (M&E) processes. Different age groups bring varying perspectives and experiences to discussions; for instance, older participants may offer valuable historical context and knowledge, while younger individuals might contribute fresh insights and innovative ideas. Additionally, communication styles can differ by age, with younger participants often more comfortable using technology and digital tools, whereas older participants may prefer traditional face-to-face interactions. Furthermore, receptiveness to change can vary, as younger individuals may be more adaptable to new methodologies, while older generations might show resistance due to established routines (Ivan, 2019).

In terms of position, a participant's role within the hospital can shape their contributions to M&E discussions. Those in leadership positions often have access to broader organizational goals and resources, providing a strategic overview, while lower-level staff may focus on ground-level insights and practical challenges related to implementation (Morgan et al, 2024). This divergence in perspective is crucial for effective stakeholder engagement, as different positions dictate how stakeholders are involved in the M&E process. Moreover, positions are often linked to specific skills and capacities essential for M&E, such as data analysis or strategic planning. Recognizing and addressing these age and positional differences enhances the relevance and effectiveness of M&E efforts, ensuring a comprehensive and representative evaluation process that captures diverse perspectives.

Just as portrayed in this study, a diverse age mix among healthcare providers can lead to a more balanced approach, combining youthful energy and technological savvy with the wisdom and experience of older professionals. This can enhance both clinical practice and M&E outcomes. Tailored training programs can help bridge generational gaps in knowledge and skills, ensuring that all staff are equipped to handle the complexities of HIV management effectively. An inclusive environment that values contributions from providers of all ages can enhance teamwork and collaboration, improving overall performance in managing HIV strategies.

4.3 Level of effectiveness of the current M&E system

The first objective sought to determine the level of effectiveness of the current M&E system in place at Thika Level 5 Hospital. The level of effectiveness of the M&E system was measured based on the response of the participants on how effective the system was. Very effective = high level of effectiveness, effective = medium level of effectiveness, and ineffective = low level of effectiveness.

Table 3 Assessing the level of effectiveness of the current M&E system.

Category	**N**	**%**
Current M&E system		
Very effective	186	50.0
Effective	105	28.2
Neutral	40	10.8
Ineffective	41	11.0
Qualitative Metrics		
Very Well	249	66.9
Well	42	11.3
Neutral	40	10.8
Poorly	41	11.0
Community Engagement		

Very engaged	243	65.3
Engaged	113	30.4
Neutral	16	4.3

The study findings indicate that half of the participants (50%) rated the current M&E system to be very effective and aligned to the socio-cultural and healthcare context, some participants (28.2%) rated the current M&E system to be effective, (10.8%) found the system to be neutral, meaning neither effective nor ineffective. However, minority of the participants (11%) found the current M&E at the hospital to be ineffective. Majority of the participants agreed that the current M&E incorporated qualitative metrics alongside quantitative metrics very well, (66.9%), a small percentage (11.3%) agreed that the current M&E incorporated qualitative metrics alongside quantitative metrics well. However, some participants were neutral on how M&E incorporated (10.8%) while others reported that the current M&E at the hospital incorporated qualitative metrics alongside quantitative metrics poorly. On the level pf community engagement, more than half of the participants (65.3%) reported to be very engaged in the current M&E process for HIV/AIDS-related projects, those who were engaged were 30.4% while those who were not sure of their engagement were 4.3%.

Discussion

The findings of our study revealed that 50% of the participants said that the current M&E system is very effective and 28% said it was effective. Cumulatively, the effectiveness of the current M&E system at Thika Level 5 hospital was 78%, which was high. The level of effectiveness was measured using the knowledge-based questions in the questionnaire, where response were very effective, effective, neutral and ineffective. A high level of effectiveness was a cumulative total of response of very effective and effective M&E system as per the responses of the participants. A high level of effectiveness of the current M&E system for managing HIV projects among healthcare providers in Thika Level 5 Hospital indicates that the system is functioning optimally and achieving its intended goals. This means that the system consistently collects high-quality data that is accurate, complete, and timely. It includes relevant indicators that comprehensively capture all aspects of HIV care, such as treatment adherence, patient outcomes, and service accessibility. The M&E system is closely aligned with the specific goals of the HIV projects, ensuring that it measures what truly matters for

patient care and program success. It can adapt to changing healthcare needs, emerging trends, and new evidence in HIV management. This farther implies that healthcare providers and other stakeholders are actively engaged in the M&E process, contributing to data collection, analysis, and interpretation, and that there are sufficient resources (human, financial, and technological) allocated to support M&E activities. Data collected through the M&E system is actively used to inform clinical and managerial decisions, leading to improved patient care and there are established processes for providing feedback to healthcare providers based on M&E findings, fostering a culture of continuous improvement.

A highly effective M&E system leads to better health outcomes for HIV patients, including higher rates of treatment adherence, lower viral loads, and improved quality of life. Resources are utilized more efficiently, reducing waste and ensuring that interventions are targeted effectively. Data-driven insights can inform hospital policies and practices, leading to evidence-based approaches in HIV management. Continuous improvement and adaptation based on M&E findings contribute to the sustainability of HIV programs, ensuring they remain relevant and effective over time. The findings of our study are similar to a study done by (Ba, 2021) which found a high effective rate of M&E system, 61% among participant. The study further explained that effective M&E system contributes greatly to expand improved policy and program design, improved operational decisions', improved tactical and strategic decisions, and improved capability to advance development objectives. This aligns with our study.

Qualitative insights can be powerful tools for advocacy, raising awareness of the challenges faced by individuals living with HIV and the need for supportive policies and resources. High qualitative metrics enable the use of storytelling to communicate findings to various stakeholders, making data more relatable and impactful. Involving patients and providers in sharing their experiences empowers them and can lead to greater advocacy for necessary changes in care and policy. Engaging stakeholders in the qualitative assessment process fosters trust and collaboration, encouraging ongoing participation and feedback. Qualitative insights can guide program design and implementation, ensuring that interventions are relevant and culturally appropriate. The M&E system effectively identifies and analyzes themes and patterns in qualitative data, providing insights into common challenges and successes in HIV management. High qualitative metrics reflect active engagement of stakeholders in the M&E process, contributing to a more comprehensive understanding of program effectiveness.

The high level of qualitative metrics in the M&E system for managing HIV projects among healthcare providers in Thika Level 5 hospital indicated that the system is adept at capturing the nuanced experiences and perspectives of patients and providers. This richness of data enhances understanding, informs program improvements, and ultimately leads to better health outcomes for individuals living with HIV. By focusing on qualitative metrics, the M&E system contributes to a more patient-centered, responsive, and effective approach to HIV management. A similar study that support our findings were done in Nairobi County in Kenya, (Obudho, 2021) found a high level of effectiveness of M&E system in HIV/AIDS projects where 88.3% of the respondents agreed that stakeholders should be involved in monitoring and evaluation processes to manage HIV/AIDS related projects. In yet another study in Tanzania, Deogratias, (2020) supports the need for a strong and highly effective M&E system among stakeholders handling HIV/AIDS projects.

4.4 Training and capacity-building efforts provided to healthcare providers

To assess the training and capacity-building efforts provided to healthcare providers regarding M&E practices on HIV/AIDS project Thika Level 5 Hospital.

Table 4 Training and capacity-building efforts

Category	N	%
Effectiveness of M&E training		
Very ineffective	372	100.0
Confident in concepts and skills		
Not Confident at All	118	31.7
Slightly Confident	117	31.5
Very Confident	137	36.8
Improvement in performance		

Yes	372	100.0
Knowledge and skills from training		
Occasionally	117	31.5
Frequently	255	68.5

The findings of this study revealed that the participants reported 100% effectiveness of the M&E training. Majority of the participants reported to be very confident in applying the concepts and skills learned during the training sessions in their day-to-day M&E tasks, (36.8%). Some participants, (31.5%) reported to be slightly confident in applying the concepts and skills learned during the training sessions in their day-to-day M&E tasks, while participants who were not confident at all in applying the concepts and skills learned during the training sessions in their day-to-day M&E tasks were 31.7%. All the participants who attended the training sessions, 100% noticed improvements in their performance in M&E tasks since attending the training sessions. More than half of the participants (68.5%) utilized the knowledge and skills gained from the training sessions in their M&E activities more than those who occasionally utilized the knowledge and skills gained from the training sessions in thier M&E activities, (31.5%). Therefore, in lieu to the second objective of the study there was high level of training and capacity building efforts provided by the healthcare providers at Thika Level 5 hospital.

Table 5 Chi-square test of association between level of effectiveness and training capacity.

M&E*training capacity variables	**Chi-square value**	**p-value**
Knowledge & skills from training	85.933	0.000
Confidence in concepts & skills	102.152	0.000
Effectiveness of M&E training	56.655	0.023

From Table 5 above, the findings indicate that there is a strong association between the training capacity and effectiveness of M&E current system at Thika level 5 hospital symbolized by significant statistical chi-square values with $p<0.05$, knowledge & skills acquired from training

(X^2 = 85.933, p=0.000), confidence in concepts and skills (X^2 =102.152, p=0.000), and effectiveness of M&E training (X^2=56.655, p=0.023).

Discussion

The findings revealed a high percentage of the respondents, 23.0% (17) agreed that training determines the effectiveness of M&E systems in HIV/AIDS project. A very effective M&E training program for healthcare providers involved in HIV projects implies several key outcomes and characteristics that enhance the capacities of healthcare staff and improve the overall management of HIV interventions. The training covered essential M&E concepts, frameworks, and methodologies relevant to HIV projects, ensuring healthcare providers understand the principles of effective monitoring and evaluation. It focused on developing specific skills, such as data collection methods (both qualitative and quantitative), data analysis, interpretation of findings, and reporting. It incorporated practical exercises, case studies, and role-playing scenarios that allowed participants to apply M&E concepts in real-world situations. The training also encouraged peer learning and sharing of experiences among healthcare providers, fostering a collaborative learning environment. Effective M&E training enhances competence and confidence among health providers. Healthcare providers become more skilled in M&E practices, leading to increased confidence in their ability to monitor and evaluate HIV programs effectively. Enhanced skills translate into better job performance in implementing, monitoring, and evaluating HIV care initiatives. Providers were better equipped to utilize data to inform their clinical practices and programmatic decisions, enhancing the quality of HIV services. Trained providers communicated M&E findings effectively to stakeholders, fostering transparency and trust and promoting stakeholder engagement in HIV initiatives. A research study in Kenya found that project performance was impoverished due to weak monitoring and evaluation systems, which were because of incompetence and lack of adequate capacity and experience among team members within systems (Obudho, 2021). A study that contradicted our study findings was done in Tanzania. It assessed how training in M&E of project implementers, M&E baseline surveys, and how M&E designs affect the performance of projects. The study found that most projects (63%) did not collect M&E data, and the goals were not achieved. This was because (89%) of the project implementers did not have any M&E training as identified in this study.

The findings of this study established a positive association between the training capacity and the M&E system efficiency at Thika Level 5 Hospital (p=0.000). The study showed that a highly skilled workforce added value to help increase efficiency in the application of M&E frameworks in delivering on health goals. A similar cross-sectional study done by Ouma et al, (2017) on the effectiveness of training health professionals in M&E pointed out that after receiving training individuals were able to apply M&E practices in data collection methods which consequently influenced the decision making system of the hospital, supporting our findings. Whichever staff members had been trained became more competent in the use of M&E tools hence improving tracking on the patients' outcome and programme impact. Another related study done by Mwangi and Kibera (2018) incorporates the healthcare organisations found in Kenya, Thika Level 5 Hospital included. The study established that nearly all the institutions provided training for their M&E teams and the various findings revealed that the institutions with comprehensive training for these teams reported higher levels of accountability and enhanced publicity. The study results indicated that CPCPs improved knowledge and practice among professionals when they engaged in CPDs in M&E, in addition to promoting the use of data in decision making. Moreover, the study conducted by Kamau and Njiru (2019) showed that the retrospective utilized proved that healthcare facilities that continued M&E training benefitted from successful performance markers. The research also found that having M&E trained more comprehensively enabled staff to quickly identify short comings and make adjustments leading to enhanced service delivery. From all these studies, historical evidences fostering training capacity within the health facilities like the Thika Level 5 Hospital was found to have a positive effect on the M&E systems. This relationship supported the argument of staff training as a potent strategy for enhancing the health systems' monitoring and evaluation.

4.5 Challenges and barriers faced in the implementation of the M&E system

To identify the challenges and barriers faced in the implementation of the M&E system for HIV/AIDS projects. Understanding the obstacles can help in developing strategies to overcome them and improve the M&E system's effectiveness.

Table 6 Challenges and barriers faced in the implementation of the M&E system

Category	N	%

Adequate financial resources		
Very Inadequate	192	51.6
Inadequate	117	31.5
Neutral	25	6.7
Adequate	13	3.5
Very adequate	25	6.7
Additional financial resources		
Increased Funding	135	36.3
Better Budget Allocation	81	21.8
Investment in Technological Resources	104	28.0
More Staff Hiring	40	10.8
Others	12	3.2
Enough staff members		
Yes	252	67.7
No	120	32.3
Level of support and guidance		
Very poor	110	29.6
Poor	90	24.2
Neutral	16	4.3
Good	104	28.0
Very Good	52	14.0

The findings in the above table revealed that more than half of the participants (51.6%) perceived that the financial resources allocated for M&E activities in their department were very inadequate. Some (31.5%) reported that they perceived the financial resources allocated for M&E activities in their department inadequate. Some participants (6.7%) were not sure of the adequacy of the financial resources allocated for M&E activities in their department. Minority of the participants reported that the financial resources allocated for M&E activities in their department were inadequate and very inadequate (3.5%) and (6.7%) respectively. In terms of additional financial resources or investments are needed to improve the effectiveness of the M&E system, majority of the participants reported that additional funding is required for effectiveness of M&E system, (36.3%), some felt that investment in technological resources is needed, (28%), those who needed better budget allocation, (21.8%), those who needed more staffing requirement (10.8%) and minority had other reasons (3.2%). Further, more than half of the participants (67.7%) believed there are enough staff members with the necessary skills and expertise to effectively carry out M&E tasks more than those who didn't believe there were enough staff members, (32.3%). In terms of support, majority of the participants reported that the level of support and guidance provided by management in terms of staffing and workload management for M&E activities were very poor (29.6%). Some of the participants reported that the level of support and guidance provided by management in terms of staffing and workload management for M&E activities was poor, (24.3%). The challenges identified during this study were lack of support, inadequate staff members, lack of additional financial resources, inadequate financial resources.

Table 7 Chi-square association between challenges and M&E system

M&E effectiveness*challenges	**Chi-square value**	**p-value**
Lack of adequate financial resources	98.417	0.000
Need for Additional financial resources	195.806	0.000
Lack of enough staff members	54.254	0.000
Level of support & guidance	112.675	0.000

The findings in the table above depicted that there was a strong statistically significant association between the challenges affecting M&E system implementation and M&E level of effectiveness, ($p=0.000<0.05$). Lack of adequate financial resources (Chi-sqaure=98.417,

p=0.000), need for additional financial resources(Chi-sqaure=195.806,p=0.000), lack of enough staff members (Chi-sqaure=54.254,p=0.000), and level of support & guidance (Chi-sqaure=112.675,p=0.000).

Discussion

There were inadequate financial resources (51.6%) in implementing M&E system. Insufficient financial resources restricted the ability to implement comprehensive M&E activities, including staff training, data management systems, and evaluation studies. This finding was supported by a study done by Healy et al, (2024) which found that one of the substantial barriers to implementation of M&E is lack of funding.

Inadequate financial resources hindered the hospital's ability to effectively allocate funds necessary for various facets of the M&E process. Specifically, this limitation affected staffing, training, data collection, and maintenance of monitoring tools. Without sufficient funding, the hospital struggled to employ enough trained personnel who could efficiently oversee and conduct M&E activities. This meant that existing staff were often overburdened, leading to incomplete data collection or analysis. The research conducted by Healy et al. (2024) on syringe service programs found that financial constraints served as a barrier to effective M&E implementation, illustrating a similar situation faced at Thika Level 5 Hospital. Limited budgets meant that training sessions for healthcare providers on the M&E system were infrequent or nonexistent. Consequently, healthcare providers lacked the necessary skills and knowledge to utilize M&E tools effectively, diminishing the overall quality of data gathered and the reliability of evaluations conducted. The study revealed that insufficient financial resources significantly impaired the implementation of the M&E system at Thika Level 5 Hospital. This situation mirrored the findings of Healy et al. (2024), which highlighted that financial limitations posed substantial barriers to the M&E practices at similar service programs. The compounded effect of these financial constraints resulted in a diminished capacity to monitor and evaluate HIV/AIDS interventions effectively, ultimately affecting service delivery and health outcomes for patients.

It was evident in this study that poor support and guidance represented significant challenges in the implementation of M&E systems for HIV/AIDS projects. This issue manifested in various ways and had detrimental effects on the overall effectiveness of M&E efforts. The study highlighted that a lack of clear support from management and stakeholders hindered the

effective implementation of M&E practices. Inadequate leadership engagement meant that project staff did not receive the necessary direction or encouragement to prioritize M&E activities. Without explicit backing and reinforcement from management, healthcare providers often felt disconnected from the M&E process, leading to inconsistencies in how data were collected and utilized. Moreover, the research revealed that insufficient training opportunities were a significant factor stemming from poor support. Healthcare providers were not adequately equipped with the skills and knowledge necessary to implement M&E effectively. This shortfall in training resulted in low confidence levels among staff, which negatively impacted their ability to conduct accurate data collection and reporting. Consequently, the quality of data generated from the M&E systems remained compromised, reflecting an incomplete picture of the project's impact. Andreas (2024) findings supported our findings by underscoring that poor support and guidance were significant impediments to the effective implementation of M&E systems in HIV/AIDS projects. The study highlighted the need for robust leadership, comprehensive training, and enhanced stakeholder engagement to overcome these challenges and ensure the successful operationalization of M&E systems. Similarly, White et al, (2022) supported our findings by advocating for a more integrated M&E approach to technical support in the global health response such as HIV/AIDS.

The study highlighted that a lack of adequate staffing directly impacted the capacity of Thika Level 5 hospital to conduct comprehensive M&E activities. With limited personnel available, many essential tasks, such as data collection, analysis, and reporting, were often delegated to a small group of overburdened staff. This situation resulted in the incomplete or inaccurate collection of critical data, undermining the reliability of the M&E outputs.

Moreover, the study indicated that insufficient staffing led to high workloads and burnout among existing employees. As a result, the quality of M&E practices diminished while staff morale declined. When personnel were stretched too thin, they faced challenges in maintaining the attention to detail and consistency required for effective M&E implementation. Additionally, the lack of manpower complicated the training and capacity-building efforts essential for enhancing M&E skills among staff. The limited number of trained professionals meant that mentoring opportunities were scarce, which hindered knowledge transfer and made it difficult for newer staff members to become proficient in M&E protocols. Consequently, the effectiveness of the M&E system was further compromised by the inadequate expertise available within the team. Gesicho and Babic, (2021) findings supported our study by

reiterating that the absence of sufficient staff created challenges in maintaining ongoing data management processes. Regular monitoring and evaluation require continuous oversight, which was difficult to achieve when personnel were minimal. This challenge led to lapses in data collection timelines and reporting cycles, resulting in gaps in the information necessary for decision-making and program improvement.

The findings of this study further reiterated that there was a statistically significant association between challenges impacting M&E implementation and M&E effectiveness at Thika Level 5 Hospital. Previous studies pointed out that numerous barriers, including limited financial resources, personnel capacity, and information management, weakened the ability of the M&E process. A research study by Mutuma et al (2018), identified some key challenges to M&E implementation at health facilities like Thika Level 5 Hospital including; inadequate resources. The study revealed the challenges faced by the research, due to inadequate funds which limited the purchase of other appropriate and essential tools and technologies for efficient data collection and reporting. Thus, they found that due to this scarcity of resources, M&E systems failed to work effectively to impact the quality of the healthcare services. However, there is a contradictory study by Onyancha and Muli (2019) that focused on the organisational factors encountered by KHS M&E Teams. The results showed that low staff recruitment and poor staff training of M&E personnel caused functional challenges that affected reliability and the credibility of the collected information. The study found that where M&E staff were ill equipped and did not possess adequate knowledge the quality of data collection suffered greatly and thus eroded the value of the M&E framework. In addition, Gikonyo and Mwangi (2020) pointed out that weak data management systems affected M&E tasks as identified in the research findings. The study also showed that the decentralized data storage and the absence of integration of the information systems made M&E a hurdle due to inadequate analysis and use of data. These established that all the undesirable factors influencing M&E implementation at Thika Level 5 Hospital were highly correlated with M&E System effectiveness. Some of the challenges like limited resources, lack of trained health workforce and poor data management practices denied quality health care and resulted in inefficiencies.

4.6 Focus Group Discussion Analysis

From the FGD the following themes emerged as summed up on table 8 below:

Table 8 FGDs analysis

Variable	Themes
Technology & data management	Mobile data collection (CommCare), online surveys,
Community engagement & cultural competence	Accountability and transparency, addressing stigma and discrimination, community-based data collection.
Recommendations &enhancements	Strengthen community engagement, use comprehensive inclusive approach, ethical considerations and data security.

On the technology and data management aspect, it was clear that mobile data collection methods such as CommCare and KoboToolbox were used to collect data, online surveys were also conducted to enhance the data management for the M&E projects from the hospital Data analysis tools such as STATA and SPSS were used in the facility a lot by the M&E professionals. Also, the facility utilized DHIS2 to support health information systems and integrate data from various sources.

On community engagement and cultural competence, the findings of the FGDs revealed that community involvement in M&E strategies for HIV projects enhanced accountability and transparency, addressed stigma and discrimination through community-based data collection. Some of the recommendations and enhancements suggested by the M&E specialists included strengthening community engagement, use comprehensive inclusive approach, and ensuing ethical considerations and data security for the HIV/AIDS individuals.

Extracts from the FGDs

Participant 1 said that he used the CommCare mobile app for data collection. In some instances online surveys were also important for data collection for the participant. In terms of accountability and community engagement, participant 1 alluded to the need of stigma and discrimination among the health care providers. However, according to participant 3, she said that in order to ensure community engagement, there needs to be community-based data collection for an inclusive data collection.

Participant 6 and 8 recommended ethical considerations and data security of the healthcare providers to ensure confidentiality of information and avoid data breach. Participant 1

reiterated the need to strengthen community engagement while participant 2 emphasized the need for an all-inclusive comprehensive approach. Some participants 9, 10, 12 said that they preferred to use KoboToolbox for data collection.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter provides the summary of findings, conclusions for the study and recommendation from the study on the knowledge gaps identified.

5.1 Summary of findings

Some of the key findings obtained from this study was that there was a high level of effectiveness of M&E current system among healthcare providers in Thika level 5 hospital. The training and strategies offered by the healthcare providers was found to be high and more effective.

The study realized that there was a positive relationship between training and capacity building and the M&E system of Thika Level 5 Hospital. Staff participation increased the efficiency in accessing and interpreting data thus improving health care delivery. Beneficial outcomes such as increased accountability and better understanding of data use supported the organisational culture change following the completed M&E training. Further, continued M&E training empowered the HC professional to point out areas of weakness and effect improvements, which ultimately improved service delivery. This highlights the importance of staff training in enhancing M&E systems in the health facilities.

The findings indicated a strong positive association between challenges affecting Monitoring and Evaluation (M&E) implementation and M&E effectiveness at Thika Level 5 Hospital. Various obstacles, including inadequate funding, lack of trained personnel, and poor data management systems, significantly hindered the effectiveness of the M&E process. Resource constraints limited the procurement of essential tools for accurate data collection and reporting, leading to inefficiencies in the M&E systems. Additionally, insufficient training for M&E staff resulted in operational difficulties that negatively impacted data accuracy and reliability. Furthermore, fragmented data storage and a lack of integration among information systems constrained the hospital's ability to analyze and utilize data effectively. Collectively, these challenges compromised the overall quality of healthcare delivery at the hospital.

5.2 Conclusions

In summary, insufficient M&E specialists can lead to gaps in data utilization, evaluation, and program effectiveness. A balanced approach, ensuring both adequate clinical staff and skilled M&E professionals, is essential for the successful management of HIV strategies in a hospital setting. Encouraging collaboration between healthcare providers and M&E specialists can create a more effective healthcare environment for managing HIV.

Based on the age distributions observed in the study the age of healthcare providers can influence the effectiveness of HIV management and M&E strategies in various ways. A diverse age profile can result in a more robust healthcare team, where the strengths of younger and older providers complement each other. Balancing experience with innovation, adapting training programs, and fostering collaboration across age groups contributed to the success of HIV initiatives in a hospital setting.

A high level of effectiveness of the M&E system for managing HIV projects among healthcare providers in a hospital signifies that the system is well-structured, data-driven, and capable of producing meaningful insights that enhance patient care and program outcomes. It creates a supportive environment for healthcare providers and fosters a culture of continuous improvement, ultimately leading to better health outcomes for individuals living with HIV.A very effective M&E training program for healthcare providers involved in HIV projects signifies that healthcare personnel gain the knowledge, skills, and confidence needed to implement robust M&E practices. This, in turn, leads to improved patient care and program outcomes, a more engaged and competent workforce, and enhanced organizational capacity for HIV management. Ultimately, effective M&E training contributes to more successful HIV interventions and better health outcomes for affected populations.

The challenges and barriers faced in the implementation of M&E systems for HIV/AIDS projects are multifaceted, involving organizational, technical, financial, and social dimensions. Addressing these challenges requires a comprehensive approach that includes capacity building, securing adequate resources, fostering stakeholder engagement, and ensuring a supportive policy environment. By overcoming these barriers, healthcare systems can enhance the effectiveness of M&E efforts, ultimately leading to improved health outcomes for individuals living with HIV/AIDS.

5.3 Recommendations

Health facilities should develop and implement comprehensive training programs focused on M&E principles, methodologies, and tools for healthcare staff.

Future research should explore the specific components and practices that contribute to a high level of effectiveness in M&E systems across various healthcare settings

Regular workshops should be established and refresher courses to keep staff updated on best practices and evolving M&E techniques to enhance on the training capacity of the healthcare providers

Future research should focus on developing a comprehensive framework for training capacity that enhances M&E competencies among healthcare staff.

To address the issue of insufficient staff members, health organizations and project managers should prioritize hiring additional personnel dedicated to M&E activities. This could involve creating specific positions focused solely on M&E functions, thereby reducing the workload on existing staff and allowing for more thorough data collection and analysis. Also, adequate resources are allocated for M&E processes, including training and development programs to build staff capacity in M&E methodologies. This approach would not only improve the quantity and quality of data collected but also foster a more supportive work environment that enhances job satisfaction and retention.

Future research should investigate the multifaceted challenges affecting M&E implementation in healthcare systems, with a focus on identifying systemic barriers and potential solutions.

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APPENDICES

Appendix 1: Consent Form

Title of the Research Study: Assessing monitoring and evaluation system for managing HIV AIDS related among healthcare providers ate Thika Level 5 Hospital, Kiambu County Kenya.

Principal Investigator: [Full Name]
Contact Information: [Email Address] | Phone Number]

Introduction:

You are invited to participate in a research study conducted by [Full Name], a researcher at [Affiliated Institution]. The purpose of this study is to evaluate the Monitoring and Evaluation system for managing HIV/AIDS-related projects at Thika Level 5 Hospital. Your participation in this study is voluntary, and before deciding whether to participate, it is important that you understand the following information.

Purpose of the Study:

The aim of this study is to assess the existing Monitoring and Evaluation system at Thika Level 5 Hospital and identify areas for improvement. The study seeks to capture perspectives from healthcare providers, Monitoring and Evaluation specialists, and administrators/managers.

Procedures:

If you agree to participate in this study, you was asked to participate in completing a questionnaire and participate in an interview.

Risks and Benefits:

There are no risks associated with participation. Additionally, the benefits include contributing valuable insights to enhance the hospital's project management.

Confidentiality:

Your identity was kept confidential to the extent permitted by law. All data collected was anonymized, and any personal identifiers was removed during the analysis phase. Only the research team had access to the raw data.

Voluntary Participation:

Your participation in this study is voluntary. You may choose not to participate or withdraw from the study at any time without penalty. Your decision did not affect your current or future relationship with Thika Level 5 Hospital or any affiliated institutions.

Questions and Further Information:

If you have any questions or need further clarification about the study, you can contact [Full Name] at [Email Address] or [Phone Number].

Consent:

By signing this form, you indicate that you have read and understood the information provided in this consent form, that any questions you have about the study have been answered satisfactorily, and that you voluntarily agree to participate in this research.

Participant's Full Name: _____

Participant's Signature: _____

Date: _____ (mm/dd/yyyy)

Appendix 2: Questionnaire

Section 1: Demographic Information

1.2. Position/Role:

- Healthcare Provider
- Monitoring and Evaluation Specialist
- Administrator/Manager
- Other (please specify): _____

1.3. Years of Experience in Current Role: _____

1.4. Gender:

- Male
- Female
- Prefer not to say

1.5. Age Group:

- 18-25

- 26-35
- 36-45
- 46-55
- 56 and above

Section 2: Evaluation of the Current M&E System

2.1. How would you rate the current Monitoring and Evaluation (M&E) system at Thika Level 5 Hospital in terms of its alignment with the socio-cultural and healthcare context?

- Very Effective
- Effective
- Neutral
- Ineffective
- Very Ineffective

2.2. In your opinion, to what extent does the current M&E system incorporate qualitative metrics alongside quantitative metrics?

- Very Well
- Well
- Neutral
- Poorly
- Very Poorly

2.3. How would you describe the level of community engagement in the current M&E process for HIV/AIDS-related projects?

- Very Engaged
- Engaged
- Neutral
- Disengaged
- Very Disengaged

Section 3: TRAINING AND CAPACITY BUILDING EFFORTS

4.2 On a scale of 1 to 5, how would you rate the effectiveness of the M&E training sessions you attended?

- 1 - Very Ineffective
- 2 - Ineffective
- 3 - Neutral
- 4 - Effective
- 5 - Very Effective

4.3 How confident do you feel in applying the concepts and skills learned during the training sessions in your day-to-day M&E tasks?

- Not Confident at All
- Slightly Confident
- Moderately Confident
- Very Confident
- Extremely Confident

4.4 Have you noticed any improvements in your performance in M&E tasks since attending the training sessions?

- Yes
- No

4.5 How frequently do you utilize the knowledge and skills gained from the training sessions in your M&E activities?

- Rarely
- Occasionally
- Frequently
- Almost Always
- Always

Section4: CHALLENGES AND BARRIERS

4.1 How adequate do you perceive the financial resources allocated for M&E activities in your department?

- Very Inadequate
- Inadequate

- Neutral
- Adequate
- Very Adequate

4.2 In your opinion, what additional financial resources or investments are needed to improve the effectiveness of the M&E system?

- Increased Funding
- Better Budget Allocation
- Investment in Technological Resources
- More Staff Hiring
- Other (Please specify): _____

4.3 Do you believe there are enough staff members with the necessary skills and expertise to effectively carry out M&E tasks?

- Yes
- No

4.4 How would you rate the level of support and guidance provided by management in terms of staffing and workload management for M&E activities?

- Very Poor
- Poor
- Neutral
- Good
- Very Good
- Other (Please specify): _____

Section 5: Open-Ended Questions

5.1. Please share any specific challenges you have encountered in the current M&E system at Thika Level 5 Hospital:

[Open-ended response]

5.2. What recommendations do you have for enhancing the Monitoring and Evaluation system to better address the unique needs and challenges faced by the hospital?

[Open-ended response]

Section 6: Additional Comments

6.1. Is there any additional information or feedback you would like to provide regarding the M&E system for HIV/AIDS-related projects at Thika Level 5 Hospital?

[Open-ended response]

Thank you for your valuable input. Your responses contributed significantly to improving the M&E system for managing HIV/AIDS-related projects at Thika Level 5 Hospital.

Appendix 3: FGDs guide

Introduction:

Thank you for participating in this FGDs. The purpose of this interview is to gather your insights and expertise regarding the Monitoring and Evaluation (M&E) system for HIV/AIDS projects at Thika Level 5 Hospital. Your perspectives are crucial to understanding the challenges and opportunities in project management. Please feel free to share your thoughts openly.

Demographic Information:

Name: _____

Position/Role: _____

Years of Experience: _____

Section 1: Background and Context

1. Can you provide an overview of your role and responsibilities within the hospital, particularly concerning HIV/AIDS projects?
2. In your experience, what role does the M&E system play in the successful implementation of HIV/AIDS projects?
3. From your perspective, how has the hospital historically approached the evaluation of HIV/AIDS projects, and what changes have you observed over time?

Section 2: Evaluation of Current M&E System

1. How would you describe the current Monitoring and Evaluation system for HIV/AIDS projects at Thika Level 5 Hospital?
2. What, in your opinion, are the strengths of the current M&E system?
3. What challenges or limitations do you perceive in the current M&E system?
4. How well does the current system align with the socio-cultural and healthcare context of the local community?

Section 3: Technology and Data Management

1. What technologies or data management tools are currently in use for monitoring and evaluating HIV/AIDS projects?
2. In your view, how effective are these technologies, and what improvements, if any, would you recommend?

Section 4: Community Engagement and Cultural Competence

1. How is community engagement integrated into the M&E processes for HIV/AIDS projects?
2. In what ways does the M&E system account for cultural nuances and socio-economic factors in healthcare delivery?

Section 5: Recommendations and Enhancements

1. Based on your experience, what recommendations would you provide to enhance the effectiveness of the M&E system for HIV/AIDS projects?
2. Are there specific strategies or approaches you believe could address the identified challenges and disparities?
3. How can project managers and administrators better support the M&E efforts within the hospital?

Conclusion:

Thank you for your valuable insights. Your input is crucial to advancing our understanding of the M&E system for HIV/AIDS projects at Thika Level 5 Hospital.

The NACOSTI permit and other approvals should be part of your appendices

Appendix 4: Approval documents

Mount Kenya University

REF: **MKU/ISERC/3830** Date: 27 June 2024

TO: **LICHFIELD JACKIE REMMIE**

REG: **MPH/2023/43691**

Dear Sir/Madam,

RE: ASSESSING MONITORING AND EVALUATION SYSTEM FOR MANAGING HIV/AIDS RELATED PROJECTS AMONG HEALTHCARE PROVIDERS AT THIKA LEVEL 5 HOSPITAL, KIAMBU COUNTY, KENYA

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **2874.** The approval period is **27/06/2024 - 26/06/2025.**

This approval is subject to compliance with the following requirements;

i. Only approved documents including informed consents, study instruments, MTA will be used
ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal
vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

MOUNT KENYA UNIVERSITY
ETHICS REVIEW COMMITTEE
P. O. Box 342 - 01000,
THIKA

Dr. Alfred Owino, PhD
Chairman, Mount Kenya University ISERC

Mount Kenya University

DIRECTORATE OF GRADUATE STUDIES

MPH/2023/43691

28th June, 2024

National Commission for Science Technology & Innovation (NACOSTI)
Off Waiyaki, Upper Kabete
P.O Box 30623- 00100
NAIROBI, KENYA

Dear Sir/Madam,

RE: LICHFIELD JACKIE REMMIE – REGISTRATION NO. MPH/2023/43691

The purpose of this letter is to introduce the above named student who is pursuing **Master of Public Health** in the department of **Community Health Epidemiology and Biostatistics** in the school of **Public Health.**

The title of the research is **"Assessing Monitoring and Evaluation System for Managing HIV/AIDS Related Projects Among Healthcare Providers at Thika Level 5 Hospital, Kiambu County, Kenya."** It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **July, 2024 and September, 2024.**

Any assistance accorded to the student will be highly appreciated.

Thank you.

Mount Kenya University
P. O. Box 342 - 01000, THIKA
Office of the Director,
Graduate Studies

Dr. Samuel M. Kareiga, Ph.D
Director, Graduate Studies
Enc.

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **283114**
Issue: **11/July/2024**

Date of

RESEARCH LICENSE

This is to Certify that Mr.. Lichfield Jackie Remmie of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kiambu on the topic: ASSESSING MONITORING AND EVALUATION SYSTEM FOR MANAGING HIV/AIDS RELATED PROJECTS AMONG HEALTHCARE PROVIDERS

AT THIKA LEVEL 5 HOSPITAL, KIAMBU COUNTY, KENYA. for the period ending : 11/July/2025.

License No: **NACOSTI/P/24/37627**

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)

Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

NATIONAL COMMISSION FOR

SCIENCE,TECHNOLOGY & INNOVATION

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COUNTY GOVERNMENT OF KIAMBU
DEPARTMENT OF HEALTH SERVICES
P.O Box 2344 - 00900 Kiambu, Kenya
Tel: +254 709 877 000 **Email**: info@Kiambu.go.ke **Website**: www.Kiambu.go.ke **Twitter**: @KiambuCountyGov

REFERENCE KIAMBU/HRDU/AUTHO/LITCHFIELD J. R.

14th July 2024

TO WHOM IT MAY CONCERN,

RE: CLEARANCE TO CONDUCT RESEARCH IN KIAMBU COUNTY

Kindly note that we have received a request by **Litchfield Jackie Remmie** of **Mount Kenya University** to carry out their research in Kiambu County, the research topic being on ***"ASSESSING MONITORING AND EVALUATION SYSTEM FOR MANAGING HIV/AIDS RELATED PROJECTS AMONG HEALTHCARE PROVIDERS AT THIKA LEVEL 5 HOSPITAL, KIAMBU COUNTY, KENYA.."***.

We have duly inspected their documents and found that they have been cleared by **MKU-ISERC** until **26th June 2025**. They thus does not need any further clearance with another regulatory body in order to conduct research within the county of Kiambu.

However, it is incumbent upon the facility in which the research is being carried out to ensure that they are conversant with the remit

of the study and operate in line with their institutional norms on conducting research. This note also accords them the duty to provide feedback on their research to the county at the conclusion of their research.

DR. JUNE MUTHIORA

COUNTY HEALTH RESEARCH OFFICER
KIAMBU COUNTY

COUNTY GOVERNMENT OF KIAMBU

DEPARTMENT OF HEALTH SERVICES

Telephone: +254722106797
Email address: thikal5hospital@gmail.com

When replying please quote:

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

Ref: CGK/TL5H/04/02/65

Date: 12th August 2024

APPROVAL TO CARRY OUT RESEARCH

PRINCIPAL INVESTIGATOR: LICHFIELD JACKIE REMMIE

RE: A STUDY ON ASSESING MONITORING AND EVALUATION SYSTEM FOR MANAGING HIV/AIDS RELATED PROJECTS AMONG HEALTH CARE PROVIDERSAT THIKA LEVEL 5 HOSPITAL.

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

This approval is subject to the following mandatory conditions:

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

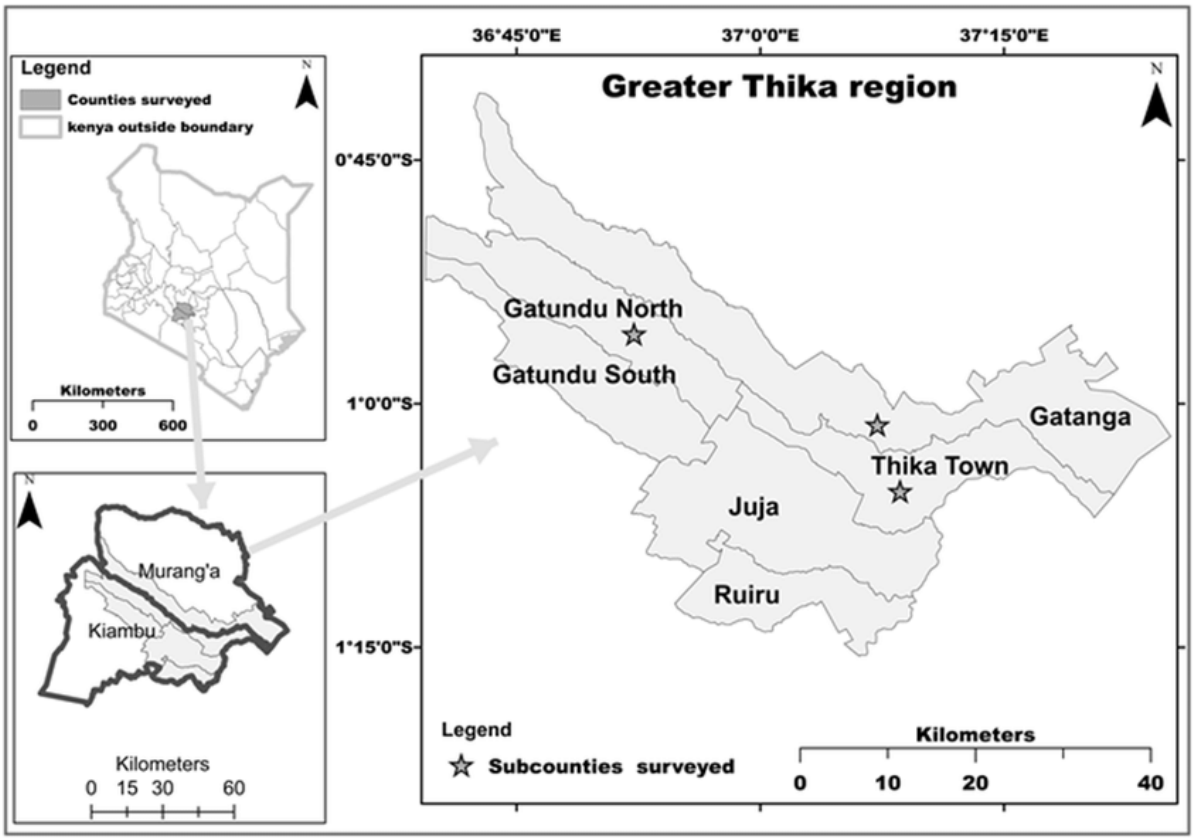
This letter is valid up to 30th September 2024. For any queries feel free to contact the committee chair through the Medical Superintendent's office or Training, Research and Ethics Committee Office.

Thank you and all the best.

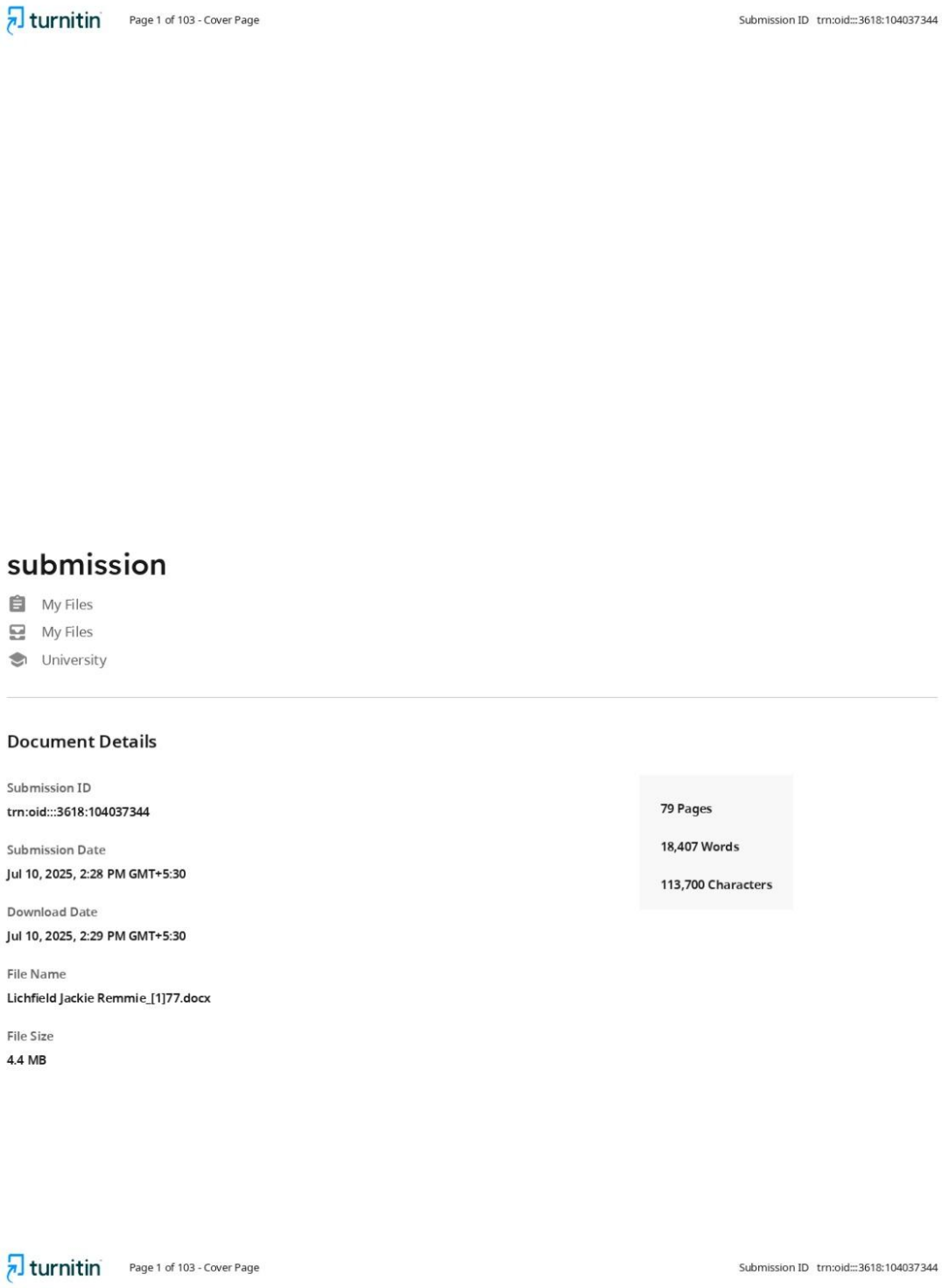
MEDICAL SUPERINTENDENT
12 AUG 2024
THIKA LEVEL 5 HOSPITAL

DR. KABIRU CHARLES
MEDICAL SUPERINTENDENT
THIKA LEVEL 5 HOSPITAL

Appendix 5: Map of the area



Appendix 6: Plagiarism Report



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