STRATEGIC CLINICAL LEADER ATTRIBUTES AND HEALTH SYSTEM FACTORS ASSOCIATED WITH PATIENT LOYALTY TO HIV CARE IN AMPATH-MOI TEACHING AND REFERRAL HOSPITAL, ELDORET KENYA

BY

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A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE IN BUSINESS MANAGEMENT (STRATEGIC MANAGEMENT SPECIALIZATION) DEPARTMENT OF MANAGEMENT SCIENCE AND ENTREPRENEURSHIP, SCHOOL OF BUSINESS AND ECONOMICS

MOI UNIVERSITY

2022

DECLARATION

Declaration by the Candidate

I declare that this thesis is my original work and has not been presented for a degree at any other University. No part of this thesis may be reproduced without the consent of the author and/or Moi University.

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DEDICATION

I dedicate my precious work to the Late Prof. Duncan Ngare.

ACKNOWLEDGEMENT

My valuable appreciation honors my Supervisors Prof. Michael Korir and Dr. Juddy Wachira for their guidance and great mentorship while developing my thesis. I acknowledge and sincerely thank Prof. Waswa Balunywa, the Principal, of Makerere University Business School (MUBS), and Dr. Veronika Mukyala for their kindness while undertaking a staff exchange program at MUBS. More important is Prof. Vincent Bagire (MUBS), for his selfless mentorship during my semester break at MUBS and for valuable insights that informed my current thesis work. I recognize the contribution of Prof. Muhammad Ngoma (MUBS) in understanding the difference between 'patient commitment' and 'patient loyalty' which informed the outcome variable of this study. I acknowledge the intellectual and fact-finding of Dr. Josephat Cheboi in defining the population of this study. I sincerely recognize moral support and intellectual advice from Dr. Patrick Limo and Dr. Andrew Kimwolo. I also wish to acknowledge my funders; CARTA for providing research funding and professional development support during my D.Phil. studies. Above all, are my lovely family, friends, and colleagues who supported me in different ways. Resilience and patients are virtues for achieving success.

ABSTRACT

Patient loyalty is a strategic component that ensures the sustainability of hospitals and gaining a competitive advantage in attracting more patients, however, patient loyalty to Human Immunodeficiency Virus (HIV) care is elusive in Sub-Saharan Africa and the determinants are less documented. The purpose of this study was to determine strategic clinical leader attributes and health system factors associated with patient loyalty to HIV care. The objectives were to determine the proportions of patients with patient loyalty, determine the health system factors associated with patient loyalty, explore the perceptions of healthcare providers on the strategic clinical leader attributes; examine the provider's perceptions of the relationship between strategic leader attributes and patient loyalty, establish the health system factors associated with patient loyalty to HIV care among patients receiving care at AMPATH-MTRH, Eldoret Kenya, and assess the mediating effects of patient satisfaction and health system capacity. This study was guided by the Theory of Planned Behavior and Complexity Theory. The study employed explanatory and exploratory research designs that were done in the Academic Model Providing Access to Healthcare in Moi Teaching and Referral Hospital. The target population included adult HIV-infected patients and healthcare providers who were sampled using stratified, systematic and purposive sampling procedures between December 2019-May 2020. The total sample for the surveys was 438 while for in-depth interviews was 22. Bivariate and multivariate analyses examined associations between variables and predictors of patient loyalty. Structural equation modeling tested mediating effects and thematic analysis extracted qualitative data. Overall perceived patient loyalty was (68%) for patients and (64%) for providers. Patients perceived statistically significant differences in patient loyalty in all clinics while providers perceived none. Results of multiple logistic regression analysis showed that patients and providers who perceived low health system capacity (OR: 0.09, 95% CI: 0.01, 0.7) perceived lower patient loyalty. Lower patient trust (OR: 0.09, 95% CI: 0.03, 0.26), and lower patient satisfaction (OR 0.37, 95% CI: 0.15, 0.87), predicted lower patient loyalty. Providers who perceived low leader adaptive capacity (OR: 0.09, 95% CI: 0.01, 0.67), perceived lower patient loyalty. Results of path analysis showed that patient satisfaction mediated the relationship between patient trust (β=.073, *p*=.001) and patient-provider communication (β=.16, *p*=.001) with patient loyalty. Health system capacity negatively mediated the relationship between leader adaptive capacity (β= -.16, *p*=.001) and patient loyalty while positively mediated clinical leader attributes (β= .33, *p*=.001) and patient loyalty. Qualitative results identified strategic leader attributes for clinical leaders as having clinical competence, being an effective communicator, being honest, having integrity, having problem-solving skills, being approachable, and being a team leader. The study concludes that a higher proportion of patients are loyal to HIV care and strategic leader attributes are necessary for clinical leaders. Also, health system factors and strategic clinical leader attributes influence patient loyalty to HIV care. The study recommends the need for innovative approaches to maintain loyal patients and address existing gaps in HIV care using robust methodologies, build the capacity of clinical leaders in strategic leadership, cascade strategic leadership at all levels of the facility management, and develop policies and guidelines to address patient and health system dynamics and enhance patient loyalty to HIV care.

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LIST OF ABBREVIATIONS

AIDS:	Acquired Immune Deficiency Syndrome
AL:	Adaptive Leadership
ALF:	Adaptive Leadership Framework
AMPATH:	Academic Model Providing Access to Healthcare
ANOVA:	Analysis of Variance
ART:	Anti-Retroviral Therapy
BLT:	Behavioral Learning Theory
CARTA:	Consortium for Advanced Research and Training in Africa
CDDPS:	Community Drug Distribution Points
CAS:	Complex Adaptive Systems
CD4:	Cluster of Differentiation 4
CEOs:	Chief Executive Officers
CFI:	Comparative Fit Index
CHWs	Community Health Workers
CI:	Confidence Interval
CL:	Confidence Limit
CLA:	Clinical Leader Attributes
CMIN/DF:	Chi-square fit statistics/degree of freedom

CRG:	Customer Relational Governance
DAAD:	German Academic Exchange Service
EFA:	Exploratory Factor Analysis
ERP:	Enterprise Resource Planning
FGDs:	Focus Group Discussions
GFI:	Goodness of Fit Index
GSCM:	Green Supply Chain Management
GVIF:	Generalized Variance Inflation Factor
HSC:	Health System Capacity
HCPs	Health Care Providers
HSC:	Healthcare System Capacity
HSF:	Health System Factors
HTCs:	HIV Testing and Counsellors
HIV:	Human Immunodeficiency Virus
IC:	Internal Consistency
IRB:	Institutional Research Board
IREC:	Institutional Research Ethics Committee
IQR:	Inter Quartile Ranges

KMO: Kaiser-Meyer-Olkin

LAC: Leader Adaptive Capacity

LMICs: Low and Medium-Income Countries

LSD: Least Significant Difference

LTFU: Lost to Follow UP

MOH: Ministry of Health

MUBS: Makerere University Business School

MUCHS: Moi University College of Health Sciences

MTRH: Moi Teaching & Referral Hospital

NACOSTI: National Commission for Science, Technology, and Innovation

NFI: Normed Fixed Index

OR: Odd Ratios

PBC: Perceived Behavioral Control

PCA: Principal Component Analysis

PCC: Patient-Centered Communication

PCC: Patient-Provider Communication

PCS: Provider Cultural Sensitivity

PDAs: Personal Digital Assistants

PHW: Primary Healthcare Workers

PL:	Patient Loyalty
PLWHA:	People Living with HIV/AIDS
PMTCT:	Prevention of Mother-to-Child Transmission
PPRA:	Patient-Provider Relational Attachment
PRSA:	Priority Setting and Resource Allocation
PS:	Patient Satisfaction
ROC:	Receiver Operating Characteristics Curve
SEM:	Structural Equation Modelling
SSA:	Sub-Saharan Africa
SMC:	Squared Multiple Correlations
SMEs:	Small and Medium-Sized Enterprises
SMS:	Short Message Service
SLA:	Strategic Leader Attributes
SNS:	Social Networking Sites
SOPs:	Standard Operating Procedures
SSA:	Sub-Saharan Africa
STATA:	Software for Statistics and Data Science
TMTs:	Top Management Teams

TPB:	Theory of Planned Behavior
TR:	Trust
TRA:	Theory of Reasoned Action
UNAIDS:	Joint United Nations Programme on HIV and AIDS
VIF:	Variance Inflation Factor
WHO:	World Health Organization

OPERATIONAL DEFINITION OF TERMS

Patient Loyalty: Patient loyalty to HIV care is a behavioral impulse and commitment of a patient to remain engaged in care regardless of the challenges experienced in care. This involves a commitment to return to the hospital, having confidence in the care, and encouraging others to remain in care.

Strategic Leader Attributes: Adaptive leadership capacity and clinical leader attributes assessed strategic clinical leader attributes in the context of HIV care where the clinical officer provides a leadership role in a /clinic.

Leader Adaptive Capacity: Leader adaptive capacity is defined in terms of the ability of the leader to address technical challenges and adaptive challenges in the provision of HIV care. This assessed the strategic leader attributes.

Clinical Leader Attributes: These are defined in terms of personal leadership characteristics of the clinical leader that aid in providing leadership and clinical functions in the HIV setting. This assessed the strategic leader attributes.

Healthcare System Capacity: Health system factors include factors that aid or constrain healthcare delivery in an HIV care facility. This was assessed by utilizing the World Health Organization (WHO) health system framework 2000, assessing health system capacity, patient trust in the health system and clinician, patient-provider communication, patient-provider attachment, and patient satisfaction with the health system and clinician.

HIV Care: Care provided to HIV-infected patients in the HIV facility

Patient Satisfaction: Patient satisfaction is the judgment of the patients of the services they receive from the clinicians and the health system

Patient Trust: Patient trust is defined as the expectations and reassurance that the patients get from believing in the clinician and the health system to provide excellent care.

Patient-Provider Communication: This is defined as the involvement and interaction of patients and providers in the exchange of information regarding the health of the patient.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

This chapter introduces the background of the study from a broader perspective and discusses the main research problem as well as states the clear objectives. It also justifies why the study is necessary, the significance of the study findings, and the scope of the study.

The notion of patient loyalty has been extensively discussed in marketing and healthcare studies. In marketing literature, the foundation of marketing activities of a firm is perceived as concerning its development, maintenance, or even enhancing customer loyalty to its products or services (Dick & Basu, 1994). In healthcare studies, patient loyalty is defined as a non-random purchase that is expressed over time by some decision-making unit and this is exhibited by a form of behavior to make a purchase decision of goods or services of an organization repeatedly (Griffin, 2002). It is a behavior that is influenced by factors like commitment to parties, such as patient trust in the physician and the quality of interpersonal relationships (Roberge et.al, 2001). Consistent with marketing literature, customer loyalty is a deeply held commitment of a customer to repurchase a preferred service in the future consistently despite situational influences and marketing efforts having the potential to cause customer switching behavior (Mortazavi et.al, 2009). This definition highlights the importance of both attitude (commitment) and behavior (repeat purchasing of services) aspects of loyalty (Roberge et al., 2001).

In healthcare studies specific to HIV, loyalty implies retention in care. Retention in HIV care is a continuous engagement of patients in care (Kiplagat et al., 2018), that occurs from both care and clinic perspectives. From the care perspective, retention is patient-based where those HIV-infected patients are considered retained if they remain active in care regardless of whether the care is received from a different clinic to the one in which they were originally enrolled, while the clinic perspective is where patients return to the same clinic at a particular point in time (van der Kop et al., 2018). Retention is also conceptualized in terms of missed appointments, medical visits at regularly defined intervals, and a combination of those methods focusing on the use of the health care system (Horstmann et.al., 2010). Scholars across disciplines consent that patient loyalty is a behavioral impulse that makes a customer engage and remain in the repeated purchase of a particular good or service for a long time (Ngurah et.al, 2018).

In sectors such as banking, tourism, transportation, and healthcare, they all need loyal customers to survive in the challenging business environments where the number of hospitals has increased and patients are “customers”, hence they need to keep loyal patients to survive in the industry (Tosyalı et al., 2019). Customer loyalty in perspective constitutes an underlying objective for strategic market planning (Kotler, 1984), and this represents an important basis for developing a sustainable competitive advantage (Dick & Basu, 1994). However, there is insufficient literature on what HIV-infected patients and healthcare providers perceive to be patient loyalty and its determinants in HIV care. According to Zhou et al. (2017), long-term commitment to care and compliance with medical advice is significant in improving healthcare services and patient outcomes.

In addition, when customers are loyal, they bring immense benefits to service institutions such as customer satisfaction, and not necessarily when they need healthcare services (Chang et al., 2013). In HIV care, for instance, it is important to build and maintain loyal clients to have a sustainable healthcare service and improved livelihoods, because, if patients are not satisfied with a product or service, they are more likely to direct their attention to another provider (Tosyalı et al., 2019). Today, patient loyalty remains a major concern that needs critical attention. In Kenya, most studies on loyalty focus on the antecedents of customer loyalty and/or patient loyalty (Agyei et.al, 2014; Kipkirong & Rabach, 2013), however, they have less extended research beyond the determinants. The adaptive leadership framework, for example, has been utilized to assess clinical conditions such as chronic diseases (Anderson et al., 2015), and patient-centered care (Corazzini & Anderson, 2015), however, this has not been applied in HIV care particularly to understand how clinical leaders apply the clinical leader adaptive capacity in HIV care. The attributes of clinical leaders include approachability, acting with integrity, effective communication, and providing direction (Larsson & Sahlsten, 2016; Shams et al., 2019; Stanley, Blanchard, et al., 2017). However, most of these studies were drawn from nursing literature lacking the component of clinicians and particularly in HIV primary care. Similarly, there is insufficient literature showing the link between clinical leader attributes and patient loyalty.

Conversely, the health system is the backbone of any healthcare institution, and the health system factors influence patient outcomes and health system improvements. The World Health Organization defines the health system in terms of its capacity to respond to the demands of the healthcare environment and patient needs (WHO, 2000). While

health system studies have shown a positive impact on patient loyalty to the institution (Fatima et al., 2018b), however, health system capacity in Sub-Saharan Africa still experiences challenges, for example, hardware and software elements of health systems influence patient disengagement in HIV care (Mwamba et al., 2018). Similarly, a Kenyan study established health system factors constrain HIV care providers from delivering quality care to HIV patients (Genberg et al., 2019).

When patients get an outstanding experience in the health system, they develop trust in the provider and the healthcare system and enhance long-term loyalty. Patient trust or customer trust is the cornerstone for building patient loyalty and patient-provider relationships in a health system (Chiu et al., 2009; Moliner, 2009). In marketing, trust is essential for the success of relationships, and without it, they will collapse (Ramli & Sjahruddin, 2015). High patient trust leads to meet patient healthcare needs and vice versa (Sumaedi et al., 2014). Similar to trust in the healthcare context, customer trust builds patient confidence (Chang et al., 2013) and trust is earned when patients believe that their provider possesses technical knowledge to evaluate the healthcare services they receive (Lonial et al., 2010). However, in the context of HIV care, patient trust is less documented, particularly in influencing patient loyalty.

To achieve high patient trust, health system improvement, and patient loyalty, providers, and patients must engage in effective communication. Studies have shown that communication determines healthy relationships among patients and providers and the provision of quality patient care (Astuti & Nagase, 2014; Hudelson, 2005). In business and marketing, good communication in terms of listening and responding to customer demands promptly predicts customer relationship management (Alrubaiee & Al-Nazer,

2010). However, other studies found poor communication to hamper patient care (Kwame & Petrucka, 2020). In HIV studies, good communication improved medical adherence (Beach et al., 2015) but patient retention was lower when patients were not involved in decision-making (Bofill et al., 2014) and, disrespected (Madula et al., 2018). When patients and providers engage in good communication relationships, they develop special bonds and attachment with their care providers (Cassedy et al., 2015), particularly when the providers are supportive (Maunder & Hunter, 2016) which lead to patient loyalty (Lonial et al., 2010). In HIV studies, negative results of patient attachment were associated with suboptimal ART adherence (Turan et al., 2019) and patient hospital readmission after 30 days for an HIV population (Parent et.al., 2018). However, there is still limited literature on how patient-provider attachment influence patient loyalty in HIV care.

Based on good patient-provider interactions and patient experiences in the healthcare system, patients get satisfied and remain loyal to the health service and/or physician (Herni J Astuti & Nagase, 2016). Satisfied customers are likely to exhibit favorable behavioral intentions, which are beneficial to the healthcare provider's long-term success (Alrubaiee & Alkaa'ida, 2011). While most studies have assessed the role of patient satisfaction on patient loyalty, they were not necessarily underpinning the HIV context presenting a gap in patient loyalty to HIV care.

In trying to understand patient loyalty, the literature indicates indirect links between patient loyalty through service quality and health systems dimensions such as trust, environment, communication, and patient satisfaction, however, there are inadequate

conversations surrounding the mediating effects of patient satisfaction on the relationship between patient trust, patient-provider communication and, patient loyalty relationships in HIV care where retention of adult patients to care remains a challenge (Kiplagat et al., 2018). A few studies have established the mediation effect of patient satisfaction, for instance, patient satisfaction mediates nursing service quality and patient loyalty between the physical environment, customer-friendly environment, and patient loyalty (Fatima et.al., 2018b; Schaal et.al., Kugler, 2016), however, this was not in the context of HIV.

1.2 Statement of the Problem

Patient loyalty is an important performance outcome that institutions aim to achieve by providing quality service and ensuring satisfaction (Hasan & Khuzaini, 2018; Zhou et.al, 2018), however, it remains a challenge in the healthcare setting when patients experience dissatisfaction (Huang et al., 2016; Mukumbang et al., 2017; Rashidian et al., 2011). Whereas patient loyalty is a strategic component that ensures the sustainability of hospitals and gains a competitive advantage in attracting more patients to their institutions (Amarat et al., 2022), however, there are inadequate conversations about patient loyalty in HIV care. More so, the proportions of patients who are loyal to HIV care are less documented, and a few scholars have extended research beyond service delivery (Chang et al., 2013). Therefore, research on patient loyalty that involves other constructs like strategic clinical leader attributes and health system factors is needed to help healthcare institutions attract and retain patients (Sumaedi et al., 2014).

While leadership studies consent that strategic leader attributes include being honest, responsive, collaborative, approachable, and dynamic (Alanazi, 2022; Heinen et al., 2019; McSherry & Pearce, 2016), however, little is known about what healthcare

providers perceive to be strategic leader attributes for clinical leaders in an HIV facility and their impact on patient loyalty. Emerging literature acknowledges that leading in the age of more chaotic environments and newly emerging challenges and crises such as the Covid-19 pandemic, demand special strategic leadership competencies (Mistarihi, 2021). Clinical leadership studies have found clinical leader attributes determine the well-being of patients (Boamah, 2017), through effective communication (Stanley, Blanchard, et al., 2017), collaboration, clinical expertise, and optimized patient engagement (Heinen et al., 2019). The adaptive leadership framework for instance has been utilized to understand chronic illnesses (Anderson et al., 2015; Neglia et al., 2013), however, little is known in the HIV context. Personal characteristics of top leaders such as working with others and improving healthcare services (Baloch & Siddiq, 2016), but the influence of clinical leaders' attributes at the HIV primary care level is unknown, presenting a research gap on clinical leader attributes (Mannix et al., 2013).

The goal of a health system is to promote the effective delivery of preventive and curative health services to a population (WHO, 2000), however, its influence on patient loyalty to HIV care is less documented. In Pakistan, physical environment, responsiveness, privacy, and safety positively influenced patient loyalty (Fatima et al., 2018b), however, in Kenya, health system factors constrained HIV care providers in providing quality patient care (Genberg et al., 2019). In East Africa, facility-level factors influenced the retention of HIV patients in care (Rachlis et al., 2016). Although trust, patient-provider communication, attachment, and patient satisfaction impact patient loyalty and medical adherence (Jr. et al., 2014; Schaal et al., 2016; Unal et al., 2018), however, little attention is directed to trust in the health system determines patient

overconsumption of health service (Krot & Rudawska, 2021), and patients lose trust when doctors don't pay full attention to their medical needs (Yang & Chen, 2018). Conversely, the patient-provider attachment approach is less documented in HIV care where patients require intermittent visits, and in predicting patient loyalty to HIV care. Furthermore, if communication is unclear and patients are not involved, patients are likely to miss their medical visits (Gourlay et al., 2014). Also, satisfied customers are insufficient in explaining customer loyalty because satisfied customers do not always become loyal customers (Chang et al., 2013). Therefore, additional research on other preconditions is needed to determine patient loyalty in HIV care.

While most studies that have investigated the mediating role of patient satisfaction (Abidova et al., 2021; Amarat et al., 2022; Schaal et al., 2016), and hospital environments (Amankwah et al., 2019), were conducted in Asian and western countries and SSA literature lacks the mediation effects of patient satisfaction and health systems' capacity, particularly in the HIV context where the patient-provider relationship is critical. In a nutshell, there is scant literature investigating patient loyalty from the perspective of HIV because patients are required to intermittently remain in care. This study, therefore, determined the influence of strategic leader attributes and health system factors on patient loyalty to HIV care in AMPATH-MTRH, Eldoret Kenya.

1.3 General Objective

Determine the strategic leader attributes and health system factors associated with patient loyalty to HIV care and explore strategic leader attributes for clinical leaders

1.3.1 Specific Objectives

1. Determine the proportions of patients with patient loyalty to HIV care among patients receiving care at AMPATH-MTRH, Eldoret Kenya
2. Explore the perceptions of healthcare providers on the strategic leader attributes for clinical leaders in AMPATH-MTRH, Eldoret Kenya
3. Examine the provider's perceptions of the relationship between strategic leader attributes and patient loyalty to HIV care in AMPATH-MTRH, Eldoret Kenya
4. Establish the health system factors associated with patient loyalty to HIV care among patients receiving care at AMPATH-MTRH, Eldoret Kenya
5. Assess the mediating effect of patient satisfaction on patient trust in clinicians and the health system, patient-provider communication, and patient loyalty relationships
6. Assess the mediating effect of health system capacity on strategic leader attributes and patient loyalty relationships

1.4 Research Question

What are the perceptions of healthcare providers on the strategic leader attributes for clinical leaders in AMPATH-MTRH, Eldoret Kenya?

1.5 Statements of Hypotheses

$H0_1$: There are no significant proportions of patients with patient loyalty to HIV care in AMPATH-MTRH, Eldoret Kenya

$H0_2$: There is no significant association between providers' perceptions of the relationship between strategic leader attributes and patient loyalty to HIV care in AMPATH-MTRH, Eldoret Kenya

$H0_3$: There is no significant association between health system factors and patient loyalty to HIV care in AMPATH-MTRH, Eldoret Kenya

$H0_4$: There are no significant mediating effects of patient satisfaction on patient trust in clinicians and the health system, patient-provider communication, and patient loyalty relationships

$H0_5$: There is no significant mediating effect of health system capacity on strategic leader attributes and patient loyalty relationships

1.6 Significance of the Study

The study of patient loyalty and specifically in the area of strategic management is essential to all the stakeholders of healthcare institutions including the patients since the healthcare system environment and service delivery models need to be strategic. Study findings provide strategies for healthcare system improvement that leverage strategic leadership, patient care delivery, and patient outcomes. Findings aid healthcare leaders, managers, and policymakers at strategic and operational levels of the care system to review and develop policies and guidelines for providing an outstanding patient experience.

In a hospital environment that has multiple integrated system elements, findings provide a platform to utilize strategic management models to package care to enhance patient loyalty to HIV care. It contributes to the extension of patient loyalty literature to provide novel views from the strategic leadership perspective from a resource-limited setting. The findings enhance a strategic leadership framework for applicability in other contexts and different healthcare settings focusing on other patient outcomes. Also, they provide a

foundation for other meaningful research questions for further investigations using innovative and appropriate methodology that best address patient loyalty challenges from a strategic management point of view.

1.7 Scope of the Study

This was a hospital-based study conducted in AMPATH-MTRH, in Eldoret, Kenya. AMPATH is a health institution that provides free comprehensive HIV care and treatment services to patients in western Kenya and provides a platform to study the strategic leader attributes of clinical leaders who provide leadership roles besides their clinical functions. The study determined the proportions of patients with patient loyalty, explored strategic leader attributes for clinical leaders and their influence on patient loyalty, and the role of health system factors in patient loyalty directly and through mediation.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This literature review focuses on key concepts and themes including patient loyalty, strategic leader attributes, and health system factors. It also focuses on theoretical perspectives and critical discussion of literature. In this view, patient loyalty guides the discussion as the dependent variable while strategic leader attributes and health system factors as independent and mediating variables. Although the themes may be presented in diverse contexts such as public health, marketing, and management, they primarily focus on the influence of patient loyalty to HIV care.

2.2 Conceptual Perspectives

2.2.1 The Concept of Patient Loyalty

Patient loyalty is a form of behavior to make a purchase decision for goods or services of an organization repeatedly (Griffin, 2002). In marketing literature, it is measured by repurchase intention, intention recommendation, and immunity attractiveness to competitors (Kotler and Keller, 2007). In the healthcare context, patient loyalty is defined as patients' deep commitment to continually utilize certain healthcare service providers even where alternatives are available (Chang et al., 2013). For example, Karsa Husada general hospital in Batu measured the number of outpatients in the first six months of 2016 and recorded 13,815 indicating an increase in the number of patients from the previous year 2015 (Chang et al., 2013). Compared to the business industry, sustainable businesses highly depend on consumers who repurchase products or services, hence loyalty defines the life of a business (Tosyalı et al., 2019).

In HIV, loyalty implies retention in care, and retention in care is a continuous engagement of patients in care (Kiplagat et al., 2018), that occurs from both care and clinic perspectives. From the care perspective, retention is patient-based where those HIV-infected patients are considered retained if they remain active in care regardless of whether the care is received from a different clinic to the one in which they were originally enrolled, while the clinic perspective is where patients return to the same clinic at a particular point in time (van der Kop et al., 2018). Retention is also conceptualized in terms of missed appointments, medical visits at regularly defined intervals, and a combination of those methods focusing on the use of the health care system (Horstmann et.al., 2010). Some of the barriers to patient retention include patient satisfaction with HIV care, frequency of clinic appointments, different appointments for mother and child, lack of HIV care for institutionalized populations including students and prisoners, lack of food support, and inconsistent linkage data (Holtzman et al., 2016; Wachira et al., 2014).

In addition, loyalty is a concept that includes not only behavioral reactions but also attitudes (Roberge et al., 2001). Behavioral loyalty is the act of purchasing and attitudinal refers to the sense of commitment that directs behavior toward the band of the business (Zhou et al., 2017b). Consumer loyalty to a healthcare provider has been defined as patient loyalty (Sumaedi et al., 2015), and (Lombardi, 2012) argue that loyal patients are the best because they can refer friends, family, and co-workers. Long-term commitment to care and compliance with medical advice is significant in improving healthcare services and patient outcomes, hence, patient loyalty must be managed by healthcare providers for the benefit of both sides (Zhou et al., 2017b)

Whereas loyalty has been described as the attachment that characterizes someone in line with their feelings, and habits, it is also considered a concept that has limits and weaknesses (Chefdebien et.al, 2016). Public health and management literature consent that the antecedents of patient loyalty include satisfaction, quality, value, hospital brand image, trust, commitment, and organizational citizenship behavior (Zhou et.al, 2018). For example, 68.50% of patients who received outpatients pharmacy services expressed the willingness to visit the hospital again (Insani et al., 2017; Mbuthia & Thaddaeus, 2015; Özer et al., 2016), and perceived length of stay positively influenced willingness to return to the hospital for care (Schaal et.al, 2016), while nursing service quality and hospital image influenced patient loyalty (Hasan & Khuzaini, 2018).

2.2.2 The Concept of Strategic Leader Attributes

According to Gupta (2018), a strategic leader should have both organizational and personal abilities to manage an organization. For instance, have an adaptive capacity to identify requirements for initiating change and consider the method for implementing it in the organization (Davies & Davies, 2011; Gupta, 2018). Adaptive Leadership is “the practice of mobilizing people to tackle tough challenges and thrive, it is about change that enables the capacity to thrive (Heifetz, 1994; Snebold, 2015). Adaptive leadership is used to enable a group to overcome challenges created by change when core beliefs and values lead to failures or when a competing value becomes more relevant (Trastek et al., 2014). Similarly, the characteristics of strategic leaders include organizational abilities and personal abilities. The organizational abilities are strategically oriented, they translate strategy into action align people and organization, determine strategic intervention points,

and develop strategic competencies. The personal characteristics include restlessness and the present, absorptive capacity, adaptive capacity and wisdom (Davies & Davies, 2010). In business studies, adaptive leadership (AL) is a process where a leader seeks to engage, mobilize, and motivate followers to change. The model of adaptive leadership advanced by (Heifetz & Laurie, 1997), gives leaders a distinct perception of how to involve individuals to positively react to change in different contexts, (Arthur-Mensah & Zimmerman, 2017). It also provides a useful way to study the patient-provider relationship and patient management in a healthcare system (Bailey et al., 2019). In the healthcare context, patients face technical and adaptive challenges that are mostly addressed by an expert such as a clinician and they use clinical expertise and authority to apply a solution (Anderson et al., 2015; Thygeson et.al., 2010). While for adaptive challenges, the patient must adapt to a health issue, for example by engaging in self-managing a chronic illness e.g. giving up behaviors that are comfortable but unhealthy, and establishing new ways of managing their chronic condition (Day, et al., 2012).

The focus of the present study is leader adaptive capacity and clinical leader attributes by utilizing the adaptive leadership framework and clinical leadership theories. According to Heifetz & Laurie, (1997), the adaptive leadership framework has been applied in healthcare studies and contains six behaviors of a leader including getting on the balcony i.e. distinguishing between a technical challenge and the adaptive challenge, regulating distress by providing an enabling environment where stakeholders feel safe to express their opinions without fear of judgment or retribution. give the work back to the people by guiding and empowering them to come up with creative and innovative solutions. Similarly, the leader should protect leadership voices from below by paying attention to

the marginalized ones whose voices and concerns may be overshadowed in the process, listening to all viewpoints, including those whom the leader disagrees with, offers an opportunity for growth and a foundation of an organization that is willing to experiment, learn and explore different options (Heifetz & Laurie, 1997).

Just as adaptive leaders and physicians, clinical leaders are also found in the complex clinical setting where they acquire clinical expertise which they then adapt to develop and facilitate sound relationships in teams (McSherry & Pearce, 2016). The characteristics associated with clinical leadership include having a clinical focus, a follower/team focus, or personal quality focus which are very necessary to sustain supportive workplaces and build the capacity and resilience of nursing workforces (Mannix et.al., 2013). Other studies have used the medical leadership competency framework to measure clinical leader abilities including personal qualities, working with others, managing services, improving services, and setting direction (Jonas et.al., 2011). In this study, the adaptive leadership framework developed by (Heifetz & Laurie, 1997) for business and clinical leader attributes was used to measure strategic leader attributes (Cook, 2013).

2.2.3 The Concept of Health System Factors

Health System Capacity

The World Health Organization (WHO) defines a health system to consist of all elements of healthcare that come together for a purpose. These include the organization of institutions, resources including materials, and people whose primary goal is to improve health. The goal of the healthcare system according to (WHO) is to promote the effective delivery of preventive and curative health services to a population equitably and efficiently while at the same time guarding the population against healthcare costs

(WHO, 2000). The building blocks of a healthcare system include health service delivery, governance, human resources, healthcare system financing, health information systems, and, medical products and technology (Murray & Frenk, 2000). Therefore, a good health system needs a robust financing mechanism, a trained and well-paid workforce, well-structured information for decisions and policymaking; sustained facilities and logistics to deliver highly superior drugs and technologies ("WHO | Health Systems," 2018).

According to the Kenyan guidelines for HIV/AIDS clinical care, the staff working in the HIV facility should have a welcoming attitude to build a system that makes the patients feel comfortable and in the right place, and have a welcoming environment that is physically comfortable in waiting for examination, have an orientation to clinic systems and rules, peer support for instance for the youth and systems to support attendance including patient reminders, patient transitions, feedback, (Government of Kenya - Ministry of Health National AIDS and STI Control Program, 2014). These are in line with the WHO health system building blocks (Organization, 2000; Percival et al., 2018).

Most health system studies have assessed healthcare system factors by utilizing the WHO health system framework. In an HIV study in South Africa, the health system capacity was defined as the extent to which health systems meet a population's expectations of how they should be treated and change the patient-provider relationship and cultures of service delivery (H. Schneider et al., 2006). Similarly, a framework assessed the effectiveness, equity, and efficiency of the health system (Elizabeth & Freedman, 2008), improving health, enhancing responsiveness to expectations of the population, and fairness of financial contribution (Murray & Frenk, 2000), WHO framework on non-

medical expectations of consumers including patient autonomy, prompt attention, confidentiality, choice of provider, dignity, clarity of communication, quality of basic amenities and social support (Paul et al., 2016; Rashidian et al., 2011; Yakob & Ncama, 2017).

In addition, the health system factors in maternal, newborn, and child health included human resource quantity and quality, health system infrastructure, tools and supplies, and procedural and capacity challenges (Agyepong, Kwamie, et al., 2017). Other studies in Africa and across that have assessed health system capacity using the WHO indicators to evaluate the performance of health systems at the facility level by using non-health aspects of care relating to the environment and the way healthcare is provided to the client, using constructs such as prompt attention to the patient, patient autonomy, quality of basic amenities and choice of provider in the facility, choice of provider, clarity of communication by the provider during examination and time to discuss health matters, confidentiality in treatment and convenience, respect for patients, travel time to the facility, training, skills, and expertise of the specialist in the hospital, social support, organizational elements such as guidelines and regulations (Harris et al., 2018; Paul et al., 2016; Rashidian et al., 2011; Yakob & Ncama, 2017).

Trust

Relationship marketing literature recognize trust as a key element in establishing customer relationships because trust precedes commitment in business-to-customer relationships (Morgan and Hunt, 1994), and trust positively influences customer loyalty in diverse contexts (Liu et al., 2005). In a challenging business environment, trust significantly determines customer loyalty (Chiu et al., 2009). Similarly, in the healthcare

context, patient trust refers to patients' conviction that the health service provider would act as expected (Moliner, 2009). High patient trust means the patient has a strong conviction that the healthcare provider or the health service institution will act in conformity with the patient expectation while low patient trust indicates the patient has a weak conviction that their expectations of service can be met (Sumaedi et al., 2014). The evaluation of trust in this study focused on trust in the clinician and the health system on aspects related to the patient judgment of the care they receive from the provider and the institution.

In essence, trust in the clinician and the health system, patient-provider communication, patient-provider relational bonding, and patient satisfaction are factors embedded in the health system and it may be difficult to evaluate the healthcare system without assessing them. Trust in the health system and clinician is another important health system factor that has received attention in the literature. Generally, customer trust is regarded as an essential component for the success of relationships because without customer trust, a relationship will not survive in the long term. It is the foundation of business between two or more parties (Ramli & Sjahruddin, 2015). In a service industry, trust is developed when customers experience the service and can make an evaluation of the same service (Berry, 1995).

Communication

Communication is a key factor in building relationships and delivery of quality medical care in a healthcare setting (Hudelson, 2005). In business and marketing literature, communication predicts customer relationship management (Alrubaiee & Al-Nazer,

2010). In healthcare, communication defines successful relationships between patients and their providers (Astuti & Nagase, 2014). Listening to patients and responding to their demands promptly might be necessary for satisfying patients and gaining their loyalty (Tosyalı et al., 2019). However, a nurse-patient communication study indicates poor communication among patients and nurses where care providers dominate the process hence neglecting patient needs and concerns (Kwame & Petrucka, 2020). For effective and successful communication in a healthcare setting, patients should be cared for with empathy and listened to and providers should involve patients more in the care process by avoiding dominating the interaction or expressing superiority over clients (Cubaka et al., 2018).

Attachment

The attachment theory explains the relationships that exist between patients and providers. There are two dimensions; one is the attachment-related avoidance dimension which strives to avoid closeness with others and avoidance of negative emotions, and the attachment-related anxiety dimension which demands assistance from others to address stressors. For people living with chronic stressful health conditions that require lifelong self-management, attachment-related avoidance and attachment-related anxiety may diminish the ability to cope with stressors as an individual leading to negative health outcomes (Turan et al., 2019). Patient attachment and connectedness are closely related concepts. In the context of patient-provider relationships, connectedness has been described as the degree to which a person perceives that he/she has a close, intimate, meaningful, and significant relationship with another person or group of people. This perception is characterized by positive expressions such as feeling compassion for others,

a sense of belonging, being affectionate towards others, and showing respect for others (Phillips-Salimi et al., 2012).

Conversely, the role of attachment theory in the patient-provider relationship explains how patients get attached to their doctors, particularly for their medical needs (Cassedy et al., 2015). In reality, the formation of strong relational bonds between service providers and customers predicts satisfaction, positive word-of-mouth, and loyalty (Berry & Parasuraman, 1991). Patients can get attached to their providers when the providers are supportive and safe and have frequent contact with them (Maunder & Hunter, 2016). In HIV care, the patient-provider relationship is characterized by a patient-provider attachment that is developed over time within the health system (Parent et.al., 2018; Turan et al., 2019), patient-provider communication and patient trust in the healthcare provider and the healthcare system. (Oetzel et.al., 2015; S.H et.al., 2017).

Patient Satisfaction

Conversely, patient satisfaction is a widely studied construct in the literature that evaluates patient judgment of perceived value and sustained response toward service-related stimulus before, during, or after the consumption of medical services by a patient (Kim et al., 2017). For hospitals, satisfied patients are more likely to keep using medical services, follow the prescribed treatment plan and maintain a relationship with a specific healthcare provider as well as recommend the hospital to others (Hekkert et.al, 2009). In HIV studies, patient satisfaction is a determinant of treatment uptake, adherence, and retention and an important health systems outcome (Chimbindi et.al., 2014). For example, an observational study in Kenya found that 79% of ANC clients were satisfied

with their clinic visits associated with the administrative staff, healthcare providers' positive waiting time, and having encountered a receptionist (Vo et al., 2012). Studies have assessed patient satisfaction using the quality of service, communication with providers, and the physical environment (Mulisa et.al., 2017). In HIV care, patient satisfaction was assessed by the medical confidentiality and respect for patient privacy, the competence of healthcare workers, the responsiveness of healthcare workers to patients' questions and requests, quality of ART services delivery, access to information and guidance, communication and guidance (Miller et al., 2015; Tran & Nguyen, 2012).

2.3 Theoretical Perspectives

2.3.1 Complexity Theory

Complexity theory was propounded by George A. Cowan, the head of research at the Los Alamos nuclear laboratory, who founded the Santa Fe Institute in the mid-1980s. The theory argues that organizations are generally deemed to be complex adaptive systems to respond to the complexities arising from system interactions (Schneider & Somers, 2006). Complexity is described based on the interrelatedness of components of a system on each other where the complexity increases with the number of components in a system, the number of relations between them, and the uniqueness of the relations (Kannampallil et.al., 2011).

In leadership studies, complexity theory is referred to as complexity leadership theory wherein in complex situations, leadership plays a critical role to manage the conditions in which complex dynamics can emerge (Marion, 2008) and particularly adaptive leadership

in complex interactions among agents rather than in individuals, and is recognizable when it has significance and impact and suggests a different paradigm for leadership from the old top-down leadership models that do not present adaptive outcomes e.g. bureaucratic (Hanson & Ford, 2010; Uhl-Bien et.al., 2007).

The adaptive leadership framework for instance is a new perspective that aids in managing complexities within a healthcare setting, e.g. implementing culture change in nursing homes, (Corazzini et.al., 2015), adaptive leadership, and person-centered care (Corazzini & Anderson, 2015), adaptive leadership and the practice of medicine (Thygeson et al., 2010b), whereby when these elements interact with each other, they cause some tensions and adaptive leader with the capacity can manage the situation. Other healthcare aspects include healthcare management (Plsek & Greenhalgh, 2001), building interventions that improve healthcare delivery in primary care (Litaker et.al., 2006), and a population influencing each other's health-related behavior or transmitting infections among each other (Gatrell, 2005).

While complexity theory has indeed been captured in the leadership lexicon, its linkage with leadership theory is nascent, indicating further development. Also, the assumptions of the theory remain murky despite much description, which hinders the development of its implications for leadership (Schneider & Somers, 2006). While the concept is useful for helping people to perceive and imagine situations differently, many practitioners remark that its conceptually interesting but seems difficult to apply in practice (Tosey, 2002).

In the present study, patient loyalty to HIV care is a health outcome that is influenced by diverse elements within a healthcare system. When these elements interrelate, they can influence patient behavior toward care (Fatemifar et al., 2016; Kannampallil et al., 2011; Wigfall et al., 2017a). The clinical leader should therefore utilize strategic leader attributes such as adaptive leader capacity in studying the elements within the healthcare system and provide strategies for promoting loyalty to HIV care.

2.3.2 Theory of Planned Behavior (TPB)

The theory of TPB propounded by Ajzen (1975) provides that an individual's behavior is driven by desires or intentions that are motivated by the attitude toward the behavior, subjective norms, and perceived control of behavior (Ajzen 1975). The same degree to which perceived behavioral control (PBC) directly influences behavior depends on the degree of actual behavioral control (Sniehotta et.al, 2014). TPB is an extension of the Theory of Reasoned Action (TRA) (Ajzen, 1985; Ajzen & Fishbein, 1975, 1980) which posits that behavioral intentions are a function of a particular behavior that leads to a specific outcome. The theory has two distinct sets including behavioral and normative. Behavioral beliefs influence an individual attitude toward performing the behavior while normative influences the individual's subjective norm about performing the behavior. (Fishbein & Ajzen, 1975).

The TPB is a useful predictor of health behavior including an understanding of ART adherence (Janepanish et.al, 2011). For example, TPB predicted a 12% variance in intentions to adhere to ART among South Africans receiving ART medication by showing a linear combination of attitudes towards ART adherence, perceived behavioral

control, and perceived group norms (Saal & Kagee, 2011). In the proposed study, the theory is used to support the study in the sense that HIV-infected persons remain loyal to HIV care depending on the attitude and feelings they have towards engaging in care. Although there are perceived influences from the environment, patients will have self-control that will influence loyalty behaviors.

Theory of Planned Behavior (TPB)

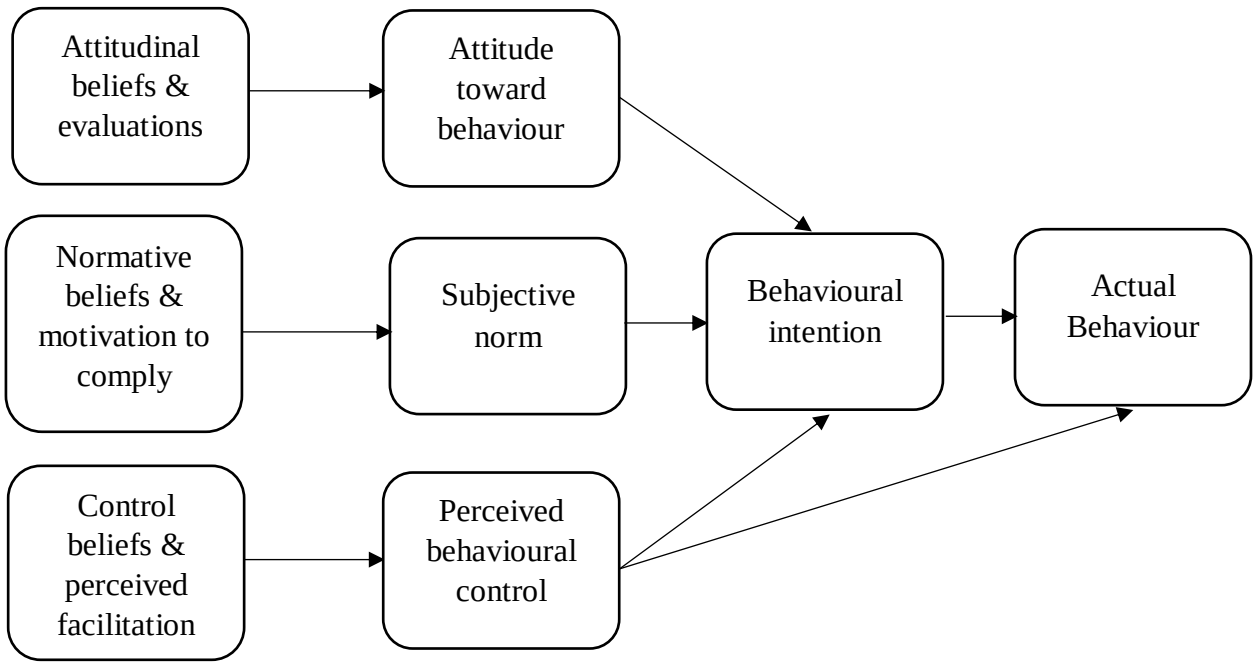

Figure 2.1: Theory of Planned Behavior (TPB): Source (Ajzen, 1991)

2.4 Patient loyalty to HIV care

Achieving patient loyalty to care is the ultimate goal for many health organizations (Kim et al., 2017), however, patient loyalty to HIV care is elusive in SSA. In marketing studies, customer loyalty is an important factor in the service business as it represents strong and positive relationships between customers and service providers (Chang et al., 2013). Patients who were treated at the Banyumas Regency Hospital expressed a high level of loyalty that was not due to the high quality of the relationship but because they were generally satisfied with the treatment process (Astuti & Nagase, 2016).

Studies on patient loyalty are influenced by or through patient satisfaction independent of service quality (Mbuthia et al., 2017; Özer et al., 2016), however, there is insufficient literature on the proportions of patients who have high loyalty to HIV care in Western Kenya that has a high population of HIV infected persons (UNAIDS, 2016), challenges of adult retention in HIV care (Kiplagat et al., 2018) and non-adherence to antiretroviral therapy (ART) (Mukumbang et.al, 2017). Studies indicate that loyalty is vulnerable to erosion when a patient decides to try treatment elsewhere, experiences dissatisfaction, or receives negative information about the performance of services, and this can result in a reduction in loyalty (Astuti & Nagase, 2016).

Patient loyalty is one of the critical factors in ensuring the sustainability of hospitals and gaining a competitive advantage in the changing health sector in Turkey. As patients' loyalty increases, they can be more resistant to the strategies of competing companies, and they can be more successful in attracting potential patients to their institutions (Amarat et al., 2022). Literature indicates that loyal customers are likely to use the same

service provider repeatedly and spread positive word of mouth (Chang et al., 2013), however, the quality of the relationship between a patient and a healthcare organization can decrease patient loyalty which may make patients switch provider and potential loyalty is destroyed (Astuti & Nagase, 2014). Therefore, patients are not compelled by their conditions to remain loyal but other factors contribute to their disloyalty to care and the institution of care.

In addition, 68.50% of patients who were satisfied with pharmaceutical services expressed willingness to visit the hospital again (Insani et al., 2017) indicating high patient loyalty. Similarly, the perceived length of stay in the hospital had a positive influence on the willingness to return (Schaal et al., 2016). Patients who felt that the hospital valued them had high patient loyalty while service quality and emotional value and professionalism had relatively more effects on patient loyalty in a public university hospital in Turkey (Özer et al., 2016). Moreover, treatment effectiveness and satisfaction positively influenced patient intent to revisit the hospital (Kim et al., 2017). An integrated review of the determinants of patient loyalty established that satisfaction, quality, value, hospital brand image, trust, commitment, organization citizenship behavior, and customer complaints were positive determinants however, there were conflicting results on the direct impact o quality, satisfaction, value, and commitment creating a gap for further investigations (Zhou et al., 2017a).

In HIV literature, the patient retention rate (95.3%) in HIV care at 12 months was higher in Vietnam and this was associated with better tracing systems (Matsumoto et al., 2015). In South Africa, similar retention rates (95.2%) were reported at 12 months and (89.3%) at 24 months after enrolment in adherence clubs (Tsondai et al., 2017). However, there

are still challenges to patient retention despite numerous interventions and strategies for promoting retention in HIV care (Kiplagat et al., 2018; K. R. Murray et al., 2017; Olney et al., 2016). For instance, HIV-infected persons are mostly lost to follow-up (LTFU) and less likely to adhere to ART due to forgetting to take drugs, being away from home, health facility-related barriers, busyness of health care providers, (Kangendo & Gitonga, 2017; Kunapareddy et al., 2014; Shubber et al., 2016; Sofia et.al., 2017; Thandar et.al., 2016).

2.4 Strategic leader attributes for clinical leaders as perceived by healthcare providers

In every organization, strategic leaders are required to perform specific roles including making strategic decisions regarding the overall direction of the organization, engaging with stakeholders, establishing follower trust, communicating organizational vision, and addressing conflicting strategic issues (Samimi et al., 2020). In healthcare studies, many physicians are currently in leadership positions whether in their practice, hospital, or health system. They perform complex leadership roles that range from managing a small clinic to serving as the hospital CEO and regardless of the assignment, their success depends on teams and those who lead them. Hence, leadership training at some level is important for every physician leader (Kelley, 2021). This is very important for all healthcare leaders and particularly in developing their strategic capabilities to manage the changing healthcare systems. Clinical leadership is dependent on developing an honest, open, transparent, person-centered relationship between patients, careers, and significant others (McSherry & Pearce, 2016). Therefore, clinicians must be included in the

organization's leadership to ensure the clinical environment operates in a safe, good-quality, and effective way to meet the needs for the delivery of patient care (Jonas et al., 2011) and facilitate sound relationships among teams through effective communication to allow individuals share and learn from each other in practice (Edmonstone, 2011; McSherry & Pearce, 2016).

The clinical attributes that shape a clinical leader include organization of care to support the well-being of patients (Boamah, 2017; Patrick et al., 2011), and clinicians need to develop a greater understanding of the structure of the healthcare services (Cohen et al., 2017; Warren and Carnall, 2011), to provide excellent patient care. Furthermore, inter-professional clinicians perceived resident leadership in the context of inter-professional teams as collaborative, and summative in providing overall direction and bringing other views together, however, the conceptualization of leadership is shifting as individuals from other clinical disciplines see themselves as leaders (Shams et al., 2019). A leader should also be responsive, collaborative, mentor, flexible in decision-making, approachable by all levels of medical and nursing staff, articulate, strategic planner, and participative in executive policy (Heinen et al., 2019; Sonnenberg et al., 2018). In digital healthcare leadership, similar leadership attributes were reported which include being proactive, visionary, and dynamic, leading by example to take the organization to the next level (Alanazi, 2022). Additionally, charisma, cognition, power, and motivation were identified as attributes of strategic leaders (Samimi et al., 2020).

The medical leadership competency framework highlights personal qualities such as acting with integrity, self-development, self-management, and self-awareness, while working with others, the leader should be a team leader, build and maintain relationships, develop networks and be accommodative by encouraging contributions (NHS Leadership Academy, 2011). A study investigating what skills and attributes would be needed for women and nurse executives to succeed in the 21st century established personal integrity as a key attribute, strategic vision, team building/communication, management and technical competencies, networking, collaborating, and valuing diversity and personal attributes such as self-direction and self-reliance were considered important leader attributes (Carroll, 2005). Similarly, physicians and clinicians who have leadership responsibilities should have core leadership competencies, emotional intelligence, building teams, and managing change as their important attributes to lead, however, there is still a gap in their leadership competency and level of preparedness for significant leadership roles (Kelley, 2021). Other personal and behavioral leadership attributes associated with successful lean system deployment in acute care hospitals include skilled communicator, motivator, self-driven, ambitious, change leader, honest, approachable, resilient, accountable, consistent, participatory, collaborative, and team-oriented among others (Steed, 2012).

Registered nurses in Sweden perceived the attributes of a clinical leader at the bedside in inpatient physical care as demonstrating clinical knowledge, establishing a good atmosphere for collaboration, consciously structuring the work to ensure patients' best nursing care, customized presence in the practical work with patients according to pre-determined pre-requisites and monitoring co-workers professional practice (Larsson &

Sahlsten, 2016). Similarly, approachability, empowerment, motivation, visibility in practice, effective communication, clinical skills, clinical knowledge, honesty, integrity, support for others and visibility in the clinical areas, integrity, support, inspiring confidence, and positive clinical role model, were perceived as clinical leader attributes (Stanley, 2017; Stanley, Latimer, et al., 2017a). A study found attributes that are commonly associated with clinical leaders to include a positive sense of humor, communication, enthusiasm, reliability, calmness, dynamics, and a vision for the future (Stanley, 2016). The attributes have been associated with charisma, managerial skills, and abilities including problem-solving, timely decision-making, and leadership adaptive capacity. In addition, power and motivation were also identified as an attribute of strategic leaders (Agle et al., 2004; Flammer & Bansal, 2017).

There is an observation of limited data on what patients and providers perceive to be clinical leader strategic leader attributes to improve healthcare system performance and impact patient care in the HIV care system.

2.5 Strategic leader attributes and patient loyalty

2.5.1 Adaptive Leader Capacity and patient Loyalty

There is insufficient literature documenting how providers and patients perceive the strategic role of their leader in influencing the healthcare system environment and patient outcomes. Most studies have highlighted how healthcare system factors influence patient outcomes (De Vries et al., 2017; Valaitis et al., 2017; Xesfingi & Vozikis, 2016a), how leadership such as transformational, transactional, and clinical leadership influence

patient outcomes (Huynh et.al., 2018a; Sfantou et al., 2017; Wong, 2015), however, little is known about the influence of leader adaptive capacity on patient loyalty to HIV care. Whereas scholars view leadership in healthcare organizations as relating to top executives, it erodes the central meaning of leadership and ignores the capacity for leadership at the point of care that focus on increasing other people's abilities to address different problems in the case of adaptive leadership because leadership is a behavior that helps in solving difficult problems related to clinical care (Jr et al., 2012).

Some scholars have described strategic leaders' characteristics in terms of personality traits including narcissism, hubris, core self-evaluations, greed, Big Five, and risk-taking propensity (Cooper & Patel, 2012; Tang et al., 2015), however, investigating personality constructs separately has led to an incomplete and even inconsistent understanding of their role in strategic leadership. Similarly, direct measurement of the personality characteristics of strategic leaders is difficult and some proxies are weakly associated with personality traits (Samimi et al., 2020). Furthermore, strategic leader attributes have been categorized in terms of managerial cognition that require attention, mental models, ambivalence, and construal levels (Plambeck & Weber, 2009).

Moreover, the adaptive leadership framework is useful to guide research about healthcare communication in addressing challenging issues in palliative care however, communication approaches were often mismatched with parent needs (Neglia et.al., 2013), indicating a gap in the utilization of the leader's adaptive capacity attributes. Similarly, providers presented detailed medical information to patient family members who lacked the technical capacity to address the complexities of palliative care (Adams et.al., 2012). Furthermore, this was a single case study with a limited sample size of

n=12, hence limiting the generalizability of results to other populations. In Zambia, a study suggests the need for management training for HCWs to provide patient-centered care due to health system challenges (Mwamba et al., 2018), but largely, the healthcare system challenges may not necessarily be associated with a lack of management skills but rather, lack of strategic leader attributes to inform strategic healthcare for HIV patients.

While leadership framework provides a useful lens to explore practitioners' leadership behaviors at the point of care, there is still inadequate evidence on what leadership at the individual level at primary care, particularly about the relationship between health care practitioners, patients, and their family's caregiver (Anderson et al., 2015; Jr et al., 2012). Similarly, the question of how and what to do about chronic diseases, presents a problem for adaptive leadership, because the prevention and control of chronic diseases in Georgia require the creation of new systems and ways of doing things (Connor, 2017), which may require the leaders to be adaptive and technical to address the gaps. Existing studies relate to the importance of leadership in a healthcare setting (Daly et.al., 2014b), strategic leadership for healthcare systems (Agyepong, Lehmann, et al., 2017), development of strategic clinical leaders in the national health systems (Edmonstone, 2011) hence presenting a literature gap on strategic leader attributes that are necessary for clinicians in the HIV context.

2.5.2 Clinical Leader Attributes and Patient Loyalty

Clinical leadership plays a key role in providing qualified patient care and forming a healthy and safe clinical work environment (Budak & Özer, 2018a). However, if clinical leadership at the frontline is ineffective, it can have a stark consequence on the quality and outcomes of care (McSherry & Pearce, 2016). Therefore, clinicians must have

leadership attributes that influence healthcare system improvement and positive patient outcomes. Personal qualities of top leaders such as working with others improved healthcare services of both private and public hospitals in Pakistan, however, they only differed in terms of delivery strategy (Baloch & Siddiq, 2016). In the US healthcare system, empirical findings showed that by encouraging healthcare teams to work effectively, leaders can help improve day-day hospital operations thereby improving the outcome quality of patient care for admitted patients (Chakraborty & Kaynak, 2016). This could also lead to effective and sustainable healthcare systems. An editorial supplement providing an overview of health leadership in Africa established positive potentials of new forms of participatory leadership, and leadership development interventions that can nurture new forms of leadership in encouraging teamwork and relationships, tackling problems collectively, spreading motivation and positive staff attitude (Gilson & Agyepong, 2018a).

Clinical leaders are effective in facilitating innovation and healthcare quality improvement by recognizing, influencing, and empowering individuals through personal characteristics such as effective communication to share and learn from and with each other in practice (McSherry & Pearce, 2016). However, for clinical leadership to be effective, it has to be prioritized as the panacea for the ills of the health system and more emphasis directed on the aesthetic attributes of leadership rather than the functions of leadership in a clinical nursing context (J Mannix et al., 2013). In Qatar for instance, top-level managers in the public sector were not fully engaged in determining their organizational direction and did not exercise all strategic leadership behaviors, and

partially demonstrated strategic leadership characteristics as they were more engaged in the operational activities of leadership (Mistarihi, 2021).

Clinical leaders were perceived as having an impact on how clinical care is delivered, staff support, and leading change and service improvements to patients and the main attributes associated included effective communication and clinical competence (Stanley, Blanchard, et al., 2017). Furthermore, by encouraging healthcare teams to work effectively, clinical leaders can improve day-day hospital operations thereby improving the outcome quality of patient care (Chakraborty & Kaynak, 2016). A frontline clinical leader focus on delivering and improving excellent patient care because of their direct contact with patients (Callaly & Minas, 2005), however, the strategic leader attributes that enable clinicians to provide patient care is less documented in HIV care. While most studies have examined the attributes of clinical leaders attributes (Jr, Docherty, Adams, Carthron, Corazzini, et al., 2012; Nzinga et al., 2018a; Reich et al., 2016), little is known about how the attributes influence patient outcomes such as loyalty and health system improvements in HIV care.

The clinical leadership attributes such as clinical expertise, and collaboration with healthcare professionals enable clinical leaders to provide leadership to the healthcare team to optimize patient engagement (Heinen et al., 2019). While literature indicates that effective leadership is necessary for healthcare both at the executive level and at the bedside, for instance, leading clinical teams and solving patient problems in the wards, envisioning a new and a better future, and inspiring others around the vision (Stoller,

2021), there is a clear gap on the influence of strategic clinical leader attributes on patient loyalty to HIV care in the HIV care system.

2.6 Health system factors associated with patient loyalty

2.6.1 Health system Capacity and Patient Loyalty

While most studies have discussed health system factors and patient retention in HIV care, there is limited evidence of patient loyalty in HIV care. In Zambia, a qualitative study established that both health system hardware and software factors such as inadequate infrastructure to protect privacy, delayed opening time, and inflexibility in visit schedules, influence patient disengagement among lost to follow-up (LTFU) patients (Mwamba et al., 2018b). Similarly, healthcare service quality e.g. physical environment, responsiveness, privacy, and safety of patients are positively related to patient loyalty in Pakistan (Fatima et.al., 2018a).

Furthermore, a health system study found some facilitators of comprehensive primary care including HIV included appointment reminder system, non-identifying clinical signs, and women and family spaces, however, the multifaceted nature of the study presents challenges for isolating specific interventions most effective in improving access to care (Lam et al., 2016; O'Brien et al., 2018). This is consistent with a mixed-methods study exploring multi-level factors influencing engagement in HIV care that established rigid clinic policies, disrespectful treatment from providers, and stock out of supplies among others (Kruk et al., 2016; Layer et al., 2014). However, most of the studies were qualitative and utilized self-reported measures which could be subject to recall bias and

limit the extrapolation of findings to other populations. In a qualitative study in the European Union, health system factors were perceived as key to achieving good treatment results in the management of TB such as timely diagnosis, effective financial systems, motivated and dedicated HCPs, and patient inter-sectoral collaboration (Mccollum et al., 2018).

Studies established similar findings such as distance to the facility, waiting time, means of transport used, perceived quality of series, the attitude of service providers, and commodity stock-outs influenced the uptake of antenatal care services uptake in Kisumu country, Kenya, and Ethiopia, and Mozambique (De Vries et al., 2017; Hoxha et al., 2019; Kilowua & Otieno, 2019), a related HIV and STI study in Lilongwe Malawi found contrary findings on poor staff attitude and lack of space and staff at the clinic as factors that disabled partner notification for the medical conditions (Matoga et al., 2018). The state of Kenya's health system in terms of the WHO 6 building blocks established effective coordination between the national and county governments however there was inadequate infrastructure for service delivery, persistent geographic inequalities, inadequate adherence to clinical guidelines and human resources for health (Mulaki & S. Muchiria, 2019).

While the goal of a healthcare system is to achieve good health for the population, ensure health services are responsive to the public and have fair payment systems (WHO, 2000), healthcare system factors still pose a challenge to patient care. For instance in Western Kenya, healthcare system factors constrain HIV care providers from delivering quality

care to patients (Genberg et al., 2019). Similarly, facility-level factors influence the retention of HIV patients in care in East Africa (Rachlis et al., 2016). Whereas the evidence was both from qualitative and quantitative retrospective and prospective cohort studies, the perspectives were only from the healthcare providers (Genberg et al., 2019) and the voices of healthcare leaders and patients were silent, especially in SSA where the leadership framework as a strategy adopted by healthcare leaders is weak and contribute to poor healthcare service delivery in South Africa (Govender et al., 2018). In related studies, patients reported healthcare system limitations and HIV concerns, and additional problems such as stigma and HIV literacy as factors that contributed to a lack of engagement in care (Bofill et al., 2014). Moreover, healthcare providers in Uganda perceived organizational culture in health facilities as predominantly hierarchical and influenced the retention of healthcare providers (Shumba et al., 2017). In South Africa, the current healthcare system is still fragmented and does not adequately meet the healthcare needs of its clients (Conmy, 2018).

Although literature established links between healthcare system factors and retention and engagement in HIV care, mostly they are not from the Kenyan context and they utilized clinical measures to assess retention. Similarly, there are limited behavioral and attitudinal patient loyalty aspects in HIV care and this study presents the opportunity to assess patient loyalty in the HIV context in Eldoret, Kenya.

2.6.2 Patient Trust and Patient Loyalty

In organizations, trust refers to employees identifying with the organization and being willing to establish long-term relationships with the organization (Yu et.al, 2018). In relationship marketing, trust is the key factor in building customer loyalty (Mayer et.al, 1995; Palmatier et.al, 2006). In healthcare studies, trust is the belief of the patient in the provider or the hospital, based on the concept that the care provider seeks the best for the patient and will provide suitable care and treatment for him/her (Platonova et al., 2008a; Zarei et al., 2014). Trust in the health system and its institutions is of utmost importance however, little attention has been put on its impact on overconsumption (Krot & Rudawska, 2021). In addition, trust was identified as an important aspect in an empirical study relating to consultations in primary healthcare in the UK (Robb & Greenhalgh, 2006), but little is known about how trust influences patient loyalty in HIV care.

While trust leads to increased patient satisfaction and loyalty as well as recommending the healthcare provider to others (Chang et al., 2013; Ozawa & Sripad, 2013) however, consistency of relationship was not relevant to the patient when clinical information was shared and used (Waibel et.al, 2018). Similarly, trust impacts patient loyalty (Sumaedi et al., 2014). However, when trust is breached, it may have negative consequences. For instance, patients who were within the same social network as their providers had the most difficult time establishing trust due to fear of disclosure and some providers avoided interacting with such patients (Wachira et al., 2018). Similarly, breaches of trust in the healthcare system threaten trust (Billie Murray, 2015). Patients with positive trust in their physicians were loyal however, 16% and 29% agreed that doctors don't pay full attention

to what they are trying to tell them and care less about their medical needs (Yang & Chen, 2018).

In HIV care, trust in physicians, in general, may not be a major barrier to HIV testing and linkage at the initial stages but is very important along the continuum of care due to later interactions with physicians and the healthcare system and thus influence retention in HIV care (Ahenkora et.al., 2019; Graham et.al., 2015). Whereas this is evident, there is insufficient literature on patient trust in the clinician and the healthcare system on patient loyalty to HIV care in Western Kenya.

2.6.3 Patient-Provider Attachment and Patient Loyalty

The role of attachment theory in the patient-provider relationship explains how patients get attached to their doctors, particularly for their medical needs (Cassedy et al., 2015). In reality, the formation of strong relational bonds between service providers and customers predicts satisfaction, positive word-of-mouth, and loyalty (Berry & Parasuraman, 1991). Patients can get attached to their providers when the providers are supportive and safe and have frequent contact with them (Maunder & Hunter, 2016). However, this study lacked the perspectives of the providers who could provide a comparative perspective. The patterns of adult attachment associated with healthcare relationships and health outcomes include security, preoccupation, dismissing, and fearfulness (Maunder & Hunter, 2009).

Improving relational continuity with primary healthcare doctors increases the potential to improve the quality of patient care including continuity of clinical management,

information, and patient health, however, the consistency of some specialists was irrelevant to some patients when their clinical information was shared (Waibel, 2018). Moreover, the relationships of patients with administrative staff have the potential to augment and enhance treatment, but they could also undermine treatment if poorly handled in the case of the therapeutic alliance in a mental unit (Sandage et al., 2017). Patient-provider relational bonding or attachment is one area that is understudied in HIV care concerning patient loyalty to care.

Whereas patients agree that they would be more likely to engage in care if they feel better after leaving their HIV care appointments, however, it was not necessarily related to the biomedical treatment they received, but rather to the empathetic and caring atmosphere that providers and staff created by knowing their names, genuinely inquiring about them, treating with respect and compassion (Wood et.al., 2018). Although studies have discussed the attachment theory in healthcare studies including ART adherence in HIV studies, (Turan et al., 2019), there is still limited evidence on the valid measure of attachment behavior and attitudes in most healthcare relationships (Maunder & Hunter, 2016), yet attitude and behavior are the most constructs of patient loyalty that determine customer disposition towards one service over another as well as the commitment to a service or a brand despite the availability of competitive alternatives i.e. repurchase or regular use of service (Ahenkora et al., 2019).

According to (Turan et al., 2019), attachment-related avoidance predicted suboptimal ART adherence, viral failure, and low CD4 count while attachment anxiety predicted

missed HIV care visits. This indicates the value of investing in patient-provider closeness and friendship to lessen tensions and improve the loyalty of patients. Similarly, an observational study established that patient-provider attachment was negatively associated with 30-day readmission for an HIV population study (Montaner, & Ti, 2018), although there may be other confounders that could have affected the situation. Moreover, a secure patient attachment was predictive of a better alliance, more perceived patient support, less general distress, and higher levels of trust and satisfaction with the healthcare providers when compared to patients with an insecure attachment style, hence using an attachment theory framework, can improve the understanding of the patient-provider relationship (Palmer Kelly et al., 2019). Higher proportions of patient-provider attachment were negatively associated with 30-day hospital readmission among people living with HIV/AIDS in Canada (Parent et.al., 2018). It is therefore evident there is insufficient literature on how relationship attachment between patients and providers affects patient loyalty to HIV care in Eldoret, Kenya.

2.6.4 Patient-Provider Communication and Patient Loyalty

Communication in healthcare is very critical in exchanging information between all stakeholders and it should be applied at all levels of a health system. However, communication breakdown occurs when the needs of the patients are not met or misunderstood in what is communicated, so patients get demoralized to engage in care (Sten et al., 2017). In Pakistan, a study that was done in both private and public hospitals established a significant relationship between patient-provider communication and patient loyalty to their physician and loyalty to the hospital (Unal et al., 2018). Similarly, an HIV

study in the US to improve patient-provider communication about HIV medication adherence established more dialogue about therapeutic regimen in visits with a group of patients and providers on intervention where the visits focused on brainstorming solutions to non-adherence compared to those in the control group (Beach et al., 2015). A systematic review to explore the association between patients' perceptions of communication quality with their provider and a range of patient outcomes established higher perceived quality of provider-patient communication in patients with T2DM influenced self-management, self-efficacy, and less diabetes distress (Peimani et al., 2018).

In Kenya, physicians engaged in a high number of communication behaviors in terms of listening carefully to their patients and patients were more likely to attend the clinic and ART medication (Wachira et al., 2014). Patients and providers in HIV care facilities in Bamako, Mali identified rapport as a foundation feature of patient-provider communication. They added that partnering to mitigate conflicts addressed barriers to engagement and increased connectedness, and patients that had disengaged, felt communication reacceptance may have prompted them to re-engage (Hurley et al., 2017). In a related study, higher clinicians' respect for a patient, engaged them in more rapport-building, social chitchat, positive talk, positive clinician and patient emotional tones, less clinician verbal dominance, and more patient-centeredness (Flickinger et al., 2017). Similarly, patients kept more appointments if providers treated them with dignity and respect listened carefully to them, explained in ways they could understand, and knew

them as persons however, involvement in decision-making was insignificant (Flickinger et al., 2013).

Engaging the narratives of clients in the communication process was linked to better reflections on HIV care, and this promoted access to HIV clinical services. The author also noted the use of open-ended questions and non-judgmental attitudes among providers as enablers of collaboration in improving barriers to care (Mabuto et.al., 2017). Establishing rapport with patients through welcoming, greeting, smiling, responding to patients' emotional needs, and showing interest in their well-being was therapeutic and enhanced communication (Hurley et.al., 2018). Providers who encouraged open discussions took interest in patients' conflicts/challenges and listened to their concerns promoting patient participation in the care process. Patients who had stopped using ART were looking forward to reacceptance through communication, for them to reengage with care service, which many providers didn't do. Providers who understood the re-engaged patients and partnered with them helped in reducing conflicts (Hurley et.al., 2018).

However, there will always be a challenge when communication does not meet the needs of the client. In Argentina, a study found providers viewed themselves as the decision-makers in inpatient care (Bofill et al., 2014). In addition, providers in an intervention group were louder than the patients in a study to improve patient-provider communication about HIV medication adherence compared to those in a control group (Beach et.al., 2015), which is likely to instill fear among the patients. A similar perspective was observed in an HIV study exploring patient-provider relations on

PMTCT uptake which found unclear communication by the provider, and patients not asking questions, which resulted in missed services (Gourlay et al., 2014).

Literature reported some form of verbal abuse and disrespect for clients by the healthcare providers even though some patients and providers engaged in good communication with nurses. Other clients were being shouted at by the healthcare providers, some patients did not have a chance to ask questions and others reported language barriers as a factor in nurses' and clients' communication. The most disadvantaged group of clients were those in public hospitals in rural areas who were being discriminated against (Madula et.al., 2018). Another communication barrier was the language used between the providers and clients. The ability of the client to understand the meaning of their diagnosis and the plan to achieve their health goals determined their active engagement, participation, and ability to articulate their needs during consultation sessions.

In an HIV observational study, clinicians were more likely to focus on patient emotions for concerns vs cues while less likely to provide space when patients of American-African origin expressed repeated emotional issues that were medically related (Park et al., 2019). Also, women living with HIV (WLH) were adherent to the provider's recommendations for abnormal pap test follow-up care however, provider communication was lowest among patients with low health literacy and lower socioeconomic status (SES) (Wigfall et al., 2017b). These findings present a clear picture of the importance of prioritizing interventions and focusing on patient-provider communication to improve patient loyalty to care.

2.6.5 Patient Satisfaction and Patient Loyalty

Patient satisfaction is the judgment of perceived value and sustained response toward service-related stimulus before, during, or after the consumption of medical services by a patient (Kim et al., 2017). For hospitals, satisfied patients are more likely to keep using medical services, follow the prescribed treatment plan, maintain a relationship with a specific healthcare provider, and recommend the hospital to others (Hekkert et.al., 2009). However, the relationship between satisfaction and loyalty, decreased as the length of the relationship increased (Balaji, 2015). In HIV studies, patient satisfaction is a determinant of treatment uptake, adherence, and retention, and an important health systems outcome (Chimbindi et.al., 2014), but the influence on patient loyalty in HIV care is less documented.

In an HIV study, satisfaction was not associated with patient socio-demographic characteristics and other related health qualities although there were 72% follow rates, however, those patients who were lost to follow-up may have been less satisfied with HIV medical care and it is difficult to account for it (Sullivan et.al., 2000). Furthermore, 86% of patients were satisfied with the care and clinic-related patient experience, however, patient experiences such as waiting time, travel time, and the number of services used were found to be insignificant to patient satisfaction. These findings are however associated with social desirability bias which may lead to over-estimation of satisfaction due to the use of staff to interview patients (Suvorovaa et al., 2015), and again, patient experience is not a precondition of patient satisfaction. Treatment effectiveness and patient satisfaction positively influenced patient intent to revisit (Kim et

al., 2017). In a public university in Turkey, perceived value influenced patient loyalty directly and indirectly through customer satisfaction (Özer et al., 2016). 68.50% of patients who were satisfied with service provision in the Karsa Husada general hospital said they will visit the hospital again however, quality improvement of pharmacy service and patient satisfaction had a positive effect but not with or towards patient loyalty (Insani et al., 2017). On the contrary, service quality was not significant to loyalty in public hospitals in Indonesia (Lestariningsih et al., 2018).

Consistently, a Western Kenyan study established that the integration of HIV services into primary care services was associated with a significant increase in patient satisfaction. However, women were more likely to express discomfort after integration (Odeny et al., 2013). Similarly, 79% of clients in Kenya were satisfied with their clinic visits, however, there was an insignificant difference among the uninfected clients due to satisfaction with the administrative staff, health care providers' positive waiting time, etc. (Vo et al., 2012). Furthermore, a patient at a clinic may have a generally good feeling about the hospital, and a high level of satisfaction, but it doesn’t mean they will be loyal however, patients may become loyal after the clinic offers loyalty programs and encourages them to come back (Astuti & Nagase, 2016). Similarly, satisfaction does not necessarily influence patient loyalty, and therefore healthcare institutions should not depend solely on satisfaction to ensure patient loyalty while a dissatisfied customer is very likely to become disloyal (Chang et al., 2013; Sumaedi et al., 2014).

There was a strong correlation between patient satisfaction and the willingness of patients to return to the hospital after a primary total hip replacement (Schaal et al., 2016), however, patient loyalty remains a challenge when patients are dissatisfied. This provides a chance to rethink the primary care level strategies that will improve patient loyalty to HIV care.

2.7 The mediating effect of patient satisfaction on the relationship between patient trust in clinicians and the health system and patient loyalty

In most studies, satisfaction appears as either the antecedent or consequence of the variables under examination and literature indicates that much patient satisfaction is due to a good doctor-patient relationship and vice versa (Addo et al., 2020). Evidence from the literature shows that patient satisfaction mediates the relationship between service quality and patient loyalty and between the physical environment and patient loyalty respectively. The study was conducted in private hospitals and views of patients from the public hospital could be important (Fatima et al., 2018b; Schaal et al., 2016), however, there is limited data on how patient satisfaction mediates patient trust in clinicians and health system and patient loyalty to HIV care in Kenya.

Although trust in the health system and its institutions is of utmost importance, however, little attention has been put on its impact on the overconsumption of healthcare. However, patient satisfaction mediates the relationship (Krot & Rudawska, 2021). Furthermore, increased trust, commitment, and the ability to communicate did not automatically lead to patient loyalty; only an increased sense of satisfaction did so (Astuti

& Nagase, 2016). A study that established whether patient experiences of examinations affect their word of mount intention found that patient satisfaction with physicians mediated the relationships however, the limitation is that the evaluation of participants may have changed over time and their views may not reflect the current situation (Akbolat et al., 2021).

In Islamic-friendly hospitals, patient satisfaction fully mediated the relationship between Shariah amenities and patient loyalty and partially mediated the relationship between physicians' services and patient loyalty to medical treatment (Rahman et al., 2021). Moreover, patient satisfaction fully mediated the relationship between dental practice-related factors (prices, facilities, dentist services, staff services) and patient loyalty in dental clinics in Chabang, Thailand (S & C.N, 2021). In addition, patient satisfaction fully mediated overall healthcare service quality and patient loyalty relationship (Shabbir et al., 2016). Whereas healthcare quality has a strong and positive impact on patient satisfaction and patient trust in medical care, patient satisfaction mediates the relationship between health service quality and patient trust in healthcare service providers (Alrubaiee & Alkaa'ida, 2011). It is possible to say that when patients are more satisfied, they develop more trust in the healthcare provider, which certainly leads to their loyalty. Patient satisfaction mediates the relationship between public trust in healthcare and patient overconsumption in healthcare systems (Krot & Rudawska, 2021).

An observational study found patient satisfaction as a mediating variable between overall satisfaction with doctors and patients' expectations and developing confidence or trust in

the emergency department (Abidova et al., 2021). Therefore, when patients are satisfied with their doctors and when they feel their expectations are made, then they will feel satisfied and develop more confidence and/or trust in the doctors and the hospital. While studies have shown the mediation effects of patient satisfaction on the quality of service and patient loyalty, little is known about how patient satisfaction with the clinician and the health system mediates the level of patient trust in the clinician and health system in HIV care.

2.8 The mediating effect of patient satisfaction on the relationship between patient-provider communication and patient loyalty.

Enhancing effective communication and relationship building may improve retention in care (Flickinger et al., 2013; Wachira et.al., 2014). However, the influence of patient-provider communication on patient loyalty to HIV care through patient satisfaction is understudied. Literature indicates that physician-patient communication determines patient loyalty to the physician and hospital while patient loyalty mediates the relationship (Unal et al., 2018). Moreover, patient trust and satisfaction positively mediated the relationship between face-to-face and online patient-provider communication which influence patients' health-related outcomes (Akbolat et al., 2021). In addition, patient-provider communication influenced patient emotional well-being and was partially mediated by patient satisfaction (Jiang, 2019b).

Fatima et al., (2018a) argue that it is sometimes difficult to satisfy everybody because generally, individuals have diverse judgments and expectations. They found that the

relationship between patient loyalty and physical environment, customer friendliness, and communication was fully mediated by patient satisfaction and partially mediation by safety and responsiveness. Literature shows that patients were particularly satisfied with the qualities of doctors such as listening to complaints, explanation of their ailments, advice, and treatment, and their general behavior (empathy, respect, confidence, etc) (Addo et al., 2020), however, the influence of these factors on patient loyalty to HIV care through patient satisfaction with the health service is understudied.

The corporate reputation of a hospital positively affects patient loyalty, while patient satisfaction with the health services such as medical services, interest, and courtesy, administrative services mediated the corporate reputation-patient loyalty relationship (Amarat et al., 2022). Moreover, patient-perceived involvement not only had a direct positive impact on patient loyalty but also had an indirect effect on patient loyalty through patient satisfaction (Zhang et.al., 2022). This implies that when patients are more engaged by their doctors through communication and other engagement strategies, they are more likely to be satisfied and engage in medical visits. Similarly, service quality and hospital image affected patient loyalty while satisfaction mediated the relationship between nursing service quality and patient loyalty to the hospital but did not mediate the hospital image-patient loyalty relationship (Hasan & Khuzaini, 2018).

2.9 The mediating effect of health system capacity on the relationship between perceived strategic leader attributes and patient loyalty

The goal of a healthcare facility is to promote the clients' well-being by organizing the hospitals in a way to provide quality care to patients (Campos Andrade, 2013), however, there is scant literature on the mediating role of health system capacity/capacity in healthcare studies and particularly connecting to HIV care. Literature indicates that the design of the hospitals matters particularly for patient consultation. When patients wait in a quiet and tidy environment with comfortable seats, they are likely to feel well, expect good care, and get satisfied with their visit. However, if the waiting rooms are disorganized, they will tend to be dissatisfied, question the quality of care, and end up being disloyal (Campos Andrade, 2013). Therefore, healthcare institutions providing clinical services such as HIV should ensure that the healthcare environment is organized in a way to provide efficient and effective quality patient care.

Studies that have assessed the mediating effect of health system capacity/responsiveness do not necessarily influence patient loyalty directly as a patient outcome. For example, physicians and nurses perceived teamwork climate (66.9%), working conditions (24.1%), and job satisfaction (9.0%) to fully mediate the relationship between managerial leadership and safety climate (Weng et al., 2017). In India, the work environment mediated the relationship between perceived employee performance and procrastination behavior (Singh & Dhaliwal, 2018). There is an indication that the health system's capacity for theoretical contributions as a mediating factor is still lacking and particularly in HIV primary care.

Other related studies contend that manager transformational leadership influences patient-nurse and patient outcomes when mediated by a supportive practice environment particularly on patient falls (Higgins, 2015). Furthermore, the organizational climate mediated the relationship between transformational leadership and patient safety in Saudi hospitals (Alotaibi et al., 2015), while the hospital environment was a significant mediating factor in empathy, assurance, and customer loyalty relationships in the Yemeni capital (Hamood & Alshehari, 2018). The quality of the healthcare healing environment mediated the relationship between patient satisfaction and core health delivery in Ghana (Amankwah et al., 2019). From these studies, there is a gap in the literature on the mediating role of health system capacity which gives this study and timely opportunity to study the HIV care system and determine the role of strategic clinical leader attributes on patient loyalty to HIV care through the health system environment.

2.10 Summary of Research Gaps

Table 2.1: Summary of research gaps

Author(s), Year of publication	**Title & Journal**	**Purpose**	**Participant & Setting**	• **Methods**	• **Findings/Themes**	**Limitations/Gaps for future research** •
Boamah, 2019	Emergence of informal clinical leadership as a catalyst for improving patient care quality and job satisfaction, *John Wiley & Sons Ltd*	Analyze the critical attributes of clinical leadership and test a model linking clinical leadership behaviors of staff nurses to patient care quality and job satisfaction.	Registered nurses in ON, Canada	• Quantitative • A predictive cross-sectional design • A survey questionnaire • Random sample • SEM analysis	• Nurses reported higher levels of clinical leadership skills in their practice • Staff nurse clinical leadership was positively related to patient care quality and job satisfaction (β=.301, p<.0001; β=.794, p<.0001). • Job satisfaction was positively related to patient care quality (β=.318, p<.0001).	• Cross-sectional design precludes cause &effect • Self-report questionnaires are subject to response bias • Nurses rated themselves fairly high in terms of their use of clinical leadership behaviors • A newly developed measure, CLS, has not been sufficiently validated • 38% response rate limits the generalizability of results • The outcome

						variable was a single-item measure which makes it vulnerable to random measurement errors & biases in meaning & interpretation
Huseb & Olsen, 2019	Actual Clinical Leadership: A shadowing study of charge nurses and doctors on-call in the emergency department *Scandinavian journal of trauma, resuscitation & emergency medicine*	Explore the activities performed by clinical leaders, identify similarities & differences between the activities performed by charge nurses and those performed by doctors on call in ED	Clinical leaders in Scandinavia	• Qualitative exploratory • n=9 • thematic analysis	• Doctors' activities include receiving an overview of the team & patient & planning the shift • Ensuring resources • Monitoring & ensuring appropriate patient flow • Patient care & treatment • Quality of patient diagnosis & treatment • Prioritization of patients • Exclusive to charge nurses is securing patient care & treatment	• A small sample size would introduce selection bias • Only 9 clinicians in the ED were overshadowed •
Mianda & Voce, 2018	Developing and evaluating clinical leadership	Describe the characteristics and the evaluation of clinical leadership		• Structural systematic quantitative literature review	• Interventions for CL development include: • Development of clinical skills	• Difficulty in consenting patients under observation

	interventions for frontline healthcare providers: A review of the literature *BMC, Health services research*	development interventions targeting frontline healthcare providers			• Leadership competencies • Teamwork • The environment of care and • Patient care • (work-based learning & experiential teaching) are effective interventions	• Some trainers may not be skilled in observation • Too intensive interventions • Resistance to implementing changed practices • LMICs still have leadership challenges
Anderson et.al., 2015	Adaptive Leadership Framework for Chronic Illness: Framing a Research Agenda for Transforming Care Delivery *Advances in Nursing Sciences*	Describe how providers & patients/ families might collaborate to create shared meaning of symptoms & challenges to co-produce appropriate approaches to care	Patients & providers	• Descriptive study •	• ALF guides researchers to develop an evidence-based for extending patient-centered care • Adaptive leaders assist individuals & teams identify technical & adaptive challenges & provide solutions • An adaptive leader can influence the provider to engage in adaptive work with patients	• The Paper is purely descriptive
Wong, 2015	Connecting nursing leadership and patient outcomes: state of the science *Journal of*	Provide a summary of the state of the science on nursing leadership & patient outcomes	Editorial	• Editorial	• Key relationships between relational leadership & decreased adverse events but findings were strongest for medication errors. • Transformational leadership, trust in	• Future longitudinal and interventional studies testing sound leadership theories that include mechanisms of

	Nursing Management				leadership, and manager support were associated with reduced medication errors in four of five studies • Mixed results linking leadership to patient falls and pressure ulcers • Decreased restraint use & hospital-acquired infections were associated with participative & transformational leadership respectively • Both transformational & resonant leadership styles were related to lower patient mortality in three of six studies • Transformational leadership of unit managers resulted in lower patient mortality through increased retention and expertise of staff which • Only 3 studies were found that measured healthcare utilization outcomes such as the number of	leadership influence must be conducted in a variety of healthcare settings to establish a stronger evidence base • Inspire nursing teams to a higher level of performance to improve patient outcomes • Unclear limitations discussed

					hospitalizations, hospital readmissions, and patient length of hospital stay, and only one study had significant results	
Fatima et.al., 2018	Hospital healthcare service quality, patient satisfaction & loyalty *International Journal of Quality & Reliability Mgt*	Explain the patient's views toward private healthcare service providers	Patients in 6 private hospitals in Islamabad, Pakistan	• Quantitative • n=611 • questionnaire • descriptive statistics	• Service providers attempt to deliver well-improved healthcare services • Better quality of healthcare services inclines toward satisfaction & loyalty • Healthcare quality service aspects include the physical environment, customer-friendly environment, responsiveness, communication, privacy & safety	• Further studies to test service quality using other data collection strategies • Consider qualitative studies • The focus was only on private hospitals
Zhou et.al., 2017	Determinants of patient loyalty to healthcare providers: An integrative review *International Journal for Quality in Health Care*	Identify determinants influencing patient loyalty to healthcare providers and propose an integrative conceptual model of the influencing factors.	A review of articles	• A review	• The integrated conceptual model comprising all the determinants demonstrated the significant positive direct impact of quality on satisfaction and value, satisfaction on trust and commitment, trust on commitment	• No qualitative or mixed-method studies were identified in the search, and the research methods of the selected studies were restricted to the structural equation model.

					and loyalty, and brand image on quality and loyalty.	• The qualitative and quantitative data of other analysis methods may enable a better understanding of patient behavioral intentions. Studies examining the determinants of patient loyalty have varying methodological quality, study locations, and patient samples, limiting comparison between studies.
Choong, 2017	Curating health system integration through value-driven change: Adaptive leadership in a complex environment *Management*	Describe the contextual factors that led to the establishment of a new primary health organization, but moreover, describe the challenges of change management in an environment	Paper	• A review	• The Western Australian Primary Health Alliance (WAPHA) has had a dual function in establishing an operating model, which effectively models the way using a suite of co-design, collaborative approaches to	• Not mentioned

	in Healthcare	that has a range of competing forces.			commissioning within a system where partnering and participative processes are the exceptions, not the norm. • Patient-centered care is now firmly embedded in the health lexicon; however, new ways of working shift the paradigm — to build a system where the clients/consumers/ patients determine value, and clinicians are the builders of systems that are part of a wider transformation of primary care's role within our health system	
Ozer et.al., 2016	The association between perceived value and patient loyalty in public university hospitals in Turkey *Total Quality*	Test the multi-dimensionality of perceived value in hospitals and examine the direct or indirect relations between perceived value, patient satisfaction, and patient loyalty in university hospitals	Patients who received health services from a public university hospital in Ankara	•	• All dimensions have significant effects on the perceived value of patients in healthcare services. • However, service quality, emotional value, and professionalism have relatively more effects. • Perceived value	• The study was conducted in only university hospitals, as using different hospital data (private) may differentiate the findings • The social value is the least effect

	Management and Business Excellence	in Turkey			affected patient loyalty both directly and indirectly through customer satisfaction.	on the perceived value of university hospitals, whereas it has more effect on private hospitals compared to state ones. Although
Anderson et.al., 2015	Adaptive Leadership Framework for Chronic Illness *Advances in Nursing Science*	Propose the Adaptive Leadership Framework for Chronic Illness as a novel framework for conceptualizing, studying, and providing care	Providers Patients/families	• A review	• Novel paradigms are needed for the care of people with chronic illnesses to disrupt the current global pandemic of chronic illnesses extreme morbidity and increasing mortality • The contemporary Western system of reliance on curative, provider-centered care has led to an emphasis on, and an expectation of, technical care and a de-emphasis on adaptive work necessary to self-manage • The Adaptive Leadership Framework for Chronic Illness is a	• Not discussed

					novel conceptualization for chronic illness management that does not supplant existing theories, but it serves as a tool to shift the focus of care to identifying adaptive challenges and collaborating to plan the adaptive work that can only be done by the person with the illness and/or his or her family	
Kipkirong et.al., 2013	Determinants of customer loyalty in Kenya: does corporate image play a moderating role? *The TQM Journal*	Provides both behavioral aspects and attitudinal loyalty	Mobile users in Kenya	• Survey • Regression analysis	• Perceived service value, service quality, and social pressure were significant predictors of customer loyalty, • customer satisfaction was not significant. • The corporate image was found to moderate the relationship between service value, service quality, social pressure, and customer loyalty	• Even though the study utilized a sample similar to other existing studies, future research should use larger samples, different measures of variables, and different contexts. Implications
Mbuthia and Thaddaeus,	Validating Customer	Assess quality levels and examine drivers		• Qualitative • Semi-structured	• Both trust and customer satisfaction	• The results of this research are

2017	Loyalty Model Using Structural Equation Modelling in a Kenyan Hospital *Open Access Library Journal*	of patients' loyalty in Aga Khan University Hospital, Nairobi (AKUHN) in Kenya.		questionnaire • Face-face interviews • Simple random sampling • Structural equation modeling	exhibited significantly strong mediating effects between the quality of service and patients' loyalty. • This implies that customer satisfaction and trust are key parameters in explaining the strength of the significant relationship between quality of service and customer loyalty.	low despite having a significant influence
Milonga et.al., 2018	Effect of Strategic Leadership on Customer Retention Commercial Banks in Kenya *Strategic Journal of Business and Change Management*	Find out the effect of strategic management practices on customer retention in Commercial Banks in Kenya	Banks in Kenya Bank managers	• Survey • Questionnaires • Descriptive statistics • Inferential statistics	• Strategic leadership practices were significant.	• Not discussed
Shukri and Ramli, 2015	Organizational Structure and Performances of Responsible Malaysian Healthcare	Assess the organizational structure and performances through the Balanced Scorecard of	Private hospitals, in Malaysia	• Survey • Questionnaires	• The majority of the private hospitals that adopt the Balanced Scorecard are highly centralized and formalized	• Mentioned in the abstract but not discussed in the document

	Providers: A Balanced Scorecard Perspective *Procedia Economics and Finance*	Malaysian private hospitals by focusing on top management's perceptions			• The private hospitals subscribed to formalized rules and written formal procedures to ensure the management and governance of the health providers act in accord with espoused values • There is a legitimate link to improved performances within this sector on the key aspects: internal business processes, patient quality services, safety and satisfaction, organizational learning and growth, and financial	
Hasan and Khuzaini, 2018	Satisfaction Mediating the Effect of Nursing Service Quality and Hospital Image on Patient Loyalty *International Journal of*	Analyze and test the satisfaction that mediated the effect of nursing service quality and hospital image on loyalty	Patients in Indonesia	• Survey • n=280	• Service quality and hospital image affected the patients' loyalty • The better nursing service quality and the higher degree of hospital image would lead to respondents' greater loyalty	• Not discussed

	Economics, Business and Management Research					
Lestariningsih et.al., 2018	Study of Service Quality and Patient Satisfaction to Trust And Loyalty in Public Hospitals, Indonesia *International Journal of Business Marketing and Management (IJBMM)*	Test and prove the relationship between service quality, patient satisfaction, trust, and loyalty directly and through mediation.	Patients in a public hospital, in Indonesia	• Survey • Questionnaire	• Service quality is not significant to loyalty, • There are moderating variables • Trust strengthens the influence of service quality on loyalty.	• Not discussed
Najmi et.al., 2017	"Mediation effect of dynamic capability in the relationship between knowledge management and strategic leadership to organizational performance	Examine and assess the effect of knowledge management and strategic leadership on the performance of hospitals using variables mediating the effect of dynamic capability.	Leaders of four hospitals in Makassar	•	• Higher Knowledge management will result in higher Hospital Performance if mediated Dynamic Capability were also higher • Dynamic Capabilities as mediation in the relationship between strategic leadership, the Hospital Performance indicates that the higher	• Not discussed

	accountability" *International Journal of Law and Management*				the strategic leadership will lead the higher the Hospital Performance if mediated Dynamic Capability were also higher	
Rodriguez et.al., 2014	A Study of Culture Dimensions, Organizational Ambidexterity, and Perceived Innovation in Teams *Journal of technology management & innovation*	Examined ambidexterity as a predictor of teams' perception of their innovation Examined the impact of culture-power distance, uncertainty avoidance, collectivism, masculinity, and short-term orientation IT teams' explorative and exploitative behaviors	Enterprise teams in the Philippines	• A mixed-method sequential explanatory approach.	• Team ambidexterity is a predictor of innovation • Power distance is negatively related to explorative behavior. • Collectivist characteristics are positively associated with both explorative and exploitative behaviors • Masculine behavior likewise predicts more explorative behavior	• The companies that were sampled were chosen based on the author having current contact with some officers of the Philippine Software Industry Association which may not be homogeneous • Most of the companies were purposely chosen to belong to one industry to minimize the possible confounding effect of different natures of business. The generalizability of the findings

						may be enhanced by further studies in other industries
Abidova et.al., 2021	The mediating role of patient satisfaction and perceived quality of healthcare in the emergency department *Medicine*	Identify whether a certain set of drivers of satisfaction/perceived quality of healthcare (PQHC) could indirectly affect patients' confidence/trust in the emergency department (ED).	Patients in the public hospital in Lisbon,	• Observational study	• Overall satisfaction with doctors and meeting expectations directly explain the trust/confidence in ED • All other variables can only indirectly affect confidence/trust in the ED, either through PQHC or satisfaction •	• Data collection was confined to one ED in one country. • The study considered the Portuguese-speaking population who could answer the questions. • The study sample distribution had a 5% margin of error rather than a lower margin of error due to time and financial constraints. • A longitudinal study would be a preferable choice, as some of the effects may present temporal lags
Amarat et.al., 2022	The mediating role of patient satisfaction in	Determine the effect of hospital reputation on patient loyalty and	Patients in Turkey	• Survey	• corporate reputation positively affects patient loyalty, and	• Not discussed

	the effect of Corporate Reputation on Patient Loyalty *International Journal of Health Management and Tourism*	the mediating role of patient satisfaction			patient satisfaction plays a positive increasing role in this effect	
Akbolat et.al., 2021	The mediating role of patient satisfaction in the effect of patient visit experiences on word-of-mouth intention *Health Marketing Quarterly*	Find out whether patient experiences of examinations affect their word-of-mouth (WOM) intention and identify the role of patient satisfaction with the physician in this effect.	Patients in Turkey	• Survey	• Patient visit experiences had a positive effect on patient satisfaction with the physician, and WOM intention and patient satisfaction with the physician played a mediating role in this effect	• The possibility that the evaluations of some participants changed because a long time passed after their experiences • Researchers who will conduct similar studies are recommended to examine whether participants prefer the same hospital or physician again and to consider the date they last received the service
Schaal et.al.,	Determinants	Looked at the factors	Patients and	• Cross-sectional	• A strong correlation	• The information

2016	of patient satisfaction and their willingness to return after primary total hip replacement: a cross-sectional study	significantly associated with patient satisfaction after a primary total hip replacement (THR), and which affect the patient's willingness to return to the same hospital for future treatment, even when unrelated to their THR	hospitals in Germany	Survey	between satisfaction or willingness to return and the health condition before hospitalization as well as the perceived length of stay • In contrast, the patient's gender and the number of inpatient cases in a hospital with THR had no influence • The binary logistic regression analyses identified three predictors associated with overall satisfaction and seven predictors associated with willingness to return • The strongest factor for both dependent variables was the perceived length of stay, and the weakest factor for satisfaction was the treatment outcome	on non-participants is not known • The non-respondents in satisfaction surveys dealing with surgery are often older and in a worse health condition than the respondents, whereby the error of these people overestimating positive results and under-estimating negative effects is considered low • Potential non-response bias and • The majority of participants were older people, for whom functional limitations may exist and make it difficult to understand or fully complete the questionnaire

2.11 Description of the Conceptual Framework

The conceptual framework (figure 2) supports the present study and provides that a clinical leader in the healthcare system with strategic leader attributes (adaptive leadership and clinical leader attributes/characteristics) entitled to leadership roles plays a greater role in influencing the healthcare system and patient care (Denis et al., 2013). Whereas leadership occurs at all levels of a healthcare system, most organizations have increased attention on high-performing clinical microsystems and other new leadership modalities such as dyads of physician and manager leaders (Denis et al., 2013), because clinical leaders must deliver patient-focused service by working together with other healthcare providers (Carmeli et.al., 2011). The essence of clinical leadership is revealing behaviors that will change the healthcare system for the benefit of patients, working with clinical and managerial leaders (Stanley et al., 2013) and a clinical leader is an expert clinician involved in providing direct clinical care and influencing others to improve the care they provide continuously (Budak & Özer, 2018b). The dimensions of the strategic leader attributes include adaptive leader capacity which utilizes the adaptive leadership framework in chronic diseases and the attributes of a clinical leader. Conversely, the healthcare system environment ensures that care is organized in a manner that provides timely delivery of patient care and attention to patient needs, ensures there is privacy and confidentiality in consultation and examination rooms, availability, and accessibility of a healthcare provider, availability of drugs, ensure quality basic amenities among others (Harris et al., 2018; Murray & Frenk, 2000; Nzinga et al., 2018b; Rashidian et al., 2011; Yakob & Ncama, 2017).

Therefore, how the clinical leader influences the providers, determines how the provider interrelates with the patients within the healthcare system environment. The provider-patient relationship is informed by health system factors and unique provider and patient characteristics that inform trust, attachment/connection, and communication in HIV care. This relationship determines whether patients will get satisfied and/or remain loyal to their HIV care for a long-term period (Dixit et al., 2018). In the proposed study, the healthcare system factors have the potential to influence patient loyalty to HIV care directly or indirectly (Xesfingi & Vozikis, 2016b). The interest is to determine how strategic clinical attributes and healthcare system factors influence patient loyalty to HIV care by testing direct and mediation effects of patient satisfaction on the relationship between patient trust in the clinician and health system, patient-provider communication, and patient loyalty to HIV care. From the health system factors, the study tested the mediating effect between patient satisfaction and patient trust and communication on patient loyalty to HIV care.

2.11.1 Overall Conceptual Framework

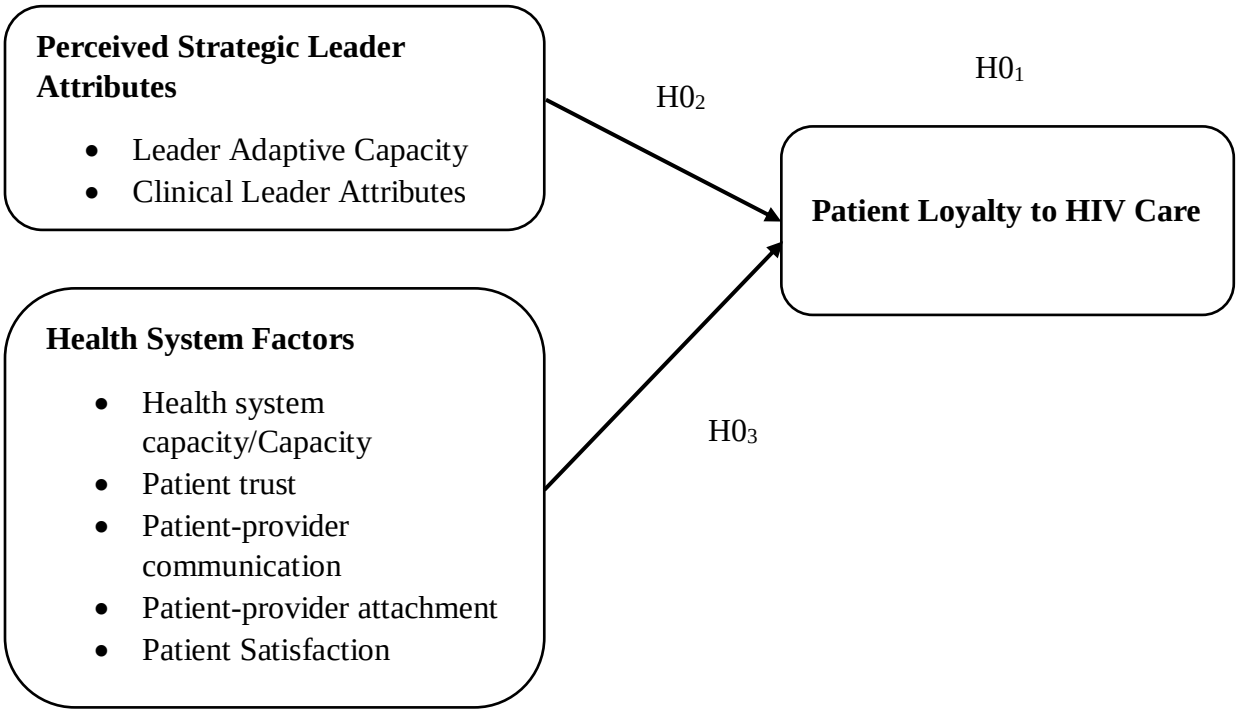

Figure 2.2: Overall Conceptual Framework: Predictors of Patient Loyalty to HIV Care

2.11.2 Sub-Conceptual Frameworks

Out of conceptual framework 1, we developed sub-conceptual frameworks 2 and 3 to test relationships on the health system factors and strategic leader attributes against patient loyalty specifically the mediating role of patient satisfaction on the relationship between patient trust and patient-provider communication and patient loyalty to HIV care and the mediating role of health system factors on strategic leader attributes and patient loyalty using SEM-PATH analysis in SPSS-AMOS (Figure 3 & 4).

a) The mediating effect of patient satisfaction on the relationship between patient trust, patient-provider communication, and patient loyalty to HIV care

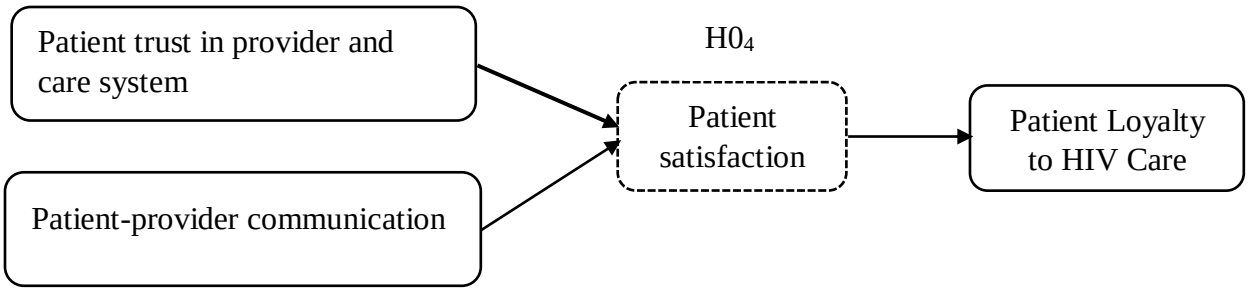

Figure 2.3: Sub-Conceptual Framework 1: Mediating role of patient satisfaction

b) SubThe mediating effect of health system capacity on the relationship between leader adaptive capacity, clinical leader attributes, and patient loyalty to HIV care

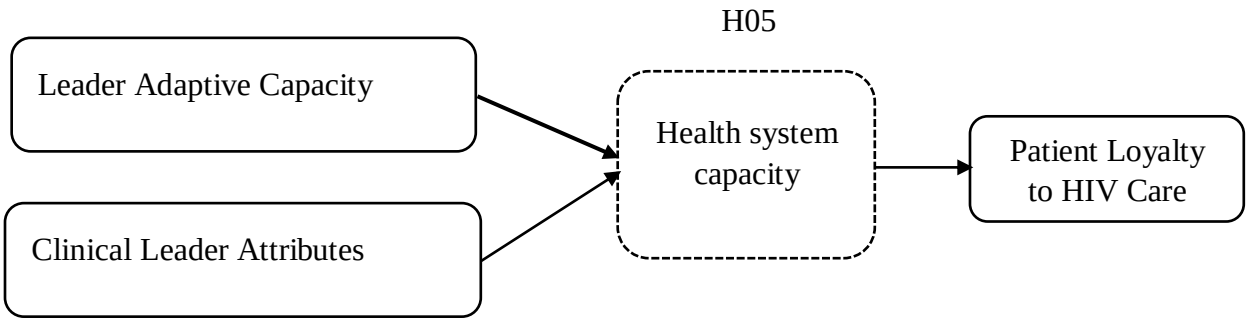

Figure 2.4: Sub-Conceptual Framework 2: Mediating role of health system capacity

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methods that were used to answer the study hypotheses and research question i.e. the research philosophy, design, study site, target population, sampling techniques, data collection methods and procedures, and data management and analysis procedures.

3.2 Research Philosophy

This study was informed by the pragmatism philosophy that includes scientific and interpretive philosophical paradigms (Crotty, 1998). The ontological position of the scientific paradigm is positivism which holds the view that objects have an existence independent of the knower (Cohen *et al.*, 2007), meaning, that reality is independent of the researcher. In the proposed study, patient loyalty is the object and depends on the understanding of the researcher and the predictors in the given phenomena. The approach allows the researcher to discover absolute knowledge about objective reality (Scotland, 2012) implying that the researcher should interact with the participant to understand underlying factors in the phenomena. For the interpretive paradigm, the ontological position is relativism in the view that reality is subjective and differs from person to person in a given phenomenon (As, 1994). Therefore, our realities are mediated by our senses without which the world is meaningless (Scotland, 2012). The interpretive methods yielded insights and understanding of the study variables through the use of open-ended interviews. In essence, the study utilized a mixed-methods approach, probabilistic and non-probabilistic sampling techniques, structured and open-ended

questionnaires to collect data, test hypotheses, and answered research questions. All of these generated factual data that were used to draw inferences and make generalizations.

3.3 Research Design

The study employed a mixed-methods design between December 2019 to May 2020, to identify associations and drivers of low and high patient loyalty to HIV care in patients receiving HIV primary care. The type of the mixed methods was parallel (Creswell, 2012), where quantitative and qualitative datasets were collected separately, analyzed and findings reported independently. None of the techniques informed the other. The purpose of the quantitative design is to test hypotheses while the qualitative purpose is to gain in-depth views.

3.4 Study Setting

The study was conducted at Academic Model Providing Access to Healthcare (AMPATH) in the Moi Teaching and Referral Hospital (MTRH-AMPATH clinic) Eldoret, Kenya. AMPATH is an established partnership between Moi Teaching & Referral Hospital and Moi University, College of Health Sciences in Kenya, and, a consortium of North American academic medical centers (Einterz et al., 2007). AMPATH care model has supported the delivery of HIV care in western Kenya and leads in promoting and fostering a comprehensive approach to HIV/AIDS control by providing free ART to patients who qualify for therapy and comprehensive services such as nutrition, psychosocial support, and economic development training. AMPATH works with healthcare providers at all government levels in providing effective care that is culturally acceptable (Karwa et al., 2017). In each of the care clinics, there is a clinical leader in charge who provides leadership roles. For this reason, AMPATH forms a

healthcare system with all the infrastructural arrangements that provide a basis for studying strategic clinical leader attributes.

3.5 Target Population

The study population comprised adult HIV-infected patients receiving HIV primary care at MTRH-AMPATH and healthcare providers (clinicians, nurses, social workers, HTCs, pharmacists, and retention workers) working in the HIV facility. This population interacts within the healthcare system that is organized into clinics (1-3) for adults and each clinic is headed by a clinical officer who plays a leadership role. At the end of July 2019, the total population of adult HIV-infected persons (+18) receiving ART medication was 26,064 (MTRH-AMPATH records, July 2018) and corresponding 50 healthcare providers (MTRH-AMPATH records, July 2019). Tables 1 and 2 show the population statistics.

Table 3.2: Population size and study sample of the HIV patients

Population					**Study sample**
Facility	Female	Male	Total	Total per clinic	Sample Distribution (x) = (x=a/N x n)
AMPATH clinic 1					
Active	2582	959	3541		54
LTFU	3267	1454	4873	8414	74
Total					128
AMPATH clinic 2					
Active	2677	1773	4450		67
LTFU	2828	1678	4522	8972	68
Total					135
AMPATH clinic 3					
Active	2430	1743	4173		63
LTFU	2630	1875	4505	8678	68
Total					131
Total for active & LTFU patients n = 394			26,064		

Source: *AMPATH Records, (July 2018)*

Table 3.3:Healthcare Provider's Population

Description	Clinic 1	Clinic 2	Clinic 3
Clinicians	5	5	5
Nurses	4	4	4
Retention Workers	3	3	3
HTS	2	3	2
Nutritionists	1	1	1
Social Workers	1	1	2
Total	16	17	17
Total sample = 50			

Source: *AMPATH Records, (July 2019)*

3.6 Sampling Frame

A two-stage sampling strategy was used to obtain the sample of the HIV-infected patients in clinics 1-3. The method allows using of various sampling techniques to achieve the desired sample size and data collection. In the first stage, the clinics (1-3) providing care to adult patients were categorized into strata 1-3. Each stratum has a clinical leader, clinicians, nurses, and other healthcare providers. Secondly, from each stratum, patients were systematically sampled to participate in the study (Bradley *et al.*, 2011; Rashidian *et al.*, 2011). For the healthcare providers, a census sampling strategy was used to survey all of them given the small sample size of n=50. To generate the sample size for the patients, the (Yamane, 1967) formula below was used to compute the sample size with a relative precision of ± 5% which is contented by most business and management research that if the study population is selected 100 times, then at least 95% of the sample would represent the entire population characteristics (Saunders *et al.*, 2009).

$$n = \frac{N}{1 + N(e)^2}$$

In this formula;

N= Population size (26,064) patients in clinics 1-3 which are treated as strata

e= Sampling error (0.05) and n= Sample size (394)

To ensure an equal chance of participation of patients from each of the three strata clinics, a fraction from each stratum was multiplied by the total sample to get the respective sample population for each clinic as illustrated in population size table 1 above.

Whereby;

x=a/N x n

x=Sample population for each clinic

a= population for each clinic

N= Total population

n= total population sample size

This generated (clinic 1: n = 128; clinic 2: n = 135 and clinic 3 n = 131), making a sample size of (n=394).

To obtain the systematic sampling starting point, the sample size was divided by the estimated population size, for example in clinic 1 (394/128=3). Every 3rd patient was systematically selected to participate in the study.

3.7 Inclusion and Exclusion Criteria

The study included adult HIV-infected patients under the AMPATH care treatment plan, currently on ART in classified care clinics (1-3), 18 years and older, and voluntarily willing to participate in the study. Also, the healthcare providers in the corresponding care clinics had at least 1-year experience in HIV care. Excluded were patients who presented severe illness or psychological cases and healthcare providers who were not

interested. The clinical leaders in the clinics were not interviewed because the providers were evaluating their strategic leader attributes.

3.8 Recruitment of study participants

Patients were recruited from two points. First, clinicians were requested to refer them after examination to a room where this study was done and the patients were approached at the point of entry and upon consent. The patient flow in each of the healthcare clinics is systematic where patients are first registered and triaged before they see a clinician or are directed to the right point of care. Those who accepted were enrolled using eligibility criteria and consented. The healthcare providers were approached individually in their respective clinics and asked to fill in a questionnaire upon consent. Three (3) research assistants who had experience in health research helped with participant consenting and data collection.

3.9 Data Collection Procedures

Data were collected from the patients and the healthcare providers between December 2019 and May 2020. Questionnaires were administered that included questions on patient loyalty, strategic clinical leader attributes, healthcare system capacity, trust in the healthcare system and clinicians, patient-provider communication, patient-provider attachment, patient satisfaction, and participant socio-demographics. The patient questionnaire was developed in English, then translated to Swahili, and back-translated to English to ensure consistency. The instruments were pretested with a sample of 6 patients and 4 healthcare providers in the MTRH-AMPATH facility to determine the suitability of the questions and there were no changes recorded. The pre-tested data were excluded from the final analysis.

3.10 Variables Measurement

3.10.1 Patient Loyalty

Patient loyalty was measured using five behavioral items obtained from customer loyalty and patient loyalty measures that had been previously used on a 5-point Likert scale ranging from (1=strongly disagree to 5= strongly agree). Patient loyalty assessed the commitment of the patient to repurchase products and services of an organization repeatedly, feelings toward the hospital, and willingness to recommend the hospital to others (Hacettepe *et al.,* 2016; Juhana *et al.,* 2015; Lee, 2019; Ngoma & Ntale, 2019). The principal component analysis was subjected to the items to determine their validity then a data transformation procedure was done to compute the means that were used for bivariate and multivariate analysis and this process was applied to all the variables in the study.

3.10.2 Strategic Leader Attributes (SLA)

i. **Leader adaptive capacity (LAC)**

The Adaptive Leadership Framework developed by Heifetz (Heifetz & Laurie, 1997) for business was used to measured leader adaptive capacity. The framework does not only focus on the leaders' capabilities but also on the leader-follower relationship as well as internal and external factors that impact the organization. It has been applied in the healthcare setting e.g. in chronic illness, (Anderson et al., 2015; Jr et al., 2019), that focus on the leadership attributes influence on the healthcare system as this is the environment that adaption and collaboration take place between the patients, care providers, and other stakeholders. Seven items

obtained from the framework were modified and used to assess the construct. A 5-point Likert point scale of (1=strongly disagree - 5= strongly agree) was used.

ii. **Clinical leader attributes (CLA)**

A collection of constructs from previous studies measured this variable including the clinical leadership competency framework assessment tool (NHS Leadership Academy, 2011), attributes of clinical leadership (Mannix *et al.*, 2013), and Victoria Quality Council. These items have been widely used in previous studies in clinical settings and have demonstrated good reliabilities (NHS Leadership Academy, 2011; Nicol, 2012). Ten (10) questions were asked on a 5-point Likert scale ranging from (1=strongly disagree to 5= strongly agree).

3.10.3 Health System Factors

i) Health system capacity

Health System capacity was measured by the use of non-health aspects of care that relate to the care environment and the way healthcare is offered to clients. Ten (10) items from the WHO healthcare system framework measuring healthcare system responsiveness and performance were used. Studies that have utilized these measures borrowed from the WHO health system capacity framework and modified to suit the relevant context and asked questions on a 5-point Likert scale (Chao et al., 2017; Miller et al., 2015; Murray & Frenk, 2000; Rashidian et al., 2011). The items were reliable. Like other variables, the items were measured on a 5-point Likert scale ranging from (1=strongly disagree to 5= strongly agree) and the same data reduction approach was applied.

ii) **Patient Trust in the healthcare system and clinicians**

To assess patient trust, 10 items utilized by previous studies were adopted. All questions were asked on a 5-point Likert scale ranging from strongly agree to strongly disagree. The items were reliable at >0.85 (Anderson & Dedrick, 1990; Dugan *et al.,* 2005; Thom *et al.,* 1999).

iii) **Patient-Provider Communication**

To measure patient-provider communication, a collection of measures from the perspectives of patient-centered communication, physician communication, and provider-patient communication were utilized and particularly from the core functions of patient-centered communication proposed by (Epstein & Street, 2007). Eight (8) questions on a 5-point Likert scale ranging from (1=strongly disagree to 5= strongly agree) assessed this construct from previously used instruments that indicated acceptable validity and reliability of > 0.80. (Jiang, 2017; Wachira *et al.,* 2014).

iv) **Patient-Provider Bonding/Attachment**

The attachment theory is a model of the doctor-patient relationship that support patient attachment to their provider specifically for clarifying, measuring, and training medical personnel in the advancement of patient-centered care (Cassedy *et al.,* 2015). To measure patient-provider relational attachment, 10 items from the Relationship Style Questionnaire on a 5-point Likert scale ranging from (1=strongly disagree to 5= strongly agree) were used. The framework has been used to assess diverse healthcare issues that focused on experiences in close relationships. For example, in HIV care, HIV + patients with insecure attachment

styles are more likely to experience higher levels of stress and worse adjustment to illness than those with secure attachment styles (Koopman *et al.,* 2000). The tool has been administered in an LMIC and showed good reliabilities (Holmes & Lyons-ruth, 2006).

v) Patient Satisfaction

Patient satisfaction was measured using 10 questions that focus on the perceptions and evaluation of patients' treatment and care in the healthcare system. These include patient satisfaction with the health system and the clinician informed by the interaction in service provision (Chimbindi et al., 2014). This questionnaire had been assessed in previous studies in HIV and TB treatment and indicated good reliabilities in SSA (Chimbindi et.al., 2014; Schneider et.al., 2012; Pearse J, 2005; Tran & Nguyen, 2012)

Table 3.4: Summary of Variables Measurements

Construct	Nature of variable	Indicators	Data collection method		Reference Source
Patient Loyalty	Dependent	Return to the hospital Confidence in the hospital Happy about the hospital treatment Refuse to choose another hospital Encourage others to attend this hospital	Questionnaire Likert Scale	5-point	Hacettepe *et al.*, 2016; Juhana *et al.*, 2015 Schaal *et al.*, 2016; Insani *et al.*, 2017 Kim *et al.*, 2017 Baker & Crompton, 2000; Motrazavi *et al.*, 2009; Ngoma & Ntale, 2019
Strategic Leader Attributes 1. Leader Adaptive Capacity	Independent	Examines and identifies problems affecting us and helps us to come up with possible solutions Ensures that we take control of our healthcare situations Builds trust with the patients and providers and promotes good relationships Creates an environment where we can spend time learning new things Communicates well with us through active listening Listens to views and assures we are valued and respected Finds ways to encourage us to see that we achieve success	Questionnaire Likert Scale	5-point	(Adaptive Leadership Framework) Heifetz, 2000 Heifetz & Laurie, 1997 Glover *et al.*, 2002 Yukl & Mahsud, 2010
2. Clinical Leadership		Knowledge & skills in providing direction & guidance Organizing the healthcare system Improve healthcare system performance	Questionnaire Likert Scale	5-point	The NHS leadership qualities, 2008 Victoria quality council, 2005 Daly *et al.*, 2014; Jonas *et al.*, 2011

		Built health environment and workplaces			Mannix *et al.,* 2013
		Uses clinical knowledge & experience to meet patient needs			Victoria quality council, 2005; Boamah, 2017; Patrick *et al.,* 2011
		Coordinates care to support patient well-being			Boamah, 2017; Patrick *et al.,* 2011
		Inspires confidence			Mannix *et al.,* 2013; Stanley, 2017
		Collaborates with others			Boamah, 2017; Patrick *et al.,* 2011; The NHS leadership qualities, 2008
		Provides positive feedback			Mannix *et al.,* 2013; Stanley, 2017; Victoria quality council, 2005
		Maintains professional ethics			Victoria quality council, 2005
Healthcare System Factors	Mediator	Proper organization of care	Questionnaire Likert Scale	5-point	De Silva & Valentine, 2000; Murray & Frenk, 2000; WHO health systems framework, 2000
		Prompt attention to healthcare needs			Yakobo & Ncama, 2017
		Talk to providers in private & confidential rooms			Yakobo & Ncama, 2017
		Privacy during physical examinations			De Silva & Valentine, 2000; WHO health systems framework, 2000
		Adequate waiting spaces & examination rooms			Rashidian *et al.,* 2011; WHO health systems framework, 2000
		Healthcare providers available in the facility			Rashidian *et al.,* 2011
		Shorter times to see a clinician			Rashidian *et al.,* 2011

	The health facility opens on time			Rashidian *et al.*, 2011
	Availability of drugs			De Silva & Valentine, 2000; WHO health systems framework, 2000
	Basic amenities are clean			Rashidian *et al.*, 2011; Yakobo & Ncama, 2017
Patient-Provider Relational Dynamics	Patient Trust	Questionnaire Likert Scale	5-point	Anderson & Dedrick, 1990 Dugan *et al.*, 2005 Thom *et al.*, 1999
	Patient-provider communication			Jiang, 2017; Wachira *et al.*, 2014
	Patient-provider relational bonding			Holmes & Lyons-ruth, 2006 Koopman *et al.*, 2000
Patient Satisfaction	HIV services Interaction with healthcare providers Health System Factors	Questionnaire Likert Scale	5-point	Chimbindi et al., 2014 Schneider et.al., 2012; Pearse J, 2005; Tran & Nguyen, 2012

Source: *Literature Review, 2022*

3.11 Data Management and Analysis

First, data cleaning was performed which included checking for erroneous data entries and missing data. Then exploratory factor analysis was done using principal component analysis to check for validity. To determine the reliability of the instrument, Cronbach's alpha coefficient was used. The Study utilized Pearson Correlation Moment to establish correlations among the study variables. In addition, data transformation was done by transforming ordinal data in the Likert scale to binary data to enable logistic regression and checked for multicollinearity. The goodness of fit of the models was checked first before reporting the results. The study analyzed data by determining overall patient loyalty using descriptive statistics, use of one-way ANOVA to determine significant differences in patient loyalty, testing associations between variables using chi-square tests and logistic regression to determine the predictors of patient loyalty, and SEM-path analysis to test mediating effects.

3.12 Analytical Model

The study tested the predictors of patient loyalty in the bivariate and multivariate logistical models using R software. The logit model was useful because adjustments of covariates were needed to reduce potential bias that may result from differences in the data (LaValley, 2008) and data was recoded into binary. The statistical parameters are modeled as follows;

Logit $\varepsilon(Y)= \beta_0+ \beta_1 x_1+ \varepsilon$ (univariate)…….....… (ii)

Logit $\varepsilon(Y)= \beta_0+ \beta_1 x_2+ \beta_2 x_2+ \beta_3 x_3+ \beta_4 x_4++ \beta_5 x_5+….+ \beta_n x_n+\varepsilon$ (multivariate)……. … (iii)

where $Y \sim \text{Bern}(\pi)$, x1 to xn represents individual-level covariates (patient predictors).

$Y = \beta_0 + \beta_1 M_1 + \beta_1 M_2 + \varepsilon$ (mediation) ....…… ……(iv)

Quantitative data analysis flowchart

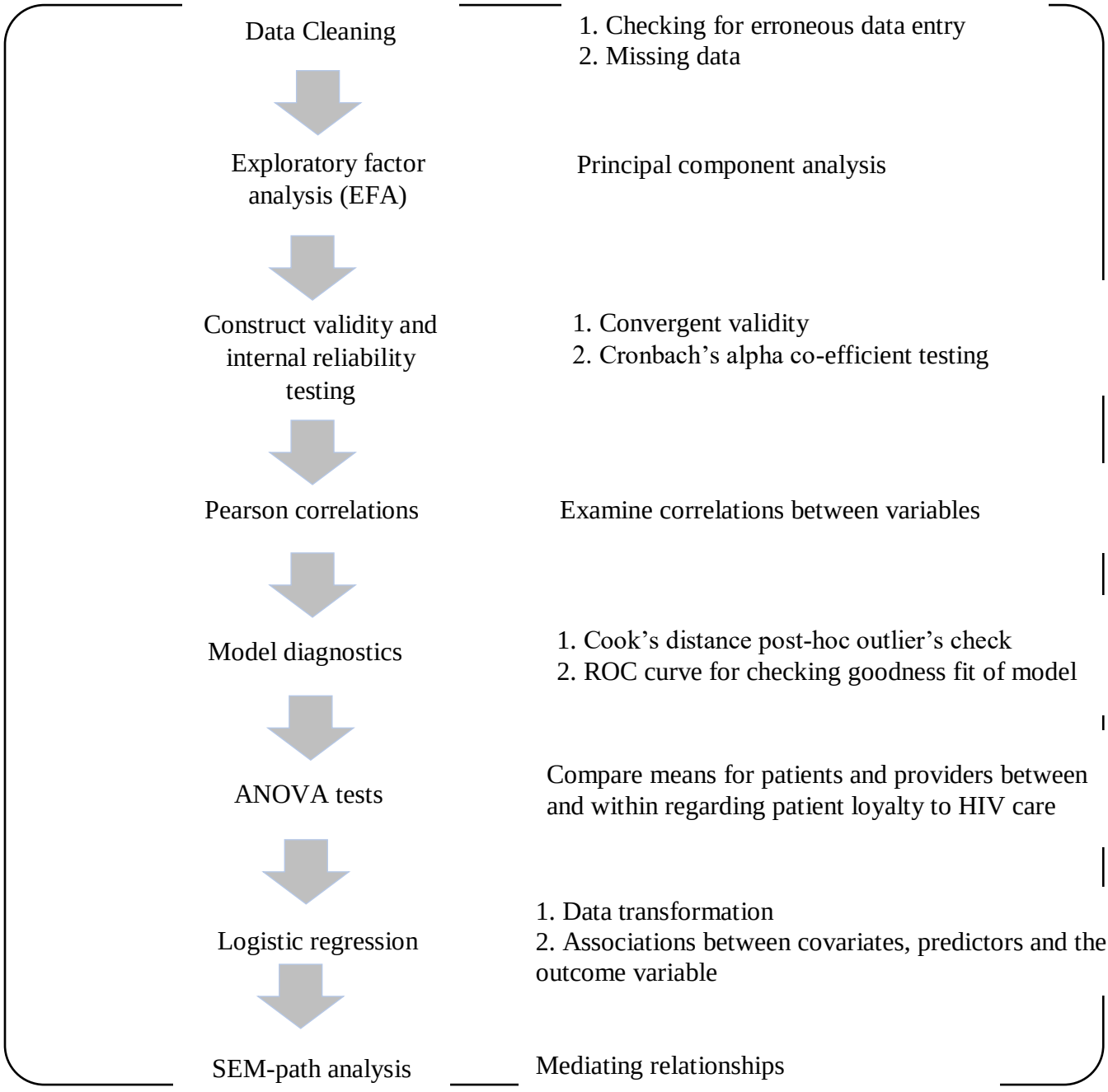

Figure 3.1: Quantitative Analyses flowchart

3.13 Qualitative Methods

3.13.1 Study Design

An exploratory qualitative study was conducted between December 2019 to May 2020 to explore healthcare providers (HCPs) perceptions of what strategic leader attributes should clinical leaders have at the primary care level in an HIV facility. The research question sought the perceptions of the health care providers to gain an in-depth understanding of the strategic leader attributes for clinical leaders because of their interaction with the clinical leader and receiving instructions from the leader.

3.13.2 Study Setting

The study was conducted in the Academic Model Providing Access to Healthcare (MTRH-AMPATH) in Eldoret, Kenya where the healthcare providers (HCPs) are based.

3.13.3 Study Sample

A total of 22 healthcare providers including (clinicians, nurses, social workers, counselors, pharmacists, and retention workers) were purposively and conveniently sampled from their working care clinics to participate in in-depth interviews because of their current role and experience in HIV care (Creswell, 2012). The sample was obtained upon data saturation.

3.13.4 Recruitment and Data Collection

The health care providers (HCPs) had been requested in a prior survey part of this study to take part in in-depth interviews at a convenient date, time, and place. The providers preferred to be interviewed in their offices within the facility which was most convenient for them and this ensured privacy and confidentiality. An interview guide was used to obtain information on the HCP's views on their understanding of leadership, the

healthcare system, the roles of a clinical leader in HIV primary care, and the strategic leader attributes for clinical leaders that facilitate the discharge of clinical functions. The sessions were audio-recorded with permission and each session lasted on average of 40-60minutes. Clinical leaders were not interviewed because the providers were assessing their leader attributes.

3.13.5 Data Management and Analysis

The study used a thematic analysis method to analyze data. First data were transcribed from the audio-recorded sessions into transcripts which were imported into Nvivo vs.12 software to manage data ideas, queries, visualization, and reporting (Franklin et al., 2019; Schreier, 2012). The transcripts were then coded to sort and organize the data and similar categories were developed for understanding the data (Franklin et al., 2019; Schreier, 2012). To ensure validation, the study engaged a qualitative expert who conducted independent coding and identified themes from 22 transcripts. The expert and the researcher examined the themes to identify duplicate and similar codes that could conflict with each other (Appleton, 1995; Franklin et al., 2019; Schreier, 2012). Then, a final codebook with consistency was developed that informed the final write-up.

3.14 Ethical Considerations

Ethical approval was obtained from the Institutional Research Ethics Committee (IREC) in Moi Teaching and Referral Hospital (MTRH); (Approval No.0003485), a research license from the National Commission for Science, Technology, and Innovation (NACOSTI No NACOSTI/P/20/3253), a permit letter from the MTRH-AMPATH HIV facility. Before the study, participants were explained about the study and they signed written informed consent for the interviews and audio recording. De-identifiers were used

in data analysis to protect the anonymity of the participant and data was kept in secured storage. To observe privacy and confidentiality, the interviews were conducted in a private and confidential room in the hospital that was identified for the study. Participants were also free to withdraw from the study at any point.

3.14 Statistical Tools for Hypotheses Testing

Table 3.5: Statistical tools for hypotheses testing

H	Statement	Test Statistics	Decision Point
$H0_1$:	There are no significant proportions of patients with patient loyalty to HIV care in AMPATH-MTRH, Western Kenya	Descriptive statistics One-way ANOVA – F statistic Tukey, Fisher's Least Significant Difference (LSD) Post hoc tests	Sig. at $p<.05$
$H0_2$:	There is no significant association between providers' perceptions of the relationship between strategic leader attributes and patient loyalty to HIV care	Chi-Square (χ^2) Odds ratios, Confidence interval (OR, 95% CI)	Sig. at $p<.05$ Sig. with both LLCI and ULCI above zero
$H0_3$:	There is no significant association between health system factors and patient loyalty to HIV care	Chi-Square (χ^2) Odds ratios, Confidence interval (OR, 95% CI)	Sig. at $p<.05$ Sig. with both LLCI and ULCI above zero
$H0_4$:	There is no significant mediating effect of patient satisfaction on patient trust in clinicians and health system and patient loyalty relationships	β and *p*-v	$p<.05$
$H0_5$:	There is no significant mediating effect of patient satisfaction on patient-provider communication and patient loyalty relationships	β and *p*-v	$p<.05$
$H0_6$:	There is no significant mediating effect of health system capacity on strategic leader attributes and patient loyalty relationships	β and *p*-v	$p<.05$

Source: *Research data, 2022*

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION, AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents the quantitative and qualitative results. The techniques included the response rate, data processing and screening, participant demographics, validity and reliability results, correlation results, descriptive statistics, diagnostic tests, logistic regression, SEM-path analysis, and qualitative results.

4.2 Response Rate

In this study, the results were categorized into two main sub-sections including HIV-positive patients and healthcare providers. In the quantitative part, 391 out of 394 adult HIV patients were surveyed, with a response rate of 99.2% while 47 out of 50 providers participated in the study, yielding a response rate of 94%. The overall response rate from all the participants in the survey was 98.6%. In the qualitative interviews, 25 healthcare providers were approached and only 22 participated in the study upon reaching data saturation. Figures 7 and 8 display the results.

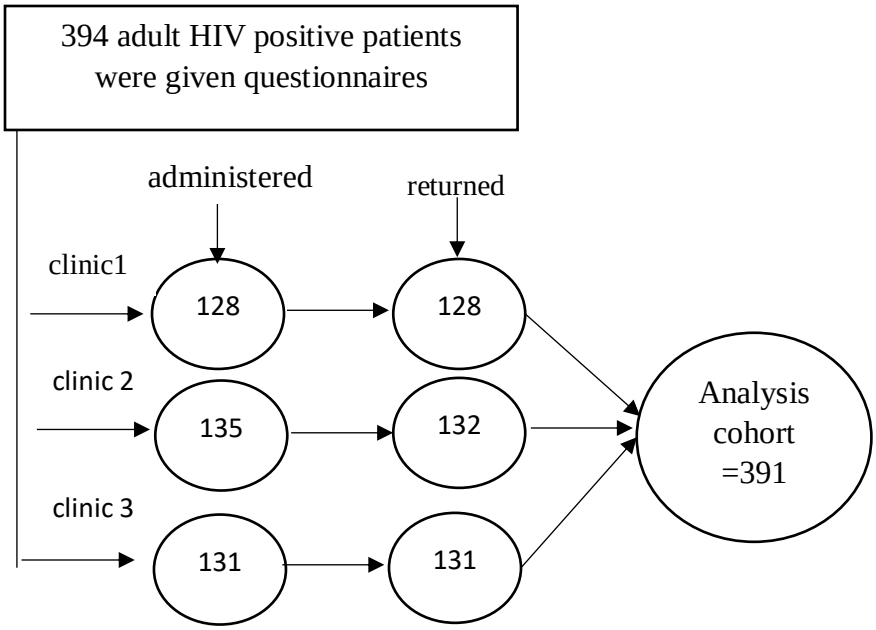

Figure 4.1: Patient's response rate

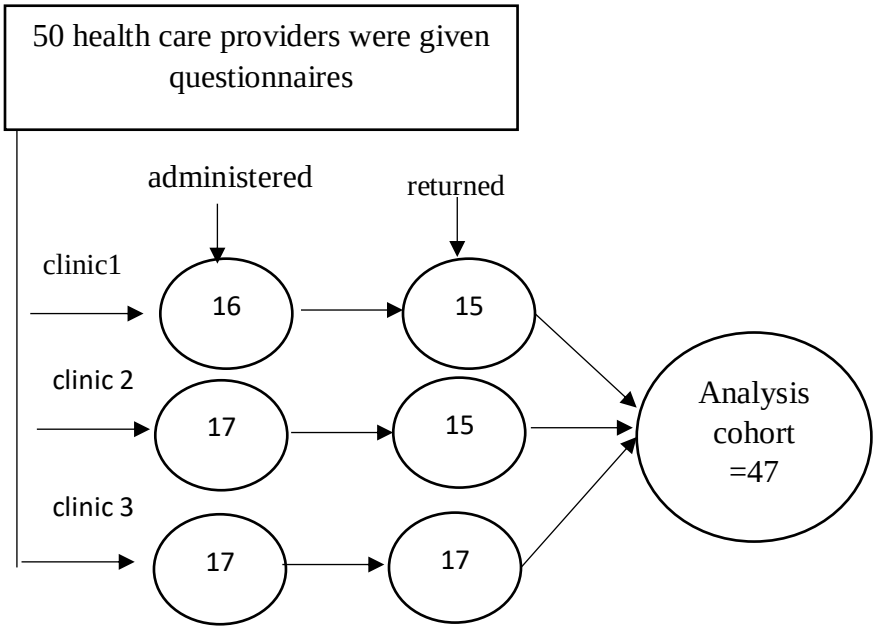

Figure 4.2: Healthcare provider's response rate

4.3 Data Processing and Screening

4.3.1 Quantitative data

All the questionnaires that were returned were serialized to aid in data tracing and verification. Then, codes were developed in SPSS vs. 23 according to the study questions and data entry performed. Checking of errors that could have emerged from data entry such as missing data was done using descriptive statistics such as frequencies, percentages, means scores, and standard deviation for all the variables. There were no missing data identified. Given that the data analysis approach was a non-linear model using logistic regression, the study did not check for outliers because it does not require a linear relationship between the independent variable and the outcome variable. However, the study conducted post-hoc outliers' tests by leveraging the cook's distance as shown in figure 1 which indicated no observations with a Cook's distance larger than 0.25 indicating no outliers.

4.3.2 Qualitative data

Transcription of data was done then codes were developed that identified recurrent themes and validation of data was done through independent coding by a qualitative expert who checked for conflicting themes. A final codebook was then developed that was used in the final write-up.

4.4 Socio-economic Characteristics of Respondents

4.4.1 Patients demographics in the survey

Among the 391 patients included in this analysis, more than half of the patient participants, (68%) were greater than 31 years. These were mostly female (63.2%) and single (58.8%) compared to a few who were single but, in a relationship, (3.6%). A

reasonable number of participants had attained a high school level of education (42.7%). Among those who earned income, only a few (7.4%) earned none while the majority (64.5%) earned less than 10,000 Kenya shillings. More than half (56.3%) of the participants had 1-5 people living in their households and resided in rural areas (49.4%). Table 4.1 presents the results.

Table 4.1: Socio-demographic characteristics

Variable (s)	**Frequency n (%) n= 391**
Age	
18 -29 years	36 (9.2%)
30-39 years	96 (24.6%)
40-49 years	133 (34.0%)
> 50 years	126 (32.2%)
Gender	
Male	144 (36.8%)
Female	247 (63.2%)
Marital Status	
Married	230 (58.8%)
Single	129 (33.0%)
In a relationship	14 (3.6%)
Divorced/Separated	18 (4.6%)
Education	
Primary	153 (39.1%)
High school	167 (42.7%)
Vocational	54 (13.8%)
Graduate	17 (4.3%)
Income	
< 10000 (KES)	252 (64.5%)
11000-30000 (KES)	78 (19.9%)
31000-50000 (KES)	15 (3.8%)
> 51000 (KES)	46 (11.8%)
Household Size	
1-5	220 (56.3%)
> 6	171 (43.7%)
Residential	
Rural	193 (49.4%)
Urban	144 (36.8%)
Semi-urban	54 (13.8%)

Source: *Research data, 2022*

4.4.2 Patients' clinical/appointment factors

While attending scheduled clinic visits, most (62.1%) participants spend less than an hour arriving at the facility, and a vast majority (93.4) consent that the clinic operating hours during the week opened for 8 hours. More than half (60.6%) of participants had seen their primary clinician in the recent past and most (63.4) participants agreed as per the estimated number of visits in the last 6-12 months. Of these respondents, only a few (5.4%) missed their required number of visits within the same period. Most (81.3%) participants had interacted with a clinician in the recent past. The data was obtained from the AMPATH adult care clinics [1 (32.7%); 2 (33.8%); 3(33.5%)].

In addition, the study established if patient loyalty to HIV care had an association with patient clinical characteristics and results indicate significant differences in patient loyalty with the number of hours the MTRH-AMPATH clinic operates if patients had visited their clinicians in the recent past if the patients had missed their clinic appointments and the care clinic where they receive clinical service. The variables that did not yield any statistically significant difference include travel time to the clinic, the required number of visits, and the provider seen in the recent past. Table 4.2 presents the results.

Table 4.2: Clinical/appointment factors

Factors	Frequency n (%) n= 391
Travel time to clinic	
< 1 hour	243 (62.1%)
2-3 hours	126 (32.2%)
> 4 hours	22 (5.6%)
Clinic hours	
8 hours	365 (93.4%)
Less than 8 hours	26 (6.6%)
Visited clinician	
No	154 (39.4%)
Yes	237 (60.6%)
Required visit	
1-2	248 (63.4%)
3-4	115 (29.4%)
> 5	28 (7.2%)
Missed visit	
0 (none)	270 (69.1%)
1-2 times	99 (25.3%)
> 3 times	21 (5.4%)
5	1 (0.3%)
provider seen	
Clinician	318 (81.3%)
Nurse	59 (15.1%)
Pharmacist	11 (2.8%)
Phlebotomist	1 (0.3%)
Other (please indicate)	2 (0.5%)
Clinic (Clinic)	
Clinic 1	128 (32.7%)
Clinic 2	132 (33.8%)
Clinic 3	131 (33.5%)

Source: *Research data, 2022*

4.4.3 Healthcare Providers (HCPs) Socio-demographic characteristics in the survey

In the survey for HCPs, most (55.3%) participants were between the age of 41 and 50 years, and most (55.3%) were male. A few (10.6%) of the providers' participants had attained a post-graduate level of education and most (63.8%) had a college education

with most (93.2%) having extensive experience in HIV care for more than seven years. Relatively few of them (36.2%) earned income of <50,000 Kenya shillings while most (44.7%) earned greater than 101,000 Kenya shillings. Table 4.3 shows the results.

Table 4.3: Healthcare Providers (HCPs) Socio-economic characteristics in the survey

Characteristics	Frequency n (%) n= 47
Age	
18 -30 years	2 (4.3%)
31-40 years	17 (36.2%)
41-50 years	26 (55.3%)
Adult	2 (4.3%)
Gender	
Male	26 (55.3%)
Female	21 (44.7%)
Education	
College	30 (63.8%)
Undergraduate	12 (25.5%)
Post-graduate	5 (10.6%)
Experience	
< 3 years	6 (12.8%)
4-7 years	16 (34.0%)
> 7 years	25 (53.2%)
Income	
<50000 (KES)	17 (36.2%)
51000-100000 (KES)	9 (19.1%)
101000-150000 (KES)	11 (23.4%)
> 151000 (KES)	10 (21.3%)

Source: *Research data, 2022*

4.4.4 Provider training/proficiency attributes

Out of 47 healthcare providers who participated in the survey, most (68.1%) had formal education in leadership while relatively few (46.8%) had no formal education in specifically clinical leadership. Almost half (40.4%) of the participants were neither

clinicians nor nurses and most (42.6%) worked in the clinical unit. More than half (61.7%) had received performance-based incentives and a few (25.5%) were not recognized and appreciated for good work in achieving targets. A vast majority (97.9%) delivered care in a healthy work environment and (100%) implemented work protocols successfully. However, a few (8.5%) of these participants, did not receive professional development since working in the HIV unit while a vast majority (95.7%) shared roles with colleagues. The only variable that was statistically significant ($p<.05$) and showed an association between high and low patient loyalty was whether the healthcare providers received performance incentives. Table 4.4 presents the proficiency attributes.

Table 4.4: Provider training/proficiency attributes

Attributes	**Frequency n (%) n= 47**
Formal Education Leadership	
Yes	32 (68.1%)
No	15 (31.9%)
Formal Education Clinic leadership	
Yes	25 (53.2%)
No	22 (46.8%)
Profession	
Clinician	16 (34.0%)
Nurse	12 (25.5%)
Other (indicate	19 (40.4%)
Received Performance Incentives	
Yes	29 (61.7%)
No	18 (38.3%)
Recognition for achieving targets	
Yes	35 (74.5%)
No	12 (25.5%)
Delivery of Care	
Yes	46 (97.9%)
No	1 (2.1%)
Professional Development	
Yes	43 (91.5%)
No	4 (8.5%)

Role Sharing	
Yes	45 (95.7%)
No	2 (2.3%)
Clinic (Clinic)	
Clinic 1	15 (31.9%)
Clinic 2	15 (31.9%)
Clinic 3	17 (36.2%)

Source: *Research data, 2022*

4.4.5 Healthcare Providers (HCPs) Socio-demographic characteristics in the qualitative interviews

There were 25 healthcare providers (HCPs) from all clinics (1-3) in the MTRH-AMPATH facility who were approached to participate in in-depth interviews, of whom 22 (88%) consented. Most were clinical officers (63.6%), nurses (22.8%) and the least were counselors (9.1%) and pharmacists (4.5%). There were more males (54.5%) than females (45.4%) who participated in the study, they earned income and had extensive experience in HIV care for more than a year. Characteristics such as clinics where the provider is based and the age that identified the participants were not reported to protect anonymity.

4.5 Validity and Reliability Tests

4.5.1 Validity Tests

Before conducting regression analysis, factor analysis was done using the psych package. Psych (Procedures for Psychological, Psychometric, and Personality Research) provides functions primarily for multivariate factor analysis, principal component analysis, cluster analysis, and reliability analysis, among others. The following procedures were followed to examine the validity of the data instrument. First exploratory factor analysis was done as a data reduction technique (Chan & Idris, 2017), to examine the relationship between

the factors and evaluate the construct validity of the instrument. Convergent validity was assessed by checking the item scale correlations or the factors that account for covariance among the items. Ideally, it establishes whether there are distinct components within the data by observing the factor loadings and the squared multiple correlations (SMC) of the items (Little et al., 2001). Previous studies have shown that factor loading of >.36 was defined as minimal accepted scores and Eigenvalues of 1.0 or more in the scree plot were regarded as meaningful (Kijima et al., 2021) and >.50 as favorable (Kim et al., 2017). In this study, EFA identified the factor components and the items that loaded in one fixed component with a convergent validity of >.36 were included in the analysis (Kijima et al., 2021). The mean satisfaction scores of all the factors identified in the factor analysis were used for regression analysis (Onyeonoro et al., 2015).

For the patient's constructs, nearly all factors loaded in the component except for one item in the trust in the clinician and the healthcare system variable (TR6), two items in the patient-provider communication (PPC 5&6), and two items in the patient-provider relational bonding/attachment variable (PPRA 1 & 2). For the providers' constructs, all the factors had a convergent validity of >.50, and Cronbach's alpha showed good values of >.70 (Masa'deh et al., 2016; Portillo, 2011). Results are shown in Table 8.

4.5.2 Reliability Tests

The reliability of the instrument was evaluated using Cronbach's alpha to assess the internal consistency of the scale with a condition of a value of at least 0.7 for all the factors that are commonly accepted (Masa'deh et al., 2016; Portillo, 2011). Results indicate good reliabilities for all the factors > 0.7 which is within the recommended threshold (Masa'deh *et al.*, 2016). Results are shown in Tables 4.5 ad 4.6.

Table 4.5: Exploratory factor analysis (EFA) and internal consistency (IC) results for patients' data

Variable	Items	Description	Loadings	Num Items	Cronbach's Alpha
Patient loyalty (PL) ***(I ensure)***				5	0.87
	PL1	I commit to return to this hospital	0.85		
	PL2	I have confidence in the quality of care provided in this hospital	0.48		
	PL3	I feel happy about the treatment at this hospital	0.78		
	PL4	I refuse to choose another hospital for care other than this	0.81		
	PL5	I will encourage others (friends & relatives) to attend this hospital	0.67		
Health System Capacity (HSC) ***The clinicians ensure;***				10	0.80
	HSC1	Proper organization of care	0.48		
	HSC2	I get prompt attention to my healthcare needs	0.68		
	HSC3	I talk to the providers in private and confidential rooms	0.66		
	HSC4	I get privacy during my physical examination and treatment	0.75		
	HSC5	There are adequate waiting spaces and examination rooms for patients	0.53		
	HSC6	Healthcare providers are available in the health facility			
	HSC7	I spend a shorter time seeing a clinician	0.44		
	HSC8	The health facility opens on time	0.46		
	HSC9	There is the availability of drugs in the health facility	0.63		
	HSC10	The basic amenities such as the cleanliness of toilets are of quality	0.50		
Trust in the clinicians and healthcare system (TR) ***The clinicians;***				10	0.77
	TR1	Always provide accurate and up-to-date medical information	0.60		
	TR2	Make an excellent medical judgment on my behalf	0.71		

Variable	Items	Description	Loadings	Num Items	Cronbach's Alpha
	TR3	Provide all the treatment options available for my condition	0.52		
	TR4	Put patient medical needs above all other considerations	0.81		
	TR5	I have no worries about putting my life in the hands of the clinicians	0.43		
	TR6	Sometimes care more about what is convenient for them than about my medical needs	Did Not Load		
	TR7	I sometimes worry that clinicians may not keep the information discussed privately	0.78		
	TR8	I trust the healthcare system of this hospital	0.58		
	TR9	I trust the healthcare system of this hospital	0.76		
	TR10	I have confidence in this healthcare system's ability to care for my health	0.55		
Patient-provider communication (PPC)				8	0.79
	PPC1	Greet me in a way that makes me feel comfortable	0.39		
	PPC2	Give me a chance to ask all my health-related questions & respond to them	0.98		
	PPC3	Involve me in decisions about my healthcare as much as I want	0.48		
	PPC4	Explain things in a way I can understand	0.57		
	PPC5	Spend enough time with me	Did Not Load		
	PPC6	Help me to deal with feelings of doubt about my health	Did Not Load		
	PPC7	Encourage me to express my thoughts concerning my health problems	0.83		
	PPC8	Checks to see if the treatment plan(s)are acceptable to me	0.59		

Patient-provider relational attachment (PPRA)				10	0.82
	PPRA1	I can depend on and trust my clinicians	0.53		
	PPRA2	I get enough emotional support from my clinicians even when am upset	0.65		
	PPRA3	My clinicians are sensitive to all my needs	0.68		
	PPRA4	I feel safe with my clinicians	0.67		
	PPRA5	When I am with my clinicians, I feel that I am /her highest priority	0.56		
	PPRA6	I wish I could see my clinicians more often	0.68		
	PPRA7	Sometimes I am afraid if I don't please my clinicians, they will not treat me as well	0.79		
	PPRA8	I am cautious of what I tell my clinicians so that they don't reject me	0.85		
	PPRA9	I am comfortable without a close personal relationship with my clinicians	Did Not Load		
	PPRA 10	I would rather not see my clinicians but I have no choice	0.85		
Patient satisfaction (PS) with the clinicians and the health system; *The clinicians ensure;*				10	0.85
	PS1	HIV services are easily accessible to me	0.46		
	PS2	I receive quality HIV care services	0.48		
	PS3	Confidentiality and privacy are observed during the consultation	0.48		
	PS4	I have excellent experience with this hospital	0.54		
	PS5	I am always satisfied with this hospital	0.57		
	PS6	This hospital always comes to my expectations	0.60		
	PS7	I have good interaction with the providers	0.54		
	PS8	Providers in this hospital treat me with respect	0.73		
	PS9	Providers give timely responses to my questions and requests	0.74		
	PS10	Providers are highly professional and competent in their work	0.53		

Source: *Research data, 2022*

Table 4.6: Exploratory factor analysis (EFA) and internal consistency (IC) results for providers' data

Variable	Items	Description	Factors	Num Factors	Cronbach's Alpha
Patient Loyalty (PL) ***(The patients)***				5	0.87
	PL1	commit to return to this hospital	0.89		
	PL2	Have confidence in the quality of care provided in this hospital	0.71		
	PL3	Feel happy about the treatment at this hospital	0.80		
	PL4	Refuse to choose another hospital for care other than this	0.70		
	PL5	Encourage others (friends & relatives) to attend this hospital	0.73		
Leader Adaptive Capacity (LAC) ***The clinical leader;***				7	0.89
	LAC1	Examines & identifies problems affecting us & helps us to come up with possible solutions	0.63		
	LAC2	Ensures that we take control of patient's healthcare situations	0.77		
	LAC3	Builds trust with the patients and providers and promotes good relationships	0.78		
	LAC4	Creates an environment where we can spend time learning new things	0.45		
	LAC5	Communicates well with us through active listening	0.79		
	LAC6	Listens to our views and assures we are valued and respected	0.89		
	LAC7	Finds ways to encourage us to see that we achieve success	0.84		
Clinical Leader Attributes (CLA) ***The clinical leader;***				10	0.92
	CLA1	Has knowledge & skills in providing direction & guidance in the healthcare system	0.71		
	CLA2	Organizes the healthcare system to ensure things are done quickly and in an honest manner	0.72		
	CLA3	Takes action to improve healthcare system performance	0.73		
	CLA4	Builds healthy environments and workplaces	0.77		
	CLA5	Uses clinical knowledge and experience to meet the needs of the patients	0.71		
	CLA6S	Coordinates care to support the health and well-being of patients	0.78		

Variable	Items	Description	Factors	Num Factors	Cronbach's Alpha
	CLA7	Inspires confidence in others to provide good patient care and better services	0.88		
	CLA8	Collaborates with others to bring added benefits	0.72		
	CLA9	Provides positive feedback	0.71		
	CLA10	Maintains professional ethics and values at work	0.77		
Health System capacity (HSC) ***The clinical leader ensures;***				10	0.88
	HSC1	Proper organization of care	0.64		
	HSC2	patients get prompt attention to my healthcare needs	0.69		
	HSC3	Patients talk to the providers in private and confidential rooms	0.47		
	HSC4	Patients get privacy during physical examinations and treatment	0.63		
	HSC5	There are adequate waiting spaces and examination rooms for patients	0.82		
	HSC6	Healthcare providers are available in the health facility	0.54		
	HSC7	Patients spend a shorter time seeing a clinician	0.70		
	HSC8	The health facility opens on time	0.61		
	HSC9	There is the availability of drugs in the health facility	0.66		
	HSC10	The basic amenities such as the cleanliness of toilets are of quality	0.77		

Source: *Research data, 2022*

4.6 Data Transformation

The study scores were transformed from ordinal (Likert scale 1-5) to binary data by assigning a median value of .7 defined by the distribution of scores (Wachira et al., 2021). For example, if the median was .7 any values greater than .7 were considered as high while values less than .7 were as low. The median and interquartile range (IQR) were used to describe study variables against patient loyalty. Then, the study utilized the logistic regression analysis method to determine the association between strategic leader attributes (leader adaptive capacity and clinical leader attributes), and healthcare system factors as predictors of patient loyalty (outcome variable). Before multivariate analysis, the study assessed associations between patient loyalty to HIV care and participants' socio-demographics (patients & providers) and the study predictors using Chi-square, then adjusted for potential covariates that included patient socio-demographics and clinical factors, provider demographics, and proficiency factors. (Wachira et al., 2021). One-way ANOVA was done to compare means for patients between and within care clinics regarding patient loyalty to HIV care. The statistical analyses were done using R software at $p \leq 0.05$.

4.7 Multicollinearity diagnostics using VIF for patients and providers' data

The study utilized the Variance Inflation Factor (VIF) and tolerance values to measure the degree of multicollinearity of an independent variable with other dependent variables in the regression model to determine how much variability for a predictor is not explained by other predictors in the same model (Poole & Farrell, 2020). Multicollinearity occurs when the data contain highly correlated covariates and can falsely inflate the model coefficient particularly when GVIF >10 and tolerance values <0.2 (Lyons *et al.,* 2016). In this study, the GVIFs were approximately ~1

and tolerance values >0.2 suggesting the absence of multicollinearity as shown in tables 8 and 9 for patient's and provider's data. The results were, therefore, fit for further analysis in table 4.7.

Table 4.7: Multicollinearity diagnostics using VIF Model for patients' data

	Collinearity Statistics	
Variables	**Tolerance**	**VIF**
Health System Capacity (HSC)	0.6940771	1.367033
Trust in the healthcare system and clinician (TR)	0.5868645	1.800071
Patient-provider communication (PPC)	0.7062692	1.482779
Patient-provider relational attachment (PPRA)	0.5080097	1.806564
Patient satisfaction (PS)	0.6811559	1.426672

Source: *Research data, 2022*

Table 4.8: Multicollinearity diagnostics using VIF for healthcare providers' data

	Collinearity Statistics	
Variables	**Tolerance**	**VIF**
Leader adaptive capacity (LAC)	0.7571543	1.385528
Health System Factors (HSC)	0.7900007	1.310208

Source: *Research data, 2022*

4.8 Correlation Results

4.8.1 Correlation results for patients' data

The Study utilized Pearson Correlation Moment to establish correlations among the study variables. Results indicate that patient loyalty was positively correlated with Health System Factors (r=.47, p<.01), moderately correlated with trust in the healthcare system and clinicians (r=.62, p<.01), positively correlated with patient-provider communication (r=.41, p<.01), patient-provider relational attachment (r=.44, p<.01) and patient satisfaction (r=.48, p<.01). The positive and statistically significant Pearson Correlation coefficients indicated that all the study variables had a direct proportionate magnitude of effects between each other. Table 4.8 presents the correlation results.

Table 4.8: Correlation results for patients' data

Variable(s)	PL	HSC	TR	PPC	PPRA	PS
Patient Loyalty (PL)	1					
Health System Factors (HSC)	.47**	1				
Trust in the clinician & health system (TR)	.62**	.43**	1			
Patient-provider communication (PPC)	.41**	.43**	.44**	1		
Patient-provider relational attachment (PPRA)	.44**	.32**	.64**	.30**	1	
Patient satisfaction (PS)	.48*Z	.46**	.48**	.43**	.36**	1

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).
Source: *Research data, 2022*

4.8.2 Correlation results for providers' data

For the healthcare providers variables (table 13), patient loyalty had positive and statistically significant correlations with leader adaptive capacity (r=.42, p<.01), clinical leader attributes (r=.54, p<.01), and health system capacity (r=.45, p<.01). This is a similar observation to the patient's variables indicating that all the study variables had a direct proportionate magnitude of effects between each other as shown in table 4.9.

Table 4.9: Correlation results for healthcare providers

Variable(s)	PL	LAC	CLA	HSC
Patient Loyalty (PL)	1			
Leader Adaptive Capacity (LAC)	.42**	1		
Clinical Leader Attributes (CLA)	.54**	.64**	1	
Health System Capacity (HSC)	.45	.097	.50**	

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).
Source: *Research data, 2022*

4.9 Testing of hypotheses and research question

The study tested the direct null hypotheses using a logistic regression model, answered qualitative research questions using thematic analysis, and tested the mediating null hypotheses using SEM-PATH analysis in SPSS-AMOS vs. 23. The results are presented below.

4.9.1 Proportions of patients with patient loyalty to HIV care

First, the study determined overall patient loyalty to HIV care from the perspectives of patients and healthcare providers. The patient's evaluation of overall patient loyalty was 68% while the providers' perception of patient loyalty among patients receiving HIV care in MTRH-AMPATH was 64% as shown in Figure 9. While patient loyalty has been studied extensively in the literature, there is inadequate empirical evidence of patient loyalty in HIV studies. Although patients and providers in AMPATH-MTRH perceived high patient loyalty to HIV care (>60%) among HIV-infected patients, the percentage was lower compared to other studies on HIV. This indicates that patients are generally loyal to HIV care and signifies more responsibility by the patient in care and the contribution of the health facility.

Secondly, the study determined statistically significant differences in patient loyalty to HIV care in terms of the three clinics as perceived by patients using a one-way analysis of variance (ANOVA). Results show the *p*-value is less than 0.005 indicating statistically significant differences in patient loyalty between and within the clinics (1-3). The total mean was (m=4.7202). 3 (m=4.9069) had a higher mean compared to 2 and 3 (m=4.7742; m=4.4734). The F test (F=44.56; $p<.000$) was statistically significant. This indicates that the population variances observed between groups were almost 45 times greater than the amount of variance within groups that are accounted for. The Levenes' test of homogeneity of variance was statistically significant ($p<.000$) which allows pulling variances across the three and the significant value is ($p<.05$), similar to the standard deviations which are statistically different, indicating that the variances among the population groups are unequal. The ($Eta^2 = .19$) provides the variance in patient loyalty that is accounted for by the groups across the clinics. It indicates that 19% of the

variability in patient loyalty is accounted for by the population groups in clinics 1-3, indicating significant differences in patient loyalty to HIV care. Table 4.10 shows the results.

Table 4.10: ANOVA results for patient loyalty to HIV care vs clinics

Variable	Clinic	N	Mean	SD	F	p-value	Levene's test	Partial Eta^2
Patient loyalty to HIV care	1	128	4.4734	.3822	44.56	.000	.000	.19
	2	132	4.7742	.4290				
	3	131	4.9069	.3141				
	Total	391	4.7202.	.4183				

Source: *Research data, 2022*

Similarly, a one-way ANOVA was conducted to determine statistically significant differences in patient loyalty as perceived by healthcare providers in the three clinics. Results indicate that although the means in the three clinics 1-3(m=4.560; 4.387, 4.447) were slightly different from each other, there were not far from the overall mean, and had no statistically significant differences (p>.76; p>.005). The means squares between and within groups (ms=6.372; .143), associated with the F test (F=.283) indicate statistically insignificant differences. The test of homogeneity of variances (p>.350; p>.05) indicated insignificant differences. The partial eta square (Eta^2=.092) indicated a low variance of 9.2% of variability among the population groups in the three clinics. Table 4.11 presents the results. Notably, patient loyalty was higher in clinic 3 compared to clinics 1 and 2. The significant differences could be attributed to internal factors such as the leadership of the clinician, patient-provider relationships, and/or healthcare system factors in the facility. This is a novel finding that determined the perceptions in different service units headed by a clinical leader in an HIV facility.

Table 4.11: Results of ANOVA for perceived patient loyalty by providers vs clinics

Variable	Clinic	N	Mean	SD	Mean squares	F	p-value	Eta^2	Levene test
Patient loyalty	1	15	4.560	.7642	Between groups =6.372	.283	0.76	.092	.350
	2	15	4.387	.6947	Within groups =.143				
	3	17	4.447	.4446					
	Total	47	4.464	.6312					

Source: *Research data, 2022*

4.9.2 Perceptions of healthcare providers about strategic leader attributes for clinical leaders (qualitative results)

The study conducted in-depth interviews to explore the perceptions of healthcare providers on what strategic leader attributes should clinical leaders possess to carry out clinical functions and make decisions as part of their clinical roles in the HIV care system. First, the study sought providers' comprehension of strategic leadership, knowledge of the health system, the role of a clinical leader, and the strategic leader attributes necessary to perform clinical functions.

a) Knowledge of Leadership

The healthcare providers described strategic leadership in terms of the clinical leader's attributes and their roles. This entails taking lead and providing direction in the health system as the overall person. Also, taking lead in departments within the healthcare setup to coordinate daily activities and oversee clinical care.

> *"Leadership is about taking the lead in the healthcare set up whereby we have for instance our chief of party who is now our overall I can say, then we have the human resources, we have the clinical departments, so I think it goes as per the departments, so we have that bureaucracy from the chief of the party, to our clinical manager, then to our clinical in charges. So, I think it depends on the departments you are in" (*Clinical officer)

> *"A leader in the healthcare system is a person who coordinates the day-to-day activities of the clinic, oversees the clinical care*" (Clinical officer*)*

b) Knowledge of Healthcare systems

Providers defined a health system as established structures that provide quality healthcare services to HIV patients. This comprised leadership in the care system, health care providers, and patients.

> *"When you talk of a healthcare system, it comprises of staff, it comprises of care providers, it comprises of patients who come here, and the management. When all these are integrated, I see a definition of a healthcare system"* (Clinical Officer*)*

> *"Health care system is actually a structure that is put in place or governed by laws and principles in terms of giving health services to the citizen. Actually, structures contain a lot of things, one is the human part of the structures, and there are other resources and there are other support services and also the healthcare structures now. Then there are bodies of other organizations that support now the healthcare structures. For instance, here, we have partners or implementing partners that back up those structures. But the key main structure here is now the ministry of health, that is now our structure*" (Clinical Officer)

It was also defined as an integrated healthcare service provision composed of patients, providers, and other stakeholders. It is also made up of various departments within a facility to help provide health care services in an organized manner.

> *"The healthcare system has different sectors that I could be doing some part of it. But there are different sectors of it, like the pharmacy part, and the lab, which we try to interlink as much as possible. There is the VITC section where people are tested and given their results. Where they are registered. If they are having legal issues, there is the legal department. If they have social issues like maybe they need drugs and they cannot afford them the program can waive that because that is what the social worker does. The nutrition is where they need help with their diet and what they need to improve in their management of HIV. So, those sectors are interrelated and interlinked. In the healthcare system, all those should be working in tandem together*" (Pharmacist)

c) Strategic Leader Attributes for Clinical Leaders

The primary themes that emerged from the study findings that characterized the strategic leader attributes for clinical leaders in the HIV care system included 4 categories; (1) training and expertise; (2) personal traits; (3) interpersonal skills; and (4) managerial traits.

Training and expertise

The most occurrent theme and relevant to training and expertise was clinical competence. The providers noted that clinical leaders who have hands-on experience and expertise in their clinical work were important in the leadership position in a health care system. A competent leader will lead by example, particularly by being swift and able to respond to patients' and health system-changing needs. Moreover, the leader was viewed as an informed and knowledgeable in the field of medicine, who will identify mistakes in service delivery to patients.

> *"In a healthcare system according to me, a leader should be knowledgeable, that is, she should be knowing some at least medicine so that she knows how to treat patients so that when I make a mistake, she can see that I have made a mistake. I wouldn't like to be led by a person who is lay in medicine" (Clinical Officer)*

In addition, the providers noted that the HIV field is currently dynamic and new guidelines and drugs addressing the HIV pandemic emerge often and must be implemented by health systems. Therefore, the strategic clinical leader should be knowledgeable, keen to note new changes, and ready to embrace them and build the capacity of other staff to comprehend the new regulations through training and workshops.

> *Like now we have issues of pep, prep, so there is a knowledge gap. So, they need to be people who are well trained, maybe trainer of trainers, so that they can pick some of these things and inform management which can then plan and organize training"* (Clinical Officer)

Personal traits

In describing the attributes of strategic clinical leaders, the providers perceived **team leadership** as an important personal trait for the leader to embrace teamwork with and among the staff. As a team leader, the clinical leader brings all the staff and their clinical expertise on board to discuss and consult on various issues within the unit or even the health facility. The providers noted that the care clinics were composed of different cadres comprising consultants, clinical officers, nurses, retention staff, nutritionists, and social workers, and hence there was a need for them to work as a team and in a coordinated manner to provide quality HIV care. For instance, a patient would come to a nurse or a clinician with multiple problems such as nutritional, psychological, or social issues which they would not be able to solve. In that case, there would be a need to refer the patient to a nutritionist and a social worker.

> *"And above all, you have to embrace teamwork. You see, in a health setup, being a staff or a healthcare provider, you are not the only one who is providing those services. Like I told you before, the module comprises some departments. We have social workers, we have nutrition, and out of all those cadres, a leader has to run all of them. So, if we cannot enhance teamwork, you may end up not giving enough service to the client because you need to incorporate all these cadres. So, working as a team is also very important*" (Clinical Officer*)*

> *"I think the main attribute is teamwork and our leader embraces teamwork, yeah so that is what keeps us going because she always brings everybody on board. So, when everybody is on board now, we can discuss within the clinic"* (Nurse).

Based on personal qualities, providers perceived a strategic clinical leader as **trustworthy**. A good relationship goes hand in hand with trustworthiness which enhances good relationships between providers and patients during clinical interactions. The clinical leader should be trusted by other staff and they can feel confident to talk and share their experiences and challenges

freely. Good interactions in the healthcare system are informed by respect, fairness, and a good personality.

> *"She should be trustworthy. Someone that you can trust with your personal issues and you wouldn't want the next time to see that people are talking about that issue; she should be trustworthy"* (Nurse)

The providers cited honesty and integrity, as important and recurrent strategic clinical leader attributes. The providers noted that for the leader to gain support from the team, the leader ought to demonstrate discipline, transparency, and predictability.

> *"The main attribute of my leader is integrity. The honesty in the person, and maybe also the transparency between the leadership styles in my leader. This one being a healthcare system, you must be genuine to the patient, you must be honest in the provision of service, and leadership process whereby in other ways you also get supported through the attributes of this particular leader*" (Counsellor)

A strategic clinical leader was viewed as a flexible person and quick in responding to work-related issues and the patient's changing needs and providing possible solutions to unprecedented issues affecting clients. In addition, the organizational dynamics and the changing lifestyle call for flexibility in terms of how a leader addresses emerging issues. A leader should therefore be ready to learn, accept and accommodate new changes and ideas. This highlights the importance of leader adaptive capacity in the HIV care system. On the contrary, being rigid results in resistance and poor-quality service provision.

> *"The leader should be kind of flexible and quick in responding to some of the issues and how to address patients changing needs*" (Clinical Officer)

> *"I think as someone said, change is the only permanent thing. So, when new things come up, that leader should be able to adapt to new situations, to new ideas, to new trends, and should be someone who is probably well-read, and able to inculcate what is new and be able to put it in part of the team and put it in the work program of that program. So, I think it is someone who should be able to adjust and walk easily in whatever the situation, regardless of if I worked seven years ago and now, we are doing things*

> *differently but should be able to adjust to the new regime that is coming up."* (Pharmacist)
>
> *"A leader who is flexible in terms of patient and staff needs and also strategically a leader who can learn in the dynamic changes. At any given time, they should be willing to learn because if you don't learn then you will not move with the trend and what will you give back to your team*" (Nurse)

In addition, a strategic clinical leader should be impartial and ready to serve the team without any discrimination, hence treating everyone equally.

> *"Then, probably another attribute he should be impartial. Serving without partiality" (Clinical Officer)*

The providers added that a strategic clinical leader should be a mentor to the juniors by being a good role model, motivating and directing others on what they are expected to do in the work environment. For instance, if the leader is punctual and accountable then the other staff are expected to follow suit. In addition, a leader is expected to show respect to others and take lead.

> *"It influences the services because when our leader goes forward and as we see her work, she is not the kind of person who just does it for the sake of. It influences positively because she is hands-on, definitely if my boss is hands-on, I will definitely work because she is not just speaking it out, it influences the work positively. For example, I said she is punctual. So that makes even our clients to be served better because we know that if she comes early, tomorrow as a junior if I come late, I will feel guilty because my boss comes early. So, when all of you are punctual, even the clients know that they will get the best because they come, they get served, and they go"* (Nurse)

Interpersonal skills

It emerged that being approachable was the most occurrent attribute for strategic clinical leaders in this domain. The leader should be approachable to the junior staff and patients to discuss diverse issues affecting them with confidence and freely without fear, through good listening and caring.

> *"A leader should be friendly because if you are not friendly, your juniors will not be free to tell you if there are any challenges at work and even giving feedback will be a problem. As I said before, there will be free communication with his or her juniors, and then also we will be free to give feedback and deliver on the duties that he or she gives us*" (Clinical Officer)

> *"That is basically what a leader is. It should be someone available to the team, someone, who is responsive to their needs, because sometimes some members of the team might have some challenges and therefore you should be willing to listen and hear them out" (*Pharmacist)

It also emerged that a strategic clinical leader was viewed as an understanding and a good listener, particularly in paying attention to the staff and patients' challenges. This also allows the junior staff and patients to be ready and always willing to sit, listen and discuss with the leader. As a leader, one is always dealing with a dynamic team as well as clients with different characters hence the leader should be accommodative.

> *"Maybe I can just mention a few that one, as a leader you should be understanding, you should be able to understand your staff and listen to their challenges, sometimes when patients come, they have a lot of issues, then you should be able to be at their shoes "(*Clinical Officer*)*

> *"A good listener, to be a leader you are supposed to be a good listener so that you can get to know what is going on to be able to understand any eventualities*" (Clinical Officer)

Providers noted that a strategic clinical leader should possess good communication skills during clinical interactions which can be useful in identifying work environment challenges and providing suggestions for improvement to provide patient quality service. The strategic clinical leader should provide timely communication to the team on new developments such as training and pass new information from the management to the juniors.

> *"The main attribute that I can talk about is there is what we call open communication, especially in our set up here, so we usually deal with patients, so the major thing we usually talk about is patient care, then the challenges we are facing, then, any other thing that we need to improve pertaining care and services towards the patients"* (Clinical Officer)

> *"If I start with my leader, it is that he is a person that always makes sure that all information that comes he passes to me and I make sure that I pass that information to the team. So that if there is something new that has to be done, that information reaches me. It has to be the biggest attribute that someone who gets information and passes to the team*" (Pharmacist)

A good relationship, interaction, and respect for other staff were noted as attributes of a strategic leader. The clinical leader should have a strong personality since they are dealing with different people.

> *"Being a leader also apart from understanding, dedication, you have to have a good interaction with your staff"* (Clinical Officer)
>
> *"So, I think reliability and respect for your juniors. It is very important because when you respect your juniors, they will respect you in return and your job becomes simpler"* (Pharmacist)

Managerial traits

A strategic leader was perceived as a good planner, an important component of strategic management in scheduling daily activities and the utility of resources. For instance, developing flexible work schedules to enable providers to work on shifts to ensure continuous patient services.

> *"You know the resources will never be enough. So planning is the backbone of all the activities that go on in the program for the best services in terms of prioritization. And if the planning doesn't go well then you will not be able to do what is expected of you. He should be swift as well, in terms of changing what is not working"* (Nurse)

Accountability was a key recurrent theme. The providers emphasized that an accountable leader promotes responsibility by attending to clients and upholding good values like transparency and time management in financial expenditure.

> *"You also have to be very accountable because sometimes we handle money for our clients, so you need to be transparent and make sure when you are given something, you can account for it to the boss"* (Clinical Officer)

In addition, a strategic clinical leader is expected to be disciplined, dedicated, and hard-working to ensure that the objectives and goals of the health facility are achieved. This includes report writing and submissions on time.

> *"Sometimes you go home very late, not like any other person or like any other staff because you have to make sure that the duties of that day, the reports are submitted on time, and all that" (*Clinical Officer)

The providers described the strategic clinical leader as an innovative leader who makes suggestions and provides solutions to a working team in unforeseen situations by being visionary and dynamic to provide solutions to unforeseen challenges. Innovativeness leads to positive change and healthcare system development through new ideas and strategies.

> *"For her, she normally analyses what happens on the ground. After analyzing what happens on the ground, based on her knowledge and her leadership, she takes it higher. Introducing something new and giving it time to work. If it doesn't work, she drops it. If it works, she rolls it down"* (Nurse)

> *"I think being visionary and probably dynamic as per need, is just the motive to improve the healthcare system because if a strategy is not working at that time, you might be forced to either leave it or modify it in such a way that you think it might give a positive impact to the healthcare system. And when I talk about the system, it does not just mean the whole system from top to bottom. You know even in that small area of jurisdiction; you can have a best practice that can influence the whole system"* (Clinical Officer)

> *"And also, strategically a leader who can learn in the dynamic changes. At any given time, they should be willing to learn because if you don't learn then you will not move with the trend and what will you give back to your team"* (Nurse)

Having problem-solving attributes enables clinical leaders to provide solutions to healthcare system challenges. For instance, reviewing customer feedback forms to document compliments, and identify complaints, and conflicts to provide objective feedback. This will aid the leader in making strategic decisions on behalf of the junior staff and the health facility. However, there can also be instances when some issues are beyond the capacity of the leader and will require help from the facility management. It was noted that problem-solving skills create harmony,

avoid the blame game, foster unity, and, provide a good role model to the patients on how to relate well. It also leads to efficiency in service delivery in the workplace.

> *"He should also be good at solving conflicts. Sometimes you find some roles that are almost the same between a nurse and a clinical officer so the nurse says this is not within my job description and the other one is like that. At the end of the day, you find that patients are not seen or somebody is overworked"* (Clinical Officer)

> *"You know the health system is broad. We have the service deliveries; you have to have some supplies. So, all these pillars interact, and when there is a weakness somewhere, then the leadership comes in and works out solutions"* (Clinical Officer)

> *"When a patient comes in and they see staff, they see how they relate with one another, beyond being a member of staff who attends to these clients, we are human beings. "So, the way we relate, with my colleagues, with my staff, might affect the way the client perceives me and the way the services are being offered"* (Pharmacist)

In addition, a strategic clinical leader should be organized in terms of time management in reporting to work and also submission of the reports.

> *"Punctuality; you have to keep time by coming in very early and again staying until the program's time is over, until five. You have to be here until five so that you make sure that the clinic is running smoothly. Punctuality in terms of reports; you have to submit reports on time, even in attending meetings, and even when you call for meetings you should be punctual. If you call for a meeting and you are late, that is not leading by example. So, in every aspect, you have to be punctual and you lead by example"* (Clinical Officer)

Another attribute of a strategic leader was noted as someone vocal and ready to fight for the right of the junior staff. One is supposed to be understanding and ready to present the issues arising from the team to the management for solutions.

> *"And then, he should be able to represent us well; because sometimes you can give your grievances and then he goes there and he doesn't say anything and yet down here you are like your issues were addressed"* (Clinical Officer)

d) Roles of Strategic Clinical Leaders in HIV health systems

Healthcare providers perceived the strategic role of a clinical leader in the HIV care system as a team leader in a program in terms of providing direction and guidance on staff and patients'

expectations. The providers emphasized team leadership as critical because the clinical leader provides necessary support to patients and providers to understand the program objectives, vision, and strategies and set targets to be achieved in the institution. They reported that the clinical leader should involve all the stakeholders in the process to ensure the goals and objectives of providing quality services to patients are prioritized and achieved daily.

> *"Healthcare system leadership is giving away to the people who are working under you so that you achieve your objectives of treating the patients because in a healthcare system there are daily activities, so you want to achieve the objectives of the patients or solve the patients' problems. So, you give the way to the people who are under you so that they know their objectives and how to achieve their objectives"* (Clinical Officer)

> *"Giving the technical know-how and also doing a regular assessment of the needs of the service provider and the patients and prioritizing the needs and intervening in accordance to availability of the resources to meet the required needs. And above all, to meet the program objectives. So, he is the driver of the objectives of the project" (*Nurse)

It emerged from the study that a clinical leader with strategic capabilities defines and assigns roles and responsibilities to staff in their respective departments, which is a typical function of management where leaders irrespective of their levels must allocate tasks and resources to achieve them. The study highlights the importance of creating an enabling environment for cohesive patient-provider interaction and providing supervision to ensure work is done effectively within the stipulated time and according to the standard operating procedures, to provide satisfactory and quality services to patients. For instance, the laboratory should be equipped and functioning, obtaining feedback from clients for quality improvement of HIV services.

> *"Number one is to do supervisory roles like daily supervision and to make sure people are at work and doing the right things and delivering. You know, implementing what they are supposed to be doing"* (Clinical Officer*)*

> *"A leader in a healthcare system ensures that our clients are given quality service. For example, a leader ensures that his team or her team are on duty and are timely with teamwork, so in the long run we give quality service to our clients"* (Clinical Officer)

> *"We have to agree who works where. We have a discussion to agree that today you will do the in-patient part of the health program and the rest of the team does the outpatient part of the program. So, we distribute roles."* (Pharmacist)

The study results showed that a strategic clinical leader acts as a link between the management and the patients as well as the staff members by presenting issues or concerns affecting them and providing feedback. Similarly, the role of the clinical leader is to link patients with other care providers such as consultants and specialists if they require their services. The results highlight the importance of clear communication to coordinate the tasks such as consulting with other departments and senior staff, handling emergencies, scheduling patient clinics, data management, reporting, and provision of quality clinical care services for patients. In addition, the clinical leader conducts staff appraisals to evaluate the performance of the unit.

> *"We have our in charge and most of the time she is the one who connects us with the management level, if we have issues, she is the one to take the issues upwards and if there is anything that has to be communicated again from the chief of party or the clinical manager, she is the one to relay the information"* (Clinical Officer)

> *"I would say majorly it is coordination; he coordinates the activities and he is the link between the higher management and the client. He coordinates all the activities and the services within the department" (Nurse)*

The providers reported accountability as a critical strategic role for the clinical leader in the HIV care system particularly being responsible for all the activities in the care unit by providing the necessary reports.

> *"Another thing is a representation of that unit because, in as much as you are working as a team at that place, this leader at some point will have to be accountable for the area in which they are working on so that in case of any issues, you don't always have to fault others. So, this particular leader is the one who will carry the burden of being accountable and being responsible for that particular area*" (Clinical Officer)

The healthcare providers identified Problem-solving as a key strategic clinical leadership role in terms of solving technical problems related to work, problems among the staff, complaints from the patients, difficult cases that the junior staffs are unable to solve, providing counseling

services to the patients, and addressing challenges in the working environment for the staff. In such situations, the strategic capability of the clinical leader is needed to provide solutions at their level. This could include having a session with the staff to discuss the strategies for solving the challenges because it helps the clinic to run effectively.

> *"And some patients have complaints; the delays, I was not treated well, somebody is handled badly...A leader should come down to earth to settle down the issues. Sometimes you apologize, one may have said something which is not good and hurts. A leader should come down to be able to apologize on behalf of that staff and clear the matter"* (Nurse*)*

The evidence from the study revealed that strategic clinical leaders develop schedules of activities in their departments that include budgeting for prioritization and allocation of limited resources. This is very important in such a large care system that has high patient volumes, hence planning for the available resources is critical because it ensures the continuous provision of strategic services to patients and strengthening of the health system's responsiveness. This includes adequate staffing, organizing work shifts to ensure present staff at the facility even during holidays, availability of medical supplies, and finance.

> *"Each and everyday supplies are there, to ensure adequate staffing; that is, the staff are enough and the supplies*" (Nurse)

> *"Another key thing that my leader is doing is the planning and budgeting for the allocation of resources, the allocation of staff such that who is allocated to work where and at what time. When there are emergencies, he assigns who is going to intervene, what are the challenges, and who is going to handle them"* (Nurse)

It also emerged from the study that a strategic clinical leader is a mentor to the junior staff to grow in their careers and perform tasks in the health system. For instance, taking lead in implementing new policies and regulations for them to follow, sharing important updates on the practice guidelines, and new standard operating procedures (SOPs), and offering training on specific areas during the monthly Continuous Medical Education (CME). In addition, strategic clinical leaders disseminate relevant knowledge through capacity-building initiatives such as

short courses, training, seminars, workshops, and mentorship programs that help enrich clinical knowledge in the health system.

> *"And then secondly, there are policies, government policies like when they are rolling them down, she is the lead person, like she mentors us"* (Clinical Officer)

> *"Number three is representing us in activities outside here, maybe acquiring some skills outside there and then come back and train us. I think those are the most important that I see in our set-up*" (Clinical Officer)

The evidence from the study showed that a strategic clinical leader organizes and attends regular departmental meetings to discuss the program and departmental activities as a way of providing progress. The meetings could range from daily, weekly to monthly and the clinical leader is usually the chair. The clinical leader is responsible for the collation, analysis of data, generation, review, and submission of progress reports to the high levels of management and ensuring the objectives and targets of a department are achieved within a specified time frame. These may include, measurements and indicators of services provided to the clients and data review.

> *"Another role he does is to collect data; to collect specific data about the healthcare system and targets. He also gets the data analyzed and prepares reports. You realize that with HIV, there is so much data; those in care, those who have defaulted, those to follow-up, and all that*" (Clinical Officer)

> *"You know, in every organization, you must have what we call objectives or goals. So, as a leader, you must work so that you achieve those goals and objectives. And by working... When you want to achieve those goals, you have to make sure that everybody is involved.*

> *"He also organizes routine meetings; routine meetings at the clinic level with the staff to evaluate the data, to also check for matters arising, any issues"* (Clinical Officer)

4.9.3 Provider's perceptions of the relationship between strategic leader attributes and patient loyalty to HIV care

The study assessed the associations between strategic leader attributes and patient loyalty to HIV care using the Chi-square test of independence. First, the study determined the associations between providers' demographic and proficiency characteristics as well as the study variable

characteristics with patient loyalty to HIV care. Results indicate that except for the healthcare providers having received performance incentives, all other variables had no statistically significant (χ^2=, p<.05) associations with patient loyalty to HIV care association with high or low patient loyalty as shown in Table 4.12.

a) Association between healthcare providers' socio-economic and clinical factors and patient loyalty to HIV care

Table 4.12: Healthcare provider's baseline characteristics associated with patient loyalty to HIV care

Variable(s)	**Total No. 47**	**High No. 30**	**Low No. 17**	χ^2	***p*-value**
Age				5.18	0.16
18 -30 years	2 (4.3%)	0 (0.0%)	2 (100.0%)		
31-40 years	17 (36.2%)	10 (58.8%)	7 (41.2%)		
41-50 years	26 (55.3%)	18 (69.2%)	8 (30.8%)		
Adult	2 (4.3%)	2 (100.0%)	0 (0.0%)		
Gender				3.14	0.08
Male	26 (55.3%)	20 (76.9%)	6 (23.1%)		
Female	21 (44.7%)	10 (47.6%)	11 (52.4%)		
Education				3.61	0.16
College	30 (63.8%)	21 (70.0%)	9 (30.0%)		
Undergraduate	12 (25.5%)	5 (41.7%)	7 (58.3%)		
Post-graduate	5 (10.6%)	4 (80.0%)	1 (20.0%)		
Experience				1.62	0.45
< 3 years	6 (12.8%)	3 (50.0%)	3 (50.0%)		
4-7 years	16 (34.0%)	9 (56.2%)	7 (43.8%)		
> 7 years	25 (53.2%)	18 (72.0%)	7 (28.0%)		
Income				1.20	0.75
<50000 (KES)	17 (36.2%)	12 (70.6%)	5 (29.4%)		
51000-100000 (KES)	9 (19.1%)	6 (66.7%)	3 (33.3%)		
101000-150000 (KES)	11 (23.4%)	7 (63.6%)	4 (36.4%)		
> 151000 (KES)	10 (21.3%)	5 (50.0%)	5 (50.0%)		
Formal Education Leadership				1.83	0.18
Yes	32 (68.1%)	23 (71.9%)	9 (28.1%)		
No	15 (31.9%)	7 (46.7%)	8 (53.3%)		
Formal education on clinical leadership					0.76
Yes	25 (53.2%)	15 (60.0%)	10 (40.0%)		
No	22 (46.8%)	15 (68.2%)	7 (31.8%)		
Profession				3.36	0.19

Clinician	16 (34.0%)	8 (50.0%)	8 (50.0%)		
Nurse	12 (25.5%)	7 (58.3%)	5 (41.7%)		
Other (indicate	19 (40.4%)	15 (78.9%)	4 (21.1%)		
Working unit				1.642	0.44
Clinical	20 (42.6%)	11 (55.0%)	9 (45.0%)		
Nursing	14 (29.8%)	9 (64.3%)	5 (35.7%)		
Other (indicate)	13 (27.7%)	10 (76.9%)	3 (23.1%)		
Received Performance Incentives				6.21	0.01
Yes	29 (61.7%)	23 (79.3%)	6 (20.7%)		
No	18 (38.3%)	7 (38.9%)	11 (61.1%)		
Recognition for achieving targets				0.01	0.91
Yes	35 (74.5%)	23 (65.7%)	12 (34.3%)		
No	12 (25.5%)	7 (58.3%)	5 (41.7%)		
Delivery of Care in a good environment				0.08	0.77
Yes	46 (97.9%)	30 (65.2%)	16 (34.8%)		
No	1 (2.1%)	0 (0.0%)	1 (100.0%)		
Professional Development				1.14	1.0
Yes	43 (91.5%)	27 (62.8%)	16 (37.2%)		
No	4 (8.5%)	3 (75.0%)	1 (25.0%)		
Role Sharing				2.34	0.31
Yes	45 (95.7%)	29 (64.4%)	16 (35.6%)		
No	2 (2.3%)	0 (0.0%)	1 (100.0%)		
Clinic (Clinic)					0.31
Clinic 1	15 (31.9%)	12 (80.0%)	3 (20.0%)		
Clinic 2	15 (31.9%)	9 (60.0%)	6 (40.0%)		
Clinic 3	17 (36.2%)	9 (52.9%)	8 (47.1%)		

Source: *Research data, 2022*

b) Association between healthcare providers' study constructs with patient loyalty to HIV care

Healthcare providers perceived higher patient loyalty to HIV care to be associated with clinical leader adaptive capacity (LAC) (p<.0003), clinical leader attributes (CLA) (p<.006), and health system capacity (p<.015). All the associations were statistically significant at (p<.05). Results are presented in table 4.13.

Table 4.13: Providers Study Construct Attributes associated with patient loyalty to HIV care

Variable(s)	Total No. 47	Patient loyalty		$\chi 2$	p-value
		High No. 30	Low No. 17		
Leader Adaptive Capacity (LAC)					
High	25 (53.2%)	22 (88.0%)	3 (12.0%)	30.733	<0.001
Low	22 (46.8%)	8 (36.4%)	14 (63.6%)		
Clinical Leader Attributes (CLA)				28.014	0.021
High	27 (57.4%)	22 (81.5%)	5 (18.5%)		
Low	20 (42.6%)	8 (40.0%)	12 (60.0%)		
Health System Capacity (HSC)				27.729	0.015
High	28 (59.6%)	22 (78.6%)	6 (21.4%)		
Low	19 (40.4%)	8 (42.1%)	11 (57.9%)		
Low	17 (36.2%)	0 (0.0%)	17 (100.0%)		

Source: *Research data, 2022*

c) Multivariate analysis of healthcare providers' data

All the significant variables in the bivariate model were entered into the multivariate logistic regression model to perform analysis. Results are shown in Table 4.14.

Table 4.14: Unadjusted and adjusted associations of provider-level characteristics and study variables with patient loyalty to HIV care

Characteristic	Unadjusted Estimates			Adjusted Estimates		
	OR[1]	95% CI[1]	*p*-value	OR[1]	95% CI[1]	*p*-value
Gender						
Male	Ref			Ref		
Female	0.27	(0.07, 0.92)	0.042	0.09	(0.01, 0.73)	0.044
Received Performance Incentives						
Yes	Ref			Ref		
No	0.17	(0.04, 0.59)	0.007	0.13	(0.01, 1.12)	0.086
Experience						
< 3 years	Ref			Ref		
4-6 years	1.29	(0.19, 8.98)	0.8	4.43	(0.17, 175)	0.4
> 7 years	2.57	(0.39, 17.1)	0.3	4.68	(0.22, 109)	0.3
Leader adaptive capacity						
High	Ref			Ref		
Low	0.08	(0.01, 0.31)	<0.001	0.09	(0.01, 0.67)	0.032
Clinical leader attributes (CLA)						
High	Ref			-	-	
Low	0.15	(0.04, 0.54)	0.002	-	-	0.034
Health system capacity						
High	Ref			Ref		
Low	0.11	(0.02, 0.41)	0.005	0.09	(0.01, 0.70)	0.4

[1]OR = Odds Ratio, CI = Confidence Interval
Source: *Research data, 2022*

Although the healthcare providers' demographic variables such as gender and experience in HIV care were insignificant in the univariate association, they were included in the final multivariate analysis since most studies have supported the test to determine any statistical implication. Results indicate that being a female healthcare provider (OR: 0.09 95% CL: 0.01, 0.73), the odds of perceiving patients to remain loyal to HIV care is lower than the odds of a male counterpart provider. Similarly, having received performance incentives in the course of duty, the odds of perceiving patient loyalty to HIV care is (OR: 0.13; 95% CL: 0.01, 1.12) times lower than the odds of those who did not receive any incentives. On the contrary, healthcare providers who had 4-6 years (OR: 4.43; 95% CL: 0.17, 174.81) and more than seven years (OR: 4.68; 95% CL:

0.22, 109.26) of experience in HIV care, were four times more of the view that patients are loyal in HIV care compared to those with less than three years of experience.

Healthcare providers who perceived their clinical leader to have low leader adaptive capacity (OR: 0.09; 95% CL: 0.01, 0.67) perceived lower patient loyalty compared to those with a higher perception of leader adaptive capacity. In addition, the odds of patient loyalty in healthcare providers with a low perception of health system capacity (OR: 0.09; 95% CL: 0.01, 0.7) were lower than the odds of those who had higher perceptions of the healthcare system capacity. This may be possible due to a lack of capacity in strategic leadership and the opportunity to exercise adaptive leadership in primary care. It could also be associated with factors beyond the capacity of the clinical leader.

4.9.4 Health system factors associated with patient loyalty to HIV care

The following steps were taken to achieve this objective. First, the study determined the association between patient baseline characteristics, patient design variables, and patient loyalty to HIV care which determined the variables that were included in the final multivariate logit model. Table 4.15 shows the results.

a) Association between patient socioeconomic, clinical factors, and patient loyalty to HIV care

The study established significant differences between patients' demographic characteristics and low and high patient loyalty among the patients and results indicate that the age of the patient, level of education, and the residential area, yielded statistically significant ($p<.05$) differences between high and low patient loyalty. Regarding the age of the patient, it is possible to say that older patients are concerned with their health and they are the most vulnerable hence they would choose to be loyal than getting susceptible to other opportunistic infections. In the clinical

factors, variables that had significant differences with high and patient loyalty to HIV care included if the patients had visited a clinician in the recent past if the patient had missed their scheduled visits, and the care clinic in which they receive their primary care. Table 19 shows the results. The study findings further suggest that patients who reside in an urban setting have access to the HIV facility, are more likely to visit their clinicians, and have high chances of not missing clinical visits due to proximity to the health facility.

Table 4.15: Patient baseline characteristics associated with patient loyalty to HIV care

	Patient loyalty (PL)				
Variable(s)	**Total No. 391**	**High No. 265**	**Low No. 126**	χ^2	***p*-value**
Age				12.857	0.004
18 -29 years	36 (9.2%)	23 (63.9%)	13 (36.1%)		
30-39 years	96 (24.6%)	54 (56.2%)	42 (43.8%)		
40-49 years	133 (34.0%)	89 (66.9%)	44 (33.1%)		
> 50 years	126 (32.2%)	99 (78.6%)	27 (21.4%)		
Gender				0.001	0.98
Male	144 (36.8%)	97 (67.4%)	47 (32.6%)		
Female	247 (63.2%)	168 (68.0%)	79 (32.0%)		
Education				14.706	0.002
Primary	153 (39.1%)	120 (78.4%)	33 (21.6%)		
High school	167 (42.7%)	104 (62.3%)	63 (37.7%)		
Vocational	54 (13.8%)	33 (61.1%)	21 (38.9%)		
Graduate	17 (4.3%)	8 (47.1%)	9 (52.9%)		
Income				2.833	0.42
< 10000 (KES)	252 (64.5%)	178 (70.6%)	74 (29.4%)		
11000-30000(KES)	78 (19.9%)	49 (62.8%)	29 (37.2%)		
31000-50000 (KES)	15 (3.8%)	10 (66.7%)	5 (33.3%)		
> 51000 (KES)	46 (11.8%)	28 (60.9%)	18 (39.1%)		
Household Size				1.945	0.16
1-5	220 (56.3%)	156 (70.9%)	64 (29.1%)		
> 6	171 (43.7%)	109 (63.7%)	62 (36.3%)		
Residential				31.792	< 0.0001
Rural	193 (49.4%)	136 (70.5%)	57 (29.5%)		
Urban	144 (36.8%)	110 (76.4%)	34 (23.6%)		
Semi-urban	54 (13.8%)	19 (35.2%)	35 (64.8%)		

Travel time to clinic				0.989	0.61
< 1 hour	243 (62.1%)	164 (67.5%)	79 (32.5%)		
2-3 hours	126 (32.2%)	84 (66.7%)	42 (33.3%)		
> 4 hours	22 (5.6%)	17 (77.3%)	5 (22.7%)		
Clinic hours				4.948	0.028
8 hours	365 (93.4%)	253 (69.3%)	112 (30.7%)		
Less than 8 hours	26 (6.6%)	12 (46.2%)	14 (53.8%)		
Visited clinician				64.018	< 0.0001
No	154 (39.4%)	141 (91.6%)	13 (8.4%)		
Yes	237 (60.6%)	124 (52.3%)	113 (47.7%)		
Required visit				1.833	0.40
1-2	248 (63.4%)	165 (66.5%)	83 (33.5%)		
3-4	115 (29.4%)	83 (72.2%)	32 (27.8%)		
> 5	28 (7.2%)	17 (60.7%)	11 (39.3%)		
Missed visit				16.817	0.0004
0 (none)	270 (69.1%)	199 (73.7%)	71 (26.3%)		
1-2 times	99 (25.3%)	51 (51.5%)	48 (48.5%)		
> 3 times	22 (5.7%)	15 (66.7%)	7 (33.3%)		
Provider seen				4.069	0.34
Clinician	318 (81.3%)	211 (66.4%)	107 (33.6%)		
Nurse	59 (15.1%)	42 (71.2%)	17 (28.8%)		
Pharmacist	11 (2.8%)	10 (90.9%)	1 (9.1%)		
Phlebotomist	1 (0.3%)	1 (100.0%)	0 (0.0%)		
Other (please indicate)	2 (0.5%)	1 (50.0%)	1 (50.0%)		
Clinic (Clinic)				104.050	< 0.0001
Clinic 1	128 (32.7%)	44 (34.4%)	84 (65.6%)		
Clinic 2	132 (33.8%)	101 (76.5%)	31 (23.5%)		
Clinic 3	131 (33.5%)	120 (91.6%)	11 (8.4%)		

Source: *Research data, 2022*

b) Association between patients' study construct attributes with patient loyalty to HIV care

Health system capacity/responsiveness (p<0.0001), trust in the clinician and health system (p<0.0001), patient-provider communication (PCC0 (p<0.0001), patient-provider relational attachment (PPRA) (p<0.0001), and patient satisfaction (p<0.0001), had statistically significant (p<.05) association with patient loyalty to HIV care. Results are presented in table 4.16.

Table 4.16: Study Construct Attributes and patient loyalty to HIV care

	Patient loyalty (PL)

Variable(s)	Total No. 391	High No. 265	Low No. 126	χ^2	*p*-value
Health system Capacity				103.28	< 0.0001
High	228 (58.3%)	195 (85.5%)	33 (14.5%)		
Low	163 (41.7%)	70 (42.9%)	93 (57.1%)		
Trust (TR) in clinician and system				196.57	< 0.0001
High	217 (55.5%)	202 (93.1%)	15 (6.9%)		
Low	174 (44.5%)	63 (36.2%)	111 (63.8%)		
Patient-Provider Communication (PPC)				92.57	< 0.0001
High	232 (59.3%)	190 (81.9%)	42 (18.1%)		
Low	159 (40.7%)	75 (47.2%)	84 (52.8%)		
Patient-Provider Attachment/Bonding				110.69	< 0.0001
High	180 (46.0%)	157 (87.2%)	23 (12.8%)		
Low	211 (54.0%)	108 (51.2%)	103 (48.8%)		
Patient Satisfaction (PS)				117.25	< 0.0001
High	237 (60.6%)	198 (83.5%)	39 (16.5%)		
Low	154 (39.4%)	67 (43.5%)	87 (56.5%)		

Source: *Research data, 2022*

c) Multivariate analysis of patients' data

Table 4.17: Unadjusted and adjusted associations of patient-level characteristics and study variables with patient loyalty to HIV care

Characteristic	Unadjusted Estimates			Adjusted Estimates		
	OR[1]	95% CI[1]	*p*-value	OR[1]	95% CI[1]	*p*-value
Age						
18 -29 years	(Ref)			(Ref)		
30-39 years	0.73	(0.32, 1.59)	0.4	1.18	(0.28, 4.78)	0.80
40-49 years	1.14	(0.52, 2.44)	0.7	1.98	(0.51, 7.57)	0.30
> 50 years	2.07	(0.91, 4.60)	**0.075**	1.72	(0.44, 6.48)	0.40
Gender						
Male	(Ref)			(Ref)		
Female	1.03	(0.66, 1.60)	0.9	0.68	(0.29, 1.55)	0.40
Education						
Primary	(Ref)			(Ref)		
High school	0.45	(0.27, 0.74)	0.002	0.38	(0.15, 0.93)	0.04
Vocational	0.43	(0.22, 0.85)	0.014	1.61	(0.48, 5.46)	0.4
Graduate	0.24	(0.09, 0.69)	0.007	0.20	(0.03, 1.15)	0.07
Clinic						
Clinic 1	(Ref)			(Ref)		
Clinic 2	6.22	(3.65, 10.8)	<0.001	3.01	(1.23, 7.63)	0.017
Clinic 3	20.8	(10.5, 44.7)	<0.001	4.34	(1.14, 16.7)	0.031
Residential						
Rural	(Ref)			(Ref)		

Urban	1.36	(0.83, 2.24)	0.2	0.59	(0.23, 1.51)	0.3
Semi-urban	0.23	(0.12, 0.43)	<0.001	0.25	(0.08, 0.77)	0.017
Travel time						
< 1 hour	(Ref)			(Ref)		
2-3 hours	0.96	(0.61, 1.53)	0.9	0.64	(0.25, 1.62)	0.3
> 4 hours	1.64	(0.62, 5.13)	0.3	1.09	(0.20, 6.78)	>0.9
Visited clinician						
No	(Ref)			(Ref)		
Yes	0.10	(0.05, 0.18)	<0.001	0.33	(0.11, 0.91)	0.036
Clinic hours						
8 hours	(Ref)			(Ref)		
Less than 8 hours	0.38	(0.17, 0.85)	0.018	0.23	(0.06, 0.84)	0.030
Health system capacity						
High	(Ref)			(Ref)		
Low	0.11	(0.07, 0.18)	<0.001	0.49	(0.21, 1.14)	0.032
Trust in the clinician and health system						
High	(Ref)			(Ref)		
Low	0.04	(0.02, 0.08)	<0.001	0.09	(0.03, 0.26)	<0.001
Patient-provider communication						
High	(Ref)			(Ref)		
Low	0.20	(0.12, 0.31)	<0.001	1.26	(0.54, 3.09)	0.6
Patient-provider relational bonding						
High	(Ref)			(Ref)		
Low	0.16	(0.10, 0.26)	<0.001	2.22	(0.84, 6.18)	0.12
Patient satisfaction with clinicians and the health system						
High	(Ref)			(Ref)		
Low	0.14	(0.09, 0.23)	<0.001	0.37	(0.15, 0.87)	0.023

[1]OR = Odds Ratio

Source: *Research data, 2022*

In the adjusted model, the clinical, social-demographic, and other design covariates including patient-provider communication (PPC), were adjusted for and results indicate that patients who had a high school level of education and below (OR: 0.38; 95% CL: 0.15, 0.93), were less likely to remain loyal to HIV care compared to those with college and university levels of education. There was a similar pattern observed in patients who received their HIV care in care clinic three (OR: 3.01; 95% CL: 1.23, 7.63) and clinic two (OR: 3.01; 95% CL: 1.23, 7.63). The patients were four and three times more likely to remain loyal in HIV care compared to the patients in

care clinic one. However, patients living in a semi-urban area (OR: 0.25; 95% CL: 0.08, 0.77), were less likely to remain loyal to HIV care compared to those in other residential areas. Patients who visited their clinicians in the recent past (OR: 0.33; 95% CL: 0.11, 0.91), had decreased odds of remaining loyal in HIV care. Similarly, patients who said the clinic hours operated less than 8 hours daily (OR: 0.23; 95% CL: 0.06, 0.84), had decreased odds of remaining loyal to HIV care. Patients who had a low perception of the health system capacity perceived lower patient loyalty to HIV care (OR: 0.49, 95% CL: 0.21, 1.14).

Furthermore, patients who had lower trust in the healthcare system (OR: 0.09; 95% CL: 0.03, 0.26), were less likely to remain loyal to HIV care compared to those with higher trust. Findings showed that trust may change over time due to patient-provider interactions within the healthcare system which may affect patient loyalty to HIV care. The findings suggest that patients are very sensitive to establishing and maintaining trust when the care environment and interaction with the clinician are not optimal. Patients who had low patient-provider communication (PPC) (OR:1.26, 95% CI: 0.54, 3.09), were one time less likely to remain loyal in HIV care. This finding indicates that lower PPC among the patients decreased the intention to visit the HIV facility for care. This is a good finding for the HIV facility management to recognize that the loyalty of patients is achieved when there is good communication between the providers and patients and it is important to continuously develop the capacity of the healthcare providers to improve their communication skills when interacting with the patients.

In addition, patients who had a low patient attachment and bonding with their clinician (OR: 2.22; 95% CI: 0.84, 6.18), were two times more likely to remain loyal in HIV care compared to those with high relational bonding. This suggests that when patients have no closer relationship with providers, they are more likely to stay engaged in care. Another explanation could be that

the healthcare system does not provide a platform to form relationships and bonding between patients and providers due to the large volume of patients being seen on a single day by clinicians making the patients less focused on developing close ties and bonds.

Similarly, patients with low patient satisfaction with the clinician and the health system (OR 0.37, 95% CL: 0.15, 0.87), had decreased odds of remaining loyal to HIV care. This finding suggests that patients' experience with the elements of the care system affects their attitude and behavior to continue using the facility service. This is a critical finding that the facility management should re-evaluate their strategies for determining patient retention and go deeper to understand the personal and attitudinal aspects of the patient, for example, what they expect in the continuum of care.

4.9.5 The Mediating effect of patient satisfaction with clinician and health system on the relationship between patient trust in the clinician and health system, patient-provider communication, and patient loyalty to HIV care

To determine the mediating effect of patient satisfaction, a post-hoc analysis of the patient's data using structural equation modeling (SEM) was employed with maximum likelihood estimation using the AMOS program in SPSS (Hong et.al., 2019) The overall model fit indices showed the best fit according to the Chi-square value ($x^{2/df}$=.394, p<.001; threshold >.05) and Root Mean Square Error of Approximation (RMSEA =.000; threshold ≤.08) (Hong & Oh, 2019). In addition, the indices that compared the target model and the null model also showed acceptable scores (NFI=.994; CFI=.1.000; threshold ≥.95) based on (Hu and Bentler, 1999; Schumacker & Lomax, 2010). For the mediating effect of patient satisfaction on the relationship between patient trust in the clinician and the health system, the estimation ($X\text{-}M_1\text{-}Y$) was determined by ($a_1 \times b_1$), to assess the amount of variance by which patient loyalty is expected to change per a change of

size in M_1 due to a unit change in patient trust. The path coefficients (β=.25×.29) =.07 is statistically significant. This implies that 7% of patient satisfaction is partially accounted for as a mediating variable and when patients trust the clinician and the health system, they are more likely to be satisfied and satisfaction leads to loyalty. Similarly, the path coefficients (β=.55×.29) =.16 determined by (a_2×b_1), indicates that patient satisfaction partially mediates the relationship between patient-provider communication and patient loyalty accounted for by 16%, and therefore the null hypothesis $H0_5$ is rejected.

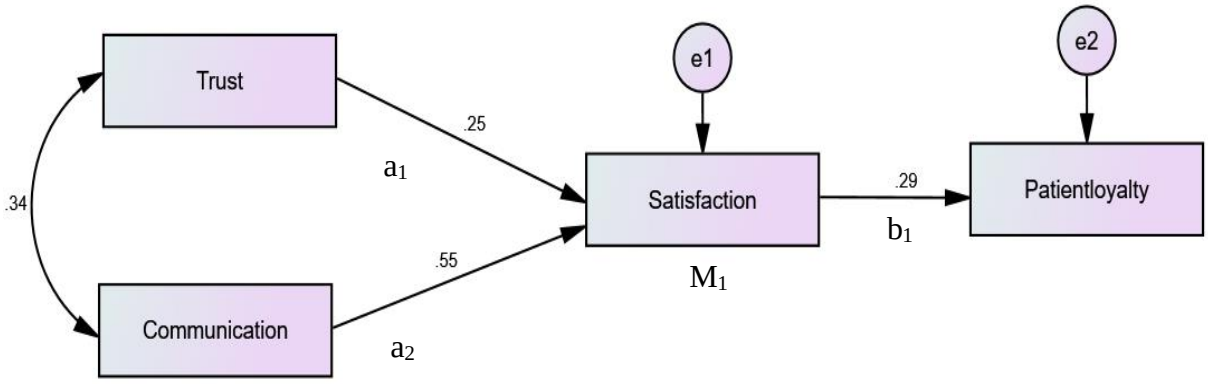

Figure 4.3: Mediating effects of patient satisfaction

Table 4.18: Path estimates for patient trust, patient communication, patient satisfaction, and patient loyalty to HIV care

Standardized regression weights	**Estimate**	**Standardized indirect effect**	**Covariate**	***p*-value**
Patient satisfaction<--- patient trust	.25	.07	.35	*p*<.001
Patient satisfaction<--- patient-provider communication	.55	.16		*p*<.001
Patient loyalty<--- patient satisfaction	.29			*p*<.001

Source: *Research data, 2022*

Results indicate a statistically significant mediation effect of patient satisfaction with the clinician and health system (PS) on the relationship between trust in the clinician and health system (TR) and patient loyalty to HIV care (β=.073; p<.05). The direct path coefficient from TR to PS was statistically significant at (β=.25, p<.001), and the path coefficient from patient satisfaction to patient loyalty to HIV care (β=.29, p<.001). Similarly, the path between patient-provider communication (PPC) and patient satisfaction (β=.55, p<.05) was statistically significant. Trust in the clinician and health system (β=.34 p<.05) was significantly correlated with patient-provider communication. The path indicating the indirect effect of PCC on patient loyalty to HIV care through patient satisfaction (β=.16, p<.05) was also statistically significant confirming the indirect effect. The results of the path analysis are illustrated in figure 4.3 and table 4.18. The study findings suggest that when patients build trust in the clinicians and the health system, they will be satisfied with the quality of care that informs trust and hence get loyal by going back to the same hospital and seeing the same clinicians for their medical needs. The study findings further demonstrate that patient satisfaction is nested in service quality and the healthcare system capacity/responsiveness which inform trust in the clinician and the health system. Moreover, the findings suggest that when patients get satisfied with their clinicians and the healthcare system, they will develop more trust which will build their confidence in using the healthcare service repeatedly.

4.9.6 The Mediating effect of health system factors on the relationship between strategic leader attributes and patient loyalty to HIV care as perceived by providers

This objective aimed to determine the mediating effects of health system capacity/responsiveness between strategic leader attributes (leader adaptive capacity and clinical leader attributes) and patient loyalty to HIV care as perceived by healthcare providers, using structural equation

modeling (SEM) with maximum likelihood estimation using the AMOS program in SSS (Hong et.al., 2019). The path model consists of structural parameters that include direct paths between leader adaptive capacity (LAC), clinical leader attributes (CLA) to health system capacity/capacity, and an indirect path between health system capacity and patient loyalty to HIV care. The model fitness indices indicate some slight variations. CMIN/DF is 4.94 which is slightly below the upper limit threshold of 5.0 SRMS, which should have been less than .08. The General Fit Index (GFI) of this study is .912, which is within the recommended level of .9. NFI was .85 and CFI was .87. These indices are slightly lower than the recommended threshold of >.95. Also, the RMSEA of the model was .292 which is greater than .05 or between .05 to .08 as the acceptable limit. Apart from these few indices showing poor fit, generally, the overall model fitness was good (Meesala & Paul, 2018).

The path diagram figure 4.4 and table 4.19 shows standardized direct and indirect effects. Results established a significant but negative direct relationship between the perceived leader adaptive capacity (β= -.35, p<.05) on healthcare system capacity. This means, that when the clinical leader has leader adaptive capacity, the health system capacity is lower but it does not affect patient loyalty to HIV care (β= .45, p<.05). Additionally, clinical leader attributes (β= .74, p<.05) are highly associated with health system capacity which in turn affects patient loyalty. Moreover, health system capacity negatively mediates the relationship between leader adaptive capacity (β= -.16, p<.05) and patient loyalty while positively mediates clinical leader attributes (β= .33, p<.05). This indicates that patient satisfaction fully mediates the relationships between perceived leader adaptive capacity and patient loyalty while partially mediates clinical leader attributes and patient loyalty to HIV care by a statistical variance of -.16% and 33% respectively. Figure 10 and table 23 present the results.

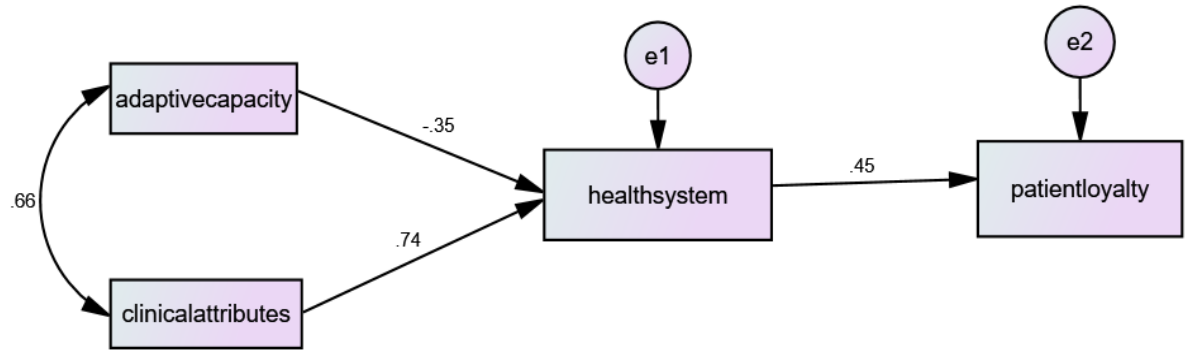

Figure 4.4: Mediating effect of health system capacity

Table 4.19: Path estimates for health system capacity/capacity and patient loyalty

Standardized regression weights	**Estimates**	**Covariate**	**Standardized indirect effects**	***p*-value**
Health system capacity<--- leader adaptive capacity	-.346	.66	-.157	*p*<.001
Health system capacity<--- clinical leader attributes	.735		.334	*p*<.001
Patient loyalty<--- health system capacity	.454			*p*<.001

Source: *Research data, 2022*

4.10 Summary of hypotheses testing

The following table 4.20 presents a summary of the hypotheses, test techniques, findings, and the decision on each of the hypotheses.

Table 4.20: Hypotheses testing summary

H	Statement	Test statistic technique	Findings	Decision
$H0_1$:	There are no significant proportions of patients with patient loyalty to HIV care in AMPATH-MTRH, Western Kenya	Descriptive statistics One-ay ANOVA	Patients and providers perceived high patient loyalty to HIV care. Patients had significant differences in patient loyalty in the clinic while providers perceived none. Patients who were serviced in clinic 3 had higher patient loyalty compared to those served in clinics 2 & 1	Null hypothesis rejected
$H0_2$:	There is no significant association between providers' perceptions of the relationship between strategic leader attributes and patient loyalty to HIV care	Associations using the Chi-square test (χ^2) Multivariate logistic regression using Odds rations, Confidence interval (OR, 95% CI)	Leader adaptive capacity & clinical leader attributes were significantly associated with patient loyalty to HIV care Providers who perceived the clinical leader with low adaptive capacity perceived lower patient loyalty to HIV care	Null hypothesis rejected
$H0_3$:	There is no significant association between health system factors and patient loyalty to HIV care	Associations using the Chi-square test (χ^2) Multivariate logistic regression using Odds rations, Confidence interval (OR, 95% CI)	Health system factors were statistically significantly associated with patient loyalty Patients who had lower trust in the clinician and health system, lower patient-provider attachment, lower patient-provider communication, and lower patient satisfaction with the clinician and health system, had lower odds of remaining loyal in HIV care	Null hypothesis rejected
$H0_4$:	There is no significant mediating effect of patient satisfaction on patient trust in clinicians and the health system, patient-provider communication, and patient loyalty relationships	Beta Coefficient and p-values in PATH analysis using SPSS AMOS	Patient satisfaction significantly mediated the relationship between patient trust and patient-provider communication with patient loyalty to HIV care	Null hypothesis rejected
$H0_5$:	There is no significant mediating effect of health system capacity on strategic leader attributes and patient loyalty relationships	Beta Coefficient and p-values in PATH analysis using SPSS AMOS	Health system factors partially mediated the relationship between strategic leader attributes and patient loyalty. For the path analysis to leader adaptive capacity, the relationship was negative and significant	Null hypothesis rejected

Source: *Research data, 2022*

4.11 Summary of Qualitative Findings

The following table presents a summary of the qualitative findings on strategic leader attributes

Table 4.21: Summary of qualitative findings

Question	Theme	Findings
What are the perceptions of healthcare providers on the strategic leader attributes for clinical leaders	Knowledge of leadership	Clinical leaders' attributes and roles include taking lead, providing direction, coordination
	Comprehension of the healthcare system	Structures, leadership, healthcare providers & integrated health services
	Attributes of strategic clinical leaders	Training and expertise • Clinical competence • Informed and knowledgeable Personality traits • Team leader • Trustworthy • Honest and integrity • Flexible and swift • Impartial and Mentor Interpersonal skills • Approachable • Good listener and understanding • Good communication skills • A good relationship, interaction, and respect Managerial traits • Good planner • Accountable • Disciplined, dedicated, and hardworking • Innovative • Problem-solver • Organized and Vocal
	Roles of strategic clinical leaders	Providing direction and guidance Define and assign roles & responsibilities Creating enabling work environment The link between management, staff, and patients Data collection, analysis, and reporting Solving problems Develop work schedules Lead in implementing new guidelines Capacity building for junior staff

Source: *Research data, 2022*

4.12 Discussion of Findings

4.12.1 Proportions of patients with patient loyalty to HIV care

Although patient loyalty has been studied extensively in the literature, there is inadequate empirical evidence of patient loyalty in HIV studies. Overall, patients and providers in AMPATH-MTRH perceived high patient loyalty (>60%) among HIV-infected patients although compared to other studies on HIV, the percentage was lower. This indicates that patients are generally loyal to HIV care and signifies more responsibility by the patient in care and the contribution of the health facility. Consistent with HIV studies, patient retention rates in HIV care at 12 and 24 months were higher and were associated with better tracing systems and enrolling patients to support groups (Matsumoto et al., 2015; Tsondai et al., 2017). Similarly, there was over 85% retention of patients in HIV care in four participating facilities in Ethiopia within 12 months of starting ARVs (Bucciardini et al., 2015).

In this study, there were significant differences in patient loyalty as perceived by patients when compared across cluster care clinics. Notably, patient loyalty was higher in clinic 3 compared to clinics 1 and 2. The significant differences could be attributed to internal factors such as the leadership of the clinician, patient-provider relationships, and/or healthcare system factors in the facility. This is a novel finding that determined the perceptions in different service units headed by a clinical leader in an HIV facility. Marketing literature acknowledges the importance of patient loyalty in service business because it determines strong and positive relationships between customers and service providers (Chang et al., 2013). On the contrary, there were no statistically significant differences in patient loyalty from the healthcare providers across the clinic clusters. This may be possible because genuine patient loyalty can be best evaluated by the patients because they are the service users. Although the providers perceived higher overall

patient loyalty, it may be linked to the frequent use of services by the patients and the perceived available statistics in the facility. A previous study found that as patients' loyalty increases, institutions become resistant to the strategies of competing companies and they can attract more patients to their institutions as a strategy for sustaining hospitals and gaining a competitive advantage (Amarat et al., 2022).

Concerning patient loyalty with patient socio-demographic characteristics, this study established that patients ≥50 years, had a primary level of education, resided in an urban setting, had visited a clinician in the recent past, did not miss their clinic visits, and was served in the clinic cluster clinic 3 had higher patient loyalty to HIV care. It is possible to say that older patients are concerned with their health and they are the most vulnerable hence they would choose to be loyal than getting susceptible to other opportunistic infections. Although in the study there was no significant association between the sex of the patient and patient loyalty, a study argued that loyalty to healthcare facilities doesn't differ for male and female patients, patients who are between 17 to 25 years old, and those between 25 to 45 years old. Some degree of loyalty can be achieved by healthcare organizations if they provide services, regardless of the type of patient and for elderly patients, loyalty can be gained through satisfaction (Herni Justiana Astuti & Nagase, 2014). In addition, older Australian patients were likely to be more satisfied and hence loyal to their general practitioner (Rundle-Thiele & Russell-Bennett, 2010). Consistently, greater adults have greater consumer experience and expertise and they may be more competent in decision-making concerning their health conditions (Yoon et al., 2009). In Kenya, a higher proportion of older adults were retained in HIV care post-ART initiation compared to younger adults (Kiplagat et al., 2018). Given that younger patients have lower patient loyalty rates, there is more need for further investigations to determine the gaps in patient loyalty.

In this study, it may be argued that patients with a primary level of education are more anxious to learn about their health conditions hence being intermittent to the facility, will position them better to manage their health conditions. Contrary to this finding, an HIV study established that patients who had post-secondary education and initiated treatment were associated with decreased risk of LTFU, whereas patients with only primary education were at a higher risk of LTFU (Charurat et al., 2010). The study findings further suggest that patients who reside in an urban setting have access to the HIV facility, are more likely to visit their clinicians, and have high chances of not missing clinical visits due to proximity to the health facility. This finding differs from previous findings in HIV that after adjusting for covariates, patients who traveled for .2hours to the clinic, were at a higher risk of non-adherence (Charurat et al., 2010). This finding is important to determine strategies and interventions for patients who reside in rural areas and with low socio-economic support to access the health facility for their HIV care. In Uganda, a community-integrated finance model for pooling wealth that is scalable, flexible, and sustainable was responsive to the shifting needs of patients and health systems and an alternative approach to healthcare financing in low-resource settings (Kinney et al., 2021). Similarly, home-based antiretroviral therapy (ART) deliveries, extending multi-month dispensing from three to six months for stable patients; leveraging the Community Drug Distribution Points (CDDPs) model for ART refill pick-ups at outreach sites in the community; increased reliance on health information systems, were strategies for dispensing ART to patients during Covid-19 lockdowns in Uganda (Zakumumpa et.al., 2021).

4.12.2 Perceptions of healthcare providers on the strategic leader attributes for clinical leaders

Strategic Clinical Leader Attributes

In this study, understanding the structures of a healthcare system and the role of clinical leadership is important in achieving HIV patient care. The definition of a health system by the healthcare providers corresponds to the elements of a health system defined by the World Health Organization (WHO) that brings multiple elements together such as healthcare workforce, healthcare financing, and governance, medical products and technologies, health service delivery, to provide service delivery (WHO, 2000). Studies argue that the leadership competencies in the health systems domain are shifting from direct patient care to the strategic level which requires an understanding of the healthcare systems to create and share an organizational vision for quality improvement of patient care (Thompson & Nelson-Marten, 2011).

In the training and expertise domain, the attributes focus on clinical service provision to HIV patients by addressing their problems. This suggests that strategic clinical leaders should have clinical competence to identify technical problems affecting patients and provide technical solutions promptly. This highlights the importance of being informed and knowledgeable in HIV clinical care. Prior research report similar findings that a clinical leader demonstrates clinical expertise in organizing the healthcare system and using the expertise to meet patient needs (Larsson & Sahlsten, 2016; Mianda & Voce, 2017; Stanley, 2016). In addition, apart from strategic decision-making, strategic leaders address conflicting strategic issues (Samimi et al., 2020), which demand technical expertise.

In the personality traits, the focus was mainly on the behavior, thoughts, and feelings of the clinical leader including instilling confidence, driving quality service, transparency, discipline, and upholding good values. Our findings found that a strategic clinical leader in an HIV system is a team leader who provides direction and guidance, suggesting the need for collaboration with other leaders and team members in providing HIV care. Consistent with this finding, successful strategic leaders depend on teams because it brings collective expertise and enhances patient care (Carroll, 2005; Mianda & Voce, 2018; NHS Leadership Academy, 2011; Shams et al., 2019). In addition, clinical leaders direct and help people (Mckimm, 2011; Stanley, 2016).

In this study, we found that good relationships in a healthcare system are built on the trustworthiness of the clinical leader to engage with the providers and patients and provide confidence during clinical interactions. Also, treating everyone equally with respect and without discrimination suggests the importance of upholding the principle of fairness to promote good interaction and harmony in the health system. Consistently, a model of youth leadership in HIV prevention in Canada established that a leader should be confident, trustworthy, willing to listen, humble ad patient (Monchalin et al., 2016). Similarly, clinical leaders should demonstrate characteristics such as trustworthiness that influence the attitudes and behaviors of others (Stanley, 2016).

Our study found that strategic clinical leaders who led with honesty and integrity gained support from team members and maintained good discipline in the management of resources suggesting that healthcare leaders should act in good faith and demonstrate responsibility in managing resources. These findings concur with previous literature which highlights the importance of a leader having integrity in their work (Carroll, 2005; NHS Leadership Academy, 2011; Nicol et

al., 2014; Rasmussen-barr et al., 2019; Stanley, 2016; Stanley, Latimer, et al., 2017b) by behaving in an open, honest, and trustworthy manner (Hargett et al., 2017).

Our study found that strategic clinical leaders are flexible to learn and adapt to new situations as well as responsive to dynamics. Previous literature concurs with our findings however, the focus is different. For instance, clinical leaders should be flexible (Mannix et al., 2013), to transition from a clinical role to executive policy decision-making and is responsive to the needs of diverse stakeholders such as the chief executive officer, chief financial officer, chief medical officer, chief nursing officer (Bahouth et al., 2013).

Our findings highlight the importance of a strategic clinical leader as a mentor to junior staff in taking lead in all tasks in the HIV facility particularly in motivating the staff to achieve their goals and tasks. This suggests the need for strong personal values to lead a group of people in a health system. This finding is consistent with previous findings which established that clinical leaders act as role models/mentors (J Mannix et al., 2013; Stanley, 2016), and they lead by example, a necessary leadership quality in healthcare (Alanazi, 2022).

On the interpersonal traits, the attributes of strategic clinical leaders appear to direct focus on the personality of the clinical leader and patient care. This is important because clinical leaders interact with patients, providers, facility management, and other stakeholders in the care system. In this study, our findings concur with previous literature that clinical leaders should be approachable, friendly, and listen to everyone (Heinen et al., 2019; Larsson & Sahlsten, 2016; Sonnenberg et al., 2018). This finding is important in creating an enabling environment with less tension for patients and providers to interact. The importance of simplicity enables clinicians to be accessible to patient and staff needs, however, a lack of approachable and effective leadership led to low staff morale, frustration, lack of commitment, and persistence of other confining and

restrictive factors (Mathole et al., 2018). Moreover, clinical leaders are approachable to all medical and nursing staff and are consultative (Bahouth et al., 2013; Larsson & Sahlsten, 2016; Stanley, 2016).

The findings emphasize the importance of active listening and understanding by the clinical leaders to address patient and staff needs which concur with previous literature (J Mannix et al., 2013) because clinical leaders are situational driven (Daly et al., 2014). Similarly, A leader should have the ability to listen and communicate effectively with staff, residents, and their families in an aged care facility (O'Toole et al., 2021), hence they should have good communication skills important during consultation rooms and providing feedback (Hargett et al., 2017; J Mannix et al., 2013; Mckimm, 2011; Stanley, 2016). Similarly, building and maintaining relationships with the leader through listening to and supporting others helps the leader to gain trust and show a sense of understanding (Hargett et al., 2017). However, the adaptive leadership framework provides evidence of how communication approaches were often mismatched with the needs of the patients in the hospital (Neglia et al., 2013).

The managerial traits identified in the study shifted focus from direct patient care to strategic leadership. In our study, the strategic clinical leaders should have good planning skills to schedule tasks and in utilize available resources suggesting the need for technical aspects in finance and management. Although this finding is not directly related to previous findings, studies in nursing found that the professional core competencies of nurse leaders were associated with good planning and implementation of training and providing technical assistance to other staff (Heinen et al., 2019). Additionally, clinicians helped patients to develop plans for achieving their treatment goals and setting directions (NHS Leadership Academy, 2011; Rasmussen-barr

et al., 2019). Furthermore, a leader should be a strategic planner, and, participative in executive policy (Sonnenberg et al., 2018).

In our study, the providers perceived the strategic clinical leaders to demonstrate responsibility in terms of patient care and management of financial resources by being accountable highlighting important values such as transparency and honesty. Previous studies found that leaders in an acute care hospital should be honest, resilient, consistent, participatory, and accountable (Steed, 2012). Similarly, clinical leaders manage services including performance, people, resources, and planning (Jonas et al., 2011).

Furthermore, strategic clinical leaders were expected to be innovative in providing suggestions and innovative solutions to a working team and patients' problems in unforeseen situations, suggesting the importance of a leader's visionary, creativity, and adaptivity in dynamic situations to create change in the healthcare system. This is also important for adaptive healthcare systems because of changing patient needs and dynamic health systems that may require innovative approaches. This is a novel finding that encourages healthcare managers to direct more focus on innovative leadership to scale up patient care and health system performance. Some aspects of innovative leadership reported in leadership studies highlight the importance of proactiveness, being dynamic, and leading the organization to another level (Alanazi, 2022; Stanley, 2016). It is important to note that these studies were not specific to innovative leadership approaches as strategic leadership aspects but generally the attributes of a clinical leader.

Previous studies have reported that the attributes of clinical leaders in contemporary nursing include problem-solving as a clinical focus aspect (Mannix et al., 2013b). Although the finding explored views of the nurses, our study found that strategic clinical leaders solve conflicts among

staff relating to work roles by identifying areas of weaknesses and ensuring positive patient perception towards HIV care.

To promote the effectiveness of service delivery in the HIV care system, the strategic clinical leaders should have organizational skills in managing time, organizing work to run smoothly in the clinic, scheduling and attending meetings, and providing timely reports. Previous studies have highlighted the clinical attributes that shape a clinical leader including organization of care to support the well-being of patients (S. Boamah, 2017; PATRICK et al., 2011), and clinicians to develop a greater understanding of the structure of the healthcare services (van Diepen et al., 2017; Warren & Carnall, 2011). Vocal clinical leaders are necessary to represent the issues of patients and staff to the relevant leadership and management of the HIV facility. This suggests the need for enthusiastic leaders to take up the issues on their own and provide total support. Whereas there is limited literature on this, previous studies acknowledge that clinical leaders are supportive(Stanley, 2016; Stanley, Blanchard, et al., 2017; Stanley, Latimer, et al., 2017b), and have interpersonal understanding (S. A. Boamah, 2019). A study suggests that clinical leaders should be enthusiastic, caring, and empathetic (Stanley, 2014).

Strategic Clinical Leader Roles

Strategic clinical leaders play important roles in the HIV care system. Our findings established that in an HIV care system, the clinical leader provides guidance and direction on what is expected of the patients and providers. This suggests that strategic clinical leaders should first understand the structure of the HIV system in terms of goals, objectives, and strategies so that they can translate them into actionable items. This finding also underscores the importance of supporting the stakeholders of the institution in realizing the goals of the organization. This finding is supported by prior research that acknowledges the importance of visionary leadership

(Jooste et al., 2017; NHS Leadership Academy, 2011; Rasmussen-barr et al., 2019), the importance of teamwork (Mianda & Voce, 2018; Nkwanyana et al., 2019), monitoring co-workers' professional practice (Larsson & Sahlsten, 2016), treating team members with respect, and facilitating a conducive work environment (Conbere & Heorhiadi, 2018; Swani & Isherwood, 2019).

The study findings highlight the importance of coordinating activities among strategic clinical leaders in the health system, which is a critical function of strategic management and it is essential in creating harmony between and within departments and sharing of knowledge and other resources. This is highlighted by previous literature as important for sharing ideas and best practices for providing quality HIV care (Larsson & Sahlsten, 2016; Sonnenberg et al., 2018). In addition, clinical nurse leaders established a collaborative atmosphere (Larsson & Sahlsten, 2016), however, poor coordination of work across cadres in primary healthcare delivery was highlighted by public health nurses (Carney, 2009), and the inability of some trained nurses to handle the supervision of other people (Conbere & Heorhiadi, 2018).

Healthcare providers perceived the strategic clinical leaders' roles as defining and assigning duties to staff in the HIV facility, highlighting the importance of responsibility and equity in providing patient care. This suggests further that the strategic leaders in HIV primary care ensure that work is carried out in a conducive work environment and there is cohesion among the staff while providing HIV care.

Our findings showed that strategic clinical leaders represent patients' and providers' issues to the facility management during departmental meetings, collect data, analyze, and provide departmental progress reports. They also link patients with other specialists in the facility. This

suggests that the health system is a typical top-down and decisions are made at the highest level. This might impact patient care negatively if some issues needed a dynamic response. This is a novel finding in this study that encourage the facility management to empower the clinical leaders in strategic decision-making regarding operational activities directed at serving HIV patients ad providers' welfare because it will boost staff morale and strengthen the healthcare system's capacity.

To achieve quality HIV patient care, strategic clinical leaders should engage in effective and excellent communication particularly during patient consultations and engaging with the healthcare providers. This suggests that the HIV facility should improve the channels of communication and make them flexible to allow easy access and exchange of information in the health system.

The providers reported accountability as a critical strategic role for the clinical leader in the HIV care system particularly being responsible for all the activities in the care unit by providing the necessary reports.

The study findings concur with previous studies that clinical leaders solve problems that exist within the healthcare system such as counseling services, patient complaints, and technical challenges that require technical solutions, by being good listeners and communicators to engage the staff and patients in addressing the issues (Agyepong, Lehmann, et al., 2017; S. Boamah, 2017, 2018; Mianda & Voce, 2017; NHS Leadership Academy, 2011; Stanley, Latimer, et al., 2017a; Swani & Isherwood, 2019).

While previous studies have reported that clinical leaders helped patients to develop plans for achieving their treatment goals and setting directions (NHS Leadership Academy, 2011; Rasmussen-barr et al., 2019), our findings differed in the type of plan of activities. The study underscores planning in terms of budgeting, prioritizing available resources, and allocation of duties to the providers, emphasizing the importance of strategic management knowledge to do forecasting activities. This, therefore, suggests that there is limited information on whether the clinical leaders also guide the patients at the primary care level, hence, there is a need to obtain patients' views on the conversations in the consultation rooms with the clinicians. While clinicians need to have a broad overview of a budget process, they are not expected to be accountants and should seek help for some financial tasks to manage a budget in a way to reduce inefficiencies and provide the greatest benefit for patients (K Oates, 2012).

In our study, although strategic clinical leaders perform leadership roles in addition to clinical functions, they also mentor other healthcare providers and fellow leaders in career development and health system improvement. This suggests the relevance of capacity-building initiatives such as mentorship programs that will improve HIV patient care service delivery and strengthen the healthcare system such as implementing new policies and guidelines, continuous medical education, training, and workshops. Our findings agree with a study that a good mentor empowered, encouraged, and inspired the novice (Slade et al., 2020).

Our study underscored the importance of organization as an aspect of strategic management and a function of clinical leaders through organizing departmental tasks, scheduling meetings, and discussing program activities. This suggests the efficiency and effectiveness of the HIV care

system in terms of performance and patient service delivery. It also emphasizes the importance of a patient database to understand their needs and the position of the health system in addressing patient issues.

4.12.3 Perceptions of healthcare providers of the relationship between strategic leader attributes and patient loyalty to HIV care

The findings of this study revealed statistically significant associations between clinical leader adaptive capacity and clinical leader attributes with patient loyalty to HIV care. In the multivariate model, healthcare providers who perceived their clinical leader to have low leader adaptive capacity perceived lower patient loyalty compared to those with a higher perception of leader adaptive capacity. In the final model, the clinical leader attributes were not significantly associated with patient loyalty to HIV care. These findings suggest although strategic leader attributes characterized by leader adaptive capacity and clinical leader attributes were statistically significantly associated with patient loyalty to HIV care, the healthcare providers perceived the clinical leader with low leader adaptive capacity influenced low patient loyalty to HIV care. This may be possible due to a lack of capacity in strategic leadership and the opportunity to exercise adaptive leadership in primary care. While healthcare systems and patient needs are dynamic, clinical leaders require more knowledge to experiment, learn and adjust to the changing situations continuously. Previous studies acknowledge that many physicians are currently in leadership positions in practice, hospitals, or health systems and they perform complex leadership roles hence leadership training at some level is necessary for them (Kelley, 2021). Similarly, clinicians must be involved in institutional leadership to ensure a healthy clinical environment and quality patient care (Jonas et al., 2011).

It is expected that clinical leaders who have leader adaptive capacity can influence other healthcare providers to support patients to adapt to their health situations and remain loyal to HIV care through the identification of problems affecting patients and using clinical expertise to provide possible solutions, which is not the case from the findings. On the contrary, previous studies found that the adaptive leadership framework provides a useful lens to explore practitioners' leadership behaviors at the point of care in helping patients manage their situations (Anderson *et al.,* 2015; Heifetz, 1994). Similarly, leadership manifests itself in the patient-therapist interaction in terms of helping the patient to develop plans for their care and help the patient to strive in achieving their goals for example leading through the treatment plan (Rasmussen-Barr *et al.,* 2018). In palliative care, adaptive leadership was useful however, there were communication challenges between the needs of the patients and the parents indicating a technical capacity gap by the clinicians to communicate effectively regarding patient care (Jr et.al., 2012; Neglia et al., 2013).

While each of the clinic clusters has a clinical leader with unique characteristics, the study findings showed that all clinical leaders had low clinical adaptive capacity. The indication of low clinical leader adaptive capacity may be associated with factors beyond the clinical leader in the health system such as limited scope in decision making regarding important health system capacity which may only be for the higher management, provider dynamics such as attitudes and behaviors. Previous findings still lack adequate data on what leadership means at the point of care using the adaptive leadership framework as a lens to explore practitioners' behaviors (Anderson *et al.,* 2015; Jr et al, 2019). Also, current leadership practices have negative consequences on staff motivation, professional practices, and most importantly patient care (Gilson & Agyepong, 2018). Similarly, there is a challenge on what to do about chronic diseases

which presents adaptive leadership challenges because healthcare institutions require innovative approaches to doing things (Connor, 2017).

4.12.4 Health system factors associated with patient loyalty to HIV care

a) Health system capacity and patient loyalty to HIV care

The study findings showed significant associations between healthcare system capacity and patient loyalty to HIV care as perceived by patients and providers. Patients who perceived low health system capacity had low patient loyalty in HIV care. Similarly, healthcare providers who perceived low health system capacity perceived patients to have low patient loyalty to HIV care. This suggests that the patients and providers consent about their health system capacity and have common factors that impede patient loyalty to HIV care. The findings of this study are consistent with previous studies arguing that health system factors such as inadequate infrastructure, and inflexibility in visit schedules influence disengagement in HIV care (Mwamba et al., 2018a). Furthermore, previous literature acknowledges health system factors such as rigid clinic policies, disrespectful treatment from providers, and stockout of supplies influence engagement in HIV care (Kruk et al., 2016; Layer et al., 2014). In Kenya, there was effective coordination in the health systems as per the WHO building blocks, however, it lacks infrastructure for service delivery, human resources for health, and geographical inequalities (Mulaki & Muchiria, 2019). This suggests the need to strengthen the healthcare systems in HIV care to provide quality and timely patient care that promotes, maintains, and, retains patients in care.

In contrast to the findings of this study, a study in Pakistan found that healthcare service quality like the physical environment, responsiveness, privacy, and safety of patients positively influenced patient loyalty (Fatima et al., 2018a). Similarly, a study in the European Union found

a positive influence of health system factors in the management of Tuberculosis (Mccollum et al., 2018).

The observation from the current study findings and existing literature is that healthcare systems vary in terms of capacity and equal responsiveness across regions because there are systems that influence patient outcomes positively while others negatively. This finding acknowledges and suggests that HIV healthcare systems should adopt more strategic approaches to improve healthcare systems performance which will improve patient loyalty to HIV care because it is a strategy for achieving organizational goals.

b) Patient trust and patient loyalty to HIV Care

The study established that lower patient trust in the healthcare system and clinicians predict low patient loyalty in HIV care. This study assessed trust in the continuum of HIV care for patients who have had interactions with clinicians and the care system. Findings showed that trust may change over time due to patient-provider interactions within the healthcare system which may affect patient loyalty to HIV care. The findings suggest that patients are very sensitive to establishing and maintaining trust when the care environment and interaction with the clinician are not optimal. Consistent with our findings, an observational study found an insignificant association between trust in the physician and the healthcare system and argue that trust may not be a major concern at baseline because it is the beginning of the continuum of care but later interactions could contribute to change in trust, however, a trusting relationship could help patients feel welcomed and cared for and reduce the perceived stigma associated with accessing HIV as well as improve patient satisfaction with care (Graham et al., 2015).

Similar findings were exhibited in HIV studies where patients had difficulties in establishing interactions with providers within the same social network due to fear of disclosure and insignificant associations of trust in the health system and linkage, ART adherence, and, retention in HIV care (Graham et al., 2015; Wachira et al., 2018). In addition, there was an insignificant association between trust in physicians and linkage to care or adherence to ARTs and when their clinical information was shared and used (Waibel *et al.*, 2018). Marketing studies also consent that without the Customer's trust, a relationship will not survive in the long term (Ramli & Sjahruddin, 2015).

Contrary to our findings, previous studies emphasize that trust is a critical element in the healthcare relationship between the customer and the healthcare provider in access and better use of health services continuously which leads to increased patient satisfaction and loyalty (Chang *et al.,* 2013). Furthermore, trust is the cornerstone of the doctor-patient relationship in the world of medicine as it determines patient decisions in choosing doctors and patients' compliance with treatments (Gu *et al.,* 2019; Platonova *et al.,* 2008b). While previous studies found that trust in the provider or the hospital happens when the provider seeks the best for the patient and will provide suitable care and treatment for the patient (Platonova et al., 2008a; Zarei et al., 2014), the stud findings suggest that patients who perceived low trust and confidence in the healthcare system and the clinician, may be associated with the organization of care in the healthcare system in terms of prompt attention to patient healthcare needs, privacy and confidentiality during examinations, availability of healthcare providers and drugs, and good basic amenities.

Low perceptions of trust in the provider and the system could be linked to providers putting their needs above the patients possibly because of personal related factors such as lack of motivation,

lack of professional development, and maybe the type of leadership within the healthcare system, hence more interventions should be directed at improving patient trust in the system and the provider. Consistent with our findings, despite patients with positive trust in the physicians remaining loyal, only 16% and 29% respectively agreed that doctors don't pay full attention to what they are trying to tell them and are careless of their medical needs (Yang & Chen, 2018). Also, qualitative research would add more value to developing an understanding of why patients had lower trust in the clinician and the care system. The study, therefore, acknowledges the gap in developing interventions to address the low patient trust in the healthcare system and physicians (graham 2015) to enhance long-term patient loyalty in HIV care.

c) Patient-provider communication and patient loyalty to HIV Care

The study established that patients who had lower patient-provider communication (PPC), were more likely to remain loyal to HIV care compared to those who had higher PPC. This finding indicates that despite lower PPC, patients still have the intention to visit the HIV facility for care. This suggests that patients have chosen to transcend the patient-provider communication challenges in the continuum of care and put more value on their clinical care. In essence, there is a slight difference between patients who had lower or higher patient-provider communication regarding loyalty to HIV care. This is a good finding for the HIV facility management to recognize that loyalty of patients is achieved over some time but also it is important to continuously develop the capacity of the healthcare providers to improve their communication skills when interacting with the patients. Contrary to the study findings, previous studies found that higher quality communication and more dialogue were associated with improved patient engagement in HIV care (Flickinger et al., 2013; Laws et al., 2014; Wachira et.al., 2014). In addition, there is a need for physicians to treat patients by recognizing patients' intentions,

thoughts, and feelings from their words and behaviors (Changjon Lee, 2020). A related study found that HIV patients who had a negative interaction with doctors or nurses in terms of poor communication by not explaining things clearly and inability to listen had poor retention in HIV care (Magnus et.al., 2013).

Generally, communication literature provides a contrasting perspective where good communication led to better health outcomes and vice versa, however, the study findings showed patients who had or perceived lower patient-provider communication, remained loyal to HIV care. this is a novel finding against the odds. On the contrary, previous studies found more dialogue about therapeutic regimen during visits with patients and providers on intervention compared to controls (Beach *et al.,* 2015), patient retention in care improved when providers treated patients with dignity and respect, listened carefully to them, and explained information for better comprehension (Flickinger *et al.,* 2013), while other patients were treated with disrespect and shouted at (Madula et al., 2018).

Also, there was a significant relationship between patient-physician communication and patient loyalty to physicians and the hospital (Unal *et al.,* 2018), and providers who encouraged open discussions took interest in patients' needs and promoted healthy engagement and patient participation in the care process (Hurley et al., 2018a), however, patients get unmotivated when their needs are perceived as unmet or misunderstood what is being communicated (Sten H. *et al.,* 2017). Moreover, there was unclear communication among providers and fear of patients asking questions in decision-making regarding the prevention of mother-to-child transmission (PMTCT) services in Tanzania (Gourlay et al., 2014).

d) Patient-provider relational attachment and patient loyalty to HIV care

The study found that patients who had low patient-provider relational attachment or bonding were two times more likely to remain loyal in HIV care compared to those with high relational bonding. This suggests that when patients have no closer relationship with providers, they are more likely to stay engaged in care. Another explanation could be that the healthcare system does not provide a platform to form relationships and bonding between patients and providers due to the large volume of patients being seen on a single day by clinicians making the patients less focused on developing close ties and bonds. Contrary to the study findings, a previous study found a related perspective that patients who agreed to remain engaged in HIV care were not necessarily compelled by the biomedical treatment they received but due to the empathetic and caring atmosphere that providers and staff created (Wood *et al.,* 2018). Conversely, patients valued more care that they received from the healthcare providers characterized by the strength of the relationship they formed during interactions, however, they asserted that weak relationships impeded engagement in HIV care (Wood et al., 2018). Similarly, understanding the emotional needs of the patients by the providers improves engagement in HIV care and increases connectedness (Hurley et al., 2018b).

The findings contrast with the concept of attachment theory in the patient-provider relationship explaining how patients get attached to their doctors for their medical needs (Cassedy *et al.,* 2015). The application of the attachment theory in health studies predicted patient satisfaction, positive word-of-mouth, and patient loyalty due to strong relational bonding (Lonial et al., 2010). Also, attachment between patients and providers happens when providers support patients and have frequent contact with them (Maunder & Hunter, 2016), however, this was not the case for the patients and providers in HIV care.

Although there is paucity in the literature on patient-provider attachment, ideally, the study findings make no difference from studies that have shown a positive impact of patient-provider attachment. If the patients were more concerned with developing attachment, probably it could affect not only their medical needs but also their emotional and mental well beings. Contrary to the study finding, previous studies on HIV found that attachment-related avoidance predicted sub-optimal ART adherence, viral failure, and low CD4 count while attachment anxiety predicted missed HIV care visits (Turan et al., 2019). On a different note, patients who had a higher patient-provider attachment were negatively associated with 30-day readmission among PLWH (Parent, et.al., 2018). This finding is critical for HIV managers and leaders to invest more in patient education and empowerment to transcend patient-provider relationship challenges which may impede HIV care.

e) Patient satisfaction and patient loyalty to HIV care

The study findings established that HIV patients who had low patient satisfaction with the facility services, the clinicians, and the healthcare system were less likely to remain loyal to HIV care. This finding suggests that patients' experience with the elements of the care system affects their attitude and behavior to continue using the facility service. This is a critical finding that the facility management should re-evaluate their strategies for determining patient retention and go deeper to understand the personal and attitudinal aspects of the patient, for example, what they expect in the continuum of care. Consistent with the study findings, previous literature found that when patients are dissatisfied, they tend to experience emotional distress which may affect their attitude towards care, and ultimately it will affect the continuity of care (Dang et al., 2017). Similarly, the relationship between satisfaction and loyalty, decreased as the length of the relationship increased (Balaji, 2015). Furthermore, patient satisfaction was a determinant of treatment uptake, adherence, and retention in HIV care, and an important health systems

outcome (Chimbindi et.al., 2014). These perspectives concur with the study findings with a possible explanation that patient experience is affected by multiple factors within the care environment over time and based on the patient experience, the patient attitude and behavior towards HIV care are affected.

Other studies established positive and negative outcomes of patient satisfaction on health outcomes for instance when patients are satisfied with the hospital, they tend to keep using medical services and maintain a relationship with providers (V. Cooper et al., 2016; Kim et al., 2017), however, the relationship between satisfaction and loyalty decreased as the length of relationship increased (Balaji, 2015). Satisfaction proves to be a strong determinant of patient loyalty and particularly in evaluating patient experience, hence a dyadic approach to patient loyalty could be meaningful in determining patient experience and satisfaction as determinants in HIV care. In HIV care, patients were satisfied with their clinic visit but there were variations in satisfaction with the administrative staff, healthcare providers' attitude, and waiting time among others (Vo et al., 2012).

4.12.5 The Mediating effect of patient satisfaction with clinician and health system on the relationship between patient trust in the clinician and health system and patient loyalty to HIV care

The study findings established a statistically significant mediation effect of patient satisfaction with the clinician and health system (PS) on the relationship between patient trust in the clinician and health system (TR) and patient loyalty to HIV care suggesting that when patients build trust in the clinicians and the health system, they will be satisfied with the quality of care that inform trust and hence get loyal by going back to the same hospital and see the same clinicians for their

medical needs. This result is consistent with previous research on patient satisfaction, for instance, patient satisfaction mediates the relationship between trust in the health system and its institutions and patient overconsumption in healthcare (Krot & Rudawska, 2021). Similarly, a study demonstrated that increased patient trust and the ability to communicate and get committed to caring, did not automatically influence patient loyalty however, a sense of patient satisfaction did so (Herni J Astuti & Nagase, 2016). In addition, patient satisfaction with the physician mediated the relationship between patient experiences of examination and word-of-mouth intentions (Akbolat et al., 2021).

The study findings demonstrate that patient satisfaction is nested in service quality and the healthcare system capacity/responsiveness which inform trust in the clinician and the health system. Consistent with previous studies, patient satisfaction mediated the relationship between Shariah amenities and patient loyalty and partially mediated physician services and patient loyalty to medical treatment (Rahman et al., 2021). Similarly, patient satisfaction fully mediated overall healthcare service quality and patient loyalty relationships (Shabbir et al., 2016). Moreover, the findings suggest that when patients get satisfied with their clinicians and the healthcare system, they will develop more trust which will build their confidence in using the healthcare service repeatedly. Previous literature found the mediating effect of patient satisfaction between the dental practice and patient loyalty in dental clinics (Siripipatthanakul & Vui, 2021).

4.12.6 The Mediating effect of patient satisfaction with the clinician and health system on the relationship between patient-provider communication and patient loyalty to HIV care

This study established the mediating effect of patient satisfaction on the relationship between patient-provider communication and patient loyalty to HIV care. The relationship was statistically significant suggesting that communication between HIV patients and healthcare providers is valuable in building loyal patients and the quality of communication strengthens the loyalty of patients in HIV care when they get satisfied with the services they receive from the clinician and the health system. Previous literature has acknowledged the role of communication in patient retention in HIV care (Flickinger et al., 2013; Wachira et.al., 2014), and patient satisfaction mediates the relationship between physician communication and patient loyalty (Unal et al., 2018), which concur with our study finding.

The findings are important in determining strategies and loyalty programs that can attract and retain more patients in HIV care since satisfaction is informed by the relationships between the patients and providers in primary care and the factors within the care environment determine patient satisfaction and loyalty to care. Consistent with this finding, previous studies established that patient-provider communication influenced patients' health-related outcomes such as emotional well-being when patients were satisfied (Jiang, 2019a). Similarly, the relationship between customer friendliness and communication, and the physical environment were fully mediated by patient satisfaction (Addo et al., 2020). Consistently, the corporate reputation of a hospital which include the communication techniques affected patient loyalty and the relationship was even better when patients were satisfied with the health services (Amarat et al.,

2022). Moreover, when patients are more involved in communication and decision-making in their medical care, they get more satisfied and hence loyal to care (Zhang et al., 2022).

4.12.7 The mediating effect of health system capacity on the relationship between strategic leader attributes and patient loyalty to HIV care

The study findings revealed that health system capacity is a significant mediating factor between perceived leader adaptive capacity and clinical leader attributes and patient loyalty to HIV care relationships. Contrary to previous studies, the study findings established that when clinical leaders are perceived to have a high leader adaptive capacity, they are unlikely to influence health system capacity or capacity, however, the relationship does not negatively influence patient loyalty. This may suggest that leading in a primary HIV care facility does not necessarily require clinical leaders to be adaptive to influence the health system performance and patient loyalty, despite the dynamic nature of the health systems, probably because, the care system structures could be organized in a manner that allows patient flow and does not require a technical capacity to address the dynamics. Contrary to the study findings, transformational leadership had a significant effect on patient falls through a supportive practice environment and job satisfaction (Alotaibi et al., 2015).

In addition, the findings found statistically significant mediating effects of health system capacity/responsiveness on the relationship between perceived clinical leader attributes and patient loyalty to HIV care. This suggests that clinical leaders' characteristics are important in driving health system performance which determines patient loyalty to HIV care. Although there is a gap in literature connecting health system capacity with leadership and patient loyalty, a few related studies have shown that working conditions in a hospital environment mediated the

relationship between management leadership and safety climate in Taiwan (Weng et al., 2017). Moreover, service quality dimensions of empathy and assurance positively influenced customer loyalty when the hospital environment was a mediating factor (Hamood & Alshehari, 2018). In Ghana, the quality of the healthcare healing environment mediated core healthcare delivery and patient satisfaction (Amankwah et al., 2019).

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the study findings, the study conclusion, study implications, recommendations, and suggestions for further research.

5.2 Summary of Findings

The first objective of the study was to determine the proportions of patients who had patient loyalty to HIV care and the study hypothesized that there were no significant proportions of patients with patient loyalty. Findings showed higher overall patient loyalty as perceived by patients (68%) and providers (64%). Similarly, there were significant differences across clinics in the HIV facility regarding patient loyalty. Patients who were served in clinic 3 had higher patient loyalty compared to those served in clinics 2 and 1.

The second objective explored the perceptions of healthcare providers on the strategic leader attributes for clinical leaders and the question was what strategic leader attributes should clinicians at HIV primary care have. The study identified the attributes including team leadership, having clinical expertise or competence, should be knowledgeable, being approachable to the patients and staff, and other stakeholders, being a problem solver, being an effective communicator, being innovative, trustworthy, honest, and having integrity, and being accountable.

The third objective determined the perceptions of healthcare providers of the relationship between strategic leader attributes and patient loyalty to HIV care and the study hypothesized insignificant effects. The findings revealed statistically significant associations between clinical leader adaptive capacity and clinical leader attributes with patient loyalty to HIV care (p<.001). In the multivariate model, healthcare providers who perceived their clinical leader to have low leader adaptive capacity (OR: 0.09; 95% CL: 0.01, 0.67) perceived lower patient loyalty compared to those with a higher perception of leader adaptive capacity. The odds of patient loyalty in healthcare providers with a low perception of health system capacity (OR: 0.09; 95% CL: 0.01, 0.7) were lower than the odds of those who had higher perceptions of the healthcare system capacity.

The fourth objective determined the relationship between health system factors and patient loyalty to HIV care with a null hypothesis predicting an insignificant relationship. Findings indicated that a lower patient trust system (OR: 0.09; 95% CL: 0.03, 0.26), in the healthcare system and clinicians predict low patient loyalty in HIV care. Also, patients with low patient satisfaction (OR 0.37, 95% CL: 0.15, 0.87), had decreased odds of remaining loyal to HIV care.

The fifth objective assessed the mediating effect of patient satisfaction on the relationship between patient trust in clinicians and the health system and patient-provider communication with a null hypothesis predicting an insignificant relationship. Results indicate the direct path from patient trust to patient satisfaction was statistically significant at (β=.25, p<.001), the path between patient-provider communication (PPC) and patient satisfaction (β=.55, p<.05), and the path coefficient from patient satisfaction to patient loyalty to HIV care (β=.29, p<.001) was statistically significant.

The sixth objective assessed the mediating effects of health system factors on the relationship between strategic leader attributes and patient loyalty as perceived by healthcare providers. The hypothesis predicted a statistically insignificant relationship. Findings established a significant but negative direct relationship between the perceived leader adaptive capacity (β= -.35, p<.05) on healthcare system responsiveness. Additionally, results showed that clinical leader attributes (β= .74, p<.05) are highly associated with health system capacity, and the care system (β= .45, p<.05) is related to patient loyalty to HIV care. moreover, health system capacity negatively mediates the relationship between leader adaptive capacity (β= -.16, p<.05) and patient loyalty to HIV care while positively mediates clinical leader attributes (β= .33, p<.05).

5.3 Strengths and Limitations

The strength of this study was based on the mixed methods parallel design that employed both explanatory and exploratory research designs right from the design, data collection, analysis, and interpretation. However, the qualitative perspectives were only obtained from the healthcare providers to comprehend the strategic leader attributes for clinical leaders, limiting important views from the patients and other stakeholders. Again, there may be a danger of response bias given that the providers were rating their immediate leader at the point of care and some may have overrated or underrated their leader. Also, the results may not be extrapolated to other populations within HIV care because leadership and healthcare system factors vary across facilities and this study only studied the HIV unit in the MTRH-AMPATH facility.

Moreover, the study sampled active patients and lost to follow-up (LTFU) together because it was difficult to identify the LTFUs using the retention/outreach staff due to massive layoffs in the facility at the time of data collection. Although the study questionnaire classified patients

who had missed their appointments more than three (3) times as per the recommended clinic visit as LTFUs, this may not represent the actual picture of those who were lost in care and it was also difficult to get the accurate numbers because some patients feared, to tell the truth, hence the data was not differentiated.

Furthermore, the questionnaire statements were self-reported which are subject to recall bias particularly the patient judging their overtime interaction with the healthcare system and the healthcare providers. In most instances, people tend to remember negative experiences. To counter this, the patients were asked to rate this based on their previous visits to minimize recall bias. The study utilized behavioral patient loyalty measures which may be limited in determining actual retention in HIV care compared to the actual clinical measures such as determining the viral load's suppression, and CD4 counts among others.

The other limitation was the sample of the healthcare providers was (n=47) which could bias the results in terms of statistical power however, the study recommends testing the relationship by increasing the level of significance from .05 to .10 to reduce the bias.

5.4 Conclusion

In AMPATH-MTRH, a higher proportion of patients are loyal to HIV care although there were significant differences between and within clinics. For example, patient loyalty was higher among patients being served in clinic three compared to those being served in clinics one and two. However, providers perceived no significant differences within and between clinics.

Patient demographic characteristics determine patient loyalty to HIV care and particularly patients who are >50 years, those who had a primary level of education, resided in an urban setting, had visited a clinician in the recent past, did not miss their clinic visits, and were served in clinic 3 had higher patient loyalty to HIV care. Efforts should be directed at patients in the other categories.

Also, the strategic leader attributes that clinical leaders in AMPATH-MTRH were identified with was categorized into training and expertise, personality traits, interpersonal skills, and managerial traits while the strategic clinical leaders' roles included strategic, managerial, supervisory, and research.

In addition, clinical leaders who were perceived to have low leader adaptive capacity and low clinical leader attributes had a lower influence on patient loyalty among HIV-infected patients. More efforts should be scaled up to improve the leadership capabilities of clinical leaders.

The study further concludes that the health system factors influence patient loyalty to HIV care in terms of patient trust, communication, establishing bonds, and satisfaction. In addition, patient satisfaction and health system capacity were intervening variables between trust, communication leadership, and patient loyalty to HIV care.

5.5 Study Contribution

First, the study contributes to practice. The findings provide valuable insights for healthcare practitioners, healthcare leaders, and managers. A leader who is equipped with strategic leadership attributes influences the healthcare system environment and patient loyalty to HIV

care. Therefore, there is a need to develop the strategic leadership capacity for clinical leaders in primary care to back up their clinical expertise. Besides, findings provide a holistic picture of the need to cascade strategic leadership downward the primary care because it drives excellent performance and quality patient care.

Secondly, the findings contribute to theory by adding knowledge to strategic management and healthcare literature particularly the utility of the Adaptive Leadership Framework (ALF) for business in HIV care extends the literature on leadership in the healthcare context, particularly from a resource-limited setting such as Kenya. Also, the contribution of the complexity theory and the Theory of Planned Behavior in supporting the study to understand the dynamics that emerge within a healthcare system environment in the HIV context.

Thirdly, the study contributes to methodology by the use of a mixed-methods design that employs both qualitative and quantitative designs. The method employs a robust technique in sampling, data collection, and analysis. Similarly, the use of logistic regression analysis and structural equation modeling using the SPSS-AMOS to determine predictors of patient loyalty and mediating relationships between health system factors and patient loyalty.

Fourth, the study informs strategies and policies for addressing dynamics in the healthcare system environment and establishes ways of improving health system performance to ensure good patient-provider relationships and provide strategic and efficient patient care that is satisfactory to enhance patient loyalty to HIV care.

5.6 Recommendations

Based on the study findings, HIV leadership, and management of the AMPATH should develop innovative approaches to encourage, maintain and sustain patients who are loyal to HIV care. In addition, the institution should build the capacity of clinicians and other healthcare providers in

the area of strategic leadership to be dynamic and adaptive in providing HIV care. Likewise, AMPATH should cascade strategic leadership at all levels of management so that clinical leaders in primary care will respond to the dynamics of the healthcare system and patient needs by making strategic decisions and developing innovative approaches to health system improvements in terms of infrastructure and responsiveness and consider policy reviews that will make HIV care more strategic in the global platform.

Similarly, AMPATH should develop policies and guidelines to address patients and health system dynamics to ensure patients continue to use the hospital services and adapt to new healthcare changes and providers. The findings also provide a basis for the AMPATH-MTRH hospital to partner with relevant government and academic institutions to develop a leadership curriculum for clinical leaders in healthcare service.

Similarly, AMPATH should consider directing more research and efforts on the existing gaps/differences across the clinic to address patient and provider dynamics that affect patient loyalty.

Additionally, other studies can utilize the adaptive leadership framework in other healthcare settings to assess other healthcare aspects and consider insightful investigation using qualitative methods to understand healthcare system aspects in a holistic view.

5.7 Suggestions for further research

The study recommends the following areas for future research

- Explore the use of the Adaptive Leadership Framework to understand the adaptive and technical challenges of HIV-infected patients.
- Explore the role of healthcare systems in supporting patients and providers in the HIV context to become adaptive to HIV dynamics
- Assess patient loyalty from the strategic management perspective using strategic leadership and management measures

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APPENDICES

Appendix I: Introduction Letter

Dear Participant,

I am Felishana Cherop, a D.Phil student at Moi University, School of Business and Economics. I am collecting data on "Strategic Clinical Leader Attributes and Healthcare System Factors associated with Patient Loyalty to HIV care in AMPATH-MTRH, Eldoret, Kenya". I kindly invite you to fill out this self-administered or guided questionnaire either in English or Swahili which will take at most 1 hour. Your responses will contribute to a better understanding of the healthcare system environment where the leader, patients, and providers are situated and interact in service provision to achieve patient loyalty to HIV care.

This study has obtained the required ethical permits. You will be given a clear explanation of the study and upon your willingness to participate, you sign a written consent (appendix 3).

Feel free to contact me for questions & clarifications at +254720296334 and/or fcherop@gmail.com

Yours Faithfully
Felishana Cherop
School of Business and Economics
Moi University

Appendix II: Recruitment Eligibility Questionnaire for Patients

Date of Birth?

- O 17 and below, [do not enroll]
- O 18 and older, [proceed to the next question]

Currently on ART medication

- O No [do not enroll]
- O Yes [proceed to the next question]

Time on ART (in months) _____

Date of enrolment to ART medication
[provide a value]

History of non-adherence

- O No [enroll]
- O Yes [enroll]

Any form of severe sickness

- O No [enroll]
- O Yes [do not enroll]

Number of times interacting with a provider

- O once [do not enroll]
- O More than 2 times [proceed to the next question]

Willingness to participate in the study

- O No [do not enroll]
- O Yes [enroll]

Translated Eligibility Criteria Questionnaire

(Dodoso la uwezo wa kuajiri)

(Tarehe ya Kuzaliwa)

- O Chini ya miaka 17 [usiandikishe]
- O Zaidi ya miaka18, [endelea kwa swali linalofuata]

(Upo kwenye ART sasa?)

- O La [usiandikishe]
- O Ndio [endelea kwa swali linalofuata]

(Muda kwenye ART – kwa miezi) _____

Tarehe ya kujiandikisha kwa dawa ya ART (toa dhamana) _____

(Historia ya kutofuata ART)

- O La [Andikisha]
- O Ndio [Andikisha]

(aina yoyote ya ugonjwa kali)

- O La [Andikisha]
- O Ndio [Usiandikishe]

(idadi ya mara umeshirikiana na mtoaji huduma)

- O Moja [usiandikishe]
- O Zaidi ya mara mbili [endelea kwa swali linalofuata]

(kujitolea kushirikia kwenye utafiti huu)

- O La [usiandikishe]
- O Ndio [andikisha]

Appendix III: Participant-Informed Consent

WRITTEN CONSENT FORM

Introduction and Purpose
You are invited to participate in a research study on "Strategic Clinical Leader Attributes and Health System Factors associated with Patient Loyalty to HIV care in AMPATH-MTRH Eldoret, Kenya. The purpose of the study is to determine the relationships among these variables and how they influence patient loyalty to HIV care.

Study Procedures and Risks
You will be required to fill in a questionnaire that will be self-administered or guided. It will take at most one hour. The primary risk is a possible loss of confidentiality and to guard against this, all personal information will be kept confidential and your identity will be held in confidence in reports in which the study may be published and databases in which results may be stored.

Benefits and Alternatives of Taking Part in This Study
There are no anticipated direct benefits from participating in this study and the alternative is to choose not to participate.

Costs and Payment
You will not be responsible for any study-specific costs nor receive payment for taking part in this study, however, you will get a reimbursement of KSh.300 to cover transport.

Contact for Inquiries
For further questions, please contact the researcher: Felishana Cherop, +254720296334, fcherop@gmail.com and the IREC, Human research subjects' office, P O Box 3-30100, Eldoret, irec@mtrh.or.ke

Voluntary Participation
Taking part in this study is voluntary and your decision on whether or not to participate will not affect your current or future relations with the investigator(s).

Signed:

Participant	Date
_____	_____
_____	_____
Researcher	Date

Translated Consent Form

RIDHAA

Utangulizin na Kusudi

Unaalikwa kushiriki kwenye utafiti juu ya "Jukumu la kiongozi wa afya, mfumo wa huduma ya afya, uhusiano wa wagonjwa na wahudumu wa afya, kuridhika na uaminifu wa wagonjwa kwa afya ya HIV" katika kituo cha afya cha HIV, hapa Eldoret. Madhumuni ya utafiti ni kuelewa jinsi vigezo hivi vinavyoshirikiana.

Taratibu na hatari za kushiriki
Utahitajika kujaza dodoso mwenyewe ama kuongozwa, itakayochukua saa moja. Hatari ya kimsingi ni upotezaji wa usiri na kulinda dhidhi ya hii, ni habari zote za kibinafsi zitatunzwa kwa siri na na kitambulisho chako kitawekwa usiri kwenye ripoti ambazo utafiti unaweza kuchapisha na kwenye hifadhi yoyote.

Faida na njia mbadala za kushiriki katika utafiti huu
Hakuna faida za moja kwa moja zinazotarajiwa kutoka kwa kushiriki katika utafiti huuna mbadala ni kuchagua kutoshiriki.

Gharama na malipo
Hutawajibika kwa gharama yoyote maalum ya kushiriki kwenye utafiti huu, hata hivyo, utapewa malipo ya shilingi mia tatu (300/=) ya kurejesha kwa usafiri

Njia ya mawasiliano
Kwa maswali zaidi, tafadhali wasiliana na mtafiti: Felishana Cherop, +254720296334, fcherop@gmail.com na IREC, ofisi ya masomo ya wanadamu, sanduku la posta 3-30100, Eldoret, irec@mtrh.or.ke

Ushiriki wa Hiari
Kushiriki kwenye utafiti huu ni kwa hiari na uamuzi wako. Kutoshiriki kwako hautaathiri uhusiano wako wa sasa au wa baadaye na mchunguzi.

Sahini:

Mshiriki _____ Tarehe _____

Mtafiti _____ Tarehe _____

Appendix IV: Patient Participant Questionnaire

Section A: Patient Socio-Demographic Characteristics

Date of Birth (DOB): [*provide a value*]

Marital Status
① Married
② Single
③Single but in a relationship
④ Divorced/Separated

Level of Education:
① Primary education or lower
② High school education
③ College or vocational education
④ Graduate

Gender: ① Female ② Male

Income: [*provide a text*]

Number of People in your household : [*provide a text*]

Residential Area

① Rural ② Urban ③ Semi-urban

Travel time to the clinic

① < 1 hour ② 2-3 hours ③ > 4 hours

Clinic operating hours during the week
① Eight hours ② Less than 8 hours

Have you visited your primary care clinician in the recent past?
① No ② Yes

Required number of visits in the last 6-12 months (provide a figure) _____

Number of missed HIV primary care visits in the last 6-12 months
① 0 (none) ② 1-2 times ③ > 3 times

Indicate the provider you have seen in the recent past
O Clinician O Nurse O Pharmacist O Phlebotomist O Other [please indicate____

Indicate the provider you have interacted most with, in the recent past
O Clinician O Nurse O Pharmacist O Phlebotomist O Other [please indicate____

k

Section B: Study Variables

Please tick your agreement with the following statements. Your responses will help us understand patient loyalty to HIV care. (**SD – strongly disagree, A-agree, N-neutral, A-Agree, and SA-strongly agree)**

Patient Loyalty	**SD**	**A**	**N**	**A**	**SA**
I commit to return to this hospital again for care	①	②	③	④	⑤
I have confidence in the quality of care provided in this hospital	①	②	③	④	⑤
I feel happy about the treatment at this hospital	①	②	③	④	⑤
I refuse to choose another hospital for care other than this	①	②	③	④	⑤
I will encourage others (friends and relatives) to attend this hospital	①	②	③	④	⑤

The questions below relate to the healthcare system and your responses will help us understand how the factors influence patient loyalty to HIV care. Please tick where applicable on the statements

Health System Capacity	**SD**	**A**	**N**	**A**	**SA**
In this healthcare system, the leader ensures;					
Proper organization of care	①	②	③	④	⑤
I get prompt attention to my healthcare needs	①	②	③	④	⑤
I talk to the providers in private and confidential rooms	①	②	③	④	⑤
I get privacy during my physical examination and treatment	①	②	③	④	⑤
There are adequate waiting spaces and examination rooms for patients	①	②	③	④	⑤
Healthcare providers are available in the health facility	①	②	③	④	⑤
I spend shorter time seeing a clinician	①	②	③	④	⑤
The health facility opens on time	①	②	③	④	⑤
There is the availability of drugs in the health facility	①	②	③	④	⑤
The basic amenities such as the cleanliness of toilets are of quality	①	②	③	④	⑤
Trust in the clinician	**SD**	**A**	**N**	**A**	**SA**
The clinician;					
Always provide accurate and up-to-date medical information	①	②	③	④	⑤
Makes excellent medical judgment on my behalf	①	②	③	④	⑤
Provide all the treatment options available for my condition	①	②	③	④	⑤
Puts patient medical needs above all other considerations	①	②	③	④	⑤
I have no worries about putting their lives in the hands of the doctors	①	②	③	④	⑤
Sometimes care more about what is convenient for them than about my medical needs	①	②	③	④	⑤
I sometimes worry that providers may not keep the information discussed privately	①	②	③	④	⑤
Trust in the Healthcare System;					
I trust the healthcare system of this hospital	①	②	③	④	⑤
I trust this healthcare system to give the best possible care	①	②	③	④	⑤
I have confidence in this healthcare system's ability to care for my health	①	②	③	④	⑤

Patient-Provider Communication ***The provider;***	**SD**	**A**	**N**	**A**	**SA**
Greets me in a way that makes me feel comfortable	①	②	③	④	⑤
Gives a chance to ask all my health-related questions and respond to them	①	②	③	④	⑤
Involves me in decisions about my healthcare as much as I want	①	②	③	④	⑤
Explains things in a way I can understand	①	②	③	④	⑤
Spends enough time with me	①	②	③	④	⑤
Helps me to deal with feelings of doubt about my health	①	②	③	④	⑤
Encourages me to express my thoughts concerning my health problems	①	②	③	④	⑤
Checks to see if the treatment plan(s) are acceptable to me	①	②	③	④	⑤
Patient-Provider Relational Attachment	**SD**	**A**	**N**	**A**	**SA**
I can depend on and trust my healthcare provider	①	②	③	④	⑤
I get enough emotional support from my provider even when am upset	①	②	③	④	⑤
My provider is sensitive to all my needs	①	②	③	④	⑤
I feel safe with my provider	①	②	③	④	⑤
When I am with my provider, I feel that I am his/her highest priority	①	②	③	④	⑤
I wish I could see my provider more often	①	②	③	④	⑤
Sometimes I am afraid if I don't please my provider she/he will not treat me as well	①	②	③	④	⑤
I am cautious of what I tell my provider so that he/she doesn't reject me	①	②	③	④	⑤
I am comfortable without a close personal relationship with my provider	①	②	③	④	⑤
I would rather not see this provider but I have no choice	①	②	③	④	⑤
Patient satisfaction (PS)	**SD**	**A**	**N**	**A**	**SA**
HIV services are easily accessible to me	①	②	③	④	⑤
I receive quality HIV care services	①	②	③	④	⑤
Confidentiality and privacy are observed during the consultation	①	②	③	④	⑤
I have excellent experience with this hospital	①	②	③	④	⑤
I am always satisfied with this hospital	①	②	③	④	⑤
This hospital always comes to my expectations	①	②	③	④	⑤
I have good interaction with the providers	①	②	③	④	⑤
Providers in this hospital treat me with respect	①	②	③	④	⑤
Providers give timely responses to my questions and requests	①	②	③	④	⑤
Providers are highly professional and competent in their work	①	②	③	④	⑤

The patient Participant Translated Questionnaire into Kiswahili

Sehemu A: Patient Demographic Variables (Demogafia ya wagonjwa)

Tarehe ya kuzaliwa _____

Hali ya ndoa
① Ndoa ② Moja ③ Moja lakini kwenye uhusiano ④ Talaka
Kiwango cha elimu
① Msingi au chini ② Sekondari ③ College or vocational education ④ Chuo kikuu
Jinsia: ① Kike ② Kiume

Mapato: [_____]

Idadi ya watu nyumbani : [_____]

Eneo la makazi

① vijijini ② Mijini ③ Nusu-Mijini
Muda wa kusafiri had kituo cha afya

① chini ya saa moja ② kati ya masaa 2-3 ③ Zaidi ya masaa 4

Saa za kliniki za kufanya kazi wakati wa wiki
O Masaa nane O Zaidi ya masaa nane

Je, umemtembelea daktari ya huduma katika siku za hivi karibuni?
O La O Ndio

Idadi ya ziara inayohitajika kutembelea hospitali katika miezi 6=12 iliyopita (toa takwimu)_____

Idadi ya ziara ya kutembelea kwenye HIV katika miezi 6-12 iliyopita

O 0 (hakuja) O Mara 1-2 O Zaidi ya mara 3
Onesha mtoaji huduma ambaye umemwona katika siku za hivi karibuni

O Daktari O Muugusi O Mfamasia O Mdunga shindani O Mwingine (onyesha) ____

Onesha mtoaji huduma ambaye umeshirikiana naye sana katika siku za hivi karibuni

O Daktari O Muugusi O Mfamasia O Mdunga shindani O Mwingine (onyesha) ____

Sehemu B: Study Variables

Kulingana na mtoaji huduma umeshirikiana naye Zaidi, tafadhali jibu makubaliano yako na taarifa zifuatazo

Katika sehemu hii, majibu yako yatatusaidia kuelewa uaminifu wa mgonjwa kwa utunzaji wa HIV. Tafadhali jibu maswali yafuatayo kwa kukea alama pale inapofaa kwako (SK-sikubaliani sana, S-Sikubali, L-labda, N- nakubali, NS- nakubali sana)

Uaminifu wa Subira wa Mgonjwa	**SK**	**S**	**L**	**N**	**NS**
Najitolea kurudi tena hospitali hii kwa utunzaji	①	②	③	④	⑤
Ninajiamini na ubora wa huduma inayotolewa katika hospitali hii	①	②	③	④	⑤
Ninahisi kufurahi na matibabu ya hospitali hii	①	②	③	④	⑤
Ninakataa kuchagua hospitali nyingine kwa huduma nyingine Zaidi ya hii	①	②	③	④	⑤
Nitawahimiza wengine (marafiki na jamaa) kuhudhuria hospitali hii	①	②	③	④	⑤

Sehemu ifuatayo ina maswali juu ya kiongozi mkakati wa kliniki katika mfumo wa utunzaji wa afya. Tafadhali jibu pale inapotumika kwenye makubaliano yako au kutokubaliana kwako (SK-sikubaliani sana, S-Sikubali, L-labda, N- nakubali, NS- nakubali sana)

Uwezo wa Kiongozi ***Kiongozi mkakati wa kliniki,***	**SK**	**S**	**L**	**N**	**NS**
Anachunguza na kubaini shida zinazotukumba na hutusaidia kupata suluhisho zinazowezekana	①	②	③	④	⑤
Uhakikisha tunasimamia hali zetu za huduma za afya	①	②	③	④	⑤
Hujengea imani na wagonjwa pamoja na watoa huduma na Kukuza uhusiano mzuri	①	②	③	④	⑤
Huunda mazingira ambayo tunaweza kutumia kujifunza vitu vipya	①	②	③	④	⑤
Anawasiliana vyema nasi kupitia kusikiliza kwa dhati	①	②	③	④	⑤
Husikiza maoni yetu na kuhakikishia tunathaminiwa na kuheshimiwa	①	②	③	④	⑤
Hutafuta njia za kututia moyo kuona kuwa tunafanikiwa	①	②	③	④	⑤
Sifa za kiongozi wa kliniki ***Kiongozi mkakati wa kliniki,***	**SK**	**S**	**L**	**N**	**NS**
Ana maarifa na ujuzi katika kutoa mwelekeo na mwongozo katika mfumo wa utunzaji wa afya	①	②	③	④	⑤
Huandaa mfumo wa utunzaji wa afya ili kuhakikisha kuwa mambo hufanywa haraka katika njia ya uaminifu	①	②	③	④	⑤
Anachukua hatua kuboresha utendaji wa mfumo wa huduma ya afya	①	②	③	④	⑤
Hujenga mazingira yenye afya na mahali pa kazi	①	②	③	④	⑤
Anatumia maarifa ya kliniki na uzoefu wa kukidhi mahitaji ya wagonjwa	①	②	③	④	⑤
Anaratibu au kutoa mwongozo wa utunzaji ili kusaidia afya na ustawi	①	②	③	④	⑤

wa wagonjwa

Hutuhimiza kujiamini ili kutoa huduma bora ya wagonjwa	①	②	③	④	⑤
Hushirikiana na wengine ili kuleta faida zaidi	①	②	③	④	⑤
Hutoa maoni mazuri	①	②	③	④	⑤
Hudumisha maadili bora kazini	①	②	③	④	⑤

Maswali yafuatayo yanahusiana na mfumo wa huduma ya afya na majibu yako yatatusaidia kuelewa jinsi sababu zinavyoathiri uaminifu wa wagonjwa kwa utunzaji wa HIV. Tafadhali jibu inapotumika kwenye taarifa zifuatazo (SK-sikubaliani sana, S-Sikubali, L-labda, N- nakubali, NS- nakubali sana)

Mazingira ya mfumo wa huduma ya afya ***Katika mfumo huu wa huduma ya afya, kiongozi anahakikisha;***	**SK**	**S**	**L**	**N**	**NS**
Kuna mwongozo bora la utunzaji	①	②	③	④	⑤
Nashugulikiwa haraka kwa mahitaji yangu ya afya	①	②	③	④	⑤
Ninazungumza na watoa huduma katika vyumba vya kibinafsi na vya siri	①	②	③	④	⑤
Napata usiri wakati ninapochunguzwa kwa matibabu	①	②	③	④	⑤
Kuna nafasi za kutosha za kusubiri na vyumba vya uchunguzi wa wagonjwa	①	②	③	④	⑤
Watoa huduma wa afya wanapatikana katika kituo cha afya	①	②	③	④	⑤
Natumia nyakati fupi kumwona daktari	①	②	③	④	⑤
Kituo cha afya kinafunguliwa kwa wakati	①	②	③	④	⑤
Dawa inapatikana kwenye kituo cha afya	①	②	③	④	⑤
Huduma kama vile usafi wa vyoo ni bora	①	②	③	④	⑤

Sehemu ifuatayo ina maswali juu ya mienendo ya uhusiano. Tafadhali jibu pale inapobidi na kiasi gani unakubaliana na taarifa (SK-sikubaliani sana, S-Sikubali, L-labda, N- nakubali, NS-nakubali sana)

Uaminifu kwa mhudumu wa afya (daktari) ***Daktari;***	**SK**	**S**	**L**	**N**	**NS**
Anatoa habari kamili na za kisasa za matibabu	①	②	③	④	⑤
Hufanya uamuzi bora wa matibabu kwa niaba yangu	①	②	③	④	⑤
Hutoa chaguzi zote za matibabu zinazopatikana kwa hali yangu	①	②	③	④	⑤
Anaweka mahitaji ya matibabu ya mgonjwa juu ya maazingatia mengine yote	①	②	③	④	⑤
Sina wasiwasi wowote kwa kuweka maisha yangu mikononi mwa madaktari	①	②	③	④	⑤
Wakati mwingine hujali zaidi juu ya kile kinachowafaa kuliko mahitaji yangu ya matibabu	①	②	③	④	⑤
Wakati mwingine nina wasiwasi kuwa watoa huduma wawaweza kosa kutunza habari inayojadiliwa kibinafsi	①	②	③	④	⑤
Uaminifu katika mfumo wa huduma ya afya	**SK**	**S**	**L**	**N**	**NS**
Ninaamini mfumo wa utunzaji wa afya wa hospitali hii	①	②	③	④	⑤

Ninaamini mfumo huu wa huduma ya afya kutoa huduma bora zaidi	①	②	③	④	⑤
Ninajiamini kwenye mfumo huu wa utunzaji wa afya kujali afya yangu	①	②	③	④	⑤
Mawasiliano kati ya mgonjwa na mhudumu wa afya	**SK**	**S**	**L**	**N**	**NS**
Mhudumu wa afya ;					
Hunisalimia kwa njia inayonifanya niwe na raha	①	②	③	④	⑤
Hunipa nafasi ya kuuliza maswali yote yanayohusiana na afya yangu	①	②	③	④	⑤
Hunihuzisha kwenye maamusi juu ya utunzaji wangu wa afya kadri ninavyotaka	①	②	③	④	⑤
Anafafanua mambo kwa njia ninayoweza kuelewa	①	②	③	④	⑤
Hunipa wakati wa kutosha	①	②	③	④	⑤
Hunisaidia kushugulikia hisia za kutokuwa na hakika juu ya afya yangu	①	②	③	④	⑤
Hunitia moyo kueleza mawazo yangu kuhusu shida zangu za kiafya	①	②	③	④	⑤
Huakikisha kama ninakubaliana na mipango yangu ya matibabu	①	②	③	④	⑤
Uhusiano kati ya Mgonjwa na Mhudumu wa afya	**SK**	**S**	**L**	**N**	**NS**
Ninaweza kutegemea na kumwamini mhudumu wangu wangu wa afya	①	②	③	④	⑤
Napata msaada wa kimoyo wa kutosha kwa mhudumu wangu hata ninapokasirika	①	②	③	④	⑤
	①	②	③	④	⑤
Mhudumu wangu wa afya ni nyeti kwa mahitaji yangu yote	①	②	③	④	⑤
Ninahisi salama na mhudumu wangu wa afya	①	②	③	④	⑤
Ninapokuwa na mhudumu wa afya, nahisi kuwa mimi ndiye kipao mbele chake cha chuu	①	②	③	④	⑤
Natamani kumwona mhudumu wangu wa afya mara nyingi zaidi	①	②	③	④	⑤
Wakati mwingine ninaogopa ikiwa sitafurahisha mhudumu wangu, anaweza kosa kunihudumia	①	②	③	④	⑤
Nina uangalifu kwa kile ninachomwambia mhudumu wangu ndio asinikatae	①	②	③	④	⑤
Nahisi vizuri bila uhusiano wa karibu na mhudumu wa afya	①	②	③	④	⑤
Sitaki kumwona mhudumu wangu wa afya lakini sina chaguo	①	②	③	④	⑤

Appendix V: Health Care Provider (HCP) Questionnaire

Section A: Provider Demographic Variables

Age (years) [*provide a value*]

Gender ① Female ② Male

Income: [*provide a value*]

Education ① College ② Undergraduate ③ Post-graduate

Total working time in HIV care (Experience in HIV care)

① < 3 years ② 4-7 years ③ > 7 years

Formal education on leadership
① Yes ② No
Formal education on clinical leadership
① Yes ② No
Profession
① Clinician ② Nurse ③ Other (indicate) _____

Working Unit
① Clinical ② Nursing ③ Other (indicate) _____

Receive performance-based incentives
① Yes ② No

Recognized & appreciated for good work/achieving targets
① Yes ② No

Deliver care in a healthy work environment
① Yes ② No
Implement work protocols successfully
① Yes ② No
Professional development since working in the HIV unit
① Yes ② No
Interaction with patients
① Yes ② No
Good interaction with colleagues
① Yes ② No
Sharing of roles with colleagues
① Yes ② No

Section B: Study Variables

In this section, your responses will help us understand your perception of patient loyalty to HIV care. Please answer the following questions by ticking where it applies to you (**SD – strongly disagree, A-agree, N-neutral, A-Agree, and SA-strongly agree)**

Patient Loyalty	**SD**	**A**	**N**	**A**	**SA**
Patients commit to return to this hospital again for the care	①	②	③	④	⑤
Patients have confidence in the quality of care provided in this hospital	①	②	③	④	⑤
Patients feel happy with the treatment at this hospital	①	②	③	④	⑤
Patients refuse to choose another hospital for care other than this	①	②	③	④	⑤
Patients encourage others (friends and relatives) to attend this hospital	①	②	③	④	⑤

The following section contains questions about a strategic clinical leader in a healthcare system. Please tick where applicable on your agreement or disagreement

Leader Adaptive Capacity ***The Clinical Leader;***	**SD**	**A**	**N**	**A**	**SA**
Examines and identifies problems affecting us and helps us to come up with possible solutions	①	②	③	④	⑤
Ensures that patients take control of their healthcare situations	①	②	③	④	⑤
Builds trust with the patients and providers and promotes good relationships	①	②	③	④	⑤
Creates an environment where we can spend time learning new things	①	②	③	④	⑤
Communicates well with us through active listening	①	②	③	④	⑤
Listens to our views and assures we are valued and respected					
Finds ways to encourage us to see that we achieve success	①	②	③	④	⑤
Clinical Leader Attributes ***The Clinical Leader;***	**SD**	**A**	**N**	**A**	**SA**
Has knowledge and skills in providing direction and guidance in the healthcare system	①	②	③	④	⑤
Organizes the healthcare system to ensure things are done quickly and in an honest manner	①	②	③	④	⑤
Takes action to improve healthcare system performance	①	②	③	④	⑤
Builds healthy environments and workplaces	①	②	③	④	⑤
Uses clinical knowledge and experience to meet the needs of the patients	①	②	③	④	⑤
Coordinates care to support the health and well-being of patients	①	②	③	④	⑤
Inspires confidence in others to provide good patient care and better services	①	②	③	④	⑤
Collaborates with others to bring added benefits	①	②	③	④	⑤
Provides positive feedback	①	②	③	④	⑤
Maintains professional ethics and values at work	①	②	③	④	⑤

The questions below relate to the healthcare system and your responses will help us understand how the factors influence patient loyalty to HIV care. Please tick where applicable on the statements

Health System capacity ***In this healthcare system, the clinical leader ensures;***	**SD**	**A**	**N**	**A**	**SA**
Proper organization of care	①	②	③	④	⑤
Patients get prompt attention to their healthcare needs	①	②	③	④	⑤
Patients talk to the providers in private and confidential rooms	①	②	③	④	⑤
There is privacy during patient physical examination and treatment	①	②	③	④	⑤
There are adequate waiting spaces and examination rooms for patients	①	②	③	④	⑤
Healthcare providers are available in the health facility	①	②	③	④	⑤
Patients spend shorter time seeing a clinician	①	②	③	④	⑤
The health facility opens on time	①	②	③	④	⑤
There is the availability of drugs in the health facility	①	②	③	④	⑤
The basic amenities such as the cleanliness of toilets are of quality	①	②	③	④	⑤

Appendix VI: Interview Guide for Health Care Providers

Focus Area/Domains	Examples of questions and probes
Study Participant and Introduction	Welcome Description of the study and interview process
Strategic leader attributes and the healthcare system	In your own words, describe what you know about leadership and the healthcare system Tell me about your interaction with a leader and the healthcare system What do you perceive as the attributes of a strategic clinical leader? How do these attributes influence the healthcare system environment?
Importance of strategic leadership in a healthcare system	In your own words, can you describe the role of a clinical leader in a healthcare system How well do you think the leader of this healthcare system coordinates care?
Healthcare system leadership challenges	At the moment, what do you think are the challenges related to leadership and the healthcare system? Where do these challenges emerge from? What are the possible consequences to patient care and the entire healthcare system
Changing healthcare system leadership	How can healthcare system leadership be made more strategic to address patient care and system improvement

Appendix VI: Research Permits

IREC Approval

INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE (IREC)

MOI TEACHING AND REFERRAL HOSPITAL
P.O. BOX 3
ELDORET
Tel: 33471//2/3

MOI UNIVERSITY
COLLEGE OF HEALTH SCIENCES
P.O. BOX 4606
ELDORET
Tel: 33471/2/3

Reference: IREC/2019/251
Approval Number: 0003485

5th December, 2019

INSTITUTIONAL RESEARCH & ETHICS COMMITTEE
05 DEC 2019
APPROVED
P. O. Box 4606-30100 ELDORET

Ms. Felishana Jepkosgei Cherop,
Moi University,
School of Business and Economics,
P.O. Box 3900-30100,
ELDORET-KENYA.

Dear Ms. Cherop,

STRATEGIC LEADERSHIP, HEALTHCARE SYSTEM ENVIRONMENT AND PATIENT LOYALTY TO HIV CARE IN A HIV CARE FACILITY IN ELDORET, KENYA. A MEDIATION MODEL

This is to inform you that ***MU/MTRH-IREC*** has reviewed and approved your above research proposal. Your application approval number is ***FAN: 0003485*** The approval period is **5th December, *2019 – 4th December, 2020.***

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 ***MU/MTRH-IREC***.
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 ***MU/MTRH-IREC*** within 72 hours of notification.
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to ***MU/MTRH-IREC*** 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 ***MU/MTRH-IREC.***

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

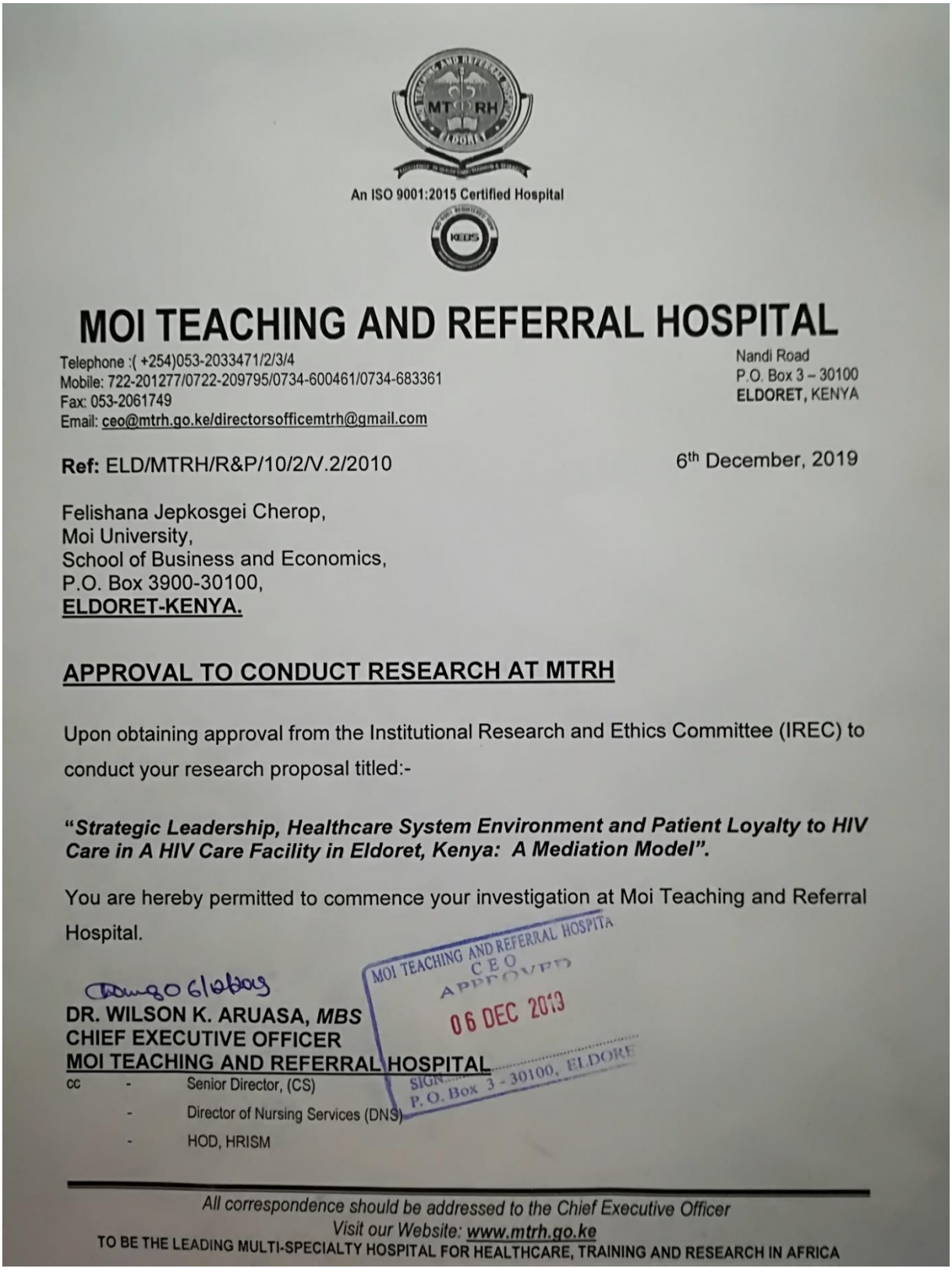
Sincerely,

FOR

PROF. E. WERE
CHAIRMAN
INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE

cc CEO - MTRH Dean - SOP Dean - SOM
Principal - CHS Dean - SON Dean - SOD

MTRH Approval



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MOI TEACHING AND REFERRAL HOSPITAL

Telephone :(+254)053-2033471/2/3/4
Mobile: 722-201277/0722-209795/0734-600461/0734-683361
Fax: 053-2061749
Email: ceo@mtrh.go.ke/directorsofficemtrh@gmail.com

Nandi Road
P.O. Box 3 – 30100
ELDORET, KENYA

Ref: ELD/MTRH/R&P/10/2/V.2/2010

6th December, 2019

Felishana Jepkosgei Cherop,
Moi University,
School of Business and Economics,
P.O. Box 3900-30100,
ELDORET-KENYA.

APPROVAL TO CONDUCT RESEARCH AT MTRH

Upon obtaining approval from the Institutional Research and Ethics Committee (IREC) to conduct your research proposal titled:-

"Strategic Leadership, Healthcare System Environment and Patient Loyalty to HIV Care in A HIV Care Facility in Eldoret, Kenya: A Mediation Model".

You are hereby permitted to commence your investigation at Moi Teaching and Referral Hospital.

MOI TEACHING AND REFERRAL HOSPITAL
CEO
APPROVED
06 DEC 2019
SIGN.....
P. O. Box 3 - 30100, ELDORET

DR. WILSON K. ARUASA, *MBS*
CHIEF EXECUTIVE OFFICER
MOI TEACHING AND REFERRAL HOSPITAL

cc - Senior Director, (CS)
- Director of Nursing Services (DNS)
- HOD, HRISM

All correspondence should be addressed to the Chief Executive Officer
Visit our Website: www.mtrh.go.ke
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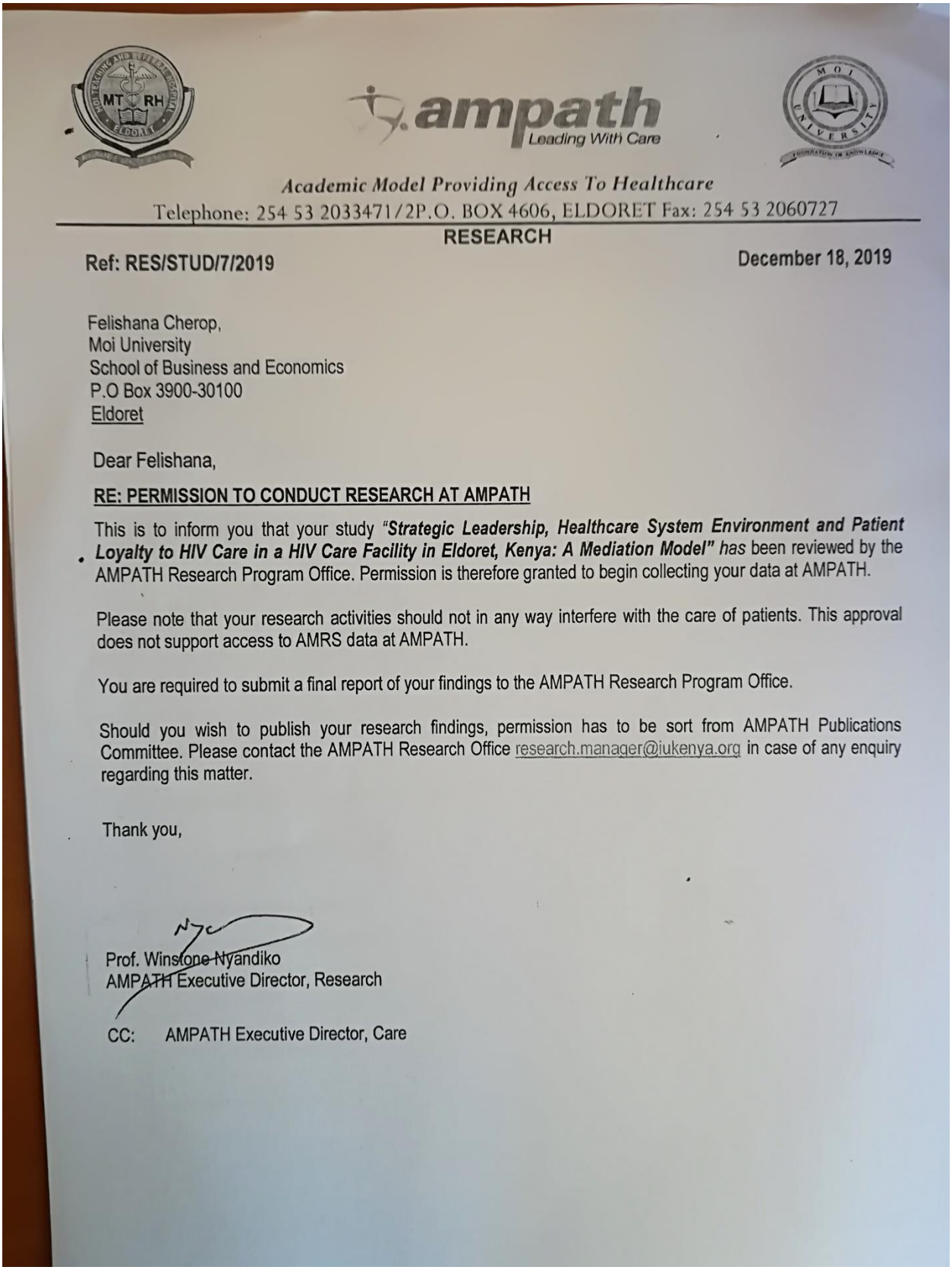
AMPATH Approval



ampath
Leading With Care

Academic Model Providing Access To Healthcare

Telephone: 254 53 2033471/2P.O. BOX 4606, ELDORET Fax: 254 53 2060727

RESEARCH

Ref: RES/STUD/7/2019 **December 18, 2019**

Felishana Cherop,
Moi University
School of Business and Economics
P.O Box 3900-30100
Eldoret

Dear Felishana,

RE: PERMISSION TO CONDUCT RESEARCH AT AMPATH

This is to inform you that your study *"**Strategic Leadership, Healthcare System Environment and Patient Loyalty to HIV Care in a HIV Care Facility in Eldoret, Kenya: A Mediation Model"** has* been reviewed by the AMPATH Research Program Office. Permission is therefore granted to begin collecting your data at AMPATH.

Please note that your research activities should not in any way interfere with the care of patients. This approval does not support access to AMRS data at AMPATH.

You are required to submit a final report of your findings to the AMPATH Research Program Office.

Should you wish to publish your research findings, permission has to be sort from AMPATH Publications Committee. Please contact the AMPATH Research Office research.manager@iukenya.org in case of any enquiry regarding this matter.

Thank you,

Prof. Winstone Nyandiko
AMPATH Executive Director, Research

CC: AMPATH Executive Director, Care

NACOSTI Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **743190**

Date of Issue: **03/February/2020**

RESEARCH LICENSE

This is to Certify that Ms.. Felishana Cherop of Moi University, has been licensed to conduct research in Uasin-Gishu on the topic: Strategic Leadership, Healthcare System Environment, and Patient Loyalty to HIV Care in a HIV Care Facility in Eldoret Kenya: A Mediation Model for the period ending : 03/February/2021.

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1. The License is valid for the proposed research, location and specified period
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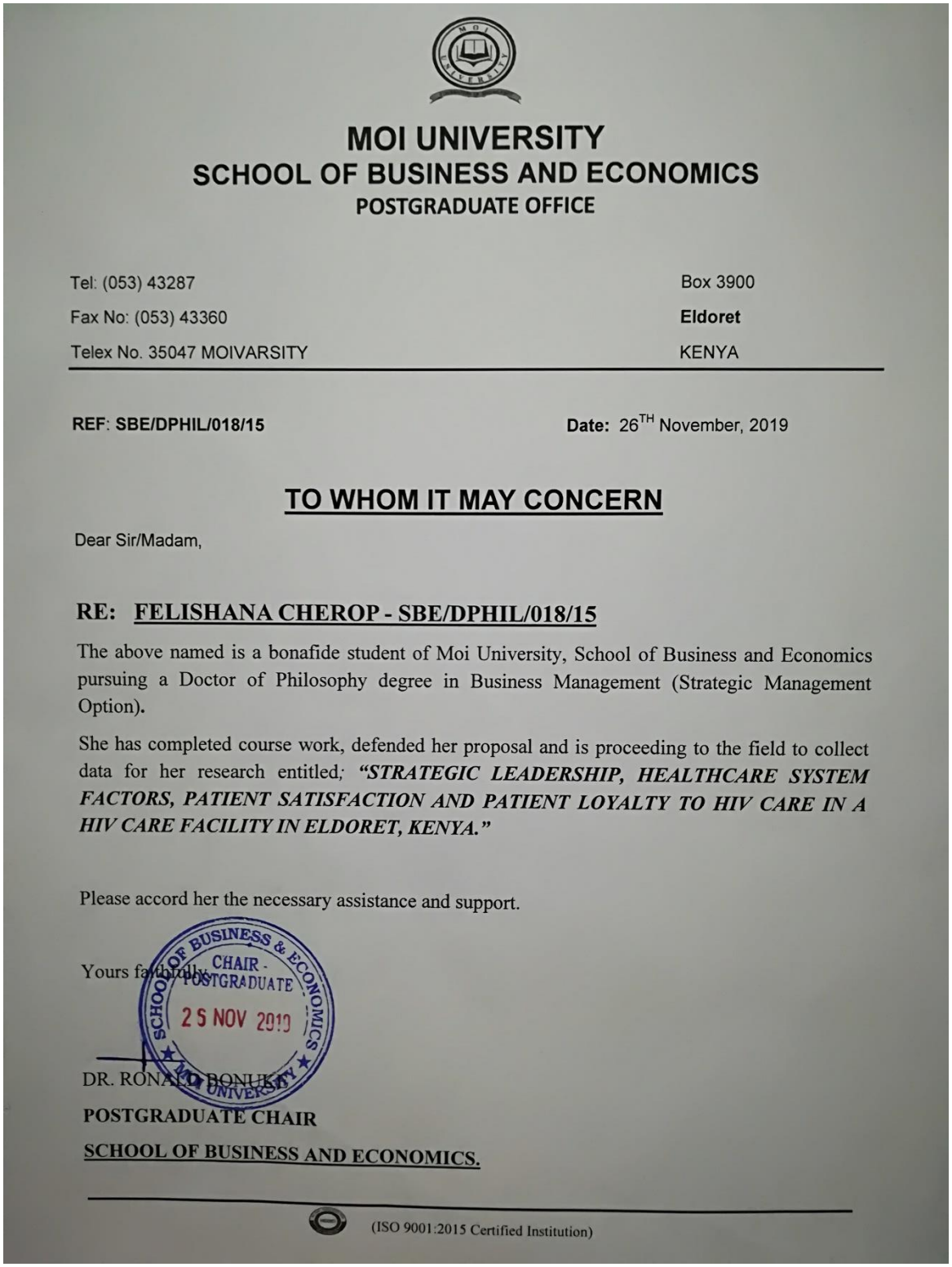
Moi University Approval



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Eldoret
KENYA

REF: SBE/DPHIL/018/15

Date: 26TH November, 2019

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: FELISHANA CHEROP - SBE/DPHIL/018/15

The above named is a bonafide student of Moi University, School of Business and Economics pursuing a Doctor of Philosophy degree in Business Management (Strategic Management Option).

She has completed course work, defended her proposal and is proceeding to the field to collect data for her research entitled; ***"STRATEGIC LEADERSHIP, HEALTHCARE SYSTEM FACTORS, PATIENT SATISFACTION AND PATIENT LOYALTY TO HIV CARE IN A HIV CARE FACILITY IN ELDORET, KENYA."***

Please accord her the necessary assistance and support.

Yours faithfully,

SCHOOL OF BUSINESS & ECONOMICS
CHAIR - POSTGRADUATE
25 NOV 2019
MOI UNIVERSITY

DR. RONALD BONUKE
POSTGRADUATE CHAIR
SCHOOL OF BUSINESS AND ECONOMICS.

(ISO 9001:2015 Certified Institution)

Appendix VIII: MTRH-AMPATH Site

Appendix IX: Field Work and Supervisorial Visits Pictorials

Principal Investigator (right) with Research Assistant verifying questionnaires (left)

Research Assistants counterchecking questionnaires

Research assistant's interaction with Academic Supervisor (standing) during a field visit