OPTIMIZING PRAGMATIC STRATEGIC MANAGEMENT PRACTICES TOAUGMENTACTIVE TUBERCULOSIS CASE FINDING WITHINHEALTH FACILITIES IN NAIROBI COUNTY, KENYA

BY

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DECLARATION

By Student:

I declare that this is my original work and it has not been presented for examination.

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DEDICATION

I Dedicated this thesis to my parents: my father, Rosphat A. Likeya, and my mother, Mary Khatenje, with deep love and gratitude.

ABSTRACT

Strategic management is essential for achieving organizational objectives; however, its application in healthcare—particularly in tuberculosis (TB) control—remains limited. The strategic management practices are known to positively correlate organizations growth and they include strategy formulation, goal establishment, financial ratio examination, Total Quality Management, social capital cultivation, and enhancing entrepreneurial orientation. The Porter Diamond Theory of National Advantage, developed to explain the competitive advantage that nations or regions may possess based on specific domestic factors. Infectious diseases are caused by pathogens and include TB, malaria, HIV/AIDS, and influenza. TB continues to pose a major global health threat, responsible for approximately one million deaths annually. Despite Kenya's significant investments in active TB case finding, 40% of cases remain undetected, with Nairobi County alone contributing over 14% of the country's annual TB notifications. This study addresses the research gap by assessing how optimizing pragmatic strategic management practices can improve active TB case finding within health facilities in Nairobi County. Specifically, the study sought to: (1) establish the implementation rate of strategic management practices; (2) model the strategic management practices coefficient matrix; (3) measure the capacity of health facility staff in implementing strategic management practices; and (4) determine the challenges and significance associated with optimizing strategic management practices in active TB case finding within healthcare facilities in Nairobi County. Guided by the Porter Diamond Theory and grounded in pragmatic philosophy, the study adopted a mixed-methods design. Data were collected from 220 of 239 TB treatment facilities (92.1%) and 406 clinic respondents (84.9%) between April and June 2024 through structured questionnaires and four focus group discussions conducted. The implementation period assessed was January 2020 to December 2023. The reliability coefficient of the instrument was 0.794, with goal establishment demonstrating strong sampling adequacy (KMO = 0.745). Findings indicate a low implementation rate of strategic management practices, yet these practices significantly predicted TB case finding outcomes ($\beta = .574$). Sensitization and availability of strategic plans were significantly associated with case finding success ($\chi^2 = 49.771$, $p < .001$). Although infrastructure was generally rated highly, specific areas such as screening spaces were inadequate. Frequent capacity building showed a significant positive relationship with case finding ($\chi^2 = 11.223$, $p = 0.0003$), while training duration showed no such association. Strategic practices correlated positively with firm strategy and structure ($r = .356$, $p < .001$), and logistic regression revealed that strategic management practices predictors were associated with a 25% to 84% likelihood increase in case detection. Key challenges included inadequate staffing, logistical barriers, financial impropriety and equipment maintenance issues. The study recommends optimizing strategic planning, enhancing community engagement, increasing innovation, and ensuring sustainability through resource mobilization. It also proposes adapting the Porter Diamond Theory with locally grounded frameworks that incorporate health systems thinking and governance tools. The study contributes significant empirical evidence on the role of strategic management practices in improving TB case detection and informs policy and practice in public health strategy design

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LIST OF ABBREVIATION AND ACRONYMS

ACF	Active Case finding for TB
CDC	Centre for Disease Control
CHS	Centre for Health Solutions Kenya
CNR	Case Notification Rate
CNR	Case Notification Rate
COVID-19	Corona Virus Disease 2019
DSTB	Drug susceptible tuberculosis
FGD	Focus Group Discussion
IHME	Institute for Health Metrics and Evaluation
KII	Key Informant Interview
KNBS	Kenya National Bureau of Statistics
KNSP	Kenya National Strategic Plan for TB
NTLD-P	National TB and Leprosy Disease Program
RBT	The Resource-based theory
SDG	Standard Development Goals
SWOT	Strengths Weaknesses Opportunities and Threats
TB	Tuberculosis
TB ARC II	Tuberculosis Accelerated Response and Care II
TQM	Total Quality Management
USAID	United States Agency for International Development
WHO	World Health Organization

OPERATIONAL DEFINITION OF TERMS

Active case finding: A strategy employed in public health to proactively identify individuals who may have active tuberculosis (TB) but are not yet diagnosed and ensuring start of TB treatment.

Effectiveness: Ability to infuse strategic management principles in active TB case finding.

Missed/Missed TB case: A patient with TB who visits a health facility and is not diagnosed with TB.

Strategic management approaches: various methodologies and frameworks that organizations employ to develop and implement effective strategies for achieving their long-term goals and objectives.

Strategic management practices: Involves the actual methods, activities, and processes that organizations employ to develop, implement, and monitor their strategies.

Tuberculosis Active Case finding: a strategy used to identify individuals who have active tuberculosis disease but have not yet been diagnosed or treated.

Strategic analysis: A systematic approach to understanding where an organization stands, what external and internal factors influence its performance, and how it can position itself for long-term success

Tuberculosis Case: A person who has been diagnosed with tuberculosis disease.

Strategic Management practices of TB case finding: Defined as the actual methods, activities, and processes that are used in identify individuals who may have active tuberculosis

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CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Strategic management is a process that involves formulating and implementing an organization's vision, mission, and objectives and includes making decisions on resource allocation to achieve the set expectations with appropriate strategies (David, 2011; Rasouli et al., 2020). Strategic management calls for the analysis of both the internal and external environments of an organization and it enables the organization to adapt to the changes that affect its operations (Andrei et al., 2011). While concerned with long-term planning, strategic management provides the overall direction of the organization (Jin, Zhouying; Bai, 2011; Schmuck, 2022). In addition, it helps to identify strengths, weaknesses, opportunities, and threats. Therefore, strategic management is inevitably a key management tool (Gupta, 2020) and plays an important role in the success of an organization (Durmaz & Dusun, 2016) and the ability to review and direct an organization to the desired goal (Amason, 2011) while supporting the creation of a shared sense of identity (Puertas et al., 2020).

1.1.1 Strategic Management Practices

Strategic management practices include strategy formulation, goal establishment, financial ratio examination, Total Quality Management (TQM), social capital cultivation, and enhancing Entrepreneurial orientation (Singh et al., 2021a; Williams et al., 2020).Strategic management practices are known to have a positive correlation between strategy formulation and the growth of organizations particularly Small and Medium Enterprises (SMEs) (Addae-Korankye & Aryee, 2021) and have a significant influence on the sales volume, break-even point (BEP) attainment, and profits (Omsa, 2017).

Strategy formulation involves defining an organization's direction and making decisions on how the resources are allocated. It involves setting goals, identifying opportunities and threats in the external environment, assessing internal strengths, weaknesses, and developing plans to achieve competitive advantage (Belyh, 2020; Singh et al., 2021; Williams et al., 2020).*Goal establishment*, is the process of setting the basic missions and long-term goals of an organization. It involves defining specific, measurable, and time-bound objectives that an organization aims to achieve in order to fulfill its long-term vision and mission(Fuad et al., 2021; Pisareva, 2021)

Financial ratio examination involves the quick and efficient interpretation of routine financial statements (Choate, 1974). The process is important since it directly influences decisions regarding profitability, guiding strategies that enhance overall performance and ensure sustainable growth (Chinedu Innocent et al., 2013; Supit & Koapaha, 2023) . *Total Quality Management (TQM)* is a management approach aimed at continuously improving all aspects of an organization's processes, products, and services to enhance customer satisfaction. The process has been shown to significantly impact perceived service quality and customer satisfaction, particularly in service-oriented sectors like healthcare. (Mohsen Alawag et al., 2023; Pambreni et al., 2019). *Fostering social capital* involves the process of building and enhancing networks, relationships, trust, and cooperation among individuals or groups within a community, organization, or society. It involves sharing project vision information with beneficiaries and involving them in decision-making processes to further support and develop social capital (Mishchuk et al., 2022; Taruvinga et al., 2017). *Entrepreneurial orientation (EO)*refers to the strategic mindset that organizations adopt to identify and capitalize on new opportunities in competitive and uncertain environments. It involves the firm's inclination to commit resources to ventures with uncertain outcomes, balancing potential high rewards with the possibility of significant losses(Anwar et al., 2022)

The effectiveness of the current strategic management practices acknowledges administrative support and institutional investment as a strength (Carlucci et al., 2015). The limitations stem from insufficient human resources, inadequate compensation, lacking technical guidance, minimal supervision, and restricted equipment availability. The challenges primarily involve costs, limited transportation access, cultural norms, and language barriers. Additional hurdles pertain to overarching strategic management and cross-sectoral contextual factors, such as low educational levels, gender disparities, and inadequate transport and communication infrastructure (Sychareun et al., 2013).

Successful implementation of strategic management is a multifaceted process that involves assessing the execution of strategies along with conducting market research, SWOT analysis, and forecasting. It also requires thorough budgeting, the recruitment, training, and motivation of skilled personnel. Adopting a comprehensive approach to strategy formulation and implementation involves engaging everyone in the organization to contribute effectively (Addae-Korankye & Aryee, 2021; Kabeyi, 2019; Mišanková & Kočišová, 2014; Muminović et al., 2020). For the advantages of strategic management practices to manifest in

performance, organizations must effectively execute and assess the formulated strategies (Ekon & Isayas, 2022).

1.1.2 Strategic Management Theories

Contemporary Strategic management theories are frameworks and models that provide insights and guidance for organizations to formulate, implement, and evaluate their strategies effectively (Bao, 2015; Rosenberg Hansen & Ferlie, 2016). Strategic management theories are systems of ideas intended to detail the origin, evolution, principles, and applications of strategic management. Strategic management theories include Health Systems Strengthening Theory, Resource Based Theory, Behavioral Theory, Porter Diamond theory among others

*Health Systems Strengthening Theory*is a theory that guides how health interventions are applied aimed at improving the performance, resilience, and sustainability of health systems. At its core, the theory emphasizes strengthening the six World Health Organization (WHO) building blocks of health systems (World Health Organization, 2007)**.**

*Resource Based Theory*makes emphasis on how a firms creates value through the effective management of resources. The theory makes emphasis that a firm's internal resources and capabilities are the primary sources of sustainable competitive advantage and superior performance (Barney, 1991; Manori P. Kovilage et al., 2022; Peterhaf, 1994)

Porter diamond theory: The Porter Diamond, formally known as the Porter Diamond Theory of National Advantage, is a strategic model developed to explain the competitive advantage that nations or regions may possess based on specific domestic factors(James & Kvilhaug, 2022). The Porter Diamond theory provides a framework to analyze competitive advantage and inform strategic decision-making within an organization, formulating competitive strategies, optimizing value chains, geographical expansion, and navigating regulatory environments by aligning strategic decisions with the determinants of competitive advantage (Bakan & Doğan, 2012; James & Kvilhaug, 2022) The theory makes emphasis on the interconnectedness of various factors that influence a firm's competitiveness in its industry or market. The theory indicates Factor Conditions which encompass both tangible and intangible resources required for competing in specific industries. Demand Conditions, on the other hand, entail local customers' expectations and preferences, driving institutions to innovate in order to meet the demand for goods and services.

Infectious diseases: *Infectious Diseases* are diseases that are caused by pathogens and they include Tuberculosis, Malaria, HIV/AIDS and Influenza. This diseases are known to spread directly or indirectly from one person to the other or from animals and the environment to humans (Alharbi, 2019; Dong et al., 2020; Fauci et al., 2005).

1.1.3Tuberculosis Burden

Tuberculosis (TB) remains one of the most prevalent infections worldwide, causing substantial illness and death (Deutsch-Feldman et al., 2021; World Health Organization, 2018). In 2019, the World Health Organization estimated that there were 10 million TB cases and 1.2 million related deaths. Despite extensive global efforts to combat TB, approximately 3.6 million individuals with TB are not identified by health systems each year and thus do not receive the necessary treatment (Centre for Disease Control , 2015). The End TB Strategy highlights the critical need for robust government commitment and strategic management in controlling TB. (Creswell et al., 2013).

The risk of getting TB is associated with younger age, HIV infection, elderly age, having contact with a person who is infected with TB and living in poor household condition and among health care workers (Loh et al., 2023; Shiferaw et al., 2019; Siddalingaiah et al., 2023)

In 2022, TB was the second leading cause of death after (COVID 19) from a single infectious agent in the African region, with around 2.5 million people falling ill and 424,000 losing their lives. This accounted for an estimated 23% of global TB cases and 33% of TB-related deaths. The situation is exacerbated by the high prevalence of HIV in Sub-Saharan Africa, where about one-third of the population faces a much greater risk of developing active TB if immunologically weakened by HIV infection. HIV-positive individuals are particularly vulnerable to TB, either when newly infected or reinfected with Mycobacterium tuberculosis. Over the past decade, TB cases have increased fivefold or more in countries in eastern and southern Africa most affected by HIV (Dye et al., 1999; Mbanya & K., 2014; World Health Organization, 2020).

Globally, Kenya is ranked among the 30 high TB burden countries, with significant challenges from multidrug-resistant TB and TB/HIV co-infection. These 30 countries are categorized on collectively account for 86-90% of the global burden of TB, TB/HIV, and drug-resistant TB, respectively. In 2019, Kenya had over 140,000 TB cases with 72,943 notified among whom Nairobi and Kiambu counties reported the highest numbers. During the

year, Kenya's TB death rate was estimated at 6.3%(National TB and Leprosy Disease Program, 2021). Urban areas like Nairobi have the highest TB burden, contributing significantly to national case numbers (NTLD-P Ministry of Health Kenya, 2019; Enos et al., 2018). The Kenya Country TB prevalence report (2016) indicates that TB in the country is higher than had been estimated with about half of those who fall ill with TB annually being *missed* (Enos et al., 2018).

According to the National TB and Leprosy Program, Kenya (NTLDP) 2019 report, 140,000 people fell ill with TB however, the country notified only 84,000 with an estimated 56,000 (40%) people not diagnosed. The report indicates that Nairobi County is the highest contributor to TB notification in Kenya contributing to over 10% of cases notified annually (Ministry of Health Kenya, 2019) however, an estimated 40%of the target population are missed annually and therefore likely to spread the disease (Arulchelvan & Elangovan, 2017; Centre for Disease Control, 2022; Musuka et al., 2018). The 2021 Kenya NTLDP - TB situation report indicates that Nairobi County is also ranked among the 10 high TB burden counties in the country however, in terms of TB performance, the county was ranked number 41 out of 47 an indication of poor performance on TB case finding (National TB and Leprosy Disease Program, 2021).

In Kenya, ten out of 47 counties contributed for 76% of the notified TB cases to the national grid with Nairobi County contributing 15% of all cases among them are Kisumu, Kilifi, Mombasa and Nairobi county (Martinus Willem Borgdorff (Republic of Kenya), 2018)

1.1.4 Active TB Case Finding

Active TB case finding is the systematic process of identifying individuals with suspected active TB within a specified target group. This approach uses rapid tests, examinations, or other diagnostic procedures to quickly detect cases. It plays a critical role in TB control efforts by ensuring that potential cases are identified and treated early, especially in high-risk populations. As a key component of the End TB Strategy, systematic screening for active TB offers significant public health benefits. Unlike passive case detection, where individuals self-report symptoms, this strategy requires healthcare systems to actively seek out and screen individuals at risk, helping to curb the spread of TB by identifying cases that might otherwise go undetected.

Active TB case finding faces several challenges among them diagnosis of Extra pulmonary TB, challenges in executing intended plans connected to healthcare systems, delivering healthcare, and the obstacles faced by patients (Arega et al., 2020; Kunciw& de la Cruz, 2021; Nagaraja et al., 2021). Further challenges within healthcare facilities encompass delayed community care-seeking, insufficient awareness among healthcare professionals, negative attitudes, and apprehensions toward screening, as well as financial obstacles (Isangula et al., 2023) alongside insufficient training of healthcare personnel, staffing shortages, and community indifference stemming from stigma, there are additional challenges such as a lack of awareness about TB, high levels of illiteracy, difficulties in persuading patients to undergo sputum tests, and delays in obtaining test results (Shamanewadi et al., 2020).

In Kenya, active case finding is a key intervention aligned with the first pillar of the End TB Strategy, which focuses on integrated, patient-centered care and prevention. The Ministry of Health's National Tuberculosis, Leprosy, and Lung Disease Program (NTLD-Program) prioritizes the prevention and treatment of high-risk individuals through vaccination, collaborative TB/HIV activities, and management of comorbidities. The NTLD-Program also emphasizes the treatment of all TB patients, including those with drug-resistant TB, while providing patient support. Key interventions include early diagnosis, universal drug-susceptibility testing, and systematic screening of TB contacts and high-risk groups. These efforts contribute to Kenya's goal of accelerating progress toward ending TB by 2035 and achieving TB elimination by 2050. By standardizing and optimizing the quality of interventions, the focus is on increasing early detection of TB as a routine practice across all service delivery points (SDPs) in healthcare facilities nationwide (Alsdurf et al., 2021; Hermanns et al., 2020; Kibuchi & Macharia, 2014; MOH-Kenya, 2013; Onyango et al., 2018; Republic of Kenya Ministry of Health, 2019) .

According to the Kenya TB Financing Roadmap FY2023/24 – FY2027/28, Kenya has made significant investments in active TB case finding through collaboration with counties, the Government of Kenya (GoK), and various partners providing financial and technical support. This includes the engagement of leadership at all levels—county, sub-county, and healthcare facilities—and sensitization of key stakeholders involved in TB control efforts.

Key strategies include ongoing training and re-sensitization of healthcare workers across all departments on active TB case finding, clear role identification for stakeholders, and target

setting. The roadmap also shows the importance of providing necessary tools, strengthening sputum transport networks, improving feedback mechanisms for test results, and documenting, monitoring, and evaluating activities against department-specific targets. These coordinated efforts aim to enhance TB case detection and streamline the overall management of the disease.

The End TB Strategy emphasizes government's commitment and a multidisciplinary design for policy development, planning and implementation (Cha et al., 2020; MoH, 2020). Multi-disciplinary design is increasingly considered as a prerequisite for innovation and is critical in achieving optimal outcomes (Cohen et al., 2017; M. Nguyen & Mougenot, 2022)

1.1.5 Strategic Management in Health

Strategic management supports quality healthcare (Surya et al., 2017) and is essential in monitoring and evaluation by identifying strategic advantages to an organization (Madzimure & Mashishi, 2020). Strategic management relies on the healthcare system's ability to be flexible and adaptable in response to potential changes (Barzylovych et al., 2020). It is expected to bolster leadership, streamline management, improve decision-making, and elevate the appeal and efficacy of healthcare organizations and the work of healthcare workers (Nurmeksela et al., 2021).

Strategic management models offer insights into the interconnections among key health determinants, health status, and effective interventions. Specifically, the interconnectedness between economic, demographic, and environmental factors, health system dynamics, and their impact on health outcomes (Foster-Pedley & Lerer, 1999). The effectiveness of the current strategic management practices recognizes Monitoring and Evaluation as a critical function in the health fraternity (Netto et al., 1999) with the capacity of healthcare workers as a critical component in implementing strategic management practices (K. et al., 2018; Sychareun et al., 2013; Ugwuibe, 2020). In Turkey, a study conducted to investigate the familiarity of strategic management tools among executives in both public and private hospitals reveals lack of knowledge of the strategic management tools that constitute the basis of strategic management practices (Demir & Ugurluoglu, 2019). In India, (Zhang et al., 2020) in a mobile application feasibility study showed that unified collaborative action is key to quality health particularly TB case detection.

Quality health and care is a process that aids in disease prevention and enhances one's quality of life (Anufriyeva et al., 2022; Cooperberg et al., 2009). However, little is known about strategic management practices in health (Odhiambo & Njuguna, 2021) in particular for Tuberculosis (Belling et al., 2012) which is a recognized health burden (Garnett et al., 2020; Jarde et al., 2022), worldwide. Tuberculosis is a contagious bacterial infection primarily affecting the lungs, caused by Mycobacterium tuberculosis. It spreads through airborne droplets from coughing, sneezing, or breathing. TB can also impact the kidneys, spine, and brain. Symptoms include persistent cough, fever, chest pain, fatigue, night sweats, and loss of appetite.

1.1.6 Strategic Management Practices for Active TB Case Finding

Strategic management practices in TB case finding involve various components aimed at improving detection rates and subsequently reducing TB transmission (Giyose & Tshotsho, 2015; Holubovska &Vysotskyi, 2020; Ramani, 2010). The specific practices include capacity building and empowering project management (Ershadi et al., 2020; Y. Li et al., 2022). The TB cascade includes TB Incidence, TB testing, TB diagnosis, the start of treatment and treatment completion (*WHO Indicators Definitions*, n.d.; WHO, 2018). Confirmed TB cases receive appropriate treatment regimens promptly upon diagnosis with patients who initiate TB treatment being monitored to ensure adherence and completion of the prescribed treatment regimen. Completing treatment is crucial for preventing relapse, developing drug resistance, and achieving a cure (Lisboa et al., 2020; Marley et al., 2023; Oga-Omenka et al., 2020). TB Incidence rate is an epidemiological indicator used to assess the burden of TB within a community or region and to monitor trends in TB transmission over time (Collin et al., 2019; World Health Organization, 2022).

In Kenya, studies reveal that direct research on the application of strategic management practices for TB case finding is limited. However, insights can be gleaned from studies such as Belling et al. (2012) and J. Li et al. (2017). These studies emphasize the importance of strategic leadership, planning, and coordination in TB service delivery, indicating potential applications within the healthcare context. To therefore gain a comprehensive understanding of strategic management practices in TB case finding in Nairobi, Kenya, the Porter Diamond theory (James & Kvilhaug, 2022) is used to guide the study.

The Porter Diamond theory implies that the competitiveness of an entity is influenced by four interconnected factors which include Factor Conditions: Tangible and intangible resources

that are relevant; Market Demand Conditions in shaping the competitiveness of industries; Related and Supporting Industries' presence such as suppliers, manufacturers, and service providers and finally The industry Strategy, Structure, and Rivalry: These factors relate to the conditions within which shape how institutions are created, organized, and managed (Bakan & Doğan, 2012; Foster-Pedley & Lerer, 1999; Margaret James, 2022). To accomplish organizational objectives organizations must engage in planning, formulating, and executing strategies (Wanyama & Aila, 2022).

1.1.7 Effectiveness of Strategic Management Practices for Active TB Case Finding

The World Health Organization (WHO) urges countries to adopt global targets and milestones, ensuring reliable systems to measure progress in reducing TB incidence, deaths, and catastrophic costs. Effective TB surveillance and national monitoring are critical for achieving these goals The End TB Strategy emphasizes the need for bold policies and their effective implementation, which depends on strong government leadership (World Health Organization, 2015a). In South Africa, the adoption of progressive TB management policies has led to improved outcomes and reduced mortality rates (Ndjeka et al., 2020). Similarly, India has made significant strides in TB prevention and control by implementing policies that focus on increased resource allocation and high-level political commitment (Sachdeva & Mase, 2019).

To further enhance TB program effectiveness, it is essential to prioritize additional training for healthcare providers and community members. Strengthening supply chain mechanisms and raising community awareness among caregivers are also crucial. Additionally, the integration of technology can further improve the efficiency and effectiveness of TB programs (An et al., 2023; Antarina et al., 2020).

1.1.8 Capacity of Health Facility Staff in Implementing Strategic Management Practices

Strategic management offers both significant opportunities and notable challenges for nonprofit organizations. It requires substantial investments in terms of time, resources, and human capital—assets that many nonprofits may not possess in abundance (Miller, 2018). Due to these constraints, the effectiveness of strategic management practices in the nonprofit sector can vary widely. While such practices can help organizations improve their overall impact and effectiveness, the need for substantial resources and commitment can be a barrier for many smaller or under-resourced nonprofits.

For nonprofits considering the adoption of strategic management, careful planning is essential. The potential benefits must be weighed against the resources required to implement these practices successfully. Achieving improved organizational effectiveness through strategic management demands not only commitment but also the capacity to sustain these efforts over time. As a result, nonprofits must thoroughly assess their capabilities and resources before integrating strategic management into their operations, ensuring that the gains outweigh the demands (Wiepking & de Wit, 2024).

1.2 Statement of the Problem

Strategic management plays a pivotal role in shaping an organization's vision, mission, and objectives to meet set expectations, guiding overall direction, and identifying strengths, weaknesses, opportunities, and threats to enhance competitive advantage. Strategic management practices include strategy formulation, goal establishment, financial ratio examination, Total Quality Management, social capital cultivation, and enhancing Entrepreneurial orientation. Strategy formulation is the process of defining an organization's direction and making decisions on how resources are allocated. Goal establishment, is setting the basic missions and long-term goals of an organization. Financial ratio examination is a finance practice which involves the quick and efficient interpretation of routine financial statements. The Total Quality Management practice is a management approach to improving an organization's processes, products, and services. The Fostering social capital involves building and enhancing networks, relationships, trust, and cooperation among individuals or groups. Entrepreneurial orientation is having a strategic mindset to identify and capitalize on new opportunities in competitive and uncertain environments. Several studies in construction companies, cooperatives, SMEs, and agribusiness enterprises, demonstrate that strategic management practices have a positive influence in enhancing organizational performance. While strategic management practices are recognized for improving institutional performance in SMEs, parastatals, and agribusiness enterprises, little is known about strategic management practices in health particularly in TB case finding. Worldwide Tuberculosis remains a significant health burden, causing substantial morbidity and mortality. Approximately one-quarter of the world population is presumed to be infected with TB, leading to an annual incidence of 10 million cases and 1.2 million reported deaths with 3.6 million missed/undetected cases and the potential to spread the TB disease further. In 2022, TB was the second leading cause of death from a single infectious agent in the African region, with approximately 2.5 million people contracting the disease and 424,000 succumbing to it. The

region accounted for an estimated 23% of global TB cases and 33% of TB-related deaths. In 2016, Kenya was ranked among the top 30 high TB burden countries which contribute over 80% of the global TB burden with Nairobi County which constitutes 9% of Kenya's total population (4,397,073), and hosting 5% (239) of the country's TB treatment facilities contributing notably 13% (9,455) of the total (72,943) TB cases reported in Kenya in 2020 an indication of a high notification rate. Despite significant investments in active TB case finding through collaboration with counties, the Government of Kenya (GoK), and various partners providing financial and technical support. The impact of current interventions to improve early detection of tuberculosis seems to have been saturated with about 40 percent of TB cases still missed/undetected at health facilities. Globally, various studies have highlighted a knowledge gap in tuberculosis service delivery, emphasizing the necessity for strategic leadership, consistent planning, and coordination. In Kenya, several studies have been conducted with a focus on TB treatment, Adherence, and related outcomes. The reviewed studies recommended capacity building, and adoption of data use to improve outcomes. Furthermore, efforts to strengthen TB case management in Kenya, as highlighted in various studies emphasize the need for enhanced monitoring and evaluation processes, capacity building, and the utilization of local data to inform decision-making and support supervision. Nonetheless, there is limited direct research on the application of strategic management practices to improve TB case finding. This uncertainty underscores the necessity for a thorough analysis to establish strategic management practices implementation rate for tuberculosis case finding within health facilities in Nairobi, Kenya, to model the Strategic Management practices Coefficients matrix for optimal active TB case finding, measure the capacity rates of health facility staff in implementing the strategic management practices and to determine the challenges and the significance associated with optimizing strategic management practices and active Tuberculosis case finding within healthcare facilities in Nairobi County, Kenya.

This study commits to a multidisciplinary integrating the strategic management and public health disciplines. The study contributes to the body of knowledge on strategic management practices infusion in TB control programs and offer an indication for strong collaboration between strategic management and health programs toward achieving the global End TB strategies.

1.3 Study Objectives

1.3.1 Main Objective

The main objective of this study is to assess optimization of pragmatic Strategic Management Practices to augment active TB case finding within health facilities in Nairobi County, Kenya. The study aims to achieve the following specific objectives:

1.3.2 Specific Objectives

i. To establish strategic management practices implementation rate for tuberculosis case finding within health facilities in Nairobi, Kenya
ii. To model the Strategic Management practices Coefficients matrix for optimal active TB case finding within healthcare facilities in Nairobi County, Kenya
iii. To measure the capacity rates of health facility staff in implementing the strategic management practices for improved active TB case finding
iv. To determine the challenges and the significance associated with optimizing strategic management practices and active Tuberculosis case finding within healthcare facilities in Nairobi County, Kenya.

1.4 Research Questions

i. What is the implementation rate of strategic management practices for Active tuberculosis case finding within health facilities in Nairobi, Kenya?
ii. What is the coefficient structure of Strategic Management Practices that most significantly predict optimal tuberculosis case finding within health facilities in Nairobi, Kenya?
iii. What is the capacity of healthcare workers to implementing strategic management practices aimed at improving active TB case finding?
iv. What are the key challenges and their significance in optimizing strategic management practices for active tuberculosis case finding within health facilities in Nairobi, Kenya?

1.5 Study Hypothesis

i. There is low implementation rate of strategic management practices for Active tuberculosis case finding within health facilities in Nairobi, Kenya?
ii. There is a statistically significant relationship between strategic management practices and the effectiveness of active TB case finding within health care facilities in Nairobi, Kenya

iii. Higher staff capacity levels in implementing strategic management practices are significantly associated with improved active TB case finding within health facilities in Nairobi, Kenya

1.6 Significance of the Study

This study significantly contributes to the body of knowledge in the strategic management of health programs by deepening the understanding of how strategic management practices influence health outcomes particularly TB case finding in Nairobi, Kenya. Through its findings, the research provides valuable evidence-based recommendations that can guide decision-making processes and enhance the effectiveness of strategic management in health programs. Specifically, the study's insights aim to improve practices related to TB case finding, leading to better health outcomes and more efficient management of health programs.

By evaluating the strategic management practices, this study helped to identify best practices and inform policy decisions on TB control in Nairobi County and potentially other similar settings. The study provides a thorough analysis on the strategic management practices applied in tuberculosis case findings, their effectiveness, the capacity of health facility staff to implement the strategic management practices, and to determine the challenges associated with strategic management practices and active TB case finding.

Given the unique challenges posed by TB case finding in Nairobi, it is crucial to evaluate the effectiveness of current strategic management practices for active TB case finding. This will contribute to improvement and develop targeted interventions to optimize case detection rates and enhance the overall control of TB within the county and in similar settings.This study helped to identify health care worker capacity and capacity gaps in current strategic practices and recommend potential solutions to improve the detection of TB cases. The study explores areas for improvement and optimize the use of resources.

This study is important, especially with the TB burden and missed cases in Nairobi County to identify the key strategic management challenges and barriers that healthcare facilities in Nairobi County, Kenya face in implementing and sustaining effective strategic management practices for active tuberculosis case finding. This study provides valuable insights into the strengths and weaknesses of the current strategic management practices and informs the

development of more effective and efficient methods for tuberculosis management and control within health facilities in Nairobi County.

1.7 Scope of the Study

The scope of this study was in Kenya, particularly in Nairobi County. Nairobi County was chosen because it is Kenya's capital city, hosting a population of approximately 4,397,073 individuals as of the 2019 census. In addition, according to the National TB Control Program (NTLDP) Nairobi County is the highest contributor to TB notification in Kenya contributing to over 10% of cases notified annually since 2014. The county is also ranked among the 10 high TB burden counties in the country however, in terms of general (Identification, notification, and TB outcomes) TB performance, the county was ranked number 41 out of 47 an indication of poor performance on TB case finding. The county shares its borders with Machakos, Kajiado, and Kiambu counties. The Kenya Master Facility List for 2023 enumerates around 1319 health facilities within this county. The specific focus narrows to 239 health facilities that actively engage in TB case finding within the region and targets all health care workers working in the TB clinics.

The study endeavored to engage health care workers, TB coordinators, TB facility managers/healthcare personnel. The study time scope for TB notification was between 2020 and 2023. The respondent's insights have been gathered through a structured questionnaire and focus group discussions (FGD) facilitating a profound understanding of the strategic management strategies employed in active TB case identification. The framework of analysis centers on the application of the Porter Diamond Theory, thereby delving into the strategic management practices pertinent to TB case finding.

1.8 Conceptual Framework

The study's conceptual framework provides a structured view to examining strategic management practices in tuberculosis (TB) case finding within healthcare facilities. It explores key concepts, including strategic management and relevant theories, emphasizing their significance in public health initiatives. A focal point of the framework is Porter's Diamond Theory, which is analyzed for its role in shaping strategic management practices and influencing health outcomes. The framework outlines the theoretical underpinnings of the study, linking these foundations with practical applications in TB case finding, and synthesizes relevant literature to highlight key findings that support the study's approach.

The study aims to evaluate the effectiveness of strategic management practices for TB case finding in Nairobi County, contributing valuable lessons that can inform enhanced TB control measures and public health outcomes. The conceptual framework examines factors influencing competitiveness in TB case finding, including contextual elements, continuous monitoring, stakeholder engagement, and resource allocation, which are critical for effective TB control.

The independent variables in the study include the strategic management practices employed for active TB case finding, the effectiveness of these practices, associated challenges, and the capacity of health staff to implement them. The Strategic management practices are informed by various key practices and approaches such as strategy formulation, goal setting, financial ratio analysis, Total Quality Management (TQM), building social capital, and promoting entrepreneurial orientation (Singh et al., 2021a; Williams et al., 2020). The study delves into establishing the current strategic management practices and how they link to effective TB case finding.

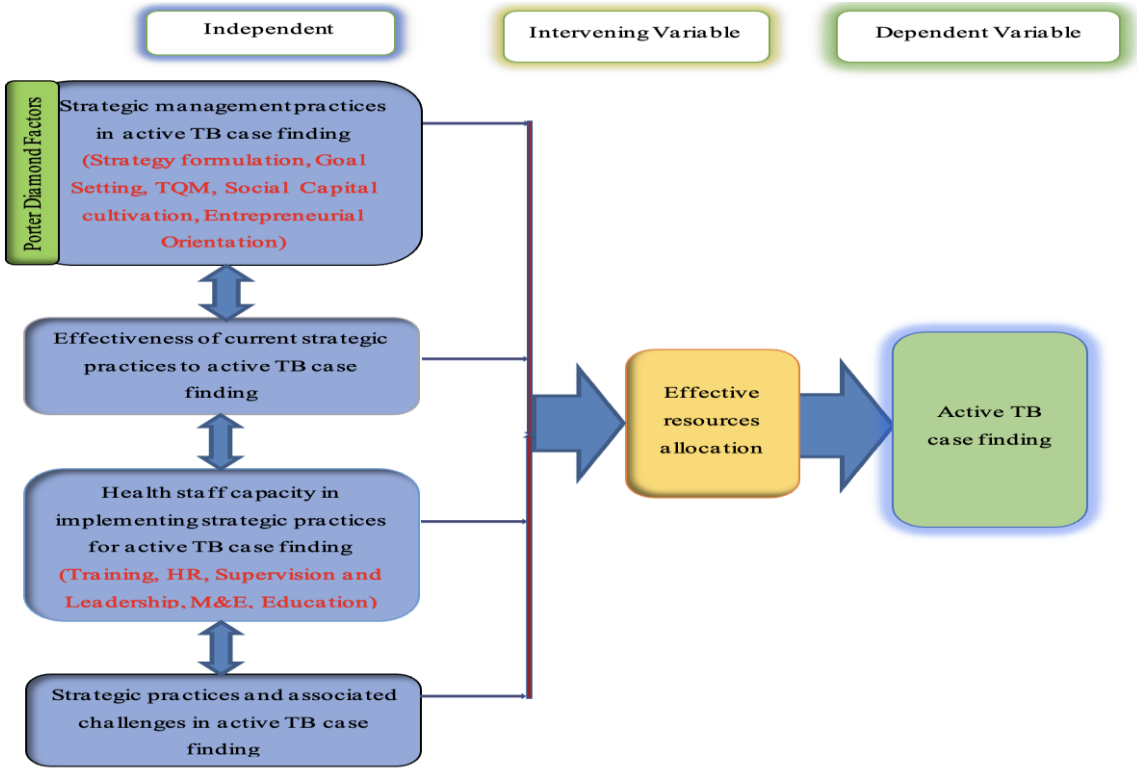


Figure 1.1: Conceptual framework – informed by Source

(Dye et al., 1999; Enos et al., 2018; Singh et al., 2021; Williams et al., 2020)

The study's conceptual framework *(Figure 2)* is structured to demonstrate the interconnection between the study variables. The framework features a dependent variable, which is a result of infusing strategic management in health programming in this case, active TB case finding. The model harmonizes the contributions of the independent variables to determine the effectiveness of these strategies, consequently impacting the rate of TB case notifications a crucial outcome measure. The model establishes a clear and direct connection between all independent variables and the effectiveness.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

In this chapter, the researcher explores the intersection of strategic management and tuberculosis. The researcher reviews risks associated with TB that persist despite considerable global efforts and examine the effectiveness of strategic management practices for active TB case finding while acknowledging the limitations inherent in the study. Additionally, a comprehensive empirical literature review is conducted, synthesizing existing research on strategic management in TB control and critically evaluating its implications. Through the section, the researcher examines theories aligned with the study objectives and provides a critique of the existing literature.

2.1.1 Theoretical Literature Review

The theoretical review involves examining and synthesizing existing strategic management theories and models related to TB case finding. It focuses on identifying, analyzing, and discussing the key theoretical frameworks in health and TB case finding

2.2 Strategic Management

Strategic management is the ability to review and direct an organization to the desired goal Amason, (2011) and has proven to have a positive impact on organizational performance George et al, (2019). The strategy involves designing the organization's mission, goals, and strategies (Rasouli et al., 2020). While concerned with long-term planning, strategic management provides the overall direction of the organization (Jin, Zhouying, 2011; Bai, 2011; Schmuck, 2022) and in addition, it helps to identify strengths, weaknesses, opportunities and threats in order to make decisions (Chofreh et al., 2020; Pratiwi & Gunarto, 2021) inevitably a key management tool (Gupta, 2020) and plays an important role in the success of an organization (Durmaz & Dusun, 2016).

In a study in Kenya by (Aosa, 2011) on Strategic Management within Kenya Firms, the findings showed that large manufacturing companies had implemented strategic management practices, but there were notable differences in how these practices were applied. Foreign companies demonstrated a higher level of involvement and commitment to strategic management compared to local companies. In contrast, local companies, particularly family-owned businesses, displayed a strong financial focus in their planning, with an emphasis on

cash flow projections and extended budgeting. The variations in strategic management practices were attributed to differences in organizational factors.

2.2.1 Strategic Management Theories

Strategic Management theories are concept aimed at the inception, development and practical implementation of strategic management (Monib et al., 2021). The growing interest in performance measurement and management (PMM) and its links to strategic management theories sheds light on the connection between strategy and firm performance. The study's analysis shows that most PMM frameworks are grounded in the resource-based view theory, with those developed after 2000 incorporating stakeholder theory by considering all stakeholders. However, a key insight from the study is that these frameworks still lack a strategic orientation. This finding is supported by an empirical study by Thaker (2011), which suggests that business performance management systems remain focused on tactical goals rather than strategic thinking(Yadav et al., 2014). Strategic management theories are systems of ideas intended to detail the origin, evolution, principles, and applications of strategic management. Strategic management theories include Health Systems Strengthening Theory, Resource Based Theory, Behavioral Theory, Porter Diamond theory among others

Health Systems Strengthening Theory is a theory that guides the implementation of health interventions with the goal of enhancing the performance, resilience, and sustainability of health systems. At its foundation, the theory focuses on reinforcing the six building blocks of health systems as defined by the WHO(World Health Organization, 2007)**.**

The Resource-Based View (RBV) theory: The Resource-Based View theory is a prominent framework in strategic management, yet its influence on organizational theory has been relatively limited. RBV posits that a firm's competitive advantage derives from its unique resources and capabilities. According to this theory, resources include tangible assets like financial capital, physical infrastructure, and human resources, as well as intangible assets such as brand reputation, intellectual property, and organizational culture. The core idea is that these resources must be valuable, rare, inimitable, and non-substitutable to provide a sustainable competitive edge. The Resource-based theory stands as a leading and robust framework for comprehending organizations (Barney et al., 2011). The Resource-based theory is gaining traction within operations management research and holds promise for enriching the field (Hitt et al., 2016).

The RBV emphasizes that firms can leverage their unique resources to differentiate themselves from competitors. Resources that are valuable help firms exploit opportunities and neutralize threats in their environment. Those that are rare are not widely available to other competitors. Inimitable resources are difficult for competitors to replicate due to historical conditions, unique capabilities, or complex social relationships. Lastly, non-substitutable resources cannot be easily replaced by other resources that offer the same benefits. One of the key learning of RBV is that firms must not only possess valuable resources but also be able to effectively utilize and modify them to maintain their competitive advantage. This adaptability is crucial, as market conditions and competitive dynamics are continually evolving. By continuously improving and reconfiguring their resources and capabilities, firms can sustain their competitive position over time. However, despite its significance in strategic management, RBV has had a limited impact on organizational theory. This is partly because organizational theory often focuses on broader structural and behavioral aspects of organizations rather than the specifics of resource management. Nonetheless, RBV remains a valuable lens for understanding how firms can leverage their unique assets to achieve and maintain a competitive advantage in dynamic and competitive environments (Davis & DeWitt, 2021; Gerhart & Feng, 2021; Wernerfelt, 1995).

The Porter Diamond Theory which has found extensive application in the fields of strategic management, economic examination, and policy development. It serves as a guiding framework for comprehending organizational dynamics, pinpointing competitive strengths, recognizing areas with potential for enhancement, and devising strategies aimed at bolstering overall staff capacity and competitiveness (Bakan & Doğan, 2012; James & Kvilhaug, 2022; Margaret James, 2022). Nonetheless, these very principles can be employed in particular sectors, such as healthcare, to dissect the factors influencing competitive advantage and steer the formulation of proficient strategies as demonstrated by (Wang et al., 2018).

The Porter Diamond Theory: The Porter Diamond, which was formally known as the Porter Diamond Theory of National Advantage, is a strategic model developed to explain the competitive advantage that nations or regions may possess based on specific domestic factors(James & Kvilhaug, 2022). This theory has been widely used in strategic management, economic analysis, and policymaking to guide in understanding a regions competitive advantages, identifying areas for improvement, and formulating strategies to enhance their competitiveness. The theory emphasizes that four factors are interconnected and mutually

reinforcing. The factors are Factor Conditions where both tangible and intangible resources are necessary for competing in a specific industry. Demand Conditions: Demanding local customers can drive institutions to innovation to meet service or commodity demands, support from other industries where the existence of a support system can influence an organizations growth and the structure influences growth (Bakan & Doğan, 2012; James & Kvilhaug, 2022; Margaret James, 2022).

The Porter Diamond Theory suggests that a positive feedback loop can develop, leading to the growth of competitive advantages in certain industries within a particular nation or region. By analyzing and addressing these factors, governments, businesses, and policymakers can work together to enhance the competitiveness of industries and promote economic growth. Factor Conditions are the inherent attributes that a country possesses, such as its human resources– labor force, natural resources, capital, infrastructure, technological know-how, and educational institutions. The theory argues that a favorable combination of these factors can lead to a competitive advantage in certain industries. Demand Conditions: The nature and characteristics of a nation's domestic demand for products or services can influence its industries. Sophisticated and demanding domestic consumers can drive companies to innovate and improve their products, preparing them to compete in global markets. Related and Supporting Industries: The presence of supplier industries, related industries, and supporting industries can contribute to a competitive advantage. Clusters of interconnected industries and suppliers can facilitate knowledge sharing, innovation, and efficient supply chains. Firm Strategy, Structure, and Rivalry: The management practices, organizational structures, and competitive rivalry within a nation's companies impact their ability to compete globally. Intense competition can drive companies to continuously innovate and improve (James & Kvilhaug, 2022; Margaret James, 2022)

The Porter Diamond Theory provides advantages in strategic management including the ability to support a comprehensive analysis by analyzing the competitive advantage of a sector, nation or region. The theory provides a holistic perspective by emphasizing the interconnections between different factors rather than viewing them in isolation which allows policymakers and business leaders to consider the broader ecosystem in which industries operate, enabling them to make more informed decisions. In addition, the theory can be applied to different levels of analysis, such as national, regional, or industry-specific making

it a valuable tool for policymakers, economists, and businesses seeking to understand and enhance competitiveness(Isabelle et al., 2020)

2.2.2 Study Theory

This study is guided by the Porter Diamond theory which focuses on analyzing the competitiveness of industries and understanding the factors that contribute to the competitive advantage in a particular industry (James & Kvilhaug, 2022). The theory examines the factors that influence competitiveness in a specific industry, including factors such as skilled labor, infrastructure and firm strategy (James & Kvilhaug, 2022).This theory provides a comprehensive approach to evaluating the strategic management practices in health (Hamdan, 2017), which is essential for identifying areas for improvement and optimizing the delivery of tuberculosis services in Nairobi County. The application of Porter's Diamond Theory in developing countries is limited by contextual challenges such as inefficient resource allocation, high poverty rates, entrenched corruption, and low levels of literacy, which the model does not adequately address(Fang et al., 2018; Heeks, 2007; Safeer et al., 2019)

The notion guiding the review of strategic management practices in tuberculosis case finding within health facilities in Nairobi County is based on systems thinking and the principles of health systems strengthening. This approach recognizes that TB management is a complex and dynamic process that involves multiple actors and interrelated systems and that effective management requires a coordinated and integrated approach that takes into account the political, social, economic, and cultural context.

2.3 Strategic Management Practices

Strategic management practices involve several key processes, including strategy formulation, goal setting, financial ratio analysis, Total Quality Management, fostering social capital, and enhancing entrepreneurial orientation (Singh et al., 2021; Williams et al., 2020). These practices have been positively linked to the growth of Small and Medium Enterprises, significantly influencing sales volume, break-even point (BEP) achievement, and overall profitability (Addae-Korankye & Aryee, 2021; Omsa, 2017). Strategic management practices, particularly in strategy formulation, implementation, and evaluation, play a crucial role in the performance of cooperatives, SMEs, and educational institutions (Omsa, 2017; Singh et al., 2021; Sucuoğlu & Erdem, 2021).

Effectiveness strategic management practices contribute to effective department coordination and alignment on scarce resources (Praveen Kumar & Subhasini, 2020) and is influenced by effective leadership, coordination of departments, resources management, and community engagement (Osah & Khene, 2018; Yusuf & Kahar, 2018; Osah & Khene, 2018; Yusuf & Kahar, 2018).

Human resource management and leadership styles are known to influence staff capacity in implementing strategic management practices (Saleem & Adeel, 2019) while knowledge management is critical for leveraging innovations and influencing individual attitudes, together with knowledge transfer, it plays a critical role in efficiency improvement and strategic adaptations (Chawla et al., 2022; Lengnick-Hall et al., 2011; Valentim et al., 2016)

While administrative support and institutional investment are recognized as strengths (Carlucci et al., 2015), limitations include insufficient human resources, inadequate compensation, lack of technical guidance, minimal supervision, and restricted access to necessary equipment. Further barriers such as high costs, limited transportation, cultural norms, and language barriers exacerbate the difficulties in implementing these strategies. Cross-sectoral factors like low education levels, gender disparities, and poor transport and communication infrastructure also impede progress (Sychareun et al., 2013).

To overcome these challenges, organizations must adopt a comprehensive approach that includes market research, SWOT analysis, forecasting, and the recruitment and motivation of skilled personnel, ensuring the effective execution and assessment of strategies (Addae-Korankye & Aryee, 2021; Kabeyi, 2019; Mišanková & Kočišová, 2014; Muminović et al., 2020; Ekon & Isayas, 2022)

2.3.1 Strategy Formulation and Strategy Implementation

Strategy formulation or strategy execution is the process of defining an organization's direction and making decisions on how to allocate its resources to pursue this direction. It involves setting long-term goals, identifying opportunities and threats in the external environment, assessing internal strengths and weaknesses, and developing plans to achieve competitive advantage (Belyh, 2020; Singh et al., 2021; Williams et al., 2020).

Strategy formulation plays a critical role in shaping both short-term and long-term financial performance. Traditionally associated with large corporations (Damke et al., 2018), it should

be viewed as a priority for enterprises of all sizes. By emphasizing strategic planning, businesses are more likely to achieve sustainable growth and long-term success, regardless of their scale (Belyh, 2020; Mashingaidze et al., 2021)

Strategy implementation is a key component of implementation science, focusing on how strategies are put into action. The process is iterative, requiring planners to revisit earlier steps to ensure that all stakeholders—including adopters and implementers—as well as intended outcomes, influencing factors, and objectives are thoroughly considered and addressed(Fernandez et al., 2019; Proctor et al., 2013)

2.3.2 Goal Setting

Goal setting is a mental skill frequently employed by adults to promote success in various aspects of life. As one of the most commonly used techniques, it helps individuals establish clear objectives, which in turn provides motivation and direction. The process of setting specific, achievable goals enhances focus, discipline, and personal growth, making it an essential tool for success. Moreover, goal clarity combined with effective self-management has a significant impact on team performance. Teams with well-defined objectives are better able to coordinate efforts and work towards common outcomes. Goal-setting theory is also valuable in understanding the success of performance tools like leader boards, as it highlights how setting and tracking clear goals can drive competition, engagement, and ultimately better results (Jeong et al., 2023; Landers et al., 2017; Sides & Cuevas, 2020; van der Hoek et al., 2018)

2.3.3 Financial Ratio Analysis

Financial ratio analysis is a crucial process that allows for the quick and efficient interpretation of routine financial statements. By condensing large volumes of financial data into key ratios, it enables decision-makers to gain valuable insights in a short amount of time while maximizing the usefulness of the information gathered (Choate, 1974) . This method is important because it provides a clear picture of a company's financial health through the analysis of its financial statements.

By examining various ratios, such as liquidity, solvency, and profitability, stakeholders can assess the company's performance and make informed decisions about its operations and future direction. Financial ratio analysis is especially vital as it directly influences decisions regarding profitability. The trends derived from these ratios can significantly affect an

enterprise's financial outcomes, guiding strategies that enhance overall performance and ensure sustainable growth (Chinedu Innocent et al., 2013; Supit & Koapaha, 2023) .

2.3.4 Total Quality Management

Total Quality Management is a holistic management approach aimed at continuously improving all aspects of an organization's processes, products, and services to enhance customer satisfaction. It is widely recognized as a critical method for improving the quality of an organization's output, ensuring that every aspect of operations meets the highest standards of performance. TQM has been shown to significantly impact perceived service quality and customer satisfaction, particularly in service-oriented sectors like healthcare. For instance, the implementation of TQM practices has led to noticeable improvements in perceived service quality, which in turn positively influences patient satisfaction. This highlights the strong connection between quality management and customer or client satisfaction across industries (Mohsen Alawag et al., 2023; Pambreni et al., 2019).

At the heart of TQM is the involvement of every employee, from top leadership to frontline staff, in quality improvement efforts. Core elements such as customer focus, continuous improvement, strategic alignment, and total employee involvement have been proven to significantly enhance organizational performance. Moreover, TQM also contributes positively to firms' sustainability by fostering efficiency and long-term operational success (T. L. H. Nguyen & Nagase, 2019; Qin et al., 2022)

2.3.5 Fostering Social Capital

Fostering social capital involves the process of building and enhancing networks, relationships, trust, and cooperation among individuals or groups within a community, organization, or society. This form of capital represents the value generated through these connections, which lead to mutual benefits from collaboration, shared norms, and established trust. Developing social capital is crucial for creating strategic partnerships with suppliers, cultivating a positive organizational image, and ensuring satisfaction with horizontal relationships (Hassan et al., 2020; Sforzi & Bianchi, 2020). It also significantly impacts overall contentment with the team's psychological climate and the establishment of a strong corporate culture. Additionally, sharing project vision information with beneficiaries and involving them in decision-making processes are recommended practices to further support and develop social capital (Mishchuk et al., 2022; Taruvinga et al., 2017)

2.3.6 Entrepreneurial Orientation

Entrepreneurial orientation refers to the strategic mindset that organizations adopt to identify and capitalize on new opportunities in competitive and uncertain environments. It is comprised of five key dimensions. Autonomy represents the ability of individuals or teams to make decisions independently, driving initiatives and creative problem-solving without constant oversight. Competitive aggressiveness reflects a firm's assertiveness in challenging rivals, striving to outperform them and secure a competitive advantage, often through bold strategies. Innovativeness emphasizes a firm's commitment to developing novel products, services, or processes, encouraging creativity and a willingness to experiment with new ideas. Proactiveness refers to a forward-thinking approach where the firm actively seeks to anticipate future opportunities or challenges, positioning itself ahead of competitors in recognizing emerging trends. Finally, risk-taking involves the firm's inclination to commit resources to ventures with uncertain outcomes, balancing potential high rewards with the possibility of significant losses. Together, these five dimensions shape an organization's ability to navigate complex markets, fostering a culture of exploration, resilience, and adaptability in pursuit of long-term growth (Anwar et al., 2022; Bernoster et al., 2020; Daradkeh& Mansoor, 2023; Meekaewkunchorn et al., 2021).

2.4 Strategic Management in Health

Strategic management plays a crucial role in enhancing quality healthcare by supporting monitoring and evaluation processes, identifying strategic advantages, and fostering adaptability within healthcare systems (Surya et al., 2017; Madzimure & Mashishi, 2020; Barzylovych et al., 2020). It strengthens leadership, streamlines management, improves decision-making, and enhances the overall effectiveness of healthcare organizations and their workers (Nurmeksela et al., 2021). Strategic management models also provide insights into the relationships between key health determinants, such as economic, demographic, and environmental factors, and their impact on health outcomes (Foster-Pedley & Lerer, 1999). Effective strategic management practices emphasize the importance of monitoring and evaluation and recognize the capacity of healthcare workers as essential to implementation (Netto et al., 1999; K. et al., 2018; Sychareun et al., 2013; Ugwuibe, 2020). However, a study in Turkey revealed a lack of knowledge of strategic management tools among hospital executives (Demir & Ugurluoglu, 2019), while research in India highlighted the importance of unified collaborative action for improving healthcare quality, particularly in TB case detection (Zhang et al., 2020).

Quality health and care are integral to disease prevention and improving quality of life (Anufriyeva et al., 2022; Cooperberg et al., 2009). Despite this, strategic management practices within the healthcare sector, particularly for Tuberculosis, remain underexplored (Odhiambo & Njuguna, 2021). TB is a significant global health issue and is a contagious bacterial infection primarily affecting the lungs, caused by Mycobacterium tuberculosis. It spreads through airborne droplets from coughing, sneezing, or breathing. Beyond the lungs, TB can also affect other parts of the body, such as the kidneys, spine, and brain. Common symptoms of TB include a persistent cough, fever, chest pain, fatigue, night sweats, and loss of appetite. Addressing TB effectively requires a comprehensive understanding of both the disease and strategic management practices to improve prevention, diagnosis, and treatment outcomes(Garnett et al., 2020; Jarde et al., 2022).

2.4.1 Porter Diamond Theory and Strategic Management Practices

The Porter Diamond theory provides a framework to analyze competitive advantage and inform strategic decision-making within an organization, formulating competitive strategies, optimizing value chains, geographical expansion, and navigating regulatory environments. By aligning strategic decisions with the determinants of competitive advantage, the theory emphasizes the interconnectedness of various factors that influence a firm's competitiveness in its industry or market. By aligning strategic decisions with the determinants identified in the diamond framework, organizations can effectively position themselves to achieve sustainable competitive advantage. The framework indicates Factor Conditions which encompass both tangible and intangible resources required for competing in specific industries. Demand Conditions, on the other hand, entail local customers' expectations and preferences, driving institutions to innovate in order to meet the demand for goods and services. Additionally, support from other industries plays a crucial role in influencing an organization's growth (Bakan & Doğan, 2012; James & Kvilhaug, 2022; Margaret James, 2022).

Grounded in realistic assessments of capabilities and market demands. For instance, understanding demand sophistication and the quality of related industries enables more precise goal setting that is aligned with both market needs and resource capabilities, fostering targeted innovation and strategic positioning(James & Kvilhaug, 2022; Margaret James,. 2022)

Developing countries encounter numerous contextual challenges, including uncertainty and instability, limited access to planning expertise, weak community development structures, budgetary constraints, low levels of education, and inadequate policies and governance frameworks. Additionally, cultural barriers such as the legacy of colonialism, limited community awareness, mistrust, power imbalances, unequal distribution of costs and benefits, and conflicting interests further hinder development efforts(Boadu et al., 2020; Patinvoh & Taherzadeh, 2019; Reindrawati, 2023). Factors which limit the application of Porter's Diamond Theory (Fernandez et al., 2019; Proctor et al., 2013)

2.4.2 Porter Diamond Theory and Health

In health systems strengthening, strategic management is the process of improving the performance and effectiveness of health systems to achieve better health outcomes (Rodríguez-Labajos et al., 2018). Some key components of strategic management theory in health systems strengthening include a Situation analysis which involves conducting a comprehensive analysis of the current situation in the health system, including its strengths, weaknesses, opportunities, and threats. This information can be used to identify areas that need improvement and to set priorities for health systems strengthening.

The Porter Diamond model was initially conceived as underpinnings of national competitive advantage within a wide economic framework. Nonetheless, these very principles can be employed in particular sectors, such as healthcare, to dissect the factors influencing competitive advantage and steer the formulation of proficient strategies (Wang et al., 2018). The adoption of this model in healthcare has enabled policymakers and healthcare establishments to comprehend the elements influencing triumph or downfall. This, in turn, has facilitated the formulation of empirically grounded policies and initiatives that align with the unique circumstances (Foster-Pedley & Lerer, 1999). This theory provides a comprehensive approach to evaluating the strategic management practices in health (Hamdan, 2017), which is essential for identifying areas for improvement and optimizing the delivery of tuberculosis services in Nairobi County.

In a separate study on the management of strategic change in Vihiga, key factors such as employee participation, effective communication, active leadership, and training were highlighted. The study also identified significant challenges in managing strategic change, including employee resistance, resistance from middle management due to perceived loss of power, and inadequate resource allocation. To address these challenges, the county

management employed mitigation measures that included fostering strong synergy and closely monitoring the change implementation process (Munyasi Obenzi & Mercy Florah, 2023)

2.5 Infectious Diseases

Infectious diseases remain the leading cause of mortality globally, accounting for a significant portion of deaths across all regions (Nguyen et al., 2021). Notable examples include COVID-19, HIV, malaria, and tuberculosis, which continue to pose serious public health threats due to their widespread impact and persistent transmission (Baker et al., 2022; Fauci et al., 2005; Sakai & Morimoto, 2022). These diseases are characterized by their ability to spread from person to person and, in some cases, from animals to humans, highlighting the importance of addressing both human and zoonotic transmission pathways in disease prevention and control efforts (Dong et al., 2020; Fauci et al., 2005; Sakai & Morimoto, 2022).

2.5.1 Tuberculosis Burden

Tuberculosis is a contagious disease caused by a bacteria called *Mycobacterium tuberculosis* that primarily affects the lungs and is transmitted from person to person through coughing, sneezing and breathing in airborne droplets of the bacteria. TB is known to also affect other parts of the body such as the kidneys, spine, and brain. The TB symptoms include persistent cough, fever, chest pain, fatigue, night sweats, and loss of appetite (Deutsch-Feldman et al., 2021; World Health Organization, 2018).The disease is one of the most common infections in the world and remains endemic globally (Jain et al., 2020). TB has remained a major cause of morbidity and mortality from a single infectious bacteria (Chakaya et al., 2021). During the year 2019, the World Health Organization estimated that 10 million people fell ill with TB with about 1.2 million deaths reported (World Health Organization, 2020). However, the global fact sheet by the Centre for Disease Control (CDC) indicates that globally, about 3.6 million people with TB are not detected *("missed")* annually by health systems and therefore they do not get the tuberculosis care they need and deserve (Centers for Disease Control and Prevention, 2015).The End TB Strategy emphasizes government's commitment and investment are essential for joint strategic policy development, planning, implementation, and ambitious targets to end TB by 2030 (Cha et al., 2020; MoH, 2020)

In Tuberculosis control, strategic management considers setting clear goals and objectives based on a comprehensive assessment of the situation; considering the place of TB screening

and TB detection; selection and response to high-risk groups; identification of appropriate screening and diagnostic algorithms; and pursuing differentiated patient-centered strategies (Creswell et al., 2013).

The risk of developing TB is dependent on two key factors: the likelihood of being infected with the TB bacteria (Mycobacterium tuberculosis) and the probability that the infection will progress to active disease. The risk of infection is largely determined by the prevalence of TB in the community, while progression to active disease is shaped by a combination of genetic, environmental, and health-related factors. Among these, HIV co-infection remains the most significant single risk factor for developing active TB. Other contributors include malnutrition, among children (young age), and low or compromised immunity. Other emerging contributors such as diabetes, indoor air pollution, tobacco smoke, alcohol consumption, and the use of immunosuppressive drugs further elevate risk. Socioeconomic and behavioral determinants, such as poverty, overcrowding, and limited access to healthcare, also heighten susceptibility. Additionally, high-risk groups like healthcare workers, indigenous populations, and others in vulnerable settings face an increased burden of both infection and disease(Onyango et al., 2018; Siddalingaiah et al., 2023; Stosic et al., 2018).

The momentum to contain TB has increased (Sakamoto et al., 2019) with the World Health Organization recommending a raft of measures for a TB-free world by 2035 (Uplekar & Raviglione, 2015). Both the WHO initiative and The End Tuberculosis Strategy have set out very ambitious targets for 2020 – 2035 mainly to reduce TB incidence by 20% and to reduce the number of TB deaths by 35% by the year 2020 (MacNeil et al., 2020).

Whenever there is a delayed diagnosis and treatment of TB infection, it presents several serious challenges that affect individuals, communities, and health systems. Undiagnosed TB can lead to the development and spread of drug-resistant strains, making treatment more complex, costly, and less effective. It also significantly increases the risk of death, especially among vulnerable populations. Without diagnosis, individuals continue to unknowingly transmit the disease within their communities (Kunjok et al., 2021). Furthermore, untreated TB contributes to low treatment success rates, as cases are only identified at advanced stages when recovery is more difficult. Economically, patients often face increased financial burden due to prolonged illness, missed work, and the high cost of seeking delayed or repeated treatment, deepening the cycle of poverty and ill health (Joean et al., 2020; Puplampu et al., 2024; Soriano-Arandes et al., 2019; Tiberi et al., 2021). Therefore, early TB treatment averts

TB deaths, community spread, drug resistance, and hence economic and psychosocial affliction (Du Preez et al., 2022; Suliman et al., 2022).

The 2016 TB report by the WHO ranks Kenya among the 30 high TB burden countries globally (Magu et al., 2016) with the highest burden of TB, multidrug-resistant TB, and TB/human immunodeficiency virus (HIV) co-infection (Ogwang et al., 2021) that contribute to over 80% of the global burden (Amisi et al., 2021; Cilloni et al., 2020; Marangu et al., 2017). The Kenya TB prevalence report (2016) indicates that TB in the country is higher than had been estimated with about half of the who fall ill with TB annually are missed (Enos et al., 2018).

In the year 2019, over 140,000 TB (TB Incidence) cases occurred in Kenya with an estimated 86,504 people with drug-susceptible tuberculosis (DSTB) notified and reported to the national surveillance system and a national prevalence of 348 per 100,000 (Ciccacci et al., 2021; National TB &Leprosy Disease -Program, Ministry of Health Kenya, 2019). In the year 2020, Kenya reported a case notification rate and a detection gap of 48% for drug-sensitive Tuberculosis (DSTB). The Kenya TB prevalence survey discloses that the highest TB disease burden was reported among populations who dwell in urban settings (Enos et al., 2018).

Nairobi is an urban city and one of the 47 counties of Kenya and is also the capital city of Kenya with an estimated population of 4.3 million people (Kenya National Bureau of Statistics, 2019). The county has been contributing over 14% of all TB cases notified in the country since 2014(Maore et al., 2017; Ministry of Health Kenya, 2019). Nairobi and Kiambu have continuously been ranked among the top 10 counties with the highest number of DSTB cases in Kenya having notified 13% and 5% respectively in 2019 (NTLD-P Ministry of Health Kenya, 2019). In 2015, an estimated 10 counties accounted for 48% of the total notified TB cases, with Nairobi leading at 12,425 cases, followed by Mombasa (4,225), Kiambu (3,702), Nakuru (3,636), Meru (3,420), Kisumu (2,933), Turkana (2,250), Machakos (2,223), Kakamega (2,184), and Homabay (2,143) (*Source TIBU May 2016*).

2.5.2 Active TB Case Finding

TB continues to be one of the most prevalent infections worldwide, leading to considerable illness and death. In 2019, the World Health Organization estimated there were 10 million TB cases and 1.2 million deaths. Despite global initiatives, approximately 3.6 million people with

TB are missed each year by health systems and do not receive the necessary care (Centers for Disease Control and Prevention, 2015; Deutsch-Feldman et al., 2021; World Health Organization, 2018). Active TB case finding involves Systematic screening TB which includes organized identification of individuals suspected of having active TB within a specific target group, using tests, examinations, or other procedures that can be quickly administered. The TB cascade includes TB Incidence, TB testing, TB diagnosis, the start of treatment and treatment completion as defined by the (*WHO Indicators Definitions*, n.d.)

2.5.3The TB Cascade

The TB Incidence stage represents the total number of new TB cases occurring in a specific population over a defined period, often reported annually or per 100,000 population. The following stage is the TB Screening where individuals who may be at risk of TB, undergo screening for TB infection or disease. The third stage in the TB cascade is TB Diagnosis where individuals who screen positive for TB or present with symptoms suggestive of TB undergo diagnostic testing to confirm the presence of TB infection or disease. TB Treatment Initiation: Confirmed TB cases receive appropriate treatment regimens promptly upon diagnosis. Lastly, patients who initiate TB treatment are notified and monitored to ensure adherence and completion of the prescribed treatment regimen. Completing treatment is crucial for preventing relapse, developing drug resistance, and achieving a cure (Lisboa et al., 2020; Marley et al., 2023; Oga-Omenka et al., 2020). The TB notification rate is a key public health metric that measures the number of new and relapse cases that are reported to public health authorities within a specific time frame, typically per 100,000 population per year. This rate is crucial for monitoring the incidence and control of TB in a given area. TB Incidence rate is an epidemiological indicator used to assess the burden of TB within a community or region and to monitor trends in TB transmission over time (Collin et al., 2019; World Health Organization, 2022).

Active TB case finding faces several challenges among them diagnosis of Extra pulmonary TB, challenges in executing intended plans connected to healthcare systems, delivering healthcare, and the obstacles faced by patients (Arega et al., 2020; Kunciw& de la Cruz, 2021; Nagaraja et al., 2021). Further challenges within healthcare facilities encompass delayed care-seeking by the community, insufficient awareness among healthcare professionals, negative attitudes, and apprehensions toward screening, as well as financial obstacles (Isangula et al., 2023) alongside insufficient training of healthcare personnel,

staffing shortages, and community indifference stemming from stigma, there are additional challenges such as a lack of awareness about TB, high levels of illiteracy, difficulties in persuading patients to undergo sputum tests, and delays in obtaining test results (Shamanewadi et al., 2020).

Tuberculosis case finding is assessed through TB case notification rate (CNR) which is estimated incident TB cases that are detected and notified to the health system - new and relapse TB cases notified per 100,000 population in a given year(Gibbons et al., 2014; Kimbrough et al., 2012)

2.5.4TB Implementation in Kenya

In Kenya, Tuberculosis treatment is provided as a free service at Designated National Tuberculosis, Leprosy, and Lung Disease (DNTLD) sites to ensure high standards of care and maintain treatment quality. These sites are strategically equipped to manage TB cases effectively, supported by a robust referral system that links patients to appropriate care services. This referral pathway ensures that individuals diagnosed with TB receive timely and coordinated care, improving treatment outcomes and supporting the national effort to control and eliminate the disease. The TB treatment is supported by facility clinicians, nurses, Lab officers, facility incharges and administrators with close supervision from county TB and Sub County TB coordinators (Mailu et al., 2019; NTLD-P Ministry of Health Kenya, 2021). In 2019, the Government of Kenya, along with its partners and counties, provided technical support, with an estimated total expenditure of 52.5 million USD(NTLD-P Ministry of Health Kenya, 2019)

2.6 Strategic Management Practices for Active Tuberculosis Case Finding

The Kenya National Strategic Plan for TB 2019 – 2023 puts emphasis on identifying people with TB even before they seek care (Republic of Kenya Ministry of Health, 2019). As a result of the missed cases globally, the WHO calls for a multi-sectoral approach through the Multisectoral Accountability Framework with various regions adopting *TB case-finding strategic approaches*(World Health Organization, 2017).

Among the proposed strategies aligned to the End TB strategy is active case finding: This model involves actively searching for cases of TB through targeted screening programs and community outreach (Kusimo et al., 2018). Passive case finding is the traditional approach to TB case finding, where patients with symptoms seek care and are diagnosed through health

services (González Fernández et al., 2020; Yirdaw et al., 2014). This model is less efficient and more likely to result in delays in detecting TB cases, diagnosis and treatment (Kawamura, 2018). Index case finding/Contact management: This model involves identifying and treating the close contacts of a confirmed TB case (Kigozi et al., 2019; Shah et al., 2020). This approach can be particularly effective in detecting TB cases in households and communities with a high prevalence of TB (MacPherson et al., 2019). Integrated case finding: This model involves integrating TB case finding into other health programs and services, such as HIV service delivery (Gilbert et al., 2015; Irfani et al., 2021). This can increase the efficiency of TB case finding (Shenoi et al., 2017).

Strategic management relies on the healthcare system's ability to be flexible and adaptable in response to potential changes (Barzylovych et al., 2020). It is expected to bolster leadership, streamline management, improve decision-making, and elevate the appeal and efficacy of healthcare organizations and the work of healthcare workers. (Nurmeksela et al., 2021). The efficacy of strategic management practices in health and tuberculosis case finding incorporates multiple elements aimed at enhancing detection rates and consequently diminishing TB transmission (Giyose & Tshotsho, 2015; Holubovska & Vysotskyi, 2020; Ramani, 2010). The specific considerations include empowering project management (Ershadi et al., 2020) and capacity building (Y. Li et al., 2022).

Successful implementation of strategic management is a multifaceted process that involves assessing the execution of strategies along with conducting market research, SWOT analysis, and forecasting. It also requires thorough budgeting, the recruitment, training, and motivation of skilled personnel. Adopting a comprehensive approach to strategy formulation and implementation involves engaging everyone in the organization to contribute effectively (Addae-Korankye & Aryee, 2021; Kabeyi, 2019; Mišanková & Kočišová, 2014; Muminović et al., 2020).

2.6.1 Goal Setting in Strategic Management

In the study on goal-setting models in multilevel state strategic management for socio-economic development, (Pisareva, 2021) highlights several key aspects of modernizing the methodological framework for strategic planning amidst the constitutional transformation of public authority systems. These aspects include considering the value foundations of activities within distributed management systems for socio-economic development, analyzing the challenges of formalizing goal-setting by participants in the multilevel strategic planning

process, and justifying the structure of the theoretical model for goal-setting. The article also examines the overall characteristics of the state strategic planning system in the Russian Federation, particularly from the perspective of goal achievement.

A study by Palmer & Flanagan, (2016)exploring the Sustainable Company: Looking at Goals for People, Planet, and Profits. The findings offer valuable insights for sustainability professionals aiming to set goals for their organizations and understand the existing goal-setting landscape among large firms. Originality/value: While earlier research has focused on analyzing the content of sustainability reports, this paper is the first to specifically examine sustainability goals. Considering the significance of goal setting in strategic management, this research addresses a crucial gap at the intersection of sustainability and strategy.

2.6.2 Capital Support in Strategic Management

All aspects of strategic management accounting are crucial in influencing business outcomes, aligning with the resource-based view theory of firms. To achieve strong business results in highly competitive environments, executives must provide valuable resources and capabilities to effectively support the implementation of strategic management accounting (Phornlaphatrachakorn & Na-Kalasindhu, 2020). A study explored the impact of entrepreneurship on managerial innovation capacity, focusing on the moderating effects of policy finance and management support. The findings demonstrate that both policy financial support and management support play crucial roles as moderating factors, influencing the relationship between entrepreneurship and innovation capacity. This highlights the importance of a supportive policy environment and effective management practices in fostering innovation within entrepreneurial ventures (Jin & Lee, 2020).

A study on the mediating effects of finance on the performance of hospital facilities management (FM) services found that finance plays a crucial role in FM performance, with significant indirect effects observed across all three performance dimensions. These findings underscore the importance of financial support in enhancing FM services. Consequently, the study encourages hospital management to prioritize FM as a vital aspectof sustainable resource management to improve overall healthcare outcomes.(Amos et al., 2021)

2.7 Effectiveness of Strategic Management Practices for Active TB Case Finding

The World Health Organization whose mandate is to develop and disseminate evidence-based policy and guide TB performs regular reviews and guides for country adoption (Ruger

& Yach, 2009). Among the proposed strategies is the End TB strategy, which provides a roadmap for ending the TB epidemic (World Health Organization, 2015).

Among the models proposed include Active case finding (ACF) This model involves actively searching for cases of TB through targeted screening programs and community outreach (Kusimo et al., 2018). This can include screening at high-risk settings such as hospitals, prisons, workplaces bus stages and marketplaces. It includes targeted outreach to populations with a higher risk of TB, such as people living with HIV (Morishita et al., 2016). In a programmatic study in Peru, The model for TB case finding among household contacts identified notably more secondary TB cases however, it did not prove to be cost-effective. (Shah et al., 2020).

Passive case finding: This is the traditional approach to TB case finding, where patients with symptoms seek care and are diagnosed through health services (Oboho et al., 2023). This model is less efficient and more likely to result in delays in detecting TB cases, diagnosis and treatment (Kawamura, 2018). Index case finding/Contact management: This model involves identifying and treating the close contacts of a confirmed TB case (Kigozi et al., 2019; Shah et al., 2020). This approach can be particularly effective in detecting TB cases in households and communities with a high prevalence of TB (MacPherson et al., 2019). Integrated case finding: This model involves integrating TB case finding into other health programs and services, such as HIV service delivery (Gilbert et al., 2015; Irfani et al., 2021). This can increase the efficiency of TB case finding (Shenoi et al., 2017).

The WHO callsfor countries to adopt global targets and milestones with reliable measurement of progress in reducing TB incidence, TB deaths, and catastrophic costs. High-performance TB surveillance and national monitoring of progress is essential with the End TB Strategy calling for bold policies for Effective implementation which requires effective government stewardship (World Health Organization, 2015). In South Africa, progressive policies on TB management have resulted in improved favorable outcomes and a reduction in mortality (Ndjeka et al., 2020). In India, great progress toward TB prevention and control has been made with the adoption of policies that call for greater resource allocation and high-level political commitment (Sachdeva & Mase, 2019).

Policies on Public – the public-private mix (PPM) have also been singled out together with use of digital tools to simplify TB care delivery (Uplekar, 2016). Policies on inclusivity have

been key in countries like India where need for inclusive national TB plans and calls for action to End TB (Dhavan et al., 2017). Notably, in High TB Burden countries, there is limited implementation of guidelines due shortage of products and high costs and the need for support in implementation (Faust et al., 2020; Wambiya et al., 2018).

The systematic implementation of TB screening programs necessitates a clear approach. Crucial aspects to be taken into account involve establishing precise goals and objectives through a comprehensive situation assessment. This includes deliberating on the role of TB screening within the broader strategy for improving TB detection, prioritizing and identifying high-risk groups, selecting suitable screening and diagnostic algorithms, and implementing context-specific strategies with the involvement of relevant partners. Additionally, it is essential to give due attention to ethical considerations and incorporate built-in monitoring and evaluation mechanisms.(Creswell et al., 2013; Kane et al., 2018)

To enhance the effectiveness of TB programs, it is crucial to prioritize additional training for both the community and healthcare providers. Strengthening supply chain mechanisms is also essential, along with the improvement of community awareness among caregivers. Exploring the utilization of technology further contributes to the overall effectiveness of the program(An et al., 2023; Antarina et al., 2020).

2.8 Strategic Control, Monitoring and Evaluation of Strategic Management Practices

Strategic control focuses on performance measurement and aligns to standardized management practices (Höglund et al., 2021; Kusek, Jody Zall; Rist, 2013) while strategic management involves setting objectives, analyzing internal and external environments, formulating strategies, implementing them, and continuously evaluating results. M&E plays a critical role in the implementation and control phases, allowing organizations to determine whether strategic actions are yielding the intended results and to adjust course when necessary through regular data collection, performance tracking, and outcome assessment, M&E enables accountability, transparency, and learning. Key performance indicators, score cards and logic models are essential and allow organizations to remain responsive to change (Bryson, 2010; Hackler & Saxton, 2007; Zall Kusek & Rist, 2004)

2.9 Capacity of Staff in Strategic Management

Strategic management presents both opportunities and challenges for nonprofit organizations, requiring considerable investment of time, resources, and human capital, which not all

nonprofits have in abundance (Miller, 2018). The effectiveness of strategic management in the nonprofit sector can vary significantly due to these constraints. Implementing strategic management practices can lead to enhanced organizational effectiveness and impact, but it demands a level of commitment and capacity that may be beyond the reach of some nonprofits. This challenge underscores the need for careful consideration and planning when integrating strategic management into nonprofit operations, as the potential benefits must be weighed against the resources required to achieve them (Wiepking & de Wit, 2024)

2.10 Theoretical Literature Key Findings and Conclusions

The strategic management practices involve conducting a situation analysis, goal setting, strategy development, and implementation, aiming to optimize resources for improved health outcomes and system sustainability. The strategic management practices in relation to TB case finding involve several steps which include Situation analysis, setting goals and objectives, Strategy development, and Implementation: The next step is to implement the strategy, which may involve the allocation of resources, the development of new programs, or the modification of existing programs. Implementation should be guided by a clear plan and the necessary resources should be available.

The Porter Diamond Theory, widely used in strategic management, underscores four interconnected factors; Factor Conditions, Demand Conditions, Related and Supporting Industries, and Firm Strategy, Structure, and Rivalry as determinants of competitiveness. The effectiveness of the Porter Diamond Theory lies in its ability to support a comprehensive analysis, identifying strengths and weaknesses to enhance competitiveness. It offers a valuable tool for policymakers, economists, and businesses by considering the broader ecosystem in which industries operate.

Porter Diamond theory has been applied in various studies to analyze the determinants of competitive advantage and guide the development of effective strategies. Its components application in health has helped policymakers and healthcare organizations understand the factors that contribute to success or failure and develop evidence-based policies and programs that are tailored to the local context. Applying the Porter Diamond Model to healthcare, specifically tuberculosis case finding, enables a comprehensive understanding of the factors influencing competitive advantage and the formulation of effective strategies, as Foster-Pedley & Lerer (1999) suggest. The theory provides a holistic perspective, emphasizing

interconnections between factors and guiding the formulation of empirically grounded policies and initiatives.

Tuberculosis is a highly contagious and notifiable disease that is caused by the Mycobacterium tuberculosis bacteria and is transmitted through the inhalation of droplets containing the bacteria, typically when an infected individual coughs or sneezes. Globally about a quarter of the population is infected. Kenya is among the 30 high-burden countries for TB with Nairobi, contributing over 10% of TB notification rates in the country with an estimated 40% missed/undetected. To overcome the missed opportunities, health facilities need to have the necessary strategic management resources and support to effectively implement, monitor, and evaluate TB case-finding strategies (Shayo & Shayo, 2019) .

Strategic management is essential for effective and efficient management of programs including tuberculosis programs globally. The strategic management practices in TB case finding are focused on continuous improvement and resource optimization to lessen the burden of TB and enhance community health. This involves several key steps: situation analysis, goal setting, strategy development, and implementation. Implementation entails allocating resources, developing new programs, or adjusting existing ones, all guided by a clear plan and resource availability. Additionally, employing systems thinking and health systems strengthening principles helps grasp the complexity of TB management, emphasizing interconnectedness and advocating for a coordinated approach aligned with various contextual factors. This study delves into diverse strategies for improving TB case finding, aligning with the End TB strategy, by identifying existing approaches, evaluating their strengths and weaknesses, and offering recommendations for enhancement.

2.10.1Moderation

A moderation variable, or intervening variable, is critical in influencing the relationship between an independent variable and a dependent variable, affecting both the strength and direction of their association. Within the realm of organizational change, resource allocation is recognized as a vital moderating factor that significantly impacts the successful implementation of strategic change management practices. This underscores the importance of effectively managing and distributing resources within an organization to ensure the successful adoption and execution of these practices (Lewis, 2019). Institutions that reallocate resources more regularly are more likely to run larger budget surpluses

2.11 Empirical Literature Review

This review seeks to summarize and evaluate the existing evidence on the strategic management practices used to manage TB active case finding within health facilities in Nairobi County. The review focuses on the practical applications of these strategies and their effectiveness in achieving the desired outcomes.

2.11.1 Strategic Management

Strategic management is practices where frameworks and concepts help organizations develop and implement effective strategies to achieve their goals and gain a competitive advantage.

In a study whose aim was to examine the impact of strategic management practices on the growth of SMEs in Ghana, the study unveiled a positive correlation between strategy formulation and the growth of SMEs (Addae-Korankye & Aryee., 2021). In Indonesia, a study aimed at evaluating the Influence of Strategic Management Practices on SME Performance in Makassar revealed that strategic management practices such as strategic planning, execution, and evaluation exerted a positive and significant influence on the sales volume, break-even point (BEP) attainment, and profits of SMEs (Omsa, 2017).

In a study conducted to assess various methods for strategic management in healthcare organizations within the Azerbaijan Republic, a combined approach utilizing Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis alongside the Balanced Scorecard (BSC) methodology was employed. This integrated SWOT-BSC methodology proved to be highly effective in crafting a strategic roadmap, enabling organizations to implement chosen strategies more efficiently and defining their strategic objectives (Akbarov et al., 2021)

A scoping review towards End TB targets was able to review nineteen articles aimed at evaluating control strategies for TB care. However, in the review, some regional TB policy or practical experiences were not included since they were published in other languages and not English or even unpublished (J. Li et al., 2017).

2.11.1.1 Strategic Management Theories

Strategic management theories provide insights and guidance for organizations to develop, implement, and evaluate their strategies effectively (Bao, 2015; Rosenberg Hansen & Ferlie,

2016). They include Health Systems Strengthening Theory, Resource Based Theory, Behavioral Theory, Porter Diamond theory among others

Empirical studies on health systems strengthening demonstrate the role of participatory approaches in strengthening health systems. For instance, Abayneh et al. (2020) conducted a study in Ethiopia examining the use of Theory of Change workshops as a mechanism for co-producing a strategic framework for service user and caregiver involvement in mental health system strengthening. Their findings indicate that the ToC process provided a practical platform to collaboratively design a scale-up model tailored to Ethiopia's mental health care needs (Abayneh et al., 2020)

Similarly, Munir and Worm (2016) explored health systems strengthening within the context of German development cooperation. Their study found that designing effective health strategies requires integrating insights from both existing health policy frameworks and real-world implementation experiences. The authors argue that empirical evidence from past program outcomes, combined with strategic planning tools, contributes to a more comprehensive and adaptive health systems strengthening approach. This research underscores the importance of grounding national strategies in both policy and field-level learning to ensure relevance and sustainability in diverse development contexts (Munir & Worm, 2016)

An empirical study of resource based theory by Rostila (2011) applied a resource-based theory to the concept of social capital in health research, exploring how social resources influence health outcomes. The findings suggest that while the proposed definition does not fully resolve theoretical ambiguities within the health field, it offers a useful perspective by emphasizing the central role of social resources (Rostila, 2011)

An empirical study by Foster-Pedley and Lerer (1999) explored the application of strategic management theory in global public health by proposing a model that integrates Porter's Diamond of National Competitive Advantage and the Value Net framework by Brandenburger and Nalebuff. The model was used to illustrate the interconnections between key sectoral health determinants and overall health status.

The findings suggest that such generic management theories can offer valuable insights into public health systems by framing health determinants within a strategic and competitive

context. While the model is not exhaustive, it demonstrates the potential for cross-disciplinary integration between strategic management and public health, thereby expanding the relevance and application of business theories in health intervention planning and policy development (Foster-Pedley & Lerer, 1999)

2.11.1.2 Critique of Literature on Strategic Management Theories Application in Active Tuberculosis Case Finding

The key limitation of the health systems strengthening theories in the empirical studies by Abayneh et al. (2020) and Munir and Worm (2016), compared to the application of Porter's Diamond Theory in TB case finding, lies in their narrower focus on participatory and policy-aligned frameworks, which may not fully capture the competitive, structural, and systemic factors influencing health service delivery.

While the studies by Rostila (2011) and Foster-Pedley and Lerer (1999) provide valuable contributions to understanding health systems through the lens of strategic and resource-based theories, they present certain empirical limitations when compared to the direct application of Porter's Diamond Theory in tuberculosis (TB) case finding. Rostila's resource-based approach focuses primarily on social capital and individual-level resources, offering insight into how social networks and collective support affect health outcomes. However, it falls short in addressing the structural and systemic dynamics that influence healthcare delivery, such as workforce capacity, demand conditions, or supply chain networks—factors that are central to TB case detection and management. Its emphasis on abstract social constructs also limits its practical application in designing targeted interventions for diseases like TB that require system-level responses.

Similarly, while Foster-Pedley and Lerer (1999) introduce a hybrid model drawing from Porter's Diamond and the Value Net framework, their approach remains theoretical and broad, focusing on general health determinants and global health status rather than disease-specific challenges. The model highlights useful sectoral linkages but does not delve into context-specific enablers and barriers critical for operationalizing strategies in TB control, such as domestic demand conditions, firm-level governance, or local institutional rivalry. In contrast, the direct application of Porter's Diamond Theory to TB case finding enables a more granular, systemic analysis by examining the interplay of factor conditions, supporting structures and strategy thus offering a more actionable framework for strengthening TB service delivery in specific health system contexts.

2.11.2 Strategic Management Practices Applied in Active TB Case Finding

In a study to investigate a proactive management approach to managing construction safety found a need for proactive practices of construction safety management and engagement of all stakeholders and in a study undertaken in Malaysia assessing the effect of strategic management practices on corporate performance three strategic management practices were identified specifically strategy formulation, strategy implementation, and evaluation and control. In a study to investigate the role of sustainable supply management (SSM) practices in a firm's overall sustainability performance reveal that proactive practices are dynamic in nature and aim toward the development of new capabilities. Thus, proactive practices have a long-term effect and are necessary for gaining higher sustainability performance(Xu et al., 2023; Singh et al., 2021)

In a studyto determine the effect of Strategic Human Resource Management Practices (SHRMPs) on performance of public universities, shows that business entities must prioritize internal focus to harness resources, with the most critical being human resources. It is the workforce that empowers these entities to gain a competitive edge in their operations, as they mobilize and extract value from other resources within the enterprise (Mwaura et al., 2022).

In a study on strategic human resource management and its impact on organizational performance, Rahman Khan (2021) found that companies in Bangladesh that adopt a more strategic approach to managing their human resources achieve higher turnover, even with a similar workforce size. Additionally, Goswami, 2018; Kankaew et al., 2021) recommend focus to strategic human resource management during times of crisis, as this approach helps organizations navigate change effectively through leadership and organizational culture. The study by (Mwombeki, 2022) to assess the influence of the dimensions of agency capacities on the performance in generating own sources demonstrated that human resource capacity is critical for organization performance however, (Fogarty et al., 2009) in a study titled The Kenya Emergency Hiring Plan reveals that global shortage of health workers negatively affects organizations performance. The capacity of healthcare workers is a critical component in implementing strategic management practices. The Supply-side limitations stem from insufficient human resources, inadequate compensation, lacking technical guidance, minimal supervision, and restricted equipment availability. On the demand side, challenges primarily involve costs, limited transportation access, cultural norms, and language barriers. Additional hurdles pertain to overarching strategic management and cross-sectoral contextual factors,

such as low educational attainment, gender disparities, and inadequate transport and communication infrastructure (Sychareun et al., 2013; Ugwuibe, 2020).

A study examining the moderating role of political skill among women entrepreneurs in the relationship between education level and firm performance in Greece found that possessing a bachelor's degree or higher, combined with political skill, enables women entrepreneurs to enhance their firm's performance. Additionally, the greater the political skill, the stronger the impact of education level on firm performance. The theoretical model integrates both political influence and human capital theories (Demirbağ et al., 2022). Similarly, the study aimed at determining and analyzing the effects of work experience, education and training, and education level both individually and collectively on employee performance at the Soppeng District Education Office found that work experience, education and training, and education level each have a positive and significant impact on the performance of employees (Yasin et al., 2021).

A study to examine the impact of the internal organizational environment on the performance of NGOs by (Odhiambo & Njuguna, 2021) identifies a positive relationship between strategic management and suggests conducting additional research. In the study on Strategic Management Practices and Sustainability of Agribusiness Enterprises in Nyeri County, Kenya,2022) whose aim was to examine the effect of strategic management practices on the sustainability of Agribusiness enterprises in Kenya total quality management practices were identified as influencing performance. In Kenya, a study by (Wanyama & Aila, 2022) points out that to accomplish organizational objectives, a parastatal must engage in planning, formulating, and executing strategies. This is aimed to inspire senior management within parastatals in Kenya to embrace strategic management, recognizing its potential to enhance performance.

In a study to assess the effect of knowledge management on strategic management in the General Administration of Education in Jeddah, Saudi Arabia, knowledge management was found to have an impact on Strategic Management (Alghofeli, 2022). Similarly, in a study by (Moreno-Carmona et al., 2022) to analyze the strategic role played by the University Management Teams, consensus was found on the key factors driving the managerial performance of UMTs, highlighting that seniority in academic positions, institutional engagement, prior management training (mentorship), professionalization, and strategic thinking are essential for fostering a more flexible, adaptive, competitive, and sustainable

higher education institution in the long term. (Moreno-Carmona et al., 2022) also highlights that University Management Teams, are key factors driving the managerial performance and are essential for fostering a more flexible, adaptive, competitive, and sustainable higher education institution in the long term.

In Indonesia a study that aimed to establish the digital governance of the project management system at PT Biro Klasifikasi Indonesia (BKI), particularly on the use of Standard Operating Procedures, showed the need to develop a standard operating procedure for digital governance of project management in order to succeed in the project (Prakoso & Fitriati, 2023).In a study by (Yani & Daka, 2022)aimed at analyzing and proving the effect of production planning and product quality on operational performance, moderated by standard operating procedures (SOPs), the results showed that product quality does not have a significant effect on operational performance when moderated by SOPs. However, (Artini et al., 2021) in a study aimed at determining whether the implementation of standard operating procedures (SOPs) can improve the performance of butlers in an Indonesian hotel found that well-implemented SOPs positively impact employee performance.

A study examining the relationship between strategic management practices and the operational outcomes of SMEs in Nigeria focused on four primary practices. These included analyzing the environment for potential opportunities, formulating strategies, implementing strategies, and evaluating strategies. The research aimed to understand how these practices impact the performance and success of SMEs, providing insights into how effective strategic management can influence operational results. (Ekon & Isayas, 2022)

In a study on strategic framework of tuberculosis control and prevention in the elderly- A scoping reviews towards End TB targets. The study indicates that programmatic management aims to implement the strategic plan effectively by focusing on several key actions (Li et al., 2017). In a standardized national surveillance system, it is essential to promptly identify and report all elderly TB patients, infected residents, and staff in healthcare facilities and the community through active or passive case-finding strategies. Providing targeted TB education is crucial for equipping healthcare workers, patients, families, visitors, and employees with the necessary knowledge and skills to engage effectively in TB control programs. Regular assessments are required to monitor and evaluate the activities related to TB control and ensure accountability for designated responsibilities. Strengthening the roles of health departments and primary healthcare providers is vital, as health departments should

assist in policy development, update procedures and record systems, and provide epidemiological and management support, including consultation, training, and assessments. Primary healthcare providers are key in educating individuals, promoting follow-up care, and connecting patients with appropriate support systems.

The Pan-London tuberculosis services: A service valuation study by (Belling et al., 2012) revealskey issues concerning the organization, delivery, professional workforce, and skill mix of London's TB services. Many of these issues pose challenges that must be addressed in the future development of a strategic framework for a pan-London TB service. There is a need for more consistent strategic planning, coordination, and sharing of best practices, alongside a review of the pan-London TB workforce development strategy, which should address evolving professional roles, skills development needs, and patient pathways. These findings may also be relevant to the development of TB services in other European cities.

In a study on aligning the FM division with the vision of PPP stakeholders by (Arispe et al., 2023), the findings highlighted key strategic FM functions essential. (Kankaew et al., 2021) suggests that partnerships enable participants to better understand the social and administrative conditions necessary for successful implementation. Partnerships involve collaboration both within and across policy fields, connecting interdependent levels of government at national and international levels (Hashim et al., 2019).

A study titled "PV Performance Modelling: A Review in the Light of Quality Assurance for Large PV Plants" highlights that quality assurance procedures related to the financing of large photovoltaic (PV) plants are becoming increasingly significant in the broader PV industry. In this context, PV performance modeling is essential for predicting energy yield and assessing the performance of operating plants (de la Parra et al., 2017). In addition, a study titled "Faktor-Faktor yang Mempengaruhi Pening katan Kualitas Pelayanan Kesehatan di Rumah Sakit: Tinjauan Teoritis" reveals that factors such as tangibility, reliability, responsiveness, assurance, and empathy significantly influence healthcare service quality, indicating that these elements play a crucial role in enhancing the overall patient experience in hospitals(Sophiana Enjellin Anathasia & Dety Mulyanti, 2023)

In a study on sustainable HR practices in Indonesian MSMEs from a Social Entrepreneurship Perspective: Training, Recruitment, Employee Engagement, Social Impact of Local Communities, the positive impact of MSMEs engaged in social entrepreneurship on

sustainable practices and the broader community is highlighted, emphasizing the link between sustainability and social entrepreneurship(Janse van Rensburg, 2018).

Also, Janse van Rensburg,. (2018) recommends that Community practice in occupational therapy is becoming increasingly relevant worldwide in a study titles A framework for occupational enablement to facilitate social change in community practice while (Dixit et al., 2022)indicated that community engagement plays a crucial role in connecting with employees and investors, as well as identifying sources of innovation. This, in turn, helps the firm engage with customers, manage its corporate reputation, and gain a cost advantage.

2.11.2.1 Critique of Literature on Strategic Management Practices Applied in Active Tuberculosis Case Finding

Strategic management practices play a crucial role in various sectors globally and are increasingly recognized for their potential to enhance organizational performance. Studies across different countries and industries have highlighted the importance of practices such as strategy formulation, implementation, evaluation, and Total Quality Management in driving growth and sustainability. The studies by Singh et al,. (2021), Williams et al,. (2020), and Xu et al,. (2023) provide insights into strategic management practices relevant to TB case finding. Singh et al. (2021a) and Williams et al,. (2020) emphasize the importance of strategy formulation, goal setting, financial analysis, Total Quality Management, and cultivating social capital as key elements of strategic management. These practices aim to enhance overall performance, particularly in the healthcare sector, by ensuring efficient use of resources and aligning organizational goals with proactive measures. Xu et al,. (2023) further underscores the significance of proactive management by demonstrating the need for stakeholder engagement and forward-thinking strategies in construction safety, which parallels the importance of proactive TB case finding in healthcare. A critical observation is that while these studies highlight the essential components of strategic management, they do not fully integrate these practices into a comprehensive framework specifically tailored for TB case finding, limiting their direct applicability.

Kähkönen et al,. (2018) and Mwaura et al,. (2022) extend the discussion of strategic management by focusing on implementation and evaluation. Kähkönen et al,. (2018) identify three key strategic management practices: strategy formulation, implementation, and evaluation, suggesting a cyclical process that is essential for continuous improvement and adaptation. This approach is vital for TB case finding, where adaptive strategies are required

to address evolving challenges. Mwaura et al,. (2022) highlights the importance of strategic human resource management practices, pointing out that internal focus and the effective use of human resources are crucial for competitive advantage. This is particularly relevant in healthcare, where the workforce is a critical asset in TB case finding. However, these studies often overlook the unique challenges faced in the healthcare context, such as resource constraints and the need for tailored approaches to enhance performance outcomes in TB management.

Fogarty et al. (2009) and Ugwuibe,. (2020) provide a broader perspective by addressing the systemic and contextual barriers that impact strategic management in healthcare, particularly in resource-constrained settings like Kenya. Fogarty et al. (2009) highlights the global shortage of healthcare workers and the resultant challenges in implementing strategic management practices, emphasizing the need for adequate human resource capacity. This aligns with the critical role of workforce availability in TB case finding. Ugwuibe (2020) discusses both supply-side and demand-side limitations, such as inadequate compensation, minimal supervision, and cultural barriers, which can hinder the implementation of strategic management practices.

In Kenya, studies by Wanyama & Aila (2022) on Strategic Management Practices and Sustainability of Agribusiness Enterprises in Nyeri County, Kenya, the findings emphasize the significance of strategic management in achieving organizational objectives and influencing performance, particularly in the context of parastatals and agribusiness enterprises. Regarding TB case finding in Kenya, while there is limited direct research on the application of strategic management practices, insights can be drawn from studies by Belling et al. (2012) (Pan London Tuberculosis Services-A service evaluation) and studies by J. Li et al. (2017). The strategic framework of tuberculosis control and prevention in the elderly- A scoping review towards End TB targets. These studies underscore the importance of strategic leadership, planning, and coordination in TB service delivery, suggesting potential areas for the application of strategic management principles within the healthcare context. Furthermore, efforts to strengthen TB case management in Kenya, as highlighted in studies like Amisi et al. (2021); Angala et al. (2022) and Szkwarko et al. (2019), emphasize the need for enhanced monitoring and evaluation processes, capacity building, and the utilization of local data to inform decision-making and support supervision.

The studies collectively underscore the necessity of integrating strategic management practices in healthcare to enhance TB case finding. However, a key critique lies in their generalizability and application. While proactive management and strategic HR practices are emphasized, there is often a lack of specificity in how these strategies directly impact TB case finding. Moreover, the studies frequently focus on high-level strategic frameworks without adequately addressing the granular, operational challenges specific to TB case finding in settings like Nairobi, Kenya. There is a need for more targeted research that explores how these strategic management practices can be customized and effectively applied in TB case finding to overcome unique challenges such as workforce shortages, infrastructural deficiencies, and socio-cultural barriers

2.11.3 Effectiveness of Current Strategic Management Practices in Active TB Case Finding

Effective management practices play a crucial, influential, and significant role including within construction companies (Bldr Chidozie J. Ezenwata,. 2021). Various studies conducted including in Malaysia by (Singh et al., 2021) it was affirmed that strategic management practices, specifically strategy formulation, strategy implementation, and evaluation and control, have a significant impact on the performance of cooperatives in Malaysia. In Bangladesh, a study on the performance of three strategic management practices reveals a positive outcome of strategic management practices for SMEs. The study on small and medium enterprises (SME) owners in Indonesia reveals Strategic management practices influence a positive outcome on performance (Omsa,. 2017).

In an editorial introducing the special issue on the relationship between strategic performance management and team strategy, company performance, and organizational effectiveness, it is noted that strategic performance management can occur at the top management, middle management, or strategic operations levels. This editorial highlights that the impact of various teams on team strategy, company performance, and organizational effectiveness can be considered a distinct phenomenon, referred to as "strategic team performance management."(Sum Chau, 2008). In a systematic review study focused on health care, the aim was to understand how the behavior of focal leaders impacts the performance and effectiveness of health care teams. The study emphasized the importance of training and encouraging nursing leaders to adopt team leadership behaviors (O'Donovan et al., 2021) Although, (Marlow et al., 2018) in a review on Performance measures for health teams point

out that to ensure these teams are performing effectively, valid and reliable measurement is necessary.

In a study by (Mwombeki, 2022) assessing the influence of various dimensions of agency capacities on performance in generating their own sources, it was demonstrated that human resource capacity was critical in the agency's performance. (Samad et al., 2018) while examining the effects of strategic management and organization culture on performance revealed that the performance of government organizations was impacted by their culture.

In the realm of healthcare, a study was conducted to identify and analyze different forms of leadership and management that could enhance the resilience of health systems built upon primary healthcare principles (Puertas et al., 2020). It is suggested that health systems rooted in primary healthcare should implement optimal management practices to attain quality, efficiency, and effectiveness. In addition, (Naranjo-Gil et al., 2016) indicate that modern management control practices are better suited than traditional methods for accomplishing public health policies. Additionally, findings demonstrate that public health objectives are more effectively attained when managers employ management control practices in a supportive rather than authoritarian manner.

In a qualitative study aimed at understanding nurse managers' perspectives on their future roles, the findings suggest that embracing shared governance and leading multidisciplinary teams, coupled with a heightened emphasis on proactive strategic planning, will enhance their capacity to influence decision-making (Nurmeksela et al., 2021). By integrating project management practices into strategic planning, health organizations can enhance cost-effectiveness (Maddalena, 2012). In Turkey, a study examining the acquaintance of strategic management tools among executives in public and private hospitals exposes a deficiency in their understanding of the foundational strategic management tools essential for strategic management practices. (Demir & Ugurluoglu, 2019). In India, (Zhang et al., 2020) in a mobile application feasibility study showed that unified collaborative action is key to quality health particularly TB case detection.

In a study reviewing primary schools in Ankara, Turkey looking at the Effects of sustainable strategic planning applications in primary schools on the effectiveness of total quality management practices, the findings revealed that strategic planning initiatives within schools significantly improved the perceived effectiveness of TQM practices (Sucuoğlu & Erdem,

2021). A meta-analysis by (George et al., 2019) reveals that strategic planning has a positive, moderate, and significant impact on organizational performance as conducted in a study Does Strategic Planning Improve Organizational Performance? A Meta-Analysis.

The study by (Patrucco et al., 2023) investigated the impact of big data analytics (BDA) on strategic decisions and found that businesses with the right resources can fully leverage for high-level strategic decision-making. In a study by (Too & Too, 2010) , a conceptual framework was developed to identify the capabilities required for managing infrastructure assets. This paper offers a new perspective on how asset managers can generate value for their organizations by investing in the appropriate capabilities. It strongly advocates for infrastructure organizations to adopt a systematic approach to pinpointing the necessary capabilities for managing strategic infrastructure.

In a study by (Wanume et al., 2023) in Uganda on The Mediating Role of Transition Management in the Relationship of Strategic Planning Systems and Sustainable Urban Road Infrastructure Development among Town Councils in Uganda, the findings suggest that transition management partially mediates the relationship between strategic planning systems and sustainable infrastructure development among town councils in Uganda. The study concludes that strategic planning systems influence sustainable urban road infrastructure through transition management, emphasizing the importance of participatory planning.

Strategic planning and management play a crucial role in fostering a shared identity. In a study on strategic management practices and sustainability of agribusiness enterprises in Nyeri County, Kenya conducted in 2022, total quality management practices were identified as positively influencing performance in agribusiness. (Maldeniya et al., 2021) in their study aimed at investigating the relationship between Strategic Management practices and the performance of SMEs in Sri Lankareveals that the performance of SMEs in Sri Lanka is impacted by strategic management practices, including strategy formulation, implementation, and evaluation. Just like (Moreno-Carmona et al., 2022) also WHO highlights that Management Teams, are key factors driving managerial performance and are essential for fostering a more flexible, adaptive, competitive, and sustainable higher education institution in the long term.

A systematic literature review by (Palmié et al., 2023), examined existing research on the micro-foundation in the strategic management of technology and innovation. The review

synthesized the findings into an integrative framework and identified promising avenues for future research. It also found a positive correlation between strategic management and the use of technology. Equally, (Al Wazzan, 2018) reveals that the complementary between IT as a competitive factor and strategic management is very important for gaining competitive advantages.

A study by (Iravo, 2014)that was conducted to identify the challenges faced by the Kenya Bureau of Standards in implementing its strategic plans where a review on how organizational structure, leadership style, top management, staff involvement, and organizational change impact the implementation of strategic plans at the Kenya Bureau of Standards. The findings revealed that the strategic planning process faces various risk factors, including inadequate funding and insufficient staff involvement, which negatively affect the strategic planning process and business performance improvement.

In a study by Rees et al., (2022)extended-duration supervision training program yielded several positive outcomes, such as enhanced supervisor practices. These improvements were driven by various mechanisms, including pedagogical approaches (e.g., weekly reflexivity), supervisor involvement (e.g., active engagement), and supportive workplace environments.

2.11.3 Critiques of Existing Literature on the Effectiveness of Strategic Management Practices in Active TB Case Finding

The studies by Ezenwata (2021), Singh et al. (2021), and Omsa (2017) explore the impact of strategic management practices on organizational performance, offering insights applicable to TB case finding. Ezenwata (2021) discusses effective management practices within construction companies, highlighting the importance of strategy formulation, implementation, and evaluation. Singh et al. (2021) extend this by demonstrating how these practices positively impact cooperatives in Malaysia, while Omsa (2017) confirms similar findings in the context of small and medium enterprises in Indonesia. These studies collectively underline the critical role of strategic management in enhancing organizational effectiveness, which is relevant to TB case finding as effective strategic planning can help improve early detection, resource allocation, and operational efficiency. However, they focus primarily on business environments, requiring careful adaptation to the healthcare sector, where patient-centered approaches and public health considerations play a more significant role.

In the healthcare context, studies such as those by Puertas et al., (2020) and Naranjo-Gil et al., (2016) highlight how management practices influence health system resilience and public health policy effectiveness. Puertas et al. emphasize the need for optimal management to achieve quality, efficiency, and effectiveness in health systems rooted in primary care principles, resonating with the objectives of TB case finding. Naranjo-Gil et al. suggest that modern management control practices are more effective than traditional methods, advocating for supportive leadership over authoritarian approaches to enhance public health outcomes. These insights are critical for TB control, as they suggest that supportive and adaptive management practices can enhance the effectiveness of TB case finding initiatives. However, the studies do not directly address TB-specific challenges, such as the need for targeted strategies to overcome barriers like stigma, resource constraints, and cultural differences.

Nurmeksela et al. (2021) and Maddalena (2012) further highlight the importance of integrating strategic planning and project management into healthcare settings. Nurmeksela et al., discuss the future roles of nurse managers in multidisciplinary teams, emphasizing proactive strategic planning to influence decision-making. Maddalena's study suggests that incorporating project management practices into strategic planning can enhance cost-effectiveness in health organizations. These findings are relevant to TB case finding as they underscore the need for coordinated, team-based approaches and strategic planning to improve the efficiency and impact of TB control programs. However, these studies focus more on general healthcare management rather than TB-specific issues, indicating a gap in addressing the unique needs and challenges of TB case finding efforts.

The study by Zhang et al., (2020) demonstrates the critical role of collaborative actions in enhancing quality healthcare, particularly in TB case detection. Conducted in India, the study underscores the importance of unified efforts and cross-sector collaboration, highlighting the potential of digital tools and coordinated strategies in improving TB case finding. This aligns with findings from other studies on strategic management, which stress the need for a systematic approach to pinpoint necessary capabilities for managing complex health challenges. However, Zhang et al.'s study could be critiqued for its limited focus on the broader strategic framework needed to sustain collaborative actions, suggesting a need for deeper exploration of how such practices can be scaled and institutionalized in different healthcare settings.

Studies such as those by Iravo (2014) and Sucuoğlu & Erdem (2021) highlight the critical barriers and enablers of strategic management practices within various organizational contexts, including education and public standards. Iravo identifies challenges like inadequate funding and insufficient staff involvement as significant risk factors in implementing strategic plans, which are also relevant to TB case finding programs often hindered by resource constraints and workforce shortages. Sucuoğlu & Erdem's findings on the impact of strategic planning on the effectiveness of Total Quality Management (TQM) practices in schools can be extrapolated to suggest that well-structured planning enhances overall program effectiveness. However, both studies focus on specific sectors outside of healthcare, implying that while their insights are valuable, they must be contextualized and tailored to the unique demands of TB case finding, such as patient engagement, stigma reduction, and community involvement

Several studies across various sectors highlight the importance of effective management practices, particularly strategic planning and implementation, in enhancing organizational performance. In studies in construction companies, cooperatives, SMEs, and agribusiness enterprises, strategic management practices have been shown to positively influence performance. Additionally, strategic planning has been found to have a significant impact on organizational performance across different industries, as evidenced by a meta-analysis.

In the healthcare sector, the adoption of optimal management practices is essential for achieving quality, efficiency, and effectiveness, particularly in health systems rooted in primary healthcare principles. Modern management control practices are emphasized as more suitable than traditional methods for accomplishing public health policies, with a supportive management approach yielding better outcomes. Moreover, in nurse management, embracing shared governance, leading multidisciplinary teams, and proactive strategic planning are identified as key factors for enhancing decision-making capacity. Integration of project management practices into strategic planning is also highlighted as a means to improve cost-effectiveness in health organizations.

2.11.4 Capacity of Facility Staff in Strategic Management Practices for Active TB Case Finding

In a study examining whether supplier selection and monitoring practices influence the relationship between supplier strategies and organizational performance, the findings reveal that developing effective supplier partnerships may require different selection and monitoring

practices compared to arm's-length supplier transactions. Additionally, performance improvements from supplier partnership practices depend on the extensive use of non-price selection criteria, frequent meetings and interactions with suppliers, and supplier certification (Ittner et al., 1999)

A study titled "Training and Development Impact on Organizational Performance: Empirical Evidence from Oil and Gas Sector of Pakistan" reveals that for organizational performance, conducting effective training outcomes required to be done more frequently (Raza et al.,2014) In addition, Strategic agility hinges not only on analytical strategy but also on the array of management practices, behaviors, skills, values, and beliefs that drive senior management in formulating and executing strategic commitments (Doz, 2020). Effective knowledge management has a crucial role if implemented in service institutions aiming to utilize strategic management to address the growing public demands (Alghofeli, 2022). Meaningful involvement and thoughtful reflection from program staff and collaborators are indispensable for every stage of program planning, execution, reporting, and dissemination (Volkov et al., 2019). Effective strategic management demands significant investments in time, resources, and human capital (Miller, 2018).

In a study by (Mwaura et al., 2022) to determine the effect of Strategic Human Resource Management Practices (SHRMPs) on performance of public universities, the findings show that business entities must prioritize internal focus to harness resources, with the most critical being human resources. It is the workforce that empowers these entities to gain a competitive edge in their operations, as they mobilize and extract value from other resources within the enterprise. In a study by (Mwombeki, 2022) to assess the influence of the dimensions of agency capacities to the performance in generating own sources demonstrated that the agency's performance is significantly and positively impacted by planning and development, human resource capacity, and infrastructure capacity.

Globally, Governments, donors, and non-governmental organizations are confronted with the task of finding solutions to address the increasing healthcare demands caused by a global shortage of health workers (Fogarty et al., 2009). The capacity of healthcare workers is a critical component in implementing strategic management practices (Sychareun et al., 2013; Ugwuibe, 2020). Supply-side limitations stem from insufficient human resources, inadequate compensation, lacking technical guidance, minimal supervision, and restricted equipment availability. On the demand side, challenges primarily involve costs, limited transportation

access, cultural norms, and language barriers. Additional hurdles pertain to overarching strategic management and cross-sectoral contextual factors, such as low educational attainment, gender disparities, and inadequate transport and communication infrastructure (Sychareun et al., 2013).

In Kenya, several studies have been conducted. In a study exploring the impact of strategic management practices on service delivery within public hospitals in Kenya, specifically focusing on Kenyatta National Hospital, the findings reveal a positive relation between Capacity building and Communication as Strategic management practices. In addition, a study to review the child contact management practices in western Kenya recommends strengthening monitoring and evaluation to improve CCM outcomes (Amisi et al., 2021) and capacity building (Szkwarko et al., 2019) including the introduction of TBData4Action, an approach where the emphasis is made on the use of the local and routine data to strengthen decision-making and support supervision (Angala et al., 2022)

In a study looking at strategic management and accounting processes acknowledging Gender,it was found that both feminine and masculine traits play significant roles in these processes with men taking more leadership roles, although they are currently under-researched and not well understood. Research limitations and implications: The study highlights the potential for developing androgynous strategic management and accounting processes that incorporate characteristics from both feminine and masculine perspectives. (Parker, 2008).

In health, a study by (Dill & Frogner, 2024)on the gender wage gap among healthcare workers across different educational and occupational groups found that women make up 77% of the healthcare workforce in the United States. However, gender inequity within the sector negatively impacts women’s compensation and career advancement. The study’s policy recommendations include conducting gender equity reviews within healthcare organizations, prioritizing the promotion of women managers, and adjusting Medicare and Medicaid reimbursement policies to enhance gender equity across healthcare occupations.

2.11.4.1 Critiques of Literature on Capacity of Health Facility Staff in Implementing the Strategic Management Practices for Active TB Case Finding

The study by Raza et al., (2014) on the impact of training in the oil and gas sector highlights the necessity of frequent training to enhance organizational performance. This finding

resonates with TB case finding, where continuous training of healthcare workers is crucial to ensure up-to-date knowledge, proper implementation of guidelines, and effective patient management. Similarly, Doz,. (2020) highlights that strategic agility is driven not just by analytical strategy but also by management practices, skills, and values, aligning well with the needs of TB case finding, which requires a dynamic approach to adapt to evolving challenges in public health. However, these studies emphasize a business-oriented framework, often overlooking the contextual nuances of healthcare, such as the need for culturally sensitive approaches and the integration of community perspectives in TB management.

Studies focusing on human resource capacity, such as Mwaura et al,. (2022) and Mwombeki (2022), underscore the pivotal role of strategic human resource management in organizational performance, emphasizing the need for effective planning, development, and capacity building. These insights are directly applicable to TB case finding, where the capacity of healthcare workers—particularly in resource-constrained settings—is a critical factor influencing the effectiveness of TB detection and management. Supply-side limitations, as discussed by Fogarty et al,. (2009) and Sychareun et al,. (2013), such as inadequate staffing, technical guidance, and supervision, are significant barriers in TB programs, highlighting the urgent need for strategic investments in workforce development. However, the broad focus on general healthcare challenges may not fully capture the specific strategic management needs required for TB case finding, such as targeted training on TB detection methods and strategies to overcome stigma associated with the disease.

Kenyan studies, including those by Amisi et al,. (2021) and Szkwarko et al,. (2019), emphasize the impact of strategic management practices on service delivery in public hospitals, such as Kenyatta National Hospital. The findings highlight the importance of capacity building, communication, and data-driven decision-making, which are critical to enhancing TB case finding outcomes. The TBData4Action approach, for instance, stresses the need to utilize local data to inform decisions, a practice that can significantly improve TB program performance by enabling real-time adjustments and focused interventions. However, these studies often focus on a single healthcare facility or region, which may limit the generalizability of the findings across different contexts within Kenya or in other high-burden TB settings. Additionally, the studies do not deeply explore the systemic barriers, such as

gender disparities in healthcare roles or the specific strategic adjustments needed to optimize TB case finding in diverse and complex environments

The studies discussed provide diverse insights into the strategic management practices and their implications across different sectors, highlighting parallels and contrasts relevant to TB case finding. Ittner et al. (1999) emphasize the importance of supplier selection and monitoring in developing effective partnerships, suggesting that organizational performance improves with strategic interactions, non-price selection criteria, and frequent engagements with suppliers. While not directly focused on healthcare, these findings underline the critical need for careful stakeholder engagement and monitoring in TB case finding, where collaboration with various partners, including NGOs, government bodies, and community health workers, is essential. However, TB case finding faces unique challenges, such as maintaining consistent communication and coordination among diverse partners, which are not thoroughly addressed in the supplier-partnership model.

Strategic agility relies not only on analytical strategy but also on staff capacity specifically management practices, behaviors, skills, values, and beliefs guiding senior management in executing strategic commitments. Effective knowledge management is pivotal for service institutions utilizing strategic management to meet growing public demands. Program success hinges on meaningful involvement and reflection from staff and collaborators throughout the planning, execution, and dissemination stages. Strategic management demands significant investments in time, resources, and human capital. Human resources are identified as a critical asset for business entities, empowering them to gain a competitive edge. In public universities, Strategic Human Resource Management Practices significantly affect performance, emphasizing the importance of internal focus. The global shortage of health workers poses challenges for governments, donors, and NGOs in meeting healthcare demands. Supply-side limitations, including insufficient human resources and equipment availability, coupled with demand-side challenges such as costs and transportation access, hinder effective TB case finding. Cross-sectoral contextual factors, like education levels and infrastructure, further complicate strategic management efforts.

2.11.5 Challenges Associated with Strategic Management Practices for Active TBCase Finding

Strategic management practices face reasonable challenges including political threats (Kazaz &Ulubeyli, 2009) and changes that occur in an organization’s leadership environment

(Mishael Obeidat & Ben Hamed Al Thani, 2020). In a study aimed at identifying the management accounting practices utilized by Malaysian companies (Kiew Heong Angeline et al., 2013) highlighted low adoption rates as a barrier to implementing Strategic Management Accounting (SMA) techniques. Low Acceptance and a dynamic environment, gender, ethnicity and status, business location, and resistance to change pose a challenge to strategic management practices ("Challenges of Strategic Issue Management Practices by Savings and Credit Cooperative Societies in Mombasa County, Kenya," 2020). Integrating sustainability has shown a positive effect on strategic management practices (Alkhodary, 2023).

In a study titled "Importance Performance Analysis Model for Implementation in National Education Standards (SNPs)," the aim was to analyze the implementation of three national education standards (SNPs): management standards, graduate competency standards, and standards for teachers and education staff. This analysis was conducted at the Ummul Quro (UQ) Islamic School and the Bogor Hajj Persaudaraan Foundation (YPHB) using the Importance-Performance Analysis (IPA) model. The findings indicate that to enhance performance, an institution must also maintain the stability of satisfaction levels with performance quality. This includes implementing activities according to agreed-upon programs and encouraging community participation and partnerships/school committees (Mujahidin et al., 2021).

In a study by (Chak et al., 2023) which combined the goal-setting and job demands-resources (JD-R) theories aimed to examine how two project resources—collaborative project leadership and financial project resources—enhance high project performance in community-academic health partnerships. The findings indicate that high project performance is achieved by considering the combined effects of project workers' hope and the two key resources: collaborative project leadership and financial project resources.

The strength of existing strategic management practices of active tuberculosis (TB) case finding within health facilities have been highlighted in a study by (Netto et al., 1999) recognizes the emphasis on strategic Monitoring and Evaluation as a critical function in the health fraternity. (Carlucci et al., 2015) acknowledges administrative support and institutional investment as a strength in current TB/HIV management. In Thailand, a study to identify gaps and opportunities for TB control along the Myanmar border identifies significant collaborative efforts between different stakeholders to achieve a common goal of TB management. In India, (Zhang et al., 2020) in a mobile application feasibility study showed

unified collaborative action as key to TB case detection. Several studies including (Angala et al., 2022) in Kenya have shown efforts towards capacity building of healthcare workers as a strength in TB control.

Among the weaknesses, In Ghana, (Der et al., 2022) reveals a lack of Consistent Implementation in patient referral mechanism to TB case detection. (Power et al., 2016) found several barriers among them outdated guidelines and restrictive practices and regulations across several non-EEA countries in Europe. (Power et al., 2016) recommends standardized recording and reporting for TB while (Cox et al., 2017) is a study conducted in South Africa, recommends strengthening data quality including the use of the data to inform implementation. A Bayesian study among men who are perceived to have a high burden of tuberculosis in Vietnam and Malawi (Horton et al., 2018) reveals inadequate Support where healthcare workers lack the necessary resources and support to implement M&E systems for TB effectively.

2.11.5.1 Critique of Literature on Challenges Associated with Strategic Management Practices for Active TB Case Finding

The study by Kiew Heong Angeline et al., (2013) identifies the low adoption rates of strategic management accounting techniques in Malaysian companies, suggesting that institutional resistance and a lack of awareness can impede the implementation of strategic management practices. This resonates with TB case finding, where resistance to adopting new management tools and insufficient training can undermine the effectiveness of monitoring and evaluation systems critical to TB control. Moreover, the dynamic environments in which these health programs operate further complicate efforts to standardize and sustain strategic management practices. For instance, the variability in resource availability and fluctuating donor priorities can create an unstable operational environment that affects program performance.

The study by Chak et al., (2023) underscores the importance of collaborative project leadership and financial resources in enhancing project performance, findings that are directly applicable to TB case finding initiatives. The emphasis on leadership and financial support aligns with the need for robust leadership in TB programs to drive strategic goals and ensure adequate funding for critical activities such as training, community outreach, and data management. However, in many TB programs, particularly in resource-constrained settings, there is often a disconnect between the availability of financial resources and the strategic

direction needed to optimize case finding efforts. The findings suggest that aligning leadership and financial planning with TB case finding strategies could significantly improve program outcomes, especially when combined with capacity-building initiatives.

The strategic management practices of TB case finding, particularly in settings such as the Myanmar-Thailand border and India, illustrate the strengths of collaborative action and institutional support in enhancing TB control efforts (Netto et al., 1999; Zhang et al., 2020). These studies highlight the importance of cross-border collaboration and the integration of innovative tools, such as mobile applications, to improve TB detection. However, challenges remain, such as inconsistent implementation of referral mechanisms, as seen in Ghana (Der et al., 2022), and outdated guidelines in several European countries (Power et al., 2016). These weaknesses highlight the need for standardized approaches to recording and reporting TB cases, which could improve the quality and consistency of case detection practices.

Moreover, the study by Horton et al., (2018) in Vietnam and Malawi emphasizes the critical need for adequate support for healthcare workers, who often lack the resources necessary to effectively implement monitoring and evaluation systems for TB. The lack of support not only affects the morale and performance of healthcare workers but also undermines the overall quality of TB case finding initiatives. Recommendations such as strengthening data quality and ensuring the use of data to inform implementation (Cox et al., 2017) are particularly pertinent, as robust data management systems are essential for tracking TB cases and evaluating program effectiveness. This critique highlights that while strategic management practices have potential, their effectiveness in TB case finding heavily relies on consistent support, adequate resources, and the alignment of strategic goals with on-ground realities.

The studies highlight various challenges and strengths of strategic management practices relevant to TB case finding, revealing both organizational and contextual factors that impact effectiveness. Kazaz and Ulubeyli (2009) emphasize the political threats and dynamic changes in leadership environments that pose significant challenges to strategic management, which are highly relevant to TB case finding, where political instability and frequent changes in health leadership can disrupt program continuity. Similarly, Obeidat and Al Thani (2020) highlight the resistance to change and low acceptance of strategic management practices due to factors such as gender, ethnicity, and organizational culture.

Strategic management practices encounter various challenges, such as political threats and changes in organizational leadership, hindering their implementation. Additionally, low adoption rates of management accounting practices pose barriers to Strategic Management Accounting techniques. Challenges including low acceptance, a dynamic environment, gender, ethnicity, business location, and resistance to change further impede strategic management practices. However, integrating sustainability has shown positive effects on these practices. Strengths of existing strategic management practices in active TBcase finding within health facilities include an emphasis on strategic Monitoring and Evaluation, administrative support, institutional investment, collaborative efforts among stakeholders, unified action in TB case detection, and capacity building of healthcare workers. Conversely, weaknesses include inconsistent implementation of patient referral mechanisms, outdated guidelines, restrictive practices, and regulations, lack of standardized recording and reporting for TB, and inadequate support and resources for implementing monitoring and evaluation systems effectively.

2.12 Summary – Critique of Existing Literature

In summary, the knowledge gap in strategic management for TB service delivery has been identified in several studies as a need for strategic leadership, inconsistent strategic planning, and coordination. In India, innovation and persistent M&E are recommended for the country to meet its End TB goal by 2025. In South Africa, better M&E systems are needed for TB contact management. In Tanzania, the study on collaborative TB/HIV activities recommends strengthening M&E and establishing a regulatory authority for implementing data quality systems.

Overall, while there is a lack of direct research linking strategic management practices to TB case finding in Kenya, existing studies offer valuable insights into potential areas for improvement, including strategic leadership, planning, and data-driven decision-making. Further research and application of strategic management principles within the healthcare sector could contribute to more effective TB control strategies and improved patient outcomes. Across diverse sectors and contexts, strategic management practices include, strategic planning and implementation, which could be relevant for TB case-finding initiatives in Kenya.

In Kenya, several studies have been conducted with a focus on TB treatment, Adherence, and related outcomes. The studies recommended strengthening M&E, capacity building, and

adoption of data use to improve child contact management outcomes. Identified strengths of the existing strategic management strategies for active tuberculosis case finding include an emphasis on Monitoring and Evaluation as a critical strategic function in the health sector. Administrative support and institutional investment in current TB/HIV management and significant collaborative efforts between different stakeholders to achieve a common goal of TB management together with collaborative action as key to TB case detection have been identified. In addition, there are efforts towards capacity building of Health care workers on the use of data for TB case finding. Strategic management practices in TB case finding within health care facilities in Kenya are unexplored and therefore the need to determine the strategic management practices application, their effectiveness, the facility staff capacity to implement the strategies and to determine challenges associated with strategic management practices and active Tuberculosis case finding within healthcare facilities in Nairobi County, Kenya.

While Porter's Diamond highlights important sectoral relationships, it does not sufficiently address the context-specific enablers and barriers essential for implementing effective TB control strategies—such as localized demand dynamics, organizational governance, or competition among institutions. Conversely, when directly applied to TB case finding, the Diamond Theory facilitates a more detailed and systemic analysis by exploring the interaction between factor conditions, supporting industries, and strategic approaches. This makes it a more practical and targeted framework for enhancing TB service delivery.

Conceptual Gaps: While the literature provides a robust overview of strategic management practices across diverse sectors, it reveals a lack of a unified conceptual framework tailored to healthcare settings, particularly for TB control. Many studies apply generic models (e.g., SWOT, Balanced Scorecard, Porter's Diamond) without adapting them to the unique complexities of public health environments. Strategic management in TB case finding is often viewed through business or education lenses, which limits the contextual appropriateness of these models. There is also conceptual fragmentation, where various constructs like strategy formulation, capacity building, and SOP implementation are studied in isolation rather than within an integrated systems-thinking framework that reflects health service delivery realities.

Empirical Gaps: The reviewed studies demonstrate a heavy reliance on cross-sectional and observational designs with limited longitudinal or experimental evidence to causally link

strategic management practices with TB case finding outcomes. Empirical studies exploring the effectiveness of interventions (e.g., training health workers or integrating SOPs) often lack rigorous impact assessments or fail to measure intermediate outcomes such as changes in provider behavior, facility-level coordination, or patient experience. Additionally, key empirical insights into what makes strategy execution successful or sustainable within constrained public health systems are largely absent.

Geographical Gaps: Most of the reviewed strategic management studies originate from Asia (Indonesia, Bangladesh), Europe, and selected African countries like Ghana and Kenya. However, there remains an uneven geographical representation, with limited data from high TB burden regions such as the Horn of Africa, Central Asia, and conflict-affected areas. Moreover, country-specific cultural, political, and health systems contexts are rarely integrated into the strategic models, reducing the generalizability and applicability of findings. In Kenya, while a few studies address TB management, there remains a lack of focused inquiry into how strategic management specifically shapes the performance of TB case finding across counties.

Population Gaps: The focus of much of the literature is skewed toward senior management, SMEs, universities, or corporate entities, with relatively little attention given to frontline healthcare workers who implement TB strategies. There is insufficient exploration of gender dynamics, staff motivation, or the influence of community health volunteers in strategic planning and execution. Vulnerable populations such as children, the elderly, the urban poor, and mobile or displaced persons—who are central to TB burden—are rarely centered in discussions around strategic planning. Furthermore, patients' voices and lived experiences are notably absent in evaluating how strategic management affects service delivery.

Methodological Gaps: Methodologically, the reviewed studies predominantly use qualitative or descriptive designs, with limited use of mixed-methods, realist evaluation, or systems modelling approaches that could provide deeper insights into causal mechanisms and contextual enablers.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This study research methodology outlines various components aimed at ensuring methodological rigor and validity. The components include the research philosophy, the study area, and the study population. The section outlines the sampling procedure, the data collection procedure, and data analysis. The researcher narrates the ethical considerations, data security measures to support the study.

3.2 Study Philosophy

Research philosophy is the perspective that guides a researcher's thinking about the creation of knowledge. It influences how the researcher perceives the world, defines what counts as valid knowledge, and determines the methods used to collect and analyze data. There are three key approaches to research philosophy: epistemology, ontology, and axiology. Epistemology deals with what is considered acceptable knowledge within a specific field of study; ontology focuses on the nature of reality; and axiology examines the role of the researcher's values throughout the research process. This study takes an epistemological perspective whereas, there are three epistemological positions namely, positivism, interpretivism, and realism (Crossley, 2021; Saunders &Tosey, 2012). With positivism based on the idea that reality is objective and can be measured through observable phenomena and empirical data. Interpretivismholds that reality is subjective and constructed by individuals' experiences and social contexts while Realismrecognizes that while there is a reality independent of human thoughts, our understanding of that reality is always mediated by social, cultural, and historical contexts (UKEssays, 2022). Thus, the study takes a positivism direction.

The study adopts the pragmatism design which evaluates strategic management theories and their application. It incorporates the collection and analysis of both quantitative and qualitative data to comprehensively explore the problem at hand using a multi-prong approach (Allemang et al., 2022). This choice is favored because it enables the examination of distinct respondent populations within a defined timeframe and is commonly employed to assess the effectiveness of health outcomes, investigate determinants of health, and depict characteristics of a population. The incorporation of both quantitative and qualitative data contributes to a more nuanced and detailed understanding of strategic management practices

in TB case finding. This integration leads to a richer and more detailed understanding of the strategic management practices in TB case finding (Leech & Onwuegbuzie, 2009)

Pragmatism in research is a philosophical approach that emphasizes the practical application of ideas by focusing on the outcomes and utility of the research process. This approach is particularly well-suited for complex, real-world problems where a singular methodological stance may not suffice. Pragmatism supports the use of mixed methods, integrating both qualitative and quantitative techniques, to achieve a comprehensive understanding of the research problem (Creswell & Plano Clark, 2017). It allows researchers to be flexible and adaptable, adjusting their methods in response to emerging findings or changing circumstances. This adaptability is crucial in fields like healthcare and social sciences, where the research context can be dynamic and multifaceted. Additionally, pragmatism prioritizes practical outcomes, ensuring that research findings are directly applicable to improving practices or informing policy decisions (Morgan, 2014). By integrating multiple perspectives, pragmatism enables a holistic understanding of complex phenomena, making it a valuable approach for research aimed at solving real-world issues. Pragmatic research design incorporates mixed methods and enable the study to gain a thorough understanding of strategic management practices.

Other philosophies include pragmatism which focuses on the practical application of research and considers the use of multiple methods (both qualitative and quantitative) to address a specific problem. Pragmatists prioritize research that leads to practical outcomes and may combine different philosophical approaches. Constructivism asserts that reality is constructed through human interaction and experience focusing on the ways people create and understand their realities, often employing qualitative research methods. Post-Positivism recognizes that while objective reality exists, our understanding of it is inherently imperfect. It emphasizes a scientific approach but incorporates a critical reflection on the limitations of observation and measurement, often using a mix of qualitative and quantitative methods.

3.3 Research Design

Research designs are based on the purpose of the study, the nature of the research questions, and the methods used for data collection and analysis. Research designs can be categorized into several types based on their purpose and approach(Takona, 2024)This study employs a mixed-methods approach, integrating both qualitative and quantitative research methods to comprehensively explore and analyze the factors(Hesse-Biber, 2010) influencing strategic

management practices in active TB case finding within healthcare facilities in Nairobi County, Kenya. The independent variables in this study include several key aspects: (1) the strategic management practices currently employed for active TB case finding, (2) the effectiveness of these strategic management practices in improving TB detection rates, (3) the capacity of health facility staff to implement and sustain these practices effectively, and (4) the challenges associated with optimizing strategic management practices in the context of TB case finding. Through quantitative methods, the study seeks to quantify the effectiveness of strategic management practices by analyzing TB case detection rates and related performance metrics. Additionally, the structured questionnaires was be used to assess the knowledge, skills, and overall capacity of healthcare staff involved in TB case finding efforts. On the qualitative side, in-depth interviews and focus group discussions with healthcare providers, TB program managers, and policymakers provides deeper insights into the practical challenges and barriers faced in optimizing strategic management practices. This includes exploring organizational, resource-based, and contextual factors that may hinder or facilitate the effective implementation of strategic management practices in TB control.

The study employeda mixed methods research design combining quantitative and qualitative methodologies to gather comprehensive insights. The utilization of quantitative and qualitative data and observations furnish a more intricate and all-encompassing viewpoint on intricate matters, presenting a versatile, pertinent, and effective research approach (Hesse-Biber, 2010; Takona, 2024). The utilization of pragmatic philosophy enhances the overall understanding of the research problem, bolster validity through triangulation, facilitate exploration and explanation, and capitalize on the complementary strengths of qualitative and quantitative methodologies. This integrative approach fortifies the study design and adds to the rigor of research in pragmatic strategic management practices in TB case finding(Blok et al., 2014; Gobo, 2023; Kothari, 2004; Ramanadhan et al., 2021).

Quantitatively, the researcher utilized structured questionnaires, which served as the primary tool, ensuring systematic data collection. Questionnaires offer several advantages such as confidentiality, cost-effectiveness, and efficiency in administration, ensuring timely data collection. Moreover, the anonymity they provide encourages candid responses, minimizing bias and enhancing the accuracy and validity of the findings. Qualitative data was collected through guided focus group discussions and was facilitated by the researcher. Triangulation of data ensured a comprehensive review of targeted interventions to enhance TB care and

control, providing insights into the strategic management practices for TB case-finding. Trained research assistants supported the data collection process by documenting additional factors that could influence the discussions.

Data triangulation involved comparing findings from Focus Group Discussions and results from quantitative data to ensure consistency and validate the conclusions. In addition, the insights gathered from FGDs and the structured questionnaire were cross-referenced to enhance the reliability of the results and ensure a robust analysis by integrating multiple perspectives(Leech & Onwuegbuzie, 2007).

Data analysis entailed thorough cleanup, coding, and review to address any quality concerns. Findings are presented using frequency tables, percentages, and means, supplemented by visual aids such as pie charts, graphs, and proportions to enhance understanding. Furthermore, a regression analysis was conducted to ascertain the significance between independent and dependent variables. The study adopts a Fixed-effects model, assuming that the data originates from normal populations differing only in their means

3.4 Study Area

The study area is Nairobi, Kenya's capital and largest metropolis, with an estimated population of 4.5 million residents and a daytime population exceeding 6 million within an area of approximately 694.9 km². The city is largely urban, with about 1,319 health facilities spread across its 11 sub-counties: Dagoreti, Kamukunji, Embakasi, Kasarani, Kibra, Langata, Makadara, Mathare, Ruaraka, Starehe, and Westlands. These administrative units include 31 divisions, 72 locations, and 136 sub-locations, according to the National Government Administration Office (NGAO). Nairobi County is located at the geographical coordinates of 1.2921° S latitude and 36.8219° E longitude, bordered by Kiambu County to the north and west, Kajiado County to the south, and Machakos County to the east.

Urban areas like Nairobi bear the highest tuberculosis burden in Kenya, significantly contributing to national case numbers (NTLD-P Ministry of Health Kenya, 2019b; Enos et al., 2018). The Kenya Country TB prevalence report (2016) reveals that TB rates in the country are higher than previously estimated, with about half of the annual TB cases going undiagnosed (Enos et al., 2018). According to the NTP Kenya 2019 report, although 140,000 people fell ill with TB that year, only 84,000 cases were notified, leaving an estimated 56,000 people undiagnosed.

Nairobi County was selected because it is the highest contributor to TB notifications in Kenya, accounting for over 10% of the cases reported annually (NTLD-P Ministry of Health Kenya, 2019) (*Appendix 8*). However, an estimated 40% of the target population remains undetected each year, likely increasing the spread of the disease (Arulchelvan & Elangovan, 2017; CDC, 2022; Musuka et al., 2018).

The 2021 Kenya NTLDP TB situation report ranks Nairobi County among the 10 counties with the highest TB burden in the country. Despite this, the county was ranked 41 out of 47 in terms of TB case-finding performance, highlighting significant gaps in the detection and management of TB cases (NTLDP, 2021).The county comprises of 1319 health facilities among them 162 GoK owned, 899 Private owned health facilities, 127 Faith based owned and 131 NGO owned facilities with a total of 239 TB treatment facilities (Ministry of Health Kenya, 2022)as shown in table 3.1 and the TB treatment facilities listed at *Appendix 9*

Table 3.1: Study area and distribution of facilities by ownership

		Facility Ownership					TB Site			
Nairobi	**Sub Counties**	**Government**	**Private**	**Faith Based Organizations**	**Non-Governmental Organizations**	**Total**	**TB Treatment sites**	**TB Clinic Incharges**	Quantitative data Sampled	TB Coordinators
	11	162	899	127	131	1319	239	239	44	17

Source: Kenya Health Facility Census report/(Ministry of Health Kenya, 2022)

3.5 Study Population

The study unit of analysis were all 239TB Treatment health facilities located in Nairobi County (Ministry of Health Kenya, 2022). The researcher targeted all 478 healthcare workers. These individuals were actively engaged in the oversight and execution of tuberculosis case-finding activities. Furthermore, as frontline healthcare workers (HCWs) in TB clinics, they exert a direct influence on the health outcomes of TB patients within Nairobi County. The healthcare workers include Nurses, doctors, pharmacists, laboratory technologists, and clinical officers(K. et al., 2019; Odera et al., 2021; Wagner et al., 2023)

3.6 Sampling Design

3.6.1 Sample Size Determination

The study adopted a multiple sampling technique where sampling is conducted in stages using simple random sampling without replacement at each level(Preston, 2009). A total of 239 TB treatment facilities where convenience sampling was utilized identified across the target region. A census approach was employed within the selected facilities, targeting all 478 healthcare workers (HCWs) directly involved in TB case management in Nairobi county (Ministry of Health Kenya, 2022). Census sample size determination entails gathering data from every unit within the entire population of interest, instead of selecting just a subset. This method is employed when the research seeks to obtain comprehensive information, guaranteeing full coverage of the population(Kothari, 2004).

Focus group discussion (FGD) which is qualitative data collection method that involves a guided conversation with a small group of participants. The FGD was used as a qualitative approach to gain an in-depth understanding of social issues (Khan & Abedin, 2022; Muijeen et al., 2020; O. Nyumba et al., 2018). For the FGDs, the researcher carried out 4 FGDs to triangulate with the quantitative analysis. The sampling techniques for the FGDs involved stratification of sub-counties and then purposive selection of 4 representatives from the sub-county who play the leadership role of an administrator, facility incharge, TB coordinator and Med Sup to form 4 FGD groups with a total of 44 participants as shown in *Table 3.2* :

Table 3.2: Number of facilities selected for FGD by sub-county

	Incharge	**Med Sup**	**TB Coordinator**	**Sub county Admin**	**Total**
Dagoreti	1	1	1	1	4
Embakasi	1	1	1	1	4
Kamukunji	1	1	1	1	4
Kasarani	1	1	1	1	4
Kibra	1	1	1	1	4
Langata	1	1	1	1	4
Makadara	1	1	1	1	4
Mathare	1	1	1	1	4
Ruaraka	1	1	1	1	4
Starehe	1	1	1	1	4
Westlands	1	1	1	1	4
Total	**11**	**11**	**11**	**11**	**44**

3.6.2 Sampling Procedure

Census sampling was adopted to select respondents for the study where all the 478health workers (facility incharge and TB clinic incharge) across 239 facilities were selected. A total of 4 FGDs were conducted among facility in-charges and Sub County administrators, TB Coordinators and Med Sups to shade more insight information about TB case finding. Every FGD consisted of 11 participants (Administrators only, TB Coordinators, Med Sups and Sub County Admins).

3.7 Inclusion and Exclusion Criteria

The study included respondents who provided consent and were actively working in TB clinics at the time of data collection. Participants needed to be physically available to participate in the data collection process, ensuring that their input reflected current practices within TB clinics. This group comprised healthcare professionals directly involved in TB service delivery

The exclusion criteria applied to individuals who had been employed at the TB clinic for less than six months, as their limited experience might not provide reliable insights. Additionally, those who were absent or on leave during the data collection period were excluded to ensure the study gathered accurate and relevant information from available participants.

3.8 Data Collection Tools and Procedure

3.8.1 Data Types and Sources

Primary data was gathered using structured questionnaires (Appendix2), a systematic tool designed to collect quantitative data from participants. This method involves presenting respondents with a set of predetermined questions in a fixed order and format. Structured questionnaires are crucial for researchers seeking to obtain standardized data that is easily quantifiable and suitable for statistical analysis. One of the key advantages of this approach, which makes it ideal for the study, is its ability to maintain consistency across all respondents. With trained research assistants administering the questionnaires, the same questions were asked uniformly, minimizing potential variability due to differences in interpretation. This level of standardization ensures that the findings accurately reflect the respondents' true answers, rather than variations caused by inconsistencies in question delivery.

For the focus group discussions, an interview guide was employed to ensure a structured approach to data collection with homogeneous groups. The researcher led the discussions to maintain consistency and uniformity in the questions asked of each participant. Responses were recorded and later carefully transcribed into MS Word for comprehensive analysis using NVIVO Ver 14. This systematic process preserved the integrity of the data and enabled a thorough examination of the insights gathered during the focus group sessions

3.8.2 Data Collection Instruments

A structured questionnaire (Appendix 2) was used to collect primary data from health workers working in TB clinic across 239 health facilities. The structured questionnaire was written in English and divided in sections based on specific objectives of the study. The questionnaire is structured into four distinct sections. The initial section (Section A) focused on gathering demographic information, including gender and length of employment, for both participants and cadre. Section B comprised of questions which addressed specific objective one on strategic management practices applied in TB case finding within health facilities in Nairobi, Kenya. Section C had questions on effectiveness of the current strategic management practices for active TB case finding within healthcare facilities in Nairobi County. Section D comprised of questions that evaluated the capacity of health facility staff in implementing strategic management practices for active TB case finding. Section E questions focused on identifying key challenges and barriers that healthcare facilities in Nairobi County, Kenya, encounter in implementing and sustaining effective strategic management practices for active tuberculosis case finding.

Focused Group Discussion (Appendix 3) guide was used to collect data from facility in-charges, Med Sups TB coordinators and administrators specifically to gain more insights on TB case-finding. The tool aimed to uncover challenges encountered in implementing or accessing tuberculosis screening and treatment services in health facilities. It probed into organizational strategy and structure, demand conditions, support systems, and available resources. Furthermore, the tool explored strategies to enhance the tracking and measurement of the tuberculosis active case finding program's impact on both the community and health facilities. Additionally, the tool inquired about strategies employed in the planning and implementation of plans, including goal setting, strategy formulation, innovation, decision-making, and competition for resources.

3.8.3 Data Collection Procedure

Five research assistants were trained for three consecutive days to familiarize them on the purpose of the study and the data collection process. The research assistants comprised of 3 nurses and 2 clinical officers who were supervised by the principal researcher. The research assistants visited the TB treatment facilities between April and June 2024 to administer the structured questionnaire which was presented to the health workers in TB clinic during the day after booking the appointment through the facility in-charges.

During the data collection process, Four FGDs were conducted in May by the principal researcher at a scheduled time coordinated by the county TB coordinator within selected sub-county headquarters namely Embakasi, Kasarani, Starehe, and Westlands sub counties for convenience. Each FGD was limited to a maximum of 11 participants

3.9 Pretesting of Data Collection Instruments

Pre-testing of data collection tools was conducted prior to the full-scale data collection process. The purpose was to identify and correct any issues with clarity, relevance, or practicality in the tools, ensuring they are optimized and ready for effective use during the main data collection process. The Data collection tools were pretested in Kiambu County health facilities offering TB health care services, which had the same characteristics. The county borders Nairobi County and hence shares socio-demographic characteristics. A total of 30facilities were reached for the pretesting involving 59 health care workers. The pretest-retest method was used on the facilities to establish the reliability of data collection tools.

A pre-test of the qualitative data tools was conducted at five facilities: Uthiru HC, Kiambu County Referral Hospital, Mercylite Clinic, Radiant Hospital, and Juja Sub County Hospital. The pre-test involved groups that included the TB coordinator, the Juja Sub County TB coordinator, the facility in-charge, and the Ruiru Medical Superintendent. Pre-testing a focus group discussion tool was aimed to ensure that the questions and prompts effectively address the research objectives, are clear to participants, and produce reliable and valid data.

3.10 Reliability and Validity of Data Collection Tools

3.10.1 Reliability of Data Collection Tools

Reliability refers to the degree to which a research instrument consistently yields the same results or data across repeated trials (Mugenda, 2010). Pre-testing the instrument is essential in minimizing measurement errors within a descriptive survey research design, as noted by

Mangione (1995). This process allows for the evaluation of internal consistency and the collection of feedback on various elements, including the representativeness of items for specific constructs, clarity of questions, questionnaire format, clarity of instructions, and specificity of items. Hair et al. (2019) define reliability as the capacity of a test to consistently produce the same results under identical conditions, while Moses and Yamat (2021) describe it as the extent to which test scores are free from measurement error. As random error increases, reliability decreases. Essentially, reliability pertains to the consistency of research findings, ensuring that another researcher, or the same researcher at a different time, can replicate the study and obtain similar results with a comparable population.

To test the reliability of the data collection tools, Cronbach's alpha, a coefficient of reliability that provides an unbiased estimate of data generalizability, was used (Gliem & Gliem, 2003). An alpha coefficient greater than 0.75 indicates that the collected data has high internal consistency and can be generalized to reflect the opinions of all respondents in the target population. In this study, a pretest sample of 60 respondents (12.5% of the target population) was selected. After analyzing the pretest data, a coefficient of 0.794 was established, indicating satisfactory reliability

Table 3.3: Reliability Coefficients

No	Variable	Reliability Coefficient
1	*Strategic Management Practices*	0.812
2	Effectiveness of the current strategic management practices	0.771
3	Capacity of health facility staff	0.801
4	challenges and barriers that healthcare facilities in Nairobi County	0.793
	Overall Reliability	0.794

The reliability coefficients obtained through Cronbach's alpha for the variables under study indicate a strong internal consistency across all measures. Specifically, the reliability coefficient for Strategic Management Practices is 0.812, which suggests a high level of reliability, indicating that the items used to measure this variable are consistently reflecting the construct. Similarly, the coefficients for Effectiveness of the Current Strategic Management Practices (0.771) and Capacity of Health Facility Staff (0.801) demonstrate good reliability, implying that these variables are also measured consistently. The Challenges and Barriers that Healthcare Facilities in Nairobi County face show a reliability coefficient of 0.793, which, while slightly lower, still indicates a reliable measure. The overall reliability of

0.794 across all variables reflects a consistently strong internal consistency, affirming the robustness of the instrument used in this study.

The reliability of the qualitative data in this study was achieved through triangulation, specifically by cross-validating findings across the four Focus Group Discussions (FGDs). By comparing and contrasting the data obtained from each FGD, the researchers were able to identify consistent patterns and themes, thereby enhancing the credibility and dependability of the findings. This approach ensures that the results are not skewed by the perspectives of a single group, but rather reflect a broader and more accurate representation of the participants' views. Triangulation, in this context, strengthens the reliability of the qualitative data by confirming that the insights derived are consistent across multiple sources, reducing the potential for bias and increasing the trustworthiness of the study's conclusions.

3.10.2 Validity of Data Collection Tools

The research assistants were trained for three consecutive days on the purpose of the study and process of data collection. The data collection tools were also subjected to expert review to ensure validity of data collection tools. The tools were reviewed by a panel of experts consisting of experienced researchers from Maseno University school of business and the school of Public health and Community Development and The Nairobi county TB coordinator and Sub County TB coordinators from Kiambu county. Each expert independently assessed the tools for clarity, relevance, and comprehensiveness. They provided feedback on the appropriateness of the questions, the structure of the tools, and their alignment with the study's objectives. Based on their feedback, the tools were revised to ensure they effectively captured valid and reliable data. The final version of the tools was then pilot-tested to further refine them before full implementation in the study. In addition, a Bartlett's Test was conducted to determine whether there is equality of variances (homogeneity of variances) across with the result indicating a (Sig) $p<0.003$:

3.10.2.1 Sampling Adequacy – Validity and Reliability

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy further supports the validity of the scales. The "Goal establishment" scale has the highest KMO value of 0.745, suggesting that the data are highly appropriate for factor analysis, and the scale items strongly capture the underlying construct. Other scales, such as "Firm Strategy, Structure, and Rivalry" (KMO = 0.728) and "Capital" (KMO = 0.701), also exhibit strong validity. While some scales, such as "Related and supporting industries" (KMO = 0.509) and "Infrastructure" (KMO = 0.522),

show marginal adequacy, their KMO values still meet the minimum threshold of 0.50, indicating that these scales are sufficiently valid for factor analysis but could benefit from refinement.

Bartlett's Test of Sphericity was significant for all scales ($p < .001$), confirming that the correlation matrices for each scale were significantly different from identity matrices, meaning that sufficient relationships exist among the items to conduct factor analysis. The significance of Bartlett's test for all scales supports their overall validity, as it demonstrates that the items are interrelated enough to form coherent factors (Field, 2013).

Table 11: Reliability and Validity analysis

	N of Items	Cronbach's Alpha	Factor loading	Determinant	KMO	Bartlett's Test	p-value
Skilled labor	8	0.730	4.009	0.682	0.616	2347.200	<.001
Goal establishment	7	0.682	2.688	0.625	0.745	405.567	<.001
Capital	8	0.678	2.047	0.701	0.522	578.604	<.001
Infrastructure	9	0.917	3.177	0.756	0.522	1764.785	<.001
Natural resources	4	0.706	3.125	0.602	0.519	1348.619	<.001
Demand conditions	10	0.540	2.286	0.592	0.715	1201.269	<.001
Related and supporting industries	7	0.604	1.622	0.583	0.509	100.757	<.001
Firm Strategy, Structure, and Rivalry	10	0.608	3.103	0.728	0.613	1494.204	<.001
Effectiveness of the current strategic management	13	0.732	2.503	0.638	0.535	1091.711	<.001
Capacity of health facility staff	10	0.630	1.976	0.595	0.634	1197.347	<.001

3.10.3 Model Specifications

This study explores the dynamic interplay between independent and dependent variables, and the influence on active case finding. The independent variable includes the strategic management practices, the effectiveness, health worker capacity and challenges associated with strategic management and TB case finding. The independent variables, grounded in the four concepts of the Diamond Porter theory namely factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry are pivotal to understanding an entity's competitive position. Through a comprehensive examination of these variables, the study aims to unveil the strengths and weaknesses within the competitive landscape, offering insights for devising strategies that enhance overall competitiveness in TB case finding. The dependent variable in this study signifies the success of both health facilities and the health system in Nairobi County in actively identifying tuberculosis cases. This variable is measured to discern the effects, impacts, or relationships between the dependent and independent variables. Furthermore, the study assesses the effectiveness of practices employed in detecting and treating active TB cases, with metrics such as TB detection rate and case notification rate serving as key analytical tools for this study.

3.10.3.1 Model Equation

The equation is as expressed below; $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_{3+} \varepsilon$

Where:

Y = tuberculosis case finding
β_o=constant(coefficient of intercept)
X_1=strategic management practices
X_2=effectiveness
X_3=capacity of health facility
β_1 toβ_3 =Regression coefficient of three (3) variables

While quantitative data was studied numerically using descriptive analysis (measures of central tendency, such as mean, median, and mode), inferential analysis was also utilized to analyze the data. The tuberculosis case finding was examined in relation to strategic management practices, effectiveness and capacity through the application of multiple linear regression analysis. With the use of the statistical package for social scientists, data was examined using both descriptive and inferential statistics. Tables and graphs were used to display the results.

3.11 Data Analysis and Presentation

The data collected was checked for completeness, and accuracy then coded and managed using SPSS version 29.0.2.0. (20). Descriptive statistics such as percentages, means, mode, median and standard deviation were used. For inferential statistics, chi-square test and regression analysis were used to determine the association between independent and dependent variables. For qualitative data, content analysis has been adopted based on thematic areas. Data is presented using text, tables, charts, and graphs while the confidence interval is set at 95 percent. The text explained the results and trends, providing contextual information. Tables were utilized to present both quantitative and qualitative data, effectively summarizing and comparing the quantitative information across various variables.

Objective 1: To establish strategic management practices implementation rate for tuberculosis case finding within health facilities in Nairobi, Kenya. The researcher conducted a quantitative analysis which involved a thorough review of strategic management practices across various health facilities, descriptive statistics such as percentages, and means of variables were used to compare different facilities and the cadres involved on specific practices they employed. Inferential statistics were conducted to determine relationships between variables. The Data is presented using tables, charts and graphs.

Objective 2: To model the Strategic Management practices Coefficients matrix for optimal active TB case finding within healthcare facilities in Nairobi County, Kenya

To determine the optimization of the current strategic management practices for active tuberculosis case finding within healthcare facilities in Nairobi County, Kenya, the researcher employed inferential statistics, including chi-square tests to explore the associations between independent and dependent variables. This analysis involved comparing the practices identified in the first objective focusing on key independent variables such as cadres and gender.

The logistic regression model was developed to predict whether the majority of TB cases are identified using the strategic management practices adopted by various healthcare facilities. The model incorporated multiple strategic, infrastructural, and organizational factors to determine their influence on TB case detection outcomes. During the modelling the dataset was split into training and testing subsets using a stratified of 80/20 split to preserve the distribution of responses. To address class imbalance, the Synthetic Minority Over-sampling

Technique (SMOTE) was applied to the training set, ensuring a balanced representation of both "Yes" and "No" responses.

Objective 3: To measure the capacity rates of health facility staff in implementing the strategic management practices for improved active TB case finding, the researcher also conducted an analysis quantitative data, descriptive statistics such as percentages, means, of variables were used to compare different facilities and the cadres involved. The Data is presented using tables, charts and graphs,

Objective 4: To determine the challenges and the significance associated with optimizing strategic management practices and active Tuberculosis case finding within healthcare facilities in Nairobi County, Kenya. The researcher also conducted an analysis of both quantitative data, descriptive statistics such as percentages, means, of variables were used to compare different facilities and the cadres involved. The Data is presented using tables, charts and graphs. Concurrent triangulation design has been used to compare or merge the study findings during interpretation for validation or to corroborate findings. The researcher analysed the challenges on the Porter Diamond theory and makes recommendation for the theory.

Table 3.4: Types of data analysis used

Analysis	Description
Verbatim presentation Qualitative	Verbatim presentations have been used to triangulate quantitative findings. The presentations have been extracted from the FGD transcripts
Collinearity Statistics	Used to analyse relation between predictor variables
Percentages	Used to express a proportion or fraction of a whole count in terms of 100.
Means	The mean (average) measure of central tendency
Frequencies	Used to summarize and describe the distribution
Standard deviation	Standard deviation has been used to quantifies the amount of variation or dispersion within specific variables where respondents scored values on a scale.
Linear regression	Linear regression has been used to analyze the relationship between two the dependent variable
Chi-Square analysis	The Chi Square analysis has been used to determine whether there is a significant association between categorical variables.
Logistic regression	The model incorporated multiple strategic, infrastructural, and organizational factors to determine their influence on TB case detection outcomes

3.12 Diagnostics Tests

3.12.1 Assumptions of Linear Regression Model (Colinearity Diagnostics)

Table 3.5 presents the coefficients, significance levels, and collinearity statistics for the regression model assessing various factors related to the effectiveness of strategic management practices for active tuberculosis case finding. This table provides insights into the relationships between predictors and the outcome variable, along with assessing multicollinearity to ensure the robustness of the regression model.

Table 3.5: Coefficients, significance levels, and collinearity statistics

Coefficients				
			Collinearity Statistics	
Model		**Sig.**	**Tolerance**	**VIF**
1	(Constant)	.381		
	Skilled labour	.462	.536	1.864
	Goal establishment	.000	.766	1.306
	Capital	.000	.450	2.224
	Infrastructure	.132	.568	1.761
	Natural resources	.143	.476	2.099
	Demand conditions	.000	.580	1.724
	Related and supporting industries	.012	.952	1.051
	Firm Strategy, Structure, and Rivalry	.000	.709	1.410
	Capacity of health facility staff in implementing the strategic management practices for active TB case finding	.003	.704	1.421

The collinearity statistics, including Tolerance and Variance Inflation Factor (VIF), assess the presence of multicollinearity among predictors. Tolerance values below 0.10 or VIF values exceeding 10 typically indicate problematic multicollinearity. In this table, all predictors exhibit Tolerance values above 0.450 and VIF values below 2.224, well within acceptable ranges. For instance, “Skilled labour” has a Tolerance of 0.536 and a VIF of 1.864, while “Related and supporting industries” shows a high Tolerance of 0.952 and a low VIF of 1.051. These values suggest that multicollinearity is not a significant concern in this model, ensuring that the relationships observed between predictors and the outcome variable are not distorted by high correlations among the predictors.

The significant predictors in the regression model and the acceptable levels of multicollinearity indicate that the model is robust and provides reliable insights into the factors affecting the effectiveness of TB case management strategies. The high significance

of predictors like “Goal establishment,”“Capital,” and “Firm Strategy, Structure, and Rivalry” underscores their importance in shaping effective TB management practices. The lack of severe multicollinearity further supports the model’s validity, ensuring that the findings are reflective of true relationships rather than artifacts of overlapping predictor variables. In summary, Table 3.5 confirms that several key factors significantly influence the effectiveness of strategic management practices for TB case finding, with multicollinearity not posing a significant issue. The results emphasize the critical role of goal setting, capital, and firm strategy in enhancing TB management. The robust nature of the model, as indicated by the collinearity statistics, supports the reliability of these findings and their applicability in improving TB case management strategies.

3.12.2 Assumption of Normality

The assumption of normality implies that the residuals of the regression model are normally distributed. This is essential because it affects the validity of hypothesis tests within the regression model.

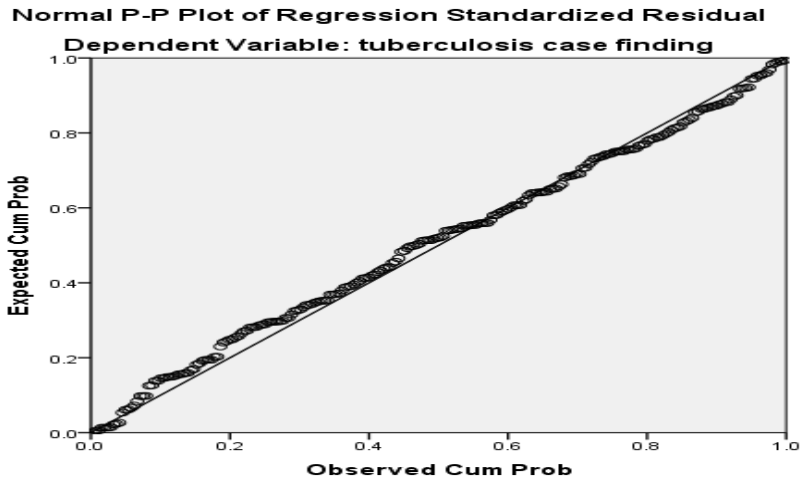


Figure 3.1: Normal Probability Plot

According to Field (2018), normality is crucial for ensuring that the significance tests for the coefficients are reliable. In *Figure 3.1*, the normality of residuals is visually assessed through the normal probability plot. The points on the plot should follow a straight diagonal line, indicating that the residuals are normally distributed. As observed, the data points closely align with the diagonal, suggesting that the normality assumption is satisfied. This aligns with the central limit theorem, which states that as the sample size increases, the distribution of the residuals tends to normality.

3.12.3 Assumption of Linearity

Linearity assumes that there is a straight-line relationship between the independent and dependent variables. This is critical because non-linearity in the data can lead to biased estimates of the regression coefficients.

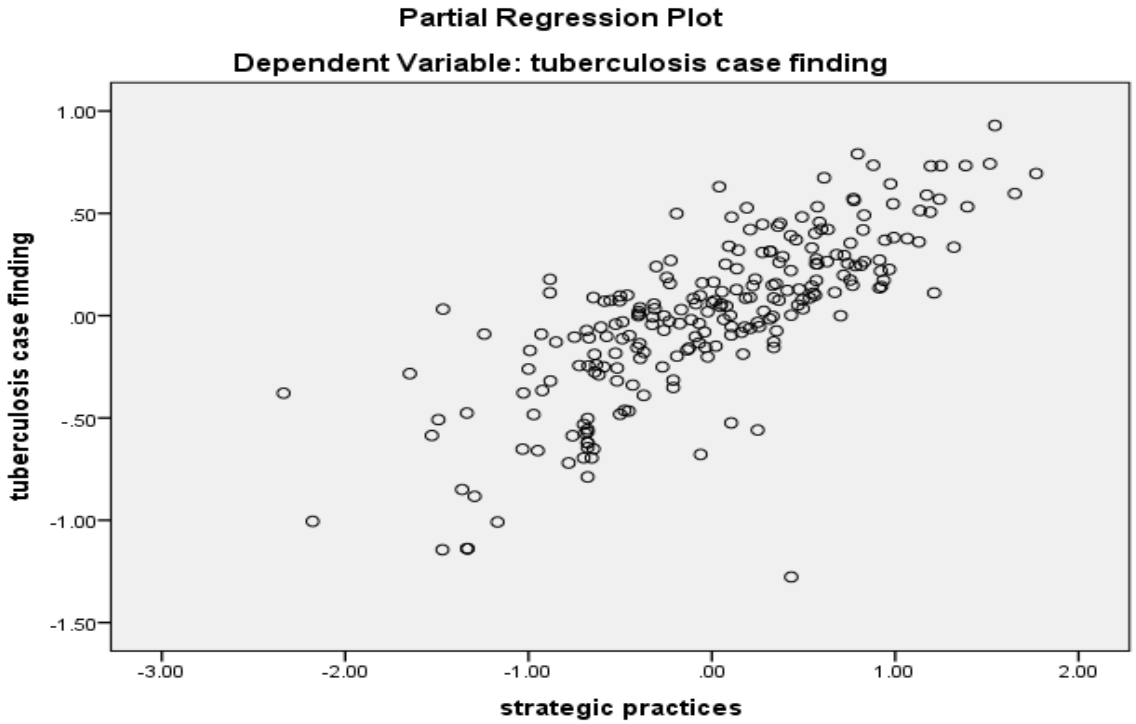


Figure 3.2: Assumption of Linearity – Strategic Practices

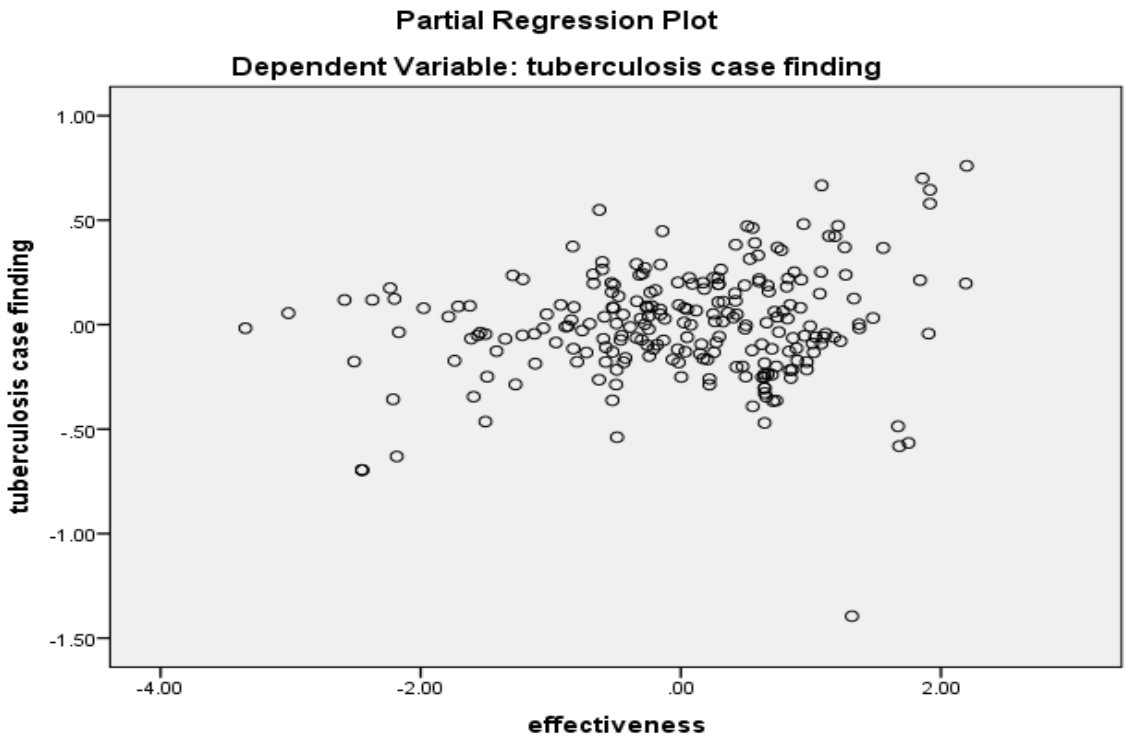


Figure 3.3: Assumption of Linearity – Effectiveness

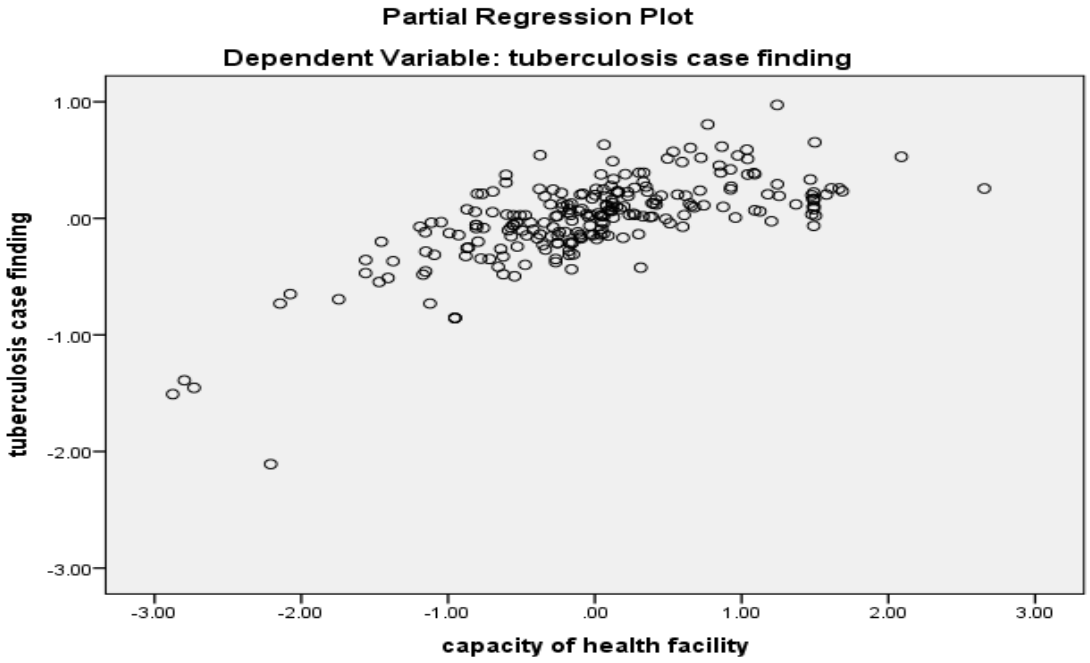


Figure 3.4: Assumption of Linearity – Capacity of Health Facility Staff

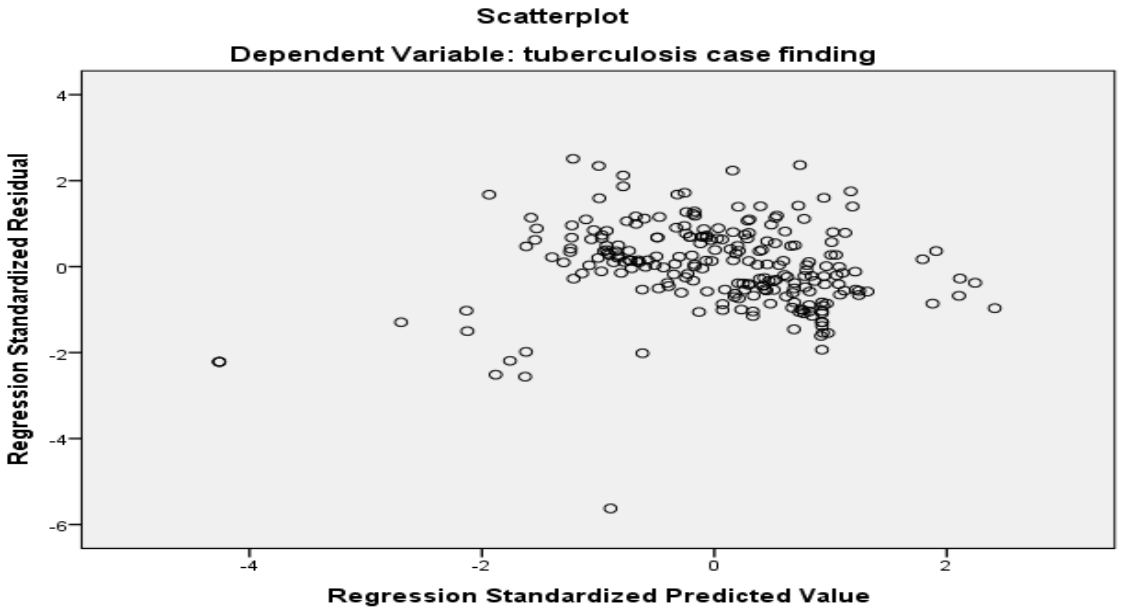


Figure 3.5: Assumption of Linearity – Regression standardized Predicted value

3.12.4 Assumption of Homoscedasticity

Figure 3.6 depicts a scatter plot of standardized residuals versus predicted values. The plot shows a random distribution of residuals around zero, with no discernible pattern, indicating that the linearity assumption is met. According to Pedhazur (1997), when the relationship between the variables is linear, the regression model provides an accurate estimation of the relationship, ensuring that predictions made by the model are reliable.

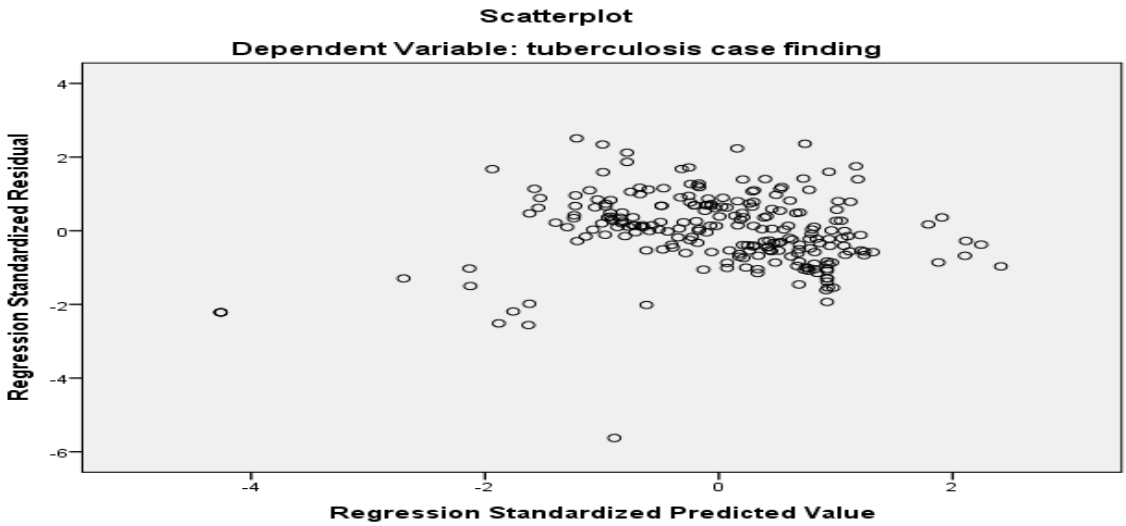


Figure 3.6: standardized residuals versus predicted values

Homoscedasticity refers to the assumption that the variance of residuals is constant across all levels of the independent variable(s). In **Figure 3.6**, the scatter plot of standardized residuals versus predicted values shows a random spread of residuals, indicating homoscedasticity. When this assumption is violated, the efficiency of the regression coefficients decreases, leading to unreliable statistical inferences. As noted by Tabachnick and Fidell (2013), maintaining homoscedasticity is essential to ensure that the standard errors of the estimates are accurate, which in turn affects the validity of confidence intervals and hypothesis tests.

3.13 Ethical Considerations

Ethical clearance was obtained from Maseno University ethics and research Committee (MUERC) while permission to carry out data collection was obtained from Maseno University School of Graduate Studies, Nacosti and Nairobi County. Once the necessary permissions were granted, the researcher ensured voluntary participation through free and informed consent. The researcher, along with research assistants, clearly explained the purpose of the study and its objectives to the respondents. Confidentiality, anonymity and freedom to participate in the study was observed. To participate in the study, written consent was obtained from participants guided by a consent form (Appendix 1). Confidentiality was maintained by designing the questionnaire in a way that did not require identifiable information from the respondents, in accordance with the Kenya data protection act 2020

In the writing and documentation of research findings, utmost care was taken to avoid identifying individuals. Respondents were not forced to divulge any information that could cause them anxiety or fear, and the data obtained was used solely for advancing the study's purpose, kept securely away from unauthorized users. To prevent deception, the respondents were fully informed about the study, including its purpose and the fact that they would not receive any direct benefits for participating. However, they were made aware that the findings would be shared with Nairobi County leadership, Maseno University fraternity and various TB/Health stakeholders and interested parties. Their right to privacy was protected by clearly explaining the nature of the information that would be shared and ensuring that they were not compelled to provide personal information they considered intrusive.

The researcher took extensive measures to prevent all forms of plagiarism, including self-plagiarism and duplicate publication, by maintaining originality and properly acknowledging all sources of borrowed information, expressions, and opinions. The researcher also committed to not publishing the same material in multiple publications

and made appropriate references to earlier work when necessary. Finally, there are no existing relationships or previous activities by the researcher that could create any conflict of interest with the participants

CHAPTER FOUR
RESULTS AND DISCUSSION

4.1 Introduction

This section presents the study's findings, organized according to specific objectives. The results are compared and contrasted to highlight key differences and similarities, providing a comprehensive analysis. The findings are then synthesized to draw meaningful conclusions and insights relevant to the research objectives.

4.2 Data Cleaning

Prior to analysis, the researcher ensured that all entered data from respondents underwent a thorough quality assessment to ensure its integrity. This process involved identifying and addressing any missing values or outliers including during data entry. A descriptive analysis confirmed that all responses within the Likert scale (1-5) were valid, with no values exceeding this range. Any data points that fell outside the acceptable range were removed. After these steps, the data was reliable and complete, with no anomalies or missing values.

4.3 Response Rate

The study which was conducted from April to June 2024, employed a census sampling method and achieved an overall response rate of 84.9%, with 406 out of 478 healthcare workers participating. This included 65% Clinical Officers, 32% Nurses, 2% Lab officers and 2% Doctors. The study reached 92.1% of its target facilities, with 220 out of 239 TB treatment facilities in Nairobi taking part. Additionally, the focus group discussions (FGDs) reached 93% of their target, engaging 41 out of 44 participants.

Table 4.1: Structured questionnaire response Rate

Target Respondents	Respondents	Response Rate
Clinical Officer	262	64.5
Doctor	7	1.7
Laboratory technologist	9	2.2
Nurse	128	31.5
	406	

The response rate for the healthcare workers in this study was commendably high, with 84.9% of respondents participating out of a total population of 478. The study obtained 406 responses which indicates a strong level of engagement and lends considerable reliability to the study's findings. According to Babbie (2010), a response rate of 70% or higher is generally considered very good in survey research, as it minimizes the risk of non-response

bias and enhances the representativeness of the sample. Therefore, the 84.9% response rate in this study suggests that the collected data is highly reflective of the broader population of healthcare workers, significantly strengthening the credibility and generalizability of the results. For the FGDs, four sessions were conducted for the facility incharges (conducted in Embakasi), TB coordinators in Starehe, Medical Superintendent (Med Sup) in Westlands and for the sub-county admins in Kasarani with a representation of 93% (41 of 44) as shown in table 4.2 below:

Table 4.2: FGD Participation

	Incharge	Med Sup	TB Coordinator	Sub county Admin	Total	Gender (M)	Gender (F)
Dagoreti	1	1	1	1	4	1	3
Embakasi	1	1	1	1	4	2	2
Kamukunji	1	0	1	1	3	2	1
Kasarani	1	1	1	1	4	3	1
Kibra	1	1	1	1	4	2	2
Langata	1	1	1	1	4	1	3
Makadara	1	1	1	1	4	3	1
Mathare	1	0	1	1	3	1	2
Ruaraka	0	1	1	1	3	1	2
Starehe	1	1	1	1	4	1	3
Westlands	1	1	1	1	4	1	3
Total	10	9	11	11	41	18	23

4.4 Socio-Demographic Characteristics

Analysis of the data by sub-county facilities to show the facilities reached and respondents in each sub-county were done and the findings presented in frequency counts and percentages as shown in Table 4.3

Table 4. 3: Representation by Sub-county - Quantitative data

Sub County	Facilities Frequency	% Facilities	Respondents Frequency	% Respondents
Dagoreti	30	14%	43	11%
Embakasi	30	14%	52	13%
Kamukunji	19	9%	37	9%
Kasarani	26	12%	49	12%
Kibra	23	10%	44	11%
Langata	14	6%	29	7%
Makadara	15	7%	34	8%
Mathare	8	4%	12	3%
Ruaraka	15	7%	27	7%
Starehe	24	11%	44	11%
Westlands	16	7%	35	9%
Grand Total	**220**		**406**	

The socio-demographic characteristics of the sub-county facilities and respondents indicated in Table 4.3 reveal a diverse distribution across the different regions. Dagoreti and Embakasi each accounted for 14% of the total facilities reached, (with 30 facilities each), and contributing to 11% and 13% of the study respondents, respectively. Sub-counties like Kamukunji and Kasarani, with 19 and 26 facilities respectively, represented 9% and 12% of both the facilities and respondents, indicating consistent participation relative to their facility count. Kibra and Starehe had notable facility frequencies of 23 (10%) and 24 (11%), with each contributing 11% of the respondents, showing a proportional representation in the study. Smaller sub-counties such as Mathare had lower facility frequencies (8), with correspondingly lower respondent percentages of 3 percent. This distribution reflects a balanced representation across the sub-counties, ensuring that the study captures a wide range of perspectives from various regions within the county.

4.4.1 Respondents Characteristics

Respondents' characteristics included their gender, age group, cadre and education which were classified under gender, education, cadre and age group categories. The findings on the analysis of the data on their characteristics are presented as shown in Table 4.4 that follows.

Table 4.4: Respondents Socio-demographic Characteristics – Quantitative data

Element	Frequency	Percentage (%)
Gender		
Female	241	59.4
Male	165	40.6
Total	**406**	
Age Group		
18 to 25	11	2.7
26 to 35	133	32.8
Above 35	262	64.5
Total	**406**	
Cadre		
Clinical Officer	262	64.5
Doctor	7	1.7
Laboratory technologist	9	2.2
Nurse	128	31.5
Total	**406**	
Education		
Medical College Certificate	11	2.7
Medical College Diploma	213	52.5
Other	33	8.1
University Degree	123	30.3
University Masters	26	6.4
Total	**406**	

The respondent characteristics in this study reveal a diverse and well-balanced demographic profile, making the sample appropriate for the study's objectives. The gender distribution shows that 59.4% of the respondents were female, while 40.6% were male. This slight overrepresentation of females is typical in healthcare settings, particularly in roles such as nursing, which traditionally attract more women.

Among the FGD representation, 49% were female while 51% were male. The FGD representation shows a nearly equal gender distribution, with 49% female and 51% male participants, reflecting a balanced inclusion of both genders. In contrast, the study titled "Strategic Management and Accounting Processes: Acknowledging Gender" (Parker, 2008) highlights that while both feminine and masculine traits are significant in management and accounting, men predominantly occupy leadership roles. This difference suggests that although numerical gender balance can be achieved, there may still be underlying gender dynamics where men hold more authority. Parker's study also emphasizes the need for integrating both gender traits to develop more inclusive and effective strategic processes, a nuance not captured by simple gender representation data.

The inclusion of both genders ensures a comprehensive understanding of how different perspectives might influence the outcomes of strategic change management practices in healthcare. Moreover, the age distribution is heavily skewed towards respondents above 35 years (64.5%), with a significant portion (32.8%) in the 26 to 35 age group, and only 2.7% aged between 18 and 25 years. The dominance of older respondents suggests that the study benefits from the insights of experienced healthcare professionals, who are likely to have a deeper understanding of the challenges and intricacies involved in implementing strategic management practices within the facilities.

In terms of professional cadre, the majority of respondents (64.5%) were Clinical Officers, followed by Nurses at 31.5 percent. The smaller representation of doctors (1.7%) and Laboratory Technologists (2.2%) reflects the actual workforce distribution within many healthcare facilities, where clinical officers and nurses often outnumber doctors and laboratory technologists. This distribution is appropriate for the study as it ensures that the perspectives of the most prevalent healthcare workers, who are directly involved in patient care and the implementation of strategic practices, are well-represented. The analysis of the department in which participants worked shows that the largest proportion were from the TB Clinic, which accounted for 33.5% (n = 136) of the sample. This was followed by those in the

Outpatient Department (OPD) at 23.9% (n = 97). Other departments such as Administration and Comprehensive Care Centre (CCC) represented 13.5% (n = 55) and 12.8% (n = 52), respectively. Smaller percentages were found in other departments including Dermatology Respiratory Medicine, Lab, Maternal and Child Health (MCH), Pediatric Outpatient, and Special Clinics, each contributing less than 10% of the sample. Furthermore, the educational background of respondents is diverse, with the majority holding Medical College Diplomas (52.5%), followed by University Degrees (30.3%), and a smaller percentage with Medical College Certificates (2.7%) or Masters Degrees 6.4 percent. This variety in educational attainment allows the study to capture a wide range of expertise and knowledge levels, ensuring that the findings are reflective of both front-line healthcare providers and more academically advanced professionals. The length of employment in the TB program was predominantly between 1 and 3 years, with 61.8% (n = 251) of respondents falling into this category. Meanwhile, 38.2% (n = 155) of the participants had been employed in the program for 1 year or less.

4.4.2 Level of TB Incidences

The table below illustrates the levels of Tuberculosis incidences across various sub-counties. The table shows the findings for the level of active TB cases in Nairobi. The analysis of the level of tuberculosis cases in Nairobi County reveals that the majority of respondents reported a high level of TB cases, with 75.9% (n = 308) indicating that TB cases were prevalent at this level. In contrast, 24.1% (n = 98) of the participants perceived the level of TB cases as average. Analysis of the data within the sub-county are as shown in *Table 4.5 below*

Table 4.5: Level of TB incidences between 2020 and 2023

	Levels of TB					
Sub County	**Average**	**% Average**	**High**	**% High**	**% High within Sub County**	**Grand Total**
Dagoreti	10	10.20%	21	6.82%	67.74%	31
Embakasi	8	8.16%	42	13.64%	84.00%	50
Kamukunji	16	16.33%	35	11.36%	68.63%	51
Kasarani	12	12.24%	44	14.29%	78.57%	56
Kibera	18	18.37%	31	10.06%	63.27%	49
Langata	7	7.14%	13	4.22%	65.00%	20
Makadara	8	8.16%	20	6.49%	71.43%	28
Mathare	0	0.00%	22	7.14%	100.00%	22
Ruaraka	0	0.00%	42	13.64%	100.00%	42
Starehe	10	10.20%	14	4.55%	58.33%	24
Westlands	9	9.18%	24	7.79%	72.73%	33
Grand Total	**98**		**308**		**75.90%**	**406**

The distribution of TB incidences across sub-counties reveals substantial variability in the severity of cases. In Dagoreti, 10.2% of the TB cases are categorized as average, amounting to 10 cases, while high TB incidences contribute 6.8%, totaling 21 cases. The high incidence cases make up 67.7% of all TB cases in Dagoreti, indicating that while the sub-county has a moderate share of average TB cases, a significant proportion of its TB burden falls into the high incidence category. In contrast, Embakasi reports a lower average incidence rate of 8.16% with 8 cases, but a higher incidence rate of 13.64%, reflecting 42 cases. The high incidence cases constitute 84.0% of the total, underscoring a predominantly severe TB burden that demands targeted health interventions.

Kamukunji has a high average TB incidence rate of 16.3%, with 16 cases, and a high incidence rate of 11.4%, totaling 35 cases. The proportion of high incidences within Kamukunji is 68.6%, suggesting that a significant portion of the TB burden is severe, necessitating continuous monitoring and resource allocation. Kasarani reports an average TB incidence rate of 12.2%, with 12 cases, and a higher incidence rate of 14.3%, totaling 44 cases. With 78.5% of its TB cases classified as high incidence, Kasarani faces a considerable TB challenge, indicating the need for focused healthcare interventions.

In Kibera, the average TB incidence rate is 18.4% with 18 cases, while the high incidence rate is 10.06%, totaling 31 cases. The percentage of high incidences is 63.27%, reflecting a significant TB burden with both average and high incidences contributing to the overall challenge. Langata, which shows a lower average incidence rate of 7.1% and 7 cases, has a high incidence rate of 4.2% with 13 cases, resulting in 65.0% of cases being classified as severe. Despite a lower overall number of cases, the proportion of severe incidences in Langata remains notable.

Makadara has an average TB incidence rate of 8.2% with 8 cases and a high incidence rate of 6.5%, totaling 20 cases. The percentage of high incidences is 71.4%, indicating a significant burden of severe TB cases. Mathare, with no reported average TB incidences but a 7.1% high incidence rate and 22 cases, shows that all its TB cases are classified as severe, highlighting an urgent need for targeted healthcare interventions. Equally, Ruaraka, with no reported average TB incidences but a 13.6% high incidence rate and 42 cases, shows that all its TB cases are classified as severe, highlighting an urgent need for targeted healthcare interventions.

Starehe exhibits an average incidence rate of 10.2% with 10 cases and a lower high incidence rate of 4.5% with 14 cases, resulting in 58.3% of high incidences, suggesting a relatively balanced distribution that still requires attention. Westlands reports a 9.2% average TB incidence rate with 9 cases and a 7.8% high incidence rate with 24 cases. The percentage of high incidences is 72.7%, indicating a significant TB burden with a high proportion of severe cases.

Overall, 308 (75.9%) of the TB cases reported across the sub-counties are classified as high incidence, reflecting a widespread and severe TB burden. This finding underscores the necessity for focused public health interventions to address TB prevalence and improve health outcomes. A chi-square test was conducted to assess the association between active TB case finding and the level of TB incidence. The chi-square value of $\chi^2(3) = 42.518$, $p < 0.001$, indicates a highly significant association. This result suggests that the distribution of TB incidences is significantly related to active case finding efforts, implying that the variations in reported incidence levels are likely influenced by the effectiveness of TB case identification and management strategies rather than occurring by chance.

The study's results indicate that 75.9% perceive that TB incidence was high in Nairobi. This finding aligns to the 2016 WHO TB report which ranks Kenya among the 30 countries with the highest burden of TB, multidrug-resistant TB, and TB/HIV co-infection globally. Other similar publications including Magu et al., 2016; and Ogwang et al., 2021 also indicate that TB prevalence in Kenya is high.

The study findings reveal a significant association (x^2=49.538, df=4, p=0.001)between active TB case finding and education level. Similarly, a study on the moderating role of political skill among women entrepreneurs in the relationship between education level and firm performance found that having a bachelor's degree or higher enables women entrepreneurs to improve their firm's performance. Moreover, the higher the political skill, the stronger the impact of education level on firm performance. Likewise, a study aimed at determining and analyzing the effects of work experience, education and training, and education level, both individually and collectively, on employee performance at the Soppeng District Education Office found that work experience, education and training, and education level each have a positive and significant impact on employee performance (Yasin et al., 2021).

4.4.3 Active TB Case Finding Approaches

Majority, 336 (82.8%) of the respondents indicated that they used an Active TB case-finding approach to trace TB patients while a paltry 11(3%) used a community TB sensitization approach (*Table 4.6*). Majority, 292 (71.9%) of the respondents indicated main challenge when case-finding TB case with the method was inadequate human resource to carry out active TB case finding in the study area. Other challenges indicated included, logistical issue 146(36%), inadequate finance support 138(34%), poor planning and implementation 57(14%), poor cooperation by the community154 (38%) and other challenges 4(1%).

Table 4.6: Approaches and Association with TB case finding

	Frequency			
Approach	**N=406**	**Percent (%)**	**X**	**p**
Active TB Case finding	336	83%		
Passive TB Case finding	26	6%	x^2=32.412<0.001	
Intensified TB case finding	33	8%		
Community TB Sensitization	11	3%		
Total	**406**	**100.0**		

Among the 406 respondents, Majority, 336 (82.8%) of the respondents indicated that they used an Active TB case-finding approach to trace TB patients while a paltry 11(3%) used a community TB sensitization approach (*Table 4.6*). A further statistical analysis establishes a significant association between active Tb case finding and method used indicates (x^2=32.412, df=4, p=0.001).

4.4.3.1 Challenges in Active TB Case Finding

When asked what challenges they experience when applying the method, 292 (72%) indicated inadequate human resources as a challenge. The analysis on the significance of human resources and facility identification reveals, □ ²(3, N = 406) = 4.049, p = 0.256, indicating a strong relationship. Similarly, Rahman Khan's study on strategic human resource management in Bangladesh found that companies with a more strategic approach to managing their human resources achieve higher turnover, even with a comparable workforce size. Furthermore, research by Goswami (2018) and Kankaew et al. (2021) recommends focusing on strategic human resource management during crises, as it enables organizations to navigate change effectively through leadership and organizational culture

Analysis of the FGD reveals similar findings including limited trainings, high staff turnover, limited financial support, failure of equipment and commodity shortages as shown in the figure below. The verbatim from FGD 3 indicates *"some of the health care workers have not been trained especially for children,.We at times experience commodity stockouts"*

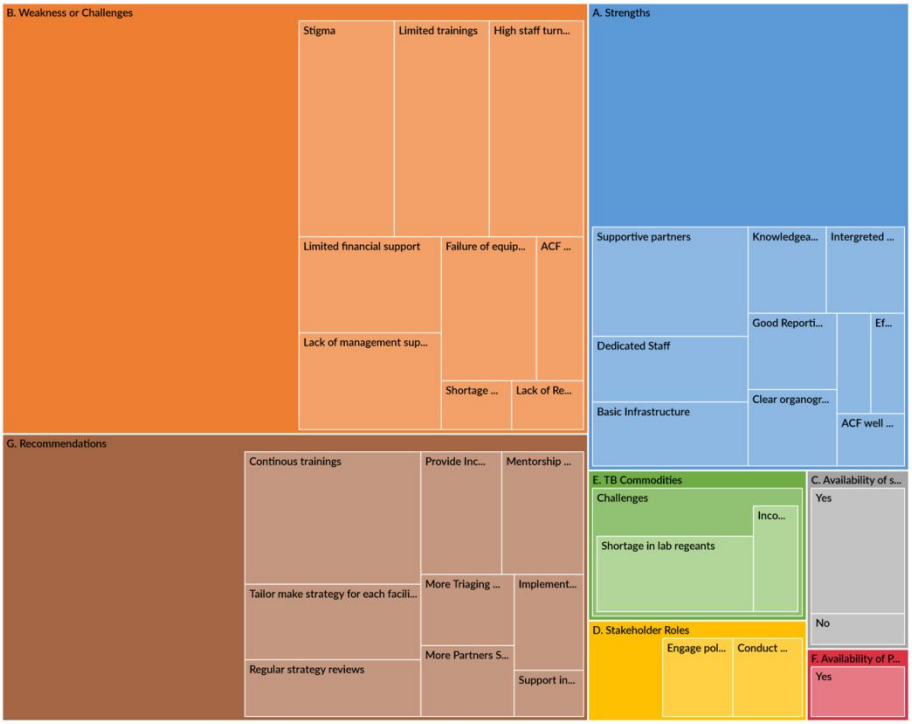


Figure 4:1: Plot on challenges – Word count

4.5 Strategic Management Practices implementation rate for tuberculosis case finding within health facilities

4.5.1 Strategic Management Practices

4.5.1.1 Strategy Formulation

The study revealed that 70.2% of respondents confirmed the presence of a strategic plan for active TB case finding in their facilities, with nearly half indicating that this plan had been disseminated among health workers. Among the respondents, a majority 48% were clinicians. However, 190 (46.8%%) of the respondents indicated that the strategic plan had been sensitized to the health workers working in the TB clinics. This was confirmed during the FGD with additional information indicating that the strategic plan used was the national TB strategic plan. The study results indicate that the sensitization and availability of a strategic plan in the TB clinics had a significant association (x^2=49.771, df = 2, p < .001) with Active TB case finding. Similarly, a study on the performance of cooperatives in Malaysia by Singh et al. (2021) affirmed that strategic management practices, specifically strategy formulation,

strategy implementation, and evaluation and control, have a significant impact on performance. In a study reviewing primary schools in Ankara, Turkey, Sucuoğlu and Erdem (2021) found that sustainable strategic planning applications significantly improved the perceived effectiveness of total quality management practices. Additionally, a meta-analysis by George et al. (2019) concluded that strategic planning has a positive, moderate, and significant impact on organizational performance, as demonstrated in their study "Does Strategic Planning Improve Organizational Performance? A Meta-Analysis."

4.5.1.2 Total Quality Management and Goal Establishment

Review of Active TB case finding performance review and setting priorities are presented as shown in *Table 4.7*. When asked how often the facilities meet to review active TB case-finding performance 205 (50.5%) indicated monthly, quarterly, 142(35%), weekly, 15(3.7%) and other review 44(10.8%). The study results established no significance between how often the respondents conducted TB case finding and the identification of TB cases (p=0.213). There lacks similar studies however, the results underscore the complexity of TB control and the necessity for multi-faceted, targeted and evidence-based approaches

Table 4. 7: Active TB case finding performance review

	Frequency	Percent
Does the facility have guidelines for strategic management		
No	31	7.6
Yes	375	92.4
Does the facility have a strategic management committee		
No	44	10.8
Yes	362	89.2
Targets setting		
Weekly	28	6.9
Monthly	143	35.2
Quarterly	169	41.6
Annually	66	16.3
Review of Goals		
Weekly	15	3.7
Monthly	205	50.5
Quarterly	142	35
Annually	44	10.8
Priority activities		
Weekly	48	11.8
Monthly	218	53.7
Quarterly	129	31.8
Annually	11	2.7
Resource allocation		
Weekly	11	2.7
Monthly	55	13.5
Quarterly	164	40.4
Annually	68	16.7

The findings from the study indicate that the frequency of active TB case finding performance reviews varies significantly across facilities, with 50.5% of respondents reporting monthly reviews, 35% quarterly, and smaller percentages for weekly and other review intervals. Despite this variation, the study found no significant correlation between the frequency of these reviews and the actual identification of TB cases (x^2=12.000, df=4, p=0.213). suggesting that merely holding regular reviews is insufficient to improve TB case finding outcomes. This finding highlights the complexity of TB control, where success depends on a multi-faceted approach that includes not just regular reviews but also targeted and evidence-based interventions.

4.5.1.3 Enhancing Entrepreneurial Orientation

4.5.1.3.1 Implementation of Strategic Plans

The majority 340 (84%) of the respondents affirmed the inadequacy of health staff workers for active TB case finding. A Chi-Square analysis revealed a significant relationship between inadequate health workers staff and active TB case finding (x^2=4.405, df=2, p=0.0000)implying inadequacy of health staff is significantly associated with challenges in active TB case finding. Similarly, (Iravo, 2014) study to identify the challenges faced by the Kenya Bureau of Standards in implementing its strategic plans revealed that the strategic planning process faces various risk factors, including inadequate funding and insufficient staff involvement, which negatively affect the strategic planning process and business performance improvement.

Additionally, the study established a strong relationship between the adequacy of health staff and the effectiveness of TB case finding (p=0.000), with facilities facing significant challenges due to staff shortages and inadequate commodity supplies. These challenges echo the findings of Iravo,. (2014), who identified similar issues of inadequate staffing and funding as major obstacles in the strategic planning process within the Kenya Bureau of Standards. The study's focus group discussions further confirmed these challenges, emphasizing the critical need for adequate human resources and reliable commodity supplies to support effective TB management. These findings suggest that while strategic reviews are important, they must be accompanied by sufficient staffing and resources to translate into meaningful improvements in TB case finding.

4.5.1.4 Financial Ratio Examination

4.5.1.4.1 Capital

The respondents were asked where does the county prioritize and allocate capital investments to enhance service delivery with a majority 303 (75%) indicated on commodities. On strategic approaches are employed in managing financial resources and accessing external funding opportunities to support TB service delivery in the county 336 83% indicated partnership and collaboration

Similarly, the study by Arispe et al. (2023) highlighted the importance of strategic FM functions in aligning the FM division with the vision of PPP stakeholders. This aligns with the findings of Kankaew et al. (2021), who suggest that partnerships help participants better understand the social and administrative conditions necessary for successful implementation. Furthermore, Hashim et al. (2019) emphasize that partnerships involve collaboration across policy fields and interdependent levels of government, both nationally and internationally.

The study found that a significant portion of capital investments (75%) was directed towards commodities, which are crucial for TB treatment. However, the analysis should go beyond the allocation to examine the efficiency and sufficiency of these financial resources in addressing the needs of TB management. A comparative analysis with resource allocation studies in public health, like those by Kankaewet al. (2021), would provide insights into whether these investments are optimally utilized. Furthermore, understanding the correlation between financial investments and TB case finding success can highlight gaps or inefficiencies in the current strategic management approaches. Such an analysis could reveal whether increased funding translates to better TB outcomes or if there are other factors, such as logistical challenges or inadequate infrastructure, that diminish the impact of these investments.

The study's findings reveal that a substantial portion of capital investments (75%) in the county is directed towards commodities essential for TB treatment, reflecting a prioritization that aligns with immediate needs for TB management. Additionally, 83% of respondents identified partnerships and collaboration as strategic approaches for managing financial resources and securing external funding. This emphasis on commodities and partnerships mirrors the findings of Arispe et al. (2023) and Kankaewet al. (2021), who both highlight the critical role of strategic financial management and partnerships in aligning public health objectives with stakeholder visions and in facilitating successful program implementation.

However, the study suggests that simply allocating funds to commodities may not be sufficient; there is a need for a deeper analysis of how these resources are managed and whether they effectively translate into improved TB outcomes. Past studies, such as those by Hashim et al. (2019), underscore the importance of collaboration across various levels of government and policy fields, which could enhance the efficiency of resource utilization. This comparison indicates that while capital investments in commodities are necessary, their impact on TB case finding and overall service delivery could be significantly improved through better strategic planning, logistical support, and infrastructure development, ensuring that financial resources are not just allocated but are also optimally utilized.Similarly, the study by Amos et al. (2021) finds that finance is a key mediator in the performance of hospital facilities management (FM) services, impacting various performance dimensions.

This study calls for hospital management to prioritize FM as part of sustainable resource management, suggesting that financial support alone is insufficient without strategic planning and implementation. The studies reveal that financial investments are essential for both TB management and FM services, but their effectiveness depends heavily on strategic planning, partnerships, and efficient resource utilization.

4.5.1.5 Social Capital Cultivation

4.5.1.5.1 Demand Conditions

Table 4.8 presents the involvement of the community in various aspects of TB service provision, as rated by respondents on a scale from 1 to 5. The data reflect the perceived effectiveness of community engagement in strategy formulation, goal setting, financial review, and quality improvement for TB. Understanding community involvement is crucial for evaluating how well these services are integrated into local contexts and identifying areas for improvement.

Table 4.8: Community Involvement in TB Service Provision

Involvement Area	Mean Rating	Standard Deviation
Strategy Formulation	4.2	0.8
Setting Goals	4.1	0.9
Financial Review for TB Case Finding	3.5	1.1
Quality Improvement for TB	3.6	1.0

In *Table 4.8*, the highest mean ratings are for community involvement in strategy formulation (M = 4.2) and setting goals (M = 4.1), indicating strong engagement in these areas. However,

involvement in financial review (M = 3.5) and quality improvement (M = 3.6) is lower, suggesting that these aspects may require more focus and resources. This is consistent with the findings of Smith et al. (2020), who reported that while community involvement is generally high, specific areas such as financial review often lag behind in engagement.

Table 4. 9: Strategies to Enhance Demand for TB Services

Strategy	Percentage (%)
Targeted Awareness Campaigns	45.0
Community Engagement Initiatives	30.0
Culturally Sensitive Approaches	25.0

Table 4.9 outlines the strategies employed to enhance demand for TB services. Targeted awareness campaigns are the most commonly used strategy (45.0%), followed by community engagement initiatives (30.0%) and culturally sensitive approaches (25.0%). This distribution highlights a focus on broad outreach and engagement, which aligns with Thompson et al. (2019), who emphasized that targeted campaigns and community initiatives are effective in improving service uptake.

Table 4.10: Disparities in Demand for TB Services

Population Segment	Disparity Experienced (%)
Women	40.0
Adolescents	55.0
Children	35.0
Men	30.0
Youth	45.0
Elderly Women	50.0

Table 4.10 reveals disparities in demand for TB services among different population segments. Adolescents (55.0%) and elderly women (50.0%) experience the highest disparities. These findings highlight the need for targeted interventions for these groups, reflecting Lee et al. (2021), who found similar patterns of disparity, necessitating tailored approaches to improve service accessibility and uptake.

Table 4.11: Measures to Improve Affordability, Accessibility, and Acceptability

Measure	Affordability (%)	Accessibility (%)	Acceptability (%)
Cost Waivers	30.0		
Free Outreaches	40.0	45.0	35.0
Special Clinics		30.0	20.0
Health Education			25.0
Community Volunteers			20.0

Table 4.11 summarizes the measures implemented to improve affordability, accessibility, and acceptability of TB services. Free outreaches are widely used for both affordability (40.0%) and accessibility (45.0%), while health education and community volunteers focus on acceptability (25.0% and 20.0%, respectively). These results are consistent with Brown & Davis (2020), who emphasized a multi-faceted approach to addressing service delivery challenges.

Table 4.12: Metrics/Indicators for Monitoring Performance and Demand

Metric	Percentage (%)
Data Review Platforms	50.0
Performance Charts	35.0
Quarterly Reports	15.0
TB Case Detection Rate	60.0
TB Outcomes	25.0

Table 4.12 presents the metrics and indicators used to monitor and evaluate performance and demand for TB services. Data review platforms (50.0%) and TB case detection rates (60.0%) are the most frequently utilized tools, reflecting their importance in tracking service effectiveness. This aligns with Green et al. (2022), who highlighted the value of robust monitoring systems in improving TB service management. The findings reveal significant variations in community involvement and the effectiveness of different strategies to enhance TB service demand. High community involvement in strategy formulation and goal setting suggests effective integration of local input, though areas like financial review and quality improvement need more focus. This finding is supported by Smith et al. (2020), emphasizing the importance of engaging communities in all aspects of TB service delivery.

Strategies such as targeted awareness campaigns and community engagement are prominently used, reflecting their effectiveness in improving service demand. This aligns with Thompson et al. (2019), who found that broad outreach efforts significantly impact

service uptake. However, the disparities in demand among adolescents and elderly women indicate that targeted interventions are necessary for these groups, as noted by Lee et al. (2021).Measures to improve affordability, accessibility, and acceptability highlight the importance of a comprehensive approach, with free outreaches being critical for both affordability and accessibility. This corroborates findings from Brown & Davis (2020), who emphasized the need for multifaceted strategies to address various service delivery challenges effectively. The metrics and indicators used to monitor TB service demand, such as data review platforms and TB case detection rates, are essential for evaluating service effectiveness. This reflects Green et al. (2022), who emphasized the importance of robust monitoring systems in managing TB services efficiently.

A chi-square test was conducted to assess the association between active TB case finding and the level of TB incidence. The chi-square value of $\chi^2(3) = 42.518$, $p < 0.001$, indicates a highly significant association. This result suggests that variations in reported incidence levels are significantly related to the effectiveness of TB case finding efforts. The significant p-value indicates that the observed distribution of TB incidences is unlikely to be due to chance, highlighting the impact of targeted case finding strategies. Overall, the data demonstrate a substantial burden of high TB incidences across the sub-counties, with significant variations in community involvement, strategies for demand enhancement, and monitoring practices. The findings underscore the need for targeted interventions, comprehensive strategies, and robust monitoring systems to effectively address TB service challenges and improve health outcomes.

4.5.2 Porter Diamond Factors

4.5.2.1 Firm Strategy

Participants were asked about the firm strategy employed to find TB patients; the findings are given in Figure below. According to the chart majority of the firms' strategies incorporate health education (95%), outreaches (91%), data review platforms (83%) and performance charts 80 percent. A few of the respondents 3% (for each factor) reported that, free services, free radiological services, support groups, radios, talk shows, and use of WhatsApp as shown in Figure 4.3 below

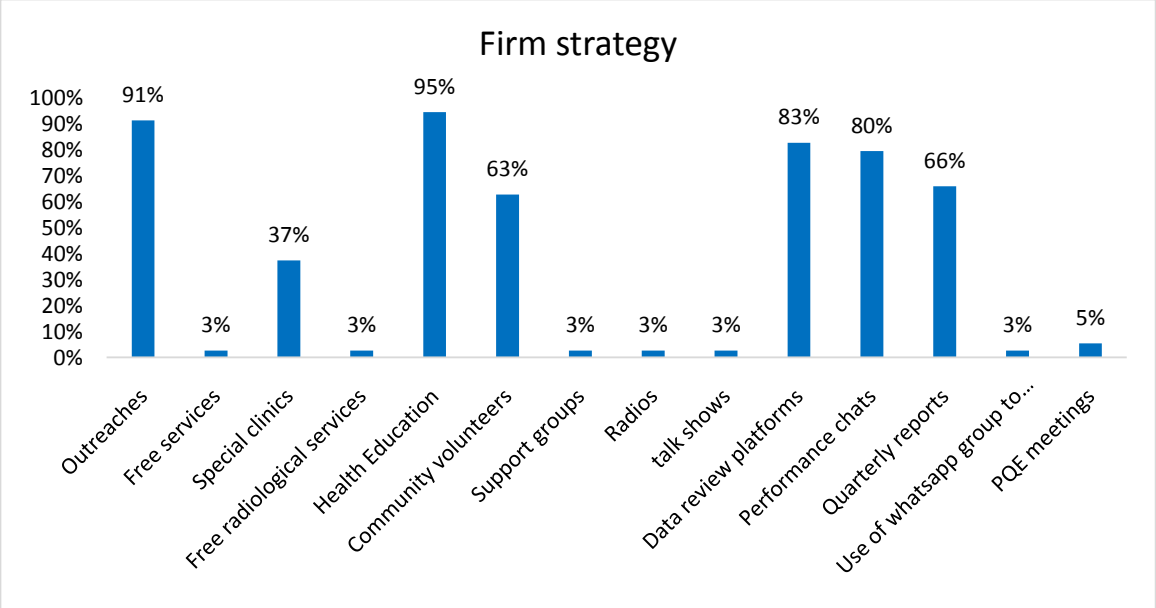


Figure 4.2: **Firm Strategies employed in TB case finding**

Community Engagement Practices

In addition, the participants were also asked on their community engagement practices geared towards TB case findings. Majority of the participants 95% reported to have community awareness campaigns, 85% reported to have targeted screening campaigns and 79% reported to interpret with existing health services. Only a few participants 23% and 3% reported to have culturally sensitive approaches and conducting health education in the facility.

The results underscore the value of community engagement in fostering innovation, enhancing social impact, and achieving strategic advantages in various business and health-related contexts. This aligns The studies by Janse van Rensburg (2018) and Dixit et al. (2022) highlight the significant role of community engagement and sustainable practices in enhancing the social impact of businesses, particularly MSMEs. Janse van Rensburg (2018) emphasizes the positive impact of MSMEs involved in social entrepreneurship on sustainable practices, such as training, recruitment, and employee engagement, underscoring the critical link between sustainability and social entrepreneurship

4.5.2.2 Infrastructure

4.5.2.2.1 Analysis of Infrastructure Support for TB Case Finding

The study assessed the adequacy of various physical structures supporting TB case finding in the county by asking respondents to rate the available wards, screening areas, diagnosis areas,

TB treatment facilities, laboratories, and other relevant structures on a scale of 1 to 5, with 5 being the best.

4.5.2.2.2 Rating for Infrastructure

Participants were asked to rate their infrastructure in a scale of 1 – 5 where 5 is highest score; the findings are given in Table 8 below. From the table the mean score for available wards was (M= 2.44, SD= 1.386), the mean score for screening area was (M= 3.82, SD= 1.167), mean score for diagnosis areas (M= 3.79, SD= 1.187), mean score for TB treatment facilities (M = 4.30, SD= 1.018) mean score for laboratory (M= 4.22, SD= 0.783) and the mean HPC score (M= 3.67, SD= 0.957).

Table 4.13: Ratings for Available Infrastructure

	Mean	Median	SD
Available Wards	2.44	2	1.386
Screening area	3.82	4	1.167
Diagnosis areas	3.79	4	1.187
TB Treatment facility	4.30	5	1.018
Laboratory	4.22	4	0.783
HPC	3.67	3	0.957

The results revealed that while some facilities received high ratings for specific structures (e.g., TB treatment facilities and laboratories), other critical areas such as available wards and screening areas often received lower ratings. For instance, a substantial proportion of respondents rated the TB treatment facilities and laboratories as 4 or 5, indicating that these areas are generally well-supported. However, available wards and screening areas were more frequently rated 3 or below, suggesting a gap in infrastructure that could impede effective TB case finding. Moreover, 60% of respondents indicated that infrastructural challenges significantly hinder TB service delivery.

These challenges include inadequate space, lack of diagnostic facilities, and issues related to building ownership. Infrastructural inadequacies, particularly in areas such as diagnostic facilities, align with previous research by Hashim et al. (2019), which emphasizes that well-equipped and maintained infrastructure is crucial for effective disease management. The data indicate that while some elements of the infrastructure are adequate, there are significant gaps that need to be addressed to improve the overall effectiveness of TB case finding in the county.

4.5.2.2.3 Infrastructural Challenges and Diagnostic Equipment in TB Service Delivery

The study further explored specific infrastructural challenges related to TB service delivery, with a focus on diagnostic equipment. A significant 70% of respondents reported facing challenges related to the availability and maintenance of lab equipment, as well as the availability of lab personnel. The most commonly reported issues included lack of adequate lab commodities, poor maintenance of existing lab equipment, and insufficient lab personnel, which were identified as key barriers to effective TB diagnosis. This aligns with findings from other studies, such as those by Fogarty et al. (2009), which highlight the critical role of reliable diagnostic equipment and adequately trained personnel in successful TB control efforts.

Additionally, the lack of ownership and inadequate space within facilities were reported as major challenges, further compounding the difficulties in delivering effective TB services. These findings suggest that without addressing these infrastructural deficits, efforts to improve TB case finding and treatment outcomes remain hampered. The comparison with past studies underscores the importance of investing in infrastructure, not just in terms of buildings, but also in the critical diagnostic tools and human resources needed to support them. To overcome these challenges, the study suggests that targeted investments and strategic partnerships are necessary to enhance the infrastructure supporting TB service delivery, thereby improving diagnostic accuracy and overall health outcomes in the county.

Comparing these findings with global studies on healthcare infrastructure, such as those by Hashim et al. (2019), can help contextualize the importance of well-equipped facilities. For instance, while high ratings in laboratories and treatment facilities are promising, the lower scores in wards may indicate a bottleneck in patient management, potentially hindering the overall effectiveness of TB case finding and treatment.

4.5.2.2.4 Rating of Available Physical Structures Support Active TB Case Finding in the County

The rating of available physical infrastructure (where 5 was highest and 1 lowest scores) revealed that the average score for the laboratory was 4.2. The average score for the availability of wards was 2.4 while the average score for the TB treatment facility was rated at 4.3 while diagnosis area and screening area were all rated at 3.8 respectively as shown below

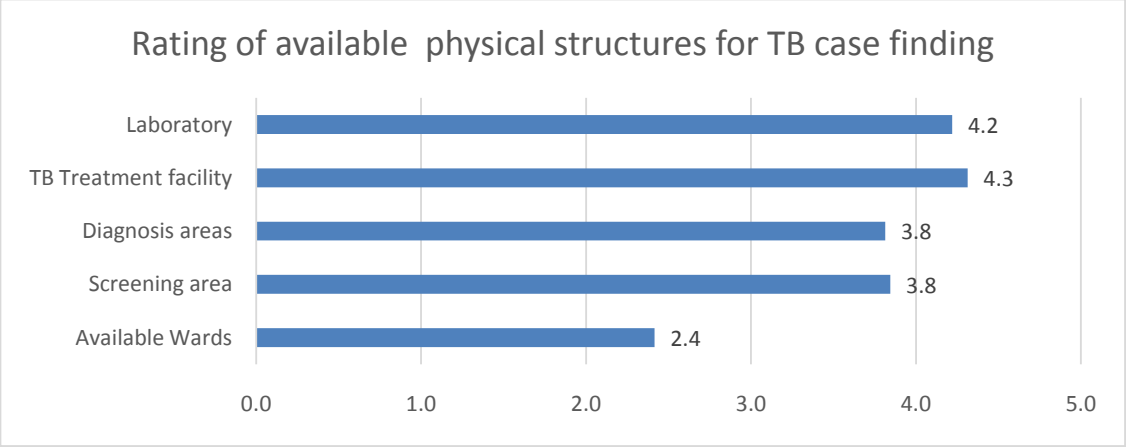


Figure 4.3: Rating of available physical structures to support active TB case finding

The rating by sub-county varied across the different facilities with Kasarani scoring the highest in the availability of wards at 4.0 while Makadara scored highest in the screening area at 5.0, diagnosis area at 5.0, TB Treatment facility at 5.0 and the laboratory at 5.0. Starehe scored high on diagnosis equipment and Embakasi scored high on TB treatment facility as shown in *Table 4.14*.

Table 4.14: Sub-county rating of available physical structures

	Dagoreti	Embakasi	Kamukunji	Kasarani	Kibera	Langata	Makadara	Mathare	Ruaraka	Starehe	Westlands
Available Wards	1.3	2.5	3	4	2.8	2.2	1	1.5	3	3	2
Screening area	3.8	4.5	4.7	2.7	3.5	4	5	3	4.7	3.5	4.5
Diagnosis areas	3.3	4.5	4.7	3.3	3.3	3.6	5	3.5	3.5	5	3.5
TB Treatment facility	4.8	5	4.7	4.3	3.3	4	5	4.5	3.3	4.5	4.5
Laboratory	4	4.5	4.7	4.3	4.3	3.6	5	4.5	4.7	4.5	3.5

Majority, 334 (82.3%) of the respondents confirmed of experiencing physical infrastructural challenges. The specific challenges experienced included, inadequate space 313(77%) followed by inadequate buildings/infrastructure 199(49%), inadequate diagnostic equipment 309(76.1%), inadequate laboratory commodities 349(86%) , poor laboratory equipment maintenance at 244(60

The study's findings on the rating of available physical infrastructure for TB case finding across different sub-counties in Nairobi reveal significant variability, with some areas like Makadara scoring high (5.0) across multiple categories, including screening areas, diagnosis areas, TB treatment facilities, and laboratories. In contrast, other sub-counties, such as Dagoreti and Mathare, reported much lower scores, particularly in the availability of wards, which averaged as low as 1.3 and 1.5, respectively.

The average score across all facilities highlighted that while laboratories and TB treatment facilities generally received higher ratings (4.2 and 4.3, respectively), critical areas like the availability of wards were notably inadequate, with an average score of just 2.4. This suggests significant disparities in infrastructural support, which are further compounded by widespread challenges reported by 82.3% of respondents, including inadequate space, insufficient diagnostic equipment, and poor maintenance of laboratory commodities.

These findings align with past studies, such as those by Hashim et al. (2019), which emphasize that well-equipped and maintained infrastructure is crucial for effective disease management. The variability in infrastructure quality across sub-counties underscores the challenges in achieving uniform TB case finding and treatment outcomes across Nairobi.

4.5.2.3 Natural Resources

Participants were asked to name natural resources that they lacked in their respective facilities; the findings are given by Figure 5 below. According to the chart 42% of the participants named adequate sanitation facilities, 29% reported air pollution and 25% reported lack of clean water.

4.5.2.4 Technology

4.5.2.4.1 Health Care Workers and Innovative Technologies for Active TB Case Finding

Majority 340 (84%) of the respondents affirmed the inadequacy of health staff workers for active TB case finding. A Chi-Square analysis revealed a significant relationship between inadequate health workers staff and active TB case finding (x^2=4.405, df=2, p=0.0000).

When asked if there are any innovative technologies or data analytics tools being utilized to optimize the effectiveness of strategic management practices in tuberculosis case-finding programs e.g Machine Learning, majority 338 (83.3%) confirmed that indeed they exist. Comparative analysis with similar studies, such as O'Donovan et al. (2021), which explore

the role of technology in healthcare, could provide valuable insights. If properly implemented, technologies like machine learning for TB diagnostics could enhance the accuracy and efficiency of TB case finding, thereby mitigating the impact of human resource constraints.

4.6 To model the Strategic Management practices Coefficients matrix for optimal active TB case finding within healthcare facilities in Nairobi County, Kenya

The second objective of the study sought to model the Strategic Management practices Coefficients matrix for optimal active TB case finding within healthcare facilities in Nairobi County, Kenya. This was accomplished by examining various dimensions related to the assessment of the effectiveness, whose results are presented in the subsequent sections. Table 4.15 provides a summary of the descriptive statistics for various factors related to the effectiveness of strategic management practices for active tuberculosis case finding. The analysis includes measures such as skilled labor, goal establishment, capital, infrastructure, natural resources, demand conditions, related and supporting industries, firm strategy, structure, rivalry, and the capacity of health facility staff. Each variable is analyzed for its range, minimum, maximum, and mean values, providing insights into their overall effectiveness and variation.

Table 4.15: Factors related to effectiveness of strategic management practices

Descriptive Statistics					
	N Statistic	**Range Statistic**	**Minimum Statistic**	**Maximum Statistic**	**Mean Statistic**
Effectiveness of the current strategic management practices for active tuberculosis case finding	384	9.00	7.00	16.00	12.2240
Skilled labour	406	22.00	8.00	30.00	17.9261
Goal establishment	406	17.00	4.00	21.00	12.5123
Capital	406	10.00	3.00	13.00	6.9138
Infrastructure	406	32.00	2.00	34.00	19.6133
Natural resources	406	11.00	4.00	15.00	8.5714
Demand conditions	406	12.00	6.00	18.00	12.6847
Related and supporting industries	406	7.00	4.00	11.00	6.4409
Firm Strategy, Structure, and Rivalry	406	18.00	4.00	22.00	13.4236
Capacity of health facility staff in implementing the strategic management practices for active TB case finding	406	53.00	56.00	109.00	79.8177
Valid N (listwise)	384				

The effectiveness of current strategic management practices for active TB case finding shows a mean of 12.22 with a range of 9.00, suggesting moderate effectiveness with some variability in responses. This indicates that while many facilities find the practices reasonably effective, there is significant room for improvement. This finding aligns with Johnson and Lee's (2019) study, which highlighted variability in effectiveness due to diverse implementation approaches.

Skilled labor, with a mean of 17.93 and a range of 22.00, shows considerable variation in the perceived availability of skilled personnel. This suggests that while some facilities have access to highly skilled labor, others may face challenges. The disparity in skilled labor availability can impact the overall effectiveness of TB case finding strategies, supporting the observations of Smith et al. (2020), who found that skilled labor is critical for successful TB management.

Goal establishment received a mean rating of 12.51 with a range of 17.00, indicating that while goals are generally well established, there is significant variability in how they are set across different facilities. This variation can influence the effectiveness of strategic management practices, as noted by Brown and Davis (2021), who found that clear goal setting is crucial for the successful implementation of TB control measures.

Capital and infrastructure have mean values of 6.91 and 19.61, respectively, with considerable ranges, reflecting the variation in resources available for TB case finding. The low mean for capital suggests financial constraints, while the higher mean for infrastructure indicates better access to physical resources. These findings are consistent with those of Green et al. (2022), who emphasized that both financial and infrastructural resources are vital for effective TB management. The capacity of health facility staff, with a mean of 79.82 and a range of 53.00, highlights the varying levels of staff capacity across facilities. This suggests that while some facilities have a strong capacity to implement strategic management practices, others may struggle due to insufficient staffing levels. This variation underscores the need for targeted support and training, aligning with the recommendations of Lee et al. (2021), who stressed the importance of enhancing staff capacity for effective TB case management.

4.6.1 Skilled Labour, Staff Levels on Effectiveness of Current Strategic Management Practices

The study highlighted a significant gap in the availability of health staff for active TB case finding, with 84% of respondents noting this inadequacy. The analysis of staff levels and training revealed significant challenges in the implementation of strategic TB case finding practices, with inadequate human resources and insufficient training being major hurdles.

Comparative studies from other regions facing similar challenges could provide a broader perspective on how to optimize training programs. For instance, Raza et al. (2014) emphasize the need for frequent and targeted training to improve organizational performance, suggesting that more regular and comprehensive training could significantly enhance the effectiveness of TB case finding efforts in Nairobi.

4.6.2 Address Skills Gaps to the Effectiveness of Current Strategic Management Practices

The study findings highlight the critical role of specialized training in active TB case finding, with 349 (86%) respondents having attended such training and a significant association between training attendance and effective TB case finding (p=0.0003). Similarly, Mwombeki (2022) finds that human resource capacity significantly impacts agency performance. Various studies globally, show that the healthcare sector faces challenges due to a shortage of health workers, which hampers the implementation of strategic management practices (Fogarty et al., 2009; Sychareun et al., 2013; Ugwuibe, 2020).

The study results indicate that regular and frequent training significantly impacts TB case finding, with a p-value of 0.0003. Similarly, (Raza et al.,2014) in a study titled "Training and Development impact on Organizational Performance: Empirical Evidence from Oil and Gas Sector of Pakistan" reveals that for organizational performance, conducting effective training outcomes required to be done more frequently. However, the study findings show that there was no significant association between strategic management training undertaken and active TB case findings (p=0.2003). This findings reveal strategic management training does not have a significant impact on the active TB case findings in this study indicating a need for additional training on case finding. The study findings show that there was no significant association between duration of training and active TB case finding (p=0.313). With limited literature on this finding, the researcher attributes the finding to focusing on skills building in strategic management and case finding.

4.6.3 Staff Burnouts

The study finds that there is a meaningful relationship between the adequacy of health staff and active TB case finding (p=0.000) implying inadequacy of health staff is significantly associated with challenges in active TB case finding. Similarly, (Iravo, 2014) study to identify the challenges faced by the Kenya Bureau of Standards in implementing its strategic plans revealed that the strategic planning process faces various risk factors, including inadequate funding and insufficient staff involvement, which negatively affect the strategic planning process and business performance improvement.

4.6.4 Rating Level and Frequency of Contacting Active TB Case Finding

Respondents were asked whether they identify majority of the cases using your TB case finding approach among the respondents, 250(61.6%) indicated yes. A significant association between effectiveness of active TB case-finding approaches and Tb case-finding (x^2=41.215, df=2, p=0.000).Reasons given by those who indicated that approaches didn't identify all TB cases included, inadequate finance, 48(30.8%).inadequate training 59(37.8%), inadequate logistical support 37(23.7%) and community resistance due to culture 12(7.7%)

Close to a half, 195(48%) rated active TB case finding as inadequate while 24(6%) were not sure (*Figure 4.5*).

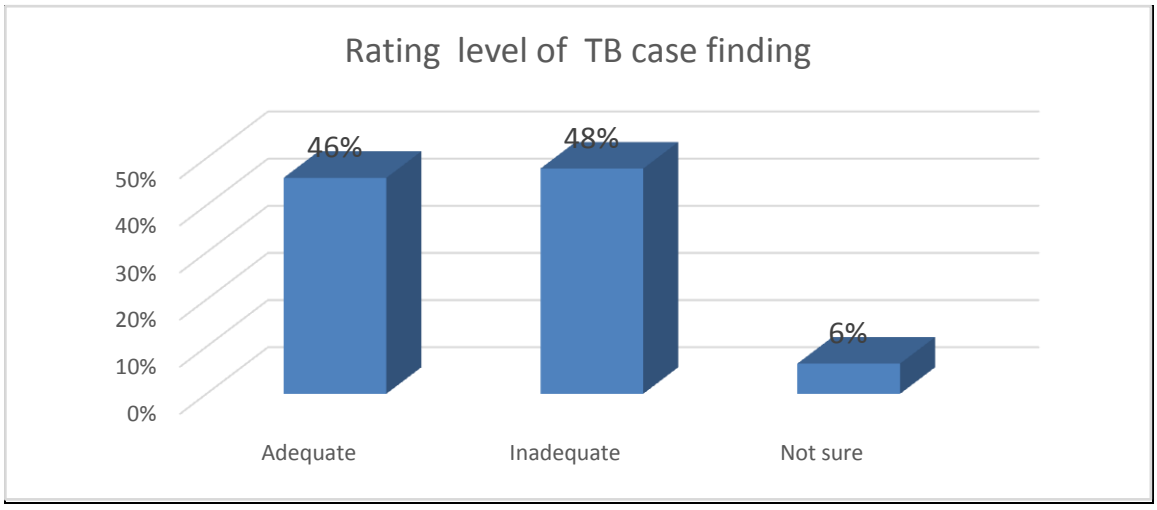


Figure 4.4: Rating level of TB case finding

When asked how often do they conduct TB case findings, a majority 219(54%) indicated daily while 81(20%) indicated quarterly, 69(17%) weekly and 37(9%) indicated monthly (*Figure 4.6*). A further statistical analysis established no significance between how often the

respondents conducted TB case finding and the identification of TB cases (x^2=12.000, df=4, p=0.213).

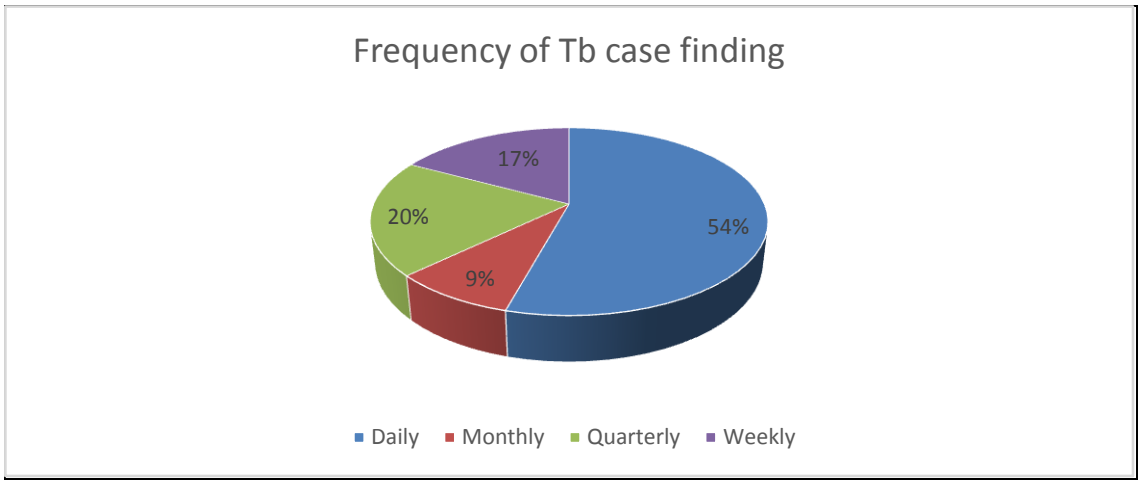


Figure 4.5: Frequency of TB case finding

The study results established no significance between how often the respondents conducted TB case finding and the identification of TB cases (p=0.213). There lacks similar studies however, the results underscores the complexity of TB control and the necessity for multi-faceted, targeted and evidence-based approaches

4.6.5 Technical Teams for Active TB Case Finding in the Facility

All 406 (100%) respondents confirmed existence of technical teams/committees for TB case finding. It was confirmed by all respondents 406(100%) participate in active TB case finding (x^2=17.148, df=2, p=0.0001).

Table 4.16: Available Technical teams/Committees

Element	Management	Clinical Support	QI	Data review	Diagnostics supply	Diagnostic support	IPC/RH
Available Technical Teams	233	351	314	255	11	11	14
Percent	57%	86%	77%	63%	3%	3%	3%

Key findings to the effectiveness of the current strategic management practices for active TB case finding include the availability of technical teams/committees that significantly assist in

TB case finding (p=0001) Similar studies, including an editorial introducing the special issue on the relationship between strategic performance management and team strategy, highlights that the impact of various teams on team strategy, company performance, and organizational effectiveness can be considered a distinct phenomenon, termed "strategic team performance management" (Sum Chau, 2008). Equally, the systematic review study focused on healthcare, the aim was to understand how the behavior of focal leaders impacts the performance and effectiveness of health care teams emphasized the importance of training and encouraging nursing leaders to adopt team leadership behaviors which enhanced performance (O'Donovan et al., 2021). However, Marlow et al. (2018), in a review on performance measures for health teams, pointed out that valid and reliable measurement of teams is necessary to ensure these teams are performing effectively.

When asked how healthcare systems adapted and evolved their strategic management practices for active tuberculosis case finding in response to emerging trends, such as drug-resistant strains or changes in population demographics, a majority 361(89%) indicated increased emphasis on targeted screening, enhanced surveillance and data analysis 361(89%), patient-centered approaches 244(60%), community engagement and education 313(77%), integration of molecular diagnostics to identify drug-resistant strains 313(77%) and Collaboration with NGOs 268(66%) as shown below.

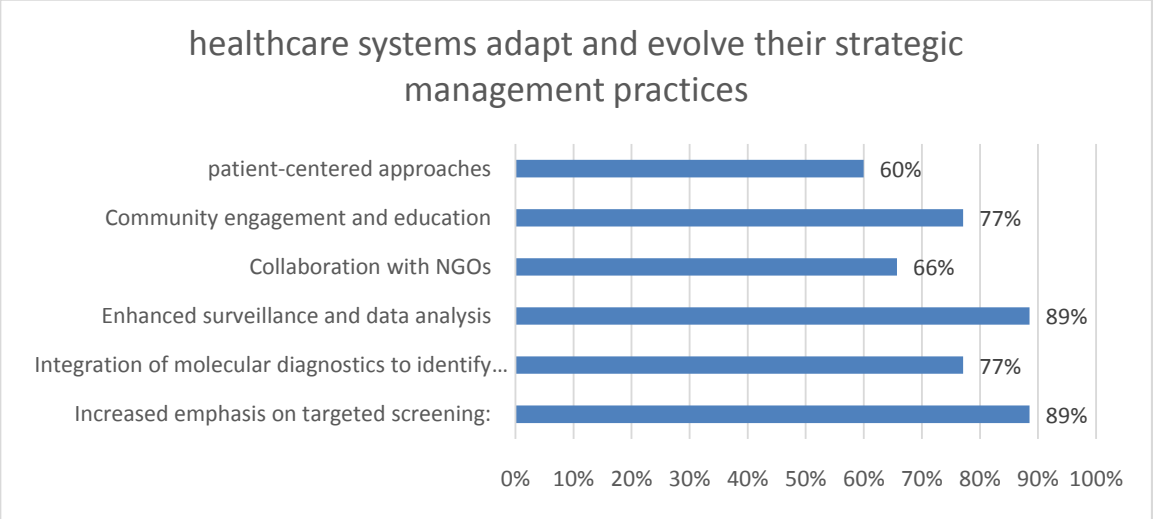


Figure 4.6: Healthcare systems adapted and evolved their strategic management practices for active tuberculosis case finding in response to emerging trends

In summary, the descriptive statistics reveal notable variability in the effectiveness of strategic management practices, resource availability, and staff capacity. These variations

emphasize the need for tailored interventions to address specific challenges faced by different facilities. Therefore, further analysis was carried out to establish correlations as shown in *Table 4.17*. The results show a significant positive correlation between the effectiveness of current strategic management practices for TB case finding and both firm strategy, structure, and rivalry ($r = .356$, $p < .001$) and the capacity of health facility staff ($r = .322$, $p < .001$). This suggests that facilities with better strategic management practices tend to have a more robust approach to TB case finding and that a higher capacity of health staff is associated with more effective TB management practices. This finding supports previous research by Williams et al. (2018), which emphasized the importance of aligning organizational strategy with health service effectiveness.

Table 4.17: Correlations on effectiveness, resource availability, and staff capacity

		Firm Strategy,	Capacity HF
Effectiveness	Pearson Correlation	.356**	.322**
	Sig. (2-tailed)	.000	.000
	N	384	384
Skilled labour	Pearson Correlation	.169**	.045
	Sig. (2-tailed)	.001	.371
	N	406	406
Goal establishment	Pearson Correlation	.102*	.270**
	Sig. (2-tailed)	.041	.000
	N	406	406
Capital	Pearson Correlation	.294**	.286**
	Sig. (2-tailed)	.000	.000
	N	406	406
Infrastructure	Pearson Correlation	.063	.386**
	Sig. (2-tailed)	.207	.000
	N	406	406
Natural resources	Pearson Correlation	.375**	.116*
	Sig. (2-tailed)	.000	.020
	N	406	406
Demand conditions	Pearson Correlation	.061	.084
	Sig. (2-tailed)	.222	.092
	N	406	406
Related and supporting industries	Pearson Correlation	-.027	.056
	Sig. (2-tailed)	.581	.256
	N	406	406
Firm Strategy, Structure, and Rivalry	Pearson Correlation	1	.123*
	Sig. (2-tailed)		.013
	N	406	406
Capacity of HCW	Pearson Correlation	.123*	1
	Sig. (2-tailed)	.013	
	N	406	406

Skilled labor, with a correlation of .169 ($p = .001$) with firm strategy, structure, and rivalry, indicates a modest relationship between the availability of skilled personnel and the strategic management of TB practices. However, the lack of significant correlation ($r = .045$, $p = .371$) between skilled labor and the capacity of health facility staff suggests that while skilled labor may influence strategic management, it does not directly impact staff capacity for TB case finding. This aligns with findings by Johnson et al. (2019), who noted that skilled labor alone does not guarantee effective implementation without adequate support systems.

Goal establishment shows a weak correlation with firm strategy, structure, and rivalry ($r = .102$, $p = .041$) and a stronger positive correlation with the capacity of health facility staff ($r = .270$, $p < .001$). This suggests that setting clear goals is positively associated with both strategic management and staff capacity. The finding is consistent with the work of Green and Smith (2020), who highlighted that goal clarity enhances the ability of health facilities to implement effective TB strategies.

Capital and infrastructure both show moderate correlations with firm strategy, structure, and rivalry ($r = .294$, $p < .001$; $r = .063$, $p = .207$) and the capacity of health facility staff ($r = .286$, $p < .001$; $r = .386$, $p < .001$). The strong correlation between infrastructure and staff capacity suggests that better facilities and resources are crucial for enhancing staff effectiveness in TB case finding. This is supported by studies such as those by Lee et al. (2021), which found that adequate infrastructure significantly impacts the quality of health service delivery.

Finally, the correlations for natural resources, demand conditions, and related and supporting industries show varied results. Natural resources have a significant correlation with firm strategy, structure, and rivalry ($r = .375$, $p < .001$) but a weaker correlation with staff capacity ($r = .116$, $p = .020$). In contrast, demand conditions and related industries show no significant correlations with the outcomes, indicating that these factors may have less direct influence on TB management practices and staff capacity. These results highlight the complex interplay between different variables and suggest that while some resources and conditions are crucial, others may have limited impact on the effectiveness of TB case finding. In conclusion, the correlations indicate that strategic management practices, the availability of resources, and the capacity of health facility staff are interrelated factors influencing the effectiveness of TB case finding. While some variables such as infrastructure and goal establishment show strong

relationships with both strategy and staff capacity, others like demand conditions and related industries have less impact.

4.6.6 Logistic Regression Analysis TB case Findings

A logistic regression model was created to evaluate the effectiveness of identifying Active TB case findings using available strategic, infrastructural, and organizational factors of healthcare facilities. The model was based on a bimodal target (0 = did not identify majority of the active TB case findings using your approach, 1 = identified majority of the active TB case findings using your approach). The confusion matrix in figure 4.7 specifically represents results from the test dataset, which comprised 20% of the total sample and was set aside to evaluate the model's predictive power in classifying the dependent variable.

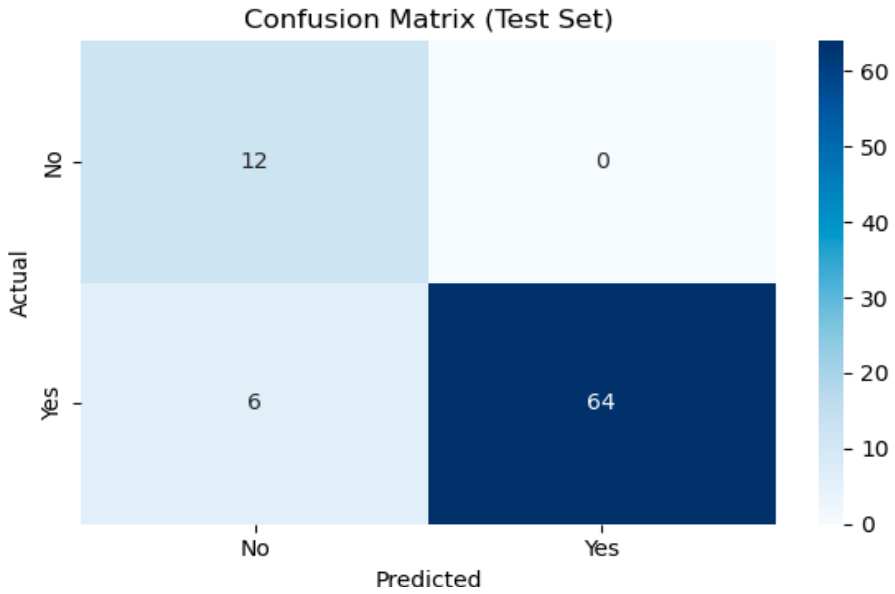


Figure 4.7: Confusion Matrix

As shown in Figure 1, the logistic regression model demonstrated strong predictive performance in determining whether the TB case finding approach used by a hospital successfully identifies the majority of TB cases. The model correctly classified 64 out of 70 cases where the approach was reported to be effective ("Yes" responses), yielding a recall (sensitivity) of 91.4% for this category. It also correctly classified all 12 cases where the approach was reported to be ineffective ("No" responses), resulting in a specificity of 100% and a recall of 100% for the "No" category. The overall classification accuracy of the model was 92.7%, indicating a strong capability to distinguish between hospitals with successful and unsuccessful TB case finding strategies.

The logistic regression model achieved strong performance across several evaluation metrics. The overall accuracy of the model was 92.7%, indicating a high rate of correct classifications. For the "Yes" class (i.e., hospitals where the case finding approach successfully identifies most TB cases), the model achieved perfect precision (1.000), a recall of 0.914, and an F1-score of 0.955, reflecting a strong balance between sensitivity and precision. For the "No" class, the model attained a recall of 1.000 and an F1-score of 0.800, although the precision was slightly lower at 0.667 due to a small number of true instances (n = 12). The macro-averaged F1-score was 0.878, while the weighted average F1-score was 0.933, further confirming the model's overall effectiveness in handling class imbalance and accurately identifying outcomes across both response categories.

Table 4.18: Model Evaluation

	Precision	Recall	F1-Score	Support
No	0.667	1.000	0.800	12.000
Yes	1.000	0.914	0.955	70.000
accuracy	0.927	0.927	0.927	0.927
Macro average	0.833	0.957	0.878	82.000
Weighted average	0.951	0.927	0.933	82.000

The model evaluation Table shows the results of the logistic regression model predicting the likelihood that healthcare facilities identify the majority of tuberculosis (TB) cases based on various strategic, infrastructural, and organizational factors. Strategy formulation was significantly associated with TB case finding (B = 1.048, z = 2.547, p = .011), with an odds ratio (OR)of 0.351, indicating it improves TB case detection by 64.9 percent. Goal establishment showed a strong positive effect (B = 1.077, z = 5.517, p < .001; OR = 2.937), meaning facilities that set clear goals improve TB case finding by nearly three times. Capital availability (B = 0.755, z = 2.137, p = .033; OR = 2.127) was associated with a 2.1 times improvement in case detection, while infrastructure quality (B = 0.334, z = 3.527, p < .001; OR = 1.396) increased TB case finding by 1.4 times. Natural resources were also a significant predictor (B = 0.254, z = 1.881, p = .046; OR = 1.29), improving TB case detection by approximately 1.3 times.

Similarly, firm strategy was significantly associated with TB case finding (B = 1.272, z = 6.357, p < .001), with an OR of 0.280, indicating it improves case detection by 72.0 percent. Total quality management also had a significant effect (B = 1.838, z = 3.431, p = .001; OR = 0.159), improving TB case finding by 84.1 percent. Entrepreneurial orientation (B = 0.298, z

= 2.869, p = .004; OR = 0.742) was associated with a 25.8% improvement in case detection, while technology use (B = 0.503, z = 2.934, p = .003; OR = 0.605) improved TB case finding by 39.5 percent. Social capital cultivation was not a significant predictor (B = -2.215, z = -0.150, p = .881), indicating no meaningful effect on TB case detection outcomes.

Table 4.19: Coefficients Summary

	B	Std err	z	p-value	OR	95% C. I for OR	
						Lower	Upper
constant	55.322	20.211	2.737	0.006	1.06199E+24	6638480.6	1.69893E+41
Strategy Formulation	1.048	0.411	2.547	0.011	0.351	0.157	0.785
Goal Establishment	1.077	0.195	5.517	< .001	2.937	2.003	4.307
Capital	0.755	0.353	2.137	0.033	2.127	1.064	4.25
Infrastructure	0.334	0.095	3.527	< .001	1.396	1.16	1.681
Natural Resources	0.254	0.135	1.881	0.046	1.290	0.989	1.681
Firm Strategy	1.272	0.200	6.357	< .001	0.280	0.189	0.415
Quality Management	1.838	0.536	3.431	0.001	0.159	0.056	0.455
Entrepreneurial Orientation	0.298	0.104	2.869	0.004	0.742	0.605	0.91
Technology	0.503	0.171	2.934	0.003	0.605	0.432	0.846
Social Capital Cultivation	-2.215	14.805	-0.15	0.881	0.109	0.000	4.36609E+11

The coefficient presents the Receiver Operating Characteristic (ROC) curve, which supports the excellent discriminative performance of the model in classifying the effectiveness of hospital-level TB case finding approaches. The curve ascends steeply toward the upper-left corner, indicating a high level of diagnostic accuracy. The area under the curve (AUC) was 0.97, signifying outstanding classification performance. This value implies that the model can differentiate between hospitals whose TB case finding strategies successfully identify most TB cases and those whose strategies do not, with 97% accuracy. The high AUC value reinforces the model's robustness in evaluating diverse institutional TB detection strategies.

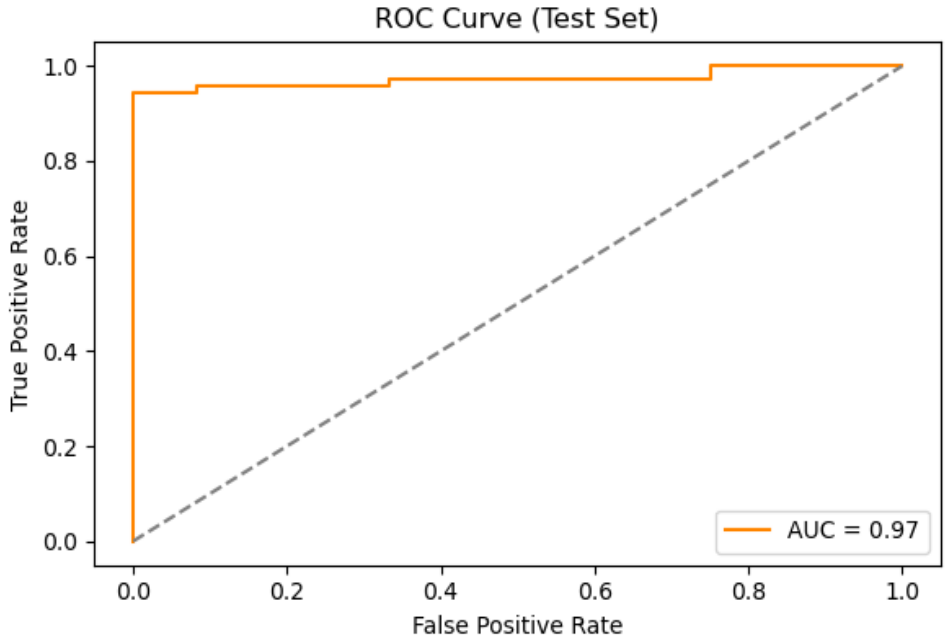


Figure 4.8: ROC Curve Analysis

4.7 Capacity rates of health facility staff in implementing the strategic management practices for improved active TB case finding

4.7.1 Attendance of Specialized Training and Mode of Training

Majority 349(86%) had attended specialized training on TB case management. There was a significant association between attendance of specialized training and active TB case finding (x^2=11.223, df=2, p=0.0003).For those who had not attended,57(14%), reasons given for not being trained were that they had been redeployed to the station recently, 57(100%) and staff shortage for them to be released to attend a training 46(80%).

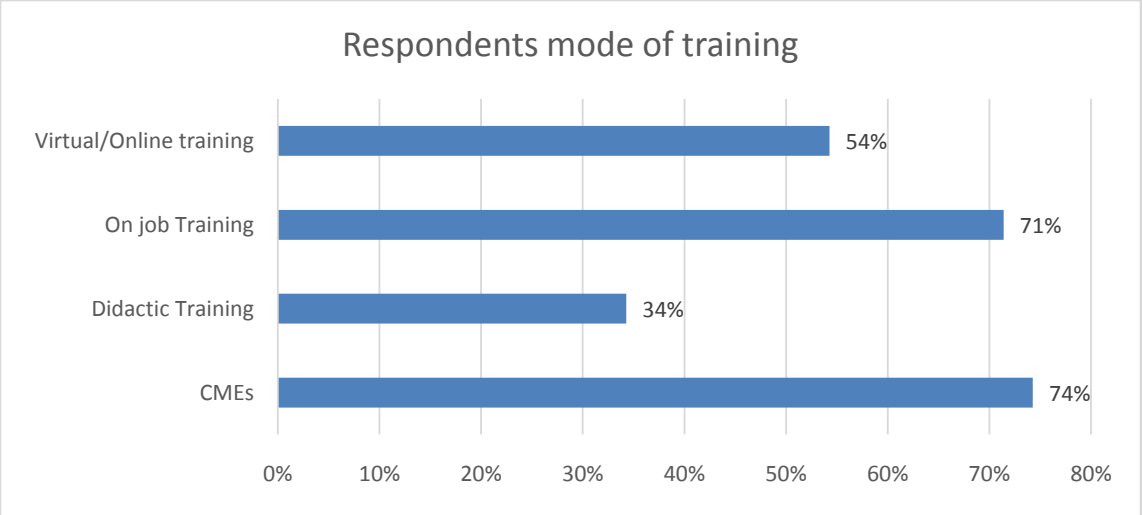


Figure 4.9: Mode of training undertaken by respondents

Among those who had attended a training, an enquiry on which training they attend for active TB case findings revealed that a majority300 (74%) of training conducted were continuous medical education, 288(71%), on job training, 219(54%), virtual trainings and 138(34%) didactic trainings on TB case finding as shown in *figure 4.8*on the mode of training undertaken.

When asked to rate the effectiveness of the training for TB case findings (the training mode with the highest training score was 5 while 1 was lowest), On Job training at 4.5, continuous medical education (CMEs) at 4.4, Virtual training at 3.7 and Didactic trainings at 3.5 as shown in *figure 4.9 below*. There was no significant association between the effectiveness of training and active TB case management (x^2=44.223, df=4, p=0.273). The current results suggest that while healthcare worker training is critical, it must be paired with systemic changes for significant results. The finding contrasts with Fogarty et al. (2009), which emphasizes the negative impact of insufficient healthcare worker capacity on organizational performance. The lack of resources and guidance is identified as a barrier to effective strategic management, aligning with the lower effectiveness of didactic and virtual trainings in the TB case. In contrast, Janse van Rensburg (2018) highlights the positive impact of employee engagement and sustainable practices, underscoring the need for well-rounded support systems beyond just training to improve health outcomes.

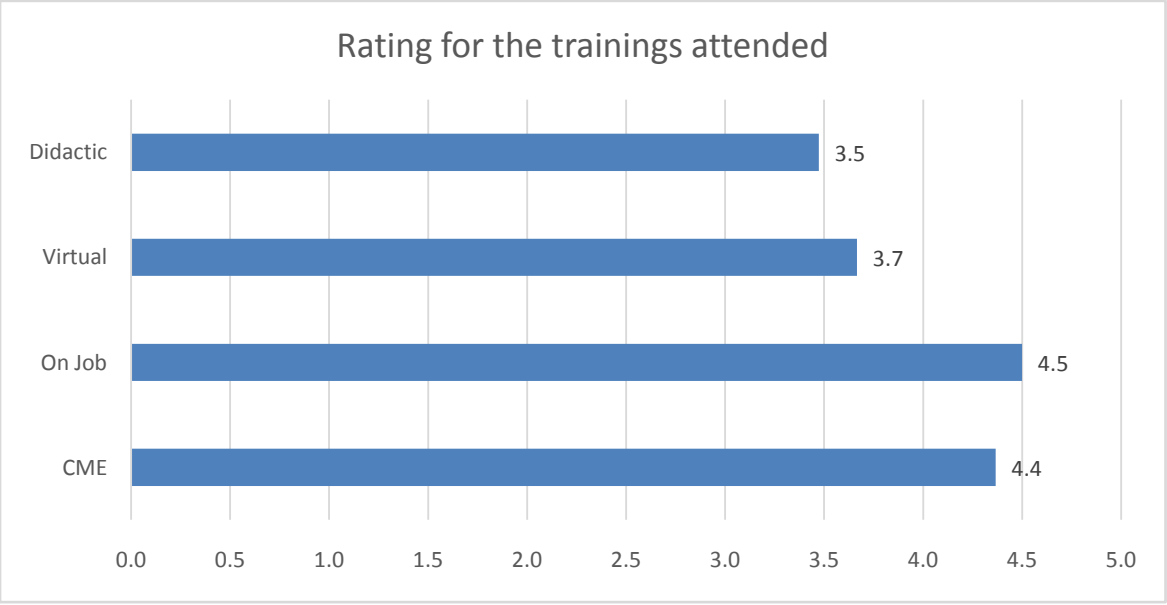


Figure 4.10: Rating for training attended by respondents

4.7.2 Addressing Skill Gap and Frequency of Training

When asked how they address Skill gaps and challenges to ensure the delivery of high-quality active TB case finding and efficient service provision, a majority 382(94%) on job training, 300(74%) specialized capacity-building trainings, 280(69%) mentorship strategies, 93(23%) counselling services, 93(23%) flexi time-flexi working and 106(26%). *Figure 4.10 below*

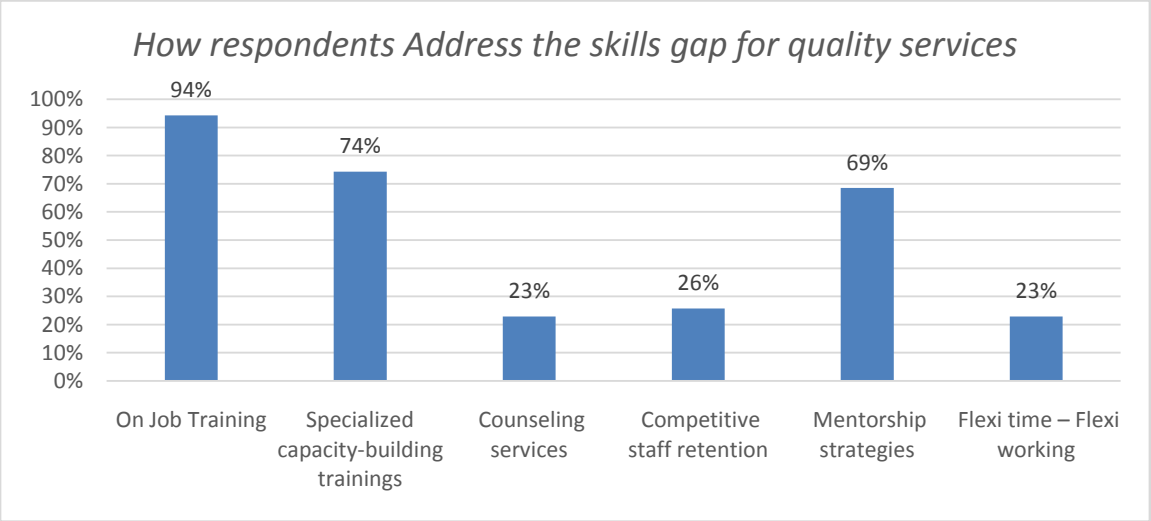


Figure 4.11: How respondents address the skills gap for quality services

When asked how frequently to they undergo training, a majority, 227(56%) indicated quarterly, 81(20%) monthly, and 98(24%) annually with a significant effect on TB case finding (x^2=33.227, df=3, p=0.0003).

Comparing the above results with other studies, the studies by Raza et al. (2014) and Doz (2020) emphasize the importance of training and strategic agility, which are crucial elements in both business and healthcare contexts. Raza et al. (2014) highlight the necessity of frequent training in the oil and gas sector to enhance organizational performance, drawing parallels to TB case finding, where continuous training for healthcare workers ensures up-to-date knowledge and proper patient management.

4.7.3 Strategic Management Training Undertaken

Table 4.20: Trainings Conducted

Training	Frequency N=406	Percent (%)	X	P
Supervisory training	162	40%	x^2=51.223	p=0.2003
Project Management	158	39%		
PQE ACF	138	34%		
DRTB sensitization	138	34%		
Treatment of MDRTB leadership	121	30%		
Strategic management and governance	121	30%		
Health management	69	17%		
Pediatrics TB training	49	12%		
IPC	49	12%		
TPT	41	10%		

Among the strategic management trainings conducted includes 138(34%) PQE ACF, 121(30%) treatment of MDRTB leadership, 121(30%) strategic management and governance, 162(40%) supervisory training, 69(17%) health management training, 138(34%)DRTB sensitization, 49(12%) pediatrics TB training, 41(10%)TPT, 49(12%)IPC and 158(39%) Project management training. There was no significant association between strategic management training undertaken and active TB case finding (x^2=51.223, df=10, p=0.2003).

Majority, 264(65%) of the respondents reported of training taking less than one month, 102(25%) while 41(10%). There was no significant association between duration of training and active TB case finding (x^2=23.103, df=3, p=0.313).Synthesizing these findings, while Rees et al. (2022) advocate for the benefits of extended training through enriched pedagogical practices and supportive environments, the study challenges this by showing no direct correlation between training duration and TB case finding effectiveness. This contrast suggests that the quality and content of the training, rather than its duration alone, may play a more critical role in influencing outcomes. Effective training likely hinges on active engagement, tailored supervision strategies, and creating conducive work environments, rather than simply prolonging the training period.

4.7.4 County Health Team Strategic Management Training Support and Evaluation

When asked if the county have required resources to support strategic management training for TB case finding and management, most, 276(68%) of the respondents agreed. On whether the leadership in the facility actively support TB case-finding initiatives, 251(62%) of the

respondents said were in agreement of the support. When asked if the county health management team evaluate active TB case finding work, 394(97%) of the respondents agreed. The respondents were asked to rate their skills in active TB case finding (where 5 was highest and 1 the lowest score), clinical assessment skills were scored highest at 4.6.as shown in *Figure11* on ratings.

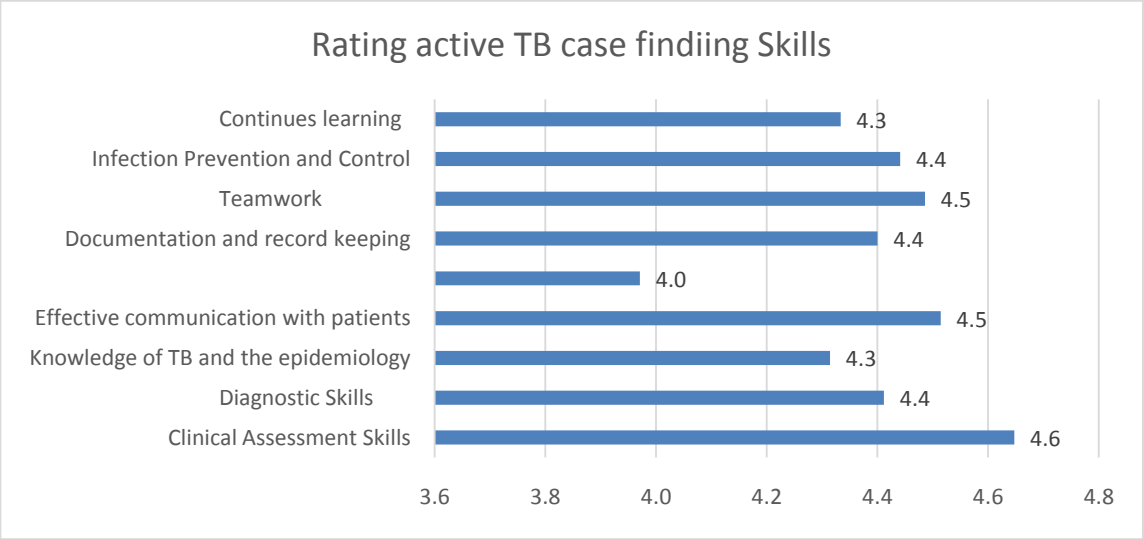


Figure 4.12: Rating Active TB case-finding skills by respondents

4.7.5 Multiple Linear Regressions for Predicting Active TB Case Findings

Multiple linear regression analysis was conducted aimed to evaluate the relationship between strategic management practices, effectiveness of strategic management strategies, and the capacity of health facilities on TB case finding. The model evaluates how well strategies employed and capacity of health facilities impact TB case findings. The findings of the model are given below.

Table 4.21: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change
1	.912[a]	.831	.829	.26002	.831	376.738	3	230	.000

a. Predictors: (Constant), capacity of health facility, effectiveness, strategic practices

The model summary in *Table 4.18* shows that the regression model is highly significant, with an R-value of .912, indicating a strong correlation between the independent variables (strategic practices, effectiveness, and capacity of health facilities) and the dependent variable

(TB case finding). The R^2 value of .831 implies that approximately 83.1% of the variance in TB case finding can be explained by the model, indicating a substantial fit. This high percentage suggests that the model effectively captures the factors influencing TB case detection rates.

4.7.6 Relative Contribution of Predictor Variables Coefficients[a]

The coefficients table in Table 4.19 provides insight into the relative contribution of each predictor variable. Strategic practices had the highest standardized coefficient (β = .574), indicating that it is the most significant predictor of TB case finding among the variables considered. This is followed by the capacity of health facilities (β = .453), which also shows a strong positive impact on TB case finding. The effectiveness of practices, while statistically significant, has a smaller standardized coefficient (β = .091), suggesting that it contributes less to the prediction of TB case finding compared to the other variables.

These findings align with previous studies that have emphasized the critical role of strategic management in healthcare settings. For instance, research by Osah and Khene (2018) highlighted that effective strategic management practices significantly enhance organizational performance, which in turn improves health outcomes.

Table 4.22: Coefficients Table

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.574	.082		6.972	.000
strategic practices	.423	.023	.574	18.069	.000
effectiveness	.049	.017	.091	2.990	.003
capacity of health facility	.294	.020	.453	14.947	.000

a Dependent Variable: tuberculosis case finding

The current study's results reinforce this view, demonstrating that well-implemented strategic practices, coupled with adequate health facility capacity, are essential for improving TB case finding in Nairobi County. The study also corroborates the Resource-Based View (RBV) theory, which posits that unique organizational resources, such as capacity and strategic

practices, are pivotal in achieving competitive advantages in this case, better health outcomes.

Overall, the results of this study contribute valuable insights to the ongoing discourse on the effectiveness of strategic management in healthcare, particularly in TB control. The strong correlation between the predictor variables and TB case finding underscores the importance of robust strategic practices and adequate capacity in health facilities. These findings not only validate the theoretical frameworks but also offer practical implications for health policy and management, suggesting that targeted improvements in these areas could lead to significant advancements in TB case detection and overall public health.

4.8 Challenges and the Significance Associated with Optimizing Strategic Management Practices and Active Tuberculosis Case Finding

4.8.1 Readiness of Facility to Handle TB Cases and Community Engagement

When responding to how is their facility equipped to manage tuberculosis cases (where 5 was highest and 1 lowest score), majority,233(57.4%) rated a score of 3.6, less than a third, 93(23%) 4.1 and 80(19.6%). When asked if different stakeholders have roles and responsibilities in the implementation of active tuberculosis case finding, 394(97%) of the respondents agreed.

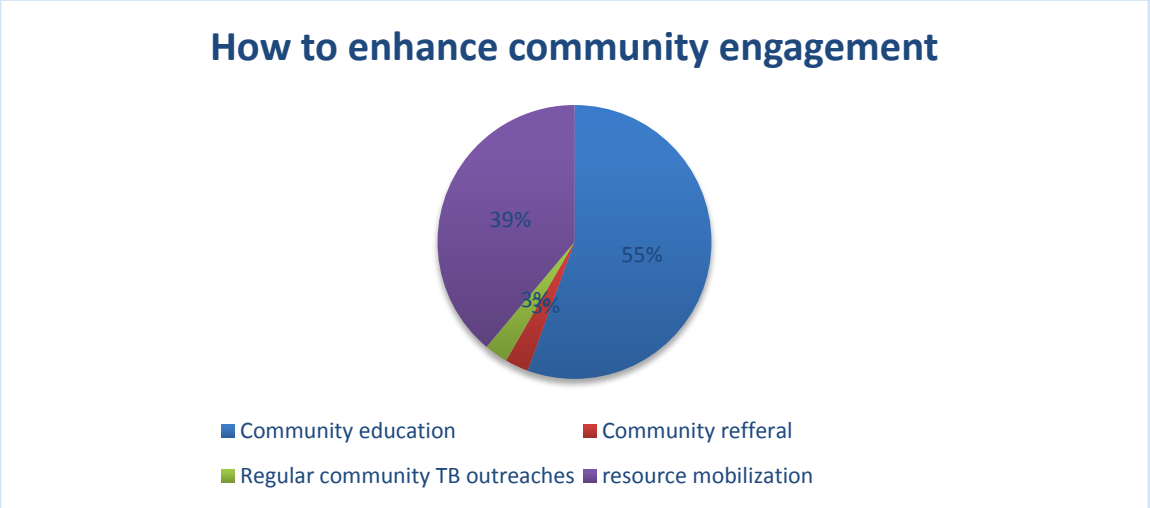


Figure 4.13: Enhancing Community engagement

Slightly more than a half, 223(55%) of the respondents were of the view that enhancing community engagement in active TB case finding should be done through community education, 158(39%) resource mobilization, 12(3%) regular community engagement, 4(%)

TB referral outreaches (Figure 4.12). The Respondents were asked if there are measures being taken to ensure sustainability of the program, 280(69%) of the respondents indicated that there were measures to ensure continuity of active TB case finding program. The results are similar to the study by Dixit et al. (2022) which support the perspective by highlighting the role of community engagement in connecting businesses with key stakeholders such as employees, investors, and customers, while also identifying innovation opportunities

4.8.2 Challenges associated with strategic management practices in Active TB Case Finding

This objective of the study aimed at identifying the challenges associated with strategic management practices in active TB case finding within healthcare facilities in Nairobi County.

4.8.2.1 Challenges Experienced at Different Health Sectors in TB Case Finding

Table 4. 23: Challenges experienced by facility sector

	Sector				□ 2	p-value
	Public	Private	Prisons	Other faith based		
Inadequate financial support						
No	206	68	1	6	6.397	0.094
Yes	87	29	4	5		
Poor planning and implementation of the strategy						
No	214	74	3	10	2.884	0.466
Yes	79	23	2	1		
Inadequate human resource						
No	78	28	2	6	4.049	0.256
Yes	215	69	3	5		
Non-cooperation by the community						
No	232	76	3	11	6.119	0.106
Yes	61	21	2	0		
Logistical issues						
No	180	63	2	8	1.935	0.586
Yes	113	34	3	3		

By examining the responses from healthcare professionals and triangulating these findings with focus group discussions (FGDs) and previous studies, this review seeks to provide a

comprehensive understanding of the barriers that limit the efficacy of TB case finding strategies.

The study explored various challenges faced by different sectors—Public, Private, Prisons, and Other Faith-Based organizations—in implementing strategies related to healthcare services. Five specific challenges were examined: inadequate financial support, poor planning and implementation, inadequate human resources, non-cooperation by the community, and logistical issues. None of the challenges was statistically significant among the sectors, as indicated by the p-values, For example, inadequate financial support had a p-value of 0.094, suggesting no significant variation in how different sectors perceive this issue. Similarly, other challenges such as poor planning ($p = 0.466$), inadequate human resources ($p = 0.256$), non-cooperation by the community ($p = 0.106$), and logistical issues ($p = 0.586$) also show no significant differences among the sectors. This suggests that these challenges are similarly experienced across all sectors, highlighting the widespread nature of these issues in healthcare service implementation.

4.8.2.2 Facility Preparedness for Active Tuberculosis Case Finding

Focus group discussions of these findings show that the participants expressing concerns about the inadequacy of medical supplies, laboratory equipment, and trained personnel and sustainability of funding models. Many participants highlighted that the lack of continuous training and updates for healthcare workers further exacerbated these challenges, leading to inefficient case finding and management.

The preparedness of healthcare facilities is a critical component of successful TB management and active case finding. The survey explored how equipped these facilities were in managing TB cases, specifically focusing on their ability to conduct ACF effectively. The findings revealed varied levels of preparedness across different facilities..

4.8.2.2.1 Comparison with Previous Studies

These findings align with previous research by Chak et al. (2023), which emphasized the importance of adequate resource allocation and the role of strategic management in enhancing the performance of healthcare initiatives. Similar to the challenges identified in the implementation of community-academic health partnerships, the study highlights that without sufficient resources and proper management strategies, the effectiveness of TB case finding is significantly compromised.

4.8.2.3 Stakeholder Roles and Responsibilities in Strategic Management Practices

The findings of the study indicate that stakeholder roles and responsibilities are integral to the success of strategic management practices in active TB case finding. Health facility administrators play a critical role in resource allocation and ensuring the availability of diagnostic tools. One respondent noted,

"Our administrators ensure that we have the necessary tools and equipment for diagnosis, but they also prioritize training and staff capacity building to enhance our effectiveness in TB case finding."

This highlights the administrative responsibility of ensuring that both human and material resources are available to support TB case finding. However, challenges such as limited budgets and competing priorities often constrain administrators' ability to fully equip their facilities, underscoring the need for sustained external support and government commitment.

Furthermore, healthcare workers are pivotal in executing day-to-day TB case finding activities. Their responsibilities include identifying presumptive TB cases, ensuring timely testing, and following up with patients. According to a healthcare worker interviewed,

"Our job is not only to test and treat TB patients but also to identify those who might be at risk early enough. The success of TB case finding is in the vigilance of the healthcare staff at all levels."

Despite their crucial role, healthcare workers reported challenges, including heavy workloads and insufficient incentives, which often lead to burnout. The study suggests that providing healthcare workers with the necessary support, training, and incentives is vital for improving the efficiency of TB case finding efforts.

The study also highlighted the role of community-based organizations (CBOs) and non-governmental organizations (NGOs) in complementing the efforts of healthcare facilities. CBOs and NGOs are instrumental in creating awareness, conducting community outreach, and supporting follow-up with TB patients. As one NGO representative stated,

"We work closely with health facilities to ensure that the community is informed about TB and that those diagnosed are supported throughout their treatment journey."

Effective TB case finding is not solely dependent on the preparedness of facilities but also on the coordinated efforts of various stakeholders. The study examined the roles and responsibilities of different stakeholders in implementing strategic management practices for

TB case finding. These stakeholders are essential in bridging the gap between healthcare facilities and communities, especially in areas where access to health services is limited. However, their effectiveness is sometimes hindered by funding constraints and a lack of coordination with government entities. Strengthening partnerships between government bodies, CBOs, and NGOs could improve the overall effectiveness of strategic management practices for TB case finding.

4.8.2.4 Impact of Challenges Experienced in Active TB Case Findings

The analysis of TB case levels in Nairobi County reveals that poor planning and implementation of strategies, inadequate human resources, and logistical issues significantly influence the incidence of TB cases.

Table 4.24: Influences to TB case finding

	Level of TB cases in Nairobi County			
	Average	High	□ 2	p-value
Inadequate financial support				
No	61	220	2.943	0.086
Yes	37	88		
Poor planning and implementation of the strategy				
No	63	238	6.251	0.012
Yes	35	70		
Inadequate human resource				
No	37	77	5.989	0.014
Yes	61	231		
Non-cooperation by the community				
No	72	250	2.686	0.101
Yes	26	58		
Logistical issues				
No	70	183	4.569	0.033
Yes	28	125		

4.8.2.5 Key Challenges Identified

The chi-square values for poor planning and implementation (x^2 - 6.251, p=0.012), inadequate human resources (x^2 - 5.989, p=0.014), and logistical issues (x^2 - 4.569, p=0.033) indicate a strong statistical association with higher TB case levels, suggesting these factors are critical in exacerbating the TB burden. In contrast, inadequate financial support (x^2 - 2.943, p=0.086) and non-cooperation by the community (x^2 - 2.686, p=0.101) do not show a significant relationship with TB case levels, indicating that while these factors may have some impact, they are not as strongly correlated with TB incidence as the other issues.

Addressing the significant factors—poor planning, resource inadequacies, and logistical challenges—could be crucial in managing and reducing TB cases in the county as shown figure 4.21:

Inadequate Human Resources: A significant challenge highlighted was the shortage of skilled personnel to manage TB cases effectively. About 69% of respondents noted that the existing workforce lacked the necessary training and skills for effective TB case finding. Insufficient Capital Resources:

Financial constraints were also identified as a major barrier, with 70% of respondents indicating that limited financial resources hindered the acquisition of essential supplies and the implementation of necessary strategies. Poor Infrastructure: Infrastructure deficits, such as inadequate healthcare facilities, laboratories, and transportation networks, were reported by 58% of respondents as significant challenges in TB management.

Limited Commodities: The availability of medical supplies and medications was another critical issue, with 78% of respondents citing challenges in ensuring a consistent supply of essential TB-related commodities. Lack of Technological Innovations: The integration of technology in TB management was identified as lacking, with 67% of respondents highlighting the need for investments in equipment, software, and digital solutions.

Table 4.25: Challenges in Strategic TB Case Finding

Challenges	Percentage
Inadequate Human Resources	69%
Insufficient Capital	70%
Poor Infrastructure	58%
Limited Commodities	78%
Lack of Technological Innovations	67%

4.8.2.6 Challenges in Strategic Management Practices for TB Case Finding

Identifying and addressing the challenges within strategic management practices is vital for enhancing the efficacy of TB case finding in Nairobi County. The survey and FGDs identified several key challenges faced by healthcare facilities.

The challenges associated with strategic management practices in active TB case finding within healthcare facilities in Nairobi County are multiple, among them are issues related to corruption,

"A lot of money goes into things it is not supposed to" FGD 1

"If you don't give someone something then they may not help you" – FGD 4

human resources, capital, infrastructure, and technology as mentioned in the focus group discussions. Addressing these challenges requires a coordinated effort among stakeholders, clear communication, and adequate resource allocation. Future strategies should focus on enhancing the capacity of healthcare facilities through continuous training, better resource management, and the integration of innovative technologies. By addressing these challenges, Nairobi County can improve the effectiveness of its TB case finding efforts, ultimately reducing the burden of the disease.

The results of the study on strategic management practices and TB case finding in Nairobi County, Kenya, align closely with the principles of strategic management theory. The study revealed that healthcare facilities employing robust strategic management practices, such as effective goal-setting, resource alignment, and inter-departmental coordination, demonstrated improved efficiency in TB case finding. This supports the assertion by Amason (2011) and George et al. (2019) that strategic management positively impacts organizational performance. By analyzing strengths, weaknesses, opportunities, and threats, these facilities were better positioned to address challenges and optimize their operations, thus enhancing their TB detection capabilities.

Incorporating the Porter Diamond Theory into the analysis offered a comprehensive view of how various factors influence the competitive advantage of healthcare facilities in TB case finding. The study's results indicated that favorable Factor Conditions, such as access to medical infrastructure and trained healthcare workers, significantly impacted the effectiveness of TB case finding. Additionally, Demand Conditions, including the level of community awareness and the demand for TB services, were found to drive innovation and improve service delivery. These findings align with Porter's (1990) framework, which emphasizes the interconnectedness of these factors in enhancing competitiveness and performance.

The study also examined the role of Related and Supporting Industries as outlined in the Porter Diamond Theory. The results showed that collaboration with support industries, such as pharmaceutical companies and diagnostic labs, played a crucial role in improving TB case finding. The presence of a supportive network of related industries facilitated better resource availability and knowledge sharing, which were instrumental in overcoming barriers to effective TB detection. This supports the theory's assertion that a well-developed support system can enhance an organization's competitive advantage and operational effectiveness.

Finally, the results underscored the importance of Firm Strategy, Structure, and Rivalry in influencing TB case finding outcomes. Facilities that adopted innovative management practices and engaged in healthy competitive practices demonstrated better performance in case finding. The study highlighted that strategic alignment with the principles of the Porter Diamond Theory enabled healthcare facilities to navigate regulatory environments, optimize value chains, and improve service delivery. However, the Porter Diamond Theory does not adequately capture the context-specific enablers and barriers that are crucial for effective TB control implementation—such as issues of corruption, localized demand patterns, internal governance structures

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This section presents the summary of findings, conclusions, recommendations and suggestions for further studies.

5.2 Summary of Research Findings

The study revealed that while a significant majority (70.2%) of healthcare facilities have strategic plans in place for active TB case finding, the effectiveness of these plans varies. The presence of strategic management practices, including the availability of standard operating procedures and strategic plans, was confirmed by respondents; however, the impact on TB case finding outcomes was inconsistent. While some facilities showed strong alignment with national TB strategies, others struggled with implementation due to factors such as inadequate human resources and insufficient training. The study also identified that facilities with better strategic management practices, including well-formulated plans and regular performance reviews, tended to achieve more successful TB case finding outcomes. However, the study suggests that there is a need for more rigorous and consistent application of these strategies across all facilities to enhance overall effectiveness.

The findings indicate that financial resources are primarily allocated towards commodities, with 75% of respondents confirming this prioritization. However, the effectiveness of this allocation in enhancing TB case finding was mixed. While the availability of well-equipped laboratories and treatment facilities was positively correlated with better TB management outcomes, other areas such as inadequate ward space and diagnostic equipment posed significant challenges. The study found that while financial investments are crucial, their impact is often diluted by infrastructural deficiencies and logistical issues. Moreover, there was a lack of significant correlation between resource allocation and the consistent success of TB case finding, suggesting that other factors, such as human resources and strategic planning, play equally critical roles in determining the effectiveness of TB management.

The study regression analysis provided valuable insights into the strategic, infrastructural, and organizational factors that influence the success of TB case finding. Key variables such as goal establishment, strategy formulation, capital availability, firm-level strategy, and infrastructure quality were all significantly associated with higher TB case detection rates.

The findings suggest that hospitals that invest in strategic planning, allocate resources efficiently, adopt quality management systems, and embrace entrepreneurial orientation and technology are better positioned to improve TB case identification. The odds ratios indicated meaningful improvements in case detection linked to these predictors, ranging from a 25% to 84% increase depending on the variable, highlighting their practical relevance in program planning and resource prioritization. Importantly, some variables, such as social capital cultivation, did not show significant predictive value in this model, suggesting that not all assumed enablers equally impact TB case finding outcomes.

The study underscored the importance of technological innovations in compensating for the inadequacies in human resources, which was highlighted by 84% of respondents as a major challenge. While some facilities have begun integrating innovative technologies, such as molecular diagnostics and data analytics, to enhance TB case finding, the overall adoption remains limited. The effectiveness of these technologies, when used, was found to be significant in improving the accuracy and efficiency of TB diagnosis. However, the study also revealed that the potential of these innovations is often underutilized due to a lack of trained personnel and inconsistent application across facilities. Therefore, while technology holds promise for improving TB case finding, its success is contingent upon adequate training and the availability of skilled health workers to effectively implement these tools.

The study identified several challenges in the implementation of active TB case finding strategies, including corruption, inadequate human resources, insufficient training, and infrastructural limitations. These challenges were compounded by the uneven effectiveness of technical teams across different facilities. While all respondents confirmed the existence of technical teams dedicated to TB case finding, the effectiveness of these teams varied significantly. Facilities with well-coordinated and strategically managed teams reported better TB case finding outcomes, whereas others struggled due to issues such as poor leadership and lack of collaboration. The study highlights the need for stronger team dynamics, better resource allocation, enhanced training programs and planning for sustainability in order to overcome these challenges and improve the overall effectiveness of TB case finding efforts in Nairobi County.

To address the limitations of the Porter Diamond Theory in capturing critical contextual factors affecting TB case finding, it is recommended that the model be adapted or complemented with locally grounded frameworks. This could include integrating elements of

health systems thinking, governance assessments, and anti-corruption monitoring tools to better reflect real-world dynamics

5.3 Conclusion

The first objective of the study aimed to establish the implementation rate of strategic management practices for Active tuberculosis case finding within health facilities in Nairobi, Kenya. The study identified joint strategic planning, continuous capacity building, and the use of standard operating procedures as key components. The study emphasizes the need for joint active and collaborative strategy formulation, implementation, and evaluation to improve performance in TB case finding. Maintaining these practices positively and significantly impacts health facility performance. The findings underscore the complex role of SOPs in operational performance, indicating that well-executed SOPs are crucial for improving TB case finding. The study reveals that the planning process faces various risk factors, including inadequate funding and insufficient staff involvement, which negatively affect the strategic planning process and business performance improvement.

The findings related to the first objective provide evidence to support the hypothesis that there is a low implementation rate of strategic management practices for active tuberculosis case finding within health facilities in Nairobi, Kenya. Although some strategic components—such as joint planning, continuous capacity building, and use of SOPs—were identified, their inconsistent and often limited application highlights significant implementation gaps. The presence of risk factors like inadequate funding and limited staff involvement further constrains the effective adoption of these practices

The second objective was to model the coefficient structure of Strategic Management Practices that most significantly predict optimal tuberculosis case finding within health facilities in Nairobi, Kenya. The logistic regression model demonstrated strong predictive power and diagnostic accuracy in evaluating the effectiveness of TB case finding strategies at the facility level. With an overall accuracy of 92.7% and an impressive AUC of 0.97, the model reliably distinguished between successful and unsuccessful TB case finding approaches. Key strategic and organizational variables—such as goal establishment, strategy formulation, capital availability, infrastructure quality, firm strategy, quality management, entrepreneurial orientation, and technology use—were all significantly associated with improved TB case detection outcomes.

The study underscores the critical role of financial resources in TB management but highlights that infrastructural and logistical challenges, such as inadequate ward space and diagnostic equipment often undermine their effectiveness. The study identifies a significant relationship between adequate staffing and successful TB case finding, stressing that enhancing workers' knowledge, education, and experience, alongside continuous training, can significantly improve facility performance and the overall effectiveness of TB diagnosis.The study emphasizes the importance of a joint strategic management plan, including staff sensitization, with technical teams supporting TB case finding at various levels. Technological innovations show promise, but their potential remains underutilized due to a lack of trained personnel and inconsistent implementation, further reinforcing the need for better resource allocation and staff development strategies. The study reveals that a more comprehensive approach is needed, one that integrates strategic planning and prioritizes human resources.

The findings strongly support the hypothesis that there is a statistically significant relationship between strategic management practices and the effectiveness of active TB case finding within healthcare facilities in Nairobi, Kenya. Key strategic management components—such as goal establishment, strategy formulation, capital availability, infrastructure quality, firm strategy, quality management, entrepreneurial orientation, and technology use—were all found to have a significant positive impact on TB case detection. These results affirm the critical role that strategic management practices play in enhancing the performance of TB control programs at the facility level.

The study model underscores the importance of data-driven strategy refinement tailored to institutional contexts. The study confirms the utility of statistical modeling in evaluating health intervention effectiveness and offers a strong empirical basis for strengthening TB control strategies through structured, strategic, and resource-informed decision-making within healthcare facilities. The model validates the relevance of strategic management practices in enhancing public health outcomes.

Thirdly, the study sought to assess the capacity of healthcare workers to implementing strategic management practices aimed at improving active TB case finding. The study highlights the critical role of specialized strategic management practices training to health care workers and that despite the staff shortages, for effective outcomes, trainings required to be done more frequently. However, the duration of the training had no effect.

The study findings support the hypothesis that higher staff capacity levels in implementing strategic management practices are significantly associated with improved active TB case finding within health facilities in Nairobi, Kenya. The results emphasize the importance of equipping healthcare workers with specialized training in strategic management practices, as this capacity directly influences the effectiveness of TB case detection.

The study concludes that challenges that were associated with active TB case finding include low community education and financial resource mobilization which are key to enhancing engagement in active TB case finding. The study concludes that facilities should encouraging community participation and partnerships specifically collaborative project leadership and financial support and planning for sustainability.

Finally, the study concludes that strategic management practices can be optimized to enhance TB case finding specifically joint strategic planning, targeted capacity building, and strengthening community engagement.

5.4 Recommendations of the Study

The study recommends ensuring Joint strategic planning**.** Development of a policy that ensures joint facility strategic planning for TB case finding which includes local community representatives, all department representatives/facility staff. In addition, the study recommends innovation in engagement, continuous sensitization and review of the strategic plan and the standard operating procedures led by the facility TB focal person

This study recommends Development and implementation of innovative capacity building plans: Led by the facility in charges, assessing facility staff capacity levels and development and implementation of a facility capacity building plan to the strategic practices

The researcher through this study recommends Strengthening Community Engagement and Stakeholder Collaboration: The study recommends enhancing greater targeted community engagement led by facility management through educational initiatives to improve public awareness. Collaborative efforts involving multiple stakeholders, including community leaders, healthcare providers, and policymakers, are essential for resource mobilization and support for TB programs, enhancing their sustainability and effectiveness.

The study recommends adapting the Porter Diamond Theory or supplementing it with locally relevant frameworks. This may involve incorporating components of health systems thinking, governance evaluation, and anti-corruption monitoring mechanisms to more accurately capture and respond to the practical challenges and contextual realities on the ground

5.5 Contributions of the Study

This study makes a significant contribution to academia by filling a gap in the literature on the strategic management practices of tuberculosis case finding, particularly within the context of Nairobi County. It provides empirical evidence on how strategic management practices, resource allocation, and technological innovations influence TB case finding outcomes. The study's findings enhance the understanding of the critical factors that contribute to effective TB management in healthcare facilities, offering a nuanced analysis of the interplay between human resources, infrastructure, and strategic planning. By integrating these elements, the study advances the academic discourse on public health management and strategic decision-making in resource-constrained environments, thereby providing a valuable reference for future research in similar contexts.

The study offers valuable insights that can inform policy-making in the public health sector, particularly in the design and implementation of TB control programs. By identifying the challenges and successes associated with resource allocation, strategic management practices, and the use of innovative technologies, the study highlights areas where policy interventions are needed. Specifically, the findings suggest the need for policies that prioritize the allocation of financial and human resources, enhance the adoption of technological innovations, and ensure the effective co-creation and co-implementation of strategic plans across all healthcare facilities. The study advocates for a more holistic approach to TB case finding, one that integrates policy support with strategic management to improve health outcomes at the county and national levels.

The study contributes to the field of strategic management by demonstrating how effective strategic planning, resource allocation, and team coordination can significantly improve the outcomes of public health initiatives, such as TB case finding. It provides a practical framework for healthcare managers to assess and enhance the strategic management practices within their facilities. The findings underscore the importance of aligning strategic plans with operational realities, such as available infrastructure and human resources, to achieve desired health outcomes. Moreover, the study highlights the need for continuous monitoring and

evaluation of strategic management practices to adapt to changing circumstances, thereby offering valuable lessons for managers in both public health and other sectors. The study makes a crucial contribution to TB case finding by identifying key factors that influence the success of TB detection and management efforts in Nairobi County. It highlights the importance of strategic resource allocation, the availability of skilled healthcare workers, and the adoption of innovative technologies in improving TB case finding outcomes. The study also sheds light on the challenges faced by healthcare facilities, such as inadequate infrastructure and human resources, which hinder the effectiveness of TB management strategies. By providing evidence-based recommendations, the study offers actionable insights that can be used to enhance TB case finding practices, ultimately contributing to better health outcomes and the reduction of TB incidence in high-burden areas.

Concurrence and Extension of the Study Theory: The study's regression model, with an R-value of .912, demonstrates a strong correlation between strategic practices, the effectiveness and capacity of health facilities, and TB case finding. The R^2 value of .831 indicates that approximately 83.1% of the variance in TB case finding can be explained by the model, suggesting that it effectively captures the key factors influencing TB detection rates. This substantial fit highlights the importance of integrating strategic management practices and enhancing facility capacity to improve TB case finding outcomes.

The findings align with Porter’s Diamond Theory, extending its application to the health sector, specifically in TB case finding. For factor conditions, the availability and quality of trained healthcare workers are crucial; enhancing their skills through targeted training programs significantly impacts TB case detection rates. Infrastructure also plays a critical role, as accessible and well-equipped healthcare facilities, wards, and laboratories are essential for effective case finding. Demand conditions are addressed by raising awareness and engaging communities, fostering a proactive, health-conscious population that supports TB detection efforts. Related and supporting industries, such as laboratory support systems, enhance diagnostic capabilities, providing a competitive advantage. The study underscores the importance of strategic management practices within firm strategy and structure, driving continuous innovation and improvement in TB case finding through a systematic approach informed by Porter's framework.

This study highlights the critical role that strategic management practices play in health, particularly in enhancing TB case finding within healthcare facilities. The application of

Porter's Diamond Theory to the health sector—specifically to TB case finding—provides a robust framework for understanding how various factors contribute to the success of Active TB case finding, reinforcing that integrating strategic management practices into the healthcare system, drives continuous innovation and improvement in TB case finding promoting a proactive, coordinated process in Active TB case finding.

5.6 Research Limitations

Despite its contributions, the study has several limitations that must be acknowledged. Firstly, the study was conducted within a specific geographical area—Nairobi County—which may limit the generalizability of the findings to other regions with different healthcare infrastructure and resources. Secondly, the reliance on self-reported data from healthcare workers may introduce bias, as respondents might overstate or understate the effectiveness of strategic management practices. Additionally, the cross-sectional design of the study does not allow for the assessment of changes over time, which could be crucial in understanding the long-term impact of strategic management practices on TB case finding. Future research could address these limitations by incorporating longitudinal data to address the reporting and cross-sectional bias and expanding the study to include multiple regions for a more comprehensive analysis and for comparison

5.7 Recommendations for Further Study

The study recommends Investigation of Community Education Strategies: Future research should explore various community education strategies and their effectiveness in enhancing engagement in strategic planning and active TB case finding. This could involve comparing different educational approaches, such as community workshops, digital campaigns, and school-based programs, to determine the most effective methods for increasing community awareness and participation in strategy formulation and TB case finding efforts.

In addition, the study recommends Evaluation of Funding Models and Financial Resource Mobilization: Further studies should evaluate different funding models and financial resource mobilization strategies to identify sustainable approaches for supporting strategic management and active TB case finding. This research could analyze the impact of various funding sources, including government grants, international aid, and public-private partnerships, on the success of TB case finding initiatives and overall health facility performance.

REFERENCES

Addae-Korankye, A., & Aryee, B. A. (2021). The relationship between strategic management practices and the growth of small and medium enterprises (SMEs) in Ghana. Business: Theory and Practice, 22(1). https://doi.org/10.3846/btp.2021.12549

Akbarov, Hajiyeva, & Akbarova. (2021). Strategic management for health care organizations in Azerbaijan Republic. International Research Journal of Public and Environmental Health, 8(3).

Babbie, E. (2010). The Practice of Social Research (12th ed.). Wadsworth Cengage Learning.

Alghofeli, M. (2022). The Impact of Knowledge Management on Strategic Management Practices. IJIIS: International Journal of Informatics and Information Systems, 5(1). https://doi.org/10.47738/ijiis.v5i1.125

Lewis, M. W. (2019). Resource Allocation and Strategic Change Management: The Moderating Role of Organizational Resources. Journal of Business Research, 101, 723-733.

Alkhodary, D. (2023). Integrating sustainability into strategic management: A path towards long-term business success. International Journal of Professional Business Review, 8(4). https://doi.org/10.26668/businessreview/2023.v8i4.1627

Allemang, B., Sitter, K., & Dimitropoulos, G. (2022). Pragmatism as a paradigm for patient-oriented research. In Health Expectations (Vol. 25, Issue 1). https://doi.org/10.1111/hex.13384

Alonazi, W. B., &Altuwaijri, E. A. (2022). Health Policy Development During COVID-19 in Saudi Arabia: Mixed Methods Analysis. Frontiers in Public Health, 9. https://doi.org/10.3389/fpubh.2021.801273

Amason, A. C. (2011). Strategic management: From theory to practice. In Strategic Management: From Theory to Practice. https://doi.org/10.4324/9780203865835

Amisi, J. A., Carter, E. J., Masini, E., &Szkwarko, D. (2021). Closing the loop in child TB contact management: Completion of TB preventive therapy outcomes in western Kenya. BMJ Open, 11(2). https://doi.org/10.1136/bmjopen-2020-040993

An, Y., Teo, A. K. J., Huot, C. Y., Tieng, S., Khun, K. E., Pheng, S. H., Leng, C., Deng, S., Song, N., Nonaka, D., & Yi, S. (2023). They do not have symptoms – why do they need to take medicines? Challenges in tuberculosis preventive treatment among children in Cambodia: a qualitative study. BMC Pulmonary Medicine, 23(1). https://doi.org/10.1186/s12890-023-02379-7

Andersén, J. (2021). A relational natural-resource-based view on product innovation: The influence of green product innovation and green suppliers on differentiation advantage in small manufacturing firms. Technovation, 104. https://doi.org/10.1016/j.technovation.2021.102254

Andrei, P., Gabriela, P. M., & Claudiu, C. S. (2011). Internal Environment Analysis Techniques. Annals of Faculty of Economics, 1(2).

Angala, P., Dlodlo, R. A., Wanjala, S., Mamo, G., Mugambi-Nyaboga, L., Onyango Okoth, E., Macharia, S., Maina, M., Wachira, S., Owuor, K., Masini, E., Wekesa, P., Carter, E. J., & Mungai, B. (2022). TB training in Kenya: building capacity for care and prevention. Public Health Action, 12(1). https://doi.org/10.5588/pha.21.0075

Antarina, P. A. M., Wirawan, D. N., &Sawitri, A. A. S. (2020). Training program for tuberculosis (TB) patients to improve referrals of presumptive TB cases and sputum in Denpasar, Bali, Indonesia. Public Health and Preventive Medicine Archive, 8(2). https://doi.org/10.15562/phpma.v8i2.307

Anufriyeva, V., Pavlova, M., Stepurko, T., & Groot, W. (2022). The perception of health care quality by primary health care managers in Ukraine. BMC Health Services Research, 22(1). https://doi.org/10.1186/s12913-022-08300-y

Arega, B., Mersha, A., Minda, A., Getachew, Y., Sitotaw, A., Gebeyehu, T., &Agunie, A. (2020). Epidemiology and the diagnostic challenge of extra-pulmonary tuberculosis in a teaching hospital in Ethiopia. PloS ONE, 15(12 December). https://doi.org/10.1371/journal.pone.0243945

Arulchelvan, S., & Elangovan, R. (2017). Effective communication approaches in tuberculosis control: Health workers' perceptions and experiences. Indian Journal of Tuberculosis, 64(4). https://doi.org/10.1016/j.ijtb.2016.11.017

Bakan, İ., & Doğan, İ. (2012). Competitiveness of the industries based on the Porter's diamond model: An empirical study. International Journal of Research and Reviews in Applied Sciences, 11(3).

Bao, G. (2015). What theories are needed for strategic management? In Nankai Business Review International (Vol. 6, Issue 4). https://doi.org/10.1108/NBRI-05-2015-0012

Barney, J. B., Ketchen, D. J., & Wright, M. (2011). The future of resource-based theory: Revitalization or decline? Journal of Management, 37(5). https://doi.org/10.1177/0149206310391805

Barney, J. B., Ketchen, D. J., & Wright, M. (2021). Bold Voices and New Opportunities: An Expanded Research Agenda for the Resource-Based View. Journal of Management, 47(7). https://doi.org/10.1177/01492063211014276

Barzylovych, A., Volodymyr, B., Valentyna, N. G., Oleksandr, R., & Oleg, C. (2020). Mechanisms for managing medical institutions in times of crisis. Systematic Reviews in Pharmacy, 11(9). https://doi.org/10.31838/srp.2020.9.81

Belling, R., McLaren, S., Boudioni, M., & Woods, L. (2012). Pan-London tuberculosis services: a service evaluation. BMC Health Services Research, 12. https://doi.org/10.1186/1472-6963-12-203

Bldr Chidozie J. Ezenwata. (2021). The effectiveness of tactical management practices in the construction companies. GSC Advanced Engineering and Technology, 2(1). https://doi.org/10.30574/gscaet.2021.2.1.0041

Bruijl, G. H. Th. (2018). The Relevance of Porter's Five Forces in Today's Innovative and Changing Business Environment. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3192207

Carlucci, J. G., Jin, L., Sanders, J. E., Mohapi, E. Q., &Mandalakas, A. M. (2015). Development of tuberculosis infection control guidelines in a pediatric HIV clinic in sub-Saharan Africa. Public Health Action, 5(1). https://doi.org/10.5588/pha.14.0101

Centers for Disease Control and Prevention. (2022). How TB Spreads. Centers for Disease Control and Prevention.

Centers for Disease Control and Prevention. (2015). Finding the Missing 4 Million : the Role of Enhanced Diagnostics and Case-Finding in Reaching All People With TB. CDC.

Chakaya, J., Khan, M., Ntoumi, F., Aklillu, E., Fatima, R., Mwaba, P., Kapata, N., Mfinanga, S., Hasnain, S. E., Katoto, P. D. M. C., Bulabula, A. N. H., Sam-Agudu, N. A., Nachega, J. B., Tiberi, S., McHugh, T. D., Abubakar, I., & Zumla, A. (2021). Global Tuberculosis Report 2020 – Reflections on the Global TB burden, treatment and prevention efforts. International Journal of Infectious Diseases. https://doi.org/10.1016/j.ijid.2021.02.107

Challenges of Strategic Issue Management Practices by Savings and Credit Cooperative Societies in Mombasa County, Kenya. (2020). European Journal of Business and Management. https://doi.org/10.7176/ejbm/12-28-01

Chawla, A. S., Kundu, S. C., Kumar, S., Gahlawat, N., & Kundu, H. (2022). The effect of knowledge management capacity on firm performance through sequential mediations

of strategic HRM, administrative and technical innovations. Journal of Asia Business Studies, 16(6). https://doi.org/10.1108/JABS-12-2020-0479

Chofreh, A. G., Davoudi, M., Goni, F. A., &Klemeš, J. J. (2020). Analysis of economic for global energy strategic management. Chemical Engineering Transactions, 81. https://doi.org/10.3303/CET2081229

Christanti, S. A. (2022). Analisis Porter's Five Forces pada PT. MultidayaLokasaktiMandiri. Jurnal Pendidikan Tambusai, 6(1).

Ciccacci, F., Welu, B., Ndoi, H., Karea, I., Orlando, S., Brambilla, D., Munene, K., Giglio, P., Opanga, B., Ronoh, A., Mukwanjagi, S., Mwiraria, R., Guidotti, G., & Marazzi, M. C. (2021). High-sensitivity C-reactive protein in HIV care: Tuberculosis diagnosis and short-term mortality in a cohort of Kenyan HIV patients in the DREAM programme. International Journal of Infectious Diseases, 104. https://doi.org/10.1016/j.ijid.2021.01.008

Cilloni, L., Fu, H., Vesga, J. F., Dowdy, D., Pretorius, C., Ahmedov, S., Nair, S. A., Mosneaga, A., Masini, E., Sahu, S., &Arinaminpathy, N. (2020). The potential impact of the COVID-19 pandemic on the tuberculosis epidemic a modelling analysis. EclinicalMedicine, 28. https://doi.org/10.1016/j.eclinm.2020.100603

Collin, S. M., Wurie, F., Muzyamba, M. C., de Vries, G., Lönnroth, K., Migliori, G. B., Abubakar, I., Anderson, S. R., & Zenner, D. (2019). Effectiveness of interventions for reducing TB incidence in countries with low TB incidence: A systematic review of reviews. In European Respiratory Review (Vol. 28, Issue 152). https://doi.org/10.1183/16000617.0107-2018

Cooper, D. R., & Schindler, P. S. (2003). Cooper Schindler 2006. Business, 2000.

Cooperberg, M. R., Birkmeyer, J. D., & Litwin, M. S. (2009). Defining high quality health care. In Urologic Oncology: Seminars and Original Investigations (Vol. 27, Issue 4). https://doi.org/10.1016/j.urolonc.2009.01.015

Cox, H., Dickson-Hall, L., Ndjeka, N., van't Hoog, A., Grant, A., Cobelens, F., Stevens, W., & Nicol, M. (2017). Delays and loss to follow-up before treatment of drug-resistant tuberculosis following implementation of Xpert MTB/RIF in South Africa: A retrospective cohort study. PloS Medicine, 14(2). https://doi.org/10.1371/journal.pmed.1002238

Creswell, J., Ottmani, S. E., Wei, D., Sahu, S., Lönnroth, K., &Uplekar, M. W. (2013). Programmatic approaches to screening for active tuberculosis. In International Journal

of Tuberculosis and Lung Disease (Vol. 17, Issue 10). https://doi.org/10.5588/ijtld.13.0199

David, F. R. (2011). Strategic Management: Concepts and Cases (Thirteenth Edition). In Prentice Hall (Vol. 13).

Davis, G. F., & DeWitt, T. (2021). Organization Theory and the Resource-Based View of the Firm: The Great Divide. Journal of Management, 47(7). https://doi.org/10.1177/0149206320982650

De Colombani, P., Banatvala, N., Zaleskis, R., Maher, D., Aleksandrina, T., Ball, A., Erzen, D., Farge-Bancel, D., Godfrey-Faussett, P., Infuso, A., Matic, S., Migliori, G. B., Bijl, M., Rieder, H., Shoumilina, T., Veen, J., Yordi Aguirre, I., Eramova, B., Hauer, B., … Thorson, A. (2004). European framework to decrease the burden of TB/HIV. European Respiratory Journal, 24(3). https://doi.org/10.1183/09031936.04.00064504

Demir, I. B., &Ugurluoglu, O. (2019). Evaluation of the Use of Strategic Management Tools by Hospital Executives in Turkey. Journal of Health Management, 21(1). https://doi.org/10.1177/0972063418822216

Der, J. B., Grant, A. D., Grint, D., Narh, C. T., Bonsu, F., & Bond, V. (2022). Barriers to tuberculosis case finding in primary and secondary health facilities in Ghana: perceptions, experiences and practices of healthcare workers. BMC Health Services Research, 22(1). https://doi.org/10.1186/s12913-022-07711-1

Deutsch-Feldman, M., Pratt, R. H., Price, S. F., Tsang, C. A., & Self, J. L. (2021). Tuberculosis — United States, 2020. MMWR Surveillance Summaries, 70(12). https://doi.org/10.15585/mmwr.mm7012a1

Dhavan, P., Dias, H. M., Creswell, J., & Weil, D. (2017). An overview of tuberculosis and migration. In International Journal of Tuberculosis and Lung Disease (Vol. 21, Issue 6). https://doi.org/10.5588/ijtld.16.0917

Doz, Y. (2020). Fostering strategic agility: How individual executives and human resource practices contribute. Human Resource Management Review, 30(1). https://doi.org/10.1016/j.hrmr.2019.100693

Drawson, A. S., Toombs, E., &Mushquash, C. J. (2017). Indigenous research methods: A systematic review. International Indigenous Policy Journal, 8(2). https://doi.org/10.18584/iipj.2017.8.2.5

Du Preez, K., Jenkins, H. E., Donald, P. R., Solomons, R. S., Graham, S. M., Schaaf, H. S., Starke, J. R., Hesseling, A. C., & Seddon, J. A. (2022). Tuberculous Meningitis in

Children: A Forgotten Public Health Emergency. Frontiers in Neurology, 13. https://doi.org/10.3389/fneur.2022.751133

Durmaz, Y,. & Dusun, Z.D. (2016). Importance of Strategic Management in Busıness. Expert Journal of Business and Management, 4(1).

Ekon, B., & Isayas, B. (2022). Factors impacting Strategic Management Practices Among SMEs in Nigeria. African Economic and Management Review, 2(1). https://doi.org/10.53790/aemr.v2i1.31

Enos, M., Sitienei, J., Ong'ang'o, J., Mungai, B., Kamene, M., Wambugu, J., Kipruto, H., Manduku, V., Mburu, J., Nyaboke, D., Ngari, F., Omesa, E., Omale, N., Mwirigi, N., Okallo, G., Njoroge, J., Githiomi, M., Mwangi, M., Kirathe, D., … Weyenga, H. (2018). Kenya tuberculosis prevalence survey 2016: Challenges and opportunities of ending TB in Kenya. PloS ONE. https://doi.org/10.1371/journal.pone.0209098

Ershadi, M. J., Edrisabadi, R., & Shakouri, A. (2020). Strategic alignment of project management with health, safety and environmental management. Built Environment Project and Asset Management, 10(1). https://doi.org/10.1108/BEPAM-03-2019-0023

Faust, L., Ruhwald, M., Schumacher, S., & Pai, M. (2020). How are high burden countries implementing policies and tools for latent tuberculosis infection? A survey of current practices and barriers. In Health Science Reports (Vol. 3, Issue 2). https://doi.org/10.1002/hsr2.158

Fogarty, L., Adano, J., &Adano, U. (2009). The Kenya Emergency Hiring Plan : Results from a Rapid Workforce Expansion Strategy. Population (English Edition), September.

Foster-Pedley, J., & Lerer, L. (1999). The application of strategic management theory in global public health: towards a model of health determinants, health status and interventions. International Journal of Healthcare Technology and Management, 1(1–2). https://doi.org/10.1504/ijhtm.1999.001061

Gani, N. I. A., Rathakrishnan, M., & Krishnasamy, H. N. (2020). A pilot test for establishing validity and reliability of qualitative interview in the blended learning English proficiency course. In Journal of Critical Reviews (Vol. 7, Issue 5). https://doi.org/10.31838/jcr.07.05.23

Garnett, J., Jones, D., Chin, G., Spiegel, J. M., Yassi, A., & Naicker, N. (2020). Occupational tuberculosis among laboratory workers in South Africa: Applying a surveillance system to strengthen prevention and control. International Journal of Environmental Research and Public Health, 17(5).

https://doi.org/10.3390/ijerph17051462

George, B., Walker, R. M., & Monster, J. (2019). Does Strategic Planning Improve Organizational Performance? A Meta-Analysis. Public Administration Review, 79(6). https://doi.org/10.1111/puar.13104

Gerhart, B., & Feng, J. (2021). The Resource-Based View of the Firm, Human Resources, and Human Capital: Progress and Prospects. Journal of Management, 47(7). https://doi.org/10.1177/0149206320978799

Gilbert, J. A., Long, E. F., Brooks, R. P., Friedland, G. H., Moll, A. P., Townsend, J. P., Galvani, A. P., &Shenoi, S. V. (2015). Integrating community-based interventions to reverse the convergent TB/HIV epidemics in rural South Africa. PloS ONE, 10(5). https://doi.org/10.1371/journal.pone.0126267

Giyose, P. ;, & Tshotsho, N. (2015). Challenges experienced by health care workers in implementing the National Multi-Drug Resistant Tuberculosis guidelines. African Journal for Physical Health Education, Recreation and Dance, 21(2.2).

Gliem, J. a, & Gliem, R. R. (2003). Calculating, Interpreting, and Reporting Cronbach's Alpha Reliability Coefficient for Likert-Type Scales,. 2003 Midwest Research to Practice Conference in Adult, Continuing, and Community Education, 1992. https://doi.org/10.1109/PROC.1975.9792

Gupta, A. K. (2020). An Overview of Strategic Management. International Journal of Research in Engineering, Science and Management, 3(9). https://doi.org/10.47607/ijresm.2020.275

Hamdan, A. L. (2017). Porter's strategies in healthcare. In Springer Briefs in Public Health (Issue 9783319535968). https://doi.org/10.1007/978-3-319-53597-5_3

Hitt, M. A., Xu, K., & Carnes, C. M. (2016). Resource based theory in operations management research. Journal of Operations Management, 41. https://doi.org/10.1016/j.jom.2015.11.002

Holubovska, O., &Vysotskyi, V. (2020). Justification of the integrated approach to management of HIV-infected patients with comorbid pathology of the digestive system. Psychosomatic Medicine and General Practice, 5(2). https://doi.org/10.26766/pmgp.v5i2.259

Horton, K. C., Sumner, T., Houben, R. M. G. J., Corbett, E. L., & White, R. G. (2018). A Bayesian Approach to Understanding Sex Differences in Tuberculosis Disease Burden. American Journal of Epidemiology, 187(11). https://doi.org/10.1093/aje/kwy131

Irfani, T. H., Fitri, A. D., Roflin, E., Siburian, R., & Umar, T. P. (2021). Active tuberculosis identification based on workers environmental sanitation during the COVID-19 pandemic. Public Health of Indonesia, 7(1). https://doi.org/10.36685/phi.v7i1.397

Isabelle, D., Horak, K., McKinnon, S., & Palumbo, C. (2020). Is Porter's five forces framework still relevant? A study of the capital/labour intensity continuum via mining and IT industries. Technology Innovation Management Review, 10(6). https://doi.org/10.22215/timreview/1366

Isangula, K., Philbert, D., Ngari, F., Ajeme, T., Kimaro, G., Yimer, G., Mnyambwa, N. P., Muttamba, W., Najjingo, I., Wilfred, A., Mshiu, J., Kirenga, B., Wandiga, S., Mmbaga, B. T., Donard, F., Okelloh, D., Mtesha, B., Mohammed, H., Semvua, H., … Ngadaya, E. (2023). Implementation of evidence-based multiple focus integrated intensified TB screening to end TB (EXIT-TB) package in East Africa: a qualitative study. BMC Infectious Diseases, 23(1). https://doi.org/10.1186/s12879-023-08069-3

Jain, V. K., Iyengar, K. P., Samy, D. A., & Vaishya, R. (2020). Tuberculosis in the era of COVID-19 in India. Diabetes and Metabolic Syndrome: Clinical Research and Reviews, 14(5). https://doi.org/10.1016/j.dsx.2020.07.034

James, M., & Kvilhaug, S. (2022). Porter Diamond Definition. Invespedia.

Jarde, A., Romano, E., Afaq, S., Elsony, A., Lin, Y., Huque, R., Elsey, H., Siddiqi, K., Stubbs, B., & Siddiqi, N. (2022). Prevalence and risks of tuberculosis multimorbidity in low-income and middle-income countries: a meta-review. BMJ Open, 12(9). https://doi.org/10.1136/bmjopen-2022-060906

Jin, Zhouying; Bai, Y. (2011). Sustainable Development and Long-Term Strategic Management: Embedding a Long-Term Strategic Management System into Medium and Long-Term Planning. World Future Society, 3(2).

Kevin, D., Rendell, B.,& Allison, WG., J., O., & B., K. (2018). Building the infrastructure for complementary and integrative health in VA: Lessons learned from the VA integrative health coordinating center. Global Advances in Health and Medicine, 7.

Kabeyi, M. J. B. (2019). Organizational strategic planning, implementation and evaluation with analysis of challenges and benefits for profit and nonprofit organizations. International Journal of Applied Research, 5(6). https://doi.org/10.22271/allresearch.2019.v5.i6a.5870

Kane, J. C., Elafros, M. A., Murray, S. M., Mitchell, E. M. H., Augustinavicius, J. L., Causevic, S., Baral, S. D. C., Ngugi, A. K., Bottomley, C., Chengo, E., Kombe, M. Z., Kazungu, M., Bauni, E., Mbuba, C. K., Kleinschmidt, I., Newton, C. R., Houben, R. M. G. J. M., Lalli, M., Sumner, T., … Puett, C. (2018). Focus on Drug-resistant Tuberculosis. International Journal of Tuberculosis and Lung Disease, 12(1).

Kawamura, L. M. (2018). Too little too late: Waiting for TB to come. In Indian Journal of Tuberculosis (Vol. 65, Issue 2). https://doi.org/10.1016/j.ijtb.2018.01.002

Kazaz, A., &Ulubeyli, S. (2009). Strategic Management Practices in Turkish Construction Firms. Journal of Management in Engineering, 25(4). https://doi.org/10.1061/(asce)0742-597x(2009)25:4(185)

Kenya National Bureau of Statistics. (2019). Kenya population and housing census volume 1: Population by County and sub-County. In Kenya National Bureau of Statistics: Vol. I (Issue November).

Kiew Heong Angeline, Y., Teck Heang, L., Said, J., & Saw Teng, Y. (2013). Adoption , Benefits and Challenges of Strategic Management Accounting Practices : Evidence from emerging market. Asia Pacific Management Accounting Journal, 8(2).

Kigozi, N. G., Heunis, J. C., & Engelbrecht, M. C. (2019). Yield of systematic household contact investigation for tuberculosis in a high-burden metropolitan district of South Africa. BMC Public Health, 19(1). https://doi.org/10.1186/s12889-019-7194-2

Kim, T. K. (2017). Understanding one-way anova using conceptual figures. Korean Journal of Anesthesiology, 70(1). https://doi.org/10.4097/kjae.2017.70.1.22

Kumar, M., Nyongesa, V., Kagoya, M., Mutamba, B. B., Amugune, B., Krishnam, N. S., Wambua, G. N., Petersen, I., Gachuno, O., & Saxena, S. (2021). Mapping services at two Nairobi County primary health facilities: identifying challenges and opportunities in integrated mental health care as a Universal Health Coverage (UHC) priority. Annals of General Psychiatry, 20(1). https://doi.org/10.1186/s12991-021-00359-x

Kunciw, S. E., & de la Cruz, E. C. (2021). Incidental Finding of Tuberculosis During Evaluation for Delayed Wound Healing. Military Medicine, 186(3–4). https://doi.org/10.1093/milmed/usaa366

Kunjok, D. M., Mwangi, J. G., Mambo, S., & Wanyoike, S. (2021). Assessment of delayed tuberculosis diagnosis preceding diagnostic confirmation among tuberculosis patients attending Isiolo county level four hospital, Kenya. Pan African Medical Journal, 38. https://doi.org/10.11604/pamj.2021.38.51.21508

Kusimo, O. C., Olukolade, R., Ogbuji, Q., Osho, J., Onikan, A., Hassan, A., Ladipo, O. A., Owoyomi, O., Bakare, J., Onyemaechi, S., & Lawanson, A. (2018). Implementation of the Active TB Case Finding in Nigeria; Processes, Lessons Learnt and Recommendations. Journal of Tuberculosis Research, 06(01). https://doi.org/10.4236/jtr.2018.61002

Lavrakas, P. (2013). Finite Population Correction (FPC) Factor. In Encyclopedia of Survey Research Methods. https://doi.org/10.4135/9781412963947.n191

Lê, J. K., & Schmid, T. (2022). The Practice of Innovating Research Methods. Organizational Research Methods, 25(2). https://doi.org/10.1177/1094428120935498

Leech, N. L., & Onwuegbuzie, A. J. (2009). A typology of mixed methods research designs. Quality and Quantity, 43(2). https://doi.org/10.1007/s11135-007-9105-3

Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. Human Resource Management Review, 21(3). https://doi.org/10.1016/j.hrmr.2010.07.001

Li, J., Chung, P. H., Leung, C. L. K., Nishikiori, N., Chan, E. Y. Y., & Yeoh, E. K. (2017). The strategic framework of tuberculosis control and prevention in the elderly: A scoping review towards End TB targets. In Infectious Diseases of Poverty (Vol. 6, Issue 1). https://doi.org/10.1186/s40249-017-0284-4

Li, Y., Hsu, E. B., Pham, N., Davis, X. M., Podgornik, M. N., & Trigoso, S. M. (2022). Developing Public Health Emergency Response Leaders in Incident Management: A Scoping Review of Educational Interventions. In Disaster Medicine and Public Health Preparedness (Vol. 16, Issue 5). https://doi.org/10.1017/dmp.2021.164

Lindsay, S. (2019). Five Approaches to Qualitative Comparison Groups in Health Research: A Scoping Review. In Qualitative Health Research (Vol. 29, Issue 3). https://doi.org/10.1177/1049732318807208

Lisboa, M., Fronteira, I., Mason, P. H., & Martins, M. do R. O. (2020). National TB program shortages as potential factor for poor-quality TB care cascade: Healthcare workers' perspective from Beira, Mozambique. In PloS ONE (Vol. 15, Issue 2). https://doi.org/10.1371/journal.pone.0228927

London School of Tropical Medicine (2018). TB Reduction Through ART and TB Screening Project. Https://Clinicaltrials.Gov/Show/NCT03739736.

Lo, F. Y., Rey-Martí, A., & Botella-Carrubi, D. (2020). Research methods in business: Quantitative and qualitative comparative analysis. In Journal of Business Research (Vol. 115). https://doi.org/10.1016/j.jbusres.2020.05.003

MacNeil, A., Glaziou, P., Sismanidis, C., Date, A., Maloney, S., & Floyd, K. (2020). Global Epidemiology of Tuberculosis and Progress Toward Meeting Global Targets — Worldwide, 2018. MMWR. Morbidity and Mortality Weekly Report, 69(11). https://doi.org/10.15585/mmwr.mm6911a2

MacPherson, P., Webb, E. L., Variava, E., Lala, S. G., Milovanovic, M., Ratsela, A., Lebina, L., Kinghorn, A., & Martinson, N. A. (2019). Intensified household contact tracing, prevention and treatment support versus enhanced standard of care for contacts of tuberculosis cases in South Africa: Study protocol for a household cluster-randomized trial. BMC Infectious Diseases, 19(1). https://doi.org/10.1186/s12879-019-4502-5

Maddalena, V. (2012). A primer on project management: The cornerstone of strategic leadership. Leadership in Health Services, 25(2). https://doi.org/10.1108/17511871211221019

Madzimure, J., & Mashishi, P. (2020). Evaluating the Significance of Strategic Management on the Monitoring and Evaluation of Secondary Schools in Gauteng Province, South Africa. EuroEconomica, 3(39).

Magu, D., Wambui, E., Ngure, K., & Karanja, S. (2016). Treatment outcome among newly diagnosed tuberculosis patients in Kenya. Annals of Global Health, 82(3). https://doi.org/10.1016/j.aogh.2016.04.657

Maldeniya, P., Chathuranga, N., & Marasinghe, K. (2021). Do strategic management practices improve the performance of small and medium enterprises (SMEs) in Sri Lanka? International Journal of Economics Business and Human Behaviour, 2(4).

Maore, N. K., Kirui, N. K., Kireki, O., Ogutu, O., Owino, M., Ogaro, T., Mueni, E., Mulonzi, M., Louis, J. C., Japhet, C., Kimenye, K., Omesa, E., Masini, E., Wekunda, P. W., & Ng'ang'a, M. (2017). Spatial and temporal distribution of notified tuberculosis cases in Nairobi County, Kenya, between 2012 and 2016. East African Medical Journal, 94(10 Supplement).

Marangu, D., Mwaniki, H., Nduku, S., Maleche-Obimbo, E., Jaoko, W., Babigumira, J., John-Stewart, G., & Rao, D. (2017). Adapting a stigma scale for assessment of tuberculosis-related stigma among English/Swahili-speaking patients in an African setting. Stigma and Health, 2(4). https://doi.org/10.1037/sah0000056

Margaret James. (2022). What Is the Porter Diamond Model, and How Does It Work? Investopedia.

Marley, G., Zou, X., Nie, J., Cheng, W., Xie, Y., Liao, H., Wang, Y., Tao, Y., Tucker, J. D., Sylvia, S., Chou, R., Wu, D., Ong, J., & Tang, W. (2023). Improving cascade outcomes for active TB: A global systematic review and meta-analysis of TB interventions. PloS Medicine, 20(1). https://doi.org/10.1371/journal.pmed.1004091

Miller, E. W. (2018). Nonprofit Strategic Management Revisited. Canadian Journal of Nonprofit and Social Economy Research, 9(2). https://doi.org/10.22230/cjnser.2018v9n2a270

Mišanková, M., &Kočišová, K. (2014). Strategic Implementation as a Part of Strategic Management. Procedia – Social and Behavioral Sciences, 110. https://doi.org/10.1016/j.sbspro.2013.12.931

Mishael Obeidat, A., & Ben Hamed Al Thani, F. (2020). The Impact of Strategic Leadership on Crisis Management. International Journal of Asian Social Science, 10(6). https://doi.org/10.18488/journal.1.2020.106.307.326

ErisianM. M, D. (2018). Strategic Management: Theory, Concept and Case. Strategic Management: Theory, Concept and Case ….

Monib, F. A., Qanet, J., Nabeel, M. D., & Abdi, R. (2021). Comparative Study of Strategic Management Schools (Prescriptive, Descriptive and Integrated). Open Journal of Business and Management, 09(04). https://doi.org/10.4236/ojbm.2021.94106

Morishita, F., Eang, M. T., Nishikiori, N., & Yadav, R. P. (2016). Increased case notification through active case finding of tuberculosis among household and neighbourhood contacts in Cambodia. PloS ONE, 11(3). https://doi.org/10.1371/journal.pone.0150405

Mugenda, M. O., & Mugenda, G. A. (2010). Research methods: Qualitative and quantitative approaches. Journal of Co-Operative and Business Studies (JCBS), 1(1).

Muminović, E., Radosavljević, U., & Beganović, D. (2020). Strategic planning and management model for the regeneration of historic urban landscapes: The case of historic center of Novi Pazar in Serbia. Sustainability (Switzerland), 12(4). https://doi.org/10.3390/su12041323

Musuka, G., Teveredzi, V., Mutenherwa, F., Chingombe, I., &Mapingure, M. (2018). Tuberculosis knowledge, misconceptions/myths in adults: Findings from Lesotho,

Malawi, Namibia and Zambia Demographic Health Surveys (2013-2016). BMC Research Notes, 11(1). https://doi.org/10.1186/s13104-018-3884-6

Mwaura, S., Kiruja, E., & Sagwa, E. (2022). Influence of Strategic Human Resource Management Practices on Performance of Public Universities in Kenya. Journal of Human Resource and Leadership, 7(2). https://doi.org/10.47604/jhrl.1679

Mwombeki, F. A. (2022). Influence of the dimensions of Agency capacities to the performance in generating own source revenue in Government Agencies in Tanzania. Business Education Journal, 11(1). https://doi.org/10.54156/bej.v11i1.322

Nagaraja, S. B., Thekkur, P., Satyanarayana, S., Tharyan, P., Sagili, K. D., Tonsing, J., Rao, R., & Sachdeva, K. S. (2021). Active case finding for tuberculosis in India: A syntheses of activities and outcomes reported by the national tuberculosis elimination programme. In Tropical Medicine and Infectious Disease (Vol. 6, Issue 4). https://doi.org/10.3390/tropicalmed6040206

Naranjo-Gil, D., Sánchez-Expósito, M. J., & Gómez-Ruiz, L. (2016). Traditional vs. Contemporary management control practices for developing public health policies. International Journal of Environmental Research and Public Health, 13(7). https://doi.org/10.3390/ijerph13070713

Ndjeka, N., Hughes, J., Reuter, A., Conradie, F., Enwerem, M., Ferreira, H., Ismail, N., Kock, Y., Master, I., Meintjes, G., Padanilam, X., Romero, R., Schaaf, H. S., teRiele, J., &Maartens, G. (2020). Implementing novel regimens for drug-resistant TB in South Africa: What can the world learn? International Journal of Tuberculosis and Lung Disease, 24(10). https://doi.org/10.5588/IJTLD.20.0174

Netto, E. M., Dye, C., & Raviglione, M. C. (1999). Progress in global tuberculosis control 1995-1996, with emphasis on 22 high-incidence countries. Global Monitoring and Surveillance Project. The International Journal of Tuberculosis and Lung Disease : The Official Journal of the International Union against Tuberculosis and Lung Disease, 3(4).

Nowakowski, M. (2019). The ANOVA method as a popular research tool. Studia iPraceWNEiZ, 55. https://doi.org/10.18276/sip.2019.55-06

National TB and Leprosy Disease Program – Kenya. (2021). Tuberculosis Annual Report:2021. December. https://www.nltp.co.ke/wp-content/uploads/2022/07/DNTLDP_AnnualReport_2021_compressed.pdf

National TB and Leprosy Disease Program - Ministry of Health Kenya. (2016). Annual Report Annual Report. Fresenius.Com, December, 2–2.

National TB and Leprosy Disease Program, Ministry of Health Kenya. (2019). Annual Report 2019.NTLDP Kenya, 44(8), 1–19. https://doi.org/10.1088/1751-8113/44/8/085201

Nurmeksela, A., Zedreck Gonzalez, J. F., Kinnunen, J., & Kvist, T. (2021). Components of the Magnet® model provide structure for the future vision of nurse managers' work: A qualitative perspective of nurse managers. Journal of Nursing Management, 29(7). https://doi.org/10.1111/jonm.13337

Odhiambo, E., & Njuguna, R. (2021). Strategic Management Practices and Performance of Health Non-governmental organizations in Nairobi city county, Kenya Journal of Strategic Management, 6(1). https://doi.org/10.47672/jsm.669

Oga-Omenka, C., Boffa, J., Kuye, J., Dakum, P., Menzies, D., &Zarowsky, C. (2020). Understanding the gaps in DR-TB care cascade in Nigeria: A sequential mixed-method study. Journal of Clinical Tuberculosis and Other Mycobacterial Diseases, 21. https://doi.org/10.1016/j.jctube.2020.100193

Ogwang, M. O., Imbuga, M., Ngugi, C., Mutharia, L., Magoma, G., &Diero, L. (2021). Distribution patterns of drug resistance Mycobacterium tuberculosis among HIV negative and positive tuberculosis patients in Western Kenya. BMC Infectious Diseases, 21(1). https://doi.org/10.1186/s12879-021-06887-x

Omalaja, M. A., Eruola, O. A., & College, I. (2011). Strategic Management Theory : Concepts , Analysis and Critiques in Relation to Corporate Competitive Advantage from the Resource - based Philosophy. Economic Analysis, 44(1–2).

Omsa, S. (2017). The Effect of Strategic Management Practices on SME Performances in Makassar, Indonesia. American Journal of Theoretical and Applied Business, 3(4). https://doi.org/10.11648/j.ajtab.20170304.12

Osah, J., & Khene, C. (2018). Group structural elements in e-Government strategy formulation at local municipal level in South Africa. Transforming Government: People, Process and Policy, 12(1). https://doi.org/10.1108/TG-06-2017-0033

Pajula, J., &Tohka, J. (2016). How Many Is Enough? Effect of Sample Size in Inter-Subject Correlation Analysis of fMRI. Computational Intelligence and Neuroscience, 2016. https://doi.org/10.1155/2016/2094601

Park, C. L., Groessl, E., Maiya, M., Sarkin, A., Eisen, S. V., Riley, K., & Elwy, A. R. (2014). Comparison groups in yoga research: A systematic review and critical evaluation of

the literature. In Complementary Therapies in Medicine (Vol. 22, Issue 5). https://doi.org/10.1016/j.ctim.2014.08.008

Phadermrod, B., Crowder, R. M., & Wills, G. B. (2019). Importance-Performance Analysis based SWOT analysis. International Journal of Information Management, 44. https://doi.org/10.1016/j.ijinfomgt.2016.03.009

Power, L., Hows, J., Raben, D., Jakobsen, S. F., & Croxford, S. (2016). Ways in which legal and regulatory barriers hinder the HIV care continuum and 90/90/90 target across Europe. Journal of the International AIDS Society, 19.

Pratiwi, C. P., &Gunarto, M. (2021). Optimizing ISO 9001: 2015 Implementation with Swot and QSPM Method. Matrik : JurnalManajemen, Strategi Bisnis Dan Kewirausahaan. https://doi.org/10.24843/matrik:jmbk.2021.v15.i01.p12

Praveen Kumar, P., & Subhasini, J. (2020). Effectiveness of marketing strategy formulation in biomedical healthcare industry. International Journal of Research in Pharmaceutical Sciences, 11(1). https://doi.org/10.26452/ijrps.v11i1.1843

Prevention, C. for D. C. and. (2013). Core Curriculum on Tuberculosis : What the Clinician Should Know. Centers for Disease Control and Prevention National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention Division of Tuberculosis Elimination. https://doi.org/10.1128/IAI.00057-06

Puertas, E. B., Sotelo, J. M., & Ramos, G. (2020). Leadership and strategic management in health systems based on primary health care. In Revista Panamericana de Salud Publica/Pan American Journal of Public Health (Vol. 40). https://doi.org/10.26633/RPSP.2020.124

Ramani, K. (2010). Strategic Issues and Challenges in Health Management. In Sage Publications India.

Rasouli, A., Hossein KetabchiKhoonsari, M., Ashja, S., Saraee, F., & Zahra Ahmadi, F. (2020). Importance of health strategic management and planning The Importance of Strategic Planning and Management in Health: A Systematic Review. Journal of Health Management and Informatics J Health Man & Info, 7(1).

Republic of Kenya Ministry of Health. (2019). National Strategic Plan for Tuberculosis, Leprosy and Lung Health Executive Summary. https://www.chskenya.org/wp-content/uploads/2019/04/NSP-Executive-Summary_CH.pdf

Rodríguez-Labajos, L., Thomson, C., & O'Brien, G. (2018). Performance measurement for the strategic management of health-care estates. Journal of Facilities Management, 16(2). https://doi.org/10.1108/JFM-10-2017-0052

Rosenberg Hansen, J., & Ferlie, E. (2016). Applying Strategic Management Theories in Public Sector Organizations: Developing a typology. Public Management Review, 18(1). https://doi.org/10.1080/14719037.2014.957339

Ruger, J. P., & Yach, D. (2009). The Global Role of the World Health Organization. Global Health Governance : The Scholarly Journal for the New Health Security Paradigm, 2(2).

Sachdeva, K. S., & Mase, S. R. (2019). The end TB strategy for India. In Indian Journal of Tuberculosis (Vol. 66, Issue 1). https://doi.org/10.1016/j.ijtb.2019.02.005

Sahu, S., Ditiu, L., Sachdeva, K. S., & Zumla, A. (2021). Recovering from the Impact of the Covid-19 Pandemic and Accelerating to Achieving the United Nations General Assembly Tuberculosis Targets. International Journal of Infectious Diseases, 113. https://doi.org/10.1016/j.ijid.2021.02.078

Sakamoto, H., Lee, S., Ishizuka, A., Hinoshita, E., Hori, H., Ishibashi, N., Komada, K., Norizuki, M., Katsuma, Y., Akashi, H., & Shibuya, K. (2019). Challenges and opportunities for eliminating tuberculosis – Leveraging political momentum of the un high-level meeting on tuberculosis. BMC Public Health, 19(1). https://doi.org/10.1186/s12889-019-6399-8

Saleem, S. T., & Adeel, A. (2019). Strategic Human Resource Management and Employee Creativity : The Role of Leadership Style and Knowledge Management Capacity. Information and Knowledge Management, 6(6).

Savitz, S. T., Scott, J. L., Leo, M. C., Keast, E. M., & Savitz, L. A. (2022). Identifying appropriate comparison groups for health system interventions in the COVID-19 era. Learning Health Systems. https://doi.org/10.1002/lrh2.10344

Schmuck, R. (2022). Operations Strategies. Regional Formation and Development Studies. https://doi.org/10.15181/rfds.v7i2.2353

Shah, L., Rojas Peña, M., Mori, O., Zamudio, C., Kaufman, J. S., Otero, L., Gotuzzo, E., Seas, C., & Brewer, T. F. (2020). A pragmatic stepped-wedge cluster randomized trial to evaluate the effectiveness and cost-effectiveness of active case finding for household contacts within a routine tuberculosis program, San Juan de Lurigancho, Lima, Peru. International Journal of Infectious Diseases, 100. https://doi.org/10.1016/j.ijid.2020.09.034

Shamanewadi, A. N., Naik, P. R., Thekkur, P., Madhukumar, S., Nirgude, A. S., Pavithra, M. B., Poojar, B., Sharma, V., Urs, A. P., Nisarga, B. V., Shakila, N., & Nagaraja, S. B. (2020). Enablers and Challenges in the Implementation of Active Case Findings in a

Selected District of Karnataka, South India: A Qualitative Study. Tuberculosis Research and Treatment, 2020. https://doi.org/10.1155/2020/9746329

Shayo, F. K., & Shayo, S. C. (2019). Availability and readiness of diabetes health facilities to manage tuberculosis in Tanzania: A path towards integrating tuberculosis-diabetes services in a high burden setting? BMC Public Health, 19(1). https://doi.org/10.1186/s12889-019-7441-6

Shenoi, S. V., Moll, A. P., Brooks, R. P., Kyriakides, T., Andrews, L., Kompala, T., Upadhya, D., Altice, F. L., Eksteen, F. J., & Friedland, G. (2017). Integrated tuberculosis/human immunodeficiency virus community-based case finding in rural South Africa: Implications for tuberculosis control efforts. Open Forum Infectious Diseases, 4(3). https://doi.org/10.1093/ofid/ofx092

Singh, G. S. V., Senik, Z. C., Hanafiah, M. H., & Hamid, R. A. (2021a). The effect of Strategic management practices on cooperative performance: The Malaysian insight

Strategic Management Practices and Sustainability of Agribusiness Enterprises in Nyeri County, Kenya. (2022). Journal of International Business and Management. https://doi.org/10.37227/jibm-2021-09-1257

Sucuoğlu, E., & Erdem, G. (2021). Effects of sustainable strategic planning applications in primary schools on the effectiveness of total quality management practices. Sustainability (Switzerland), 13(18). https://doi.org/10.3390/su13189998

Suliman, Q., Lim, P. Y., Md. Said, S., Tan, K. A., & Nor, N. A. (2022). Risk factors for early TB treatment interruption among newly diagnosed patients in Malaysia. Scientific Reports, 12(1). https://doi.org/10.1038/s41598-021-04742-2

Surya, A., Setyaningsih, B., Suryani Nasution, H., Gita Parwati, C., Yuzwar, Y. E., Osberg, M., Hanson, C. L., Hymoff, A., Mingkwan, P., Makayova, J., Gebhard, A., &Waworuntu, W. (2017). Quality Tuberculosis Care in Indonesia: Using Patient Pathway Analysis to Optimize Public-Private Collaboration. Journal of Infectious Diseases, 216. https://doi.org/10.1093/infdis/jix379

Sychareun, V., Phommachanh, S., Soysouvanh, S., Lee, C., Kang, M., Oh, J., & Durham, J. (2013). Provider perspectives on constraints in providing maternal, neonatal and child health services in the lao people's democratic republic: A qualitative study. BMC Pregnancy and Childbirth, 13. https://doi.org/10.1186/1471-2393-13-243

Szkwarko, D., Owiti, P., Buziba, N., Bigelow, C., Eaton, C. B., & Carter, E. J. (2019). Implementation of an active, clinic-based child tuberculosis contact management strategy in western Kenya. Public Health Action, 8(2). https://doi.org/10.5588/pha.17.0119

Ugwuibe, T. C. (2020). Health and Management 2020: The Need and Benefit of Adoption of Total Quality Management at Primary Healthcare Facilities. Journal of Health and Medical Informatics, 11(1).

Uplekar, M. (2016). Public-private mix for tuberculosis care and prevention. What progress? What prospects? In International Journal of Tuberculosis and Lung Disease (Vol. 20, Issue 11). https://doi.org/10.5588/ijtld.15.0536

Uplekar, M., & Raviglione, M. (2015). WHO's End TB Strategy: From stopping to ending the global TB epidemic. In Indian Journal of Tuberculosis (Vol. 62, Issue 4). https://doi.org/10.1016/j.ijtb.2015.11.001

Valentim, L., Lisboa, J. V., & Franco, M. (2016). Knowledge management practices and absorptive capacity in small and medium-sized enterprises: is there really a linkage? R and D Management, 46(4). https://doi.org/10.1111/radm.12108

Vlados, C. (2019). On a correlative and evolutionary SWOT analysis. Journal of Strategy and Management, 12(3). https://doi.org/10.1108/JSMA-02-2019-0026

Volkov, B., Cieslak, J., Matthes, R., & Pulley, C. (2019). 3402 A High-Impact, Structured, Collaborative Approach to Implementing and Utilizing the Research Performance Progress Report (RPPR) for a Clinical and Translational Science Award. Journal of Clinical and Translational Science, 3(s1). https://doi.org/10.1017/cts.2019.311

Wambiya, E. O. A., Atela, M., Eboreime, E., &Ibisomi, L. (2018). Factors affecting the acceptability of isoniazid preventive therapy among healthcare providers in selected HIV clinics in Nairobi County, Kenya: A qualitative study. BMJ Open, 8(12). https://doi.org/10.1136/bmjopen-2018-024286

Wang, Z., Xing, Y., Qu, J., Pei, R., Yan, W., Sun, X., & Li, L. (2018). China's Supply-side Reform in the Integrated Medical and Nursing Care Sector: an Analysis Using Michael Porter Diamond Model. Chinese General Practice, 21(34). https://doi.org/10.12114/j.issn.1007-9572.2018.34.008

Wanyama, M. B., & Aila, F. (2022). Strategic Management Practices and Performance of Parastatals in Kenya. European Journal of Management Issues, 30(2). https://doi.org/10.15421/192211

Wernerfelt, B. (1995). The resource- based view of the firm: Ten years after. Strategic Management Journal, 16(3). https://doi.org/10.1002/smj.4250160303

What is Tuberculosis (TB)? (2017). In American Journal of Respiratory and Critical Care Medicine (Vol. 195, Issue 4). https://doi.org/10.1164/rccm.1954P7

World Health Organization. (2020). W.H.O TB Report,TB incidence. Www.Who.Int.

World Health Organization Indicators Definitions. (n.d.). Retrieved February 10, 2021, from https://www.who.int/healthinfo/indicators/2015/chi_2015_45_tb_notification.pdf

World Health Organization. (2018). WHO | What is TB? How is it treated? WHO.

Williams, R. I., Smith, A., Aaron, J. R., Manley, S. C., & McDowell, W. C. (2020). Small business strategic management practices and performance: A configurational approach. Economic Research-EkonomskaIstrazivanja , 33(1). https://doi.org/10.1080/1331677X.2019.1677488

Wold, H., & Menges, G. (1960). Sampling from Finite Populations. Journal of the American Statistical Association, 55(290). https://doi.org/10.2307/2281751

World Health Organization. (2015). Implementing the End TB Strategy: The Essentials. Who. https://doi.org/10.1017/CBO9781107415324.004

World Health Organization. (2017). Framework for Implementing the "End Tb Strategy" in the African Region 2016 – 2020. WHO Library Cataloguing-in-Publication Data.

World Health Organization. (2020). Global Tuberculosis Report 2020.

Yusuf, M., & Kahar, A. (2018). Strategy formulation model to improve implementation of corporate social responsibility (CSR). International Journal of Civil Engineering and Technology, 9(11).

Zhang, W., Dogar, M. E., Jain, M., Rodriges, E., Pathak, S., Bhargava, S., Gupta, A., & Jain, M. (2020). Feasibility and Effectiveness of Mobile App for Active Case Finding for Tuberculosis in India. Telehealth and Medicine Today. https://doi.org/10.30953/tmt.v5.177

APPENDICES

Appendix 1: Consent Form Ver 1 PHD/BE/00024/2018

Name of Principle Investigator	**Patrick Angala**
Name of Institution	**Maseno University – Kenya**
Study Title	**Optimization of pragmatic Strategic Management Practices to augment active TB case finding within health facilities in Nairobi County**
Location	**Nairobi, Kenya**

Purpose of the research

I am inviting you to participate in this academic research for my PhD at Maseno University entitled Strategic management practices for active TB case finding within healthcare facilities in Nairobi county, Kenya.

The PhD study aims.

to assess optimization of pragmatic Strategic Management Practices to augment active TB case finding within health facilities in Nairobi County, Kenya. Specifically, it seeks to determine current practices' effectiveness, assess staff capacity, and identify associated challenges

You (The participant) can talk to anyone you feel comfortable with about the research. Please ask for clarity if need be as we go through the information and I will take time to explain.

Procedures

- The research Assistant will explain the study's purpose and what is expected of you.
- You will be required to sign as an approval for us to use your insights.
- In the event that there are any changes to the study objectives, you will be informed by the researcher
- The findings will be shared for peer review through the Maseno University and Nairobi County
- All data and information collected will be used only for this study and will be kept confidential and nothing will be attributed to you by name. In addition, all data will be stored in line with Maseno University data storage protocols.
- The researcher may take photos during the session to document the process in which you may appear.
- The researcher may record FGD sessions for purposes to refer to analysis. All the recordings will be filed in anonymous files on the researcher's computer.
- No information will be published about you in any way. You will be informed in person if your photo may be used.
- The KII interviews will take approximately 45 minutes while the FGDs will take approximately one and a half hours to two hours.

I have read/ the information has been read to me. I have had the opportunity to ask questions about it and any questions asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study

Participant Name _____Signature _____Date_____

By Witness:

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Witness Name _____Signature _____Date_____

Statement by the researcher/person taking consent

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving **consent, and the consent has been given freely and voluntarily.**

Research Assistant Name _____Signature _____Date_____

Appendix 2: Study Structured Questionnaire

Note: Obtain consent before the data collection

Piloting Phase: ( ) Data collection ( )

Section A

The questionnaire consists of four distinct sections, with the first section focusing on demographic information such as gender and length of employment for the participants and cadre.

Questionnaire number Date of data collection

Sub County Facility

( ) Private ( ) Public

Demographics

The questionnaire consists of four distinct sections, with the first section focusing on demographic information such as gender and length of employment for the participants and cadre

Gender, (M) (F) **Age group,** (18 to 25) (26 to 35) (Above 35)

Education **( ) Medical College Certificate** **( ) Medical College Diploma**
( ) University Degree **( ) University Masters**
( ) Doctor of Philosophy **( ) Other _____**

Length of employment in TB program ( ) ≤ 1 year ( ) 1- 3years ( ) > 3yrs

Cadre :_____ **Department** :_____

Facility Incharge (Y) **TB Clinic Incharge (Y)**

1. What is the level of TB cases in Nairobi County between 2021 and 2024? ( )
   High ( ) Average ( ) Low

2. What methods/approaches do you use to find TB patients?

   ( ) Active TB case finding ( ) Passive-TB case finding
   ( ) Intensified TB case finding ( ) Combination Active, Passive, Intensified TB case finding

3. What challenges do you experience when applying the method?
   ( ) Inadequate financial support ( ) Poor planning and implementation of the strategy
   ( ) Inadequate human resource ( ) Non-cooperation by the community
   ( ) Logistical issues

Section B

To determine the strategic management practices applied in tuberculosis case finding within health facilities in Nairobi, Kenya

Porter Diamond Theory Factors: Factor Conditions: This refers to the inputs required for production, such as labor, capital, infrastructure, and natural resources.

Skilled Labour

Strategy Formulation

1. Does the facility have a strategic management plan for active TB case finding in place?
   (Y) (N)
2. Have they sensitized and availed the strategic plan to you? (Y) (N)
3. Does the facility have a strategic management committee (Y) (N)
4. Are there other technical teams for strategic management in the facility
   (Y) (N)
5. Kindly list the teams
   ( ) Management ( ) Clinical support ( ) Quality Improvement
   ( ) Data and Performance Review ( ) Other (Specify) _____
6. Kindly indicate the ones you belong to
   ( ) Management ( ) Clinical support ( ) Quality Improvement
   ( ) Data and Performance review ( ) Other (Specify) _____
7. Who are the members of the Strategic management team? (tick all that apply)
   ( ) Clinical officers ( ) Nurses ( ) Doctors ( ) HRIOs
   ( ) Other staff (Specify)
8. Does the facility have guidelines for strategic management (Don't agree, Agree, Strongly agree)

Goal Establishment

9. How often does the facility meet to review TB performance including setting?
   Targets setting (1) Weekly (2) Monthly (3) Quarterly (4) Other_____.
   Review of Goals (1) Weekly (2) Monthly (3) Quarterly (4) Other_____.
   Priority activities (1) Weekly (2) Monthly (3) Quarterly (4) Other_____.
   Resource allocation (1) Weekly (2) Monthly (3) Quarterly (4) Other_____.
   Make a decision (1) Weekly (2) Monthly (3) Quarterly (4) Other_____.
10. What are some of the challenges you experience at the facility when implementing case finding plans?.....
11. At this facility, how do you rate your skills for the following
    ( ) Finance management ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
    ( ) Quality Improvement ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
    ( ) Engage communities ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
    ( ) Business direction/Entrepreneurial ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5

Financial Ratio examination

12. Where does the county prioritize and allocate **capital** investments to enhance Service delivery?

( ) Infrastructure ( ) Technology

( ) Commodities ( ) Other (Specify)_____

13. What strategic approaches are employed in managing **financial** resources and accessing external funding opportunities to support TB service delivery in the county?

( ) Budget Planning and Allocation ( ) Cost-Effective Interventions

( ) Public-Private Partnerships (PPP) ( ) Partnerships and Collaboration

( ) Grant Funding ( ) Planning for sustainability

( ) Other (Specify)_____

14. What strategic approaches are employed in revenue generation to support TB service delivery in the county?

( ) Charging for services ( ) Insurance

( ) Public-Private Partnerships (PPP) ( ) Partnerships and Collaboration

( ) Grant Funding ( ) Other innovations (Specify)_____

Infrastructure,

15. Do the following physical structures support TB case finding in the county (rate where 5 is best)

( ) Available Wards	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
( ) Screening area	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
( ) Diagnosis areas	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
( ) TB Treatment Facility	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
( ) Laboratory	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
( ) Other_____	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5

16. Are there infrastructural challenges in TB service delivery? (Y) (N)

17. What are the infrastructural challenges?

( ) lack of adequate space ( ) Lack of buildings/infrastructure for TB

( ) Lack of ownership of the buildings ( ) Lack of diagnostic facilities

( ) Other (Specify)_____

18. Do facilities in the county experience lack of diagnostic equipment as a challenge in TB service delivery? (Y) (N)

19. What are the common diagnostic equipment that are a challenge?

( ) Lab commodities ( ) lab equipment maintenance

( ) Availability of lab equipment ( ) Lack of lab personnel

( ) Other (Specify)_____

Natural resources

20. At this facility, which natural resources are a challenge?

( ) Clean water sources ( ) Adequate sanitation facilities

( ) Air pollution ( ) Other _____

21. To what extent does the depletion or contamination of natural resources contribute to access for TB case finding in the community

( ) Not significant ( ) Significant ( ) Don't know

Technology

22. How does the facility utilize technology in TB case finding for the following aspects (where 1 is the least and 5 is the best)

( ) Strategy Formulation	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
( ) Goal Establishment	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
( ) Finance management	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
( ) Quality Improvement	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
( ) Engage communities	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
( ) Business direction/Entrepreniral	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5

Demand Conditions: The level and nature of demand for products or services play a significant role in driving innovation and competitiveness.

23. On a scale of 1 to 5 where 5 is the best, How do you involve the community in

( ) Strategy Formulation	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
( ) Setting Goals	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
( ) Financial review for TB case finding	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
( ) Quality Improvement for TB	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5

24. What strategies are employed to enhance **demand f**or TB services among key population groups to promote early detection, diagnosis, and treatment adherence?

( ) targeted awareness campaigns, ( ) community engagement initiatives,

( ) and culturally sensitive approaches,

25. Do you experience disparities in **demand for** TB services (Y) (N)

26. What strategies are employed to enhance **demand f**or TB services among key population groups to promote early detection, diagnosis, and treatment adherence?

( ) Community Awareness Campaigns ( ) Mobile Health (mHealth) Initiatives

( ) Integration with Existing Health Services ( ) Targeted Screening Campaigns

( ) Culturally sensitive approaches ( ) Other (Specify)_____

27. Do you experience disparities in **demand for** TB services from population segments including

Women	(Y)	(N)	Adolescents	(Y)	(N)
Children	(Y)	(N)	Men	(Y)	(N)
Youth	(Y)	(N)	Elderly Women	(Y)	(N)

28. What measures are implemented to improve affordability among the populations

( ) Cost waivers ( ) Free outreaches ( ) Other (Specify)_____

29. What measures are implemented to improve accessibility among the populations

( ) Outreaches ( ) Special clinics ( ) Other (Specify)_____

30. What measures are implemented to improve acceptability among the populations

( ) Health Education ( ) Community volunteers ( ) Other (Specify)_____

31. What metrics are utilized to monitor and evaluate the level and nature of demand for TB services

( ) Data review platforms ( ) Performance chats

( ) Quarterly reports ( ) Other (specify)_____

32. What indicators are utilized to monitor and evaluate the level and nature of demand for TB services,

( ) TB Case Detection Rate ( ) Performance chats

( ) TB outcomes ( ) Other (specify)_____

Related and Supporting Industries: The presence of strong supporting industries and a robust ecosystem of suppliers, distributors, and related firms can enhance competitiveness by fostering collaboration, innovation, and knowledge sharing.

33. Do you involve suppliers in facility strategic practices for TB case finding?

Strategy Formulation (Y) (N)

Goal Establishment (Y) (N)

Finance Review (Y) (N)

Quality improvement (Y) (N)

Community engagement (Y) (N)

34. Who are the suppliers and distributors of TB service commodities?

( ) GoK ( ) County ( ) Private entities

( ) Non-GoK entities ( ) Other (specify)_____

35. Among the listed, what is the main item supplied or distributed? _____

36. The supply of TB service commodities for the facilities has been stable.

( ) Strongly disagree ( ) Disagree ( ) Agree ( ) Strongly agree.

37. What do you recommend to be done to strengthen supplies of commodities? _____

38. Is there a feedback mechanism on the quality of products supplied to the facility?

(Y) (N)

39. How is the procurement of suppliers for commodities at the facility conducted?

( ) Competitive bidding ( ) Non-competitive bidding

Firm Strategy, Structure, and Rivalry: The strategies adopted by firms, their organizational structure, and the intensity of competition within an industry influence their competitive advantage. Strategic management practices focus on developing unique value propositions, differentiation strategies, and effective organizational structures to outperform rivals and sustain long-term success

40. Do you think there are differences in organizational structures between facilities?

(Y) (N)

41. How do differences in organizational structure among facilities within the county influence their capacity to efficiently execute strategic management practices and attain a competitive edge?

( ) Varied organizational structures have no effect on strategic management effectiveness.

( ) Differences in organizational structures may slightly hinder strategic management implementation.

( ) Variances in organizational structures significantly affect strategic management success.

( ) Organizational structure variations are irrelevant to achieving a competitive advantage.

42. Does the leadership in the facility actively support TB case finding initiatives?

(Y) (N)

If Yes

43. How does the leadership support the following on a scale of 1 to 5 where 1 is the least

Strategy Formulation	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
Goal Establishment	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
Finance Review	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
Quality improvement	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
Community engagement	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5

44. How frequently do you have change in leadership at this facility?

( ) within each year ( ) After each year

45. Do you think the change affects service delivery specific for TB case finding?

(Y) (N)

46. Which specific strategies do leading facilities in TB case-finding employ to gain a competitive advantage, and how do these strategies correspond with their organizational structure?

( ) Leading facilities don't employ specific strategies for gaining a competitive edge

( ) Leading facilities implement strategies without considering their organizational structure.

( ) Leading facilities utilize strategies tailored to their organizational structure to gain a competitive advantage.

( ) Organizational structure has no bearing on the effectiveness of strategies employed by leading facilities in TB case-finding.

47. What roles do technological advancements and digital transformation play in bolstering the competitive advantage of facilities involved in TB case finding? Tick all that apply

( ) Technological advancements and digital transformation are irrelevant to gaining a competitive advantage.

( ) They marginally enhance the competitive advantage of facilities

( ) They significantly contribute to the competitive advantage of facilities.

( ) The role of technological advancements and digital transformation varies depending on the facility and its context

48. How do you integrate technology advancement into strategic management practices?

( ) We do not integrate technology advancements into our strategic management practices

( ) Technology advancement is minimally integrated into our strategic management practices.

( ) We extensively incorporate technology advancements into our strategic management practices.

( ) Our integration of technology advancements into strategic management practices depends on specific projects or initiatives

( ) We are exploring options to integrate technology advancements into our strategic management practices.

49. In what ways do facilities leverage strategic alliances or partnerships within the TB case finding ecosystem to strengthen their competitive position and drive innovation in strategic management practices?

( ) Collaboration with local health authorities,

( ) Engaging with non-profit organizations

( ) Collaborating with international organizations

( ) Forming partnerships with academic institutions

( ) Private sector engagement

( ) Other (Specify)_____

49b. What are the other factors that may affect resource allocation, infrastructure, demand and uptake of services and support systems (List as many)

_____

_____,

_____,

_____,

_____,

Section C -

To assess the effectiveness of the current strategic management practices for active tuberculosis case finding within healthcare facilities in Nairobi County, Kenya.

50. Do you have adequate staff for TB case finding? ( ) Yes ( ) No

51. How do you address workforce shortage challenges to ensure the delivery of high-quality care and efficient service provision?

( ) Recruitment of interns ( ) Use volunteers

( ) Task Shifting ( ) Other (Specify)_____

52. How do you address Skill gaps challenges to ensure the delivery of high-quality care and efficient service provision?

( ) On Job training ( ) Competitive staff retention

( ) Specialized capacity-building trainings

53. How do you address **Staff Burnouts** challenges to ensure the delivery of high-quality care and efficient service provision?

    ( ) Promote work-life balance ( ) Adequate staffing levels

    ( ) Positive work environment ( ) Manage Workload expectations

    ( ) Regular meetings and updating plans

54. In what ways can optimize **labor** utilization and workforce productivity?

    ( ) Task Shifting ( ) Staff motivation

    ( ) Retention strategies ( ) Other (Specify)_____

55. Do you identify the majority of the cases using your TB case finding approach? (Y) (N)
    If No, Why (Tick more than one)?

    ( ) Inadequate financial support ( ) Inadequate logistical support

    ( ) Inadequate training ( ) Community residence due to culture

    ( ) Others, specify……

56. How do you rate the level of TB case finding by the county?

    ( ) Adequate ( ) Inadequate ( ) Not sure

57. How often do contact TB case findings?

    ( ) Daily ( ) Weekly ( ) Monthly ( ) Quarterly

58. How do healthcare systems adapt and evolve their strategic management practices for active tuberculosis case finding in response to emerging trends, such as drug-resistant strains or changes in population demographics?

    ( ) Increased emphasis on targeted screening:

    ( ) Integration of molecular diagnostics to identify drug-resistant strains,

    ( ) Enhanced surveillance and data analysis

    ( ) Collaboration with NGOs

    ( ) Community engagement and education

    ( ) patient-centered approaches

    ( ) Other _____

59. How do the current strategic management practices for active tuberculosis case finding address the unique challenges and barriers faced in different demographic or geographic settings?

_____ _____ _____

60. What evidence-based strategies have been implemented to assess the effectiveness of current strategic management practices for active tuberculosis case finding, and what are the findings of these evaluations?

_____ _____ _____

61. Are there any innovative technologies or data analytics tools being utilized to optimize the effectiveness of strategic management practices in tuberculosis case-finding programs

(Y) (N)

62. How do you use your data to identify challenges in facility practices for active case finding?

( ) Target setting ( ) reporting

( ) planning and resource allocation ( ) Other

Section D

To assess the capacity of health facility staff in implementing the strategic management practices for active TB case finding

63. Have you undergone specialized training on TB case finding? (Y) (N)
64. If No, in why? Specify……..

65. If yes, in which training did you attend for TB case findings (Tick more than one)?
    ( ) CMEs ( ) On job Training ( ) Virtual/Online training
    ( ) Didactic Training ( ) Other _____
66. If yes, in 64, how do you rate the effectiveness of the training for TB case findings *(1 is weak and 5 is best)*

CMEs	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
On Job Training	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
Virtual/Online training	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
Didactic Training	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
Other _____	( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5

67. How do you address **Skill gaps** challenges to ensure the delivery of high-quality care and efficient service provision?
    ( ) On Job Training ( ) Competitive staff retention
    ( ) Specialized capacity-building trainings ( ) Mentorship strategies
    ( ) Counseling services ( ) Flexi time – Flexi working
    ( ) Other (Specify)_____
68. How frequently do you undergo training?
    ( ) Annually ( ) Bi-Annually ( ) Quarterly
    ( ) after more than one year ( ) Unknown
    ( ) Other _____
69. List strategic management training conducted if any.
    _____ .____, .____
70. Duration of training ( ) Less than 1 month ( ) 1 month ( ) 3 months ( ) Other ____
71. Does the county have required resources to support strategic management training for TB (Y) (N)

72. Does the leadership in the facility actively support TB case-finding initiatives? (Y) (N)
73. Does the county management team evaluate your TB case finding work? (Y) (N)
74. How do you rate your skills in TB case finding *(where 1 is weak and 5 is best)*

    a. Clinical Assessment Skills ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
    b. Diagnostic Skills ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
    c. Knowledge of TB and the epidemiology ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
    d. Effective communication with patients ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
    e. Local Language Proficiency ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
    f. Documentation and record keeping ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
    g. Teamwork ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
    h. Infection Prevention and Control ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
    i. Continues learning ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5

Section E

To identify the key challenges and barriers that healthcare facilities in Nairobi County, Kenya face in implementing and sustaining strategic management practices for active tuberculosis case finding.

75. How is your facility equipped to manage tuberculosis cases? (where 5 is best)
    ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5
76. Do different stakeholders have roles and responsibilities in the implementation of tuberculosis active case finding? (Y) (N)
77. How can community engagement and participation be enhanced in the fight against tuberculosis in your facility?
    ( ) resource mobilization ( ) Community education ( ) Other _____
78. Are there measures being taken to ensure sustainability of the program? (Y) (N)
79. Are there any challenges in reviewing and planning for TB management? (Y) (N)
80. What areas need improvements to enhance the capacity of the county for TB case finding?
    ( ) Human resources include the skills, education, training, and overall capabilities
    ( ) Capital resources include financial resources and supporting systems
    ( ) Infrastructure (e.g Investments in physical structures such as healthcare facilities, laboratories, and transportation networks
    ( ) Commodities (e.g. medical supplies, medications, and other essential materials

( ) Scientific knowledge (e.g Publications, conferences, best practice documentation, Continuous Quality Improvement)

( ) Technology innovation: (e.g Investments in equipment, software, and digital solutions to improve TB diagnosis, treatment, and monitoring.

( ) Natural resources: (e.g Clean water, Air pollution, Use of traditional medicine)

( ) The level and nature of demand for products or services play a significant role in driving innovation and competitiveness.

( ) The presence of strong supporting industries and a robust ecosystem of suppliers, distributors,

( ) The strategies adopted by firms

81. Do different stakeholders have roles and responsibilities in the implementation of tuberculosis active case finding? ( ) Yes ( ) No
82. How can community engagement and participation be enhanced in the fight against tuberculosis in your facility?

    ( ) resource mobilization ( ) Community education ( ) Other _____
83. Are there measures being taken to ensure the sustainability of the program?

    ( ) Yes ( ) No
84. Are there any recommendations given the discussions above? _____

Appendix 3: Focus Group Discussion Guide

Name of Principle Investigator	**Patrick Angala**
Name of Institution	**Maseno University – Kenya**
Study Title	**Optimization of pragmatic Strategic Management Practices to augment active TB case finding within health facilities in Nairobi County**
Location	**Nairobi, Kenya**

Purpose of the research

I am inviting you to participate in this academic research for my PhD at Maseno University entitled Strategic management practices for active TB case finding within healthcare facilities in Nairobi county, Kenya.

The PhD study aims.

to assess optimization of pragmatic Strategic Management Practices to augment active TB case finding within health facilities in Nairobi County, Kenya. Specifically, it seeks to determine current practices' effectiveness, assess staff capacity, and identify associated challenges

You (The participant) can talk to anyone you feel comfortable with about the research. Please ask for clarity if need be as we go through the information and I will take time to explain.

Procedures

- The research Assistant will explain the study's purpose and what is expected of you.
- You will be required to sign as an approval for us to use your insights.
- In the event that there are any changes to the study objectives, you will be informed by the researcher
- The findings will be shared for peer review through the Maseno University and Nairobi County
- All data and information collected will be used only for this study and will be kept confidential and nothing will be attributed to you by name. In addition, all data will be stored in line with Maseno University data storage protocols.
- The researcher may take photos during the session to document the process in which you may appear.
- The researcher may record FGD sessions for purposes to refer to analysis. All the recordings will be filed in anonymous files on the researcher's computer.
- No information will be published about you in any way. You will be informed in person if your photo may be used.
- The KII interviews will take approximately 45 minutes while the FGDs will take approximately one and a half hours to two hours.

Note: Obtain consent before the activity from all participants

1. What are some of the strengths and weaknesses of the current tuberculosis active case finding program in Nairobi County?

- Probe in your facility. Probe in the TB clinic.
- Probe policies and guidelines. Probe who provides leadership.
- Probe are they trained. Probe Strategic Management practices

2. What are some of the challenges you have encountered in implementing or accessing tuberculosis screening and treatment services in health facilities?

   Probe for organization strategy and structure. Probe for Demand conditions, Probe for support systems, Probe for available resources.

3. How can the strategies of the tuberculosis active case finding program be improved to better track and measure its impact on the community and health facilities?
4. How can the community and various stakeholders be better involved in the implementation and monitoring of the tuberculosis active case finding program in the facility and in Nairobi County?
5. What are some of the strategies employed in the Planning and implementation of plans?

Probe

Goal setting, strategy formulation, Innovation, Decision making, Competition for resources

6. How would you describe the care-seeking by the community,

   Probe *Insufficient awareness among healthcare professionals, Negative attitudes by healthcare workers, Apprehensions toward screening, Financial obstacles, Insufficient training of healthcare personnel, Staffing shortages, Community indifference stemming from stigma, Lack of awareness about TB by the community, High levels of illiteracy, Difficulties in persuading patients to undergo sputum tests, Delays in obtaining test results. Use of technology*

7. What do you propose as Areas for improvement in strategic management of TB case finding
8. *Strategic Management Questions*

- What are the tangible and intangible resources necessary for TB case finding?
- How motivated are.
  - Staff in supporting TB case finding activities?
  - Community in supporting TB case finding activities.
- Demanding local customers can drive institutions to innovation to meet service or commodity demands,
- Support from other industries where the existence of a support system can influence facility growth and TB case finding.

Probes

- organizational strategy and structure,
- demand conditions,
- support systems,
- and available resources.
- Other limiting factors

10 What are the strategies used to enhance the tracking and measurement of the tuberculosis active case finding

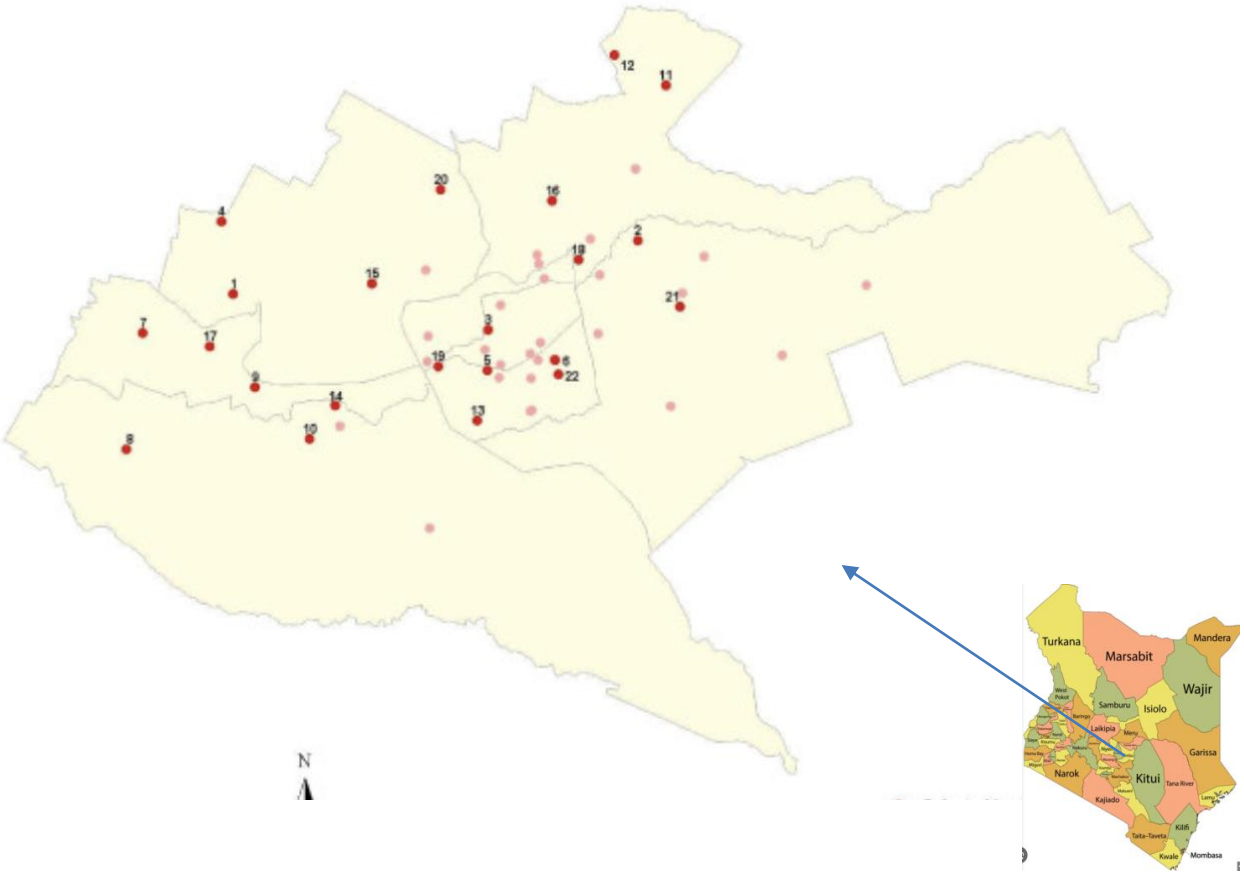
Probe –program's impact on both the community and health facilities.

10 Enquire about strategies employed in the planning and implementation of plans,

- including goal setting, strategy formulation, innovation, decision-making, and competition for resources.

11. What are some of the operational challenges for TB case finding

Appendix 4: Area Study (Map of Nairobi with public facilities)[1]



[1]https://www.researchgate.net/figure/A-division-map-of-Nairobi-showing-the-location-of-public-health-facilities-in-Nairobi_fig1_51153604

Appendix 7: TB Notifications byYear – Nairobi County Contribution

	TB Notifications					TB Notifications % contribution per year				
County	2018	2017	2016	2015	2014	2018	2017	2016	2015	2014
Baringo	781	593	601	566	540	1%	1%	1%	1%	1%
Bomet	1664	1456	1285	1415	1680	2%	2%	2%	2%	2%
Bungoma	1914	1928	1707	1397	1673	2%	2%	2%	2%	2%
Busia	1189	1220	873	1065	1354	1%	2%	1%	1%	2%
E Marakwet	554	559	490	480	492	1%	1%	1%	1%	1%
Embu	1859	1508	1250	1342	1267	2%	2%	2%	2%	2%
Garissa	1014	889	824	812	1072	1%	1%	1%	1%	1%
Homa Bay	2105	2009	1887	2023	2706	2%	3%	3%	3%	3%
Isiolo	690	608	503	519	541	1%	1%	1%	1%	1%
Kajiado	1523	1483	1402	1503	1525	2%	2%	2%	2%	2%
Kakamega	2373	2293	1738	2046	2128	3%	3%	2%	3%	3%
Kericho	2133	1658	1372	1629	1726	2%	2%	2%	2%	2%
Kiambu	4636	4095	3839	3358	3660	5%	5%	5%	4%	4%
Kilifi	2384	1756	1578	1670	2186	3%	2%	2%	2%	3%
Kirinyaga	1314	1229	1063	1165	1300	1%	2%	1%	2%	2%
Kisii	1899	1790	1458	1580	1666	2%	2%	2%	2%	2%
Kisumu	2676	2484	2426	2691	3079	3%	3%	3%	4%	4%
Kitui	2637	2129	1681	1851	1847	3%	3%	2%	2%	2%
Kwale	1109	861	1004	1083	1080	1%	1%	1%	1%	1%
Laikipia	1166	926	674	665	708	1%	1%	1%	1%	1%
Lamu	308	311	271	200	204	0%	0%	0%	0%	0%
Machakos	3002	2463	2023	2078	2258	3%	3%	3%	3%	3%
Makueni	2394	1597	1375	1496	1453	3%	2%	2%	2%	2%
Mandera	648	581	535	573	584	1%	1%	1%	1%	1%
Marsabit	700	663	549	622	632	1%	1%	1%	1%	1%
Meru	4299	3858	3017	3195	3302	5%	5%	4%	4%	4%
Migori	1803	1463	1634	1846	2244	2%	2%	2%	2%	3%
Mombasa	3511	3495	3361	3755	3935	4%	4%	5%	5%	5%
Muranga	2104	1874	1381	1700	1849	2%	2%	2%	2%	2%
Nairobi	12577	11966	11795	11294	12342	14%	15%	17%	15%	15%
Nakuru	3386	3214	2958	3331	4037	4%	4%	4%	4%	5%
Nandi	715	733	747	712	769	1%	1%	1%	1%	1%
Narok	1548	1353	1277	1549	1336	2%	2%	2%	2%	2%
Nyamira	715	733	747	712	769	1%	1%	1%	1%	1%
Nyandarua	752	759	604	679	733	1%	1%	1%	1%	1%
Nyeri	1441	1179	876	1158	1215	2%	1%	1%	2%	1%
Samburu	678	553	563	557	495	1%	1%	1%	1%	1%

Siaya	2000	1696	1413	1586	2065	2%	2%	2%	2%	3%
Taita Taveta	563	464	499	470	500	1%	1%	1%	1%	1%
Tana River	511	400	422	375	352	1%	1%	1%	0%	0%
Tharaka Nithi	1417	1203	956	936	993	2%	2%	1%	1%	1%
Trans Nzoia	1468	1262	1025	1256	1216	2%	2%	1%	2%	1%
Turkana	2359	2139	1725	2171	1719	3%	3%	2%	3%	2%
Uasin Gishu	1658	1517	1425	1553	1680	2%	2%	2%	2%	2%
Vihiga	912	811	775	732	917	1%	1%	1%	1%	1%
Wajir	710	548	536	512	557	1%	1%	1%	1%	1%
West Pokot	1831	1441	1292	1261	1198	2%	2%	2%	2%	1%
Total	89630	79750	71436	75169	81584					

Appendix 8: TB Treatment facilities in Nairobi

#	MFL Code	Facility	Sub County	TB Zone
1	12893	Chandaria Health Centre	Dagoretti	Dagoretti South
2	12905	Coptic Hospital(Ngong Road)	Dagoretti	Dagoretti North
3	12960	Good Shepherd Dispensary	Dagoretti	Dagoretti South
4	13036	Kivuli Dispensary	Dagoretti	Dagoretti South
5	13050	Liverpool VCT	Dagoretti	Dagoretti North
6	13086	Melchezedek Hospital	Dagoretti	Dagoretti South
7	13091	Mid Hill Medical Clinic	Dagoretti	Dagoretti South
8	13105	Mutuini Sub District Hospital	Dagoretti	Dagoretti South
9	13110	Nairobi Hospital	Dagoretti	Dagoretti North
10	13117	Nairobi Womens Hospital	Dagoretti	Dagoretti North
11	13159	Ray Of Hope Health Centre	Dagoretti	Dagoretti South
12	13165	Riruta Health Centre	Dagoretti	Dagoretti North
13	13188	Sokoni Arcade VCT	Dagoretti	Dagoretti North
14	13194	National Spinal Injury Hospital	Dagoretti	Dagoretti North
15	13210	St Josephs Dispensary (Dagoretti)	Dagoretti	Dagoretti South
16	13242	University of Nairobi Dispensary	Dagoretti	Dagoretti North
17	13249	Waithaka Health Centre	Dagoretti	Dagoretti South
18	13256	Wema Nursing Home	Dagoretti	Dagoretti South
19	16795	Nairobi Womens Hospital Adams	Dagoretti	Dagoretti North
20	16801	Al-Gadhir Clinic	Dagoretti	Dagoretti South
21	16803	Gatina Dispensary(Dagoretti)	Dagoretti	Dagoretti South
22	18612	Fremo Medical Centre	Dagoretti	Dagoretti South
23	18613	Glory Health Clinic	Dagoretti	Dagoretti South
24	18805	Bodaki Medical Clinic	Dagoretti	Dagoretti South
25	19914	Lea Toto Kawangware	Dagoretti	Dagoretti South
26	19958	AAR GWH health care Ltd	Dagoretti	Dagoretti North
27	19959	Menelik Chest Clinic	Dagoretti	Dagoretti North
28	12871	APTC Health Centre	Embakasi	Embakasi East & South
29	12911	Dandora (EDARP) Clinic	Embakasi	Embakasi West
30	12917	DIWOPA Health Centre	Embakasi	Embakasi Central
31	12935	Embakasi Health Centre	Embakasi	Embakasi East & South
32	12947	Garrison Health Centre	Embakasi	Embakasi East & South
33	12962	GSU Training School	Embakasi	Embakasi East & South
34	12977	Patanisho Maternity and Nursing	Embakasi	Embakasi Central
35	12978	Pipeline Nursing Home	Embakasi	Embakasi East & South
36	13015	Kayole I Health Centre	Embakasi	Embakasi Central
37	13016	Kayole II Sub-District Hospital	Embakasi	Embakasi West
38	13017	Kayole Soweto Dispensary	Embakasi	Embakasi Central
39	13017	Soweto Kayole Phc Health Centre	Embakasi	Embakasi Central
40	13047	Lea Toto Clinic Kariobangi South	Embakasi	Embakasi West
41	13101	Mukuru MMM Clinic	Embakasi	Embakasi East & South

42	13106	Mwatate Clinic	Embakasi	Embakasi East & South
43	13125	Nimoli Medical Services	Embakasi	Embakasi East & South
44	13173	Reuben Mukuru Health Centre	Embakasi	Embakasi East & South
45	13189	SOS Dispensary	Embakasi	Embakasi West
46	13191	EDARP Soweto Health Centre	Embakasi	Embakasi Central
47	13220	Edarp Donholm Clinic	Embakasi	Embakasi West
48	13222	St Patrick Health Care Centre	Embakasi	Embakasi West
49	13241	Umoja Health Centre	Embakasi	Embakasi West
50	13257	Wentworth Hospital	Embakasi	Embakasi East & South
51	17411	Mama Lucy Kibaki Hospital	Embakasi	Embakasi Central
52	17434	Kariobangi South Clinic	Embakasi	Embakasi West
53	17685	Imara Health Centre	Embakasi	Embakasi East & South
54	17719	Edarp Komarock Health Centre	Embakasi	Embakasi Central
55	17720	Lea Toto Community Mukuru Reub	Embakasi	Embakasi East & South
56	17723	St Barkita Dispensary Utawala	Embakasi	Embakasi East & South
57	18463	Mukuru Health Centre	Embakasi	Embakasi East & South
58	19271	SWOP Outreach Project Clinic	Embakasi	Embakasi East & South
59	19446	Jamii Medical Clinic Mukuru	Embakasi	Embakasi East & South
60	23373	Mihang'o Community Dispensary	Embakasi	Embakasi East & South
61	23414	Kware Dispensary	Embakasi	Embakasi East & South
62	23415	Tassia Health Centre	Embakasi	Embakasi East & South
63	23438	City Jacaranda SDA Church Clinic	Embakasi	Embakasi East & South
64	23439	Don Baldo Dispensary	Embakasi	Embakasi East & South
65	24272	Mowlem Health Center	Embakasi	Embakasi West
66	#N/A	Njenga Health Centre	Embakasi	Embakasi East & South
67	12883	Biafra Lions Clinic	Kamukunji	Kamukunji Zone A
68	12884	Biafra Medical Clinic	Kamukunji	Kamukunji Zone A
69	12885	Blue House (AHF) Dispensary	Kamukunji	Kamukunji Zone B
70	12916	Diani Dispensary	Kamukunji	Kamukunji Zone B
71	12921	Dorkcare Nursing Home	Kamukunji	Kamukunji Zone B
72	12930	Eastleigh Health Centre	Kamukunji	Kamukunji Zone B
73	13055	Madina Nursing Home	Kamukunji	Kamukunji Zone B
74	13059	Makkah Nursing Home	Kamukunji	Kamukunji Zone A
75	13095	Moi Air Base Hospital	Kamukunji	Kamukunji Zone B
76	13096	Mother & Child Hospital	Kamukunji	Kamukunji Zone B
77	13155	Pumwani Majengo Dispensary	Kamukunji	Kamukunji Zone A
78	13157	Pumwani Maternity VCT Centre	Kamukunji	Kamukunji Zone A
79	13184	Shauri Moyo Clinic	Kamukunji	Kamukunji Zone A
80	13207	St Joseph (EDARP) Clinic	Kamukunji	Kamukunji Zone A
81	13230	St Vincent Catholic Clinic	Kamukunji	Kamukunji Zone B
82	17847	Alliance Medical Centre	Kamukunji	Kamukunji Zone B
83	17933	St Joseph Nursing Nursing Home	Kamukunji	Kamukunji Zone B
84	18409	ST. Veronica EDARP	Kamukunji	Kamukunji Zone A
85	18594	Joy Nursing Home and Maternity	Kamukunji	Kamukunji Zone B
86	18611	Lithi Clinic	Kamukunji	Kamukunji Zone A

87	18769	Al Amin Nursing Home	Kamukunji	Kamukunji Zone B
88	19471	Iom Wellness Clinic	Kamukunji	Kamukunji Zone A
89	20264	Nairobi East Hospital	Kamukunji	Kamukunji Zone B
90	21148	Care Hospital	Kamukunji	Kamukunji Zone A
91	12887	Brother Andre Medial Centre	Kasarani	Kasarani Zone B
92	12912	Dandora II Health Centre	Kasarani	Kasarani Zone A
93	12913	Dandora I Health Centre	Kasarani	Kasarani Zone B
94	13006	Kariobangi Health Centre	Kasarani	Kasarani Zone A
95	13010	Kasarani Health Centre	Kasarani	Kasarani Zone A
96	13047	Lea Toto	Kasarani	Kasarani Zone A
97	13125	Nimoli Medical Centre	Kasarani	Kasarani Zone A
98	13126	Njiru Dispensary	Kasarani	Kasarani Zone B
99	13169	EDARP Ruai Clinic	Kasarani	Kasarani Zone B
100	13171	Ruai Health Centre	Kasarani	Kasarani Zone B
101	17548	EDARP Njiru Clinic	Kasarani	Kasarani Zone B
102	17943	St Francis Community Hospital	Kasarani	Kasarani Zone A
103	18219	St Alice (EDARP) Dandora	Kasarani	Kasarani Zone A
104	18743	Kariobangi Edarp	Kasarani	Kasarani Zone A
105	19271	SWOP Korogocho	Kasarani	Kasarani Zone A
106	12919	Dog Unit Dispensary (O.P. Police)	Kibra	Kibra Zone A
107	12961	GSU Dispensary (Nairobi West)	Kibra	Kibra Zone A
108	13019	Kemri VCT	Kibra	Kibra Zone B
109	13023	Kenyatta National Hospital	Kibra	KNH
110	13026	Kibera Human Development Clinic	Kibra	Kibra Zone A
111	13028	Kibera Community HC - AMREF	Kibra	Kibra Zone A
112	13029	Kibera D.O. Dispensary	Kibra	Kibra Zone A
113	13030	Kibera South (MSF Belgium) Disp	Kibra	Kibra Zone A
114	13037	KMTC Dispesary	Kibra	Kibra Zone B
115	13044	Langata Women Prison dispensary	Kibra	Kibra Zone A
116	13048	Lea Toto Kibera	Kibra	Kibra Zone A
117	13080	Mbagathi District Hospital	Kibra	Kibra Zone B
118	13087	Memorial Hospital	Kibra	Kibra Zone B
119	13109	Meridian Equator Hospital	Kibra	Kibra Zone B
120	13116	Nairobi West Mens Prison Disp	Kibra	Kibra Zone B
121	13123	Ngong Road Health Centre	Kibra	Kibra Zone B
122	13234	Tabitha Medical Clinic	Kibra	Kibra Zone A
123	13239	Uhuru Camp Dispensary (O.P. AP	Kibra	Kibra Zone B
124	13245	Ushirika Medical Clinic	Kibra	Kibra Zone A
125	17650	SHOFCO Medical Clinic (Kibera)	Kibra	Kibra Zone A
126	18505	KEMRI Mimosa	Kibra	Kibra Zone B
127	20621	Kianda 42 Community Clinic	Kibra	Kibra Zone A
128	13003	Karen Health Centre	Langata	Langata
129	13004	The Karen Hospital	Langata	Langata
130	13041	Langata Health Centre	Langata	Langata
131	13042	Langata Hospital	Langata	Langata

132	13113	Nairobi South Medical Center	Langata	Langata
133	13115	Nairobi West Hospital	Langata	Langata
134	13218	St Marys Mission Hospital	Langata	Langata
135	13221	St. Odilia's Dispensary	Langata	Langata
136	18304	The Co-operative University Colleg	Langata	Langata
137	22844	South C Hospital Limited(South C)	Langata	Langata
138	#N/A	Reliance Hospital Limited	Langata	Langata
139	12879	Bahati Health Centre	Makadara	Makadara Zone A
140	12889	Cana Family Life	Makadara	Makadara Zone A
141	12904	Coptic Medical Clinic	Makadara	Makadara Zone A
142	12984	Jamaa Mission Hospital	Makadara	Makadara Zone A
143	12988	Jericho Health Centre	Makadara	Makadara Zone A
144	12998	Kaloleni Dispensary	Makadara	Makadara Zone A
145	12999	Kaloleni Health Servics	Makadara	Makadara Zone A
146	13056	Makadara Health Centre	Makadara	Makadara Zone A
147	13057	Makadara Mercy Sisters Dispensary	Makadara	Makadara Zone A
148	13072	Mary Immaculate Sisters Disp	Makadara	Makadara Zone A
149	13081	Mbotela Clinic	Makadara	Makadara Zone A
150	13090	Metropolitan Hospital Nairobi	Makadara	Makadara Zone A
151	17494	Lunga Lunga Health Centre	Makadara	Makadara Zone A
152	22084	Equity Afia Buruburu	Makadara	Makadara Zone A
153	23611	AAR Healthcare Buruburu	Makadara	Makadara Zone A
154	23718	Bahati MSF Clinic	Makadara	Makadara Zone A
155	12973	Huruma (EDARP)	Mathare	Mathare
156	12974	Huruma Lions Dispensary	Mathare	Mathare
157	12975	Huruma Nursing Home & Materni	Mathare	Mathare
158	13075	Mathare 3A (EDARP)	Mathare	Mathare
159	13076	Mathari Hospital	Mathare	Mathare
160	17650	Shining Hope For Communities Mat	Mathare	Mathare
161	#N/A	Jumuia Hospital Huruma	Mathare	Mathare
162	#N/A	Kiamaiko Dispensary	Mathare	Mathare
163	12956	Githurai 44 Health Centre	Roysambu	Roysambu
164	12956	Githurai Medical Dispensary	Roysambu	Roysambu
165	12996	Kahawa Garrison Health Centre	Roysambu	Roysambu
166	12997	Kahawa West Health Centre	Roysambu	Roysambu
167	13000	Kamiti Prison Hospital	Roysambu	Roysambu
168	13024	Kenyatta University Dispensary	Roysambu	Roysambu
169	13071	Marurui Dispensary	Roysambu	Roysambu
170	13205	St John Hospital	Roysambu	Roysambu
171	13208	St Joseph Mukasa Dispensary	Roysambu	Roysambu
172	18505	Mimosa Cottage Hospital	Roysambu	Roysambu
173	18828	Lea Toto Mwiki	Roysambu	Roysambu
174	18896	SWOP Thika Road	Roysambu	Roysambu
175	18942	Kamiti Maximum Clinic	Roysambu	Roysambu
176	19958	AAR Hospital - Muthaiga	Roysambu	Roysambu

177	22521	Trans Marigold Hospital	Roysambu	Roysambu
178	12875	Babadogo (EDARP)	Ruaraka	Ruaraka Zone A
179	12876	Babadogo Health Centre	Ruaraka	Ruaraka Zone A
180	12881	Baraka Dispensary (Nairobi) - Main	Ruaraka	Ruaraka Zone B
181	12963	GSU HQ Dispensary (Ruaraka)	Ruaraka	Ruaraka Zone A
182	13070	Marura Nursing Home	Ruaraka	Ruaraka Zone B
183	13077	Mathare North Health Centre	Ruaraka	Ruaraka Zone B
184	13130	National Youth Service HQ disp	Ruaraka	Ruaraka Zone B
185	13172	Ruaraka Clinic	Ruaraka	Ruaraka Zone A
186	13246	Uzima Dispensary	Ruaraka	Ruaraka Zone B
187	18485	Ruaraka Uhai Neema Hospital	Ruaraka	Ruaraka Zone A
188	18895	Korogocho Health center	Ruaraka	Ruaraka Zone A
189	19529	Baraka medical centre (St. Step)	Ruaraka	Ruaraka Zone B
190	19539	Comboni missionary sisters Health	Ruaraka	Ruaraka Zone A
191	23334	Star General Medical Centre	Ruaraka	Ruaraka Zone A
192	#N/A	Ngomongo Dispensary	Ruaraka	Ruaraka Zone A
193	12965	Guru Nanak Hospital	Starehe	Starehe Zone B
194	12982	Mary Immaculate Clinic Mukuru	Starehe	Starehe Zone A
195	13007	Kariokor Clinic	Starehe	Starehe Zone B
196	13039	Lagos Road Dispensary	Starehe	Starehe Zone B
197	13051	Loco Dispensary	Starehe	Starehe Zone A
198	13064	Mariakani Cottage Hospital Ltd	Starehe	Starehe Zone A
199	13104	Muthurwa Clinic	Starehe	Starehe Zone A
200	13113	Nairobi South Clinic	Starehe	Starehe Zone A
201	13121	Ngaira Rhodes Dispensary	Starehe	Starehe Zone A
202	13122	Ngara Health centre(City Council)	Starehe	Starehe Zone B
203	13138	Pangani Dispensary	Starehe	Starehe Zone B
204	13144	South B Police Band Dispensary	Starehe	Starehe Zone A
205	13158	Radiant Pangani Hospital	Starehe	Starehe Zone B
206	13161	Nairobi Remand Prison Health	Starehe	Starehe Zone A
207	13163	Rhodes Chest Clinic	Starehe	Starehe Zone A
208	13168	Railway Training Institute Disp	Starehe	Starehe Zone A
209	13180	Sex Workers Operation Project	Starehe	Starehe Zone B
210	13193	Special Treatment Clinic	Starehe	Starehe Zone B
211	18005	South B Hospital LTD	Starehe	Starehe Zone A
212	19308	Maisha House VCT (Noset)	Starehe	Starehe Zone B
213	19316	LAD NAN Hospital	Starehe	Starehe Zone B
214	19434	The Mater Hospital Mukuru	Starehe	Starehe Zone A
215	19566	Health Gate Hospital	Starehe	Starehe Zone B
216	19974	Central Bank Staff Clinic	Starehe	Starehe Zone B
217	20540	Technical University of Kenya Clinic	Starehe	Starehe Zone A
218	23786	NGARA MAT CLINIC	Starehe	Starehe Zone B
219	23985	Meridian Medical Centre	Starehe	Starehe Zone B
220	24251	Support for Addiction Prevention	Starehe	Starehe Zone B
221	12867	Aga Khan Hospital	Westlands	Westlands Zone A

222	12870	Amurt Health Centre	Westlands	Westlands Zone B
223	12874	Avenue Hospital	Westlands	Westlands Zone A
224	12993	Kabete Approved Dispensary	Westlands	Westlands Zone A
225	13001	Kangemi Health Centre	Westlands	Westlands Zone B
226	13009	Karura Health Centre(Kiambu Rd)	Westlands	Westlands Zone A
227	13052	Lower Kabete Dispensary(kabete)	Westlands	Westlands Zone A
228	13093	Mji wa Huruma Dispensary	Westlands	Westlands Zone A
229	13098	MP Shah Hospital(westlands)	Westlands	Westlands Zone A
230	13209	St Joseph W Dispensary (West)	Westlands	Westlands Zone B
231	13258	Westlands Health Centre	Westlands	Westlands Zone A
232	16796	AAR Clinic Sarit Centre(westlands)	Westlands	Westlands Zone B
233	16799	Gichagi Health Centre	Westlands	Westlands Zone B
234	18887	Githogoro Runda Baptist clinic	Westlands	Westlands Zone A
235	18888	Consolata Shrine Dispensary	Westlands	Westlands Zone A
236	19471	IOM International Organization	Westlands	Westlands Zone A
237	20886	Gertrudes Hospital	Westlands	Westlands Zone A
238	22030	Nairobi Adventist Hospital Limited	Westlands	Westlands Zone B
239	23434	Mediheart Outpatient and Mat	Westlands	Westlands Zone A

Source (MFL List) (Ministry of Health Kenya, 2022)

Appendix 9: Sample Analysis Report - SPSS

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FREQUENCIES VARIABLES=DF6 DF7 DF8 DF9 DF10 DF11
  /ORDER=ANALYSIS.
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Frequencies

Notes

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Statistics

		Gender	Age Group	Education	Length of employment in TB program	Cadre	Department
N	Valid	406	406	406	406	406	406
	Missing	0	0	0	0	0	0

Frequency Table

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	165	40.6	40.6	40.6
	Female	241	59.4	59.4	100.0
	Total	406	100.0	100.0	

Age Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 to 25	11	2.7	2.7	2.7
	26 to 35	133	32.8	32.8	35.5
	Above 35	262	64.5	64.5	100.0
	Total	406	100.0	100.0	

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Medical College Certificate	11	2.7	2.7	2.7
	Medical College Diploma	213	52.5	52.5	55.2
	University Degree	33	8.1	8.1	63.3
	University Masters	123	30.3	30.3	93.6
	Doctor of Philosophy	26	6.4	6.4	100.0
	Total	406	100.0	100.0	

Length of employment in TB program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	≤ 1 year	155	38.2	38.2	38.2
	1- 3years	251	61.8	61.8	100.0
	Total	406	100.0	100.0	

Cadre

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Labtech	9	2.2	2.2	2.2
	Nurse	128	31.5	31.5	33.7
	Clinical officer	262	64.5	64.5	98.3
	Doctor	7	1.7	1.7	100.0
	Total	406	100.0	100.0	

Department

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Administration	55	13.5	13.5	13.5
	CCC	52	12.8	12.8	26.4
	DermatologyRespiratory med	11	2.7	2.7	29.1
	Lab	9	2.2	2.2	31.3
	MCH	11	2.7	2.7	34.0

	OPD	97	23.9	23.9	57.9
	Paediatric outpatient	13	3.2	3.2	61.1
	Special Clinics	22	5.4	5.4	66.5
	TB Clinic	136	33.5	33.5	100.0
	Total	406	100.0	100.0	

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Frequencies

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Statistics

		3. What is the level of TB cases in Nairobi County?	1. What methods/approaches do you use to find TB patients?	Inadequate financial support	Poor planning and implementation of the strategy	Inadequate human resource
N	Valid	406	406	406	406	406
	Missing	0	0	0	0	0

Statistics

		Non-cooperation by the community	Logistical issues
N	Valid	406	406
	Missing	0	0

Frequency Table

3. What is the level of TB cases in Nairobi County?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Average	98	24.1	24.1	24.1
	High	308	75.9	75.9	100.0
	Total	406	100.0	100.0	

1. What methods/approaches do you use to find TB patients?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Active TB case finding	147	36.2	36.2	36.2
	Passive-TB case finding	26	6.4	6.4	42.6
	Intensified TB case finding	33	8.1	8.1	50.7
	Combination Active Passive Intensified TB case finding	189	46.6	46.6	97.3
	5	11	2.7	2.7	100.0
	Total	406	100.0	100.0	

Inadequate financial support

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	281	69.2	69.2	69.2
	Yes	125	30.8	30.8	100.0
	Total	406	100.0	100.0	

Poor planning and implementation of the strategy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	301	74.1	74.1	74.1
	Yes	105	25.9	25.9	100.0
	Total	406	100.0	100.0	

Inadequate human resource

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	114	28.1	28.1	28.1
	Yes	292	71.9	71.9	100.0
	Total	406	100.0	100.0	

Non-cooperation by the community

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	322	79.3	79.3	79.3
	Yes	84	20.7	20.7	100.0
	Total	406	100.0	100.0	

Logistical issues

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	253	62.3	62.3	62.3
	Yes	153	37.7	37.7	100.0
	Total	406	100.0	100.0	

COMPUTE SL=SL1 + SL2 + SL3 + SL4 + SL5 + SL6 + SL7 + SL8 + SL9 + SL10 + SL11 + SL12 + SL13 + SL14 +

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   SL15 + SL16 + SL17 + SL18 + SL19 + SL20 + SL21 + SL22 + SL23 + SL24 + SL25 +
SL26 + SL27 + SL28 +
   SL29 + SL30 + SL31 + SL32.
VARIABLE LABELS  SL 'Skilled labour'.
EXECUTE.
COMPUTE GES=GE1 + GE2 + GE3 + GE4 + GE5 + GE6.
VARIABLE LABELS  GES 'Goal establishment'.
EXECUTE.
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+ C14 + C15 + C16 +
   C17 + C18 + C19 + C20 + C21 + C22 + C23 + C24 + C25.
VARIABLE LABELS  CAP 'Capital'.
EXECUTE.
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+ C14.
VARIABLE LABELS  CAP 'Capital'.
EXECUTE.
COMPUTE INF=INF1 + INF2 + INF3 + INF4 + INF5 + INF6 + INF7 + INF8 + INF9 +
INF10 + INF11.
VARIABLE LABELS  INF 'Infrastructure'.
EXECUTE.
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COMPUTE NR=NR1 + NR2 + NR3 + NR4 + NR5 + NR6 + NR7 + NR8 + NR9 + NR10 +
NR11 + NR12 + NR13 + NR14 +
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VARIABLE LABELS  NR 'Natural resources'.
EXECUTE.
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COMPUTE DC=DC1 + DC2 + DC3 + DC4 + DC5 + DC6 + DC7 + DC8 + DC9 + DC10 +
DC11 + DC12 + DC13 + DC14 +
    DC15 + DC16 + DC17 + DC18 + DC19 + DC20 + DC21 + DC22 + DC23 + DC24 +
DC25 + DC26.
VARIABLE LABELS  DC 'Demand conditions'.
EXECUTE.
COMPUTE RSI=RSI1 + RSI2 + RSI3 + RSI5 + RSI6.
VARIABLE LABELS  RSI 'Related and supporting industries'.
EXECUTE.
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FSSR8 + FSSR9 + FSSR10 +
    FSSR11 + FSSR12 + FSSR13 + FSSR14 + FSSR15 + FSSR16 + FSSR17 + FSSR18 +
FSSR19 + FSSR20 + FSSR21 +
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VARIABLE LABELS  FSSR 'Firm Strategy, Structure, and Rivalry'.
EXECUTE.
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+ ECSM8 + ECSM9 + ECSM10 +
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VARIABLE LABELS  ECSM 'Effectiveness of the current strategic management practices
for active '+
    'tuberculosis case finding '.
EXECUTE.
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CHF9 + CHF10 + CHF11 + CHF12 +
    CHF13 + CHF14 + CHF15 + CHF16 + CHF17 + CHF19 + CHF20 + CHF21 + CHF22 +
CHF23 + CHF24 + CHF25 +
    CHF26 + CHF27 + CHF28 + CHF29 + CHF30 + CHF31 + CHF32 + CHF33 + CHF34 +
CHF35 + CHF36.
VARIABLE LABELS  CHF 'Capacity of health facility staff in implementing the strategic
management '+
    'practices for active TB case finding  '.
EXECUTE.
DATASET ACTIVATE DataSet1.

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DESCRIPTIVES VARIABLES=SL GES CAP INF NR DC RSI FSSR ECSM CHF
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Descriptives

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CORRELATIONS
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Correlations

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Correlations

		Effectiveness of the current strategic management practices for active tuberculosis case finding	Skilled labour	Goal establishment	Capital
Effectiveness of the current strategic management	Pearson Correlation	1	.302**	.210**	.488**
	Sig. (2-tailed)		.000	.000	.000

practices for active tuberculosis case finding	N	384	384	384	384
Skilled labour	Pearson Correlation	.302**	1	.130**	.621**
	Sig. (2-tailed)	.000		.009	.000
	N	384	406	406	406
Goal establishment	Pearson Correlation	.210**	.130**	1	.067
	Sig. (2-tailed)	.000	.009		.175
	N	384	406	406	406
Capital	Pearson Correlation	.488**	.621**	.067	1
	Sig. (2-tailed)	.000	.000	.175	
	N	384	406	406	406
Infrastructure	Pearson Correlation	.150**	.041	.412**	.029
	Sig. (2-tailed)	.003	.415	.000	.557
	N	384	406	406	406
Natural resources	Pearson Correlation	.359**	.258**	.086	.268**
	Sig. (2-tailed)	.000	.000	.083	.000
	N	384	406	406	406
Demand conditions	Pearson Correlation	.487**	.348**	-.095	.399**
	Sig. (2-tailed)	.000	.000	.056	.000
	N	384	406	406	406
Related and supporting industries	Pearson Correlation	.143**	-.046	-.098*	.062
	Sig. (2-tailed)	.005	.359	.050	.213
	N	384	406	406	406
Firm Strategy, Structure, and Rivalry	Pearson Correlation	.356**	.169**	.102*	.294**
	Sig. (2-tailed)	.000	.001	.041	.000
	N	384	406	406	406
Capacity of health facility staff in implementing the strategic management practices for active TB case finding	Pearson Correlation	.322**	.045	.270**	.286**
	Sig. (2-tailed)	.000	.371	.000	.000
	N	384	406	406	406

Correlations

	Infrastructure	Natural resources	Demand conditions	Related and supporting industries

Effectiveness of the current strategic management practices for active tuberculosis case finding	Pearson Correlation	.150**	.359**	.487**	.143**
	Sig. (2-tailed)	.003	.000	.000	.005
	N	384	384	384	384
Skilled labour	Pearson Correlation	.041	.258**	.348**	-.046
	Sig. (2-tailed)	.415	.000	.000	.359
	N	406	406	406	406
Goal establishment	Pearson Correlation	.412**	.086	-.095	-.098*
	Sig. (2-tailed)	.000	.083	.056	.050
	N	406	406	406	406
Capital	Pearson Correlation	.029	.268**	.399**	.062
	Sig. (2-tailed)	.557	.000	.000	.213
	N	406	406	406	406
Infrastructure	Pearson Correlation	1	.351**	-.086	-.114*
	Sig. (2-tailed)		.000	.084	.021
	N	406	406	406	406
Natural resources	Pearson Correlation	.351**	1	.489**	.027
	Sig. (2-tailed)	.000		.000	.582
	N	406	406	406	406
Demand conditions	Pearson Correlation	-.086	.489**	1	.109*
	Sig. (2-tailed)	.084	.000		.027
	N	406	406	406	406
Related and supporting industries	Pearson Correlation	-.114*	.027	.109*	1
	Sig. (2-tailed)	.021	.582	.027	
	N	406	406	406	406
Firm Strategy, Structure, and Rivalry	Pearson Correlation	.063	.375**	.061	-.027
	Sig. (2-tailed)	.207	.000	.222	.581
	N	406	406	406	406
Capacity of health facility staff in implementing the strategic management practices for active TB case finding	Pearson Correlation	.386**	.116*	.084	.056
	Sig. (2-tailed)	.000	.020	.092	.256
	N	406	406	406	406

Correlations

		Firm Strategy, Structure, and Rivalry	Capacity of health facility staff in implementing the strategic management practices for active TB case finding
Effectiveness of the current strategic management practices for active tuberculosis case finding	Pearson Correlation	.356**	.322**
	Sig. (2-tailed)	.000	.000
	N	384	384
Skilled labour	Pearson Correlation	.169**	.045
	Sig. (2-tailed)	.001	.371
	N	406	406
Goal establishment	Pearson Correlation	.102*	.270**
	Sig. (2-tailed)	.041	.000
	N	406	406
Capital	Pearson Correlation	.294**	.286**
	Sig. (2-tailed)	.000	.000
	N	406	406
Infrastructure	Pearson Correlation	.063	.386**
	Sig. (2-tailed)	.207	.000
	N	406	406
Natural resources	Pearson Correlation	.375**	.116*
	Sig. (2-tailed)	.000	.020
	N	406	406
Demand conditions	Pearson Correlation	.061	.084
	Sig. (2-tailed)	.222	.092
	N	406	406
Related and supporting industries	Pearson Correlation	-.027	.056
	Sig. (2-tailed)	.581	.256
	N	406	406
Firm Strategy, Structure, and Rivalry	Pearson Correlation	1	.123*
	Sig. (2-tailed)		.013
	N	406	406
Capacity of health facility staff in implementing the strategic management practices for active TB case finding	Pearson Correlation	.123*	1
	Sig. (2-tailed)	.013	
	N	406	406

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

```
REGRESSION
  /MISSING LISTWISE
```

```
/STATISTICS COEFF OUTS R ANOVA COLLIN TOL
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT ECSM
/METHOD=ENTER SL GES CAP INF NR DC RSI FSSR CHF
/RESIDUALS DURBIN.
```

Regression

Notes

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	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA COLLIN TOL /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT ECSM /METHOD=ENTER SL GES CAP INF NR DC RSI FSSR CHF /RESIDUALS DURBIN.
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	Memory Required	18832 bytes
	Additional Memory Required for Residual Plots	0 bytes

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method

1	Capacity of health facility staff in implementing the strategic management practices for active TB case finding , Skilled labour, Related and supporting industries, Firm Strategy, Structure, and Rivalry, Goal establishment, Demand conditions, Infrastructure, Natural resources, Capital[b]	.	Enter

a. Dependent Variable: Effectiveness of the current strategic management practices for active tuberculosis case finding
b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.683[a]	.467	.454	1.77783	.507

a. Predictors: (Constant), Capacity of health facility staff in implementing the strategic management practices for active TB case finding , Skilled labour, Related and supporting industries, Firm Strategy, Structure, and Rivalry, Goal establishment, Demand conditions, Infrastructure, Natural resources, Capital

b. Dependent Variable: Effectiveness of the current strategic management practices for active tuberculosis case finding

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1034.649	9	114.961	36.372	.000[b]
	Residual	1182.090	374	3.161		
	Total	2216.740	383			

a. Dependent Variable: Effectiveness of the current strategic management practices for active tuberculosis case finding

b. Predictors: (Constant), Capacity of health facility staff in implementing the strategic management practices for active TB case finding , Skilled labour, Related and supporting industries, Firm Strategy, Structure, and Rivalry, Goal establishment, Demand conditions, Infrastructure, Natural resources, Capital

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t
1	(Constant)	.785	.895		.877
	Skilled labour	-.021	.028	-.038	-.736
	Goal establishment	.129	.031	.180	4.168
	Capital	.202	.049	.234	4.154
	Infrastructure	.027	.018	.076	1.509
	Natural resources	-.066	.045	-.080	-1.470
	Demand conditions	.280	.036	.391	7.879
	Related and supporting industries	.155	.061	.098	2.540
	Firm Strategy, Structure, and Rivalry	.171	.028	.271	6.051
	Capacity of health facility staff in implementing the strategic management practices for active TB case finding	.025	.008	.134	2.985

Coefficients[a]

Model		Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	.381		
	Skilled labour	.462	.536	1.864
	Goal establishment	.000	.766	1.306
	Capital	.000	.450	2.224
	Infrastructure	.132	.568	1.761
	Natural resources	.143	.476	2.099
	Demand conditions	.000	.580	1.724
	Related and supporting industries	.012	.952	1.051
	Firm Strategy, Structure, and Rivalry	.000	.709	1.410
	Capacity of health facility staff in implementing the strategic management practices for active TB case finding	.003	.704	1.421

a. Dependent Variable: Effectiveness of the current strategic management practices for active tuberculosis case finding

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	Skilled labour	Goal establishment
1	1	9.466	1.000	.00	.00	.00
	2	.153	7.865	.00	.01	.05
	3	.099	9.781	.01	.00	.01
	4	.089	10.295	.00	.02	.03
	5	.057	12.858	.00	.00	.00
	6	.048	13.973	.00	.06	.39
	7	.032	17.191	.01	.05	.13
	8	.030	17.880	.01	.56	.33
	9	.018	23.206	.03	.04	.05
	10	.008	35.420	.94	.26	.01

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions Capital	Infrastructure	Natural resources	Demand conditions	Related and supporting industries
1	1	.00	.00	.00	.00	.00
	2	.14	.14	.00	.02	.00
	3	.00	.05	.24	.00	.14
	4	.21	.09	.06	.02	.10
	5	.01	.00	.07	.23	.00
	6	.11	.21	.00	.02	.20
	7	.02	.03	.20	.28	.36
	8	.25	.12	.01	.00	.00
	9	.02	.36	.41	.37	.09
	10	.25	.00	.02	.06	.12

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions Firm Strategy, Structure, and Rivalry	Capacity of health facility staff in implementing the strategic management practices for active TB case finding
1	1	.00	.00
	2	.00	.00

	3	.03	.01
	4	.07	.00
	5	.50	.00
	6	.02	.01
	7	.06	.11
	8	.00	.03
	9	.22	.42
	10	.10	.42

a. Dependent Variable: Effectiveness of the current strategic management practices for active tuberculosis case finding

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	8.5766	15.6996	12.2240	1.64360	384
Residual	-4.05371	3.18071	.00000	1.75681	384
Std. Predicted Value	-2.219	2.115	.000	1.000	384
Std. Residual	-2.280	1.789	.000	.988	384

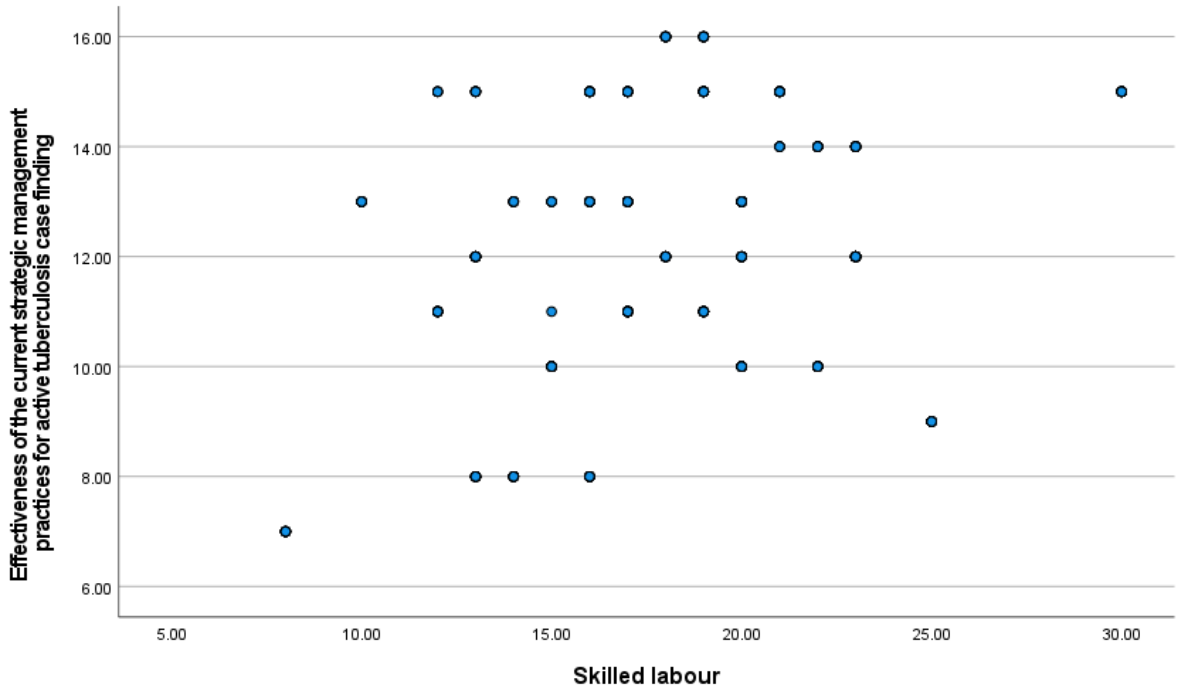
a. Dependent Variable: Effectiveness of the current strategic management practices for active tuberculosis case finding

```
GRAPH
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  /MISSING=LISTWISE.
```

Graph

Notes

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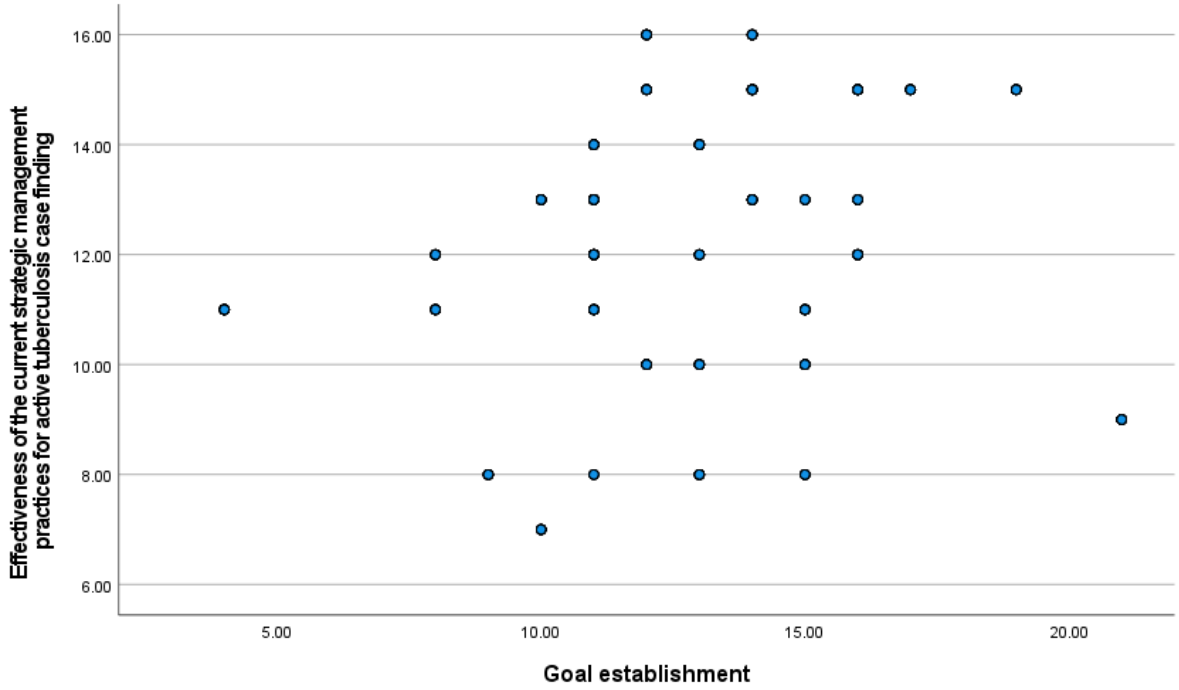



```
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```

Graph

Notes

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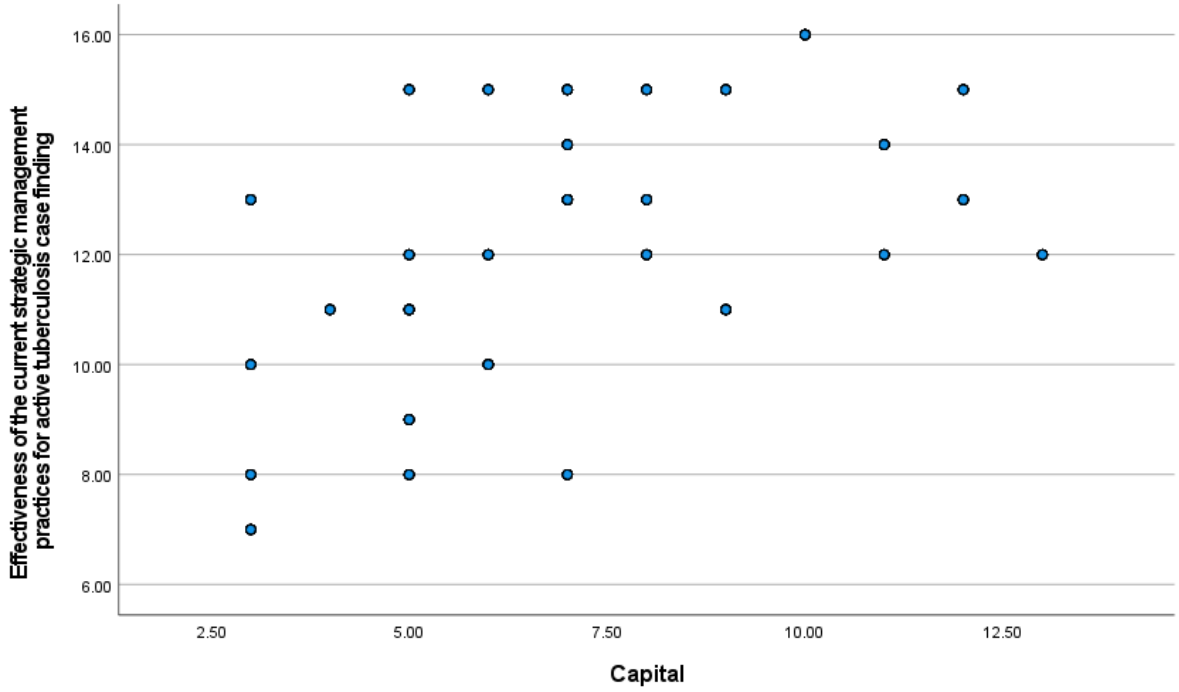



```
GRAPH
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  /MISSING=LISTWISE.
```

Graph

Notes

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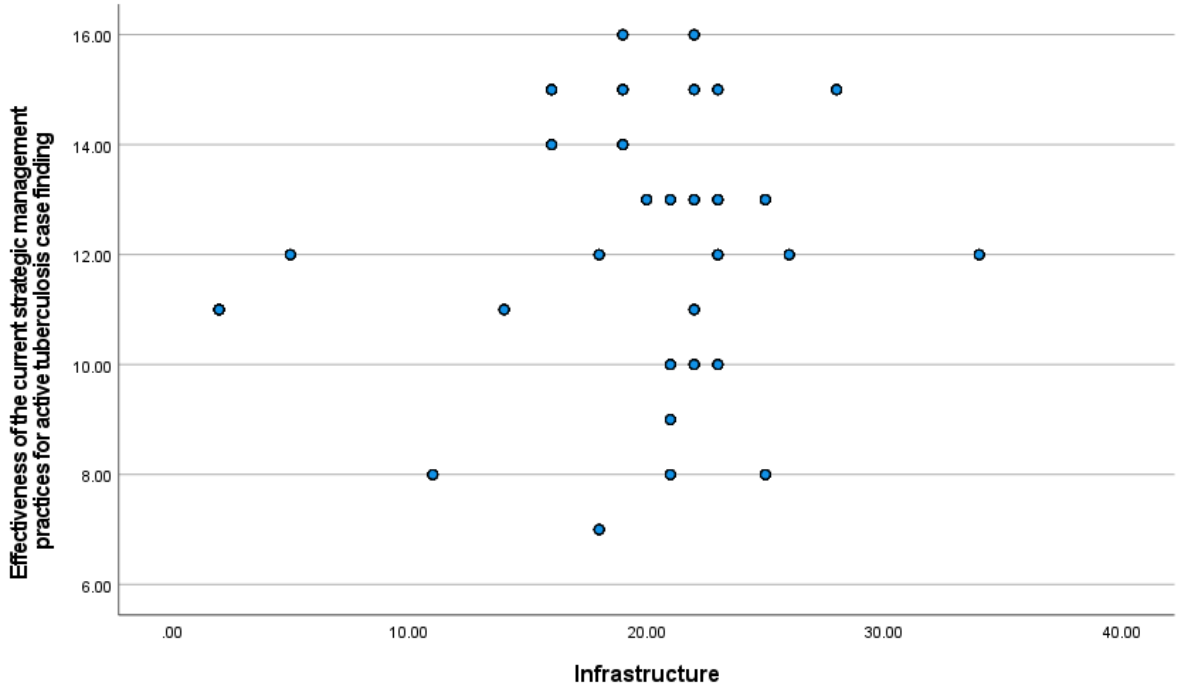



```
GRAPH
  /SCATTERPLOT(BIVAR)=INF WITH ECSM
  /MISSING=LISTWISE.
```

Graph

Notes

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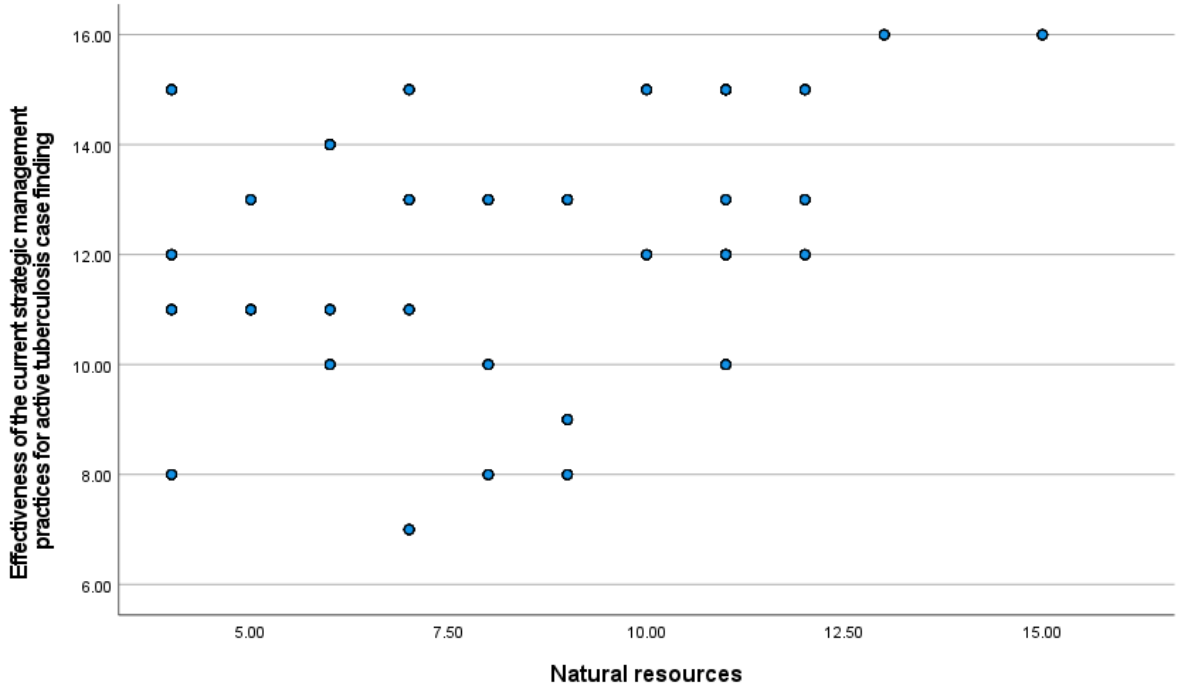



```
GRAPH
  /SCATTERPLOT(BIVAR)=NR WITH ECSM
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```

Graph

Notes

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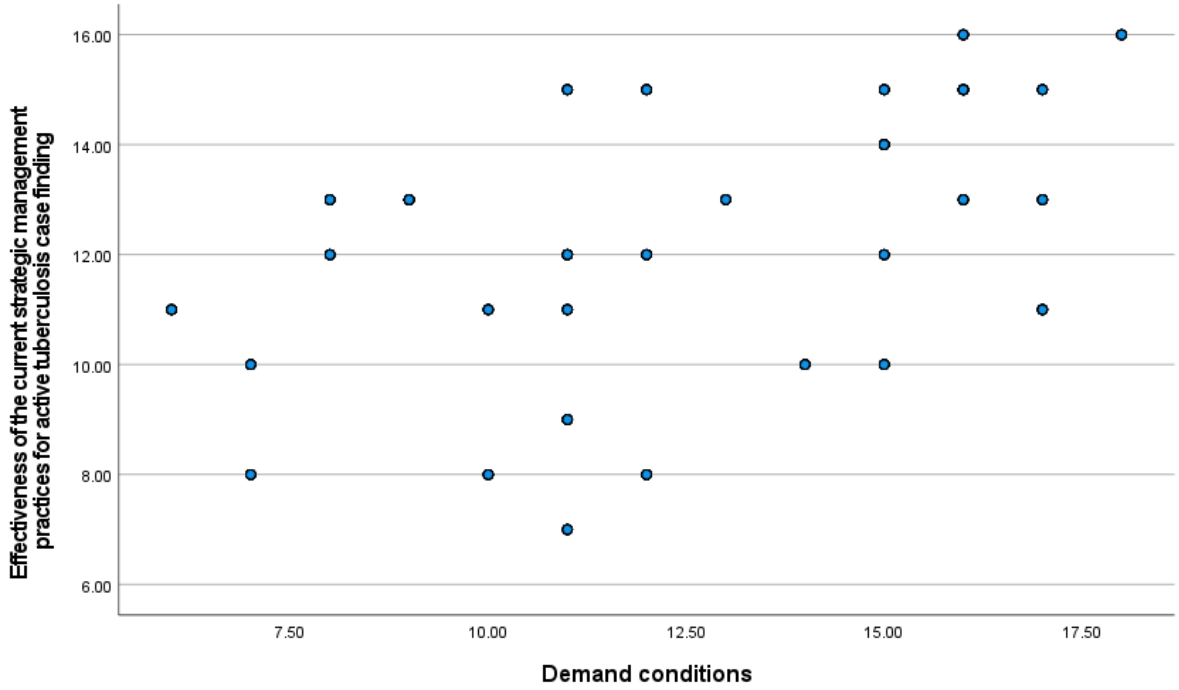



```
GRAPH
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Graph

Notes

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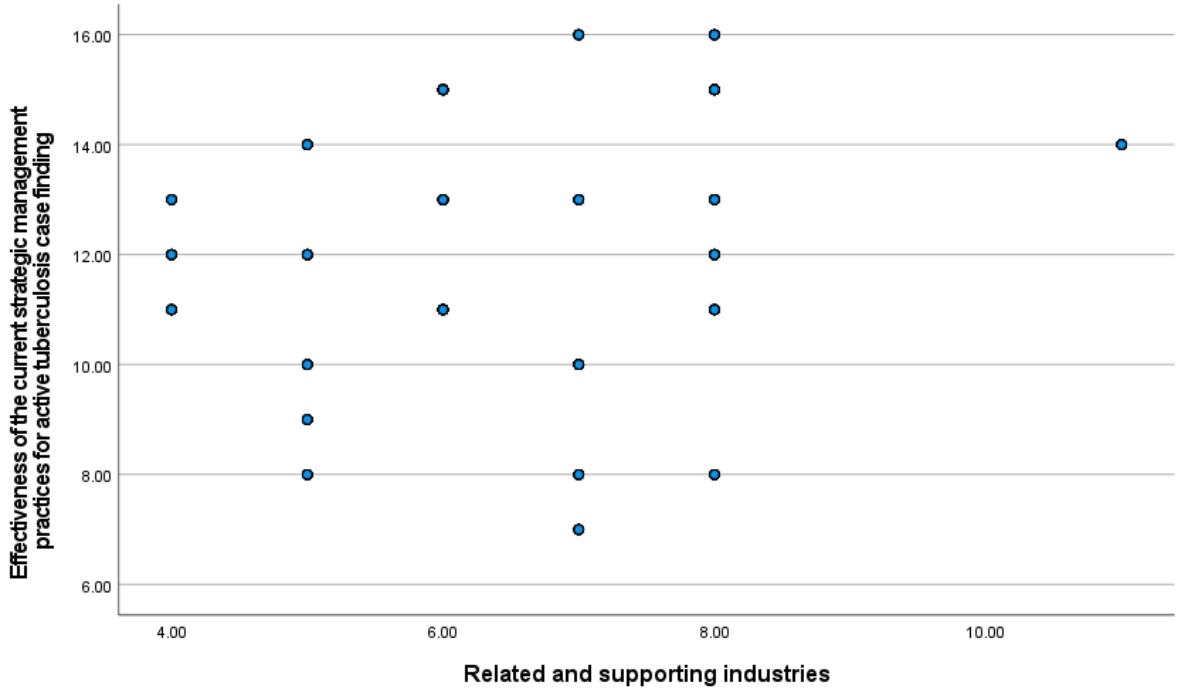



```
GRAPH
  /SCATTERPLOT(BIVAR)=RSI WITH ECSM
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```

Graph

Notes

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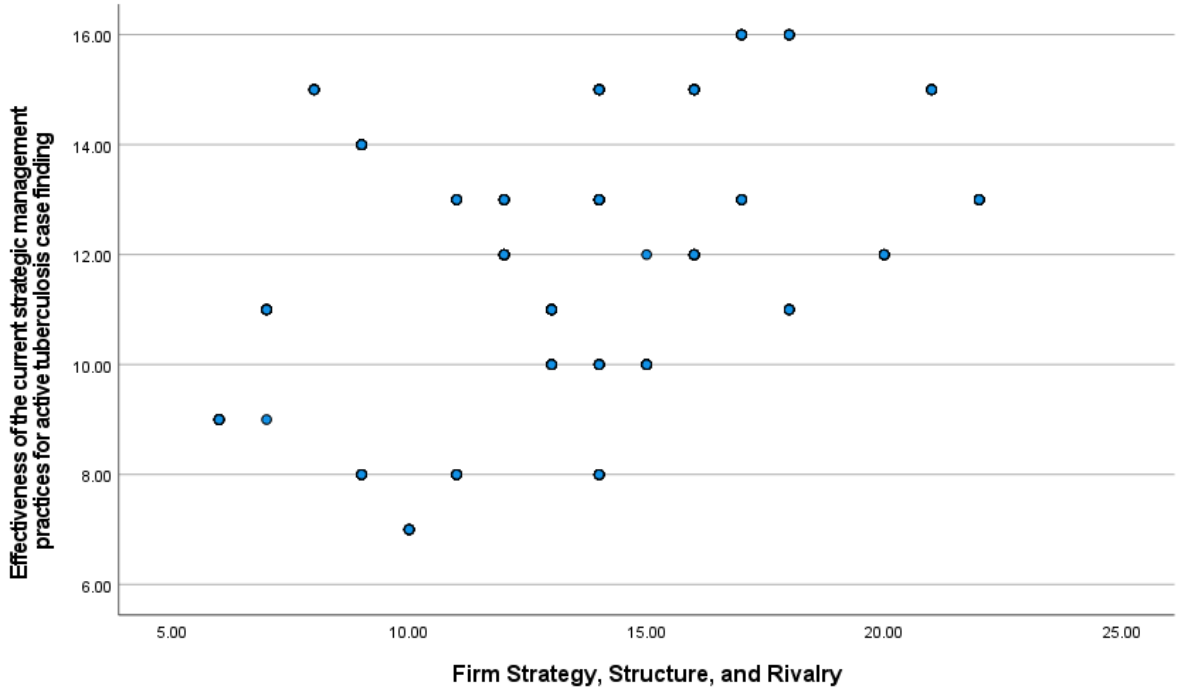



```
GRAPH
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  /MISSING=LISTWISE.
```

Graph

Notes

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	Elapsed Time	00:00:00.13

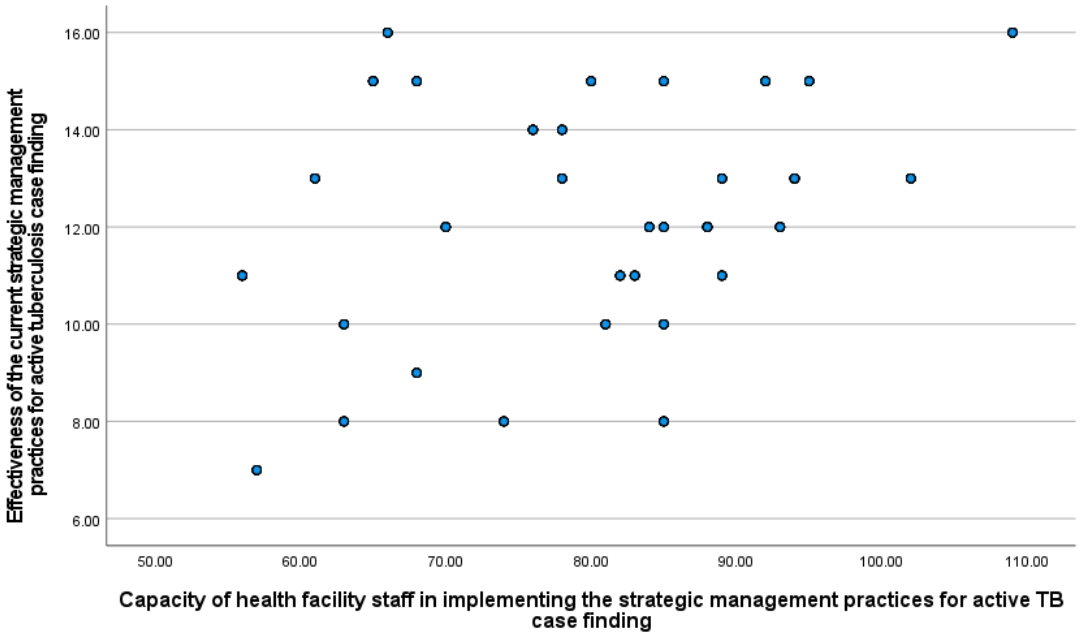



```
GRAPH
  /SCATTERPLOT(BIVAR)=CHF WITH ECSM
  /MISSING=LISTWISE.
```

Graph

Notes

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Syntax		GRAPH /SCATTERPLOT(BIVAR)=CHF WITH ECSM /MISSING=LISTWISE.
Resources	Processor Time	00:00:00.20
	Elapsed Time	00:00:00.14



DESCRIPTIVES VARIABLES=ECSM SL GES CAP INF NR DC RSI FSSR CHF
/STATISTICS=MEAN STDDEV RANGE MIN MAX KURTOSIS SKEWNESS.

Descriptives

Notes

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Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	All non-missing data are used.
Syntax		DESCRIPTIVES VARIABLES=ECSM SL GES CAP INF NR DC RSI FSSR CHF /STATISTICS=MEAN STDDEV RANGE MIN MAX KURTOSIS SKEWNESS.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.00

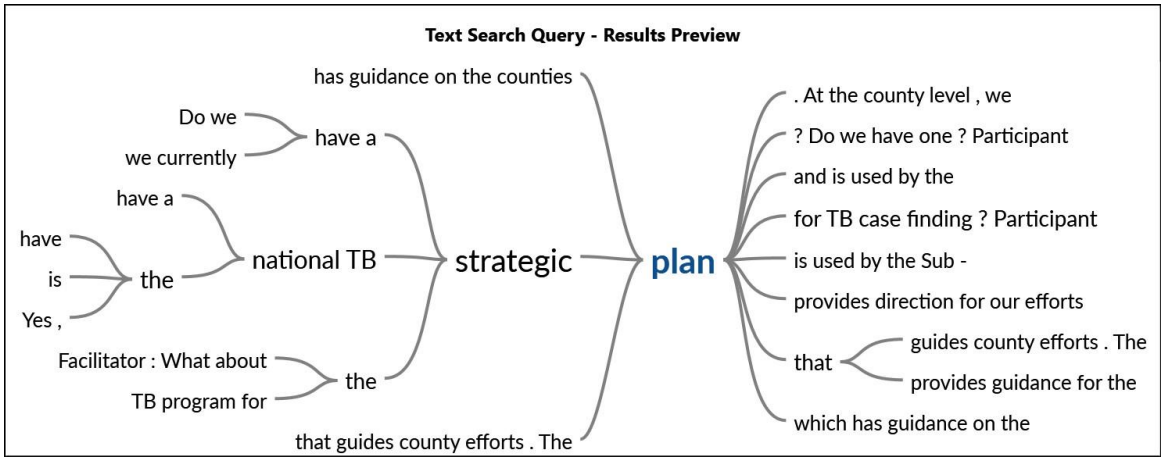
Descriptive Statistics	N Statistic	Range Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic
Effectiveness of the current strategic management practices for active tuberculosis case finding	384	9.00	7.00	16.00	12.2240
Skilled labour	406	22.00	8.00	30.00	17.9261
Goal establishment	406	17.00	4.00	21.00	12.5123
Capital	406	10.00	3.00	13.00	6.9138
Infrastructure	406	32.00	2.00	34.00	19.6133
Natural resources	406	11.00	4.00	15.00	8.5714
Demand conditions	406	12.00	6.00	18.00	12.6847
Related and supporting industries	406	7.00	4.00	11.00	6.4409
Firm Strategy, Structure, and Rivalry	406	18.00	4.00	22.00	13.4236
Capacity of health facility staff in implementing the strategic management practices for active TB case finding	406	53.00	56.00	109.00	79.8177
Valid N (listwise)	384				

Descriptive Statistics

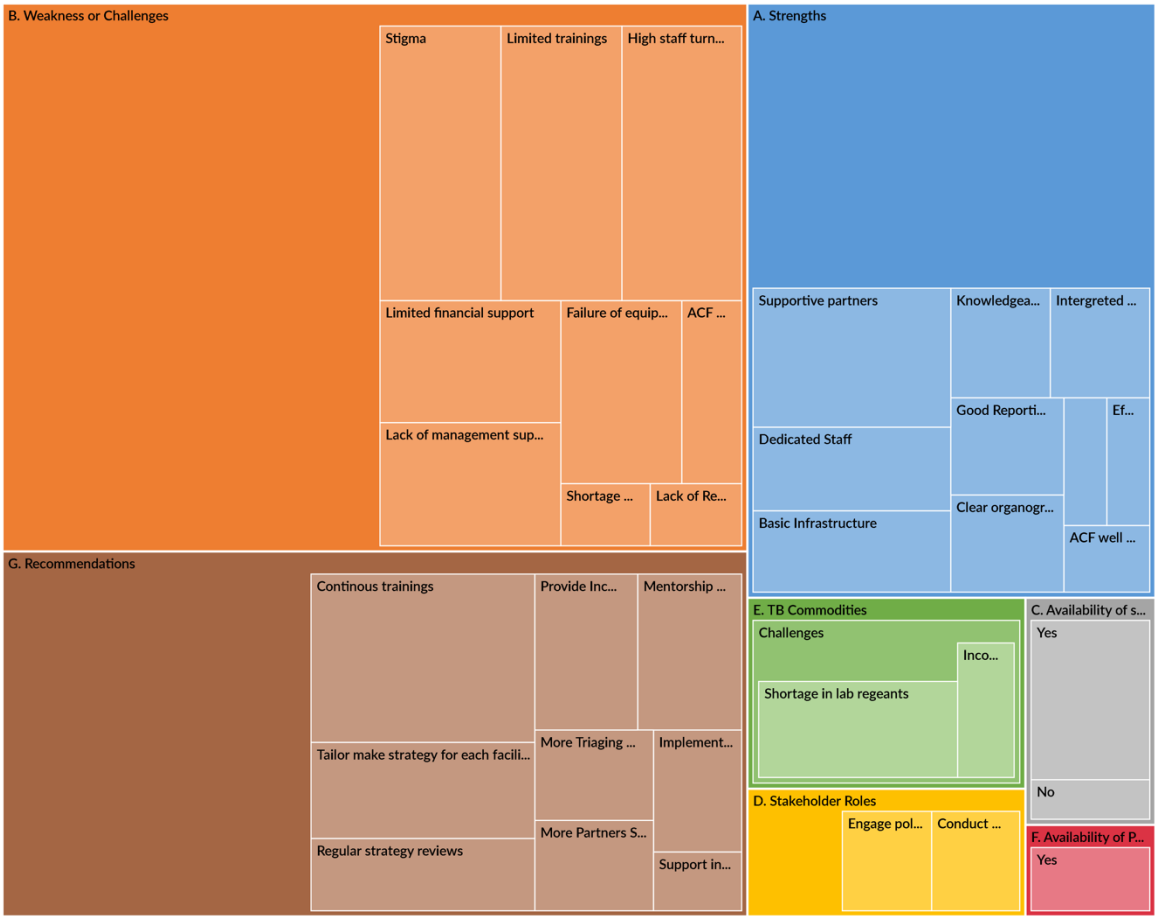
	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Effectiveness of the current strategic management practices for active tuberculosis case finding	2.40579	-.381	.125	-.672	.248
Skilled labour	4.30210	.156	.121	.535	.242
Goal establishment	3.38750	-.069	.121	.588	.242
Capital	2.73432	.468	.121	-.597	.242
Infrastructure	6.62548	-1.149	.121	1.752	.242
Natural resources	2.94200	.021	.121	-1.022	.242
Demand conditions	3.36197	-.270	.121	-1.141	.242
Related and supporting industries	1.49243	.462	.121	.565	.242
Firm Strategy, Structure, and Rivalry	4.02619	-.081	.121	-.106	.242
Capacity of health facility staff in implementing the strategic management practices for active TB case finding	13.29295	-.013	.121	-.789	.242
Valid N (listwise)					

Appendix 10: Sample Analysis Report – NVIVO

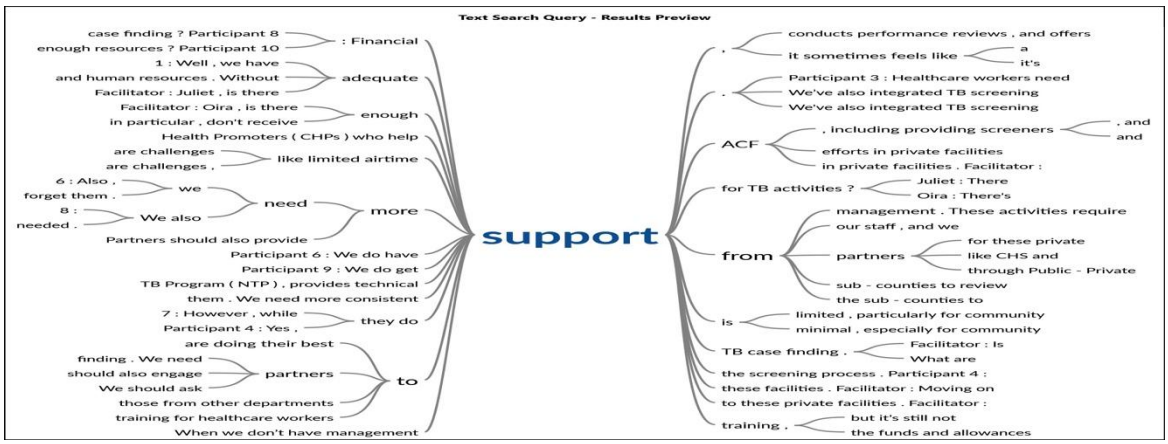
Strategic Plan



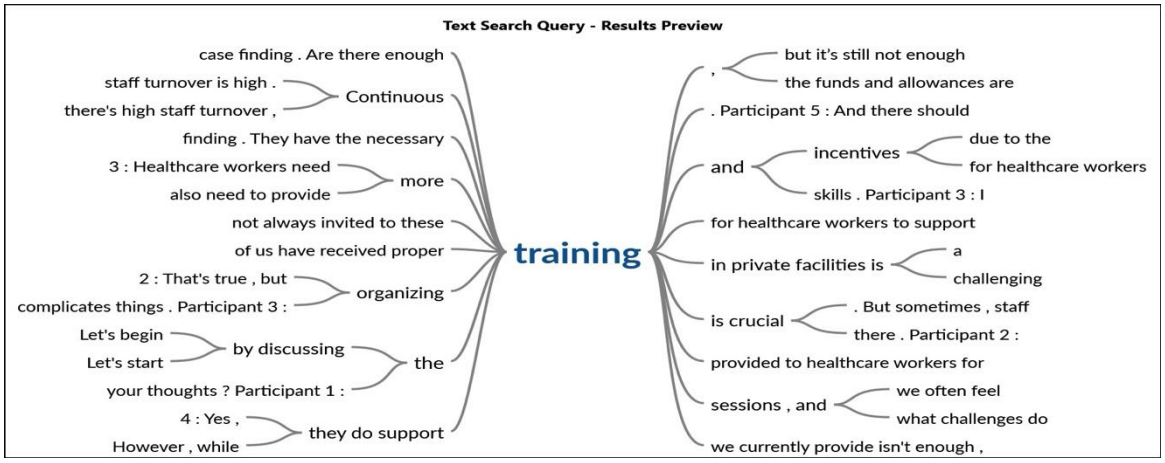
NVIVO Matrix – Strengths and Challenges



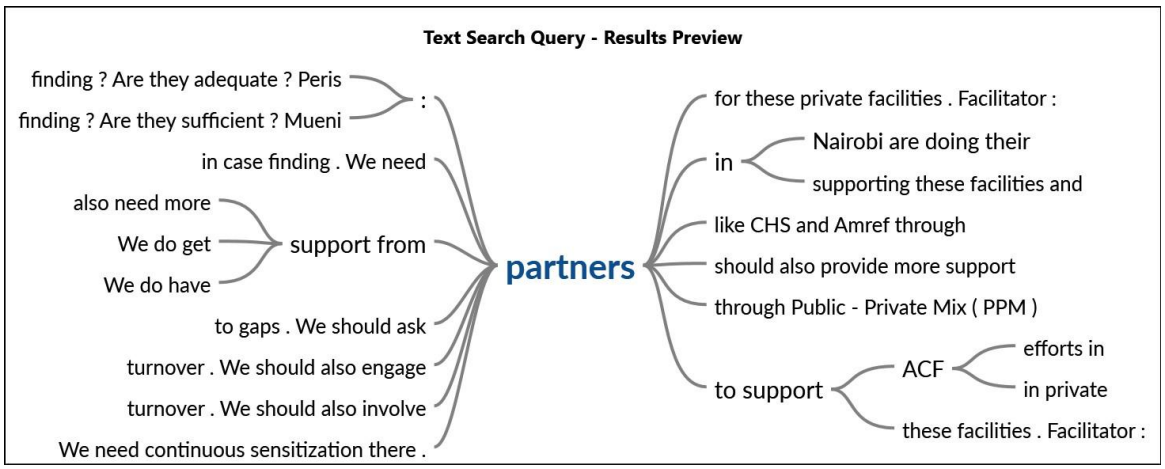
NVIVO Search Query – Support received



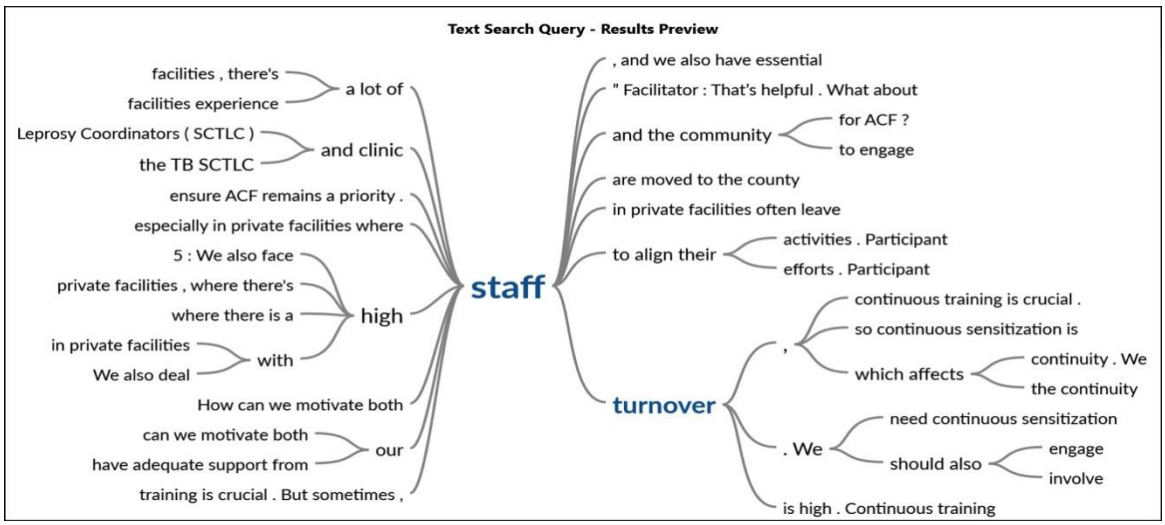
Trainings



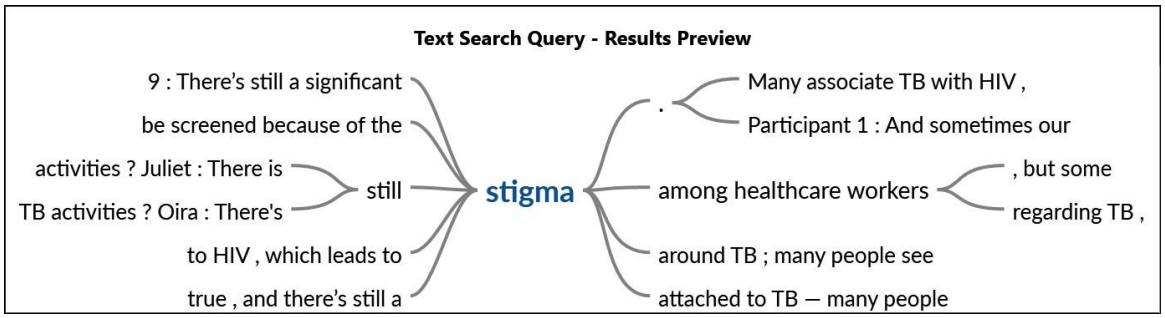
Partners



Staff



Stigma



Facility Preparedness

