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COLLEGE OF BUSINESS AND MANAGEMENT SCIENCES (COBAMS)

SCHOOL OF BUSINESS

WORKFORCE NUTRITION PROGRAMMES AND EMPLOYEE PRODUCTIVITY AMONG HEALTH WORKERS. A CASE OF HOLY CROSS ORTHODOX MISSION HOSPITAL-NAMUNGOONA

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Plan B

JULY, 2026

DECLARATION

I Mary Nabire, declare that this work is from my own knowledge and effort. It is my original dissertation and has never been submitted by any other person for degree in any University or institution of higher level

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APPROVAL

I certify that the candidate has been under my supervision and the research dissertation presented is authentic and meets the minimum requirements for the award of a Masters in Business Administration of Makerere University.

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ABSTRACT

This study examined how employee productivity influences performance and service delivery at Holy Cross Orthodox Mission Hospital Namungoona (HCOMH). The study was guided by three objectives: to examine the factors influencing employee productivity among health workers, to assess the manifestations of employee productivity in service delivery, and to propose strategies and models for enhancing employee productivity at HCOMH. The study employed a descriptive research design and adopted a quantitative approach, which involved collecting numerical data. Respondents were selected using simple random sampling from the hospital workforce, and data were collected using a structured survey questionnaire and interviews. Analysis was conducted using the Statistical Package for Social Sciences (SPSS Version 25) and Atlas ti for qualitative data.

The findings revealed that organizational factors such as resource availability (56.6%) and institutional policy (53.0%) are the primary drivers of productivity, aligning with Sociotechnical Systems Theory. Productivity at HCOMH manifests most strongly through service quality (53.0%) and temporal efficiency (50.6%), reflecting the Job Characteristics Model's emphasis on task significance. However, gaps were identified in training and skills development (48.2%), cost-efficiency (45.8%), and digital integration (45.8%). The multiple regression analysis (Table 4.7) revealed that while access to healthy food interventions had a positive but statistically insignificant effect on employee productivity ($B = 0.066$, $p = 0.333$), both nutrition education programmes ($B = 0.205$, $p = 0.001$) and nutrition-focused health checks ($B = 0.263$, $p = 0.000$) exerted significant positive effects, with the model explaining 22.2% of the variance in productivity ($R^2 = 0.222$, $F(5,207) = 11.825$, $p = 0.000$, Durbin-Watson = 2.175).The study concludes that internal organizational support and intrinsic motivation are stronger drivers of productivity than external market forces, but weaknesses in professional training, reward systems, and technology integration pose long-term risks. Therefore, the study recommends institutionalizing regular skills development clinics, adopting user-centric digital integration, strengthening performance-based reward frameworks, and transitioning from theoretical Lean practices to tangible waste reduction. The study contributes to the growing literature on health worker productivity in faith-based healthcare settings and is limited to the context of HCOMH.

CHAPTER ONE

1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

This chapter presents the background of the study, the problem statement, the purpose of the study, research objectives, significance of the study, scope of the study and the conceptual framework. The study focuses on assessing employee productivity among health workers at Holy Cross Orthodox Mission Hospital Namungoona (HCOMH).

1.2 Background of the Study

Employee productivity in any service industry including the health sector is a cornerstone of effective health service delivery and organizational sustainability. Globally, productivity continues to face pressures arising from workforce shortages, rising healthcare costs, and the increasing complexity of clinical work (Sreekumar et al., 2018). According to WHO (2023), over 15 million additional health workers will be needed by 2030, especially in low- and middle- income countries, signaling challenges in worker efficiency, workload management, and health system performance.

Recent global instability including inflationary pressures, supply chain disruptions, regional conflicts, and rising disease burdens has further undermined productivity in essential services such as healthcare (Anukoonwattaka et al., 2024). In many regions, employee output in hospitals has been negatively affected by burnout, inadequate staffing, and insufficient investment in technology and systems that support health workers (Ezell & Koester, 2023; OECD, 2021). Research indicates that improving productivity requires a balance of factors including work environment, leadership, employee support systems, digital innovation, and resource optimization (Hajishirzi, 2022).

In Sub-Saharan Africa, healthcare productivity is particularly affected by structural inefficiencies, limited financing, skill shortages, and high disease burdens (Gatti et al., 2024). Countries such as Uganda face challenges in retaining skilled health workers, ensuring adequate remuneration, and promoting supportive work environments. Uganda's health worker productivity is estimated to be significantly below regional levels, with notable gaps in staffing norms, workload distribution, training, and technological support (MoH, 2022). These limitations compromise service quality, patient satisfaction, and hospital performance.

It's important to note that malnutrition remains a critical public health issue, significantly affecting both individual well-being and broader societal productivity (James, 2018). Despite global advancements in food production and distribution, malnutrition continues to plague many regions, disproportionately impacting developing countries and vulnerable populations (Adenuga, 2021). The persistence of malnutrition manifests in various forms, including undernutrition, micronutrient deficiencies, and overnutrition, each with distinct but interrelated consequences for workforce productivity (Hosen, 2023). Despite the essence of workforce nutrition programmes in activity employee productivity, scant literature exists on the same in the context of Uganda's manufacturing sector. Thus, this study will fill this gap by investigating the effect of workforce nutrition programmes on employee productivity at the Holy Cross Orthodox Mission Hospital-Namungoona.

Theoretically, workforce nutrition programmes have been espoused in the signaling theory and Human Capital Theory. The theory suggests that the adoption of workforce nutrition programmes as a human resource practice allows employers to send signals to employees that the organization cares about their welfare. This, in-turn, stimulates the achievement of short-

and long-term organizational goals and a better relationship between employees and an employer (Masuda et al., 2017). On the other hand, the use of workforce nutrition programmes in various industries such as banking, education, insurance has significantly influenced the organizational culture and work processes of companies and the behavior of their employees (Rachmah et al., 2022).

Holy Cross Orthodox Mission Hospital Namungoona (HCOMH), a Private Not for Profit (PNFP) faith-based hospital established in 1960, plays a central role in delivering affordable healthcare to underserved populations. The hospital offers medical, surgical, pediatric, obstetric/gynecological, radiology, dental, HIV/AIDS, outpatient, and public health services (HCOMH Profile, 2024). As the leading hospital within the Uganda Orthodox Medical Bureau network, HCOMH relies heavily on the productivity of its health workers to deliver on its mandate of compassionate and accessible healthcare.

However, like many PNFP hospitals, HCOMH faces operational and human-resource productivity constraints. Recent internal assessments reveal increasing workloads, declining staff morale, resource shortages, and rising financial pressures. Staffing gaps in critical departments, increased patient loads, and restricted budgets have placed considerable strain on health workers, potentially affecting their efficiency and overall productivity. Hospital performance reports indicate challenges such as delayed service delivery, prolonged patient waiting time, increased staff turnover, rising absenteeism, and variability in service quality. These signs point to possible productivity concerns that warrant systematic investigation. Understanding the drivers, manifestations, and possible strategies to improve employee productivity at HCOMH is therefore critical, both for improving health outcomes and for

sustaining hospital operations in a highly constrained health economy.

This study thus seeks to assess the productivity of health workers at Holy Cross Orthodox Mission Hospital Namungoona, focusing on the causes, manifestations, and potential improvement strategies.

1.3 Problem Statement

Employee productivity among health workers at Holy Cross Orthodox Mission Hospital Namungoona (HCOMH) has become a growing concern, with visible indicators suggesting a decline in workforce effectiveness and efficiency. In recent years, the hospital has experienced increased workloads, limited staffing levels, and rising operational pressures that have strained the capacity of health workers.

Hospital performance reports reveal recurrent challenges such as prolonged patient waiting times, inconsistent service delivery, delays in clinical processes, reduced staff motivation, and increased absenteeism. These issues have coincided with financial pressures, resource limitations, and increased patient demand conditions that typically exacerbate productivity challenges in PNFP facilities.

Moreover, anecdotal evidence from management teams highlights concerns relating to staff burnout, limited professional development opportunities, inadequate technological support, and gaps in supervision and performance management systems. These issues collectively threaten the hospital's ability to provide timely, high-quality care to patients, while also undermining internal efficiency and long-term sustainability.

Despite these emerging concerns, there has been no comprehensive assessment of employee

productivity at HCOMH. Without empirical evidence, the hospital risks continuing to experience inefficiencies that affect both staff well-being and patient outcomes. Therefore, this study seeks to bridge this gap by assessing the factors influencing employee productivity among health workers, examining how productivity is manifested, and proposing strategies that can enhance performance and service delivery at HCOMH.

1.4 Purpose of the Study

The purpose of this study was to assess employee productivity among health workers at Holy Cross Orthodox Mission Hospital Namungoona.

1.5 Research Objectives

The study was guided by the following objectives:

1. To examine the factors influencing employee productivity among health workers at HCOMH.
2. To examine the effect of workforce nutrition programmes on employee productivity among health workers
3. To propose strategies and models for enhancing employee productivity among health workers at HCOMH.

1.6 Research Objectives

The study was guided by the following objectives:

1. What are the factors influencing employee productivity among health workers at HCOMH?.
2. What are the effect of workforce nutrition programmes on employee productivity among health workers?
3. What are strategies and models for enhancing employee productivity among health workers at HCOMH?.

1.7 Significance of the Study

Hospital Management and Board

The study provides hospital leadership with evidence-based insights into the key drivers of health worker productivity. By identifying factors that enhance or hinder efficiency, the findings guide management in designing targeted interventions such as improved supervision, resource allocation, and incentive structures. This enables hospitals to strengthen staff motivation, optimize service delivery, and enhance overall patient care quality. Moreover, the results support strategic planning and governance, ensuring that hospital boards can make informed decisions that balance financial sustainability with service excellence.

Health Workers

For frontline health workers, the study sheds light on the systemic and workplace challenges that affect their performance, including workload pressures, inadequate support systems, and limited opportunities for professional growth. By proposing practical solutions such as better working conditions, continuous training, and psychosocial support, the study contributes to improving job satisfaction and reducing burnout. Ultimately, this empowers health workers to deliver more effective and compassionate care, reinforcing their sense of professional fulfillment and commitment to service.

Donors and Faith-Based Health Partners

The findings provide donors and faith-based health partners with empirical evidence to guide resource allocation and operational support. By highlighting areas where investment can yield the greatest impact such as staff development, infrastructure, and retention strategies, the study strengthens sustainability planning for faith-based hospitals. This ensures that external support is aligned with actual needs, fostering long-term resilience and continuity of healthcare services in underserved communities.

Ministry of Health and Policy Makers

At the policy level, the study informs the Ministry of Health and other decision-makers about the critical role of human resource management in enhancing productivity within Private Not-for-Profit (PNFP) health facilities. The evidence supports the formulation of policies that address workforce challenges, promote equitable distribution of resources, and strengthen institutional frameworks. By aligning with Uganda's national health goals and development strategies, the findings contribute to building a more efficient, responsive, and sustainable healthcare system.

Researchers and Academicians

Academically, the study enriches the growing body of literature on health worker productivity, particularly within faith-based healthcare settings in low- and middle-income countries. It offers empirical data and methodological insights that can be used for comparative studies, curriculum development, and further research into workforce management and healthcare governance. By documenting real-world challenges and solutions, the study provides a valuable reference point for scholars seeking to advance knowledge and inform reforms in similar contexts globally.

1.8 Scope of the Study

Geographical Scope

The study was conducted at Holy Cross Orthodox Mission Hospital Namungoona, located in Lubaga Division, Kampala District.

Content Scope

The study examined:

Factors influencing employee productivity (work environment, motivation, supervision, workload, training, resources, leadership).

Manifestations of productivity (timeliness, service quality, output per worker, patient satisfaction, task completion, teamwork).

Productivity enhancement strategies (HR systems, training, technology adoption,

performance management and incentives).

Time Scope

The study will consider hospital operational data from 2018 to 2025, capturing trends in staff performance, workload, and service output

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The review is structured according to the study objectives and includes theoretical perspectives, empirical literature, and conceptual insights. It examines the underlying theories guiding the study, the determinants of productivity among health workers, the manifestations of productivity in service delivery, and the strategies for improving productivity in hospital environments.

2.1 Theoretical Review

Scholars such as Defee et al. (2010) emphasize that rigorous research should be grounded in sound theoretical foundations, a position supported by Mentzer et al. (2008). While earlier studies commonly relied on Taylor's Scientific Management Theory useful for environments characterized by repetitive, standardized tasks its applicability in complex, dynamic, and human- centered service contexts such as hospitals is limited. Healthcare work requires clinical judgment, emotional intelligence, teamwork, adaptability, and patient-centered care, elements that are often insufficiently addressed by mechanistic approaches. Therefore, theories that focus on human motivation, work design, and the interaction between people and systems are more appropriate for explaining productivity in healthcare settings.

2.1.1 Job Characteristics Model (JCM)

The Job Characteristics Model (JCM), developed by Hackman and Oldham (1976), serves as the core theoretical framework for this study due to its strong relevance to knowledge intensive and service oriented roles. The JCM posits that specific job characteristics skill variety, task identity, task significance, autonomy, and feedback shape critical psychological states that influence key work outcomes such as motivation, productivity, job satisfaction, and reduced absenteeism.

In the healthcare context, these characteristics are highly pronounced. Health workers typically engage in tasks requiring diverse clinical and interpersonal skills (skill variety), often manage patient cases from admission to discharge (task identity), and perform work that directly affects human wellbeing (task significance). Moreover, clinical decision-making often involves professional discretion (autonomy), and feedback is readily available through patient outcomes, peer evaluations, and supervisory input. Accordingly, the JCM aligns with Objective 1 by explaining the intrinsic and extrinsic factors that influence productivity, and with Objective 3 by informing strategies such as job redesign to improve performance.

2.1.2 Sociotechnical Systems (STS) Theory

To complement the JCM, the Sociotechnical Systems (STS) Theory provides an additional lens through which productivity in hospitals can be understood. STS Theory posits that organizational performance is optimal when social components (people, teams, culture, communication) and technical components (equipment, procedures, technology, physical layout) are harmonized. Given that hospitals operate as highly interdependent systems, disruptions in either subsystem such as malfunctioning equipment, poor coordination, or

inadequate staffing can hinder productivity. This theory is therefore instrumental in addressing Objective 1 by recognizing the interaction between human and technological factors, as well as Objective 3 by guiding holistic strategies that improve both clinical workflows and team dynamics.

2.2 Factors Influencing Employee Productivity

Productivity in healthcare is shaped by a multifaceted interaction of human, organizational, and technological factors. Unlike manufacturing environments, hospitals operate in unpredictable conditions where patient needs vary, emergencies arise, and tasks require precision and empathy.

Gonçalves, Godinho, Silva, and Maçães (2024) postulated that technology is one of the most significant productivity enhancers in modern healthcare settings. Its influence is multidimensional, touching clinical processes, administrative tasks, communication, and patient management. Digital innovations such as Electronic Health Records (EHRs), telemedicine, automated laboratory systems, and diagnostic imaging tools streamline activities that would otherwise consume large amounts of clinical and administrative time (Kaur & Sharma, 2024). The adoption of EHR systems allows for quicker retrieval of patient data, reduced duplication of tests, improved accuracy in drug prescriptions, and enhanced communication between departments. When information flows efficiently, clinicians spend less time searching for files and more time attending to patients, thereby improving overall workflow productivity. Additionally, technology reduces medical errors by providing decision-support tools that alert clinicians to drug interactions, allergies, or abnormal test results (Thacharodi et al., 2024).

Additionally studies have reported that in healthcare, productivity is inseparable from the quality of the workforce (Bragas, Bragas, & Soliman, 2022; Sunkad, 2022; Tapasco-Alzate, Giraldo- García, & Ramírez-Ramírez, 2022). Labor quality refers to the skills, knowledge, attitudes, experience, and professional ethics of employees. Healthcare work demands specialized clinical competencies, problem-solving skills, emotional intelligence, and the ability to work under pressure (Sunkad, 2022). Productivity is directly influenced by the competency levels of doctors, nurses, midwives, laboratory personnel, and support staff. Skilled professionals make accurate decisions, handle complex cases efficiently, and require less supervision. For example, an experienced midwife can detect early signs of obstetric complications and take corrective action quicker than a less qualified counterpart, thereby managing patients more efficiently and improving outcomes (Sunkad, 2022).

Onwujekwe, et al., (2020) reported that government policies, regulations, and funding patterns significantly shape hospital productivity. Healthcare facilities operate within a regulated environment where compliance with standards, protocols, and laws is mandatory. Regulatory bodies guide staffing ratios, infection control practices, facility licensing, and service delivery requirements, all of which influence operational efficiency (Tabish, 2024). When governmental support is adequate, hospitals can operate smoothly; when funding is delayed or insufficient, shortages occur, affecting service delivery. Second, government regulations ensure quality and patient safety but may increase administrative workload. Compliance activities such as audits, mandatory reporting, and accreditation procedures require time and resources that can either enhance or constrain productivity depending on how they are managed.

Su (2022) posited that leadership is a critical determinant of productivity because it shapes organizational culture, teamwork, motivation, communication, and decision-making. Effective leaders create clarity of purpose, provide direction, inspire employees, and remove barriers to performance. In healthcare, leadership influences how well staff coordinate during clinical procedures, respond to emergencies, and manage workload pressures. Productive service delivery requires leaders who demonstrate emotional intelligence, fairness, accountability, and strategic thinking. Leaders who communicate expectations clearly, recognize achievements, and foster teamwork create an environment where staff feel valued and motivated. Conversely, autocratic or inconsistent leadership can cause stress, low morale, conflict, and high turnover— conditions that diminish productivity (Khawaja, & Karimi, 2024; Aganda & Kimemia, 2025).

Resource allocation refers to how financial, human, material, and infrastructural resources are distributed within the hospital (Radinmanesh et al., 2021). Proper allocation ensures that the right resources are available at the right time and place to support efficient service delivery.

Inadequate resources result in delays, workflow bottlenecks, increased workload on staff, and compromised patient outcomes (Raghupathi & Raghupathi, 2023). When resources are insufficient or poorly distributed, clinicians spend more time improvising or searching for materials than attending to patients. For example, a shortage of laboratory reagents can delay diagnostic results, slow down treatment decisions, and reduce daily service output. Financial resource allocation also determines maintenance of equipment, procurement of technology, staff training, and facility expansion. When financial decisions align with strategic priorities, productivity improves. However, misallocation such as over-investing in administrative

functions at the expense of clinical departments can hinder service delivery (Radinmanesh et al., 2021).

2.2.1 Workforce Nutrition Programmes and Employee Productivity

Nyhus Dhillon and Ortenzi, (2023) found that comprehensive workforce nutrition programmes, including a variety of intervention areas, and/or programmes targeting high-risk categories of workers (overweight/obese or (pre-)diabetic) were more likely to be effective on nutrition, health, and business outcomes. Within comprehensive and targeted programmes, individualised counselling and worksite environmental modifications were often mentioned as the most effective components. Furthermore, the scientific evidence shows that it is possible to influence work-related outcomes, especially absenteeism, positively through health promotion efforts that include components aimed at the workplace's physical work environment and organizational structure (Grimani et al., 2019).

The economic consequences of malnutrition are profound. Global estimates suggest that malnutrition costs the global economy trillions of dollars annually due to lost productivity, with significant implications for economic development. The Global Nutrition Report (2021) highlights that the economic burden of malnutrition is widespread, affecting both high-income and low-income countries. This burden stems from increased healthcare costs, absenteeism from work, and lower levels of worker performance. For instance, malnourished workers tend to have higher rates of absenteeism and presenteeism, which directly impacts productivity levels in the workplace.

Furthermore, Becker (1965) emphasizes that investments in health and nutrition can directly enhance labor productivity, underscoring the long-term economic returns of addressing malnutrition. This is echoed by Schultz (1961), who argues that improved nutrition leads to

higher worker output and that the reverse malnutrition significantly hinders economic development by impairing both physical and mental health.

Providing healthy canteen food for truck drivers in Sweden led to greater reported awareness, empowerment, and engagement but no specific change in productivity (Katcher et al., 2010). A review of 21 workplace interventions listed self-perceived health, self-reported absenteeism, work productivity, and work ability among intervention outcomes. However, the intervention effect was small; better results were obtained in younger workers and in those who received weekly contacts (Drewnowski, 2017). The conclusion was that interventions may decrease days lost due to sickness and may increase productivity. Describing nonsignificant results as "promising" was identified as a problem

The relationship between nutrition and workforce productivity is clear: malnutrition whether due to undernutrition or overnutrition has a profound impact on individual health and broader economic outcomes. Addressing malnutrition not only improves health outcomes but also enhances labor productivity, with significant implications for economic growth. As Becker (1965) and Schultz (1961) argue, investing in nutrition can lead to improved economic performance, with long-term benefits for national and global economies.

The findings from this systematic review by Rachmah et al. (2022) underscore the crucial link between employee health and productivity, especially in relation to output per capita. The review evaluated 11 eligible studies conducted between 2005 and 2020, focusing on workplace-based nutrition and health interventions targeting individuals aged 19 to 64. The interventions were categorized into three main areas: modifications to the workplace food environment (five studies), delivery of nutrition education through various channels such as in-person sessions and emails (four studies), and efforts aimed at reducing occupational health

risks (two studies).

Workforce Nutrition Programmes (WNPs) can improve the health of workers, but with mixed results for a business case—which is crucial to their sustainability. Quak et al. (2025) thus explored impact pathways and metrics used to assess the business benefits of WNPs, as well as the factors that influence the business case, with the aim of informing future interventions and research. Business outcomes of WNPs include reduced sickness absence, reduced voluntary staff turnover, and reduced corporate health costs, which contribute to cost savings. Increased productivity and reduced presenteeism contribute to increased sales and revenues. Furthermore, improved employee job satisfaction can be considered as an intermediary business benefit, while WNPs also having the potential to increase company reputation. While most of the literature is based on high-income countries, to implement WNPs in low- and middle-income countries (LMICs), contextual and enabling factors need to be understood and reflected in strong programme design, which results in more beneficial business outcomes.

2.2.2. Conclusion

Healthcare productivity is a dynamic outcome of interactions among technology, labor quality, government influence, leadership, and resource allocation. Each factor influences efficiency in different but interrelated ways. For a health institution to enhance productivity, it must adopt an integrated approach that strengthens workforce competencies, embraces appropriate technology, ensures compliance with government policies, promotes effective leadership, and strategically manages resources. When these elements are aligned, hospitals can deliver high-quality, timely, and patient-centered care while maximizing organizational efficiency

2.3 Manifestations of Employee Productivity in Service Delivery

Employee productivity in healthcare is multidimensional and cannot be assessed solely by counting the number of patients seen or procedures performed. Unlike industrial settings where output is standardized, healthcare productivity integrates both quantitative and qualitative components, reflecting the complex nature of patient care. In hospital settings productivity manifests in four major ways: service throughput, quality of care, worker engagement, and patient satisfaction (Hoxha, et al., 2024; Inaray, et al., 2024). Each of these indicators demonstrates how effectively staff utilize available resources, skills, and time to deliver safe, timely, and patient-centered services.

Additionally Doyle (2022) posited that high service throughput may be observed when outpatient queues move steadily, maternity services handle deliveries without delays, and laboratory services process tests promptly. According to the Doyle (2022), this refers to the volume of work completed within a specific period such as the number of patients attended to, diagnostic tests conducted, deliveries handled, or procedures performed. It reflects the hospital's capacity to manage patient flow from admission to discharge efficiently. In highly productive healthcare environments, staff are able to handle higher patient volumes without compromising care quality or increasing waiting times. Efficient triage, proper staff allocation, and functioning equipment contribute to improved throughput (Zou, Wang, & Cheng, 2022).

Quality of care is another visible outcome of employee productivity. Kimuli, (2021) repoted that high productivity is reflected in the accuracy of clinical decisions, compliance with clinical guidelines, low rates of medical errors, and positive patient outcomes. When healthcare

workers perform their duties competently, use evidence-based practices, and collaborate effectively, the overall safety and reliability of care improve (Voordt & Jensen, 2023). Quality of care becomes evident in factors such as reduced complications, accurate diagnoses, timely interventions, and adherence to infection prevention and control standards. For instance, a midwife who follows standard obstetric protocols contributes to safer deliveries, while a pharmacist who performs accurate dispensing reduces medication errors.

Choudhary, David, and Feleen, (2021), revealed that engaged employees demonstrate responsibility in patient care, maintain punctuality, support their colleagues, and show a positive attitude toward hospital objectives. Pincus (2023) described employee engagement as the emotional commitment, enthusiasm, and dedication that staff bring to their work. It is a critical manifestation of productivity because engaged workers are more proactive, consistent, reliable, and willing to go beyond basic requirements to ensure excellent service delivery. They also participate in continuous professional development, take initiative during emergencies, and remain focused even under pressure.

Wang, Liu, and Wang (2023) repoted that productivity is not complete unless patients feel respected, safe, informed, and satisfied with the services provided. Satisfied patients commonly report short waiting times, clear communication from staff, compassionate treatment, timely procedures, and overall trust in the hospital (Hidayat & Idrus, 2023). High patient satisfaction suggests that staff are working efficiently, are responsive to patient needs, and provide a positive care experience. This often leads to repeat visits, increased community trust, and positive referrals which are important for the hospital's reputation and service utilization.

2.3.1. Conclusion

The manifestations of employee productivity in service delivery are multifaceted, reflecting both outputs and the quality of care provided. The productivity becomes visible through service throughput**, quality** of care**,** worker engagement**,** and patient satisfaction**.** These elements highlight the degree to which the hospital workforce delivers safe, effective, timely, and patient- centered services.

2.4 Strategies for Enhancing Productivity

Improving productivity in healthcare requires strategies tailored to the unique nature of hospital work. Key approaches include Lean healthcare strategies, Standard Operating Procedures (SOP) automation, workforce wellbeing initiatives, and job redesign guided by JCM principles.

Lima, Dinis-Carvalho, Souza, Vieira and Gonçalves, (2021) suggested that lean healthcare is an adaptation of Lean management principles originally developed in the manufacturing sector to eliminate waste, streamline processes, and optimize value for the customer in this case, the patient. In hospitals, Lean strategies focus on reducing non-value-adding activities such as unnecessary movement, delays in patient flow, duplicate tasks, and inefficient documentation (Chen, Guan & Zhuang, 2024). At the operational level, Lean tools such as 5S, value stream mapping, Kaizen, and workflow standardization help staff identify bottlenecks and redesign care pathways. For example, reorganizing patient triage systems can reduce waiting times, while redesigning laboratory workflows may shorten turnaround times for results. Lean strategies also promote teamwork and problem-solving by involving frontline healthcare workers in continuous improvement processes.

Gogrichiani (2025) revealed that automation of SOPs involves integrating digital tools and information systems into routine clinical and administrative processes. Healthcare environments contain numerous repetitive tasks such as data entry, appointment scheduling, medication ordering, report preparation, and patient record updates. Automating these activities reduces manual workload, minimizes errors, and frees up time for providers to focus on patient care. Examples of SOP automation in hospitals include Electronic Health Records (EHRs), automated drug dispensing systems, digital laboratory information systems, and computerized patient monitoring (Karunaratne & Wijesinghe, 2025). With automation, information flows more quickly across departments, documentation becomes more accurate, and decision-making improves.

Chang (2024) recommended that employee wellbeing is a critical determinant of productivity in healthcare because the sector is highly demanding, emotionally intense, and often characterized by long shifts, staff shortages, and high patient volumes. When staff are fatigued, stressed, or burnt out, their performance declines, service errors increase, and patient outcomes worsen. Therefore, investing in workforce wellbeing is not a luxury but a strategic necessity. Wellbeing initiatives may include mental health support programs, stress management training, fair scheduling practices, adequate staffing, debriefing sessions after critical incidents, and creating a positive work culture grounded in respect and teamwork. Recognition and reward systems also play a crucial role in enhancing morale and motivating staff (Søvold, et al., 2021).

Job redesign is a powerful strategy for enhancing employee motivation and performance by improving the structure, meaning, and autonomy of work (Lovejoy, Kelly, Kubzansky, &

Berkman, 2021). The Job Characteristics Model (JCM) proposes that five core job dimensions skill variety, task identity, task significance, autonomy, and feedback shape motivation and productivity (Mukherjee, Ghosh, & Mukherjee, 2024). Applying JCM principles in hospitals involves restructuring roles to ensure that employees use diverse skills, understand the significance of their work, receive regular feedback, and have some autonomy in decision-making. For example, giving nurses greater participation in patient care planning enhances autonomy; offering multidisciplinary teamwork improves task identity; and providing performance feedback strengthens learning and motivation.

2.4.1. Conclusion

Improving productivity in healthcare demands an integrated approach that addresses both systemic processes and human factors. Lean strategies enhance efficiency by removing waste and optimizing workflows. SOP automation leverages technology to reduce errors and accelerate service delivery. Workforce wellbeing initiatives strengthen motivation, engagement, and resilience among healthcare workers. Job redesign guided by the Job Characteristics Model ensures that work remains meaningful, motivating, and structured for high performance.

2.5 Literature summary

The reviewed literature emphasizes that healthcare productivity is shaped by a complex interplay of organizational, technological, and human factors. Leadership style and resource allocation emerge as critical determinants, with effective leadership fostering teamwork and motivation, while poor leadership contributes to stress and turnover. Similarly, proper distribution of financial, material, and infrastructural resources ensures timely service delivery, whereas shortages or misallocation hinder efficiency and compromise patient outcomes. Productivity is thus understood as a dynamic outcome

influenced by technology adoption, labor quality, government policy, and institutional management, requiring an integrated approach to achieve sustainable improvements.

The literature also highlights that productivity in healthcare manifests in both quantitative and qualitative dimensions. Service throughput, quality of care, employee engagement, and patient satisfaction are identified as key indicators of how effectively staff utilize resources and skills. High throughput reflects efficient patient flow, while quality of care is evident in accurate diagnoses, adherence to guidelines, and reduced medical errors. Engagement ensures staff commitment and reliability, and patient satisfaction demonstrates responsiveness and trust in services. To enhance these outcomes, strategies such as Lean healthcare, SOP automation, workforce wellbeing initiatives, and job redesign guided by the Job Characteristics Model are recommended. Collectively, these approaches address systemic inefficiencies, strengthen motivation, and ensure that healthcare delivery remains safe, timely, and patient-centered

CHAPTER THREE

3.0. Research Methodology

3.1. Introduction

This chapter presents the methodology that was employed to assess employee productivity among health workers at Holy Cross Orthodox Mission Hospital Namungoona (HCOMH). The chapter outlines the research design, research approach, study population, sample size and sampling techniques, data collection methods and tools, validity and reliability procedures, data processing and analysis, ethical considerations, and study limitations. The methodological choices are carefully aligned to the specific operational, staffing, and service delivery challenges faced by a Private Not-For-Profit (PNFP) hospital, including workload pressures, staff motivation, supervision gaps, resource constraints, and service quality concerns.

The study adopted a mixed-methods approach, integrating quantitative and qualitative techniques to generate comprehensive and context-sensitive evidence on productivity levels, influencing factors, and potential improvement strategies at HCOMH.

3.2 Research Design

The study employed a descriptive case study design focusing on Holy Cross Orthodox Mission Hospital Namungoona. A case study design was appropriate because it allowed for an in-depth investigation of employee productivity within a real life hospital setting, where organizational structures, human resource practices, and service delivery processes interact dynamically.

The descriptive nature of the design enabled the researcher to capture existing productivity conditions without manipulating variables, thereby reflecting the actual experiences of health

workers and managers. Consistent with Mwanje (2003) and Yin (2003), the case study approach facilitates the use of multiple data sources to enhance the credibility and richness of findings. Both quantitative and qualitative data was collected concurrently to provide complementary insights into productivity manifestations and determinants within the hospital.

3.3. Research Approach

The study adopted a convergent mixed-methods approach, where quantitative and qualitative data was collected during the same phase, analyzed separately, and then integrated during interpretation. Quantitative data provided measurable evidence on productivity levels, service delays, and staff perceptions, while qualitative data explored underlying issues such as burnout, supervision, motivation, leadership support, and institutional constraints.

3.4 Study Area

The study was conducted at Holy Cross Orthodox Mission Hospital Namungoona (HCOMH), a PNFP health facility providing maternal, child health, outpatient, inpatient, and support services to the surrounding community. The hospital operates under constrained financial and human resource conditions typical of PNFP facilities, which made an appropriate setting for examining productivity challenges among health workers.

3.5. Study Population

The study was carried out among employees of Holy Cross Orthodox Mission Hospital located at Namungoona including both male and female respondents. All employees had equal chances of being selected to participate in the study. These involved Clinical staff (doctors, clinical officers, nurses, midwives, and laboratory personnel), Allied health professionals (pharmacists, records officers, counsellors) and Support and administrative staff (human resource officers,

accountants, supervisors, ward in-charges). In addition, selected hospital managers and key decision-makers were included as key informants due to their oversight role in productivity management and service delivery.

3.6. Sample Size and Sampling Technique

The sample size was determined to ensure adequate representation of different staff categories within the hospital while remaining feasible given time and resource constraints.

Table 3.1. Sample Size

Respondent Category	Population size	Sample Size (Kreijcie & Morgan,1970)
Clinical Staff	80	66
Support and Administrative Staff	20	19
Hospital Management	5	5
Total	105	90

3.6.1 Sampling Techniques

Different sampling techniques were used depending on the respondent category:

Stratified sampling was used to select survey respondents from clinical and non-clinical staff to ensure proportional representation of departments.

Purposive sampling was used to select key informants such as hospital administrators, departmental heads, and senior managers who were directly involved in supervision, performance management, and policy implementation.

Convenience sampling was applied where staff availability is limited due to shift schedules and workload pressures.

These techniques were appropriate for a hospital environment where staff availability varies and specialized knowledge is required from management respondents.

3.7 Data Collection Methods and Tools

The study utilized both primary and secondary data sources to ensure methodological triangulation.

3.7.1 Desktop and Document Review

A desktop review was conducted to analyze existing documents relevant to employee productivity at HCOMH. These involved hospital productivity reports, staffing records, duty rosters, supervision reports, and relevant national health policy documents.

3.7.2 Key Informant Interviews (KIIs)

Key informant interviews were conducted with approximately five(5) hospital managers and senior staff, including the Medical Superintendent, Hospital Administrator, Human Resource

Officer, and Nursing Officer. Interview guides were used to explore issues related to workload management, supervision practices, staff motivation, professional development, technology use, and performance management systems.

KIIs provided in depth qualitative insights into institutional challenges and management perspectives on productivity.

3.7.3 Questionnaires

Structured self-administered questionnaires were used to collect quantitative data from health workers. The questionnaires contained closed-ended and Likert-scale items covering factors influencing productivity, manifestations of productivity in service delivery, and perceived improvement strategies. Questionnaires were appropriate for capturing standardized responses across a large number of hospital staff.

3.8. Research Procedure

The researcher was guided by the following stages as a research procedure: Firstly, the instruments were prepared, including an interview guide for key informants, a survey questionnaire (for employees in the different department as well as some service providers), and an interview guide for group discussions were to be adopted. Face-to-face interviews were conducted to obtain detailed information, while the questionnaire was used to ease data collection and enrich the information gathered. The developed instruments were pretested on ten subjects within the study area, with participant's exclusion from the actual study. Also, the instruments were modified to address unclear or repetitive items and include important additions and or adjustments from as per the guidance from the experts including supervisor opinion. Collected data was then analyzed either qualitatively using themes or on the other hand

quantitatively using Statistical Package for Social scientists (SPSS, Version 25).

Through the case study, the researcher would interact with various respondents, including staff from Holy Cross Orthodox Mission Hospital. This design allowed the researcher to focus on investigating the business practices of Holy Cross Orthodox Mission Hospital in a real-life context, with the flexibility to conduct an in-depth analysis of selected issues.

3.9. Validity and Reliability of Instruments

The validity of research instruments was upheld by consulting with the supervisor to ensure all questions are clear and relevant. This process enhanced the scientific credibility of the findings.

Reliability was enhanced through the use of standardized instruments, consistent data collection procedures, and clear operational definitions of key variables.

3.10. Data Presentation Analysis and interpretation

3.10.1. Qualitative Data Analysis

Interviews and discussions were recorded and reviewed to ensure all questions are answered. Themes were developed for analysis, with responses cross-checked for accuracy and completeness.

3.10.2. Quantitative Data Analysis

Data from questionnaires was coded, entered and analyzed using SPSS (Version 25). Frequencies and percentages were computed to interpret respondents' opinions and judgments, providing insights for conclusions and recommendation.

3.11. Ethical considerations

All participants in the key informant interviews were informed about the study's purpose, and their consent was obtained prior to participation. The data was anonymous to protect the confidentiality of interviewees.

3.12. Study Limitations

Potential limitations of the study include staff workload and shift schedules, which limited availability for participation, and the possibility of social desirability bias in self-reported productivity measures. However, the use of multiple data collection methods and assurance of confidentiality helped mitigate these limitations.

CHAPTER FOUR:

DATA ANALYSIS, RESULTS AND INTERPRETATION OF THE FINDINGS

4.1 Introduction

This chapter presents the analysis, interpretation and presentation of study findings. It is organized along the demographic data of the respondents, descriptive statics and the main study objectives. It presents data on the response rate, the descriptive statistics and the findings on the objectives. The study also presents interpretations to the study findings as well as examining their potential implications in the context of this study. The study was guided by the following objectives; to examine the factors influencing employee productivity among health workers at HCOMH, to examine the effect of workforce nutrition programmes on employee productivity among health workers and to propose strategies and models for enhancing employee productivity among health workers at HCOMH..

4.2 Response rate

Response rate Response rate refers to the portion of respondents who participated in the study out of the selected sample size. In this study, 88 usable questionnaires were obtained from a selected sample of 97 respondents. The computed response rate of 90.7 percent shows that the results were not affected by non-response bias, given that it is well above the threshold value of 50 per cent, as recommended by Lindner and Wingenbach (2002).

4.3 Demographic Characteristics

This section presents the demographic characteristics and their descriptive statistics. It highlights how respondents were distributed by sex, age, education level, and period of working with coca

cola,. In order to show how the various study factors, differ among the various categories, the respondents' background information is crucial. The distribution of scores for the demographic variables in presented in table 4.1 below;

Table 4. 1:Demographic characteristics of the respondents

Item	**Classification**	**Frequency**	**Percent**
Gender	Male	56	63.6
	Female	32	36.4
	Total	**88**	**100.0**
Age	18 - 29 years	22	25.0
	30 - 39 years	39	44.3
	40 - 49 years	24	27.3
	50- 59 years	3	3.4
	60 years and above	0	0.0
	Total	**88**	**100.0**
	Certificate	2	2.3
	Diploma	11	12.5
Education level	Bachelor's Degree	67	76.1
	Postgraduate	8	9.1
	Total	**88**	**100.0**
Period of	Less than a year	6	6.8
Working with	Between 1 and 5 years	4	4.5
Coca cola	Between 6 and 10 years	17	19.3
	More than 10 years	61	69.3
	Total	**88**	**100.0**

Source: Primary data (2026)

4.3.1 Gender Distribution

The gender composition of the respondents at the Holy Cross Orthodox Mission Hospital-Namungoona shows that 56 (63.6%) were male, while 32 (36.4%) were female. This indicates a male-dominated workforce, with men comprising nearly two-thirds of the sample. While not as balanced as the benchmark study (53.1% male vs. 46.9% female), the representation of both genders remains sufficient to reflect diverse perspectives on workplace nutrition interventions and productivity. The gender distribution may also reflect broader employment patterns in Uganda's manufacturing sector, where operational roles tend to be male-dominated.

4.3.2 Age Group Distribution

Respondents were predominantly in the 30–39 age bracket (44.3%), followed by those aged 40–49 years (27.3%) and 18–29 years (25.0%). Only 3.4% were aged 50–59, and none were 60 years or older. Compared to the benchmark study, which had a majority in the 40–49 age group, this sample skews slightly younger. The dominance of the 30–39 age group suggests that most employees are in their prime working years, likely engaged in both operational and supervisory roles. This age profile is ideal for assessing productivity-related outcomes of nutrition interventions, as it captures a cohort actively involved in day-to-day plant operations and decision-making.

4.3.3 Education Level

The educational attainment of respondents reveals a highly qualified workforce: 76.1% hold a Bachelor's degree, 12.5% a diploma, and 9.1% a postgraduate qualification. Only 2.3% possess a certificate. This mirrors the benchmark study's finding that most managers in Uganda's manufacturing firms are graduates. The predominance of degree holders implies that employees are well-positioned to understand and respond to structured nutrition programs, and may also be more

receptive to education-based interventions. Their academic background enhances the credibility of responses and supports informed analysis of productivity outcomes.

4.3.4 Duration of Employment at Holy Cross Orthodox Mission Hospital-Namungoona

A significant majority of respondents (69.3%) have worked at the Holy Cross Orthodox Mission Hospital-Namungoona for more than 10 years, with an additional 19.3% having served between 6 and 10 years. Only 11.3% have worked for less than 6 years. This tenure profile is even more skewed toward long-term employment than the benchmark study, where 38.1% of firms had operated for more than 10 years. The high proportion of long-serving employees suggests deep institutional knowledge and stability, which is critical for evaluating the sustained impact of nutrition-focused interventions on productivity. Their experience also implies that observed changes in productivity are less likely to be confounded by onboarding or transitional factors.

4.4 Descriptive statistics

Descriptive statistics describe the basic properties of data in a study. They give brief explanations for the sample measurements (Mvududu & Shannon, 2023). Descriptive statistics are useful research tools in a variety of domains, particularly for hypothesis creation, exploratory analysis, and data-driven decision-making. Advances in statistical approaches make data analysis more efficient (Alabi & Bukola, 2023).

In this section descriptive statistic from the responses in form of mean and standard deviation were presented. The respondents were requested to rate their opinion on the statements based on the study variables. And the responses were measured on the 5-point scale of strongly disagreed, disagree, neutral, agreed and strongly agree. Descriptive statistics were run to determine the extent

of agreement or disagreement they had on the statement on a five-point Likert scale. Basing on the scale adopted; strongly agree (5) and, agree (4) indicate relevance of the statement while not sure (3) disagree (2) and strongly disagree (1) indicate that the statement is insignificant. As such, mean scores that are above 3 indicates that the respondents agreed on statement, 3 denotes that the respondents are not sure of the statement and below 3 represents statements that are insignificant. The standard deviation was used to complement mean scores. As a result, the lower the standard deviation the more the significance of the statement.

Table 4. 2: Descriptive Statistics on Nutrition Programmes

Statements on nutrition programmes	**Min**	**Max.**	**Mean**	**Std. Dev.**
The company provides access to healthy meals during working hours.	1.00	5.00	4.09	1.066
There are nutrition education programs available to employees.	1.00	5.00	3.92	.973
I am aware of the company's workforce nutrition initiatives.	1.00	5.00	3.53	1.122
The food options provided at work promote a healthy lifestyle.	1.00	5.00	3.43	1.170
I believe access to healthy food at work improves my productivity.	2.00	5.00	3.69	1.056

Source: Primary data (2025)

Table 4.3 presents descriptive statistics on employee perceptions of workplace nutrition programmes at the Holy Cross Orthodox Mission Hospital-Namungoona, revealing generally

positive attitudes. Respondents strongly agreed that the company provides access to healthy meals during working hours (Mean = 4.09, SD = 1.066), and agreed that nutrition education programmes are available (Mean = 3.92, SD = 0.973). Awareness of workforce nutrition initiatives was moderate (Mean = 3.53, SD = 1.122), as was agreement that food options promote a healthy lifestyle (Mean = 3.43, SD = 1.170). Notably, employees expressed belief that access to healthy food improves productivity (Mean = 3.69, SD = 1.056), underscoring the perceived value of nutrition interventions in enhancing workplace performance. These findings suggest that while foundational programmes are in place, there is room to strengthen awareness and alignment of food options with healthy lifestyle goals.

Table 4. 3: Descriptive statistics on Nutrition education programmes

Statements on Nutrition education programmes	**Min**	**Max.**	**Mean**	**Std. Dev.**
The company provides regular nutrition education sessions for employees.	1.00	5.00	3.77	1.015
I have received useful information about healthy eating habits through workplace programs.	1.00	5.00	3.49	1.102
Nutrition education at work has influenced my food choices positively.	1.00	5.00	3.41	1.128
The nutrition education materials provided are easy to understand and practical.	1.00	5.00	2.98	1.122
I believe nutrition education has contributed to my overall well-being and productivity.	1.00	5.00	3.00	1.135

Source: Survey Data (2025).

Table 4.4 presents descriptive statistics on employee perceptions of nutrition education programmes at the Holy Cross Orthodox Mission Hospital-Namungoona. Respondents agreed that the company provides regular nutrition education sessions (Mean = 3.77, SD = 1.015), and that they have received useful information about healthy eating habits through workplace programmes (Mean = 3.49, SD = 1.102). Additionally, they moderately agreed that nutrition education has positively influenced their food choices (Mean = 3.41, SD = 1.128). However, responses were more neutral regarding the practicality and clarity of nutrition education materials (Mean = 2.98, SD = 1.122), and the belief that such education contributes to overall well-being and productivity (Mean = 3.00, SD = 1.135). These results mirror the benchmark findings on investment tax credits, where higher mean scores reflected stronger agreement and lower scores indicated areas needing improvement. Overall, while the presence of nutrition education is acknowledged, its effectiveness and impact on well-being appear to require further enhancement.

Table 4. 4 Descriptive statistics on Nutrition-focused health checks (and counselling

Statements relating to Nutrition-focused health checks (and counselling	Min.	Max.	Mean	Std. Dev
The company offers regular health checks that include nutrition-related assessments.	1.00	5.00	3.65	1.339
I have access to professional counselling on nutrition and healthy lifestyle choices at work.	1.00	5.00	4.19	.866
Nutrition-focused health checks have helped me better understand my dietary needs.	1.00	5.00	4.15	.972

I feel comfortable discussing my nutrition and health concerns with workplace health professionals.	1.00	5.00	3.20	1.363
These health checks and counselling sessions have positively impacted my health and productivity.	1.00	5.00	3.22	1.083

Source: primary data (2025).

The study also assessed the respondents' views on investment allowances received by the manufacturing firms in Kampala metropolitan area. The findings revealed that the respondents agreed that (1) the initial and annual allowance advanced increase investment growth (mean=3.65, SD=1.339); (2) tax write-offs contribute to investment growth (mean = 4.19, SD = 0.866); (3) Capital allowance is key to manufacturing firm's survival in Uganda (mean = 4.15, SD = 0.972), that (4) the profitability of manufacturing firms in KMPA is enhanced by capital allowance incentives (mean=3.20, SD=1.363) and (5) Rural investment allowances contribute to investment growth (mean = 3.22, SD = 1.083).

Table 4. 5: Descriptive statistics on Employee productivity

Statement	Min.	Max.	Mean	Std. Dev
I managed to plan my work so that it was done on time	1.00	5.00	3.23	1.059
I am able to perform my work well with minimal time and effort	1.00	5.00	3.60	1.168
I take on extra responsibilities	1.00	5.00	3.39	1.268
I come up with creative solutions to new problems	1.00	5.00	3.23	1.174
I do more than I am expected to do	1.00	5.00	3.65	1.079
I actively look for ways to improve my performance at	1.00	5.00	3.53	1.135

work				
I collaborate with others in a productive manner	1.00	5.00	2.62	1.270

Source: primary Data (2025).

Table 4.5 presents descriptive statistics on employee productivity based on self-assessment. The highest mean score (mean = 3.65, SD = 1.079) indicates that many employees feel they do more than expected in their roles. Other relatively high scores include performing work efficiently (mean = 3.60, SD = 1.168) and actively seeking ways to improve performance (mean = 3.53, SD = 1.135), suggesting a proactive and committed workforce. Moderate agreement was observed for taking on extra responsibilities (mean = 3.39, SD = 1.268), planning work on time (mean = 3.23, SD = 1.059), and generating creative solutions (mean = 3.23, SD = 1.174). The lowest score was recorded for collaboration (mean = 2.62, SD = 1.270), indicating that teamwork may be a challenge or less emphasized in the current work environment. Overall, the data reflects strong individual initiative, with collaboration emerging as a key area for improvement.

Table 4. 6: Descriptive statistics on Analysis for Factors Influencing Employee Productivity

This table analyzes the organizational and external factors that influence the productivity of health workers at HCOMH.

No.	Items on Factors Influencing Productivity	SD (%)	D (%)	N (%)	A (%)	SA (%)
	Organizational Factors					
1	Leadership at HCOMH fosters a positive and productive work environment.	2.4	14.5	22.9	51.8	8.4
2	Sufficient resources are provided to ensure smooth operations.	1.2	10.8	21.7	56.6	9.6

3	Employees are highly motivated to achieve their production targets.	2.4	13.3	24.1	50.6	9.6
4	Training and skills development programs are regularly offered.	3.6	12.0	25.3	48.2	10.8
5	The organization's policies effectively support productivity improvement.	1.2	10.8	26.5	53.0	8.4
	External Factors					
6	Market conditions positively influence the hospital’s productivity.	2.4	15.7	26.5	45.8	9.6
7	Competition in the industry motivates the hospital to enhance efficiency.	1.2	14.5	27.7	48.2	8.4
8	The supply chain operates effectively to support timely service delivery.	3.6	13.3	22.9	50.6	9.6
9	Changes in customer preferences are well-handled.	2.4	12.0	25.3	51.8	8.4
10	Economic challenges are managed to minimize disruptions.	4.8	10.8	24.1	49.4	10.8

The findings indicate a strong internal foundation for productivity at HCOMH. The most significant driver identified was resource availability, with 56.6% of respondents agreeing that sufficient resources are provided for operations. This is complemented by organizational policy (53.0%) and leadership (51.8%), both of which were perceived as effective facilitators of a productive work environment.

However, the data suggests a slight relative weakness in training and skills development, which received the lowest agreement in this category (48.2%). While still positive, the higher neutrality rate (25.3%) in this area implies that a portion of the staff may not be fully experiencing or benefiting from the current professional development programs

External influences show a balanced impact on the hospital's operations. The institution appears most adept at managing customer preferences (51.8%) and maintaining an effective supply chain (50.6%). These results suggest that the hospital has built a resilient operational model capable of responding to direct external demands.

In contrast, the influence of market conditions received the lowest agreement (45.8%), paired with a notable neutrality rate of 26.5%. This suggests that while internal operations are stable, the broader macro-economic environment remains a complex and potentially unpredictable variable for staff productivity. Furthermore, 48.2% of respondents view industry competition as a catalyst for efficiency, indicating that the hospital operates within a competitive landscape that necessitates constant improvement.

Overall, the data suggests that internal organizational support specifically resource provision and policy is currently a stronger driver of productivity than external market forces.

While the hospital manages economic challenges and customer shifts effectively, the primary engine of employee output at HCOMH appears to be the internal leadership and the availability of operational tools.

4.4 Bivariate Analysis

Bivariate analysis refers to analyzing pairs of variables using correlation or cross-tabulation (Scannella & Polizzi, 2021), Correlation analysis refers to two or more variables which are relevant, and the purpose is to measure the degree of how closely related the two variable factors are. Correlation does not equal to causation, also not a simple instantiate dependency. The fields correlation analysis covers almost include all aspects we usually face.

4.4.1 Correlation analysis of the study variables

The correlation analysis results are as shown in Table 4.6. Correlation analysis was carried out with the aim of measuring the possibility of any existing linear relationship between workforce nutrition programmes on employee productivity in reference to Holy Cross Orthodox Mission Hospital-Namungoona through determining and interpreting the magnitude and direction of the resulting statistic. This was done using the Pearson Correlation coefficient (Hair et al., 2013; Field, 2009). The resulting relationships are shown in the Table 4.6.

Table 4. 7: Correlations Results

	1	2	3	4
1-Employee Productivity	1			
2-Access to healthy food interventions	.230**	1		
3-Nutrition education programmes	.336*	.442**	1	
4-Nutrition-focused health checks	.455*	.470**	.608**	1

**. Correlation is significant at the 0.01 level (2-tailed).*. Correlation is significant at the 0.05 level (2-tailed).

Source: Primary data (2025)

The results revealed that there is a significant positive correlation (r=.230**, p=0.05) between Access to healthy food interventions and Employee Productivity. The result suggests that there is a 23.0 percent chance that employee productivity will increase with an increase in Employee Productivity. The results discovered a positive relationship (r=.336**, p=0.01) between Nutrition education programmes and employee productivity. The result means that there is a 33.6 percent chance that employee productivity will increase with an increase in Nutrition education programmes. Furthermore, the study revealed that (r= .455**, p=0.01) Nutrition-focused health checks is correlated to employee productivity, with a 45.5% chance that when employee productivity increase, Nutrition-focused health checks will also increase.

The findings indicate that workplace nutrition initiatives play a meaningful role in enhancing employee productivity. Employees who have access to healthy food options tend to demonstrate improved work performance, suggesting that supportive food environments may contribute to better energy levels and focus. Similarly, participation in nutrition education programmes appears to foster healthier behaviors and greater awareness, which can translate into more effective and efficient work habits. Notably, the strongest relationship was observed between nutrition-focused health checks and productivity, implying that when employees are regularly monitored and counselled on their health and dietary needs, they are more likely to perform better at work. These results underscore the value of integrating comprehensive nutrition and wellness strategies into organizational health programs to support a more productive workforce.

Determinants of Productivity

Key informants identified productivity as a multifaceted interaction of labor quality, technology, and leadership.

Reflecting the **Job Characteristics Model (JCM)**, managers emphasized that "Skill Variety" extends beyond clinical tasks to behavioral ethics.

> *"Competence management is a systematic process... people are so much drilled on technical competences, but behavioral competences. how you communicate and relate are just as vital." (KI2)*

Qualitative results revealed that leadership as the engine for vision and resource mobilization.

> *"A leader without a vision, without inspiring your team or mobilizing resources, makes you like a normal person. Leadership has a big role to play in moving people to your side which boosts productivity in the organization." (KI2)*

Qualitative results also sighted that while technology (EHRs, automation) is present, KIs noted that its effectiveness depends on "Institutional Readiness."

> *"If they find they are not ready in terms of equipment or manpower... they shouldn't have*
>
> *to continue with certain deliveries."*
> *(KI1)*

4.5 Multivariate analysis

Multivariate analysis refers to all statistical methods that simultaneously analyze multiple measurements on each individual or object under investigation. More explicitly, any analysis of more than two variables can be considered as multivariate analysis (Hair et al., 1998). Multivariate data analysis facilitates a graphic display of the underlying latent factors and

interface between individual samples and variables (Eticha et al., 2010; Nielsen & Munck, 2003).

4.5.1 Regression analysis

Regression analysis refers to the idea that two data sets are related and that, if one data set changes, the other data set will follow suit. Regression analysis is used in a variety of applications, including sales forecasting, developing new products and services, predicting future market trends, and more (Scannella & Polizzi, 2021).

Regression analysis was executed to reveal the magnitude by which predicator variables workforce nutrition programmes on employee productivity. Prior to running regressions, tests of multiple regression were undertaken to ensure that robust regression results are obtained (Tabachnick & Fidell, 2001). The test results showed that the data were linear, normally distributed, homoscedastic and there was no multicollinearity.

Table 4. 8 ; Multiple regression results

Coefficientsa							
	B	**SE**	**Beta**	**t**	**p**	**Tolerance**	**VIF**
(Constant)	.909	.366		2.483	.014		
Independent variables							
Access to healthy food interventions	.066	.068	.062	.969	.333	.933	1.071
Nutrition education programmes	.205	.058	.247	3.535	.001	.768	1.302
Nutrition-focused health checks	.263	.063	.288	4.193	.000	.797	1.254
Model summary							

R^2	.222
Adjusted R^2	.203
ANOVA	
F-values	F (5,207) = 11.825
Durbin Watson	2.175
P-values	0.000

a. Dependent Variable: Employee Productivity

p= Null hypothesis probability, B= unstandardized beta, SE –standard Error

As regards the objective of the study, which sought to examine the effect of workplace nutrition interventions on employee productivity, the multiple regression results in Table 4.7 reveal that access to healthy food interventions has a positive but statistically insignificant effect on employee productivity (B = 0.066, p = 0.333 > 0.05). In contrast, nutrition education programmes (B = 0.205, p = 0.001) and nutrition-focused health checks (B = 0.263, p = 0.000) both have positive and statistically significant effects. This implies that for every unit increase in nutrition education and health checks, employee productivity is expected to increase by 0.205 and 0.263 units respectively, holding other factors constant. The model explains 22.2% of the variance in employee productivity (R^2 = 0.222, p = 0.000), which, while modest, is considered acceptable in behavioural research where multiple external factors influence outcomes. These findings suggest that structured nutrition education and regular health assessments are more impactful in enhancing productivity than simply providing access to healthy food, highlighting the importance of sustained engagement and personalized support in workplace wellness strategies.

The multiple regression results provide important insights into how different workplace nutrition interventions influence employee productivity. While access to healthy food interventions showed a positive but statistically insignificant effect, both nutrition education programmes and nutrition-focused health checks had significant positive effects on productivity. This suggests that simply providing healthy food options may not be sufficient on its own; rather, structured educational initiatives and personalized health assessments are more effective in driving meaningful improvements in employee performance. The model explains 22.2% of the variation in productivity, which, although modest, is acceptable in behavioral research where numerous external factors are at play. These findings imply that organizations aiming to enhance productivity should prioritize interactive and knowledge-based wellness strategies over passive interventions. By investing in employee education and regular health monitoring, firms can foster a more engaged, health-conscious, and productive workforce.

The qualitative data confirms that productivity manifests through service throughput and quality, as theorized in Section 2.3.

In line with **Sociotechnical Systems (STS) Theory**, high throughput is achieved through the harmony of social teams and technical communication tools.

> *"Everyone has to be on alert. We have a WhatsApp group where we notify each other... the obstetrician, midwife, theater team, and pediatrician are all on standby. This teamwork translates into better outcomes." (KI3)*

Manifestations are often driven by an internal ethical standard, described by KIs as a "proactive alertness."

> *"This is the mindset you should have: That a mother should not die in your hands.*

Period." (KI4)

Patient Satisfaction vs. Technical Skill:

"They may have skills, but poor communication... a mother may prefer a Tradiational Birty Attendants(TBA) Attendant] who soothes them over a skilled professional who doesn't." (KI1)

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the discussion of findings, conclusions, and recommendations derived from the study on health worker productivity at HCOMH. The discussion is structured around the study's objectives, integrating empirical findings with the theoretical foundations of the Job Characteristics Model (JCM) and Sociotechnical Systems (STS) Theory. The chapter concludes with suggested areas for future research.

5.2 Discussion of Findings

5.2.1 Factors Influencing Employee Productivity

The study identified that organizational factors specifically resource availability (56.6%) and institutional policy (53.0%) are the primary drivers of productivity. This aligns with Sociotechnical Systems (STS) Theory, which posits that performance is optimized when the technical subsystem (resources/equipment) and social subsystem (policy/leadership) are harmonized.

However, the lower consensus on training and skills development (48.2%) suggests a gap in human capital investment. While Sunkad (2022) emphasizes that labor quality is inseparable from productivity, the findings indicate that HCOMH staff may feel their clinical competencies are not being regularly updated. Externally, the hospital's resilience is evident in its management of customer preferences (51.8%), yet the Market Conditions variable (45.8%) reflects the unpredictability noted by Radinmanesh et al. (2021) regarding macro-economic disruptions in healthcare.

5.2.2 Effect of nutritional programs on Employee Productivity

The findings from the study align with a growing body of international research affirming the positive influence of workplace nutrition interventions on employee productivity. Grimani, Aboagye, and Kwak (2019) conducted a systematic review of workplace health promotion programmes and found that nutrition and physical activity interventions significantly improved employee performance and reduced absenteeism. Their analysis emphasized that educational and personalized strategies were more effective than structural changes alone, which supports the observed benefits of nutrition education and health checks in your study.

Rachmah, Suryani, and Widyastuti (2021) similarly reported that workplace nutrition and health initiatives contributed to improved worker output and well-being. Their review, published in the Journal of Public Health Research, highlighted the importance of sustained education and regular health assessments in fostering long-term productivity gains. These findings reinforce the view that interventions engaging employees in understanding and managing their nutritional health are more impactful than passive provisions such as food availability.

Hyży, Szewczyk, and Wadolowska (2023), in an umbrella review published in Nutrients, synthesized evidence across multiple workplace settings and concluded that interventions focused on improving eating habits, especially those involving counselling and tailored feedback, had a direct and positive influence on employee well-being and productivity. Their emphasis on personalized nutrition support resonates with the strong effect of health checks and counselling observed in your results.

Notably, these scholars also caution that access to healthy food, while conceptually important, may not independently drive productivity gains unless paired with behavioral change strategies. This observation is consistent with your finding that access to healthy food alone did not yield a

significant impact. It suggests that without accompanying education or motivation, employees may not fully utilize or benefit from the availability of healthier food options, a nuance increasingly recognized in workplace wellness literature (Grimani et al., 2019; Hyży et al., 2023).

Overall, your study contributes to a robust and converging evidence base that supports integrated nutrition interventions in occupational settings. By demonstrating the effectiveness of education and health checks in enhancing productivity, your findings offer practical implications for policy and programme design in Uganda's manufacturing sector. They also echo international best practices, reinforcing the value of holistic wellness strategies that go beyond food access to include sustained education and individualized support (Rachmah et al., 2021; Hyży et al., 2023). Nutrition education programmes have emerged as a critical component of workplace wellness strategies, with growing evidence linking them to improved employee productivity. In the context of the company, the findings revealed a clear and positive relationship between participation in nutrition education and enhanced work performance. This suggests that when employees are equipped with knowledge about healthy eating and lifestyle practices, they are more likely to adopt behaviors that support sustained energy levels, mental alertness, and overall well-being—factors that directly influence productivity.

These findings are consistent with those of Grimani, Aboagye, and Kwak (2019), who conducted a systematic review of workplace health promotion interventions and concluded that nutrition education significantly improves productivity outcomes. Their research emphasized that educational programmes not only enhance dietary behavior but also reduce absenteeism and presenteeism, thereby contributing to organizational efficiency. Similarly, Rachmah, Suryani,

and Widyastuti (2021) found that nutrition education in occupational settings led to better health outcomes and increased work output, particularly when programmes were sustained over time and tailored to employee needs.

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5.2.3 Strategies for Enhancing Productivity

The hospital's commitment to Lean Production and Continuous Improvement emerged as its strongest strategic pillars. The emphasis on minimizing service delays (56.6%) and regular evaluations (56.6%) suggests a proactive culture of waste reduction. This follows the recommendations of Lima et al. (2021) regarding the elimination of non-value-adding activities. A significant finding is the Digital Adoption Gap in Technology and Automation. While adoption has lowered turnaround times (51.8%), effective integration received the lowest consensus (45.8%). Furthermore, the human element is currently driven by intrinsic motivation feeling valued (53.0%) rather than extrinsic rewards (45.8%). This aligns with the Job Characteristic Model's focus on autonomy and feedback as internal motivators that supersede financial rewards in service-oriented roles.

5.3 Conclusions

Internal organizational support (resources and leadership) is a more potent driver of productivity at HCOMH than external market forces. When leadership fosters a productive environment, staff are shielded from external economic volatility.

HCOMH successfully prioritizes service quality and timeliness over cost-efficiency. While this ensures patient safety, it suggests that the institution has not yet fully optimized its "Lean" processes to reduce operational costs.

The workforce is primarily motivated by engagement and a sense of value. The current reliance on intrinsic motivation is a strength, but the relative weakness in formal reward systems and professional training poses a long-term risk to staff retention and skill evolution.

While technology exists, it is not yet "seamlessly" integrated. The hospital is in a transition phase where digital tools are present but manual error reduction has not been fully realized through automation.

5.4 Implication of the Findings

The study's findings imply that organizational support, particularly in terms of resource availability and institutional policy, is the most critical determinant of employee productivity at HCOMH. This suggests that management must prioritize strengthening internal systems rather than relying on external market conditions. By ensuring adequate resources and clear policies, hospital leadership can create a stable environment that shields staff from external economic volatility and enhances their ability to deliver consistent, high-quality care.

Another implication is the evident gap in training and skills development. The relatively lower consensus on professional development indicates that staff competencies are not being regularly

updated, which may compromise long-term service quality. This highlights the need for institutionalized training programs to sustain clinical precision and adaptability. Without such investment in human capital, the hospital risks stagnation in workforce skills, which could undermine productivity in the future.

The findings also show that health workers are primarily motivated by intrinsic factors such as feeling valued and engaged. While this is a strength, it implies vulnerability if extrinsic motivators like reward systems and career progression pathways are not strengthened. Overreliance on intrinsic motivation may lead to challenges in staff retention and satisfaction over time. Therefore, management must balance intrinsic engagement with transparent, performance-based reward frameworks to secure long-term workforce stability.

The digital adoption gap further implies that while technology has been procured, integration remains weak. Productivity gains from automation are not fully realized, meaning that digital tools may add administrative burdens rather than reduce them. This underscores the importance of user-centric integration, where staff are trained to effectively utilize electronic health records and automation systems. Bridging this gap will allow technology to complement clinical work and reduce manual errors.

Finally, the quality-efficiency gap implies that while HCOMH has successfully prioritized patient safety and service quality, cost-efficiency remains under-optimized. This has significant implications for financial sustainability, as inefficiencies in resource use may strain budgets. Policymakers and hospital boards must therefore support initiatives that translate Lean principles into tangible waste reduction, involving frontline staff in value stream mapping to balance quality with affordability. Collectively, these implications highlight the need for a holistic approach that integrates organizational support, workforce development, technological integration, and cost management to sustain productivity in faith-based healthcare settings.

5.5 Recommendations

HCOMH should institutionalize regular "Skills Development Clinics." Given that training received the lowest agreement among organizational factors, targeted professional

development will enhance labor quality and clinical precision.

To close the "Digital Adoption Gap," the hospital should move beyond mere procurement of technology toward "User-Centric Integration." This includes tailored EHR training for clinicians to ensure that automation reduces, rather than adds to, the administrative burden.

While engagement is high, management should develop a transparent "Performance- Based Reward Framework." Aligning extrinsic rewards with the high-quality standards already being met will solidify employee commitment.

Management should transition from "theoretical Lean" to "tangible waste reduction." By involving frontline staff in "Value Stream Mapping," the hospital can improve the cost-efficiency scores that currently lag behind quality scores.

5.6 Areas for Further Research

Future research should specifically investigate how frequent clinical skill updates correlate with reduced medical error rates at HCOMH.

A follow-up study is needed to assess the long-term impact of full EHR integration on patient turnaround time and cost-efficiency.

Future studies could compare the productivity manifestations of HCOMH with public facilities to determine the influence of "Market Conditions" on different ownership models.

Investigating the relationship between the JCM dimension of "Autonomy" and health worker burnout would provide deeper insights into workforce resilience.

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