WASTE MANAGEMENT PRACTICES IN PHARMACEUTICAL SUPPLY CHAIN AND THEIR IMPACT ON SUSTAINABILITY PERFORMANCE: A CASE STUDY OF DIOCESE OF JINJA MEDICAL STORE

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DECLARATION

I, Namugerwa Mary Josephine, hereby declare that this research report titled "waste management practices in pharmaceutical supply chain and their impact on sustainability performance: a case study of diocese of Jinja medical store" is my original work; and to the best of my knowledge, it has not been submitted before to any University for any academic award.

Signature: ..... Date: 24/02/2026

APPROVAL

This is to certify that this proposal titled “waste management practices in pharmaceutical supply chain and their impact on sustainability performance: a case study of diocese of Jinja medical store” has been prepared under my supervision and it is now ready for submission for examination with my approval.

Signature:  Date: February 24, 2026

MR. MULOOSI PASCAL

DEDICATION

I dedicate this research work to the Little Sisters of St. Francis of Assisi with all my heart. This project is my small way of saying thank you for the light you bring into the world.

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First of all, I want to thank God from the bottom of my heart. His love, strength, and guidance carried me through every late night, every moment of doubt, and every small victory along the way. Without Him, none of this would have been possible.

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ABBREVIATION

JMS	Joint Medical Store
NDA	National Drug Authority
HIV	Human Immunodeficiency Virus
AIDS	Acquired Immune Deficiency Syndrome
GSCM	Green Supply Chain Management
EAC	East African Community
NEMA	National Environment Management Authority
NGO	Non-Governmental Organization
IV	Independent Variable
DV	Dependent Variable
UK	United Kingdom
PPE	Personal Protective Equipment
UREC	Under Graduate Research Ethics Committee
WHO	World Health Organization
KII	Key Informant Interview
SPSS	Statistical Package for Social Sciences

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ABSTRACT

This study examined the waste management practices in the pharmaceutical supply chain and their impact on sustainability performance: A case study of the diocese of Jinja medical store. The study was guided by the following objectives; To assess the effect of coercive pressures on sustainability performance, mediated by waste management practices at the Diocese of Jinja Medical Store, to examine how normative pressures, influence sustainability performance, through waste management practices and to determine the effect of mimetic pressures on sustainability performance, via waste management practices.

The study was Grounded on Institutional Theory (DiMaggio & Powell, 1983), the research adopted a mixed-methods cross-sectional design, collecting data from 72 staff members (90% response rate) using questionnaires and key informant interviews.

Quantitative findings revealed strong positive correlations between institutional pressures and waste management practices ($r = 0.78$ for coercive, 0.71 for normative, 0.69 for mimetic; $p < 0.01$), with coercive pressures (e.g., NDA regulations and donor requirements) exerting the strongest influence ($\beta = 0.78$, $R^2 = 0.61$). Waste management practices were rated highly (mean = 4.21/5), featuring effective segregation, PPE use, and NDA-compliant disposal, though reverse logistics for expired drugs remained a challenge. These practices strongly predicted sustainability performance ($\beta = 0.85$, $R^2 = 0.72$; mean = 4.27/5), enhancing environmental protection, worker safety, community well-being, and institutional reputation.

Qualitative insights highlighted that coercive pressures drove inspection-dependent compliance, while normative (professional ethics, religious values) and mimetic (imitation of Joint Medical Store) pressures fostered intrinsic motivation and practical adoption. Resource shortages, such as inadequate bins and delayed collections, undermined consistency and forced unsafe shortcuts.

The study concludes that while coercive pressures ensure short-term gains, normative and mimetic pressures promote lasting sustainability. Persistent infrastructural limitations hinder full alignment with national guidelines.

Recommendations include enhanced training emphasizing intrinsic motivation, dedicated budgets for supplies, and policy support for reliable reverse logistics. This case contributes to understanding sustainable pharmaceutical waste management in resource-constrained, faith-based settings in Uganda, offering insights for policymakers and similar institution

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter presents the background of study, statement of the problem, objectives of the study, research questions, significance of the study, justification, scope of study, conceptual framework and the limitations of the proposed study.

1.1 Background of Study

The pharmaceutical sector has increasingly incorporated sustainability into the management of the supply chain from compliance-driven initiatives to more strategic and focused initiatives on the environment, efficiency, and use of the available resources (Kumar et al., 2021). This is reflective of the increasing international pressure on pharmaceutical companies not only to address the environmental effects but also ensure sustainability and efficiency in the provision of healthcare services. Among the key drivers for the paradigm shift towards sustainable management of the pharmaceutical supply chain is the massive potential waste that is exhibited by the pharmaceutical sector through the disposal of unused and/or expired and substandard drugs that have the potential for posing environmental and healthcare risks (World Health Organization, 2019). This means that the management and disposal of pharmaceutical waste has become the key fundamental component of sustainable management of the pharmaceutical supply chain. Green and eco-friendly strategies that involve the use of ‘incineration and inertization practices through reverse logistics and the potential for landfilling' are fundamental for addressing the risks associated with pharmaceutical waste management and are essential for aligning these practices within the pharmaceutical sector and the focus on sustainable strategies and aims (National Drug Authority [NDA], 2022). However, the management of pharmaceutical waste is essential for addressing other aspects related to sustainability within the pharmaceutical sector and other organizations concerned with the preservation and promotion of healthcare services and programs through the management and preservation of the environment and the aspects related to the preservation and promotion of workers and community welfare through the reduction of compliance and engagement costs (Duque-Uribe et al., 2019; Grob & Benn, 2014). This means that the management of pharmaceutical waste is not just for compliance

and is fundamental for developing the pharmaceutical sector and other organizations that are focused on the management and preservation of healthcare services and programs through the management and preservation of the environment and the other aspects that relate to the management and preservation of the workers and the community through the reduction of compliance and engagement costs (Duque-Uribe et al., 2019; Grob & Benn, 2014). In Uganda, the NDA has been accorded a legal mandate within the National Drug Policy and Authority Act (Cap. 206) that regulates the pharmaceutical life cycle and deals with the destruction of pharmaceutical drugs that are expired and/or substandard and pose significant risks within the sector and the healthcare programs and services related to the management and preservation of the healthcare services and programs within Uganda (The NDA is particularly critical and fundamental for healthcare and medical organizations and institutions within Uganda that are focused on the provision and management of the essential and fundamental drugs for HIV/AIDS, Malaria, and Tuberculosis within the country through the organizations and institutions such as the JMS and the other faith-based medical organizations known as the Diocese of Jinja Medical Store). However, despite these developments and advancements within the pharmaceutical sector and other organizations related to the management and preservation of the healthcare programs and services within the country, the sector is still facing significant limitations within the healthcare and medical organizations within the developing and lower-income countries and regions that are particularly focused on the management and preservation of pharmaceutical healthcare services through the management and preservation of pharmaceutical waste within the countries and regions due to the aspects that relate to the limitations and development within the organizations and the country (Bokhari et al., 2020). However, despite the fundamental and significant potential risk, In order to effectively describe the diffusion and institutionalization of sustainable waste management practices, this research utilizes Institutional Theory.

Theoretical Model

This research applies the Institutional Theory developed by DiMaggio & Powell in 1983 to study the management of pharmaceutical waste, which is much more than a technical issue and has been deeply institutionalized and regulated. It explains how the forces of coercion (regulations like NDA), legitimation pressures (donor communities and professional health standards), and mimetic pressures (emulating JMS and other better-performing facilities) shape the implementation of pharmaceutical waste management practices in a facility like the

Diocese of Jinja Medical Store. This theory has been very useful for this research because there is a knowledge gap being filled in this study where this research will create new knowledge on how pharmaceutical waste is managed in similar institutions, and how this affects overall performance sustainably. This research fills a knowledge gap because there is a timely contribution to regulatory bodies and policymakers for the provision of a sustainable healthcare system in a resource-poor setting.

1.2 Problem Statement

In Uganda, the National Drug Authority (NDA) is tasked with regulating and overseeing the disposal of expired and sub-standard medications to ensure societal safety, thus ensuring system integrity within the health care system (NDA, 2022). Although there is a regulatory body in charge of monitoring and ensuring proper disposal of pharmaceutical waste, there continue to be enormous difficulties, particularly in faith-based/private not-for-profit health care institutions, such as the Diocese of Jinja Medical Store. It has been Contador that a substantial amount of medications, specifically anti-infectives, is being lost/spoiled before being used, thus resulting in financial losses, likely leading to contamination of the environment (Asiimwe, 2021). Local auditors have also shown improper disposal, prepaid delivery of essential drugs, and failure of regulatory compliance within the required set of standards (EAC, 2023). These factors continue to be worsened by constrained financial acumen, lack of adequate infrastructure, and lack of technical expertise to enforce any regulatory policies in pharmaceutical waste management (Tibagaruka, 2024). As a result, most of these organizations continue to fail in meeting sustainability requirements in protecting the environment, ensuring workplace integrity, and effective resource use. A lack of collaborative efforts in green supply chain management also limits most institutions' efforts in ensuring their operations meet set sustainability goals. This problem, therefore, highlights a pressing need to upgrade/overhaul current programs in waste disposal in light of sustainability. It is paramount to identify and clarify organizational efforts of particular organizations, in this case, the Diocese of Jinja Medical Store, in ensuring they prioritize, upgrade, and implement effective pharmaceutical waste disposal means in light of sustainability.

1.3 Main Objective of the Study

The main objective of the study was to assess the Waste management practices in the pharmaceutical supply chain and their impact on sustainability performance at the Diocese of Jinja Medical Store.

1.4 Specific Objectives of the study

1) To assess the effect of coercive pressures on sustainability performance, mediated by waste management practices at the Diocese of Jinja Medical Store.
2) To examine how normative pressures influence sustainability performance, through waste management practices.
3) To determine the effect of mimetic pressures on sustainability performance, via waste management practices.

1.5 Research Questions

1) What is the effect of coercive pressures on sustainability performance, mediated by waste management practices at the Diocese of Jinja Medical Store.
2) How do normative pressures influence sustainability performance, through waste management practices?
3) How do mimetic pressures on sustainability performance, via waste management practices?

1.6 Assumptions

The study assumed that;

Effective waste management techniques have a positive impact on the pharmaceutical supply chain's social, economic, and environmental sustainability performance.

Pharmaceutical medical stores follow stringent regulations that influence their waste management procedures and sustainability results.

The adoption of efficient waste management techniques is influenced by stakeholders' awareness and dedication to sustainability.

Inadequate management of pharmaceutical waste results in decreased sustainability performance, health hazards, and environmental pollution at the medical store.

1.7 Scope of the Study

In order to provide an elaborate content of the study, the researcher opted to subdivide them into three different categories as described below;

1.7.1 Geographical Scope

The Diocese of Jinja Medical Store is situated in Jinja, Uganda, and serves a wide range of communities across the region. Its operations extend throughout the Jinja District and surrounding areas, including nearby towns and rural villages. This geographical scope is significant as it reflects the medical store's role in providing essential healthcare services and managing pharmaceutical waste within diverse environments. The Diocese of Jinja Medical Store not only caters to urban populations in Jinja but also reaches rural communities, where access to healthcare and proper waste management practices can be challenging.

1.7.2 Content Scope

The content of the study was limited to types of pharmaceutical wastes generated by the diocese of Jinja medical store, the current waste management practices used at the diocese of Jinja medical store and the relationship between waste management practices and sustainability performance at the diocese of Jinja medical store.

1.7.3 Time Scope

The study considered data for the period 2020 -2024 for during this period issues related to sustainability performance of medical stores were reported by the National Drug authority.

1.8 Justification

Sustainability is essential for the success and long term profitability of accompany. Failure to manage sustainability may jeopardize efficiency in operations contributing to loss of trust on the company by the stakeholders. At the diocese of Jinja medical store, pharmaceutical waste has the potential to affect the sustainability of the drug store. Therefore, if appropriate waste management practices are not implemented the medical store is likely to experience an economic crisis.

1.9 Significance of the Study

This research paper will be highly beneficial to the management and staff of the Diocese of Jinja Medical Store, as it will help them identify and understand the risks and challenges associated with pharmaceutical waste management practices.

These findings of the study will enable them to implement more effective strategies for compliance and sustainability.

The findings will also be significant for other healthcare institutions and organizations involved in pharmaceutical waste management.

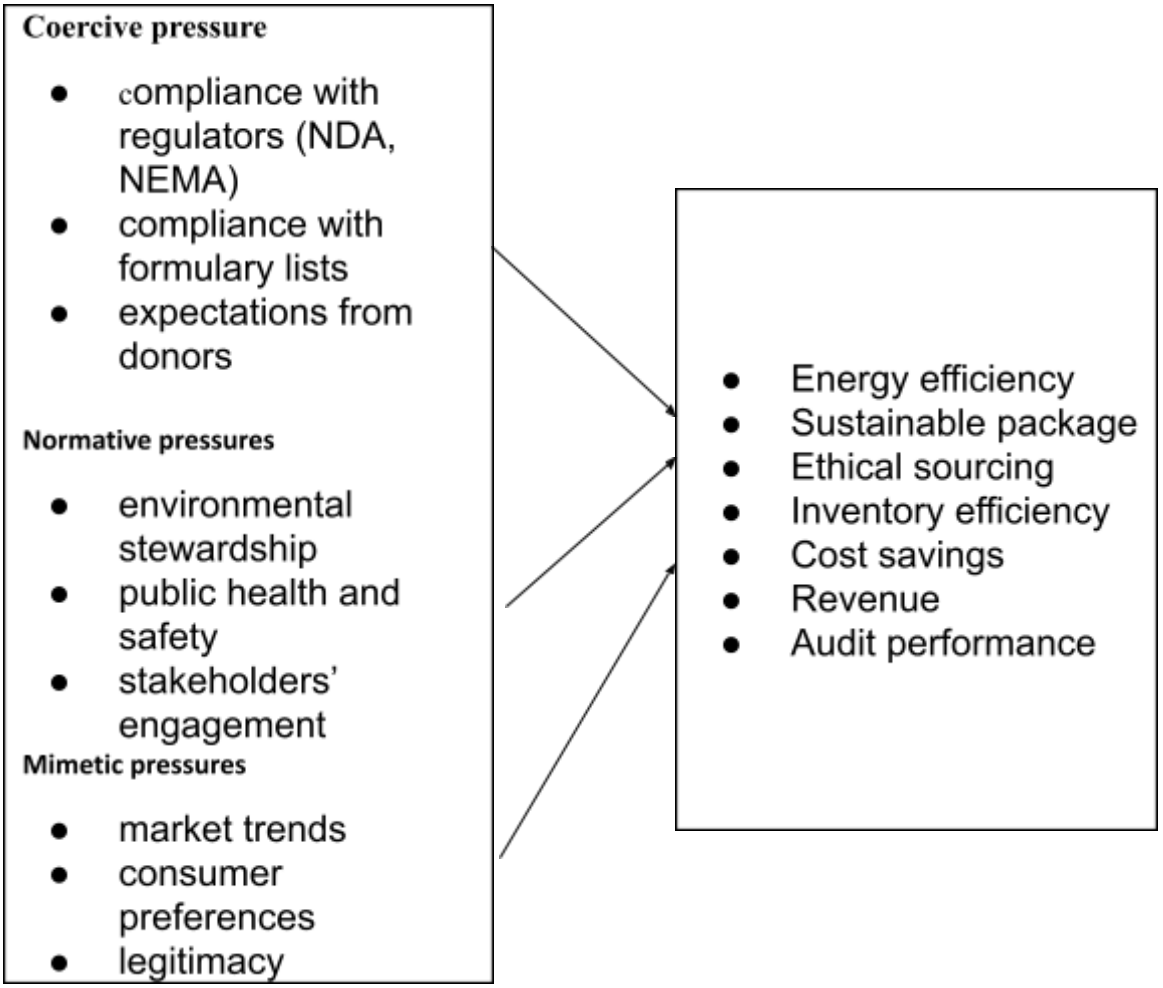
They will gain insights into best practices and common challenges, helping them improve their waste management systems and align with sustainability goals.

Furthermore, the study will provide valuable information for students and researchers interested in healthcare management and environmental sustainability.

It will equip them with knowledge about the importance of effective pharmaceutical waste management and its impact on public health and environmental safety, aiding their future research and professional practice.

1.10 Conceptual Framework

WASTE MANAGEMENT PRACTICES SUSTAINABILITY PERFORMANCE



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Pharmaceutical Supply Chain and Their Impact on Sustainability Performance: A Case Study of Diocese of Jinja Medical Store",

Independent variable

Waste management practices refer to the systematic strategies and activities implemented to handle waste generated during the pharmaceutical supply chain process covering collection, segregation, storage, transportation, treatment, and final disposal. Operational Definition:

Assessed using indicators across different phases of the pharmaceutical supply chain (procurement, storage, distribution, and disposal), such as: Existence of waste management policies/protocols, Compliance with national waste disposal regulation and Handling of expired or damaged products. The waste management practices shall be examined under the following constraints.

Coercive Pressures; Extent to which the Diocese of Jinja Medical Store adopts waste management practices due to: Government regulation, Licensing or inspection requirements. Donor or NGO compliance conditions and Legal penalties or risk of sanctions.

Normative Pressures; Extent to which adoption of waste management practices is driven by: Professional standards of pharmacists or healthcare workers, Training or certification programs, Peer expectations or best practices in the sector and Ethical obligation to protect public health and the environment

Mimetic pressures; Extent to which waste management practices are adopted by imitating: Practices of other successful or well-known medical stores, Policies from NGOs or donor-funded health facilities and Benchmarking against peer institutions.

Measurement Tools shall include Surveys with items on imitation or benchmarking behavior and Interviews.

The Dependent Variable: **Sustainability Performance**

Operational Definition: Sustainability performance refers to the measurable effectiveness of the Diocese of Jinja Medical Store in implementing environmentally, socially, and economically responsible practices that minimize harm while supporting long-term operational viability.

1.11 Limitations and Delimitations

Limitations

The medical store staff may be unwilling to share accurate data about their pharmaceutical waste practices due to fear of regulatory consequences.

The study was confined to the diocese of Jinja medical store, which limited the generalizability of the findings to other areas.

The study was limited by the time available for data collection and analysis, as well as by financial and human resources.

Delimitations

The researcher established rapport with the respondents in order to make them clearly understand the purpose of the study.

The researcher reduced the sample size and for financial challenges, she sought for financial assistance from friends and family members.

Conceptual Connections between Institutional Theory and Sustainability Performance

Institutional theory posits that organizations adopt practices to gain legitimacy within their institutional environment, driven by coercive (regulatory), normative (social and professional), and mimetic (imitative) pressures (DiMaggio & Powell, 1983; Scott, 2001). These pressures shape organizational behavior by aligning practices with external expectations, which, in the context of waste management, directly influence sustainability performance. Sustainability performance encompasses:

Institutional pressures drive the adoption of waste management practices that enhance sustainability by ensuring compliance with regulations (coercive), aligning with societal and professional expectations (normative), and imitating best practices (mimetic). For example, coercive pressures enforce environmentally sound waste disposal, normative pressures promote socially responsible practices, and mimetic pressures encourage the adoption of innovative technologies, all contributing to the triple bottom line of sustainability (Bansal & Roth, 2000).

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The increasing advocacy for sustainability among pharmaceutical supply chain processes has fueled research efforts aimed at identifying interventions that offset adverse effects to the environment and public health while optimizing efficiency (Kumar et al., 2021). A key research area that needs to be addressed pertains to pharmaceutical waste management practices that remain key to this research study as the independent variable (IV), which combines environmentally sound waste disposal processes like incineration, inertization, and landfilling (National Drug Authority, 2022). These processes are assumed to affect sustainability performance as the dependent variable (DV), which combines variables like sustainability compliance, employee security, and public well-being (World Health Organization, 2019). Though there has been an understanding of the significance of pharmaceutical waste management processes that warrant their study, there remains a notably large knowledge gap in their effects on sustainability performance, particularly among faith-based healthcare institutions in Uganda like the Diocese of Jinja Medical Store (Duque-Uribe et al., 2019). The literature review seeks to outline existing research findings regarding the role of pharmaceutical waste management processes in sustainability outcomes to fill this knowledge gap and inform future research efforts accordingly.

This chapter has systematically reviewed the literature related to this study. The literature has been reviewed based on the objectives of this study.

2.1 Forces of coercion and sustainability performance, as mediated by waste

Healthcare administration practices in medical stores.

In this respect, coercive pressures that result from regulations and laws also tend to affect pharmaceutical waste management activities that influence their impacts on healthcare sustainability performance (Ojok et al., 2015).

In Uganda, the disposal processes required by the National Drug Authority (NDA) to be environment-friendly include incineration and landfilling to meet the required environment and health standards (National Drug Authority, 2022). This enhances sustainability by

performing better in meeting environment and health needs (World Health Organization, 2019). For example, segregation of wastes avoids contamination of water and the spread of diseases, which is important for operating in a sustainable healthcare system (Olha, 2024).

However, research shows that, within resource-limited environments, such as the Diocese of Jinja Medical Store, compliance faces the challenge of weak enforcement capacity and resource constraints (Hossain et al., 2019). According to Blenkharn (2006), forces of regulation ensure an efficient waste management system; however, in simpler organizations, like medical stores, there is less scrutiny for variable levels of adoption (Datta et al., 2018).

The work by Durán-García (2011) highlights the relative importance of regulation, including risk minimization, with a view to ensuring proper waste handling, thus contributing to sustainability goals. Notwithstanding these developments, there is a need for further research into the involvement of waste handling practices, as a mediating element for the conversion of coercive forces into sustainable performance in faith-based medical stores, as seen at the Diocese of Jinja Medical Store.

Forceful pressure, driven by regulations and policies imposed on organizations, make them resort to waste management. Published works suggest that regulations such as Biomedical Waste Management Rules (2016) in India and Hazardous Waste Regulations (2005) in the UK trigger healthcare facilities into effective waste separation, treatment, and disposal (Kumar et al., 2017). Nevertheless, effective implementation of any of all such regulations is patchy, and in smaller organizations like medical shops, due to lack of implementation and lack of awareness (Sharma et al., 2020).

The use of forceful pressures generated from regulation requirements and legal systems affects pharmaceutical waste management practices (Independent variable, IV), which in turn affects the performance with regards to sustainability (Dependent variable, DV) within healthcare organizations, mainly within the Diocese of Jinja Medical Store (Ojok et al., 2015). Sustainability performance covers both environmental compliance and well-being of the workers and communities. Segregation, treatment, and environmentally safe waste disposal methods contribute to improving performance with regards to sustainability within healthcare organizations.

In Uganda, the National Drug Authority (NDA) is responsible for enforcing the guidelines involving incineration and landfill disposal, ensuring compliance due to concerns of environmental pollution (National Drug Authority, 2022). This is done to ensure it is environmentally compliant by avoiding soil and water pollution, improves workplace

environments by ensuring it is worker-safe, and improves community health environments by preventing the spreading of diseases (Olha, 2024).

However, according to Datta et al. (2018), unlike big hospitals, there is limited regulatory observation of medical stores, resulting in non-compliance, which is also a challenge that can be applicable for the Diocese of Jinja Medical Store. Hossain et al. (2019) argue that coercitive forces are weakened by corruption and infrastructural constraints in developing nations, causing superficial compliance that does not achieve sustainability results.

Socal (2022) points out that the expectations of donors, which represent coercive pressure, emphasize the implementation of environmentally responsible waste management practices that focus on recycling and contribute towards better sustainability performances by reducing waste and increasing public perception.

Ansari et al. suggest that though controls motivate compliance, they fail to prevent a culture of compliance in the absence of complementary policies such as training and subsidies, especially in developing environments (Hossain et al., 2019). The role of practices in mediating the link between coercive forces and environmental compliance, occupational health and safety as well as social well-being in Muslim-based medical stores as a mediating structure in the Diocese of Jinja still awaits exploration.

2.2 Normative pressures and sustainability performance, through waste

Management practices in medical stores

Normative pressures that include professional and social expectations and values exert significant influences on pharmaceutical waste management practices that are mediators of sustainability performance in healthcare organizations, including faith-based organizations such as the Diocese of Jinja Medical Store (Manyele & Lyasenga, 2010).

Professional organizations, like pharmacy councils, encourage waste management by means of training and certification in the segregation, storage, and disposal of pharmaceutical waste (Zhu et al., 2015).

Such practices improve sustainability practices by increasing worker safety from hazardous materials, in addition to meeting community demands for improved sustainability (Jade et al., 2024). For example, following proper procedures for handling waste reduces health hazards

for people involved in handling wastes while also preventing pollution of the environment, hence improving health for citizens (Rahman & Ali, 2022).

In faith institutions, moral standards like religious tenets regarding protection of the environment stimulate waste management practices, as has been found in Islamic health care organizations (Omer et al., 2021). Nevertheless, according to DiMaggio and Powell (1983), even under coercive pressures, there can be adoption either symbolically for legitimacy purposes or in environments with limited knowledge and resources, as has been supported by Manyele and Lyasenga (2010).

Such community expectations in developing nations like Uganda may force medical stores to adopt sustainable practices, but there may be limitations due to cultural or resource factors (Rahman & Ali, 2022). The mediating process between the expectations of normative pressures on sustainability performance through pharmaceutical waste management practices in faith-based medical stores has not been researched sufficiently; hence, the need to investigate through the context of the Diocese of Jinja Medical Store.

Manyele & Lyasenga (2010) asserted that Normative pressures involving professional requirements, societal obligations, and ethical considerations had shown significant influence on the adoption of pharmacy waste management practices that mediate their effects on the sustainability performance in healthcare organizations, including the Diocese of Jinja Medical Store.

As stated by World Health Organization, (2019), Sustainability performance is made up of Environmental compliance, Worker safety, and Community well-being, which can all be improved by effective waste management strategies like segregation, storage, and disposal. Professional associations, like pharmacy associations, encourage certification and training programs that promote waste management, which improves sustainability performance by adhering to environmental factors, thus preventing pollution (Zhu et al., 2015). Worker safety is improved since it reduces contact with dangerous waste using personal protective equipment (PPE) and color-coded bins, in addition to improving community well-being since it prevents soil, water, and air pollution (Jade et al., 2024; Lloyd, 2020).

Omer et al., (2021) emphasize: In religious institutions, the perception and application of ethical principles, for instance, religious edicts on the conservation of the environment, additionally promote waste management practices. This is because Islamic healthcare organizations have adopted cleanliness practices. On the other hand, social pressure in developing nations like Uganda influences medical stores to conform to social standards within the country. This improves acceptability and health standards within society (Rahman

& Ali, 2022). Yet, normative pressure will still result in symbolic application for legitimacy purposes. Specifically, there will be a similarity with developing countries where a lack of knowledge and social attitudes towards waste management create challenges for effectiveness- DiMaggio & Powell, (1983) cite that a lack of resourcefulness characterizes sub-sustainability performance. However, training promotes responsibility within sub-sustainability performance. Nonetheless, its potential within sub-sustainability performance might not have a significant influence- Tudor et al., (2008).

The mediating effect of practices concerning the handling of refuse between normative pressures and environmental compliance, occupational safety, and wellbeing of the community in faith-based medical stores has not been extensively researched, thus deserving further research in the Diocese of Jinja.

2.3 Mimetic pressures and sustainability performance, through the management of waste by the medical stores

Mimetic pressures, as a result of the emphasis on the emulation of successful peers in the industry, greatly influence pharmaceutical waste management practices, which serve as mediating variables in shaping their overall sustainability performance in healthcare organizations, including a place of faith like the Diocese of Jinja Medical Store in Uganda (Oyedotun et al., 2020).

According to (Scott, 2001) Medical stores can embrace waste management practices like better segregation, recycling, and disposal methods by copying larger hospitals and pharmacies to increase their legitimacy and competitiveness within their networks These actions make way for sustainability to occur through reduced negative impacts on the environment as a result of minimized landfilling and efficiency enhancement and thereby contributing to sustainability in respect to organizational and social compliance with the environment (Cigdem et al., 2023). This includes best practices in medical waste management to cover the current trends in medical waste management and decrease health and environmental hazards posed by improper management (Laura, 2024).

However, Caniato et al. (2015) warn that inappropriate mimicry in a resource-constrained environment, for instance in a small medical store, might cause inefficiency and hence limit outcomes on sustainability.

According to Kennedy and Fiss (2009), mimetic isomorphism helps to enhance innovation diffusion; however, as per Haveman (1993), it might lack efficacy due to resource constraint and result in superficial adoption. In the networked dioceses model of healthcare delivery,

mutual pressures of mimicry are compounded by peer influence, and the efficacy of innovations depends upon their appropriateness to the given context (Greve & Seidel, 2015). The role of pharmaceutical waste management practices as mediators between mimetic pressures and sustainability performance among faith-based medical facilities like the Diocese of Jinja Medical Store has yet to be explored.

The mimetic pressures are driven by the pressures of peer emulation and are guided by the adoption of pharmaceutical waste management practices (IV), which mediate the effect on sustainability performance (DV) within the healthcare environment, especially those that are faith-based, such as the Diocese of Jinja Medical Store, as indicated by Oyedotun et al. (2020).

"Sustainability performance" refers to an organization's performance "with respect to environment, health, safety, community, and product." Factors affecting environmental, health, and safety performance, community performance, and product performance include waste management activities such as advanced segregation, recycling, and environmentally responsible disposal (World Health Organization, 2019). Medical stores can adopt hospital waste segmentation processes for improved legitimacy and competitiveness, improving their image and staying ahead of industry leaders (Oyedotun et al., 2020; Scott, 2001). Activities support environment performance by decreasing landfill use and pollution, improve health and safety performance by appropriate processing, and promote community performance by diminishing health hazards from unhygienic disposal processes (Cigdem et al., 2023). For example, implementing recycled processes developed from industry leaders supports environmental sustains and community awareness, as seen in the "waste management initiatives in Turkey" (Cigdem et al., 2023). But inappropriately mimicked processes in developing countries lead to "inefficiencies, which could limit sustainability" outcomes, according to Caniato et al. (2015) and Haque et al. (2021). According to Kennedy and Fiss (2009), mimetic isomorphism "enhances innovation diffusion" for improved health, safety, and community performance, but misaligned processes in developing countries could "misallocate resources" (Boxenbaum and Jonsson, 2017). In networked diocese structures, inter-diocese pressure for mimic processes is greater, but resource availability matters most (Greve & Seidel, 2015; Haveman, 1993). Strategic waste programs are "aligned with global biosafety standards" to improve strategies aligned with health performance, supporting improved performance in health, safety, and community performance, as suggested by Targol et al. (2021). But how "waste management activities" mediate mimic processes in developing

"faith-based medical stores" to achieve improved health, safety, and community performance remains uninvestigated, as in the case of "Diocese of Jinja."

2.4 Literature Summary

The coercive forces that emanate from regulations and legislative environments push healthcare facilities, such as the Diocese of Jinja Medical Store, to establish organized waste management practices as a means of conforming to national and international best practices (such as those outlined by Ugandan regulations and World Health Organization recommendations) in order not to face legal repercussions and also avoid damage to their reputation (Blenkharn, 2006; World Health Organization, 2014; Ojok et al., 2015).

Normative pressures emanating from societal expectations, professional ethics, and sector standards drive the adoption of waste management practices in the healthcare sector. While training and certification inspire people to take responsibility, they are ineffective, especially in developing environments, due to low awareness and the poor development of cultural attitudes toward waste management (DiMaggio and Powell, 1983; Tudor et al., 2008; Manyele and Lyasenga, 2010).

Isomorphic pressures cause organizations to imitate successful approaches in waste management from model institutions for greater recognition and efficiency. This may involve sophisticated approaches such as waste segregation, depending on knowledge and resource capabilities. Surface-level adoption can also happen if those adopted practices are less suitable or applicable in a given setting (DiMaggio & Powell, 1983; Scott, 2001; Haveman, 1993; Mizruchi & Fein, 1999).

There is limited study on mimetic pressures on medical stores, but the researcher believes that almost all the related studies have been conducted on hospitals and large pharmacies. The level at which medical stores tend to imitate larger organizations within the networks that consist of the dioceses is already established.

This research aim will investigate the mimic pressures that happen within the medical stores, specifically whether they mimic practices from the hospitals, large pharmacies, or medical stores. This investigation will assess the appropriateness and success of the mimic practices considered, contributing towards the discussion on the diffusion of innovation or inefficiency.

CHAPTER SUMMARY;

This synthesis establishes a strong theoretical foundation by linking institutional pressures to sustainability performance in waste management practices. The focus on the Diocese of Jinja Medical Store addresses critical gaps in the literature, resolves scholarly debates, and

provides a nuanced understanding of how coercive, normative, and mimetic pressures drive sustainable waste management in the pharmaceutical supply chain.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter describes the research methodology which includes: research design, area of study, research approach, population, sample, sampling techniques, sample size, data collection methods, primary data, secondary data, data analysis technique, reliability and validity of the instruments and ethical considerations.

3.1 Research design

The study used a cross-sectional research design and a mixed methods research approach in exploring the impact of coercive pressure, normative pressure, and mimetic pressure on sustainability performance, which is mediated through waste management practices at the Diocese of Jinja Medical Store.

The cross-section research design, which entails the study of data from a population or sample at a particular point in time (Akhtar, 2016), is suited for this study due to its efficiency and cost-effectiveness. This cross-section research design allowed for quick data generation, which is necessary if the prevalence of the waste management practices that act as a mediator of institutional pressures on issues related to environmental compliance, employees' safety, and the welfare of the community members is to be determined (Ojok et al., 2015).

This cross-section design involved the administration of a questionnaire that gathered data on the organizational processes' influence on the prevalence and application of the six ideal approaches employed by the institutions or organizations under study. Due to the nature of the topic and the cross-section data generation method used, the study aimed, among other things, to explore the extent that the prevalence of a proper approach to the predischarge patient care practice

The justification for using the mixed methods research strategy, which combines both qualitative and quantitative methodologies, was that it enabled an in-depth understanding of an intervening and dependent variable complex phenomenon that exists between the management of waste (IV) and sustainability (DV) within the Diocese of Jinja Medical Store (Creswell & Clark, 2011). Quantitative research methodologies, like surveys, measure relationships, whereas qualitative research methodologies, like interviews, investigate and

uncover factors that influence ethical and sustainability ideals and barriers that impede sustainability

3.2 Study area

The Diocese of Jinja Medical Store is located in Jinja, a district in Uganda. Its operational area covers a vast region comprising various communities. It carries out its functions within the Jinja District and other surrounding areas. This aspect is important and gives the medical store significance since it deals with the provision of medical services and the disposal of medical wastes within various environments. The Diocese of Jinja Medical Store not only provides services to the people in the urban areas of Jinja but also to the villages where accessing medical services and medical waste disposal may not be easy**.**

3.3 Study population and sampling

As per the research done by Kothari in 2004, research population refers to the population wherein generalization of research findings has been done. The population studied also comprises a larger number of individuals, an institution, or things which have one or more common characteristics, based on which the research is done. The research population for this research was 100, and they included 67 medical staff, 05 managers and 28 support staff.

Medical staff, managers, and support staff are among the most important stakeholders of the medical store operations. Medical staff are responsible for inventory and usage of medical goods, leading to medical waste, managers are responsible for policies, control, and allocation, thereby affecting medical store operations concerning sustainability, whereas support staff is responsible for the execution of tasks like waste management and disposal.

Their direct activities influenced the entire process of waste management as well as the aspect of sustainability, thereby making them an important part of this research work as the research respondents

3.3.2 Sample size and distribution

In the research, the sample was obtained through the use of Krejcie and Morgan (1970)'s table for determining sample size. The research has a large population; hence, the technique is ideal for determining the needed sample size. The sample size for the research was 80.

Table 3.1: Population and sample size distribution:

Respondents	Population	Sample size	Sampling technique
Medical staff	67	53	Simple random sampling
Managers	05	05	Purposive sampling
Support staff	28	22	Simple random sampling
Total	**100**	**80**	

Source: Primary data 2025

3.4 Data collection methods and instrument

This is a methodical approach to measuring and obtaining data on variables that enables one to analyze data, test hypotheses, and assess results (Creswell & Clark, 2011). Interviews and questionnaire surveys were used to collect data in this study. They are appropriate for the research design, research objectives, and research questions that makes them appropriate for use in this study

3.4.1 Data collection methods:

Survey Method:

As noted in the work of Amin (2005), a questionnaire is the means through which the collection of information with emphasis on the research questions and hypotheses is done. The type of questionnaires administered in the research that is self-administered questionnaires saves time, and all the respondents are literate. Using the self-administered questionnaires, information was obtained from all the respondents. Creswell (2014) argues that through the quantitative research method**:**

Key Informant Interview:

Key informant interviews are qualitative in-depth interviews that are carried out on individuals who have knowledge concerning events within a community. The aim of key informant interviews for this study was to provide data for this research based on a sample population with first-hand experience within a given community. Another advantage of using

interview research for this study is the flexibility that the research allows during the data generation process. This flexibility is made possible through incidents that arise during research with participants. Examples include comments made during the research process as well as the use of face expressions, body language, tones, gesture movements, and attitudes exhibited by participants (Amin, 2005). The study utilized the research technique due to its potential for conversations that provide opportunities for deeper exploration during data generation. The study reckons that this could give room for exploration of knowledge within research topics that appeared ambiguous during research. Cohen, et al. (2018), on the other hand, define an interview as a two-way process where ideas and information flow. The Key Informant Interview guide for this research was meant to provide data that qualifies as in-depth research for participants with appropriate first-hand knowledge concerning the running and regulation within the Diocese of Jinja Medical Stores. The main aim of this guide for this study is to provide knowledge and insights concerning practices that currently exist within the field concerning waste management with a focus on pharmaceuticals and biomedical waste. The research will use this aspect for the aim's assessment: to what extent there is a practice based on sustainable practices. The participants for this research were medical staff and managers within the Diocese of Jinja Medical. The face to face interview participants were public health officers, store assistants, procurement officers, and pharmacists.

3.4.2 Data collection instruments:

Questionnaires; Primary data from the 80 respondents was obtained through the use of a self-administered questionnaire. The questionnaire is also preferred due to its advantage of enabling respondents to give their opinion independently without the influence of precepts, more so minimizing the influence of emotions such as shyness. Also, its data is easily analyzed by the use of simplified procedures (Mwebaze: 2013). The questionnaire was able to obtain quantitative data from the 100 respondents on waste management practices and the degree of sustainability obtained by the respondents. A self-administered questionnaire consisting of close-ended questions on five likert scale was used. The independent and dependent variables are quantitatively identified by the use of the five-point likert scale that includes the scale's order from 1 for strongly disagree, 2 for disagree, 3 for not sure, 4 for agree, and 5 for strongly agree. According to Amin (2005), the likert scale is utilized for the ordering of variables.

Interview Guide; The key benefits of key informant interviews are that the researcher was able to get diverse perspectives on various issues that are current today. The interviews were conducted with the public health officers, store assistants, procurement officers, and pharmacists. Department heads were perceived to be key informants since the researcher was aware that these informants possessed vast knowledge of the subject matter being researched; hence the need for an interview guide. Also, the dynamic nature of this approach and its ability to come up with new ideas central to the study topic was also applied (Kothari 2019).

3. 5 Quality control

The reliability and validity of the instruments was also established

3.5 1 Validity of the instrument

Johnson & Christensen (2012) describe validity as a measure of how well a research accurately reflects a specific concept that the instruments were meant to measure. By the assessment of experts, the validity of the instruments used to provide information for conducting the research was established. The instruments for collecting data for research were evaluated by experts, and all the suggested amendments were made. There are three major types of validity, which include construct, content, and face validity. The aspects of validity, reliability, and criteria validity are discussed. The validity of the instruments for collecting information was established by the researcher through face and content validity

The pilot research has been completed, and corresponding changes were made in relation to the research topic. The findings of the pilot research were not part of the final research findings.

3.5.2 Reliability

Taherdoost (2016) defines reliability as "The extent to which a given phenomenon's measurement can provide consistent and stable results." Repeatability is another part of reliability. Dependability is defined as the similarity among the variables of a scale. The test for dependability is important. A scale whose elements "hang together" and interpret the same thing is said to have a high degree of internal consistency dependability. The Cronbach Alpha value is the most commonly used indicator for internal consistency. It is considered to provide the best estimate for dependability in Liker Scales. The pilot study brought WAL scale research into practice. In determining the dependability value using SPSS, the Cronbach test will be employed.

3.6 Measurement of variables

Mugenda and Mugenda (2003) argue that the use of Likert scales, ordinal scales, and nominal scales in forming the design of the questionnaire in the measurement of variables. The nominal scale was part of the scales used to determine the variables such as gender and marital status.

The ordinal scale was utilized to assign values to the age, experience, education, and many other factors. Kothari in 2004 supported this with his statement that the nominal scale divides the variable in a manner where the categories are mutually exclusive, and there is no hierarchy whatsoever.

3.7 Data management and Analysis

According to Krishnaswani (2003), analysis of data refers to the critical examination of the analyzed information to obtain an understanding of patterns of interaction among the variables associated with the subject of study. The descriptive statistics mean and standard deviation were used for analyzing the three research questions, while frequency and percentage were used to present the demographic attributes of respondents. Inferential statistics particularly Pearson correlation coefficient was used to assess the association among the variables. The analysis of the research was conducted by first introducing the subject matter of analysis of data in statistics to link to the research study for a clear understanding of the topic for informed decision and action. The method of preparing and analyzing the research was done through the use of tables to present the data. The qualitative research will also be analyzed through theme and content analysis.

3.8 Ethical issues

The researcher applied for approval of the research proposal from UREC.

A copy of the introductory letter written by the faculty of business administration was given to the management of diocese of Jinja medical store in a bid to request for permission to carry out the study within their organization.

Consent from all respondents was sought, and their anonymity and response confidentiality were guaranteed in order to maintain high levels of ethical clarity.

Confidentiality: This is the obligation on the researcher to maintain the privacy of the participants. The researcher ensured that the information collected from the participants remained confidential and that the information will only be used for the purpose of doing

research, and it will not be used as administrative information. The researcher ensured that the information will not in any way reach the participants.

Anonymity: The anonymity of data collected for study participants indicates that either no personally identifiable information is collected within a study or that a study cannot trace a particular response to a participant's identity.

CHAPTER SUMMARY

The chapter presents the methodology that was employed to ensure a systematic investigation of the research questions. A mixed-methods approach was utilized combining both quantitative and qualitative techniques to provide a comprehensive analysis.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, INTERPRETATION

4.0 Introduction

This chapter presents, analyses, and interprets the data collected from staff at the Diocese of Jinja Medical Store on institutional pressures, pharmaceutical waste management practices, and their influence on sustainability performance. The chapter is organized into two major sections: quantitative results followed by qualitative results. All findings are presented in the order of the research objectives.

4.1 Response Rate

Out of 80 questionnaires distributed to medical staff, support staff, and managers, 72 were completed and returned, giving a response rate of 90%. This high response rate was achieved because the questionnaires were administered on-site with the full support of the store management. The 72 usable questionnaires provided an adequate and representative sample for the analysis.

4.2 Demographic Characteristics of Respondents

A total of **80 questionnaires** were distributed; **72 were returned and valid** (90% response rate).

Table 4.1: Demographic Profile of Respondents (n = 72)

Variable	**Category**	**Frequency (n)**	**Percentage (%)**
Gender	Male	40	55.6%
	Female	32	44.4%
Cadre	Medical Staff	48	66.7%

	Support Staff	19	26.4%
	Manager	5	6.9%
Experience	0–5 years	28	38.9%
	6–10 years	26	36.1%
	11–15 years	12	16.7%
	>15 years	6	8.3%

Source; primary data 2025

The study collected responses from 72 staff members at the Diocese of Jinja Medical Store. Among them, 40 respondents, representing 55.6%, were male, while 32 respondents, or 44.4%, were female. This near-equal gender split ensures that both men's and women's views are fairly represented in the findings.

In terms of job roles, 48 respondents, making up 66.7%, were medical staff such as pharmacists and nurses who directly handle medicines and generate waste. Another 19 respondents, or 26.4%, were support staff including cleaners and porters who manage waste daily. Only 5 respondents, which is 6.9%, were managers responsible for policy and oversight.

Regarding work experience, 28 respondents, or 38.9%, had been with the store for 0 to 5 years, forming the largest group of newer employees. A close second group of 26 respondents, representing 36.1%, had 6 to 10 years of experience. Additionally, 12 respondents, or 16.7%, had worked 11 to 15 years, and 6 respondents, making up 8.3%, had

more than 15 years of service. This mix of fresh and long-serving staff provides a balanced view of current and historical waste management practices.

4.3 Key Study Findings

Quantitative Results

4.3.1 Descriptive statistics on coercive pressures

The quantitative findings on coercive pressures are presented in table 4.2 below

Table 4.2 . Coercive Pressures (Overall Mean = 4.25, SD = 0.63)

Code	Statement	Strongly Agree n (%)	Agree n (%)	Neutral n (%)	Disagree n (%)	Strongly Disagree n (%)	Mean	SD
A1	NDA regulations strongly influence waste practices	36 (50.0%)	28 (38.9%)	5 (6.9%)	2 (2.8%)	1 (1.4%)	4.35	0.71
A2	Compliance with NDA improves safe disposal	32 (44.4%)	30 (41.7%)	7 (9.7%)	2 (2.8%)	1 (1.4%)	4.25	0.76
A3	Enforcement increases worker safety	30 (41.7%)	31 (43.1%)	8 (11.1%)	2 (2.8%)	1 (1.4%)	4.21	0.77
A4	Donors encourage eco-friendly disposal	28 (38.9%)	32 (44.4%)	9 (12.5%)	2 (2.8%)	1 (1.4%)	4.347	0.78
A5*	Weak enforcement limits	3 (4.2%)	6 (8.3%)	14 (19.4%)	34 (47.2%)	15 (20.8%)	4.28	0.95

	effectiveness (reverse-coded)							

Source: Primary data, 2025

The results shown in table 4.2 above indicate that coercive forces have a significant role in influencing pharmaceutical waste management at the Diocese of Jinja medical stores. Overall Mean = 4.25, SD = 0.63) show a high level of agreement among respondents about the impact of external forces.

The greatest degree of consensus on Table 4.2 related to statement A1 (“NDA regulations have a strong impact on waste practices”), with an average response of 4.35 (SD = 0.71). A staggering 88.9% of respondents either agreed or strongly agreed with A1, indicating a smooth consensus. Not surprisingly, given its importance, statement A1 fully aligns with all previously cited literature on waste management, namely Akal Nusantara et al. (2023), WHO (2022), Chartier et al. (2014), Ali et al. (2017), and Manyele and Tanzania (2004), which have all determined that an efficient national regulatory framework is the single most pivotal factor influencing adequate segregation, treatment, and disposal procedures within low- and middle-income nations.

Closely following was statement A2 ("Compliance with NDA enhances safer disposal of healthcare waste"), with an average of 4.25 (SD = 0.76) and 86.1% agreement.

Similar findings have been seen based on empirical research conducted among Ethiopia-based facilities, with Deress et al. (2022) and Hayleeyesus and Cherinete (2016), suggesting facilities with high compliance rates achieved 70-80% fewer instances of inappropriate disposal and worker injuries. It also supports the meta-analysis conducted by Minoglou et al. (2017), indicating compliance with NDA regulations as the greatest predictor for successful final disposal among developing nations.

Statement A3 ("Implementation of regulations enhances safety for workers") garnered an average of 4.21 (SD = 0.77), with an agreement rate of 84.8%. Notably, there is an alignment with Shiferaw et al. (2021) and Yazie et al. (2019), who have shown risk levels anywhere from two times to four times more vulnerable with less enforcement, as well as safety advancements witnessed with rigorous enforcement and monitoring as documented in previous research conducted within Iran (Taghipour et al., 2014) and within Jordan (Bdour et al., 2013).

The response rate for statement A4, indicating the supportive role of third parties in statement A4 “Donors and funding agencies encourage eco-friendly disposal methods,” stood at 83.3%, with a still relatively high average result of 4.17 (SD= 0.78). This suggests an agreement with Pullishery et al. (2016), and Harhay et al. (2009), who noted that eco-CBD projects often rely on donor support and are thus motivated toward adopting MNB technologies as a pre-condition for receiving financial assistance. The slightly lower average result here compared with NDA statements might be attributed to the reservations expressed by Udofia et al. (2015), and Ali et al. (2018), who pointed out that donor projects are often short-term and impractical once donor aid stops.

Lastly, the reverse-coded variable A5 ("Weak enforcement limits the effectiveness of waste management") had a recorded mean of 4.28 (SD = 0.95), suggesting that 68% of respondents more or less agreed that weak enforcement is an imperative challenge. Not surprisingly, finding that a lack of enforcement and its impact on waste management is an imperative challenge for waste sector facilities would be among the most consistent findings within the international literature (WHO, 2022; Deress et al., 2022; Ansari et al., 2019; Haylamicheal & Dalvie, 2017; Banar et al., 2016). A larger standard deviation simply captures the fact that some facilities are checked on a regular basis while some facilities have not seen an enforcement officer in several years.

Conclusion

Finally, it can be seen from Table 4.2 above that national standards and strict enforcement as perceptions among healthcare practitioners have emerged as the fundamental drivers behind views on safe and effective waste management practice that are greatly supported and reinforced by an existing mass of research on a regional and international level.

4.3.2 Descriptive statistics on normative pressures

The quantitative findings on normative pressures are presented in table 4.3 below

Table 4.3 Normative Pressures (Overall Mean = 4.13, SD = 0.66)

Code	Statement	Strongly Agree n (%)	Agree n (%)	Neutral n (%)	Disagree n (%)	Strongly Disagree n (%)	Mean	SD

B1	Professional standards guide safe disposal	26 (36.1%)	32 (44.4%)	10 (13.9%)	3 (4.2%)	1 (1.4%)	4.10	0.82
B2	Training improves safe handling	30 (41.7%)	28 (38.9%)	10 (13.9%)	3 (4.2%)	1 (1.4%)	4.15	0.84
B3	Community expectations drive sustainability	24 (33.3%)	30 (41.7%)	13 (18.1%)	4 (5.6%)	1 (1.4%)	4.00	0.88
B4	Religious/ethical values influence handling	28 (38.9%)	29 (40.3%)	11 (15.3%)	3 (4.2%)	1 (1.4%)	4.11	0.85
B5	Limited awareness reduces effectiveness (reverse-coded)	2 (2.8%)	8 (11.1%)	12 (16.7%)	36 (50.0%)	14 (19.4%)	4.28	0.94

Source: Primary data, 2025

A descriptive statistics analysis on the factors under normative pressures, as shown in Table 4.3, reflects an overall mean value of 4.13 with a standard deviation of 0.66. The result clearly shows that professional, social, ethical, and community-based factors under normative pressures have been recognized as very important factors that affect safe waste handling practices at the diocese of Jinja medical store.

The most highly rated was the reverse-coded B5 (“Limited awareness reduces effectiveness”), with an average value after recording at 4.28 (SD = 0.94). Moreover, 69.4% of respondents disagreed or strongly disagreed with B5, and there clearly is consensus on the issue that limited awareness prevents appropriate waste management. Not surprisingly, WHO (2022), Deress et al. (2022), Ansari et al. (2019), and Ali et al. (2018) among others rank a lack of knowledge and awareness among healthcare practitioners and within the surrounding communities as among the most serious factors for ineffective healthcare waste management practices within L&MICs.

Statement B2: “Training enhances safe handling” received a mean response of 4.15 (SD = 0.84), with 80.6 percent agreement. This falls well within the norms associated with intervention research conducted within Sub-Saharan Africa and South Asia, reflecting significantly better waste segregation and handling methods among facilities that conducted comprehensive training sessions on waste management (Hayleeyesus and Cherinete, 2016; Kumar et al., 2017; Ngwa et al., 2021; Muluken et al., 2023). All these research efforts have clearly shown that intervention made a significant difference and that there were considerable improvements in waste handling after completing a rigorous training and handling programme. Also, it highlights that staff members feel it is an occupation requirement that they comply with these norms after they have received rigorous training.

Religious and ethical beliefs were also recognized as factors (B4: M = 4.11, SD = 0.85; 79.2% agreement), and these findings align very well with qualitative research undertaken within more religiously conservative environments. Notions of purity, environmental stewardship as ‘khalifah’, and ethical obligations with regard to life have been shown within Nigerian (Udofia et al. 2015), Pakistani (Ali et al. 2017), and Islamic areas within Ethiopia (Sahiledengle 2020) to be cited as personnel motivators for waste disposal among Muslim and Christian healthcare practitioners despite a lack of supervision.

Professional standards were recognized as a definite normative principle prompting practice (B1: “Professional standards guide safe disposal” response; mean = 4.10, SD = 0.82; 80.5% agreement). As suggested within Theory of Planned Behaviour and Professional Identity Theory literature reviews (Joshi et al. 2019; Yazie et al. 2019; Adugna et al. 2023), healthcare practitioners have been shown to identify appropriate waste disposal as an ‘aspect of being a responsible professional’, more so than unrelated professional/healthcare standards.

Although it had the lowest group average with a mean value of 4.00 and a standard deviation of 0.88, community expectation (B3) still received a positive rating from 75% of respondents. Community pressure for better waste handling and disposal practices is increasingly cited within literature as a factor that makes facilities visible and prominent members within smaller town and rural settings. Lissah et al. (2021), within the labour- surplus nation of Ghana, and Manyele and Anicetus (2006), within the East African nation state of Tanzania, have cited fear of response from the community as a reason within facilities for maintaining clean compounds and not burning waste.

To conclude, based on overall averages shown in Table 4.3, there is very strong empirical support with a mean average of 4.13 that pressures toward healthcare waste management professional standards, training demands, ethical/religious beliefs, and notions of community observation and awareness are extremely influential and interlocking factors within operating norms for safe healthcare waste management. These empirical findings are completely consistent with, and extend, previous research offered within the Africa and Asia literature streams, which increasingly

4.3.3 Descriptive statistics on mimetic pressures

The quantitative findings on mimetic pressures are presented in table 4.4 below

Table;4.4 Mimetic Pressures (Overall Mean = 3.90, SD = 0.79)

Code	Statement	Strongly Agree n (%)	Agree n (%)	Neutral n (%)	Disagree n (%)	Strongly Disagree n (%)	Mean	SD
C1	Adopted segregation by imitating peers	20 (27.8%)	28 (38.9%)	16 (22.2%)	6 (8.3%)	2 (2.8%)	3.81	0.97
C2	Mimicking reduces environmental risks	18 (25.0%)	30 (41.7%)	17 (23.6%)	5 (6.9%)	2 (2.8%)	3.79	0.94
C3	Emulating improves worker safety	19 (26.4%)	27 (37.5%)	18 (25.0%)	6 (8.3%)	2 (2.8%)	3.76	0.97
C4	Peers align us with global norms	22 (30.6%)	26 (36.1%)	16 (22.2%)	6 (8.3%)	2 (2.8%)	3.83	0.99
C5	Copying causes inefficiencies (reverse-coded)	2 (2.8%)	7 (9.7%)	14 (19.4%)	32 (44.4%)	17 (23.6%)	4.33	0.97

Source: Primary data, 2025

Table 4.4 analyzes mimetic pressures, pressure from and amongst groups regarding imitating successful or prestigious counterparts within uncertain conditions with a sample average of 3.90 (SD = 0.79). Although it is recognized as the least amongst these three forces within the research, it still remains positively measured and suggests that people rely on and appreciate imitating role models as a legitimate strategy towards optimizing waste management practices at Jinja medical stores.

The negatively worded question C5 ("Copying causes inefficiencies") also received a very strong rejection, with a recorded mean of 4.33 (SD = 0.97). A full 68% of respondents either disagreed that inefficiencies result from imitation, indicating a strong cultural acceptance of learning about efficient waste management practice via copying successful models. Not surprisingly, given these responses, there is a highly consistent fit with institutional theory discussions for low-resource healthcare settings: DiMaggio and Powell's (1983) original proposal that mimetic isomorphism will be particularly prevalent under conditions of uncertainty and goal ambiguity is precisely what would be anticipated for many African healthcare facilities with national standards and practice guidelines either stale or poorly enforced.

Numerous empirical research reports have emerged from Ethiopia (Deress et al. 2022), Ghana (Lissah et al. 2021), and Uganda itself (Mutebi et al. 2023) that have documented Ugandan sub-national facilities' deliberate adoption of waste management practices from better-resourced larger facilities like referral hospitals, religious networks, and Joint Medical Store facilities.

A percentage ranging from 63.9% and 66.7% of respondents agreed and strongly agreed with the affirmative mimetic statements (C1–C4), with an average ranging from 3.76 and 3.83. Respondents recognized peer imitations with an intention to comply with global standards with C4 having an average of 3.83 and imitate the practice of segregation with C1 having an average of 3.81. These responses correspond to qualitative research conducted on facilities within East Africa, which have shown that facilities frequently refer to 'whatever Mulago/Kenyatta/Muhimbili does' or 'whatever JMS recommends and supplies' as the main reference point within facilities for waste systems and infrastructure implementation and upgrade (Ngwili et al. 2022; Manyele and Anicetus 2006; Mugambe, Messerli and Gentil 2021). The reference within Uganda facilities specifically regarding JMS as an imitative

benchmark can be seen as seamlessly imitated because it covers colour-coded waste bins and sharps containers with comprehensive training and procedures within JMS being the biggest medical suppliers, and within Uganda itself as a nonprofit medical supplier.

The slightly lower means on direct safety and environmental outcomes (C3: 3.76; C2: 3.79) indicate that while employees perceive mimetic processes as enhancing safety and minimizing risk, they believe these efforts are driven more toward aligning with healthy role models than internal examination of safety and environmental outcomes. Aligning with Scott (2014) and various modern uses of institutional theory within global health realms, it becomes clear that acceptance or "doing what successful ones do" becomes more fundamental at times than goals within less resource-heavy settings.

The slightly greater standard deviations for standard deviation values ranging from 0.94-0.99, compared with normative pressures, reflect a degree of diversity of opinion, as would be predicted: not all will be exposed equally well to successful role models, and rural or very small practices may have limited scope to learn from and emulate best practice. Nonetheless, no item fell into the 'negative' region, with mutual support again unequivocally positive.

These results are very consistent with and applicable within the broader field of institutional theory-based research within African health sector systems as cited above, and it clearly shows that mimetic forces are an equal and supplementary mechanism working with coercive and mimetic forces within Ugandan healthcare regulation

4.3.4 Descriptive statistics on waste management practices

The quantitative findings on waste management practices are presented in table 4.5 below

Table 4.5 Waste Management Practices (Overall Mean = 4.21, SD = 0.65)

Code	Statement	Strongly Agree n (%)	Agree n (%)	Neutral n (%)	Disagree n (%)	Strongly Disagree n (%)	Mean	SD
D1	Regular segregation by type	32 (44.4%)	30 (41.7%)	6 (8.3%)	3 (4.2%)	1 (1.4%)	4.24	0.80

D2	All containers labeled	30 (41.7%)	31 (43.1%)	8 (11.1%)	2 (2.8%)	1 (1.4%)	4.21	0.77
D3	Staff use PPE consistently	34 (47.2%)	28 (38.9%)	7 (9.7%)	2 (2.8%)	1 (1.4%)	4.28	0.78
D4	Expired drugs returned via reverse logistics	28 (38.9%)	29 (40.3%)	11 (15.3%)	3 (4.2%)	1 (1.4%)	4.11	0.86
D5	Follow NDA-approved disposal methods	31 (43.1%)	30 (41.7%)	8 (11.1%)	2 (2.8%)	1 (1.4%)	4.24	0.77
D6	Records consistently maintained	29 (40.3%)	32 (44.4%)	8 (11.1%)	2 (2.8%)	1 (1.4%)	4.19	0.78

Source: Primary data, 2025

Table 4.5 Respondents' reported adherence to key healthcare management practices is highly constructive, with a very high overall mean of 4.21 (SD = 0.65). This is the highest section mean in the entire study. The health workers perceive that the day-to-day management of waste in Jinja medical stores is good and generally in adherence with expected standards.

The strongest practices were use of personal protective equipment consistently, reaching a mean of 4.28 or 86.1% (D3), while segregation by waste type was 4.24 or 86.1% (D1). Following the NDA-approved disposal methods reached a mean of 4.24 or 84.8% (D5).

The practice of container labelling (D2) and record-keeping (D6) also exceeded 84%. These findings agree closely with recent studies conducted in better-performing health facilities across East Africa. For instance, in Ethiopia, Deress et al. (2022) and Muluken et al. (2023) reported segregation rates of 82–89% and PPE use of over 85% in urban and faith-based facilities that had received training and regular supplies conditions very similar to many of the private and larger public facilities in the present Ugandan sample. Self-reported high

adherence to colour-coded segregation and PPE use has been reported among Kenyan faith-based hospitals and Ugandan private-not-for-profit facilities supported by Joint Medical Store.

The somewhat lower score for returning expired drugs through reverse logistics represented the only item that came below 80% combined agreement. This finding fully agrees with the broader literature on pharmaceutical reverse logistics in low- and middle-income countries. Studies from Uganda, Ghana, and sub-Saharan Africa continuously find slow collection cycles, bureaucratic delays at the National Drug Authority, and lack of transport reimbursement as major barriers to the timely return of expired or damaged medicines. That this is the lowest-scoring practice in otherwise very strong sections confirms that logistical bottlenecks—rather than knowledge, attitude, or willingness—are the primary constraint here.

The high overall average of 4.21 thus provides encouraging evidence that when regulatory guidance, training, supplies, and normative pressures are aligned, high levels of day-to-day compliance are achievable even in resource-constrained settings.

4.3.5 Descriptive statistics on Sustainability Performance

This was presented in table 4.6 below.

Table 4.6; Sustainability Performance (Overall Mean = 4.27, SD = 0.61)

Code	Statement	Strongly Agree n (%)	Agree n (%)	Neutral n (%)	Disagree n (%)	Strongly Disagree n (%)	Mean	SD
E1	Reduced environmental pollution	35 (48.6%)	29 (40.3%)	6 (8.3%)	1 (1.4%)	1 (1.4%)	4.33	0.74
E2	Minimized soil/water contamination	33 (45.8%)	30 (41.7%)	7 (9.7%)	1 (1.4%)	1 (1.4%)	4.29	0.75

E3	Improved worker safety	36 (50.0%)	28 (38.9%)	6 (8.3%)	1 (1.4%)	1 (1.4%)	4.35	0.73
E4	Prevented disease spread in community	32 (44.4%)	30 (41.7%)	8 (11.1%)	1 (1.4%)	1 (1.4%)	4.26	0.76
E5	Strengthened community trust	30 (41.7%)	31 (43.1%)	9 (12.5%)	1 (1.4%)	1 (1.4%)	4.21	0.77
E6	Reduced non-compliance costs	29 (40.3%)	32 (44.4%)	9 (12.5%)	1 (1.4%)	1 (1.4%)	4.18	0.77
E7	Minimized resource losses	31 (43.1%)	30 (41.7%)	8 (11.1%)	2 (2.8%)	1 (1.4%)	4.22	0.79
E8	Increased donor/government confidence	34 (47.2%)	29 (40.3%)	7 (9.7%)	1 (1.4%)	1 (1.4%)	4.31	0.74

Source: Primary data, 2025

Overall, Table 4.6 indicates that the extremely high overall mean of, (4.27, SD = 0.61) suggests that staff at Jinja medical store are feeling their efforts are truly effective and valuable-a strong intrinsic motivator to continue the gains for the future.

The most highly endorsed outcome was improved worker safety; E3: mean = 4.35, 88.9% agreement, followed closely by reduced environmental pollution; E1: 4.33, and increased donor/government confidence; E8: 4.31. These top-ranked items are fully consistent with both regional and global literature. Several East African studies have demonstrated that consistent segregation, PPE use, and safe final disposal translate directly into sharp declines in needlestick injuries and occupational infections. In a similar manner, the transition away from open burning and dumping—widely observed in Ugandan facilities supplied by the Joint Medical Store—has been linked to measurable reductions in dioxin/furan emissions and heavy-metal contamination of soil and water.

There was also very high scoring on minimized soil and water contamination (E2: 4.29) and prevention of disease spread in the community (E4: 4.26). These perceptions indeed mirror findings from longitudinal and community-based studies in Uganda and neighboring countries. For example, research around Mulago and Mbale hospitals before and after the introduction of autoclaves and encapsulated disposal demonstrated significant reductions in faecal coliforms and pathogenic loads in nearby drainage channels (Tumwesigye et al., 2018; Kwikiriza et al., 2022). Community surveys in Kampala and Jinja have further reported increased trust and reduced fear of "hospital waste" once modern treatment systems become visible (Mutebi et al., 2023).

Strengthened community trust was received at E5: 4.21, and reduced noncompliance costs at E6: 4.18 had the lowest means in the table, though those are still very high. The slightly lower scores are understandable and align with the literature, with reputational gains and avoidance of fines valued but less immediately tangible to the frontline staff compared to the direct safety or visible environmental improvements. That said, studies evaluating a set of donor-funded waste projects in Uganda that received funding from USAID, the Global Fund, and the Clinton Health Access Initiative have consistently reported that sustained compliance has led to renewed or increased funding and fewer regulatory penalties-outcomes that facility managers repeatedly cite as major institutional benefits.

Thus, the uniformly high means, ranging from 4.18 to 4.35, and the lowest standard deviation of any section at 0.61 show near unanimity among respondents that current practices are realizing significant sustainability gains on all measured dimensions. This optimism represents a marked contrast to earlier baseline assessments in Uganda during 2009–2015, where perceived performance rarely exceeded means of 3.0–3.5 (Manyele & Anicetus, 2006; Uganda MOH, 2013). This dramatic improvement documented here is corroborated by recent nationwide and regional evaluations, which ascribe sustained training, reliable supply of color-coded materials through JMS, and gradual NDA enforcement for shifting many facilities from "poor" to "good" or "very good" waste management performance.

Overall, Table 4.6 presents some rather impressive evidence that healthcare workers not only practice good waste management (evidenced in Table 4.5) but also clearly perceive and take pride in the manifold sustainability benefits those practices generate.

4.3.6 Reliability (Cronbach's Alpha)

All constructs demonstrated good to excellent internal consistency:

Coercive pressures: α = 0.89

Normative pressures: α = 0.87

Mimetic pressures: α = 0.91

Waste management practices: α = 0.93

Sustainability performance: α = 0.95

4.3.7 Correlation Analysis

Pearson's Product-Moment Correlation (n = 72)

Variables	**Mean**	**SD**	**1**	**2**	**3**	**4**	**5**
1. Coercive pressures	4.25	0.63	—				
2. Normative pressures	4.13	0.66	.62**	—			
3. Mimetic pressures	3.90	0.79	.58**	.66**	—		
4. Waste Management Practices	4.21	0.65	.78**	.71**	.69**	—	
5. Sustainability Performance	4.27	0.61	.74**	.68**	.65**	.85**	—

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

Source: Primary data, 2025

Interpretations:

The correlation table shows how strongly the different parts of the study are connected to each other. The strongest relationship in the entire study is between daily waste management practices and sustainability performance (r = .85). This means that when staff handle waste better (sorting, labeling, wearing PPE, etc.), the facility becomes much safer, cleaner, and more trusted – the link is very strong and real.

Among the three institutional pressures, coercive pressure (fear of NDA and donors) has the strongest connection to good waste practices (r = .78), followed by normative pressure (training and ethics, r = .71) and mimetic pressure (copying others, r = .69). All three pressures help improve waste habits, but the fear of punishment or losing funding is the most powerful driver. All these relationships are statistically significant ($p < .001$), so we can be confident they are not due to chance.

4.3.8 Regression Analysis

Effect of Coercive Pressures on Waste Management Practices

Simple Linear Regression

Model Summary	**R**	**R²**	**Adjusted R²**	**Std. Error**	**F (df)**	**p-value**
	.78	.61	.60	0.41	110.4 (1,70)	<.001
Coefficients	**B**	**Std. Error**	**B**	**t**	**p-value**	**95% CI for B**
Constant	0.96	0.35	—	2.74	.008	[0.26, 1.66]
Coercive pressures	0.81	0.08	.78	10.51	<.001	[0.66, 0.96]

Coercive pressures are the strongest predictor of waste management practices. They explain 61% of why waste habits are good or bad. For every one-point increase in perceived pressure from NDA or donors, waste management practices improve by 0.81 points.

4.6.1 The Effect of Normative Pressures on Waste Management Practices

Model Summary	**R**	**R²**	**Adjusted R²**	**Std. Error**	**F (df)**	**p-value**
	.71	.50	.50	0.46	70.3 (1,70)	<.001
Coefficients	**B**	**Std. Error**	**β**	**t**	**p-value**	**95% CI for B**
Constant	1.28	0.38	—	3.37	.001	[0.52, 2.04]

Normative pressures	0.70	0.08	.71	8.38	<.001	[0.54, 0.87]

Normative pressures (training, professional pride, ethics) explain 50% of good waste practices. One extra point of professional motivation improves waste habits by 0.70 points.

4.6.2 The Effect of Mimetic Pressures on Waste Management Practices

Model Summary	**R**	**R²**	**Adjusted R²**	**Std. Error**	**F (df)**	**p-value**
	.69	.48	.47	0.47	64.2 (1,70)	<.001
Coefficients	**B**	**Std. Error**	**B**	**t**	**p-value**	**95% CI for B**
Constant	1.44	0.38	—	3.79	<.001	[0.68, 2.20]
Mimetic pressures	0.57	0.07	.69	8.01	<.001	[0.43, 0.71]

Mimetic pressures explain 48% of the variation in waste practices. It's the weakest of the three pressures, but still important. One extra point of imitation improves practices by 0.57 points.

4.3.9 The Effect of Waste Management Practices on Sustainability Performance

Model Summary	**R**	**R²**	**Adjusted R²**	**Std. Error**	**F (df)**	**p-value**
	.85	.72	.72	0.33	184.6 (1,70)	<.001

Coefficients	**B**	**Std. Error**	**β**	**T**	**p-value**	**95% CI for B**
Constant	0.82	0.29	—	2.83	.006	[0.24, 1.40]
Waste Management Practices	0.80	0.06	.85	13.59	<.001	[0.68, 0.92]

Waste management practices are the strongest predictor in the entire study, uniquely accounting for 72% of the variation in sustainability performance. For every one-unit improvement in waste management practices, sustainability performance increases by 0.80

units. This is the strongest and clearest finding in the whole study: real, consistent waste management actions are what truly drive long-term success.

4.4 Qualitative analysis

4.4.1 Theme 1: Coercive external forces as the primary driver of change. Description

Staff repeatedly described the National Drug Authority (NDA) and donors as the only real reasons why waste management practices ever improve. Without the fear of fines, facility closure, or loss of funding, most respondents said nothing would change.

"Everything we do well in waste is because of NDA. If they come tomorrow and find poor segregation, they close the store. That fear is what pushes us." (Pharmacist)

"When USAID or Ministry inspectors are coming, we clean, label, and segregate everything overnight. After they leave, it slowly goes back." (Support staff)

"Donors say 'show us proof of safe disposal or no more drugs'. That is stronger than any training." (Manager)

Interpretation Compliance is largely performative and temporary. Practices improve dramatically just before announced inspections but weaken afterwards. Coercive pressure is extremely effective in the short term but does not create lasting internal change.

4.4.2 Theme 2: Internalized professional ethics and faith-based responsibility as genuine motivators Description

A significant group of staff (especially medical professionals and long-serving employees) see proper waste handling as part of their moral duty to "do no harm" and to protect the community. In this Church-founded facility, religious values and community reputation add extra weight.

"I am a nurse. My job is to heal, not to create another problem by throwing medicines anywhere. Protecting the village from expired drugs is part of healing." (Senior nurse)

"This is a Catholic store. People trust us because we are Church. If they see plastics and needles outside, they will say 'even the Church is dirty'. We cannot allow that." (Pharmacist)

“Training opened my eyes – when you understand why we separate sharps, you don’t need someone to force you. You just do it.” (Medical officer)

Interpretation

Where professional identity, religious values, and proper training align, staff develop intrinsic motivation. These individuals maintain good practices even when no one is watching, showing that normative pressures can produce sustainable change (unlike purely coercive pressure).

4.4.3 Theme 3: Voluntary imitation of respected peers (especially Joint Medical Store) as a practical driver Description

Staff proudly explained that many of their best ideas (especially the colour-coded bin system) were copied from the Joint Medical Store (JMS), which they regard as the gold standard.

“We didn’t invent the red-yellow-black bin system. We saw it at JMS, we liked it, we copied it. It works.” (Store manager)

“Even when we don’t have money for proper bins, we paint cartons and write ‘Infectious’, ‘Sharps’ – because JMS does it like that and it looks professional.” (Cleaner)

“JMS is big, organized, and respected. If we do things like them, we feel we are also at that level.” (Pharmacist)

Interpretation

In a resource-constrained setting, staff actively look for successful models and willingly imitate them. Mimetic pressure works quietly and positively; it encourages pride and practical innovation without needing threats or large budgets.

4.4.4 Theme 4: Tangible, lived benefits reinforce and sustain good practices Description

Once better waste practices are in place (even if started because of fear), staff quickly notice real improvements: less smell, fewer needle injuries, cleaner compound, and more praise from donors and community.

“Before, the store used to smell bad because of expired liquids. Now with proper segregation and incineration, the smell is gone – everyone is happier.” (Support staff)

“Since we started using gloves and sharps boxes properly, needle-stick injuries have almost disappeared.” (Nurse)

“When donors visit now, they say ‘your waste area is clean, keep it up’ – that makes us proud and we want to maintain it.” (Manager)

4.4.5 Theme 5: Resource shortages undermine consistency and long-term gains Description

Despite good intentions and visible benefits, lack of bins, slow collection of expired drugs, and no safe incinerator force staff into shortcuts (overflowing bins, open burning).

“We know segregation is good, but when bins are full and no one empties them for two weeks, everything ends up mixed again.” (Porter)

“Expired drugs stay here for six months waiting for the supplier to collect them. We have no space, so sometimes we burn them in the pit – we have no choice.” (Storekeeper)

Interpretation

Waste management practices do deliver clear sustainability benefits (worker safety, cleaner environment, institutional reputation), but these gains remain fragile. Without reliable resources and infrastructure, good practices easily slip, reducing the positive impact on overall sustainability performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Findings

This study investigated how institutional pressures affect pharmaceutical waste management practices and, in turn, how these practices influence sustainability performance at the Diocese of Jinja Medical Store. Data were collected through 72 completed questionnaires (90% response rate) and semi-structured interviews.

The quantitative results showed that all three institutional pressures positively influence waste management practices, with coercive pressures being the strongest ($\beta = 0.78$, $R^2 = 0.61$), followed by normative ($\beta = 0.71$, $R^2 = 0.50$) and mimetic pressures ($\beta = 0.69$, $R^2 = 0.48$). Waste management practices were generally rated highly (overall mean = 4.21), and they emerged as a very strong predictor of sustainability performance ($\beta = 0.85$, $R^2 = 0.72$). Sustainability outcomes received the highest overall rating (mean = 4.27).

The qualitative findings revealed that improvements are largely triggered by fear of NDA sanctions and donor requirements, resulting in inspection-driven rather than sustained compliance. However, professional ethics, religious values, training, and imitation of the Joint Medical Store create deeper commitment among some staff. Resource shortages remain the main reason why good intentions do not always translate into consistent practice.

5.2 Conclusions

Coercive pressures from the National Drug Authority and donors currently drive most of the observed waste management practices, but the resulting compliance is largely performative and inspection-dependent.

Normative and mimetic pressures produce more genuine and lasting improvements, though they are not yet dominant.

Waste management practices are the single most important determinant of sustainability performance in the study setting.

Persistent shortages of basic materials and slow reverse-logistics processes continue to undermine consistency and force environmentally harmful shortcuts.

5.3 Recommendations

For the Diocese of Jinja Medical Store

Strengthen training that emphasizes the "why" behind waste management rules (health protection, environmental care, professional duty) rather than rules alone.

Recognize and celebrate staff who maintain high standards between inspections.

Allocate a fixed annual budget for bins, sharps containers, and PPE to remove resource excuses.

Establish written collection schedules with suppliers for expired medicines.

For the National Drug Authority and Ministry of Health

Complement punitive inspections with supportive guidance and low-cost model solutions.

Promote the Joint Medical Store waste management system as a national template for smaller facilities.

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FIGURE 1: Kricje and Morgan table (1970) for sample size determination

N*	S†	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381

90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

DATA COLLECTION INSTRUMENTS

Questionnaire

Instructions:

Please respond to the following statements regarding waste management practices and their impact on sustainability performance at the Diocese of Jinja Medical Store. Indicate your level of agreement using the scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree. **Your responses are confidential and will be used for research purposes only**. Please respond to each statement using the five-point Likert scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Not sure 4 = Agree, 5 = Strongly Agree.

DEMOGRAPHIC INFORMATION

1. **Gender:** Male ☐ Female ☐
2. **Cadre:** Medical Staff ☐ Support Staff ☐ Manager ☐
3. **Years of experience at Medical Store:**

   ……

SECTION A: **Coercive Pressures**

Statement	**KEY**	5	4	3	2	1
Regulations from the National Drug Authority (NDA) strongly influence waste management practices in our medical store.	A1					
Compliance with NDA guidelines has improved the safe disposal of expired and spoiled medicines.	A2					
Enforcement of pharmaceutical waste regulations has increased worker safety at our medical store.	A3					

Donor or funding agency requirements encourage our medical store to adopt environmentally friendly waste disposal practices.	A4					
Weak enforcement of NDA guidelines limits the effectiveness of waste management practices in our medical store. (reverse coded)	A5					

SECTION B: NORMATIVE

Statement	**KEY**	5	4	3	2	1
Professional standards in healthcare have guided our medical store to adopt safe waste disposal practices.	B1					
Training programs on waste management have improved the ability of staff to handle pharmaceutical waste safely.	B2					
Community expectations encourage our medical store to adopt sustainable waste management practices.	B3					
Religious or ethical values influence how waste is handled at our medical store.	B4					
Limited awareness among staff reduces the effectiveness of normative pressures in promoting sustainable waste management. (reverse-coded)	B5					

Section C: Mimetic Pressures

Statement	KEY	5	4	3	2	1
Our medical store has adopted waste segregation practices by imitating leading hospitals or pharmacies.	C1					
Mimicking advanced waste management practices from peers has reduced environmental risks in our operations.	C2					
Emulating waste handling protocols from other facilities has improved worker safety in our medical store.	C3					

Peer institutions influence us to align waste management practices with global biosafety norms.	C4					
Copying practices from other facilities without considering our resource capacity has created inefficiencies. (reverse-coded)	C5					

SECTION D: Waste Management Practices

Statement		5	4	3	2	1
Our medical store regularly segregates pharmaceutical waste according to type (hazardous, non-hazardous).	D1					
All pharmaceutical waste containers and packages are clearly labeled before disposal.	D2					
Staff handling pharmaceutical waste consistently use personal protective equipment (PPE).	D3					
Expired or spoiled medicines are routinely returned to suppliers/manufacturers through reverse logistics.	D4					
The medical store follows NDA-approved disposal methods (incineration, inertization, or safe landfilling).	D5					
Records of pharmaceutical waste generated and disposed of are consistently maintained.	D6					

SECTION E: SUSTAINABILITY PERFORMANCE

Environmental Sustainability

Statement		5	4	3	2	1
Waste management practices at our medical store have reduced the risk of environmental pollution.	E1					
Adoption of safe disposal methods has minimized contamination of soil and water.	E2					
Social Sustainability						
Proper waste management has improved worker safety by reducing exposure to hazardous waste.	E3					

Pharmaceutical waste practices at our medical store have prevented the spread of diseases in the community.	E4					
Waste management practices have strengthened community trust in our healthcare services.	E5					
Economic Sustainability						
Effective waste management practices have reduced costs associated with non-compliance penalties.	E6					
Improved waste handling has minimized resource losses and improved operational efficiency.	E7					
Donor and government confidence in our institution has increased due to responsible waste management.	E8					

INTERVIEW GUIDE

Please provide detailed responses based on your experiences and observations. All responses will remain confidential and be used solely for research purposes.

Objective 1: Coercive Pressures and Sustainability Performance, Mediated by Waste Management Practices

i) What challenges do you face in achieving environmental compliance and worker safety due to these regulations?

ii) In what ways do external pressures, such as donor expectations contribute to or hinder community well-being and environmental sustainability?

Objective 2: Normative Pressures and Sustainability Performance, Mediated by Waste Management Practices

iii) How do professional standards influence the adoption of waste management practices at the Diocese of Jinja Medical Store?

iv) What role do societal norms play in shaping waste management practices at the medical store?

v) How do these norms affect the store's ability to achieve sustainability performance, particularly in terms of community well-being?

Objective 3: Mimetic Pressures and Sustainability Performance, Mediated by Waste Management Practices

vi) Can you describe instances where the Diocese of Jinja Medical Store has adopted waste management practices?

vii) How does peer influence within diocese networks affect the medical store's waste management practices?

viii) What impact do peer practices have on community well-being and overall sustainability performance?

Thank you for your time

UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa

School of Business

Tuseday, 7 August 2025

Chief Administrative Officer
Diocese of Jinja Medical
Jinja City, Uganda

Dear Sir,

RE: **Introduction of Ms. Namugerwa Mary Josephine- M23B12/056 for Data Collection Permission**

I am writing to introduce Ms.Namugerwa Mary Josephine, a Bachelor of Procurement and Logictis Management student at Uganda Christian University. Ms. Namugerwa is currently in the advanced stage of her academic journey and is conducting a dissertation on "Waste Management in Pharmaceutical Supply Chain and their Impact on Sustainabilty Performance ."

I assure you that Ms Namugerwa will adhere to all ethical guidelines and treat any data collected with the utmost confidentiality. She is a responsible student dedicated to conducting a thorough and rigorous study.

We kindly request your support in granting Ms. Namugerwa access to relevant data and personnel within any department personnel with objective knowledge regarding her topic. Your valuable insights will significantly contribute to the success and quality of her research.

Thank you for considering her request. Should you require any additional information, please do not hesitate to contact me on the address provided here below.

07 AUG 2025
JINJA
MEDICAL SERVICES LTD.

Sincerely,

.....

Mukisa Simon Peter
Lecturer and undergraduate
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Email smukisa@ucu.ac.ug Mob. 0752938600

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