

THE EFFECT OF INVENTORY MANAGEMENT PRACTICES ON SERVICE DELIVERY: A CASE STUDY OF PEARL WELLNESS CENTER, MUKONO

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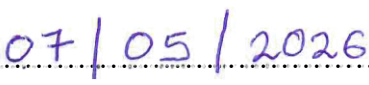
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DECLARATION

As per the University values of integrity and diligence. I have not received any unauthorized assistance while working on my research. I NABAJJA PRISCILLA declare that the work is authentically mine and to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the university. The only work used that has been published by other persons has been purely for reference purposes.

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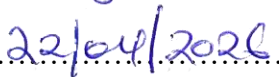
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S23B12/055.

APPROVAL

I hereby certify that this dissertation entitled “The effect of inventory management practices on service delivery” has been done by Nabajja Priscilla of reg no. S23B12/055 under my supervision and is ready for submission of my approval as the University supervisor.

Sign 

Date 

MRS. TUMUHAMYE COMFORT MPIRIIRWE

SUPERVISOR

DEDICATION

I dedicate this piece of work to the Almighty God who guided, strengthened and empowered me with wisdom in the course of study. It was a challenging task which required a lot of patience, time but the Lord's presence was with me.

I also dedicate this work to my father, Mr. Balikatta Kezekia and my mother, Namyalo Suzan for the ever-unending love, support and courage they rendered to me in the course of my study at university and also during the time of carrying out my research. May the Almighty God reward the works of your hands? Amen.

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ABSTRACT

This study examined the effect of inventory management practices on service delivery at Pearl Wellness Centre in Mukono, Uganda. The main objective of the study was to assess how inventory management practices influence service delivery, with specific focus on inventory management practices used at the Centre, the relationship between inventory accuracy and service delivery, and the challenges affecting effective inventory management.

This study adopted a mixed-methods approach, using both qualitative and quantitative methods. A sample of 15 was surveyed through questionnaires, interviews and observations. Data was tabulated, frequency and percentages were used to interpret the findings.

The study established that Pearl Wellness Centre has basic inventory management practices that include using previous consumption data, stock-taking and matching physical and recorded stocks. The study also revealed a positive link between inventory accuracy and service delivery, in that inventory accuracy results in less emergency orders, better service and satisfied customers. But the study found factors negatively impacting effective inventory management, such as lack of financial support, ineffective supplier coordination, use of manual systems, absence of modern technology and poor supervision. The study found that good inventory management practices enhance service delivery at Pearl Wellness Centre by ensuring supply of medical items and avoiding service disruptions. The study concluded that the Centre should implement computerised systems, improve supplier coordination, increase funding for inventory management, and strengthen staff training and supervision to improve inventory performance and service delivery. Accuracy and service delivery, and the challenges affecting effective inventory management.

CHAPTER ONE

1.1 Introduction

This chapter entailed the background of the study, statement of the problem, purpose of the study, specific objectives, research questions, and significance of the study, scope of the study, limitation and delimitations.

1.2 Background of the study

The efficient inventory management is crucial to the healthcare systems throughout the world to make sure that the necessary supplies, medication, and equipment are at hand when required to provide quality care. Inventory poor practices especially in hospitals especially in the private set up have been commonly associated with stock-outs, wastage by expiry, delays in service delivery and high costs. Such inefficiencies may undermine patient satisfaction, worsen the quality of the provided services, and lower the overall outcomes of the healthcare facility (Mackenzie et al., 2020; Nabukeera, 2023).

Healthcare logistics are recurrent problems in several countries in East Africa. Stock-outs and supply chain delays are prevalent particularly in rural and semi-urban health facilities. Weak transportation networks, unreliable supplier delivery, and inaccurate forecasting are some of the factors that usually cause discrepancies between demand and supply (Wakibi et al., 2021). Inventory tracking Information systems have been poorly developed, paper based or disparate digital systems have ensured that data on consumption stocks, lead time and expiry was not reliable and planning was a challenge (Tumwesigye, 2019). Financial, human, and infrastructural Resource constraints Resource constraints include financial, human, and infrastructural limitations, limited storage capacity, cold chain reliability, and staff training in the best practices like First Expire, First out (FEFO); First In, First Out (FIFO); or ABC classifications (Nabukeera, 2023).

Standards of inventory management have not always been imposed by regulatory and institutional environments. There are examples of the lag of some private facilities in terms of

the best practice, but the latter tend to be more flexible than the former (Ssengooba et al., 2015). These issues are common in most of the East African states such as Kenya, Tanzania, Rwanda, and Uganda. As an example, Tanzania research revealed that following the implementation of electronic Logistics Management Information Systems (eLMIS) and the enhancement of data visibility and utilization, the number of stock-outs of medicines also decreased, and the performance of the entire supply chain also improved (Wakibi et al., 2021). Probably, these interventions are more powerful in the public sector or donor-funded programs, though.

The role of the private health sector in the delivery of health services has increasingly become significant in Uganda. Clients have also been visiting private hospitals due to the congestion or their perception of quality or speed of services at the public hospitals (Ssengooba et al., 2015). Nonetheless, operational expenses, regulatory, and inefficiencies in the supply chains have also been a challenge to the operations of the private hospitals (Nabukeera, 2023).

An examination of private hospitals in Uganda, including Nakasero and Nsambya Hospitals, revealed that the financial performance is affected significantly positively by the practice of inventory control (such as material handling, purchase order system, and storage conditions) (Nabukeera, 2023). However, bad storage facilities (e.g., temperature control), low storage capacity, ineffective reverse logistics (receiving, returning products), and poor documentation are recurrent issues (Nabukeera, 2023).

Equally, research in state-owned hospitals (e.g., Arua Regional Referral Hospital and Kabale Referral Hospital) indicates that inventory management strategies (forecasting, ordering, inventory counting methods, and use of ABC, FIFO, and FEFO methods) have a severe impact on the service delivery in terms of timely supply availability, patient satisfaction, cost management, and decrease in waste (Tumwesigye, 2019). The barriers to effective health facilities in Uganda have been reported as the use of manual inventory systems rather than automated systems, poor forecasting and consumption data, delays in supplier delivery, insufficient interdepartmental cooperation (procurement, stores, clinical), ineffective personnel training, and resources to meet special storage requirements, such as the maintenance of cold chains (Tumwesigye, 2019).

Although extensive research has been done on the topic of inventory management in large hospitals and government institutions, smaller facilities like Pearl wellness centres have received

little attention. Most of the available research has focused on financial performance as opposed to metrics of service delivery including timeliness, patient satisfaction, and quality of care (Nabukeera, 2023). The Pearl Wellness Center in Mukono is a smaller privately owned organization with distinctive patient mix, management structure, size, and resources. Such aspects potentially generate different inventory management issues and impacts than those of larger hospitals or community institutions. Thus, studying the impact of inventory management practices on service delivery in Pearl Wellness Center, Mukono was to close a gaping gap in the knowledge of how smaller privately owned healthcare institution could enhance service delivery with improved inventory practices.

1.3 Statement of the Problem.

Pearl Wellness Center Mukono was anticipated to undertake the right inventory management procedures that included proper monitoring of stock, reordering at the right time, effective record keeping and effective storage which would lead to uninterrupted supply of necessary stock, reduce wastage and increase efficiency in service provision. Research has indicated that proper monitoring, consumption-related reordering, and advanced logistic tools are the major factors in ensuring the continuous supply of needed drugs in hospitals (BMC Health Services Research, 2023; NetSuite, n.d.). These practices ideally should ensure that staff are able to access the required materials on time, minimize service delays and facilitate client satisfaction.

Nonetheless, Pearl Wellness Center has been reported to have frequent stock-outs of the essential medical and wellness supplies, delays in the provision of services, and at times overstocking of the low-demand products. This was typical of health facilities where there is a lack of efficiency in inventory management that culminates in frequent stock-outs, higher operating expenses, and lower patient satisfaction (Human Resources for Health, 2022; Journal of Pharmaceutical Policy and Practice, 2022). The impact of these difficulties was the disruption of service, appointment delays, and wastage of perishable goods which could have had adverse effects on client confidence and efficiency in operations (NetSuite, n.d.).

1.4 Objective of the Study.

This study was aimed at investigating how inventory management practices influence service delivery of Pearl Wellness Center, Mukano.

1.5 Specific objectives of the Study.

- To study the inventory management settings applied at Pearl Wellness Centre Mukono.
- To determine the correlation between inventory accuracy and service delivery in Pearl Wellness Centre Mukono.
- To determine the issues that are impacting effective management of inventory at Pearl Wellness Centre.

1.6 Research Questions of the study.

- What inventory management was applied at Pearl Wellness Centre in Mukono?
- What was the impact of the accuracy of the inventory on service delivery in the facility?
- What are some of the challenges that made effective inventory management at Pearl Wellness Centre?

1.7 Significance of the study

- ❖ This research was helpful to national and local health policy makers in relation to the prevailing condition of inventory management, as it presented evidence to be used in formulating or amending guidelines and policies to enhance inventory management.
- ❖ In the case of students and graduates in disciplines, this study acted as a case study in the real world that can be related to theory and assist in comprehending the influence of inventory practices on the outcomes of healthcare delivery.
- ❖ The research was also used in future scholarly activities and was a stimulus to conduct further research regarding the efficiency of supply chains, electronic inventory, or health logistics concerns in related situations.

1.8 Scope of the Study.

1.8.1 Geographical Scope

The article only conducted the research on Pearl Wellness Centre, which is in Mukono Municipality, Uganda, and not on other private/public hospitals.

1.8.2 Content Scope

The study provided was centered on inventory management practices including ordering, storage, record keeping and monitoring stock and their impact on service delivery. This study is limited to other areas of operational or financial management.

1.8.3 Time Scope

The analysis aimed at inventory practices and service delivery outcomes that would be carried out between the years 2023 and 2025, based on the data available within the same period.

1.9 Limitations of the Study.

- Time constraints. The study was also limited in time because it was performed within a limited time in academia and this could hamper the rigor and breadth of data collection and analysis.
- The research lacks a generalizability since it was conducted in one of the privately operated health facilities, Pearl Wellness Centre, in Mukono and as such the results might not be the most accurate when it comes to all the privately operated health facilities or hospitals in Uganda.
- Access to some inventory records and operational data was occasionally limited because of confidentiality issues or because of incomplete documentation, which might compromise the validity and fullness of the study results.
- Some employees were not ready to reveal any weaknesses in their inventory management systems as they were afraid of being blamed or criticized which may have interfered with the sincerity and dependability of information given in the interview or questionnaires.

1.10 Delimitations of the Study

- The study also focused on inventory management practices but not on other operational or administrative functions in the hospital.

- The case study, Pearl Wellness Centre, was chosen based mostly on its accessibility and relevance and not necessarily a representative of all the private health facilities in Uganda.
- The study centered on data and practices in the years 2023-2025 and does not look at historical trends beyond the years.
- The research was limited to a private wellness centre and not to the public hospitals or pharmacies.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The chapter involved a literature review of the available literature on the effect of inventory management practices on service delivery. The major variables in the literature review were variable 1 and variable 2. It also reviewed literature that was consistent with the three main objectives of the study, by analysing the inventory management practices employed at Pearl Wellness Centre Mukono, the correlation between the accuracy of inventory and the service delivery at Pearl Wellness Centre Mukono, the issues that pose a challenge to efficient inventory management at Pearl Wellness Centre.

2.1 Definition of Key Variables

This section established the key variables of the study, which are Inventory Management Practices (independent variable) and Service Delivery (dependent variable). These are the main concepts that served to base the study on the existing literature and give a clear idea of how they were implemented in the framework of the Ugandan private healthcare facilities.

2.1.1 Inventory Management Practices

Inventory management practices include the process of planning, organizing, controlling, and monitoring materials and products in order to make sure that they are available when required, in the correct amount, and at the lowest possible costs. Bhattacharyya, Chanu and Dutta (2022) argue that inventory management practices involve ordering, issuing, storing and trading of inventory products and are a component of supply chain management. In a different review, Munyaka and Yadavalli (2022) define inventory management as a key management operation in logistics and material management systems, where it is important to control inventory to ensure operational success.

Chase, Jacobs, and Aquilano (2019) posit that the literature usually includes such components as stock level management, demand forecasting, reorder systems safety stock, recording systems, technology use and supplier coordination. As an illustration, Ayivi, Anane & Awuah (2022)

discovered that inventory planning and scheduling and recording are some of the practices employed in institutions to enhance efficiency. According to Wild (2017), the key component of operational efficiency is inventory control since the availability of necessary items to maintain the continuous working process should be guaranteed. Inventory management in a healthcare facility is more urgent because of the urgency and nature of medical supplies.

According to the World Health Organization (WHO, 2017), inadequate inventory management is one of the factors that have led to shortages, wastage, and expiry of vital medicines in most developing countries. This implies that the structured methods like the ABC analysis, Just-in-Time (JIT) and computerized inventory management systems can greatly enhance the availability of inventory and minimize operational risks. Lysons and Farrington (2020) also emphasize the fact that today organizations are increasingly incorporating technology, including Enterprise Resource Planning (ERP) and barcodes, to improve accuracy and real-time access.

It has been established in the literature that human resource capacity plays a critical role in effective inventory practices. According to van der Vorst and Beulens (2021), documentation and timely ordering are enhanced by a trained staff and well-defined procedures. Baily et al. (2018) confirm that supplier management, such as the control of lead-time and long-term cooperation with suppliers, is essential to ensure the optimal level of stocks. When referring to health facilities, Management Sciences for Health (MSH, 2012) suggests standard operating procedures in the procurement, storage, and distribution to avoid any shortages and improve accountability. To conclude, the literature shows that inventory management practices including forecasting, stock control methods, technology systems and coordination with suppliers are important in ensuring the unending supply of essential supplies. Such practices increase efficiency, decrease wastage, and facilitate the smooth running of operations especially in health facilities where service delivery is greatly affected by accessibility of the medical supplies in a timely manner.

2.1.2 Service Delivery

Service delivery is the extent to which an organization delivers services of the required standard of the availability, responsiveness, reliability, and quality and client satisfaction. Service delivery in most of the public and private service settings entails the availability of the required inputs (such as inventory items) when needed, in the required quantity and quality, and utilized to

benefit the clients. As an illustration, a study by Nalubowa (2019) in Uganda defined service delivery as the relationship between providers and clients where the service is provided by the former and loss or value is as a consequence to the former. The World Health Organization (2017) recommends that the delivery of services in the healthcare sector needs good systems that guarantee the provision of medical commodities and prompt care to patients. Research indicates that inventory availability, supply reliability and service timely as key measures of service delivery (see e.g., Mburu, Ngugi and Ofula, 2020, a Kenyan hospital case). Study In service delivery, the operationalization will be facilitated through the following indicators: availability of service (or items of service needed to service), reliability of service (delivering to promised standards/time), service quality and customer/client satisfaction.

The world has a very high connection between quality service delivery and the presence of required inputs, competency of staff, and facility preparedness as well as supply chain reliability. According to Donabedian (1988), effective service delivery relies on the structure (resources), processes (activities), and outcomes (patient satisfaction and health results). This model has been used to direct decades of research on healthcare quality. According to the evidence provided by World Bank (2018), the lack of basic supplies like medicines and diagnostic supplies directly affects the delivery of services through the following ways: the patients have to wait longer, the diagnosis becomes less accurate, and the patients become dissatisfied. Also, the Behavioral Model of Health Services Use by Andersen (1995) indicates that enabling resources like medical equipment, drugs, trained staff, and functional infrastructure affect the outcomes of service delivery. The lack of the resources denies healthcare providers the opportunity to address the needs of patients in time. In several low- and middle-income countries, WHO (2020) research indicates that insufficient inventory systems interfere with the ongoing delivery of services, leading to long wait time, procedures cancelled, and the lack of trust in the health institutions.

Patient satisfaction is also now an essential measure of service delivery. Al-Abri and Al-Balushi (2014) note that access to medicines, service speed, and professionalism of the staff are some of the factors that greatly influence the perception of quality by patients. Access to drugs, medical supplies and diagnostic materials are important in wellness centers and clinics since time delays influence the effectiveness of treatment. Furthermore, Kotler and Keller (2016) also note that the customer-centered service delivery process should be based on efficiency, reliability, and

responsiveness to the needs. This shows that service delivery in the healthcare sector is multidimensional, where resources are available, the processes are efficient, the patient is satisfied with the services, and employees perform well. Good service delivery entails sufficient supplies, trained staff and responsive systems a relationship that high inventory management level is important to the smooth and reliable operations of healthcare.

2.2 Inventory Management Practices used

Inventory management practices are the methods and procedures involved in the activities of organizations to plan, control, and monitor stock amounts to maintain efficiency in operations (Waters, 2019). Proper inventory control enables companies to hold the correct level of stocks, minimize stock-outs, decrease holding costs and increase service delivery (Lysons & Farrington, 2016). Waters (2019) further explains that inventory management is a process that coordinates the activities to make sure that materials are available when required, in the correct quantity, and at the minimum cost possible. Companies around the world depend on organized methods of controlling inventory e.g. classification of stock, forecasting, maintaining records of inventory, stocktaking and technology systems to take good care of their inventory.

Inventory classification, especially the ABC analysis, is one of the commonly accepted practices. This model categorizes inventory by value and consumption rate, and the organizations can exercise stringent control over high-value inventory and less rigorous controls over low-value inventory. The international studies demonstrate that ABC classification improves efficiency of inventory planning. As an example, Lysons and Farrington (2020) note that the ABC model enables organizations to focus on resources and monitoring activities on the items that have a strong effect on the continuity of operations. In healthcare, drugs, medical supplies, and reagents of varying value and use are controlled through the ABC analysis. In a study conducted in India by Vuddagiri et al. (2019), the ABC-VED matrix analysis increased hospital access to drugs and decreased wastage.

Reorder point (ROP) system defines the amount of stock that should be ordered so that there can be no stock-outs (Waters, 2019). ROP is utilized by healthcare facilities to maintain the availability of necessary consumables like drugs, medical supplies, and laboratory supplies to support the care of the patients.

Demand forecasting is yet another significant practice. Forecasting enables organizations to anticipate the future consumption patterns using the past trends, seasonality's, and variations in demand. Chopra and Meindl (2021) state that forecasting improves planning and purchasing decisions and minimizes the risk of overstocking or stock-outs. Forecasting is also important in hospitals and wellness centres to make sure that necessary medicines, laboratory reagents, and medical consumables are on hand at all times. According to McKone-Sweet et al. (2020), international studies have revealed that proper prediction in healthcare supply chains leads to shortages and helps to enhance patient safety.

Inventory management practices also involve stock recording and documentation which is a key practice in the world. Good stock records be it manual or electronic give sound information regarding movements of the stock, its availability and consumption. According to Richards (2018), when documentation is done correctly, then it can minimize discrepancies and also enable organizations to trace their losses, leakages and inefficiencies. The integrated warehouse systems have enhanced transparency in many countries. In the United States, as an example, automated stock recording systems in hospitals have minimized the number of human errors in drug dispensing (Smith and Roberts, 2017).

Inventory management has been reshaped by technological development that has taken place in the world. Computerized inventory management systems, barcoding, RFID (Radio Frequency Identification) systems and ERP (Enterprise Resource Planning) systems are now used by many organizations to automate inventory processes. Bowersox et al. (2019) indicate that technology promotes the speed, precision, and real-time tracking of stock levels. The implementation of electronic logistics management information systems (eLMIS) in Sub-Saharan Africa has assisted health facilities in keeping the accurate stock data, minimizing stock-outs of vital medicines, and enhancing the efficiency of reporting. Kimaro and Sanga (2018) conducted a study in Tanzania that revealed that electronic systems enhanced visibility of stocks and minimized emergency ordering in public health facilities.

The best practices in inventory management worldwide focus on cycle counting and continuous stock-taking. Stock-taking assists in determining discrepancies between stock and recorded stock. According to Chase et al. (2021), frequent cycle counting helps to avoid the occurrence of large discrepancies and reduce the possibility of pilferage or misreporting. Cycle counting is

especially significant in healthcare systems that are found all over the world due to the high risk of expiry and sensitivity of medical products. The works of other nations show that the practices applied to inventory management such as the classification, forecasting, record-keeping, stock-taking, and technological usage are essential in terms of operational efficiency and service delivery consistency.

2.3 Inventory Accuracy and Service Delivery

Inventory accuracy can be described as the correspondence between the physical inventory and the inventory levels indicated in stock documentation like bin cards, ledgers, or computerized systems. Proper inventory management is the core of effective decision-making, especially in healthcare settings where patient outcomes largely depend on the access to the required medicine and supplies. Richards (2018) emphasizes that inventory accuracy increases the efficiency of operations through the provision of credible purchasing, distribution, and stock management data. Likewise, Mburu, Ngugi, and Ofula (2020) have found out that proper inventory systems in hospitals offer better planning in procurement and offer prompt supply of the necessary supplies thus improving the level of patient care.

The use of technology based inventory systems is also found to reinforce inventory accuracy as is evidenced by other countries across the world. Accuracy is enhanced through RFID technology, barcoding and automated tracking systems which help minimize human errors which are caused by manual recording. Surveys conducted in Europe indicate that hospitals with automated inventory also decreased stock discrepancies by 80 percent (McKone-Sweet et al., 2020). Munyaka and Yadavalli (2022) also posit that a more modern technology like barcoding, Radio Frequency Identification (RFID), and Enterprise Resource Planning (ERP) systems improves the accuracy of inventory by offering real-time information. Proper records would allow health care providers to prevent interruptions in services and avoid redundancy in the form of spoiled or lost goods.

A number of studies are associated with inventory accuracy in enhancing service delivery. Smith and Roberts (2017) discovered in the United States that hospitals that had correct inventory records had fewer service delays and lower rates of cancelled operations. The reasoning behind this is that precise stock information will ensure the health providers get the right items at the right time and this will not interfere with the treatment of the patient. Waters (2019) likewise

claims that inaccurate inventory is the cause of stock-outs, overstocking, and emergency orders all of which have negative implications on service reliability. Inventory inaccuracy is one of the primary reasons why service delivery is poor in the developing countries. According to a study done by Wanjiru (2020) in Kenya, the problem caused by poor inventory management was that most of the time there were shortages of drugs in the government health facilities and patients had to buy it privately at a high price. This decreased patient satisfaction and confidence in state healthcare. The study found out that the accuracy of stocks would be very instrumental in enhancing the delivery of health services.

Lead times also need to be minimized using accurate information on inventory. With the help of good stock data, procurement officers are able to make timely orders and make sure that stock replenishment is in line with the pattern of consumption. Chopra and Meindl (2021) argue that correct inventory data assist organizations in being able to continue with their operations and decreases the time lag in service delivery. Access to consumables like gloves, syringes, and laboratory supplies in wellness centres are crucial to effective handling of patients.

Moreover, inventory precision improves the quality of services since it contributes to the supply of necessary goods. The study by Parasuraman et al. (1985) reveals that service reliability is one of the important dimensions of service quality. Poor records are detrimental to reliability because they bring out doubts regarding the presence of required resources. Lack of necessary medicine or equipment in hospitals around the globe as a result of inaccurate records results in service delays, increased waiting periods and lower patient satisfaction.

Cost efficiency also helps in the service delivery, which is indirectly affected by inventory accuracy. Bowersox et al. (2019) believe that poor inventory bookkeeping results in unnecessary purchases, theft, and wastage, which drive up the operating expenses. The cost of operation is high, which constrains the funds that can be used to enhance service delivery. Contrary to this, precise inventory systems will minimize cost overheads and enable institutions to invest in quality improvement projects. Hence, the positive connection between accuracy of inventory and quality service provision is always marked in the world literature, particularly in health and wellness facilities where efficiency of service provision relies on the availability of the necessary resources. The accuracy of inventory results in timely availability of supplies, high service reliability, and high level of customer satisfaction and low cost of operation.

2.4 Challenges Affecting Inventory Management

Inventory management is being faced by the world but the level and nature of the challenges vary among the developed and developing countries. Poor staff training is one of the challenges faced all over the world. Inventory management involves expertise in all the procedures involved e.g. stock-taking, record-keeping, forecasting and technology usage. Lysons and Farrington (2020) observe that the absence of proper skills among staff members will result in mistakes in recording and processing stock, and create discrepancies and inefficiencies. In a Nigeria-based study, Olanrewaju (2019) discovered that shortage of trained staff was a major cause of inventory errors and stock-outs in government hospitals.

Low levels of technological adoption are also another obstacle. Although computerized inventory systems are common in developed countries, most health facilities in developing countries are still using manual systems. Manual systems are vulnerable to human error, slow and have little real time visibility. According to Richards (2018), technology enhances accuracy, speed, and transparency, yet it is not always adopted in low-income areas due to financial limitations. In a study conducted in Ethiopia, Tesfaye and Kitaw (2021) found that use of manual stock cards led to high levels of discrepancies and out of date medicines in government hospitals.

Another major challenge is financial constraints. The inventory management needs resources to buy the right amount of stock, invest in technology, get storage space, and educate employees. Bowersox et al. (2019) state that inadequate budgets in organizations can lead to shortage of stock, substandard storage facilities, and absence of automated system. Inventory systems in most African countries are not stable and trustworthy because the health facilities depend on donors to provide the necessary medicines.

Lack of proper storage facilities is a worldwide problem, particularly in health facilities where sensitive or perishable products are stored. Mishandling which may be manifested in improper shelving, poor ventilation, or no control of temperature will cause damage, spoilage, and expiry. Waters (2019) asserts that poor storage does not only influence the quality of stocks but also the accuracy of records since goods might be lost or destroyed without anyone noticing. Surveys are conducted in several Asian countries and demonstrate that the hospital pharmacies often lack the space to store their stock, which leads to congestion and mis location of stock (Gupta and Kant, 2020).

Ineffective inventory management is also supported by weak supervision and internal controls. Chase et al. (2021) observe that insufficient monitoring promotes pilferage, fraud, and carelessness. Nakyanzi et al. (2019) performed a study in Uganda and found that absence of effective supervision in hospital pharmacies led to stock-outs of medicine, leakages, and inadequate documentation.

Poor coordination of suppliers is another typical challenge which leads to fluctuating delivery schedules, long lead times and emergent orders. According to Chopra and Meindl (2021), poor supplier relationships cause the unpredictability of replenishment and disturb the operational planning. In most parts of the world, health systems that rely on central medical stores are prone to delays as a result of the bureaucratic procurement procedures. In general, the literature shows that all these issues have a cumulative impact on the efficiency of inventory operations and might seriously interfere with service delivery, particularly in the facilities that are based on the constant presence of the operational supplies. To solve these challenges, it is necessary to enhance service delivery in organizations by investing in digital inventory management systems, ongoing staff training, and enhanced relationships with suppliers to guarantee the availability of the necessary medical supplies in time.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter described the approach to the study of how inventory management practices have impacted on service delivery at Pearl Wellness Center, Mukano. It discussed the research design, sampling techniques, sample size, data collection sources, data collection instruments, procedures, validity and reliability of data.

3.1 Research Design

A mixed methods approach was adopted, which entailed the application of both methods. Quantitative method was employed to gather numerical data concerning the inventory management practices and service delivery by using questionnaires whereas the qualitative approach was employed to get detailed information by the management through interviews. This method was selected to give a detailed and valid result.

3.2 Sampling Techniques

Purposive sampling method was employed in the selection of key informants including managers, inventory/store officers due to their knowledge and experience in inventory management and service delivery. The other staff members were selected through simple random sampling technique so that they could have equal opportunity to participate and so as to reduce bias.

3.3 Sample Size

The sample size for the study was determined using Yamane's (1967) formula.

$$n = \frac{N}{1 + Ne^2}$$

Where:

n = Sample size

N = Population size (15)

e = Margin of error (0.05)

$$n = \frac{15}{1 + 15(0.05)^2}$$

$$n = \frac{15}{1 + 15(0.0025)}$$

$$n = \frac{15}{1 + 0.04}$$

$$n = \frac{15}{1.04}$$

$$n = 14.4$$

Therefore, 14 respondents were selected out of 15 people in the population.

3.4 Data Collection Sources

3.4.1 Primary Sources of Data

Primary data were collected directly due to respondents by use of a questionnaire, interview insights, and observations. This gave the researcher the opportunity to gather firsthand information about the inventory management practices of the organization and their impact on delivery of services.

3.4.2 Secondary Sources of Data

Company records, procurement manuals, annual reports and other related documents were used to get secondary data. The other information may also be examined using stock cards, delivery records, textbooks, academic journals, dissertation, and reliable online sources on inventory management and service delivery.

3.5 Data Collection Instruments

3.5.1 Interviews

Key informants, including the Procurement Manager, Store Manager, and Operations Officer, were interviewed using structured interviews. The interviews gave comprehensive qualitative information on inventory control process, stock management issues and its effect on service delivery.

3.5.2 Questionnaires

The questionnaires with closed and open-ended questions were given to employees working in various departments. Closed ended questions presented quantifiable information in a form of numbers, percentages whereas the open ended questions enabled the respondents to elaborate on their answers. Questionnaires were chosen as they were economical, ensured anonymity and provided an opportunity to collect data in a cost-effective manner and question many respondents at a time.

3.5.3 Observations

Systematic observation was conducted to observe, listen and note down the handling of stocks, record-keeping processes and delivery processes as they arose naturally. Observations were used to provide objective data that complemented data obtained through interviews and questionnaires.

3.6 Data Collection Procedures

A letter of introduction was acquired from the School of Business at Uganda Christian University and was presented to Pearl Wellness Centre to seek for permission to collect data.

After permission was granted, questionnaires were distributed to respondents and interviews were conducted with key informants. The researcher collected the completed questionnaires and recorded interview responses for analysis.

3.7 Reliability and Validity of Data

3.7.1 Reliability of Data

Reliability was used in relation to the consistency and dependability of data collection instruments. To test the reliability, the researcher did a pilot test of the questionnaire and interview guide on a small group of staff members who do not form part of the ultimate research sample. Corrections that were necessary were applied to enhance the clarity and consistency of instruments.

3.7.2 Validity of data.

Validity was used to describe the degree to which the instruments measure what they are supposed to measure. An academic supervisor and research experts revised the questionnaire, interview guide, and observation checklist in order to assure content validity. Their recommendations were also used to enhance the accuracy and relevance of the instruments.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND PRESENTATION OF THE FINDINGS.

4.0 Introduction

This chapter gives the data analysis, presentation and interpretation of the findings the respondents gave, discussion of the overall objectives of the entire survey, which entails the inventory management practices at Pearl Wellness Centre Mukono, the relationship between

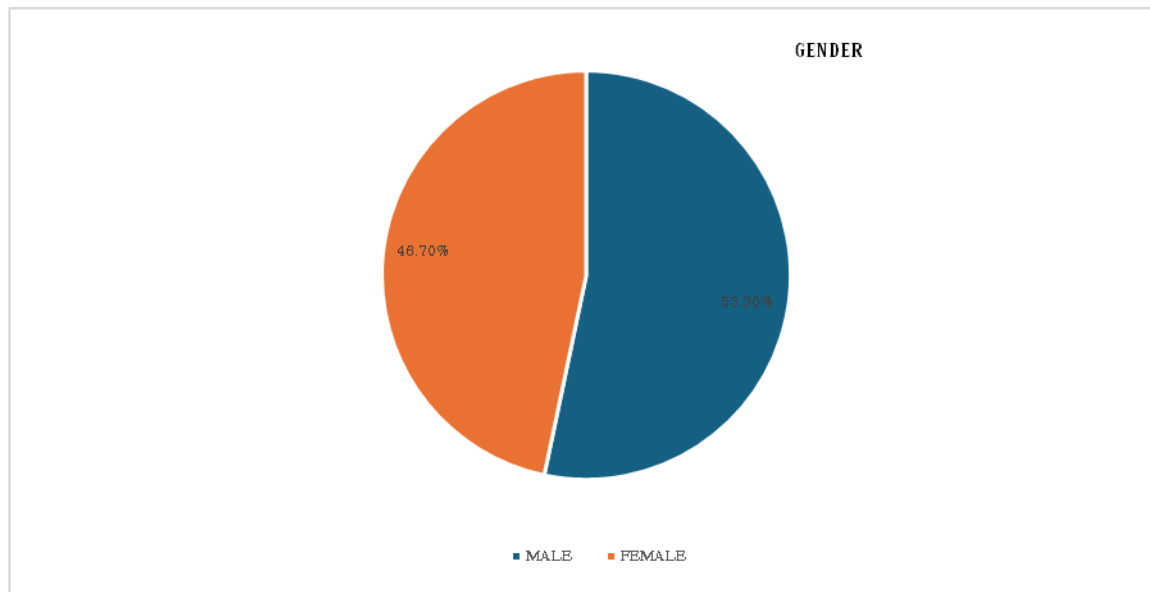
inventory accuracy and service delivery at Pearl Wellness Centre Mukono, and the challenges that affect effective inventory management practice at Pearl Wellness Centre.

4.1 Presentation on demographic characteristics of the respondents

4.1.1 Gender

	Frequency	Percentages (%)
Male	8	53.3
Female	7	46.7
Total	15	100

Figure 1; Gender distribution of respondents

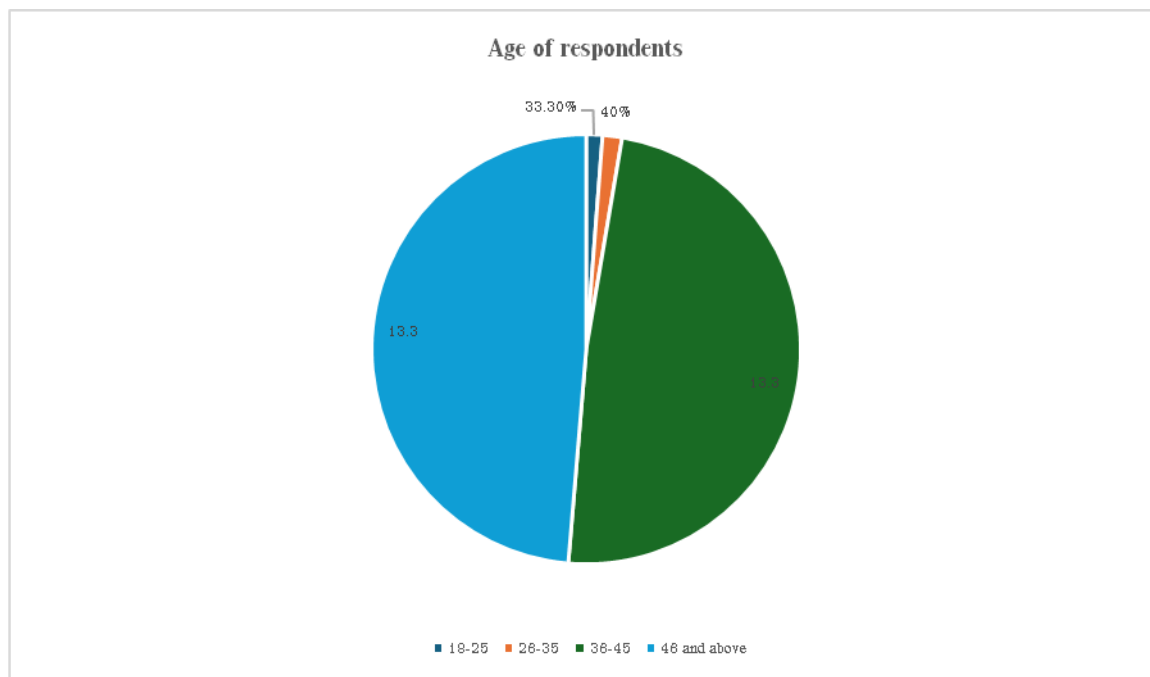


According to the data presented above, 8 (53.3%) of the respondents were men and 7 (46.7%) were women. This indicates that the organization prioritizes gender parity when hiring new employees because they all participate in organizational activities.

4.1.2 Presentations on the age bracket of the respondents.

	Frequency	Percentage (%)
18-25	5	33.3
26-35	6	40
36-45	2	13.3
46 and above	2	13.3
Total	15	100

Figure 2; Age bracket distribution of respondents

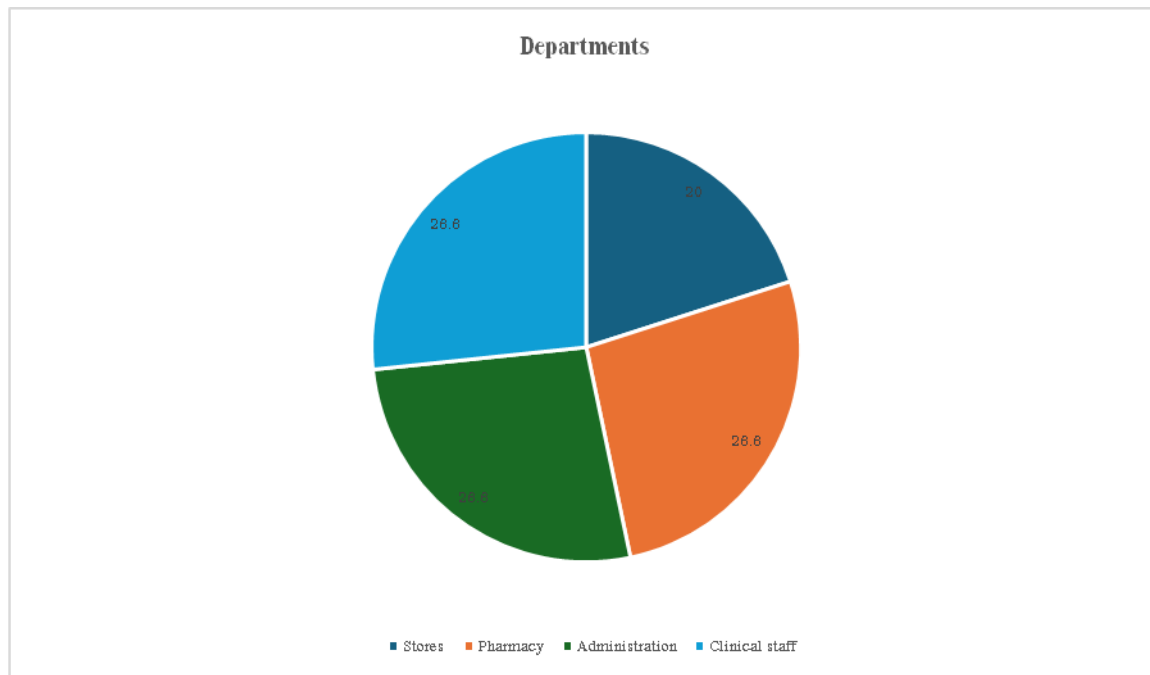


According to findings, respondents as indicated by the data gathered, fall into the following age groups: 26–35 6 (40%), 18–25 5 (33.3%), 36–45 2 (13.3%), and 46 and above 2 (13.3%). This demonstrates that the company employs people who are enthusiastic, have enough energy, and are driven to learn more about their field.

4.1.3 Presentation on the department of the respondents.

	Frequency	Percentage (%)
Stores	3	20
Pharmacy	4	26.6
Administration	4	26.6
Clinical staff	4	26.6
Others	0	0
Total		100

Figure 3; Percentage distribution of respondents according to departments

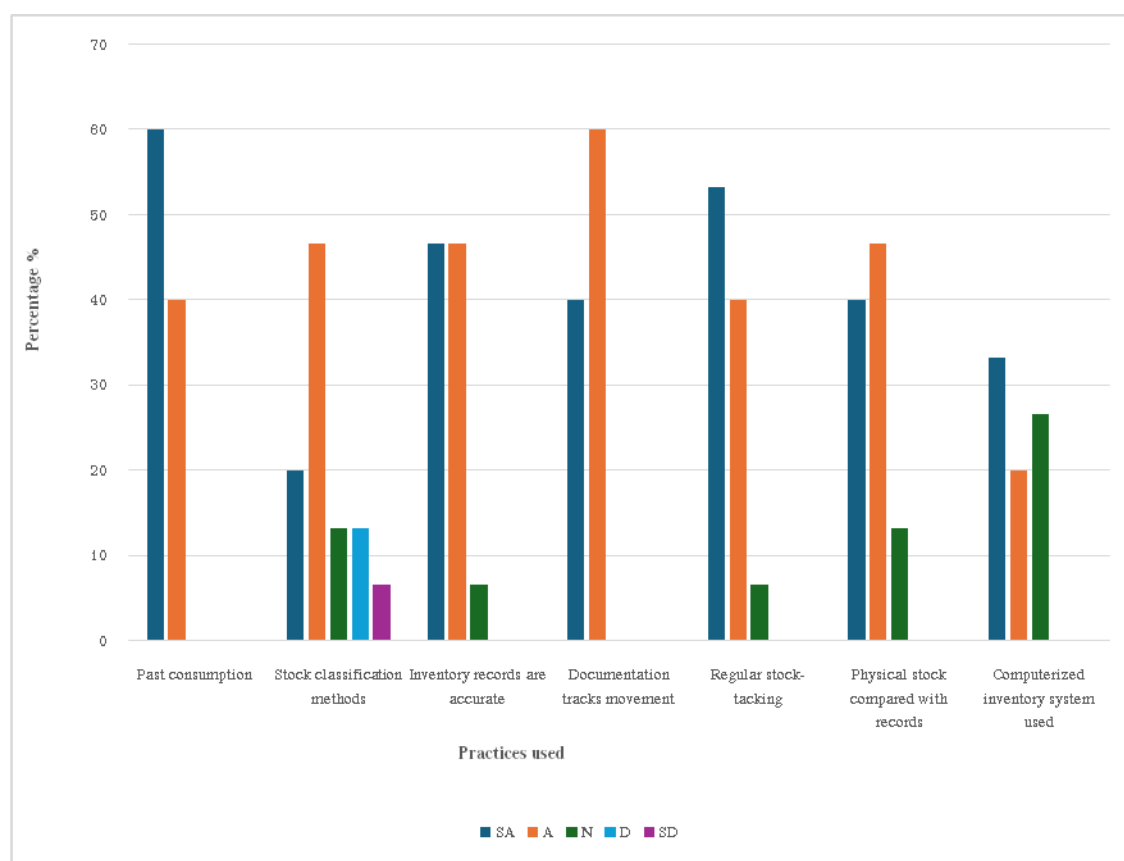


According to the above table, 3 (20%) of the respondents worked in the stores department, 4 (26.6%) in the pharmacy department, 4 (26.6%) in the administration department, and 4 (26.6%) in the clinical staff. This demonstrates that the company has a number of departments that manage different facets of the business, ensuring effectiveness and goals are fulfilled.

4.2 Findings on the inventory management practices at Pearl Wellness Centre Mukono.

S/N	Practices used	SA		A		N		D		SD	
		F	%	F	%	F	%	F	%	F	%
a	Past consumption records are used when planning inventory levels.	9	60	6	40	0	0	0	0	0	0
b	The centre applies stock classification methods such as ABC analysis.	3	20	7	46.6	2	13.3	2	13.3	1	6.6
c	Inventory records accurately reflect quantities of stock available.	7	46.6	7	46.6	1	6.6	0	0	0	0
d	Inventory documentation helps track	6	40	9	60	0	0	0	0	0	0

	stock movement effectively.										
e	Regular stock-taking or cycle counting is conducted.	8	53.3	6	40	1	6.6	0	0	0	0
f	Physical stock is compared with recorded stock levels.	6	40	7	46.6	2	13.3	0	0	0	0
g	The centre uses computerized inventory management systems.	5	33.3	3	20	4	26.6	3	20	0	0



With 60% strongly agreeing and 40% agreeing, the results show that past consumption records are used when planning inventory levels. This suggests that in order to predict demand and reduce stock-outs or overstocking, the center mainly relies on past usage data. The lack of disagreement indicates that staff members consistently use and comprehend this practice.

46.6% agreed, 20% strongly agreed, 13.3% were neutral, 13.3% disagreed, and 6.6% strongly disagreed that stock classification techniques (such as ABC analysis) should be used. While the majority of respondents are in favor of classification techniques, the presence of neutral and disagreeing responses suggests there may be inconsistencies across the departments in the center regarding the use of classification techniques.

Per the survey results, the accuracy of Inventory Records suggests that 46.6% strongly agreed and 46.6% agreed that inventory records accurately reflect quantities of stock available, while only 6.6% were neutral and no-one disagreed. This high agreement rate indicates that the inventory records at the center are accurate. Reliable records are important for decision making, stock management and prevention of losses through mismanagement.

Furthermore, 40% strongly agree and 60% agree that documentation helps to efficiently monitor stock movement. This unanimous agreement suggests that documentation, such as stock cards, issue vouchers and delivery notes are helpful and play an important role in tracking stock movement in and out of storage. Transparent and accountable inventory management is supported by effective documentation. The survey results show that 40% agreed and 53.3% strongly agreed that periodic inventory cycle counting or stock-taking is carried out, with 6.6% being neutral. From the agreed 93.3%, it is evident that the center does conduct physical stock-taking. Periodic stock-taking is important to identify discrepancies, stop stock variations, and ensure that stock is in agreement with the records.

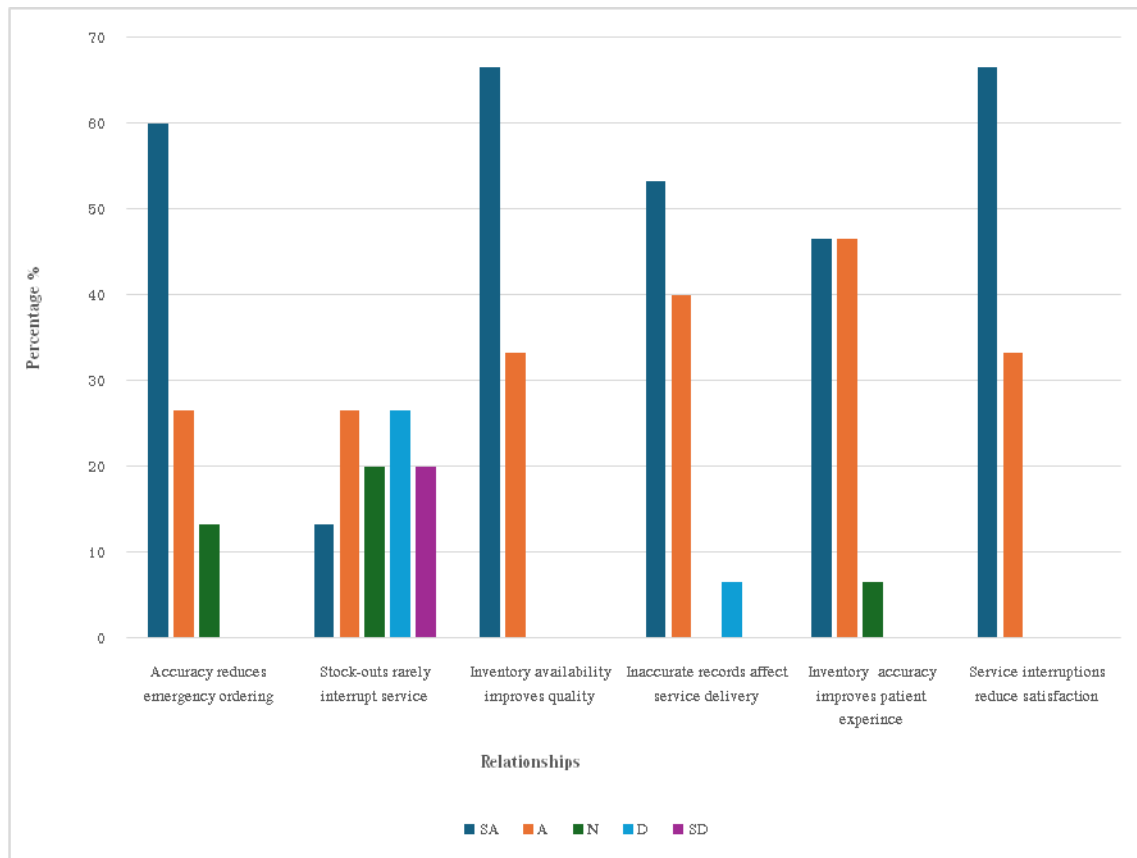
Likewise, 40% strongly agreed and 46.6% agreed that the physical stock is reconciled to the stock records, while 13.3% were neutral. No respondents disagreed. The majority of stock reconciliation procedures are undertaken. Physical counts are reconciled against the computer system to improve internal controls and the accuracy of the inventory. Finally, computerised inventory management systems have various responses. 33.3% strongly agreed, 20% agreed, 26.6% were neutral and 20% disagreed. While the centre has implemented some form of computerised inventory management, it may not be comprehensive. The fairly high rate of neutral and disagree responses suggests there may be issues with system features, training or partial automation of inventory management.

Thus the results suggest that Pearl Wellness Centre has put in place basic inventory management practices, especially in terms of using historical consumption data, maintaining records,

documenting and conducting periodic stock counts. These are examples of formal inventory control practices. But there is limited use of more sophisticated practices like ABC analysis and computerized inventory systems, which could be further developed. Improving these could improve efficiency, cost reduction and ultimately service delivery at the center.

4.3 Findings on the relationship between inventory accuracy and service delivery at Pearl Wellness Centre Mukono.

S/N	Relationship	SA		A		N		D		SD	
		F	%	F	%	F	%	F	%	F	%
a	Inventory accuracy reduces emergency ordering of supplies.	9	60	4	26.6	2	13.3	0	0	0	0
b	Stock-outs rarely interrupt service provision.	2	13.3	4	26.6	3	20	4	26.6	2	20
c	Reliable inventory availability improves service quality.	10	66.6	5	33.3	0	0	0	0	0	0
d	Inaccurate inventory records negatively affect service delivery.	8	53.3	6	40	0	0	1	6.6	0	0
e	Inventory accuracy contributes to positive patient experiences.	7	46.6	7	46.6	1	6.6	0	0	0	0
f	Service interruptions reduce patient satisfaction.	10	66.6	5	33.3	0	0	0	0	0	0



The results show a positive association between inventory accuracy and service delivery. Most (60%) strongly agreed that having accurate stock records helps avoid urgent procurement of supplies, 26.6% agreed and 13.3% were neutral. This implies that having an accurate stock status could facilitate planning and prompt replenishment, thus avoiding emergency ordering.

Yet, there is some contradiction in responses relating to stock-outs. Though 13.3% strongly agreed and 26.6% agreed that stock-outs rarely affect delivery of services, many 26.6% disagreed, 20% strongly disagreed and 20% were undecided. This suggests that despite measures to ensure accurate stock records, stock-outs still occur and disrupt service provision. This implies that there were inconsistencies between record accuracy and stock availability in some cases.

The study also indicated that respondents universally agree (100%) that having accurate inventory enhances service quality, with 66.6% strongly agreeing. This shows that respondents understand the need for stock availability at the right time to improve service quality in health care. In addition, 53.3% of respondents strongly agreed and 40% agreed that inventory

inaccuracy impacts service delivery. This highlights the importance of reliable stock information in facilitating smooth operations and avoiding delays in patient treatment.

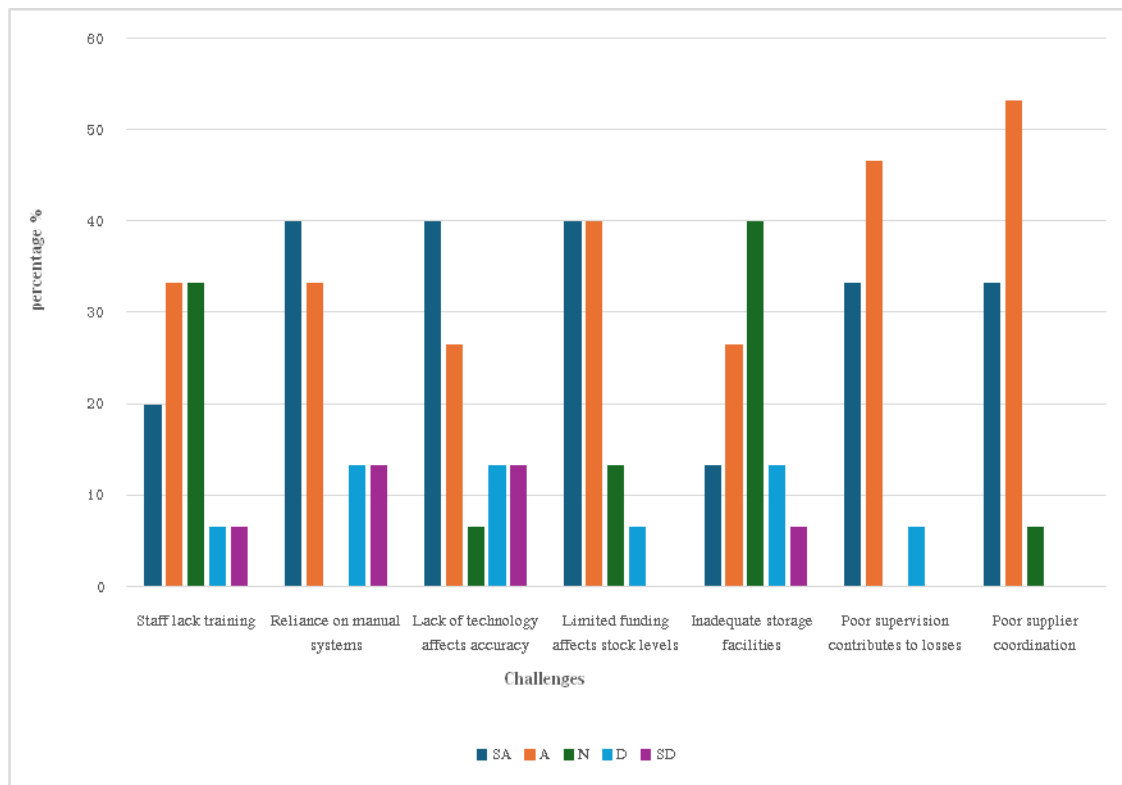
Likewise, 93.2% agreed that stock accuracy leads to positive patient experiences, suggesting that good inventory management leads to higher patient satisfaction due to timely service delivery and access to the right medical inventory. Finally, all participants (100%) indicated that disruptions in service have a negative impact on patient satisfaction. This clearly demonstrates that continuous service delivery is critical in health care and that inventory control plays a key role in this endeavor.

In conclusion, the study shows that there is a strong positive link between inventory accuracy and service delivery at Pearl Wellness Centre. Although inventory accuracy has positive effects on stock-out reduction, service quality and patient satisfaction, it also has negative impacts on stock-outs, which means that inventory control systems need to be improved. Better stock monitoring and consistency between actual and recorded stock levels are likely to enhance service delivery and customer satisfaction levels.

4.4 Findings on the challenges affecting effective inventory management at Pearl Wellness Centre.

S/N	Challenges	SA		A		N		D		SD	
		F	%	F	%	F	%	F	%	F	%
a	Staff lack adequate training in inventory management.	3	20	5	33.3	5	33.3	1	6.6	1	6.6
b	The centre relies heavily on manual inventory systems.	6	40	5	33.3	0	0	2	13.3	2	13.3
c	Lack of technology affects inventory accuracy.	6	40	4	26.6	1	6.6	2	13.3	2	13.3
d	Limited funding affects maintenance	6	40	6	40	2	13.3	1	6.6	0	0

	of adequate stock levels.										
e	Storage facilities are inadequate for proper inventory management.	2	13.3	4	26.6	6	40	2	13.3	1	6.6
f	Poor supervision contributes to inventory losses.	5	33.3	7	46.6	0	0	1	6.6	0	0
g	Poor supplier coordination causes frequent stock-outs.	5	33.3	8	53.3	1	6.6	0	0	1	6.6



With regards to staff not being well trained in inventory management, 20% strongly agreed, 33.3% agreed, 33.3% are neutral, 6.6% disagreed and 6.6% strongly disagreed. This suggests

that although there are training needs, not everyone agrees, and this suggests staff capacity building to increase inventory management skills would be beneficial.

It was also found that the center heavily relies on manual inventory management, 40% strongly agreed, 33.3% agreed, 13.3% disagreed and 13.3% strongly disagreed. This suggests low automation and that manual procedures may be inefficient as they could lead to stock recording and tracking errors, and hence slow down processes.

Likewise, 40% of the respondents strongly agreed, 26.6% agreed, 6.6% were neutral, 13.3% disagreed and 13.3% strongly disagreed that absence of technology affects inventory accuracy. This is consistent with the above finding and suggests insufficient technology limits the ability to track, report and reconcile stock levels in real time.

Insufficient funds impact stock availability, with 40% of respondents strongly agreeing, 40% agreeing, 13.3% being neutral and 6.6% disagreeing. This implies that the center is unable to maintain buffer stock and purchase sufficient stock due to limited funding, which may cause shortage of supply. Results were varied in the case of storage facilities. 13.3% strongly agreed, 26.6% agreed that the storage facilities are inadequate, 40% were neutral, 13.3% disagreed and 6.6% strongly disagreed. This implies that storage may not be a big problem compared to other aspects, but could be improved.

Further, lack of supervision is a challenge in inventory loss where 33.3% strongly agreed, 46.6% agreed, 6.6% disagreed. This suggests poor control and supervision within the inventory system and could result in theft, wastage or misuse of supplies. Finally, 86.6% agreed that poor coordination with suppliers results in stock-outs, 6.6% were neutral and 6.6% strongly disagreed. This challenge was rated as one of the highest, which could be an indication that supplier coordination, order processing and timely delivery is critical to ensure stock availability.

The results indicate that the key challenges that influence effective inventory management at Pearl Wellness Centre are funding, supplier co-ordination, manual system, lack of technology and supervision. While moderate challenges were found with staff training and storage facilities, the greatest challenges appear to be financial and supplier-related. These may limit the efficiency of the inventory and subsequently impact the services at the center. Overcoming these challenges

by better allocation of funds, implementing technology, and better supervision and supplier relations will enhance inventory management.

CHAPTER FIVE

DISCUSSION, SUMMARY, RECOMMENDATIONS AND CONCLUSION OF THE FINDINGS.

5.0 Introduction

This chapter presents the discussion, summary, recommendations and conclusion of the findings.

5.1 Discussion of the Findings

5.1.1 Discussion of the Findings on Inventory Management Practices used at Pearl Wellness Centre Mukono

The researchers concluded that 100 per cent of the respondents said that previous consumption records are taken into consideration when planning the level of inventory. It coincides with Chopra and Meindl (2021) highlighted that historical-based demand forecasting enhances better decisions in purchasing and decreases stock-outs or overstocking. On the same note, Waters (2019) observed that the key to inventory planning relies on previous consumption patterns. The high level of agreement among the respondents implies that Pearl Wellness Centre has been utilizing forecasting practices that are in line with the international best practices in the management of inventory. This means that the Centre is aware that data-driven planning is critical in ensuring service continuity.

With respect to the stock classification techniques like the ABC analysis, the result showed a moderate adoption with 66.6% studying agreeing and others being neutral or disagreeing. Lyons and Farrington (2020) indicated that ABC classification enables companies to focus tightened control on high-value items and ease control on low-value items. Also, studies such as Vuddagiri et al. (2019) showed that the ABC-VED matrix analysis in hospital improved drug availability and reduced wastages. Unlike these recommendations, the findings show that Pearl Wellness Centre is not fully familiar with the classification methods but may have biased use of them across the departments. This selective approach might curtail the potential of the Centre to enhance control of high-value and critical medical supplies.

Another observation of the study was a high degree of consensus (93.75 per cent) that the stock cards represent the quantity of stock on hand and the documentation is adequate to monitor the stock flow. This finding supports the view of Richards (2018), who proposed that having effective documentation reduces the inconsistencies and enhances accountability. Further, Chase, Jacobs and Aquilano (2021) stated that stock record-keeping is the key to avoid loss and ensure effectiveness. That most respondents agreed well suggests that Pearl Wellness Centre has a good documentation system in place, such as stock cards and issue vouchers, which promote internal control and transparency. Counting of stock and matching the actual stock with the stock card were also widely practiced as evident with over 90 percent agreement. This finding supports Waters' (2019) thesis that it is important to have the stock check from time to time to spot the differences and to prevent fraud or misuse. This process is particularly important in health care where the goods are perishable. So, the cycle counting process at the Centre is linked with the world's recognized best practices in stock control.

The results however indicated mixed reactions in the implementation of computerized inventory management systems. Some of the respondents affirmed that they used it, but a large number were neutral or disagreed. As Bowersox et al. (2019) and Munyaka and Yadavalli (2022) highlighted, technology like ERP systems, barcoding, and RFID enhances the real-time visibility, accuracy, and speed of operations. Sub-Saharan Africa studies also revealed that electronic logistics management information systems (eLMIS) also decrease stock-outs and enhance reporting effectiveness (Kimaro & Sanga, 2018). In comparison to these international results, Pearl Wellness Centre seems to be partially dependent on manual systems that can restrict complete automation and the ability to monitor in real-time. Such partial adoption of technology might be one of the reasons why some discrepancies have been found in stock availability as per the second objective.

5.1.2 Discussion of the Findings on the Relationship between Inventory Accuracy and Service Delivery at Pearl Wellness Centre Mukono

The research found that most of the respondents (86.6) concurred that accuracy in inventory decreases emergency ordering of supplies. This observation aligns with Waters (2019) who believed that correct inventory in the books would allow replenishing in time and avoid emergency purchases. On the same note, Chopra and Meindl (2021) also observed that accurate

inventory data minimizes lead time and facilitates operational planning. The results in the Pearl Wellness Centre thus support academic claims that precise stock information improves the effectiveness of planning and reduces the inconveniences occasioned by emergency buying.

Moreover, the findings revealed that 100 percent of the respondents said that having reliable inventory availability enhances the quality of services. This is very much in line with the findings reported by Parasuraman et al. (1985), who found reliability as one of the dimensions of service quality. When the key supplies are always ready, healthcare providers can be in a position to provide the services as they promised hence improving client trust and satisfaction. The results also confirm the structure process outcome model by Donabedian (1988) as presented in Chapter Two that states that the proper availability of resources (structure), including medicines and medical supplies, have a direct impact on the service processes and patient outcomes. Availability of correct inventory records in the Centre will thus add positively to the structural element required to achieve quality service delivery.

The study also identified that 93.2 percent of the respondents supported the fact that accuracy of inventory is a factor that leads to positive experiences of the patients. This aligns with the findings of Al-Abri and Al-Balushi (2014), who observed that patient satisfaction in healthcare organizations is strongly determined by the availability of medicine and the timeliness of the services. Likewise, the World Health Organization (2017, 2020) highlighted that the supply system should be reliable to provide continuous healthcare provision. The results at Pearl Wellness Centre indicate that the correct stock records can lead to service responsiveness that eventually leads to patient satisfaction in the quality of care.

Furthermore, a big percentage of the respondents (93.3) affirmed that poor service delivery is caused by poor inventory records. This observation aligns with Richards (2018), who opined that inaccuracy in records causes discrepancies, delays, and inefficiencies. Such inaccuracies can lead to delayed treatment, cancelation of treatments or even forced referral in healthcare settings. The findings are also in line with the findings of Smith and Roberts (2017), who found that hospitals that had an accurate record of inventory had a lower number of delays in service delivery than those with inaccurate records. Thus, the research shows that inventory accuracy is a paramount factor of service reliability and continuity.

Nevertheless, the results showed mixed reactions whether stock-outs are frequent interrupters of service provision. Although there were respondents who agreed, a great percentage of the respondents disagreed or strongly disagreed. This implies that in spite of their relatively accurate records, stock-outs do still take place. To some extent, this observation conflicts with the literature that holds that proper inventory automatically helps to avoid service disruption. As an example, Mburu, Ngugi, and Ofula (2020) discovered that drug shortages in Kenyan hospitals were reduced significantly with the use of accurate inventory systems. The inconsistency of Pearl Wellness Centre can be an indication that other causes of the stock inconsistency include supplier delays, funding limitation or the fluctuation of lead times that may impact the stock availability even when the records are correct.

5.1.3 Discussion of the Findings on the Challenges Affecting Effective Inventory Management at Pearl Wellness Centre Mukono

Among the biggest identified challenges was the lack of sufficient funding, with 80 percent of the respondents saying that financial limitations impact the management of sufficient stocks? This observation is corroborated by Bowersox et al. (2019), who have contended that organizations that work within a constrained budget typically find it difficult to have an optimal inventory, invest in technology, or enhance their storage facilities. Financial constraints in the healthcare environments have a direct impact on the capacity to keep buffer stock and the capacity to react to demand variability. The results hence verify academic opinions that sufficient funding is essential in maintaining successful inventory management and service continuity.

The second major issue that was identified was ineffective coordination of the supplier with 86.6 percent of respondents concurring that it leads to frequent stock-outs. This is consistent with the Chopra and Meindl (2021), who pointed out that the poor relationship with suppliers and a lengthy lead time make the replenishment unpredictable and disrupt operational planning.

On the same note, lack of proper coordination with the suppliers usually leads to late delivery and last minute ordering. Results presented in Pearl Wellness Centre indicate that despite having the right internal records, the external supplier inefficiencies may adversely impact the stock availability and service continuity. The research also discovered that the Centre has been overly dependent on manual inventory systems, and the absence of technology influences the accuracy

of inventory. Most of the respondents found themselves in agreement with both statements. This observation is in line with Richards (2018), who observed that manual systems are susceptible to human error, slowness, and lack of real-time visibility. Besides, Munyaka and Yadavalli (2022) claimed that modern technologies are more effective in improving inventory accuracy and operational efficiency: ERP systems, barcoding, and RFID are highly efficient. In comparison to these academic suggestions, Pearl Wellness Centre seems to have a minimal level of automation, which can be one of the reasons why inconsistencies and inefficiency can be observed in practice.

The moderate challenge was staff training, whereby respondents gave mixed responses. Some agreed that staff is not well trained on the management of inventory, whereas others were neutral or not. To some extent, this observation can be explained by the fact that, according to Lysons and Farrington (2020), to achieve good inventory management, one will need competent staff that will be able to perform forecasting, stock-taking, and documentation with high precision. In the same manner, research papers in developing nations, including Olanrewaju (2019), have determined that untrained staff played a significant role in inaccuracy of the inventory. Training is not the most critical challenge at Pearl Wellness Centre, but the fact that there was a neutral and agreeing response is a pointer that there is a need to embrace continuous capacity building in order to reinforce competencies.

Ineffective internal controls and poor supervision were also pointed out and most of them agreed that they cause inventory losses. This observation is corroborated by Chase, Jacobs, and Aquilano (2021), who suggested that poor monitoring is more prone to pilferage, fraud, and mismanagement. Supervision is important in healthcare facilities where there are inventory items that are precious and sensitive. Thus, the results can be used to support the hypothesis that enhancing internal controls would probably decrease the losses and enhance accountability at the Centre. As to storage facilities, the responses were not as consistent and many respondents were neutral. This indicates that storage conditions need not be a significant issue as compared to funding, supplier coordination, or technology gaps. Waters (2019), however, pointed out that inadequate storage may cause damage, expiry, and quality degradation. Although it is not a problem at the moment, insufficient storage facilities can be an issue in case the volumes of stock grow.

]5.2 Summary of the Findings

The results of inventory management practices applied at Pearl Wellness Centre Mukono indicated that the Centre had adopted basic inventory control practices that enabled service delivery. The findings showed that 60% strongly agreed and 40% agreed that historical consumption records were used to plan for inventory indicating strong use of historical data in predicting demand and planning inventory. With respect to stock classification techniques such as ABC analysis, 20% strongly agreed, 46.6% agreed, 13.3% were neutral, 13.3% disagreed and 6.6% strongly disagreed, revealing that there was a moderate level of stock classification practices used by different departments. The study also revealed that 46.6% strongly agreed and 46.6% agreed that inventory records were representative of the stock on hand, and 40% strongly agreed and 60% agreed that inventory documentation tracked stock movement, showing effective record-keeping and documentation practices. Also, 53.3% strongly agreed and 40% agreed that periodic stock-taking was performed, and 40% strongly agreed and 46.6% agreed that actual stock was verified with recorded stock levels, signifying strong stock reconciliation. But the use of computerized inventory management systems had varied responses of 33.3% strongly agreed, 20% agreed, 26.6% neutral, and 20% disagreed, and indicating limited use. In summary, the results showed Pearl Wellness Centre had good general inventory management but only good acceptance of advanced inventory management techniques including ABC analysis and computer inventory control systems, suggesting that inventory control could be improved.

The results of the relationship between inventory accuracy and service provision at Pearl Wellness Centre, Mukono showed that there was a strong positive correlation between these two factors. The study revealed that 60% strongly agreed and 26.6% agreed that inventory accuracy eliminated emergency orders, showing that inventory accuracy facilitated planning and timely procurement. However, in responses on stock-outs, 13.3% strongly agreed and 26.6% agreed that stock-outs didn't negatively impact service delivery, while 26.6% disagreed, 20% strongly disagreed and 20% were neutral, indicating that stock-outs still had an impact on service delivery. The results also revealed that 66.6% strongly agreed and 33.3% agreed that the availability of stock improved service quality, and 53.3% strongly agreed and 40% agreed that inaccurate inventory records disrupted service delivery. Similarly, 46.6% strongly agreed and 46.6% agreed that inventory accuracy improved patient satisfaction and 66.6% strongly agreed

and 33.3% agreed that service interruption led to poor patient satisfaction. In general, the results showed the service delivery was enhanced by the presence of accurate inventory records but stock-outs were still experienced due to other constraints.

The study on the challenges faced in managing inventory at Pearl Wellness Centre Mukono identified operational and financial challenges. The study showed that 20% of the respondents strongly agreed and 33.3% agreed that the staff lacked sufficient training in inventory management, while 33.3% were neutral, suggesting some level of training. The study also revealed that 40% strongly agreed and 33.3% agreed that the Centre used manual systems for inventory management; and 40% strongly agreed and 26.6% agreed that absence of technology caused inventory inaccuracy, thus implying limited technology-based inventory management. Insufficient funding was found to be a significant issue, with 40% strongly agreeing and 40% agreeing that lack of funds impacted stock level maintenance. Further, 33.3% strongly agreed and 46.6% agreed that ineffective supervision led to loss of stock and 33.3% strongly agreed and 53.3% agreed that ineffective supplier coordination led to frequent stock-outs, which was a major challenge. The responses for storage facilities were mixed with 13.3% strongly agreeing, 26.6% agreeing and 40% neutral, showing moderate concern. In summary, the study revealed that lack of adequate funding, poor supplier co-ordination, manual systems, lack of technology and supervision were the main challenges that negatively impacted inventory management at the Centre.

5.3 Recommendations of the Findings

- The Centre should improve computerised inventory management systems. While it has some computer-based system, the study revealed that it is partially manual, which raises the possibility of error and prevents real-time stock tracking. The Centre should adopt a fully integrated inventory management system that enables real-time inventory monitoring, reordering and reporting. Moreover, employees should be trained on how to use the system to fully leverage its benefits and increase inventory accuracy.
- Improve supplier coordination and relationships. Given that lack of coordination with suppliers was a contributing factor to stock-outs, management should ensure that there are contractual agreements with suppliers that specify delivery dates, lead times and

compensation for late shipments. Long-term relationships with dependable suppliers and supplier performance monitoring are required to enhance delivery schedules and minimize service disruptions due to delayed stock replenishment.

- Budget should be increased for inventory control activities. Insufficient budget was found to impact the Centre's stock levels. Managers must ensure budget for inventory financing to enable the purchase of critical inventory and stockpile. Effective financial management will reduce stock-outs and the need to rush orders, which can be more expensive.
- Ensure strong supervisory systems and controls. Given that poor supervision led to losses in inventory, management should ensure periodic internal audits, periodic stock verification and accountability. Delineating roles and ensuring separation of duties will increase accountability and minimize the risks of theft or abuse.
- The Centre should progressively implement more sophisticated inventory methods like ABC analysis and forecasting models. This will allow full application of these techniques to priorities valuable and critical medical stocks, optimize resource allocation, and increase service delivery.

5.4 Conclusion of the Findings

The study found that inventory practices positively impacted service delivery at Pearl Wellness Centre Mukono. It was found that the Centre engaged in basic inventory management practices, such as the use of past records of consumption (60% strongly agreed, 40% agreed), accurate inventory records (46.6% strongly agreed, 46.6% agreed) and good documentation (40% strongly agreed, 60% agreed), which enhanced timely stock control and the provision of services. It further found that accurate inventory contributed to better service delivery (66.6% strongly agreed, 33.3% agreed) and eliminated panic orders for out-of-stock items (60% strongly agreed, 26.6% agreed). But financial restrictions (40% strongly agreed, 40% agreed), lack of coordination with suppliers (53.3% agreed), manual processes and lack of technology limited the effectiveness of inventory management. In general, enhancing computerised systems and supplier coordination would enhance service delivery.

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APPENDIX

QUESTIONNAIRE

Introduction

My name is Nabajja Priscilla, a Bachelor of Procurement and Logistics Management(BPLM) student at Uganda Christian University (UCU). This questionnaire is part of my academic research titled“The Effect of Inventory Management Practices on Service Delivery: A Case Study of Pearl Wellness Centre, Mukono.”

The purpose of this study is strictly academic. All information provided will be treated with utmost confidentiality and will only be used for research purposes. You are kindly requested to respond honestly.

Instructions to Respondents

- Please tick (✓) the option that best represents your opinion.
- Do not write your name on this questionnaire.
- There are no right or wrong answers.
- Your responses will be kept confidential.

SECTION A: Demographic Information

(Tick the appropriate response)

1. **Gender**

- ☐ Male
- ☐ Female

2. **Age group**

- ☐ 18–25 years
- ☐ 26–35 years
- ☐ 36–45 years
- ☐ 46 years and above

3. Department

- ☐ Stores
☐ Pharmacy
☐ Administration
☐ Clinical staff
☐ Others (specify) _____

SECTION B: Inventory Management Practices Used at Pearl Wellness Centre

Indicate your level of agreement in relation to SA = Strongly Agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree.

S/N	Practices used	SA	A	N	D	SD
a	Past consumption records are used when planning inventory levels.					
b	The centre applies stock classification methods such as ABC analysis.					
c	Inventory records accurately reflect quantities of stock available.					
d	Inventory documentation helps track stock movement effectively.					
e	Regular stock-taking or cycle counting is conducted.					
f	Physical stock is compared with recorded stock levels.					
g	The centre uses computerized inventory management systems.					

- h) In case there is any other inventory management practice used apart from those mentioned above, please specify;

SECTION C: Relationship Between Inventory Accuracy and Service Delivery

S/N	Relationship	SA	A	N	D	SD
a	Inventory accuracy reduces emergency ordering of supplies.					
b	Stock-outs rarely interrupt service provision.					
c	Reliable inventory availability improves service quality.					
d	Inaccurate inventory records negatively affect service delivery.					
e	Inventory accuracy contributes to positive patient experiences.					
f	Service interruptions reduce patient satisfaction.					

g) In case there is any other inventory management practice used apart from those mentioned above, please specify;

SECTION D: Challenges Affecting Effective Inventory Management

S/N	Challenges	SA	A	N	D	SD
a	Staff lack adequate training in inventory management.					
b	The centre relies heavily on manual inventory systems.					
c	Lack of technology affects inventory accuracy.					
d	Limited funding affects maintenance of adequate stock levels.					
e	Storage facilities are inadequate for proper inventory management.					
f	Poor supervision contributes to inventory losses.					
g	Poor supplier coordination causes frequent stock-outs.					

h) In case there is any other challenges affecting effective inventory management apart from those mentioned above, please specify;

SECTION E: Interview Guide

1. How do inventory management practices influence service delivery at Pearl Wellness Centre?
2. What challenges do you experience in maintaining accurate inventory records?
3. How does inventory accuracy affect patient satisfaction and service reliability?
4. What strategies would you recommend to improve inventory management and service delivery?

Thank you very much for your time and valuable contributions. Your responses will greatly support this academic research.