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Procurement Cycle Process and Performance of Public Level 5 Hospitals in Nairobi City County, Kenya

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ABSTRACT

Purpose: The study sought to establish the effect of procurement planning on performance of public level 5 hospitals in Nairobi City County, Kenya, to determine the effect of sourcing on performance of public level 5 hospitals in Nairobi City County, Kenya. This study was guided by Goal Setting Theory and The Resource-Based View (RBV) Theory.

Methodology: This study adopted a descriptive research design. This study targeted level 5 public referral hospitals in Nairobi city county, Kenya. According to MoH report (2024) there are three public level 5 referral hospitals in Nairobi city county and they include; Pumwani Maternity Hospital, Mama Lucy Kibaki Hospital and Mbagathi County Hospital. There are a total of 207 procurement employees in the three hospitals. The Yamane formula was adopted to calculate the study sample of 136 respondents. The study used structured questionnaires as the main data collection instrument. Quantitative data was coded then analyzed using Statistical Package for Social Sciences (SPSS) computer software version 28. Descriptive statistics was used to analyze the data in frequency distributions and percentages which were presented in tables and figures. The study also analysed the data using inferential statistics which comprised of correlation analysis and regression analysis.

Findings: The study concludes that procurement planning has a positive and significant influence on performance of public level 5 hospitals in Nairobi City County, Kenya. In addition, the study concludes that sourcing has a positive and significant effect performance of public level 5 hospitals in Nairobi City County, Kenya.

Unique Contribution to Theory, Practice and Policy: Based on the findings, the study recommends that public level 5 hospitals in Kenya should strengthen sourcing practices by adopting transparent, competitive, and reliable supplier selection processes that prioritize quality, cost-effectiveness, and timely delivery of goods and services. Hospital management should evaluate suppliers based on their capacity, reliability, compliance, and ability to consistently meet hospital requirements.

Key Words: *Procurement Cycle Process, Procurement Planning, Sourcing and Performance of Public Level 5 Hospitals*

Background of the Study

According to the World Health Organization (WHO, 2023), global health expenditure reached approximately 10.3% of the world's GDP, highlighting the sector's critical importance in national and international development. Improved healthcare systems not only reduce mortality and morbidity rates but also strengthen a nation's human capital by ensuring that citizens are healthy enough to contribute meaningfully to the economy. The World Bank further reports that countries with stronger healthcare systems achieve up to 24% higher labor productivity compared to those with weaker systems, underscoring the sector's contribution to long-term economic growth and social stability.

Despite its importance, the global health sector faces numerous challenges, including inadequate resources, inefficient procurement processes, and escalating costs of medical supplies. For example, the World Health Organization (2022) estimates that inefficiencies in healthcare procurement and supply chains account for up to 20–40% of total health spending losses globally. Additionally, the United Nations (2021) notes that more than half of the global population lacks access to essential health services, pointing to systemic weaknesses in resource allocation and management. These challenges highlight the need for effective procurement cycle processes, as they ensure the availability of quality medicines, medical equipment, and services in a timely and cost-efficient manner, thereby improving the performance of healthcare institutions worldwide.

The procurement cycle process refers to the structured sequence of steps that an organization follows to acquire goods, services, or works in a cost-effective, transparent, and timely manner (Murasandonyi & Gitah, 2022). It begins with identifying the need and specifying requirements, followed by supplier identification and selection, sourcing and tendering, evaluation of bids, and awarding of contracts. Once a supplier is chosen, the process moves to purchase order issuance, delivery and inspection of goods or services, payment to the supplier, and finally performance evaluation to ensure compliance and value for money. This cycle not only ensures accountability and efficiency but also helps organizations maintain strong supplier relationships while adhering to legal and regulatory frameworks (Mensah & Tuo, 2022).

The procurement cycle process significantly influences the performance of Public Level 5 hospitals, as it ensures the availability of essential medical supplies, equipment, and services needed for quality healthcare delivery (Lwitiko, 2023). Through effective planning**,** hospitals can forecast demand, allocate budgets, and prioritize critical needs, reducing shortages and delays in service provision. Sourcing enables hospitals to identify reliable suppliers and promote competitive bidding, ensuring cost-effectiveness and transparency (Ritah, 2024). During contracting, clear terms and agreements safeguard hospitals against risks such as late deliveries or substandard supplies, while also promoting accountability among suppliers. Lastly, efficient order management ensures timely delivery, proper inspection, and accurate payment processing,

which minimizes disruptions in patient care. By strengthening these stages of the procurement cycle, Public Level 5 hospitals enhance efficiency, accountability, and service quality, ultimately improving health outcomes and public trust in the healthcare system (Okello & Kihara, 2022). The study aims to establish the effects of procurement cycle process on performance of public level 5 hospitals in Nairobi City County, Kenya.

Statement of the Problem

Health is a fundamental pillar of Kenya's socio-economic development, as it enhances productivity, reduces poverty, and improves quality of life. A healthy population contributes directly to economic growth by ensuring a productive workforce and lowering the national disease burden. According to the World Health Organization (WHO, 2023), global health expenditure accounts for over 10% of GDP, while in Kenya, the Ministry of Health (2022) reported that health accounts for about 6% of the national budget, reflecting the sector's strategic importance. The devolution of healthcare services under the 2010 Constitution aimed to improve access, equity, and efficiency, with counties tasked to deliver quality healthcare at the grassroots level. In this framework, Level 5 hospitals, which serve as county referral hospitals, play a critical role in providing specialized services to large populations across multiple counties.

Despite being a devolved function, health service delivery in Kenya continues to face significant challenges that undermine hospital performance. Procurement and supply chain inefficiencies remain among the major bottlenecks. According to the Ministry of Health (2021), 43% of public hospitals in Kenya experience recurrent stockouts of essential medicines, severely disrupting service delivery. A report by the Kenya Medical Supplies Authority (KEMSA, 2020) further revealed that up to 30% of ordered medical supplies are delayed, while an Auditor General's Report (2021) highlighted procurement irregularities worth over KSh 3 billion in public health facilities, affecting the timely availability of medicines and equipment. Moreover, the Council of Governors (2022) indicated that over 25% of medical equipment in county hospitals is non-functional due to delayed procurement, poor contract management, and lack of spare parts. These inefficiencies particularly affect Level 5 hospitals, which are referral centers serving large populations, thereby straining service delivery.

Although previous studies and government audits acknowledge the role of procurement inefficiencies in weakening health service delivery, there remains limited empirical research on how the procurement cycle process specifically influences hospital performance in Kenya's devolved context. Much of the existing focus has been on financing, human resource management, and governance issues, with little attention paid to procurement planning, tendering, contract management, and distribution stages.

Various studies have been conducted in different parts of the world on procurement cycle process and organization performance. For instance, Okello and Kihara (2022) in Kenya assessed

the effect of procurement lifecycle on performance of government ministries. In Kenya, Atego and Theuri (2023) conducted a study on the effects of public procurement cycle process on organization performance and Makabira and Waiga (2021) in Kenya researched on the role of procurement cycle process on the performance of corporate organizations. However, none of these studies focused on planning, sourcing, contracting and order management on performance of public level 5 hospitals in Nairobi City County, Kenya. To fill the highlighted gaps, the current study sought to establish the effects of procurement cycle process (planning, sourcing, contracting and order management) on performance of public level 5 hospitals in Nairobi City County, Kenya.

General Objective

The general objective of the study is to establish the effects of procurement cycle process on performance of public level 5 hospitals in Nairobi City County, Kenya.

Specific Objectives

i. To establish the effect of procurement planning on performance of public level 5 hospitals in Nairobi City County, Kenya
ii. To determine the effect of sourcing on performance of public level 5 hospitals in Nairobi City County, Kenya

Theoretical Literature

A theory is a group of concepts and ideas used in the explanation of events and other things, particularly the ones based on general principles independent of the event to be explained. The theoretical review gives an introduction of the theories that are used to express the reason for the existence of the research. In addition, a theoretical review provides the main variables that affect the phenomenon under study and points out the need to consider the effect of these variables under different circumstances (Ocharo & Kimutai, 2020). In this section, the study presents the theories that guided the study.

Goal Setting Theory

Goal Setting Theory was developed by Edwin Locke (1968), emphasizing that specific, measurable, and challenging goals are more effective in driving performance than vague or general objectives. The theory highlights that when individuals and organizations set clear goals, they establish a sense of direction, focus, and motivation to achieve desired outcomes (Kushnirenko & Gakhovych, 2023). It also stresses the importance of feedback, which enables continuous monitoring of progress and adjustment of strategies to stay on track. In the context of organizational management, goal clarity fosters efficiency by ensuring that resources are allocated to priority areas and that efforts are aligned with strategic objectives (Magok, Wanyama & Chebet, 2021).

Applied to procurement in Public Level 5 hospitals, Goal Setting Theory underlines how effective planning can enhance performance. Hospitals that set precise procurement targets—such as forecasting medicine demand, reducing lead times, and minimizing stockouts—are better positioned to meet patient needs and improve service delivery (Gitagia, 2020). For example, setting measurable targets for reducing drug shortages by a specific percentage within a defined timeline guides procurement staff toward efficiency. Additionally, involving staff in setting these procurement goals strengthens commitment and accountability, ensuring that resources are managed effectively and hospital performance is improved (Yusuf, Mukulu & Oloko, 2020). The theory was used to establish the effect of procurement planning on performance of public level 5 hospitals in Nairobi City County, Kenya.

Resource-Based View (RBV) Theory

The Resource-Based View (RBV) Theory was advanced by Jay Barney (1991), positing that an organization's performance is largely dependent on the resources it possesses and how effectively those resources are utilized (Bottone, Mancini & Boffelli, 2024). RBV classifies resources into tangible and intangible assets, which must be valuable, rare, inimitable, and non-substitutable (VRIN) to provide a sustainable competitive advantage. This means that organizations succeed when they strategically acquire and manage resources that competitors cannot easily replicate. The theory thus provides a framework for understanding how internal resource capabilities contribute to long-term success and efficiency (Koomson, Ampong & Asibey, 2021).

In the case of Public Level 5 hospitals, RBV Theory is highly relevant in assessing the effect of sourcing on performance. Strategic sourcing allows hospitals to acquire critical medical supplies, skilled personnel, and advanced equipment that are essential for effective healthcare delivery (Kamau & Njeru, 2025). When hospitals establish strong supplier relationships and prioritize sourcing from reliable vendors, they gain access to rare and high-quality resources that enhance service quality and efficiency. By securing essential resources such as diagnostic machines, medicines, and surgical tools, Level 5 hospitals strengthen their ability to handle referrals, reduce treatment delays, and deliver superior patient care. Thus, RBV underscores the importance of effective sourcing in achieving improved hospital performance (Oloitiptip & Ndeto, 2023). The theory was used to determine the effect of sourcing on performance of public level 5 hospitals in Nairobi City County, Kenya.

Conceptual Framework

A conceptual framework refers to a structured representation of the key concepts, variables, and their presumed relationships in a study. It serves as a guide for how the research problem will be examined (Adom, Hussein, & Agyem, 2018). Figure 2.1 below shows the conceptual framework.

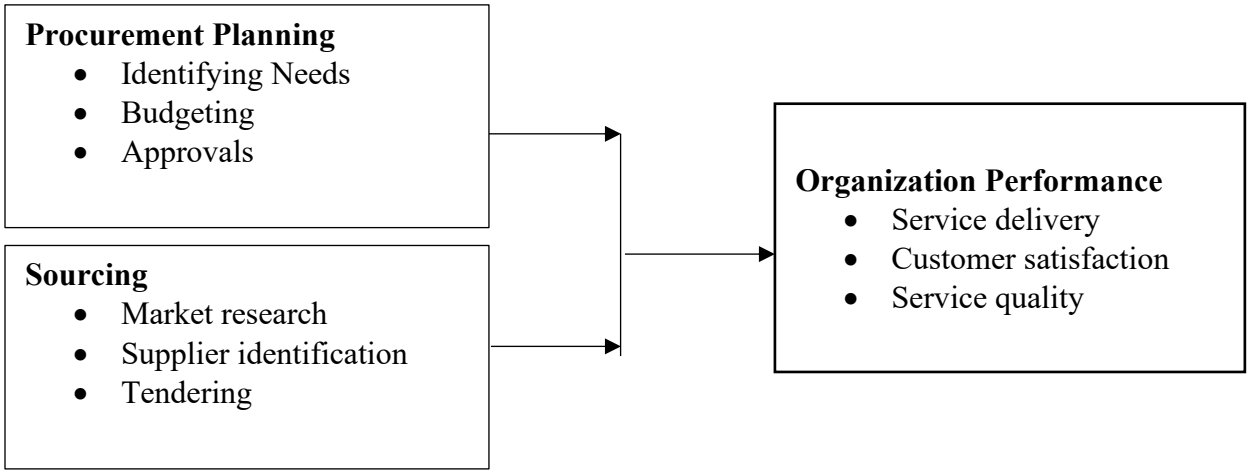


Figure 2. 1: Conceptual Framework

Procurement Planning

Planning is the first and most critical stage of the procurement cycle, involving the systematic identification of needs, determination of specifications, and allocation of resources to ensure that an organization's objectives are met efficiently (Kushnirenko & Gakhovych, 2023). It entails analyzing current and future requirements, forecasting demand, and aligning procurement activities with available budgets and organizational goals. Effective planning reduces uncertainty, minimizes wastage, and ensures that the right goods and services are procured at the right time and cost. In the context of healthcare, planning helps hospitals anticipate patient demand, determine the required medical supplies and equipment, and allocate resources in a manner that supports uninterrupted service delivery (Magok, Wanyama & Chebet, 2021).

Identifying Needs is the first step in the procurement process, where an organization determines the goods, services, or works required to achieve its operational goals. It involves analyzing demand, assessing gaps in current resources, and aligning needs with strategic priorities (Gitagia, 2020). In Public Level 5 hospitals, identifying needs is critical as it ensures that essential medical supplies such as drugs, surgical instruments, and diagnostic equipment are procured in line with patient demand. This step also requires consultations with different hospital departments to ensure that all requirements are captured accurately, preventing shortages and avoiding unnecessary purchases. Properly identifying needs forms the foundation for efficient procurement planning and supports the delivery of quality healthcare (Yusuf, Mukulu & Oloko, 2020).

Budgeting follows the needs identification stage and involves allocating financial resources to meet the identified requirements within the limits of available funds. It ensures that procurement

activities are conducted in a cost-effective manner while adhering to organizational financial constraints (Lerai, Rintari & Moguche, 2023). In the healthcare context, budgeting is vital for balancing the hospital's limited resources with the growing demand for services. It provides a framework for prioritizing critical items, preventing overspending, and ensuring accountability in resource utilization. A well-prepared budget helps Level 5 hospitals to streamline their procurement, avoid disruptions in service delivery, and ensure that resources are directed toward areas of highest need (Kushnirenko & Gakhovych, 2023).

Approvals represent the formal authorization stage in the procurement cycle, where identified needs and proposed budgets are reviewed and validated by relevant authorities before purchases are made. This step introduces accountability and transparency, ensuring that procurement decisions comply with legal and regulatory frameworks (Magok, Wanyama & Chebet, 2021). In Public Level 5 hospitals, approvals are typically granted by hospital boards, county governments, or procurement committees, depending on the size and nature of the purchase. Approvals prevent misuse of funds, curb corruption, and guarantee that procurement activities are aligned with hospital priorities and government policies. Ultimately, the approvals process safeguards institutional credibility while ensuring that procurement decisions lead to effective service delivery (Gitagia, 2020).

Sourcing

Sourcing refers to the process of identifying, evaluating, and selecting suppliers who can provide the required goods, works, or services in a cost-effective and reliable manner. It goes beyond simply purchasing by focusing on building sustainable supplier relationships, assessing vendor capacity, negotiating favorable terms, and ensuring that quality standards are met (Bottone, Mancini & Boffelli, 2024). Effective sourcing involves market analysis, competitive bidding, and supplier qualification to guarantee transparency and accountability in procurement. For hospitals, sourcing ensures that critical medical products such as drugs, surgical tools, and diagnostic equipment are acquired from credible suppliers who can consistently deliver on time and in compliance with regulatory standards, thereby enhancing service quality and efficiency (Koomson, Ampong & Asibey, 2021).

Market Research is a vital step in the procurement process that involves gathering and analyzing information about the supply market to understand the availability, pricing, quality, and trends of required goods or services (Kamau & Njeru, 2025). For Public Level 5 hospitals, market research helps procurement teams identify the most cost-effective and reliable options for medical supplies, equipment, and services. It also enables hospitals to anticipate price fluctuations, evaluate emerging technologies, and ensure compliance with healthcare standards. By conducting thorough market research, hospitals can make informed procurement decisions that enhance efficiency, minimize risks, and improve service delivery (Oloitiptip & Ndeto, 2023).

Supplier Identification refers to the process of recognizing and selecting potential suppliers capable of meeting the organization's needs in terms of quality, reliability, and affordability. This stage is crucial for hospitals since the performance of healthcare services depends heavily on the consistency and quality of supplies provided (Ndung'u, Njeru & Muathe, 2025). Public Level 5 hospitals often engage in pre-qualification processes to verify suppliers' capacity, financial stability, and track record. Proper supplier identification reduces risks of delays, substandard goods, and unreliable partnerships, ensuring that hospitals can sustain continuous operations and meet patient demands effectively (Bottone, Mancini & Boffelli, 2024).

Tendering is the formal procurement procedure through which hospitals invite suppliers to submit competitive bids for the provision of goods, services, or works (Koomson, Ampong & Asibey, 2021). This process promotes transparency, fairness, and accountability by allowing multiple suppliers to compete under standardized conditions. For Public Level 5 hospitals, tendering ensures that medical supplies and services are acquired at competitive prices while maintaining required quality standards. It also creates an open platform that minimizes corruption risks and enhances trust in public procurement processes (Kamau & Njeru, 2025).

Bid Evaluation follows tendering and involves a systematic assessment of submitted bids to determine which supplier offers the best value for money. The evaluation is based on criteria such as price, technical specifications, supplier capacity, delivery timelines, and compliance with regulatory requirements (Oloitiptip & Ndeto, 2023). In Public Level 5 hospitals, bid evaluation is crucial for balancing affordability with quality, especially when procuring lifesaving drugs and advanced medical equipment. By carefully evaluating bids, hospitals can select suppliers who are not only cost-effective but also reliable and capable of delivering high-quality products, which directly impacts hospital performance and patient satisfaction (Ndung'u, Njeru & Muathe, 2025).

Empirical Review

Procurement Planning and Organization Performance

Kushnirenko and Gakhovych (2023) conducted a study on the effect of planning of the industrial recovery in Ukraine based on sustainable development The article substantiates the importance of incorporating the principles of sustainable development into the strategic planning of Ukraine's post-war recovery The goals and objectives mandatory for the post-war recovery of industrial development in Ukraine are substantiated, namely energy efficiency, ensuring efficient, safe and environmentally friendly production according to the sustainable development principles, a future without a carbon footprint and a circular economy in accordance with the European strategic vector. The study concluded that the action of these instruments is aimed at creating favorable conditions for eco-innovative transformations and is implemented at the level of interstate cooperation, state institution, regional public institution and enterprises

Magok, Wanyama and Chebet (2021) conducted a study on the moderating effect of government regulations on the relationship between planning practices and financial performances of SMEs in Juba, South Sudan. This study used a Cross-Section Survey. The target population consists of 4,951 small and medium enterprises founded in Juba, South Sudan. Findings illustrated that Government Regulations had no significant moderation effect on the relationship between planning practices and the financial performance and between strategic formulation practices and the financial performance among the SMEs in Juba, South Sudan. It was concluded that when the government regulations are less stringent towards the SME'S operations in Juba, South Sudan, then the slope is significant and higher compared when the regulations are moderately stringent or highly stringent

Gitagia (2020) conducted a study on the effect of practices and influence of planning on the organizational performance of Kenyatta national hospital. The main purpose of the study was to determine the planning practices adopted by Kenyatta National Hospital and how these practices have influenced the performance of the hospital. The findings from this study may particularly be useful in providing additional knowledge to the hospital and other organizations on planning practices adapted so as to remain competitive. From the conclusions of the study the hospital has a well-grounded strategic management system with refined planning practices.

Yusuf, Mukulu and Oloko (2020) conducted a study on the influence of planning to firm performance in agricultural research based institutions of Kenya The institutions had 2922 employees in the year 2015. The study employed descriptive research design. The sample size was 352 having been arrived at using Yamane's (1967) formula. The study finds that financial resource planning is adopted by agricultural research based institutions of Kenya since it had a significant factor in determining firm performance of agricultural research based institutions in Kenya. Conclusion of the study were that financial resources planning, human capital planning, material resource planning and information resource strategic planning influence a firm's performance in a great way.

Lerai, Rintari and Moguche (2023) conducted a study on the influence of planning on the organizational performance among commercial-based parastatals in Kenya The study obtained the sample size of 40 departmental managers and 110 administrative staff using simple random method. The study found that the dependent variable results indicated that respondents strongly agreed on the highest mean that the management motivated the staff to go and get a higher academic qualification. The study concluded that the basis of the parastatals' planning was not supported by any bench marking but rather a specific individual's knowledge and experience.

Sourcing and Organization Performance

Bottone, Mancini and Boffelli (2024) conducted a study on the effect of sourcing governance and de-risking strategies in Europe: a comparative study of Germany, Italy and Spain. Using a

common set of questions in the national business surveys conducted in Germany, Italy and Spain in 2023, this paper aims to test whether and to what extent the type of governance mode in active sourcing inputs from abroad influences the decision to engage in de-risking activities. The study findings indicate that relations perceived as more complex and less substitutable are typically the first targets of derisking efforts. This conclusion contrasts with the notion that arm's length transactions are more likely to be revised due to their lower cost and ease of reconfiguration.

Koomson, Ampong and Asibey (2021) conducted a study on the effect of sourcing and its associated challenges in the mining industry in Ghana. A well-structured questionnaire was sent to these companies to gather primary data. Secondary data from various offices within the supply chain departments of these companies were also used to supplement data obtained from the survey. The study revealed that quality is the main factor that drives mining companies in Ghana to do sourcing. The study concluded that sourcing as a strategy for global business in the ever growing world of globalization has great benefits that a company can derive from

Kamau and Njeru (2025) conducted a study on the effect of sourcing on the performance of selected food manufacturing firms in Kiambu County, Kenya. The study relied on descriptive research design. The sample group included 191 employees from 29 chosen food manufacturing businesses and 20 distribution outlets in Kiambu County. A census approach was needed because the study involved only a relatively small number of participants. The findings reveal that active sourcing practices are widely adopted, as indicated by the overall mean of 4.02 and standard deviation of 0.79, suggesting strong agreement among respondents and a positive impact on firm performance. Because of these practices, the results of the firms improved greatly. The study concluded that having supplier collaboration, networking, a well-defined assessment process for suppliers and tough criteria for selection plays a big part in making food manufacturing firms in Kiambu perform well

Oloitiptip and Ndeto (2023) conducted a study on the effect of sourcing process and performance of selected cement manufacturing companies in Kenya. The study's target population includes the 504 employees working in cement manufacturing firms in Kenya. The study's sample size was reached at using Krejcie and Morgan sample size determination formula. The 218 respondents were chosen with the help of stratified random sampling technique. The study found that supply base rationalization has a positive and significant effect on the performance of selected cement manufacturing companies in Kenya. The study concludes that organizational policy has a positive and significant effect on performance of selected cement manufacturing companies in Kenya

Ndung'u, Njeru and Muathe (2025) conducted a study on the effect of sourcing: a game changer for public hospital performance in Kenya. The study's target population was 243 public hospitals in Kenya. Both descriptive and inferential statistics were used for data analysis. Employing a multiple regression analysis on data from public hospitals across Kenyan counties. The study

revealed that supplier relationship and procurement planning play an important role in enhancing the performance of public hospitals in Kenya. The conclusions revealed that sourcing factors in the form of supplier relationships and procurement planning positively and significantly influence the performance of public hospitals

RESEARCH METHODOLOGY

Research Design

This study adopted a descriptive research design. According to Mugenda and Mugenda (2019), a descriptive design involves the systematic process of collecting data to answer questions related to the current status of the subject under investigation. It is widely applied in research because it helps in describing key aspects such as behavior, values, attitudes, and characteristics of the population under study. By focusing on existing conditions, the design allows the researcher to capture accurate and detailed information relevant to the research objectives.

The descriptive research design is particularly useful in providing deeper insights into the relationship between the independent and dependent variables. It enables the researcher to examine how specific factors influence the outcomes under study and to present the findings in a structured and meaningful way. Ultimately, this approach not only facilitates the interpretation of data but also supports the drawing of informed conclusions and recommendations based on the evidence collected.

Target Population

This study targeted level 5 public referral hospitals in Nairobi city county, Kenya. According to MoH report (2024) there are three public level 5 referral hospitals in Nairobi city county and they include; Pumwani Maternity Hospital, Mama Lucy Kibaki Hospital and Mbagathi County Hospital. There are a total of 207 procurement employees in the three hospitals. The unit of analysis was the three level 5 public referral hospitals in Nairobi City County while the unit of observation was the 207 procurement employees since they are in a better position to provide need information. The total target population was therefore 207 procurement employees.

Sample size and Sampling Technique

According to Kothari (2019), an appropriate sample size should be large enough to give reliable results and allow for generalization to the larger population, but also small enough to be manageable in terms of cost, time, and resources. A sample is a small group obtained from accessible population (Mugenda & Mugenda 2018). The Yamane formula was adopted to calculate the study sample size as follows;

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

Where n is the sample size, and N is the population size, e- acceptable sampling error (0.05)

$$= \frac{207}{\frac{1+207}{(0.05^2)}}$$

$$= \frac{207}{1.5175} = 136$$

n≈ 136

Therefore, the study sample size was 136 respondents.

Data Collection Instrument

The study used structured questionnaires as the main data collection instrument. Structured questionnaires are preferred because they provide uniformity in responses and make it easier to compare data across respondents. They consist of predetermined questions arranged in a systematic manner, which ensures consistency and reliability in the information gathered. According to Mugenda and Mugenda (2019), questionnaires are effective tools for collecting data from a large population within a relatively short time and at a lower cost.

Pilot Study

A pilot test was conducted to determine validity and reliability of the data collection instrument. A pilot study is a small experiment designed to test logistics and gather information prior regarding a larger study, in order to improve the latter quality and efficiency. A pilot study can reveal deficiencies in the design of proposed experiment and procedure, and these can be addressed before time and resources are expended on large scale studies. The responses from respondents were used to adjust and refine the questionnaire accordingly. According to Mugenda and Mugenda (2017) the pretest sample should be between 1% and 10% depending on the sample size. In this study, the pilot group was 14 individuals representing 10% of the total study sample size.

Data Analysis and Presentation

Quantitative data was coded then analyzed using Statistical Package for Social Sciences (SPSS) computer software version 28. The choice of the software is influenced by its ability to appropriately create graphical presentation of questions, data reporting, presentation and publishing. SPSS is also able to handle large amount of data and it is purposefully designed for social sciences.

Descriptive statistics was used to analyze the data in frequency distributions and percentages which were presented in tables and figures. Discussions and presentations of the analyzed data were done in tables of frequency distribution, percentages, bar graphs and pie charts. Measures of dispersion were used to provide information about the spread of the scores in the distribution.

The study also analysed the data using inferential statistics which will comprise of correlation analysis and regression analysis. Correlation analysis was used to test the strength and the direction of the relationship between the independent variables and the dependent variable. Multiple regression analysis comprised of the model summary, the analysis of variance and the beta coefficients.

The multiple regression model was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where: -

Y is public level 5 hospitals in Nairobi City County, Kenya

X_1 is procurement planning.

X_2 is Sourcing

β_0 is a constant

ε is Error term

FINDINGS AND DISCUSSION

Descriptive Statistics Analysis

Procurement Planning and Organization Performance

The first specific objective of the study was to establish the effect of procurement planning on performance of public level 5 hospitals in Nairobi City County, Kenya. The respondents were requested to indicate their level of agreement on various statements related to procurement planning and performance of public level 5 hospitals in Nairobi City County, Kenya. The results were as shown table 4.1.

From the results, the respondents agreed that the hospital has a clear system for identifying medical supply needs (M= 3.880, SD= 0.665). In addition, the respondents agreed that procurement planning is guided by accurate stock usage and demand forecasts (M=3.856, SD=0.689). Further, the respondents agreed that the hospital prepares realistic procurement budgets (M=3.834, SD=0.943).

From the results, the respondents agreed that budget allocations adequately support timely availability of essential supplies (M=3.806, SD= 0.887). In addition, the respondents agreed that the hospital has an efficient approval process that minimizes delays (M=3.766, SD=0.623). Further, the respondents agreed that procurement plans and budgets go through transparent and accountable approvals (M=3.723, SD=0.681).

Table 4. 1: Procurement Planning and Organization Performance

	Mean	Std. Deviation
The hospital has a clear system for identifying medical supply needs.	3.880	0.665
Procurement planning is guided by accurate stock usage and demand forecasts.	3.856	0.689
The hospital prepares realistic procurement budgets.	3.834	0.943
Budget allocations adequately support timely availability of essential supplies.	3.806	0.887
The hospital has an efficient approval process that minimizes delays.	3.766	0.623
Procurement plans and budgets go through transparent and accountable approvals.	3.723	0.681
Aggregate	**3.811**	**0.748**

Sourcing and Organization Performance

The second specific objective of the study was to determine the effect of sourcing on performance of public level 5 hospitals in Nairobi City County, Kenya. The respondents were requested to indicate their level of agreement on various statements related to sourcing and performance of public level 5 hospitals in Nairobi City County, Kenya. The results were as shown table 4.2.

From the results, the respondents agreed the hospital conducts thorough market research before procurement (M=3.881, SD=0.626). Further, the respondents agreed that supplier identification is based on clear and transparent criteria (M=3.870, SD=0.725). In addition, the respondents agreed that the hospital ensures a fair and competitive tendering process (M=3.848, SD=0.815).

From the results, the respondents agreed that suppliers are evaluated based on quality, reliability, and cost-effectiveness (M=3.834, SD=0.728). Further, the respondents agreed that market information is regularly updated to guide procurement decisions (M=3.808, SD=0.831). The respondents also agreed that tendering processes promote transparency and accountability (M=3.751, SD=0.642).

Table 4. 2: Sourcing and Organization Performance

	Mean	Std. Deviation
The hospital conducts thorough market research before procurement.	3.881	0.626
Supplier identification is based on clear and transparent criteria.	3.870	0.725

The hospital ensures a fair and competitive tendering process.	3.848	0.815
Suppliers are evaluated based on quality, reliability, and cost-effectiveness.	3.834	0.728
Market information is regularly updated to guide procurement decisions.	3.808	0.831
Tendering processes promote transparency and accountability.	3.751	0.642
Aggregate	**3.832**	**0.728**

Organization Performance

The respondents were requested to indicate their level of agreement on various statements related to performance of public level 5 hospitals in Nairobi City County, Kenya. The results were as shown Table 4.3.

From the results, the respondents agreed that the hospital provides timely and efficient healthcare services (M=3.802, SD= 0.769). In addition, the respondents agreed that service delivery processes minimize delays and congestion (M=3.775, SD= 0.888). Further, the respondents agreed that patients are generally satisfied with the services offered (M=3.768, SD= 0.567).

From the results, the respondents agreed that the hospital responds effectively to patients' needs and feedback (M=3.713, SD= 0.798). In addition, the respondents agreed that the quality of healthcare services meets professional standards (M=3.645, SD=0.689). Further, the respondents agreed that service quality has improved overall hospital performance (M=3.621, SD=0.702).

Table 4. 3: Organization Performance

	Mean	Std. Deviation
The hospital provides timely and efficient healthcare services.	3.802	0.769
Service delivery processes minimize delays and congestion.	3.775	0.888
Patients are generally satisfied with the services offered.	3.768	0.567
The hospital responds effectively to patients' needs and feedback.	3.713	0.798
The quality of healthcare services meets professional standards.	3.645	0.689
Service quality has improved overall hospital performance.	3.621	0.702
Aggregate	**3.721**	**0.736**

Correlation Analysis

The present study used Pearson correlation analysis to determine the strength of association between independent variables (procurement planning and sourcing) and the dependent variable (performance of public level 5 hospitals in Nairobi City County, Kenya). Pearson correlation

coefficient range between zero and one, where by the strength of association increase with increase in the value of the correlation coefficients.

Table 4. 4: Correlation Coefficients

		Organization Performance	Procurement Planning	Sourcing
Organization Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	102		
Procurement Planning	Pearson Correlation	.826**	1	
	Sig. (2-tailed)	.001		
	N	102	102	
Sourcing	Pearson Correlation	.845**	.119	1
	Sig. (2-tailed)	.000	.059	
	N	102	102	102

From the results, there was a very strong relationship between procurement planning and performance of public level 5 hospitals in Nairobi City County, Kenya (r = 0.826, p value =0.001). The relationship was significant since the p value 0.001 was less than 0.05 (significant level). The findings are in line with the findings of Kushnirenko and Gakhovych (2023) who indicated that there is a very strong relationship between procurement planning and organization performance.

Moreover, the results revealed that there is a very strong relationship between sourcing and performance of public level 5 hospitals in Nairobi City County, Kenya (r = 0.845, p value =0.000). The relationship was significant since the p value 0.000 was less than 0.05 (significant level). The findings conform to the findings of Bottone, Mancini and Boffelli (2024) that there is a very strong relationship between sourcing and organization performance.

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (procurement planning and sourcing) and the dependent variable (performance of public level 5 hospitals in Nairobi City County, Kenya).

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.811	.657	.656	.10428

a. Predictors: (Constant), procurement planning and sourcing

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r-squared for the relationship between the independent variables and the dependent variable was 0.657. This implied that 65.7% of the variation in the dependent variable (performance of public level 5 hospitals in Nairobi City County, Kenya) could be explained by independent variables (procurement planning and sourcing).

Table 4.6: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76.028	2	38.007	46.472	.002[b]
	Residual	39.653	97	.409		
	Total	115.681	101			

a. Dependent Variable: performance of public level 5 hospitals in Nairobi City County, Kenya

b. Predictors: (Constant), procurement planning and sourcing

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 46.472 while the F critical was 2.465. The p value was 0.002. Since the F-calculated was greater than the F-critical and the p value 0.002 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of procurement planning and sourcing on performance of public level 5 hospitals in Nairobi City County, Kenya.

Table 4.7: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.260	0.070		3.714	0.002
procurement planning	0.321	0.083	0.320	3.867	0.001
Sourcing	0.340	0.089	0.341	3.820	0.000

a Dependent Variable: performance of public level 5 hospitals in Nairobi City County, Kenya

The regression model was as follows:

$$Y = 0.260 + 0.321X_1 + 0.340X_2 + \varepsilon$$

According to the results, procurement planning has a significant effect on performance of public level 5 hospitals in Nairobi City County, Kenya (β1=0.321, p value= 0.001). The relationship was considered significant since the p value 0.001 was less than the significant level of 0.05. The findings are in line with the findings of Kushnirenko and Gakhovych (2023) who indicated that there is a very strong relationship between procurement planning and organization performance.

The results also revealed that sourcing has a significant effect on performance of public level 5 hospitals in Nairobi City County, Kenya, (β1=0.340, p value= 0.000). The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings are in line with the findings of Bottone, Mancini and Boffelli (2024) who indicated that there is a very strong relationship between sourcing and organization performance.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study concludes that procurement planning has a positive and significant influence on performance of public level 5 hospitals in Nairobi City County, Kenya. Findings revealed that identifying needs, budgeting and approvals influence performance of public level 5 hospitals in Nairobi City County, Kenya. In addition, the study concludes that sourcing has a positive and significant effect performance of public level 5 hospitals in Nairobi City County, Kenya. Findings revealed that market research, supplier identification and tendering influence performance of public level 5 hospitals in Nairobi City County, Kenya.

Recommendations

This study recommends that public level 5 hospitals in Kenya should strengthen procurement planning by aligning procurement activities with hospital needs, available budgets, and service delivery priorities. Hospital management should prepare timely and comprehensive procurement plans, conduct accurate forecasting of medical supplies and equipment requirements, and involve relevant departments in identifying procurement needs. Further, this study recommends that public level 5 hospitals in Kenya should strengthen sourcing practices by adopting transparent, competitive, and reliable supplier selection processes that prioritize quality, cost-effectiveness, and timely delivery of goods and services. Hospital management should evaluate suppliers based on their capacity, reliability, compliance, and ability to consistently meet hospital requirements.

REFERENCES

Abdullah, A. Z, Rahman, H. D., & Awang, M. S. (2020). Identification of the major order management issues in oil and gas industry in Malaysia. *International Journal of Business and Social Science, 2*(11), 182-194

Alfatian, N., Cahyadi, E. R., & Mulyati, H. (2025). Improving the quality of procurement process through lean six sigma in the Indonesian public rail transport company. *Jurnal locus: Penelitian & Pengabdian, 4*(7), 4566-4579.

Atego, C. O., & Theuri, F. S. (2023). Effects of public procurement cycle process on organization performance. *International Journal of Scientific and Research Publications, 5*(9), 1-6.

Kamau, J. K., & Njeru, P. (2025). Sourcing on the performance of selected food manufacturing firms in Kiambu County, Kenya. *African Journal of Empirical Research, 6*(3), 90-96

Kibogo, A. D., & Mwangangi, M. (2020). Factors affecting contract management in public procurement sector in Kenya: a case of Kenya literature bureau. *European Journal of Business Management, 1*(11), 377-384.

Koomson, E. S. B, Ampong, A. E., & Asibey, O. (2021). Sourcing and its associated challenges in the mining industry in Ghana. *Science Journal of Business and Management, 9*(4), 269-280

Kuloba, E. (2023). *Effect of procurement cycle process on organizational performance: a case of Moi teaching and referral hospital, Eldoret.* Retrieved from http://repository.kisiiuniversity.ac.ke:8080/

Kushnirenko, O., & Gakhovych, N. (2023). *Planning of the industrial recovery in Ukraine based on sustainable development*. Retrieved from https://dspace.nuft.edu.ua/

Lerai, S.E, Rintari, N., & Moguche, A. (2023). Influence of planning on the organizational performance among commercial-based parastatals in Kenya. *Journal of Business and Strategic Management, 8*(1), 77-81

Loewe, M., & Albrecht, H. (2022). *Social contract in Egypt, Lebanon and Tunisia: What do the people want?* Retrieved from https://onlinelibrary.wiley.com/doi/pdfdirect/

Mensah, C., & Tuo, G. (2022). Evaluation of procurement cycle process and its Operational Performance in the Public Sector of Ghana: A Case Study of Komfo Anokye Teaching Hospital and Kumasi Polytechnic. *European Journal of Business and Management, 5*(29), 121-133.

Muhia, D. W., & Afande, F. O. (2024). Adoption of procurement cycle process and Procurement Performance in State Corporations in Kenya (A Case of Kenya Revenue Authority). *Industrial Engineering Letters, 5*(6), 1-25.

Murasandonyi, J., & Gitahi, N. (2022). The effect of procurement cycle process on the operational performance of airlines in Rwandan air Ltd. *Journal of Procurement & Supply Chain, 6*(2), 21–40.

Musau, P. M., & Kirui, C. (2023). Order management practices and implementation of government projects in Kenya, case of Machakos County government. *International Academic Journal of Information Sciences and Project Management, 3*(2), 58-79

Mutua, J. M, Waiganjo, E., & Oteyo, I. N. (2020). The influence of contract management on performance of outsourced projects in medium manufacturing enterprises in Nairobi County, Kenya. *International Journal of Business and Social Science, 5*(9), 25-33

Ocharo, R. N., & Kimutai, G. (2020). Order management practices and implementation of power projects in Kenya. *International Academic Journal of Information Sciences and Project Management, 3*(1), 28-46

Ogunde, A. O, Afolabi, O. A. O., & Ojelabi, J. O. R. (2020). Challenges confronting construction order management system for sustainable construction in developing countries: professional's perspectives (a case study of Nigeria). *Journal of Building Performance, 8*(1), 1-11

Ogunsanmi, O. E. (2023). Effects of procurement cycle process on construction project performance in Nigeria. *Ethiopian Journal of Environmental Studies and Management, 6*(2), 215-223

Okello, T. M., & Kihara, A. (2022). Effect of procurement cycle process on performance of government ministries in Kenya. *International Journal of Supply Chain and Logistics, 3*(2), 105–128.

Oloitiptip, S. L., & Ndeto, C. (2023). Sourcing process and performance of selected cement manufacturing companies in Kenya. *International Journal of Social Sciences Management and Entrepreneurship, 7*(1), 388-387

Omolo, E. J. (2021). *Factors influencing implementation of order management in public-funded projects in Kenya – the case of Kenya Pipeline Company, Nairobi County*. Retrieved from https://erepository.uonbi.ac.ke/bitstream/handle/

Yusuf, W. M, Mukulu, E., & Oloko, M. (2020). Influence of planning to firm performance in agricultural research based institutions of Kenya. *Journal of Management and Sustainability, 8*(4), 83-95

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