

Customer Management Agility and Service Delivery in Level Six Private Hospitals in Nairobi County, Kenya

^{*1}Mutua Mary Mukulu, ²Paul Gesimba, PhD & ³Eunice Wandiga, PhD

¹Masters Student, St. Paul's University

^{2,3}Lecturer, School of Business and Leadership Studies, St. Paul's University

*E-mail of corresponding author: mukulumutua@gmail.com

Publication Date: September 2026

Abstract

In today's increasingly competitive healthcare market, service delivery must be of high quality to make patients satisfied, reduce death rates and make hospitals competitive. Even though there has been an increase in the coverage of health care service in Kenya, the quality of services as delivered by the advanced referral hospitals is still constrained by the lack of staffing, poor resources, and weak operation of the hospital affecting the delivery of specialised services. This study sought to assess the effect of customer management agility on service delivery in Level Six Private Hospitals in Nairobi County, Kenya. The study was anchored on the Service-Dominant Logic Theory. The study used a descriptive cross-sectional research design and targeted employees of Aga Khan University Hospital, The Nairobi Hospital and MP Shah Hospital. The unit of analysis consisted of staff members in the public relations, human resources, administration and supply chain/procurement departments of the three hospitals. The data was primary and was collected using a structured questionnaire and analysed using the Statistical Package for the Social Sciences. Data was analysed using both in descriptive and inferential statistics. The relationship between customer management agility and service delivery was established using correlation and regression analyses. The correlation results showed a positive and significant association between customer management agility and service delivery ($r = 0.589$, $p < 0.05$). Similarly, regression analysis established a positive and statistically significant effect of customer management agility on service delivery ($\beta = 0.292$, $p = 0.000$). The study concluded that the ability of Level Six private hospitals to respond flexibly and promptly in managing customers plays an important role in improving healthcare service delivery, and that differences in the application of customer management strategies indicate a need for a more uniform approach to customer service. The study recommends that Level Six private hospitals in Nairobi County scale up their agility practices in the management of customers by establishing standard patient feedback collection procedures, continuously training customer-facing staff, and using technology to enable communication between hospitals and patients.

Keywords: *Customer Management Agility, Service Delivery, Patient Feedback, Responsiveness, Digital Tools, Level Six Private Hospitals.*

1.0 Introduction

Service delivery in healthcare is an important determinant of patient outcomes, institutional performance, and overall health system effectiveness (Abu-Nahel et al., 2020). Service delivery encompasses the ability of hospitals to provide timely, reliable, responsive and patient-centered care that meets established quality standards (Machuki, Kwendo, & Fozia, 2023). In top-tier medical facilities like level six private hospitals, service provision goes beyond the normal clinical care to encompass advanced diagnostics, specialized care and improved patient experience (Muli & Kiiru, 2025). Service delivery should be of high quality to improve patient satisfaction, mortality rates, and institutional competitiveness in a healthcare setting that is becoming more and more demanding (Abu-Radi and Al-Hawajreh, 2023). Efficient service delivery improves confidence in the healthcare systems, patient retention, and better health outcomes, particularly in the private hospitals where the quality and efficiency expectations are extremely high (Ngeche & Kaluyu, 2023).

Strategic agility allows organizations to adjust swiftly to the constantly evolving environments and maintain a competitive edge (Abusalma, 2021). Strategic agility in the healthcare industry entails adaptable leadership, responsive workforce management, customer responsiveness, and supply chains that are efficient (Abu-Radi and Al-Hawajreh, 2023). Studies have shown that highly strategic agile hospitals are in a better position to tackle technological changes, evolving patient demands, and external shocks like pandemics (Ngeche & Kaluyu, 2023). When applied to the setting of private hospitals, strategic agility improves operational effectiveness, improves service quality and aids in competitive positioning (Kuria & Ndeto, 2024). Empirical studies also prove that the agility capabilities, particularly organizational processes geared towards customers, play a major role in hospital performance and sustainability (Machuki, Kwendo, and Fozia, 2023). As a result, agile organizations are better positioned to become resilient and long-term effective in dynamic healthcare settings (Wahome, 2025).

Strategic agility helps hospitals to match internal capabilities with external needs, improving the quality and responsiveness of service delivery (Abu-Radi & Al-Hawajreh, 2023; Muli & Kiiru, 2025). With agile hospitals, patient needs can be predicted, resources are used in the best way possible, and continuity of care is ensured even in uncertain settings (Ngeche & Kaluyu, 2023). Studies across different sectors indicate that organizations with higher agility levels tend to achieve superior service performance due to their ability to respond effectively to changing conditions (Abusalma, 2021). Strategic agility has proven worldwide distribution in healthcare. As an example, a study carried out in Jordan revealed that strategic agility has a significant effect on every aspect of healthcare quality in accredited private hospitals, such as the responsiveness, professionalism, and operational efficiency (Odeh & Alkshali, 2024).

Globally, service delivery in healthcare has increasingly been necessitated by the need for efficiency, patient-centered care, and integration of advanced technologies (Abusalma, 2021). In Malaysia, healthcare systems have adopted digital health solutions and process optimization strategies to improve responsiveness and reduce service delays, leading to improved patient outcomes (Abu-Radi & Al-Hawajreh, 2023). Reforms in Brazil have been oriented at improving access and maintaining service quality using integrated care models, yet there are still disparities in service delivery across regions (Abu-Nahel et al., 2020). These studies show that agile hospitals are in a better position to address the changing needs of patients and technological upheavals (Ngeche & Kaluyu, 2023). Nevertheless, in these better systems, the increasing costs and demand pressures remain as the challenges to service delivery performance (Machuki, Kwendo, and Fozia, 2023).

In Africa, the healthcare systems are still struggling with resource limitations, staffing shortages, and infrastructure limitations, which have a profound effect on service delivery

(Kuria & Ndeto, 2024). Ghana has been making efforts to improve service delivery by improving supply chain systems and financing mechanisms of healthcare, but issues of inefficiencies and accessibility still exist (Machuki, Kwendo, and Fozia, 2023). Rwanda has achieved some developments by using digital health innovations and well-functioning governance structures to improve service responsiveness and patient outcomes (Abu-Radi and Al-Hawajreh, 2023). Healthcare reforms in Tanzania have been based on decentralization and capacity building to improve service delivery, yet quality and access disparities remain, especially in rural regions (Ngeche & Kaluyu, 2023).

Locally, healthcare service delivery has been subjected to extensive reforms in Kenya to increase access, quality, and efficiency, especially in the framework of the Universal Health Coverage agenda (Muli & Kiiru, 2025). Despite these efforts, issues like insufficient health workforce, resource shortage, and inefficiencies in service delivery still affect the performance of healthcare institutions (Kuria & Ndeto, 2024). Level six private hospitals, which are supposed to provide quality and specialized care, are under mounting pressure to address the growing patient demands and operational efficiency (Ngeche & Kaluyu, 2023). Studies indicate that adopting strategic agility practices such as responsive customer management have the potential to improve service delivery in Kenyan hospitals (Machuki, Kwendo, & Fozia, 2023). However, gaps in coordination, resource allocation, and adaptability continue to hinder optimal service delivery (Karatu, 2024).

Strategic agility refers to the ability of an organization to quickly sense, react, and adjust to the changes in the environment without losing strategic coherence (E-Cunha et al., 2019). With the competitive environment of the healthcare sector, Level six private hospitals in Kenya are increasingly under pressure owing to changes in the environment, regulations, and expectations of prospective patients (Mwongera, 2023). As such, if these institutions are to succeed, they have to instil agility in their management of customers. Customer management agility helps organizations to predict and react efficiently to customer demands by providing personalized services, digital interactions and constant upgrading upon feedback (Botmediscare, 2024). Organizations that have high scores in agility in managing customers can provide more responsive, reliable, and more personalized services and thus enhance customer satisfaction and loyalty.

Service delivery refers to the delivery of services that are timely, efficient, equitable, needs-focused and user-centered (World Health Organization, 2023). Service delivery involves core and support functions, such as planning, performance, follow-up and coordination of activities in order to achieve the best results. High-quality service delivery is defined as what organizations are able to do to provide the right service at the right time, in a way that reduces inefficiencies and provides maximum value. Some of the most important indicators that are normally used to measure service delivery are responsiveness, efficiency, user satisfaction and the quality of outputs in general (Parasuraman, Zeithaml & Berry, 1985). In modern service settings, companies are more than ever being demanded to align their activities to changing user expectations and remain consistent, reliable, and accountable in service delivery (OECD, 2021).

In Kenya, institutional reforms continue to highlight service delivery with the aim of enhancing performance, access and satisfaction by the users in the different sectors (Kenya Institute for Public Policy Research and Analysis [KIPPRA], 2023). By offering specialized, high-quality and reliable services, organizations that are involved in high-demand environments are important in filling service gaps. Empirical data show that service quality is influenced by such dimensions as responsiveness, reliability, assurance, empathy, and tangibility, which, together, influence user perceptions and satisfaction levels (Yanti et al., 2020). The dimensions are

particularly applicable in settings where the demands of high performance are high and operational inefficiency can greatly compromise results (Muli & Kiiru, 2025).

Strategic agility has been found to be an important enabler of effective service delivery in dynamic and uncertain environments (Yanti et al., 2020). It enables organizations to react quickly to evolving needs, streamline internal operations, and maintain service continuity (Abusalma, 2021). Research has demonstrated that agile organizations are more equipped to enact strategic interventions that enhance service performance by enhancing coordination, innovation, and adaptability (Musili & Mutinda, 2021; Nyamai, 2023). The worldwide practice also shows that adaptive strategies, including the expansion of access points and the incorporation of community-based strategies, can help to achieve much better service outcomes and efficiency (OECD, 2021). To have a solution to persisting service-delivery challenges, it is important to invest more resources and influence strategic agility in the main area of customer engagement, so as to enhance efficiency, responsiveness, and overall quality of service delivery.

1.1 Statement of the Problem

The growing population pressure, epidemiological shifts, and technological transformations are putting additional strain on healthcare systems to provide high-quality, affordable, and efficient services (OECD, 2021). Universal Health Coverage (UHC) as stressed by the World Health Organization is not only about access to healthcare services but also about the quality, safety, and responsiveness of care (World Health Organization, 2023). Level six private hospitals in Kenya are the highest level of specialization in healthcare provision and are supposed to provide advanced diagnostic, surgical and subspecialty services. These facilities work in a very difficult environment with a high patient expectation, advanced technological demands, and multidisciplinary care coordination needs. Although they are strategic, there is evidence that continuing to deliver quality service is a challenge in the wider healthcare system.

The Kenya Institute for Public Policy Research and Analysis (2023) shows that the density of health workers in Kenya is at about 15.6 health workers per 10,000 population, way below the World Health Organization recommended health workers density of 44.5 per 10,000 that is necessary to provide effective service coverage. Moreover, key service delivery indicators, such as bed-to-population ratios and fair access to specialized care, have gaps (KIPPRA, 2023; World Health Organization, 2023). These constraints affect both the public and private health care systems, and restrict their ability to provide timely and reliable services. Research evaluating the quality of the services in the private healthcare sector indicates that the level of satisfaction of patients varies between 66% and 70% due to the difference in responsiveness, reliability, and the overall experience of patients (Seify, Tabaeian, and Khoshfetrat, 2020). In addition, lack of efficiency in coordination and delays in service delivery, as well as variability in care delivery, have been reported in high-level facilities which points to systemic issues that are not limited to resource availability (World Health Organization, 2023).

The consequences of these challenges have direct implications on the level six private hospitals expected to deliver the highest standard in care delivery. Operational pressures may be brought on by the growing need for specialized services, limited capacity to deliver services, limited infrastructure, and the need to coordinate services and resources. Patients often face delays in accessing services, inefficient workflows, and inconsistencies in care quality, whereas providers struggle with workload distribution and managing intricate care systems. On the institutional side these affect service delivery and the performance and competitiveness of the healthcare sector. A structured knowledge of high-level healthcare institutions' drivers of service delivery performance is needed to tackle these challenges.

Previous empirical studies have evaluated various strategic interventions within the healthcare industry such as digital integration, capacity building and leadership practices and associated them with improved service delivery (Musili & Mutinda, 2021; Nyamai, 2023; Waithaka, Kyongo & Omagwa, 2025). Most of these studies, however, examine only part of the organizational strategy, without analysis of customer management agility, which presents a conceptual gap. Moreover, there is limited empirical evidence examining how customer management agility influences service delivery in Level six private hospitals in Kenya. This represents a conceptual gap, empirical gap and a contextual gap. This study therefore sought to address these gaps by investigating the effect of customer management agility on service delivery in level six private hospitals in Nairobi County, Kenya. The results are anticipated to enhance both theoretical understanding and practical application by illuminating the study variable that could guide strategies for augmenting responsiveness, efficiency, and service quality in specialised healthcare facilities.

1.2 Research Objective

To assess the effect of customer management agility on service delivery of Level six private hospitals in Nairobi County, Kenya.

1.3 Research Hypothesis

H₀₁: Customer management agility has no statistically significant effect on service delivery of Level six private hospitals in Nairobi County, Kenya.

2.1 Theoretical Framework

The study was anchored on the Service-Dominant Logic Theory. Service-Dominant Logic Theory was developed by Vargo and Lusch (2004). The theory states that service, rather than goods, is the fundamental basis of exchange and value is co-created through interactions between providers and customers rather than being embedded in products alone. The theory has evolved into a dominant framework in service research, highlighting operant resources such as skills, knowledge, and relationships as key drivers of competitive advantage (Vargo & Lusch, 2021). Service-Dominant Logic also underscores the importance of interaction, collaboration, and continuous feedback in shaping service outcomes (Grönroos, 2011). In service-intensive environments, value is realized through use and experience rather than ownership, reinforcing the need for responsiveness and adaptability in service delivery systems (Payne, Storbacka, & Frow, 2008). Service-Dominant Logic shifts the focus from goods-centered logic to service-oriented reasoning, highlighting the co-creation of value through interactions between providers and customers rather than embedded in products alone (Vargo & Lusch, 2021).

Customer management agility is a measure of the capability to jointly create value with patients by responding to them in a manner that is responsive, empathetic and personalized (Grönroos, 2011). Customers' active engagement in the service process improves service delivery by allowing organisations to optimise offers based on real-time feedback (Payne et al., 2008). Focusing on responsiveness, customisation, and relationship management as important factors influencing service quality is in line with the research objective of assessing the effect of customer management agility on service delivery (Vargo & Lusch, 2016). In addition, Service-Dominant Logic backs the theory that effective communication with customers increases important service delivery key performance indicators including satisfaction, trust, and loyalty (Vargo & Lusch, 2021).

However, others have argued that the theory is overly theoretical and lacks practical, testable guidance (Grönroos, 2011). Several variables, particularly in complex service settings, may be

more difficult to measure according to its generic definition of value co-creation (Payne et al., 2008). In addition, Vargo and Lusch (2008) found that Service-Dominant Logic failed to adequately address the importance of contextual constraints, which include factors such as power dynamics, institutional restrictions, and resource limits, in shaping service delivery processes. Vargo and Lusch (2016) found that healthcare infrastructure restrictions and a lack of labour can limit the successful use of value co-creation.

Although Service-Dominant Logic provides a valuable perspective for understanding service-related processes, it does not independently capture every operational and managerial factor that shapes service delivery. Its limitations therefore make it necessary to complement it with other theoretical perspectives when examining complex service environments (Vargo & Lusch, 2021). Nevertheless, the theory remained relevant to this study because it offered a suitable foundation for explaining customer management agility. In particular, it emphasizes that organisations should continuously identify changing customer expectations and respond through flexible, personalised, and interactive engagement (Vargo & Lusch, 2004).

Thus, the theory proved to be useful in the study of the effect of customer management agility on service delivery. It focuses on value creation through interaction, timely responsiveness and the effective use of available resources, which is in sync with the concept of customer management agility. In private hospitals in level 6, value is not created by the institution, but is a result of ongoing interactions between the patient, health care professionals, administrators and other service providers. Therefore, the hospital's coordination of resources, timely response to patient concerns and capacity to adapt services to the evolving needs will be critical to effective healthcare delivery. Service-Dominant Logic therefore offered a suitable analytical framework for assessing the customer-oriented strategic agility and service delivery in the private hospitals selected.

2.2 Conceptual Framework

Conceptual framework is a representation of the association between study variables. Figure 1 shows the conceptual framework this study used. The conceptual framework shows the effect of customer management agility on service delivery in level six private hospitals in Kenya. Customer management agility is the independent variable while service delivery is the dependent variable.

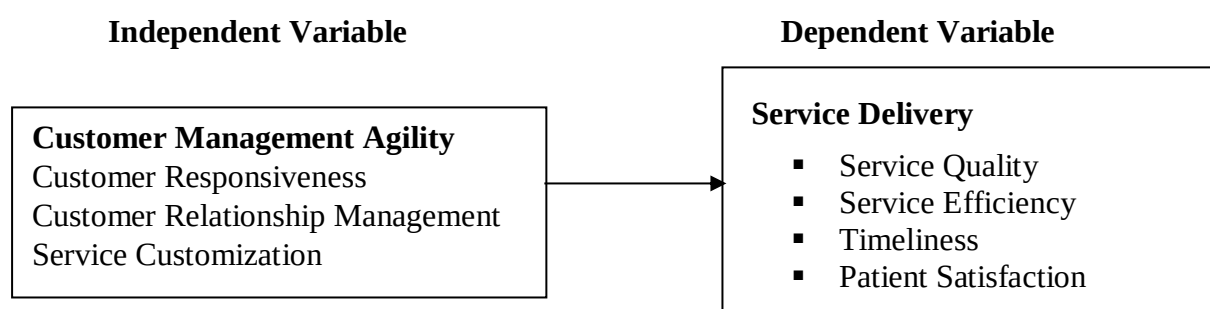


Figure 1: Conceptual Framework

2.3 Empirical Literature Review

Saleh et al. (2024) evaluated agile management in healthcare that enhances patient outcomes by being flexible and responsive. The aim of the study was to explore the potential of agile management principles to improve the situation of the patient through the focus on flexibility and immediate response in healthcare settings. The researchers applied a broad range of literature reviews, case studies and interviews with healthcare professionals and administrators

to analyse clinical and administrative uses of agile methodologies. They also examined the information collected in healthcare organizations which had implemented agile practices. The results showed that agile management greatly increased the capacity of healthcare institutions to respond rapidly to the patient's requirements, resulting in increased patient satisfaction, a decrease in wait times, and an improvement in overall patient care. However, the focus of the study was not mainly on Level six private hospitals and the study was not conducted within the Kenyan context. Due to a lack of research on the factors influencing strategic agility and service provision in Kenya's affluent private hospitals, a geographical and contextual vacuum has opened up. To bridge this gap, the current study was carried out to understand the relationship between customer management agility and service delivery in level six private hospitals in Kenya.

Kalisa and Anatole (2025) aimed to identify if the five dimensions of service quality (empathy, assurances, reliability, tangibles, and responsiveness) predict health service satisfaction and how well each dimension predicts it. Results indicated that all five dimensions together were very significant predictors of satisfaction, the most important being empathy, followed by accessibility, tangibles, guarantees, and dependability. The study, however, has a gap in the context of general health facilities and has not separated the high level private hospitals. The current study therefore examines the relationship between customer management agility and service delivery particularly in level six private hospitals in Kenya.

Ngo and Vu (2021) analyzed customer relationship management (CRM) and customer agility in the Vietnam tourism industry and their roles in tourism business success. The aim of this study was to establish whether CRM software is truly beneficial for businesses to ensure they can meet the needs of their customers. The results of the study revealed that various CRM practices have various impacts on client agility, and that not every dimension of client agility is beneficial to business outcomes. The research offered important insights into the role of CRM in improving agility and competitiveness, but focused on small and medium-sized enterprises (SMEs) in the tourist industry of Vietnam, and was directed towards financial performance instead of healthcare service delivery. This study examines level six private hospitals to determine whether a relationship exists between customer management agility and service delivery to close this gap.

Kalogiannidis and Chatzitheodoridis (2022) studied the effects of agile customer relationship management (CRM) systems on business performance and entrepreneurship. The paper brought out the automatic features and easy-to-use design of Agile CRM, which allows companies to cut down their operational expenses and enhance efficiency and overall performance. Results showed that the implementation of agile CRM encourages organizations to be more decisive and efficient in their client service strategies and make better long-term relationships with clients. The study, however, was restricted to commercial business and concentrated on the overall performance of business as opposed to the delivery of healthcare services. This creates a gap in the context which the current study seeks to fill by exploring the effect of customer management agility on service performance in level six private hospitals in Kenya.

3.0 Research Methodology

A research design is a plan or structure that helps in data collection, measurement, and analysis to solve the research problem (Subbarayudu et al., 2024). For this study, the design used was a cross sectional survey to analyze the effect of customer management agility on service delivery in level six private hospitals in Kenya. The design facilitated the study to explore the relationship between customer management agility and service delivery efficiently in a limited time frame. Thus, the cross sectional survey design was appropriate for the purpose of allowing

systematic analysis of the relationship between customer management agility and service delivery in level six private hospitals in Nairobi County, Kenya.

3.1 Target Population and Sampling

This study targeted the three Level six private hospitals in Nairobi County Kenya including; Aga Khan University Hospital Nairobi, The Nairobi Hospital and MP Shah Hospital. The target group included employees who were recruited based on the main functional departments that are directly related to service delivery and customer-facing operations, i.e., Public Relations, Human Resource, Administration, and Supply Chain/Procurement departments. The population frame was sourced using official human resource records of the hospital and the departmental staff registers that gave the correct and verifiable data on the number of employees in each functional unit. This made sure that the study did not use estimates but real data on staffing hence enhancing validity and reliability of the results. The chosen departments were relevant since they were the core departments in the operationalization of customer management agility practices, such as customer interaction, coordination of operations, and resource procurement in support of patients. Based on verified departmental records, the target population comprised 186 employees. Table 2 shows the target population.

Table 1: Target Population

Hospital	Public Relations	Human Resource	Administration	Supply Chain/Procurement	Total
Aga Khan University Hospital	15	20	25	15	75
The Nairobi Hospital	12	18	22	14	66
MP Shah Hospital	8	12	15	10	45
Total	35	50	62	39	186

Source: Hospital Human Resource Records (2026)

The research was census based because all the employees in the target population identified were covered in the research. Since the size of the total population was relatively small and manageable (186 employees), it was not only feasible but also methodologically correct to collect data on the entire population and not use a sample. The census approach did away with sampling error and captured all the pertinent views among the departments sampled, which enhances the accuracy, reliability, and generalizability of the results in the study setting. A census is considered suitable where the population is small and where the researcher would want all the units of analysis to give detailed information. The inclusion of all employees made sure that differences in departmental roles and responsibilities were well captured without the chances of underrepresentation. Based on this, the sample size of the study was equal to the target population of 186 employees.

3.2 Data Collection Instrument and Procedure

The study used primary data, which was collected directly from employees working in the selected Level six private hospitals. Primary data was suitable since it offered first-hand information that captured the perceptions and experiences of the respondents on customer management agility and service delivery. A structured questionnaire was used to gather this data in the study. The questionnaire was appropriate as it enabled the collection of quantitative data on a large sample in a very short period. The questionnaire comprised closed-ended questions structured around a Likert scale, enabling measurement of perceptions and attitudes towards customer management agility and service delivery. It was categorized into three parts to fully capture the needed information. The first part involved the collection of demographic information of the respondents, the second part was based on customer management agility,

and the third part was based on service delivery in Level six private hospitals in Kenya. This structure made sure that customer management agility was properly addressed, and responses could be properly analyzed quantitatively to determine the relationship between the independent and the dependent variable.

The researcher received an introductory letter from the University, a research permit from NACOSTI and authorization from the selected hospitals prior to collecting data. The researcher met with respondents in person after receiving approvals, and explained the purpose of the study and clarified that participation was voluntary and information would be kept confidential. Respondents were given ample time to fill in the questionnaires and then the questionnaires were collected, coded and stored safely for analysis.

A pilot study was conducted to test the research instrument in terms of feasibility, clarity, validity, and reliability. A pre-test study of the research instrument was conducted and, of the target population of 186 respondents, a pilot test with 19 participants (10%) was considered adequate. The preliminary research was conducted at Avenue Hospital Nairobi. This facility was selected because its operational structures, service delivery methods and functions of the departments are comparable to those in Level six private hospitals. Additionally, there was no chance of data contamination since it was not included in the main study cohort.

3.3 Data Analysis and Presentation

Questionnaire data was coded, entered and analysed using the Statistical Package for the Social Sciences version 27. Descriptive statistics, particularly means and standard deviations, were used to summarise the response patterns for customer management agility and service delivery. Pearson's product moment correlation analysis was subsequently conducted to establish the strength and direction of the relationship between customer management agility and service delivery. Regression analysis was then performed to ascertain the extent to which customer management agility predicted service delivery in Level six private hospitals in Kenya. It should be noted that customer management agility was analysed together with other dimensions of strategic agility measured in the wider study from which this article is drawn; the results reported in this article isolate and discuss only the results relating to customer management agility. The regression equation below was used to determine the effect of customer management agility on service delivery:

$$Y = \beta_0 + \beta X + e$$

Where:

Y = Service Delivery

β_0 = Regression constant

β = Regression coefficient

X = Customer Management Agility

e = Error term assumed to be normal in distribution with mean zero and variance.

The Shapiro Wilk test was performed to determine the normality of data since it is appropriate for small and moderately sized samples. The test is used to see whether an observed distribution is significantly different from the normal distribution. If the p value is greater than .05, then there is no significant departure from normality, and the normality assumption for regression analysis is met.

The variance inflation factor was used to check the level of association among the independent variables. This diagnostic was appropriate as it checks whether predictors are too similar to

each other. VIFs greater than 10 were considered as serious multicollinearity (Field, Miles, & Field, 2018), while values less than 10 were considered acceptable. Low levels of multicollinearity improve the reliability, stability and interpretation of regression estimates.

The Breusch Pagan test was used to check whether the variance of the errors was constant across all the observations. This procedure was warranted because one of the important assumptions that must be satisfied for regression analysis is homoscedasticity. Anselin and Florax (2012) reported that if the p value is higher than 0.05 then the error variance is constant, but when the p value is less than 0.05 then the error variance is heteroscedastic. This assumption makes the regression estimates more accurate and the results of statistical inference more valid.

3.5 Ethical Considerations

To guarantee that the research is responsible and integrity-driven, several ethical considerations were evaluated when conducting the study. First, the researcher contacted the Institutional Scientific and Ethics Review Committee (ISERC) from St Paul's University (SPU), and NACOSTI for approvals to acquire data. Second, the risk of loss of confidentiality, as the participants might be afraid that their identities or information provided by them may be revealed, which might lead to reputational harm or professional consequences, was mitigated by ensuring that information is anonymous by removing personal identifiers. The institution sent the respondents an introductory letter informing them that the data would only be used for academic purposes.

All participants were provided with informed consent, which provided their rights, and the element of participation and confidentiality in regard to responses, data storage and use was voluntary. Thirdly, the risk of bias or coercion whereby participants might feel that they are being coerced to take part, especially given that they might feel that the participation process might affect their employment or their relationship with the employer, was addressed. In order to curb this possible risk, the study emphasized the autonomy of the participants by indicating their freedom to refuse to participate or to withdraw at any moment without incurring any repercussions. Moreover, the study took care to guarantee the absence of conflict of interest, which assured the participants that their participation would not have any effect on their position at their company.

4.0 Findings and Discussion

A census-type sampling method was adopted, which involved all 186 personnel in the Public Relations, Human Resource, Administration and Supply Chain/Procurement departments in the three private level six hospitals in Nairobi County, Kenya. The questionnaires were sent to the selected respondents and 182 of them were recovered and sent back, while 4 of these questionnaires were not recovered. This resulted in a response rate of 97.8%, with almost all sampled employees responding to the study. This is considered to be very high participation in an organisational study and significantly decreases the risk of non-response bias.

A total of 62.6% of respondents were female, while 37.4% were male, according to the gender breakdown. Customer management agility practices are most prevalent in operational areas like public relations and administration, where women are increasingly holding senior positions in healthcare. This gender makeup reflects that trend. Having a mix of male and female participants strengthens the study's conclusions by giving a better picture of how customer management agility affects service delivery from the employees' points of view. The study further found out that most of the respondents (37.4%) were in the age group of 36-45 years and the next largest group was 36.3% (26-35 years). This is useful in terms of understanding the respondents' view of customer management agility in health care, as it seems that majority of respondents are mid-career and have a wealth of experience. Some of the findings in the

study may offer new perspectives on service delivery as there were younger respondents (9.3%, 18-25 years). The wide age range of respondents facilitates the different views on customer management and service delivery.

The study found that most of the respondents in the private hospitals had either a Doctorate (35.2%) or a Master's degree (23.1%), showing the high education requirement needed for management and strategic decision-making jobs in the private hospital. This demographic also speaks to the professionalism of the staff at the private hospitals in Nairobi that ensures service delivery is professionally managed, especially with regard to complex customer-facing procedures. The years in healthcare indicate a high level of experience among the respondents, with 32.4% having 10 years or more of experience and another 32.4% having 6-10 years of experience. Gaining insight into the consequences and difficulties of incorporating customer management agility into service delivery over the long run requires this wealth of expertise. Although only 14.3% of the participants have less than two years of experience, their perspectives on customer management agility in the constantly changing health care sector might be unique. Most of the respondents (34.6%) had been at the hospital for one to three years and 28.0% had been at the hospital for four to six years, giving a good mix of experienced and newer staff perspectives on the relevance of customer management agility in service delivery.

4.1 Descriptive Statistics

Customer Management Agility

Participants were asked to rate their agreement with statements about customer management agility practices such as the hospital's speed to respond to changes in patient needs, the flexibility of services to patients' expectations, the ongoing solicitation of patient feedback, the effectiveness of the hospital's response to the unexpected demands of patients, and the use of digital tools for improving patient experience. The results are presented in Table 2.

Table 2: Descriptive Statistics on Customer Management Agility

Statement	Mean	Std. Dev.
Our hospital adapts quickly to changing patient needs and preferences.	3.91	1.01
The hospital is flexible in adjusting its services to match patient expectations.	3.86	1.08
The hospital continuously collects feedback from patients and uses it to improve services.	3.47	1.12
The hospital can handle unexpected patient demands or emergencies effectively.	3.88	0.98
Digital tools (e.g., portals, telehealth) are updated to improve patient experience.	3.63	1.10
Overall Mean / Std. Dev.	3.75	1.06

The results showed that, overall, customer management agility is a relatively good competency area for the Level Six private hospitals in Nairobi County; however, there are some differences in the competency area between different practices. The respondents illustrated a high level of agreement regarding their hospitals' ability to meet the changing needs of patients, with a mean score of 3.91, showing that majority of the respondents believe their hospital is responsive to change in patient needs. The standard deviation of 1.01, however, indicates that there is a bit of variation in the perception of this agility; while many hospitals may be agile, there may be differences among various departments or facilities.

Similarly, the flexibility of the hospital to adapt services to patient expectations had a mean score of 3.86, with more than two-thirds of respondents agreeing or strongly agreeing with the statement. This demonstrates a satisfactory degree of consensus about the need for hospital services to be tailored to the needs of patients. However, the standard deviation of 1.08 indicates that perceptions of this flexibility may be somewhat variable, perhaps depending on the resources in a facility, staff training or the services provided at different facilities. The results were more mixed when it came to the collection of continuous feedback. The mean score was 3.47, suggesting that while some hospitals are very good at collecting feedback from patients and using it to improve services, there was only moderate agreement among majority of participants. The standard deviation of 1.12 also suggests that this is not done as a standard approach in all hospitals and that there may be some variation in how patient input is used in the service improvement approach.

In terms of the capacity of the hospitals to cope with unforeseen patient needs or emergencies, the mean score was 3.88, suggesting that a majority of employees think their hospitals have adequate capacity. The standard deviation is relatively low at 0.98, which means that the respondents have a high degree of agreement in this area. Further, the mean score for the use of digital tools (portals and telehealth) to enhance patient experience was 3.63, indicating a need to enhance the use of these tools to improve patient experience with them. The standard deviation of 1.10 suggests that there is a degree of variation among the hospitals or departments, with some being more technologically advanced than others.

It is thus evident from the findings that the agility of customer management is becoming a phenomenon embraced by these hospitals, but there are some differences, such as in the collection and use of patient feedback and the use of digital tools. Overall, the findings show that most hospitals in Nairobi County are able to engage in relationships with their customers and make adaptations to customers' needs, but there is a gap in the consistency and application of technology for enhanced patient experience. This is in line with Saleh et al. (2024), whose findings state that agile management significantly affected healthcare institutions' ability to respond in time to patients' needs, which in turn boosted patients' satisfaction, reduced waiting times and enhanced the quality of care. However, that study did not involve the Kenyan set-up nor was it conducted on level six private hospitals.

Service Delivery

Descriptive statistics results on service delivery, the dependent variable of the study, are presented in Table 3.

Table 3: Descriptive Statistics on Service Delivery

Statement	Mean	Std. Dev.
The hospital consistently delivers high-quality care to patients.	3.74	1.09
Staff respond promptly to patient requests and concerns.	3.93	1.05
The hospital's processes are streamlined and efficient, ensuring smooth and effective delivery of services.	3.50	1.17
Services at the hospital are delivered in a timely manner, with minimal waiting time for patients.	3.90	1.00
The competence and professional behavior of staff inspire patient confidence.	3.84	1.09
Overall Mean / Std. Dev.	3.782	1.08

The results show that majority of the respondents agreed that the hospital consistently delivers high-quality care to patients, reflected by a mean score of 3.74. This indicates that most hospitals are perceived to maintain high standards in patient care. The standard deviation of 1.09, however, indicates that some of the responses varied, suggesting that, while good care is usually available, there may be variation in the experience of this care in different departments or hospitals. Majority of the respondents agreed that staff respond promptly to patient requests and concerns, with a mean score of 3.93. This shows that hospital personnel are receptive to the needs of patients, which is important for patient satisfaction and trust.

Most of the respondents agreed, with a mean score of 3.50, that the hospital's processes are streamlined and efficient. This indicates that although a number of employees think the processes used in the hospital are effective, there is a need to improve the efficiency of work processes so that the service delivery process can run smoothly and effectively. The results further show that most respondents felt that the hospital's services are provided in a timely manner with minimal waiting time for patients, as the mean score was 3.90. Regarding the competence and professional behavior of staff, most of the respondents agreed that staff behavior inspires patient confidence, with a mean score of 3.84. The mean score for service delivery overall was 3.782 with a standard deviation of 1.08, representing a generally favourable perception of services, as majority of respondents felt that their hospitals offered high-quality, responsive and timely services delivered by competent staff.

4.2 Correlation Analysis

Pearson correlation was used to identify the strength of the association between customer management agility and service delivery, as well as to find out whether the relationship is favourable or negative. Table 4 displays the results of the correlation.

Table 4: Correlation Analysis Results

	Service Delivery	Customer Management Agility
Service Delivery	1.000	
Customer Management Agility	0.589**	1.000
Sig. (2-tailed)	0.000	

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

The results in Table 4 show a positive and significant association between customer management agility and service delivery ($r = 0.589$, $p < 0.05$). This indicates that customer management practices are associated with high-quality service to patients. These findings are supported by Saleh et al. (2024), who noted that agile management practices, particularly in customer management, enhance healthcare institutions' ability to react swiftly to patient needs, leading to higher patient satisfaction and better overall care quality. This reinforces the role of customer management agility in improving hospital performance and service delivery.

4.3 Diagnostic Test Results

Shapiro Wilk test produced significance values above .05 for both variables examined. The recorded p value was .226 for customer management agility and .213 for service delivery. These findings showed that neither variable departed significantly from a normal distribution. The normality requirement was therefore met, confirming that the data was appropriate for regression analysis. The tolerance value for customer management agility was 0.435 and the VIF was 2.301, both within the recommended limits (VIF below 10 and tolerance above 0.20), indicating that the regression coefficient for customer management agility could be interpreted without bias arising from multicollinearity. Heteroscedasticity test results revealed p-value of .5887 greater than the .05 significance threshold, suggesting that the variance of the residuals

remained constant across the observations. Therefore, there was no evidence of heteroscedasticity in the data. This finding confirmed that the homoscedasticity assumption required for regression analysis was satisfied.

4.4 Regression Analysis Results

Regression analysis was applied to establish the effect of customer management agility on service delivery in Level Six private hospitals in Nairobi County. The analysis of variance results showed that the overall regression equation was statistically significant, $F = 69.091$, $p < .001$. This finding indicated that the combined contribution of the strategic agility dimensions examined, including customer management agility, significantly predicted service delivery. The model was therefore suitable for assessing the influence of customer management agility on service delivery. The regression coefficient for customer management agility is presented in Table 5.

Table 5: Regression Coefficients

Model	B	Std. Error	Beta	t	Sig.
(Constant)	0.312	0.146		2.138	0.037
Customer Management Agility	0.292	0.058	0.323	5.031	0.000
Dependent Variable: Service Delivery					

Beta coefficient results depict that customer management agility positively and significantly affected service delivery ($\beta = 0.292$, $p = 0.000$). The t-statistic for customer management agility was 5.031, which exceeds the critical value of 1.96, confirming the significance of the effect. The coefficient points to the fact that a unit improvement in customer management agility is expected to cause a 0.292 unit improvement in service delivery, holding all the other factors constant. This finding aligns with Saleh et al. (2024), who found that agile customer-management practices have a positive effect on patient satisfaction and service quality. They also found that healthcare organizations that are able to rapidly and effectively adjust to evolving patient needs and expectations have improved service outcomes.

The regression results overall showed that customer management agility had a significant positive contribution to service delivery in Level Six private hospitals in Nairobi County. These findings indicate that hospitals can enhance their service delivery by boosting their responsiveness to patients and increasing the adaptability of their customer management practices. Consequently, the null hypothesis (H_0) was rejected, and the study finds that customer management agility has a statistically significant effect on service delivery of Level six private hospitals in Nairobi County, Kenya.

5.0 Conclusion

Strategic agility is a huge challenge to private hospitals as they deliver services. The pursuit of agility in customer management can dramatically influence customers' satisfaction and the quality of the services offered, empowering hospitals to navigate the ever-changing healthcare landscape. However, this agility needs to be practiced throughout all departments and practices to maintain the quality of service delivery at hospitals. Differences in the application of customer management strategies also indicate a need for a more uniform approach to customer service, where hospitals would be able to make continuous adaptations to meet customer needs and use feedback more regularly to enhance services.

6.0 Recommendations

In view of the findings, the study recommends that level six private hospitals in Nairobi County should scale up their agility practices in the management of their customers. Hospitals need to increase efforts to develop systems that are consistent with patients' needs and expectations. This can be done by establishing standard patient feedback collection procedures and by using technology to enable communication between hospitals and patients. Also, hospitals need staff, especially those dealing with customer service, to be continuously trained to meet the demand of patients in a flexible and responsive manner. In addition, hospitals should actively involve patients as partners in co-creating their health care experiences and provide them with greater opportunities to give feedback and make suggestions. These practices enhance hospitals' responsiveness to patient needs, create more satisfied patients, and enhance service delivery.

Performance monitoring and evaluation (M&E) should become part of the culture of a hospital so that it can monitor progress towards achieving customer-related service delivery targets. By setting clear Key Performance Indicators (KPIs) for customer management, hospitals are able to have a clear path to measuring success and pinpointing areas to improve. Performance reviews should be carried out regularly and corrective action should be taken swiftly in line with the findings from the M&E. Hospitals need to establish feedback mechanisms where patient suggestions are promptly addressed and used to evaluate their own performance in a patient-centred way. This ongoing process will ensure that hospitals keep improving service delivery and stay competitive in the healthcare sector.

REFERENCES

- Abu-Nahel, Z. O., Alagha, W. H., Al Shobaki, M. J., Abu-Naser, S. S., & El Talla, S. A. (2020). Quality of services and its role in improving strategic flexibility in non-governmental hospitals.
- Abu-Radi, S., & Al-Hawajreh, K. M. (2023). Strategic agility and its effect on the operations competitive capabilities in Jordanian private hospitals. *Middle East University*.
- Abusalma, A. (2021). Strategic agility and its effect on competitive capabilities in healthcare.
- Anselin, L., & Florax, R. J. G. M. (2012). *New directions in spatial econometrics*. Springer Science & Business Media.
- Botmediscare. (2024, September 20). How to improve healthcare customer service with technology. Botmediscare. <https://botmediscare.com/healthcare-customer-service/>
- E-Cunha, M. P., Rego, A., Oliveira, P., Rosado, P., & Habib, N. (2019). Strategic agility: A paradox-based conceptualization. *Journal of Strategic Management*, 5(3), 115–128.
- Field, A., Miles, J., & Field, Z. (2018). *Discovering statistics using R* (2nd ed.). SAGE Publications.
- Grönroos, C. (2011). Value co-creation in service logic: A critical analysis. *Marketing Theory*, 11(3), 279–301. <https://doi.org/10.1177/1470593111408177>
- Kalisa, F., & Anatole, J. (2025). Examination of the predictive power of service quality dimensions on customer satisfaction with health services in Rwanda. *Journal of Business and Strategic Management*, 10, 51–70. <https://doi.org/10.47941/jbsm.2803>

- Kalogiannidis, S., & Chatzitheodoridis, F. (2022). Effects of agile customer relation management system on business performance and entrepreneurship. *WSEAS Transactions on Environment and Development*, 18, 496–503.
- Karatu, E. N. (2024). *Influence of strategic leadership on medical employees' performance in county referral hospitals of central region economic bloc, Kenya* [Doctoral dissertation, Kenya Methodist University].
- Kenya Institute for Public Policy Research and Analysis. (2023). *Policy brief No. 14 of 2023–2024: Promoting healthcare service delivery in Kenya*. KIPPRA. <https://repository.kippira.or.ke/handle/123456789/4638>
- Kothari, C. R., & Garg, G. (2018). *Research methodology: Methods and techniques* (4th ed.). New Age International Publishers.
- Kuria, J., & Ndeto, D. (2024). Supply chain agility and performance of selected private hospitals in Nairobi City County, Kenya. *International Journal of Supply Chain Management*, 9(2), 45–56.
- Machuki, M. K., Kwendo, E. S., & Fozia, N. (2023). The moderating role of procurement governance on the relationship between supply chain agility and service delivery of the public health care sector in the county governments of western region, Kenya. *International Journal of Business, Economics, and Social Development*, 4(3), 161–174.
- Muli, A. M., & Kiiru, D. (2025). Organizational agility and service delivery in deposit taking savings and credit cooperative societies in Nairobi City County, Kenya. *The Strategic Journal of Business & Change Management*, 12(2), 1582–1600.
- Musili, T. M., & Mutinda, B. (2021). Strategic management practices and service delivery at public hospitals in Kenya: A case of Kenyatta National Hospital. *Journal of Strategic Management*, 5(3), 115–128.
- Mwongera, R. G. (2023). *Strategy implementation practices and competitive advantage among selected private hospitals in Nairobi, Kenya* [Master's thesis, St. Paul's University]. Global Scientific Journal.
- Ngeche, J., & Kaluyu, V. (2023). Organizational agility capabilities and sustainable competitive advantage in private multi-practice hospitals in Kenya. *The University Journal*, 179–194.
- Ngo, V. M., & Vu, H. M. (2021). Can customer relationship management create customer agility and superior firms' performance? *International Journal of Business & Society*, 22(2).
- Nyamai, O. M. (2023). *Strategic interventions and quality service delivery in public hospitals in Embu County, Kenya* [Master's thesis, Kenyatta University].
- Obaje, S. A., & Abdullahi, M. A. (2021). Operational efficiency and patient satisfaction in Nigerian tertiary hospitals: A performance-based approach. *African Journal of Health Economics and Policy*, 4(2), 45–59.
- OECD. (2021). *Health at a glance 2021: OECD indicators*. OECD Publishing. <https://doi.org/10.1787/4dd50c09-en>
- Odeh, I. M., & Alkshali, S. J. (2024). The effect of strategic agility on the quality of healthcare at Jordanian private hospitals. *International Journal of Entrepreneurship*, 28(S6), 1–11.

- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41–50.
- Payne, A. F., Storbacka, K., & Frow, P. (2008). Managing the co-creation of value. *Journal of the Academy of Marketing Science*, 36(1), 83–96. <https://doi.org/10.1007/s11747-007-0070-0>
- Raiji, N. D. (2025). *Strategic implementation practices and service delivery of national referral hospitals in Kenya: A case study of Kenyatta National Referral Hospital* [Master's thesis, Kenyatta University].
- Saleh, H. H., Abbas, Z. A., Latif, N., & Khalil, Z. T. (2024). Agile management in healthcare improving patient outcomes through flexibility and responsiveness. *Journal of Ecohumanism*, 3(5), 633–649.
- Seify, N., Tabaeian, R., & Khoshfetrat, A. (2020). Customer satisfaction trends in private hospitals: A three-year survey. *Journal of Health Services Research*, 12(4), 211–219.
- Subbarayudu, C. B. V., Singh, H. P., Karamthoti, M. B., & Rao, M. (2024). *A conceptual approach to research methodology and data analytics*. Academic Guru Publishing House.
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(1), 1–17. <https://doi.org/10.1509/jmkg.68.1.1.24036>
- Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1), 1–10. <https://doi.org/10.1007/s11747-007-0069-6>
- Vargo, S. L., & Lusch, R. F. (2016). Institutions and axioms: An extension and update of service-dominant logic. *Journal of the Academy of Marketing Science*, 44(1), 5–23. <https://doi.org/10.1007/s11747-015-0456-3>
- Vargo, S. L., & Lusch, R. F. (2021). Service-dominant logic 2021: Continuing the evolution. *Journal of the Academy of Marketing Science*, 49(4), 1–15. <https://doi.org/10.1007/s11747-020-00741-9>
- Wahome, K. W. (2025). *Effect of strategic agility strategies on the performance of five-star hotels in Nairobi County, Kenya* [Doctoral dissertation, Kisii University].
- Waithaka, S., Kyongo, J., & Omagwa, J. (2025). Strategic alignment and performance of private hospitals in Kenya. *Journal of Health Policy and Management*, 7(1), 45–59.
- Wanjiru, L., & Muthoni, G. (2023). Improving patient engagement through CRM systems: A pathway to improved healthcare delivery. *International Medical Science Research Journal*, 4(10), 88–97. <https://doi.org/10.51594/imsrj.v4i10.1648>
- World Health Organization. (2023). *Universal health coverage: Moving together to build a healthier world*.
- Yanti, N., Faiza, D., Dewi, R., & Wibisono, A. (2020). Consumer perceptions of service quality in healthcare: A SERVQUAL-based analysis. *International Journal of Health Services Management*, 6(1), 55–68.