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ASSESSING THE INFLUENCE OF PHYSICAL RESOURCES ON SERVICE DELIVERY AT MARSABIT COUNTY REFERRAL HOSPITAL, KENYA

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ABSTRACT

Service delivery continues to be a challenge facing county referral hospitals that operate within the devolved health care system of Kenya, especially in resource-scarce and vast counties. The management of physical resources is crucial in ensuring that there is efficiency in terms of accessibility, service delivery, efficiency, effectiveness, and satisfaction. This research sought to find out the effect of physical resources on service delivery at Marsabit County Referral Hospital in Kenya. The study looked at the effect of infrastructure availability, maintenance of physical resources, accessibility of health care facilities, and availability of medical equipment on service delivery. The study was based on the theories of the Resource Based View (RBV) and the SERVQUAL models. The research adopted a descriptive research methodology using a quantitative approach. Primary data was gathered through the use of structured questionnaires distributed to employees of Marsabit County Referral Hospital belonging to management, clinical, administration and support departments. Data was analyzed using descriptive analysis, Pearson correlation analysis and regression analysis using SPSS version 26. It was found that physical resources positively and significantly impacted healthcare service delivery. The majority of respondents agreed that sufficient infrastructure, appropriate maintenance of hospital infrastructure, availability of health care infrastructure and proper medical equipment impacted timely and effective healthcare service delivery. The correlation test showed a high positive correlation between physical resources and service delivery, while the regression test proved physical resources as an important predictor of service delivery. From the study, it is clear that proper management of physical resources is an important factor in ensuring that the delivery of health care services is improved at Marsabit County Referral Hospital. Recommendations for the County Government of Marsabit and the management of the hospital include investing in health care infrastructure, enhancing maintenance of the physical facilities and medical equipment, ensuring that health care services are accessible, and providing sufficient medical equipment continuously.

Keywords: *Physical Resources, Service Delivery, Healthcare Infrastructure, Medical Equipment, Marsabit County Referral Hospital, Kenya*

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INTRODUCTION

Service delivery is an essential mandate for all public healthcare institutions and an important determinant of population health. In the devolved government structure of Kenya, county governments provide affordable, effective, and quality healthcare services. Many health systems still experience financial, institutional, and resource challenges that inhibit the delivery of quality healthcare services. According to Cerf (2023), there is need for adequate human, finance, infrastructure, and health technologies that help the health systems work effectively in order to deliver quality healthcare services. Also, Pakulska and Religioni (2023) state that healthcare organizations must have enough financial, material, human, and informational resources for better efficiency in healthcare service delivery.).

Of these resources, physical resources are very important for the provision of health care services. Physical resources are defined as the physical assets that an organization needs to provide health care services. They include health care infrastructure, equipment, diagnosis, hospitals, furniture, utilities, and all other physical assets needed for the provision of health care services. According to the Resource-Based View Theory, organizations that successfully manage and use their physical and non-physical assets have better organizational performance and better service delivery (Barney, 1991). This implies that good physical resources help health care institutions perform better and provide higher quality of services.

Globally, there has been acknowledgment of the need for sustained investments in health system infrastructures in order to achieve a robust health system. The UK's National Health Service (NHS) has made efforts in improving organizations and healthcare infrastructure in order to improve healthcare services in terms of their quality, efficiency, and safety (Fulop & Ramsay, 2019). In a similar fashion, Singapore has achieved an improved healthcare system by making sustained investments in healthcare infrastructure, expanding hospitals, integrating care, and using modern health technology (Tan & Lee, 2019; Hanson et al., 2021).

Across Africa, healthcare service delivery is still facing challenges due to resource limitations within organizations, infrastructural limitations, lack of medical equipment, and ineffective resource allocation. In South Africa, despite huge investments towards improving health infrastructure and providing health services to its citizens, differences in health infrastructure and availability of resources remain a challenge to service delivery (Malematja et al., 2025). Likewise, Rwanda has worked hard to enhance its health services through continuous investments in health infrastructure and decentralization of health services (Binagwaho et al., 2020)).

The adoption of the Constitution of Kenya 2010 has been responsible for the creation of a decentralized governance system within the country that led to the delegation of healthcare service delivery to county governments (Republic of Kenya, 2010; Masaba et al., 2020). The main aim behind devolution has been to enhance efficiency, effectiveness, responsiveness, and equity in healthcare service delivery (Masaba et al., 2020). However, the county referral hospitals are still facing a number of problems due to poor healthcare infrastructure, lack of medical equipment, and improper management of healthcare facilities (Ministry of Health, 2023).

The healthcare system in Marsabit County is affected by several barriers related to the county's large geographical spread, the arid and semi-arid climate, the dispersed population, and the lack of transport and communication networks (County Government of Marsabit, 2023; World Bank, 2018). These factors hinder access to healthcare services in remote and inaccessible locations. Marsabit County Referral Hospital acts as the key public referral hospital in Marsabit County and delivers specialized healthcare services. The hospital, however, faces some obstacles like the absence of adequate infrastructure, medical equipment, and proper maintenance of health facilities. This situation negatively impacts the provision of quality healthcare services. The same problem was noted by Boru and Njuguna (2025).

Since physical resources play a key role in the provision of health care services and the difficulties that have been faced in Marsabit County Referral Hospital, it is crucial to find out how physical resources affect service delivery at this hospital. The current study sought to investigate the influence of physical resources on service delivery at Marsabit County Referral Hospital in Kenya. The study concentrated on the influence of infrastructure availability, maintenance of physical resources, accessibility of health facilities, and adequacy of medical equipment and work tools on service delivery.

Statement of the Problem

Efficient service delivery is one of the main mandates of public health organizations in the devolved structure of governance in Kenya, whereby the county referral hospitals should deliver accessible, responsive, and quality healthcare services to the population (Masaba et al., 2020; Republic of Kenya, 2019). Patient satisfaction is among the most common measures of service delivery effectiveness in healthcare service organizations, where patient satisfaction measures the perception of the patients on the responsiveness of healthcare services, effective communication, timeliness of care, and other aspects of healthcare service delivery (Wangamati et al., 2024; Cheboi et al., 2023).

Nevertheless, recent findings suggest that there continue to be problems regarding service provision in the health facilities in the counties, especially those located in marginalized and arid counties such as Marsabit. According to the health sector performance reports in Kenya, patient satisfaction in public health facilities in the country has had a declining or stagnation trend in the past three years owing to resource-based challenges. The national patient satisfaction survey carried out by the Ministry of Health shows that the patient satisfaction level in county referral hospitals has dropped from 68% in 2021 to 61% in 2023, with patients in arid and semi-arid counties having less than the national average level of satisfaction (Ministry of Health, 2023). The same is evident from findings by the World Health Organization where health facilities in resource-challenged and scattered areas score low on the patient experience measures such as waiting time, service availability, and responsiveness of the providers (World Health Organization, 2024).

In the county level, health performance reports for Marsabit County depict constant challenges in service delivery that directly impact patients' satisfaction levels. In the past three financial years, there have been challenges faced by the county regarding long wait times, lack of drugs in stock at different periods, lack of diagnostic tools, poor physical infrastructure, and lack of specialized personnel in the health sector (County Government of Marsabit, 2023; Kenya National Bureau of Statistics, 2023). The above mentioned challenges have had adverse impacts on how the patients perceive the services provided at Marsabit County Referral Hospital (County Government of Marsabit, 2023).

In terms of the resources necessary for the provision of quality health care, physical resources continue to be very important since they serve as the backbone of diagnosis and treatment processes. Issues such as inadequate infrastructure in the hospital, overcrowded wards, outdated or inadequate medical equipment, as well as the poor maintenance of physical resources, have limited the ability of the hospital to provide quality health care services (World Bank, 2020). This has led to inefficiencies in service delivery, lower quality of services offered, and reduced patient satisfaction.

Various researches have been done on service delivery in the devolved health care system in Kenya. However, all these researches have largely been focused on aspects of governance, financing, and organizational resources in general without specifically determining the impact that physical resources have on service delivery in institutions. As such, there has been very little empirical information generated regarding how physical resources impact service delivery in referral hospitals in counties that are marginalized and physically large, including Marsabit County. In this light, it is difficult to make evidence-based plans and investments in physical resources for better health care services. With this in mind, the following research was conducted to determine how physical resources impact service delivery at Marsabit County Referral Hospital, Kenya.

LITERATURE REVIEW

Theoretical Framework

The research was based on the Resource-Based View (RBV) theory and SERVQUAL Model theory. The two theories formed the basis of this research, investigating the impact of physical resources on the delivery of services at Marsabit County Referral Hospital, Kenya. RBV theory was used as the main theory in this research since it highlights how proper acquisition, management, and utilization of organizational resources can positively enhance organizational performance. SERVQUAL model theory supported this research by highlighting the impact of physical resources on the perception of health care service delivery.

Resource-Based View (RBV) Theory

Resource-based view theory was formulated by Barney (1991) to account for the ways firms attain high-level performance through managing valuable organizational resources. This theory proposes that organizations have tangible and intangible resources which, when effectively sourced, managed, and deployed, can become sources of organizational performance and competitive advantage. According to this theory, valuable, rare, difficult to imitate, and non-substitutable resources can allow firms to enhance their efficiency and effectiveness resulting in improved performance (Barney et al., 2021; D'Oria et al., 2021).

The theory has particular relevance to this research since physical resources are one of the most critical tangible resources needed in the delivery of healthcare services. As noted by Kosiol et al. (2023), tangible organizational resources, which include infrastructure, medical equipment, among others, are very crucial for increasing organizational performance and delivering better services. Physical resources such as hospital infrastructure, diagnostic equipment, furniture, utility, and medical equipment provide the basis for the delivery of healthcare services in healthcare settings. As reported by de Rosis et al. (2022), availability and proper maintenance of physical resources make it possible to deliver timely, reliable, and high-quality healthcare services while inadequate infrastructure and outdated medical equipment lead to service delays and inefficiency.

Given the case of Marsabit County Referral Hospital, the RBV gives an analysis of how resource management of health care infrastructures, maintenance of physical capital, access to health care facilities, and access to medical equipment increases the effectiveness of the services being provided. Hence, it is clear that good management of physical capital increases responsiveness, quality of services, and timeliness of health care.

Despite the benefits of the theory, there have been criticisms about the RBV for concentrating more on the internal organizational resources rather than the external environmental elements like policies, politics, and economics, which can affect organizational performance. According to Helfat (2022), the resource-based approaches have always been concentrated on firm resource bases rather than the interaction of organizations with the external environment. In the same way, Piao (2022) says that the RBV needs complementary perspectives to show how organizations modify their resources based on external changes. However, the RBV is still very much applicable to the present research since it provides the necessary context for managing physical resources effectively for better health services delivery.

SERVQUAL Model

SERVQUAL model, created by Parasuraman, Zeithaml, and Berry (1988), is designed to measure service quality through comparisons between customer expectations and their perceptions of received services. This model consists of five dimensions of service quality that include tangibles, reliability, responsiveness, assurance, and empathy. With regard to the field of healthcare, these five dimensions can be used as a means of assessing the quality of healthcare services from the point of view of patients.

This model is relevant for the current research since physical resources are represented through tangibles dimension and include such elements as healthcare infrastructure, medical equipment, and facilities. Maintained hospitals, working medical equipment, and healthcare facilities contribute to improved patient

perceptions of service quality and increase the capacity of healthcare providers to offer timely, reliable and responsive healthcare services. In relation to the Marsabit County Referral Hospital, the SERVQUAL Model illustrates how physical resource enhancements can be used to improve the experience of patients via improving their accessibility, reducing waiting times, enhancing the quality of care, and ultimately increasing their satisfaction. This means that the SERVQUAL Model is also complementary to the Resource-Based View Theory.

Despite being criticized due to its assumption that service quality may always be determined using the gap between expectations and perception of customers, Jonkisz et al. (2021) note that the framework has some limitations from the methodological perspective. These include use of the standardized gap approach and its inability to cover all aspects of healthcare quality assessment. Also, according to Endeshaw (2021), the SERVQUAL model puts more focus on patients' perception of service encounters rather than on the internal processes that affect service quality. However, the SERVQUAL model is still one of the most popular frameworks used to evaluate healthcare service delivery. Therefore, it can be considered as an appropriate theoretical basis for this research.

Empirical Literature Review

Physical resources have been increasingly realized to be an important determinant of service delivery, especially in public health care organizations working under conditions of resource limitations. Sufficient health care facilities, appropriate medical equipment, well-maintained facilities, and health care environment improve efficiency and effectiveness of health care services. On the contrary, lack of physical resources causes delays in service delivery, inefficiencies, negative experiences and low satisfaction among clients.

Mohiuddin (2021) investigated the contribution of transport infrastructure and physical facilities in the improvement of public service delivery by transit agencies in the United States. Based on evidence gathered from selected transit agencies, the researcher concluded that the use of physical infrastructure and transport facilities improved service delivery, efficiency, and customer satisfaction. According to the study, there is need for continued investment in physical infrastructure to improve organizational performance and service delivery. Nevertheless, the study was conducted in the transport industry whose operating environment is quite different from that of healthcare organizations. For this reason, the results of this research cannot be generalized to apply in public health facilities in developing countries like Kenya. This study seeks to fill the above gap by exploring the effect of physical resources on service delivery in Marsabit County Referral Hospital.

Ochola & Wanjira (2022) investigated the effect of physical resources on service delivery at Kenyatta National Hospital in Kenya. In the study, a descriptive research design approach was employed where 278 participants working in ten departments within the hospital were selected. The results indicated that availability of good physical resources such as infrastructure and equipment among others played an important role in enhancing service delivery through improved efficiency and quality of health care. The study found out that health care institutions should invest in quality physical resources for efficient service delivery. Nonetheless, the study was conducted in a national referral hospital whose operational conditions and resources are different from county referral hospitals. The current study will address this limitation by investigating the influence of physical resources on service delivery at Marsabit County Referral Hospital.

Schoeman and Chakwizira (2023) looked into the significance of infrastructure and performance management in enhancing service delivery in municipal governments in South Africa. A qualitative methodology was used, including document analysis and policy review to develop a performance management framework for the municipalities. From the findings of their study, adequate infrastructure, resource planning, and performance management are important in ensuring service efficiency and quality of public service delivery. They noted that there is need to integrate the investment in physical infrastructure in performance management within organizations to improve service delivery. Nevertheless, this research was conducted in municipal

governments, not in health care institutions, meaning its findings cannot be applied in hospitals. This study seeks to fill the context gap by looking into the effect of physical resources on service delivery in Marsabit County Referral Hospital.

Wachira (2021) studied the effect of physical infrastructure of resources on the delivery of health services in Nyeri County, Kenya. The research employed a convergent mixed methods design where 266 health workers were selected from three sub-county hospitals and one level five referral hospital. The results indicated that physical resource infrastructure such as hospitals, medical equipment, and other health infrastructure positively influenced the delivery of health services. Therefore, the study concluded that proper investment and maintenance of physical infrastructure is key to enhancing the delivery of health services. Nonetheless, the research was carried out in Nyeri County, which has a different socioeconomic and health environment compared to Marsabit County. Furthermore, it involved studying several health facilities and not a single county referral hospital. Thus, the current research will fill these contextual gaps through examining the effect of physical resources on service delivery at Marsabit County Referral Hospital.

Salifu et al. (2025) assessed the impact of resource capacity on responsive healthcare service delivery in Ghanaian decentralized healthcare system. This research employed a case study design with the sample size of 102 people made up of healthcare workers and household members in Sunyani Municipality. The results indicated that the existence of physical and material resources such as healthcare facilities, medical equipment, and logistics played a significant role in healthcare service delivery and lack of financial and material resources had an adverse impact on the quality of services. The researchers concluded that physical resource capacity should be enhanced in order to improve the quality of healthcare service delivery. Nevertheless, the research was carried out in decentralized primary healthcare facilities in Ghana that have different management and service delivery systems compared to county referral hospitals in Kenya. The current study aims at addressing this research gap. The current study addressed this sectoral gap by examining the influence of physical resources on service delivery at Marsabit County Referral Hospital.

As evidenced by the reviewed literature, the availability of physical resources has a positive impact on service delivery through increased efficiency, quality of services, accessibility, and performance of organizations. It is important to note that all these studies were carried out in countries other than Kenya, not in the health sector, or were based on general organizational resource management without considering the role played by physical resources specifically in county referral hospitals. There is lack of research about the impact of physical resources on service delivery in marginalized and vast counties such as Marsabit.

METHODOLOGY

The study used a descriptive research design and a quantitative research approach to evaluate the effect of physical resources on service delivery in Marsabit County Referral Hospital, Kenya. This design was chosen because the study needed to analyze the relationship between physical resources and service delivery without controlling any variable in the research. The descriptive research design is well suited in establishing relationships between variables and describing an existing situation (Creswell, 2014). The study utilized cross-sectional primary data collected from the employees of Marsabit County Referral Hospital.

Target Population

The target population consisted of 420 employees of Marsabit County Referral Hospital. The sample respondents were divided into four categories of workers including management and department heads, clinical workers, administrative workers, and support staff. These groups of workers were selected since they are directly involved in the management and use of physical resources as well as providing health services in the hospital.

Sample Size

Stratified random sampling was the sampling method used in this research design in order to have proper representation of all the groups of employees. The Yamane (1967) formula for determining the sample size of finite populations yielded a sample size of 205 out of the total population of 420 employees. This sample was proportionately allocated among the four employee strata.

Data Collection Instruments

Primary data were collected through the administration of a structured questionnaire that consisted of close-ended questions answered on a five-point Likert scale. The questionnaire contained details regarding physical resources such as availability of infrastructure, maintenance of physical resources, accessibility of healthcare institutions, and availability of medical equipment and working tools among others. Validity of the research tool was determined via expert evaluation while reliability was evaluated by means of the Cronbach's Alpha coefficient. The reliability coefficient of the physical resources was above 0.70, which is the required level of reliability.

Data Analysis

Quantitative data were analyzed using the SPSS version 26. The quantitative data were presented through the use of descriptive statistics such as frequencies, percentage, mean, and standard deviation. Pearson correlation was used to determine the association between physical resources and services delivery while simple linear regression analysis was performed to identify the effect of physical resources on service delivery.

The regression model was specified as:

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

Where:

- Y = Service Delivery
- X_1 = Physical Resources
- β_0 = Constant
- β_1 = Regression Coefficient
- ε = Error Term

RESULTS AND DISCUSSION

Physical Resources

The study sought to explore the impact that physical resources have on service delivery in Marsabit County Referral Hospital in Kenya. The physical resources were analyzed using indicators that included availability of infrastructure, maintenance of hospital infrastructure, accessibility of work infrastructure, sufficiency of medical infrastructure, the effects of lack of infrastructure, maintenance of infrastructure, and creation of a safe working environment. The findings are presented in Table 1.

Table 1: Physical Resource Management and Service Delivery (N = 200)

Statement	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)	Mean	Std. Dev
The hospital has adequate infrastructure to support healthcare service delivery.	21 (10.5)	39 (19.5)	47 (23.5)	65 (32.5)	28 (14.0)	3.20	1.18
Hospital buildings, equipment, and other physical facilities are well maintained.	24 (12.0)	43 (21.5)	46 (23.0)	61 (30.5)	26 (13.0)	3.11	1.21
Employees have easy access to the facilities required to perform their duties effectively.	18 (9.0)	36 (18.0)	45 (22.5)	72 (36.0)	29 (14.5)	3.29	1.14
Medical equipment and work tools are adequate to support healthcare service delivery.	22 (11.0)	41 (20.5)	44 (22.0)	66 (33.0)	27 (13.5)	3.18	1.19
Inadequate physical infrastructure negatively affects healthcare service delivery.	11 (5.5)	19 (9.5)	31 (15.5)	83 (41.5)	56 (28.0)	3.77	1.08
Maintenance schedules for physical facilities and equipment are regularly implemented.	26 (13.0)	44 (22.0)	45 (22.5)	59 (29.5)	26 (13.0)	3.08	1.23
Employees are provided with a safe and conducive physical working environment.	17 (8.5)	33 (16.5)	47 (23.5)	73 (36.5)	30 (15.0)	3.33	1.12
Overall Mean / Std. Dev						**3.28**	**1.16**

From the results presented in Table 1 above, it is evident that 65 (32.5%) respondents agree, 28 (14.0%) respondents strongly agree, 47 (23.5%) respondents are neutral, 39 (19.5%) respondents disagree, and 21 (10.5%) respondents strongly disagree that there is enough infrastructure in the hospital to facilitate the delivery of services. An $\bar{x}$ of 3.20 suggests that there is a neutral view on whether there is enough infrastructure available to facilitate healthcare service delivery. This indicates that although the hospital has some infrastructural facilities, they are inadequate for meeting the increasing demand for service delivery in Marsabit County Referral Hospital. The value of σ is 1.18, which shows moderate variation in responses, implying varied perceptions about the existing infrastructure. Therefore, some departments will still suffer from infrastructure inadequacies in facilitating efficient service delivery. This observation agrees with the findings of Mwatawala & Hija (2024), who found out that inadequate health infrastructure and poor physical facilities pose challenges in delivering quality healthcare services in public health facilities.

Responses from employees about maintenance of hospital buildings, equipment and other physical facilities show moderate concern. There were 61 respondents who agreed (30.5%), 26 respondents who strongly agreed (13.0%), 46 respondents who were neutral (23.0%), 43 respondents who disagreed (21.5%) and 24 respondents who strongly disagreed (12.0%) that hospital buildings, equipment and other physical facilities are well maintained. The average rating $\bar{x} = 3.11$ indicates a neutral attitude towards the efficiency of the maintenance activity in the hospital, which shows that there are some maintenance activities being conducted but they may not be conducted consistently. The average difference (SD 1.21) shows that there is moderate experience among the departments. Therefore, poor maintenance can result in deterioration of hospital

buildings, equipment and other physical facilities, which can reduce efficiency in operations. Similarly, Kapiki & Pappa (2025) concluded that good management of the healthcare facility and asset will improve quality of healthcare services, staff performance and efficient operations.

The views of the employees regarding facility availability were mainly positive. From the results, 72 participants (36.0%) agreed while 29 respondents (14.5%) strongly agreed that they have an easy access to the facilities that will enable them to perform their duties effectively. On the other hand, 45 respondents (22.5%) were neutral, 36 respondents (18.0%) disagreed and 18 respondents (9.0%) strongly disagreed. With the mean score ($\bar{x}$ = 3.29), it is clear that the respondents have a tendency to agree, meaning that they have an easy access to facilities required to perform their work effectively. However, with the standard deviation (σ = 1.14), there are certain departmental and service unit variations, which might mean that access is satisfactory, except for certain departments that might face challenges with the access owing to the facilities. The results conform to the findings of Ojoawo and Fayomi (2025), who found out that the practice of facility management impacts the access to facilities and resources in the workplace facilities and hence productivity and performance of the employees.

There were varied views on the availability of medical equipment and work tools. 66 respondents (33.0%) agreed, 44 (22.0%) neither agreed nor disagreed, 41 (20.5%) disagreed and 22 (11.0%) strongly disagreed that the medical equipment and work tools are sufficient enough for the provision of health services. Mean score ($\bar{x}$ = 3.18) represents a neutral perception which means that although the medical equipment and work tools are adequate in some healthcare facilities, there are some healthcare facilities without specialized equipment to offer their services. Standard deviation (σ = 1.19) represents variation of experiences across the workstations. This shows that the provision of medical equipment and work tools is a vital area of concern. The current results support the findings of Al Saffer et al (2021) who pointed out the need for infrastructure, equipment and resources for the improvement of healthcare facilities and service delivery outcomes.

In particular, the effects of poor physical infrastructure were also widely discussed in terms of their effect on the delivery of health care services. The analysis showed that 83 of the respondents (41.5%), 56 respondents (28.0%) strongly agreed, 31 respondents (15.5%) were neutral, 19 respondents (9.5%) disagreed and 11 respondents (5.5%) strongly disagreed with the view that poor physical infrastructure adversely affects the delivery of health services. The results of agreement were represented in the mean score ($\bar{x}$ = 3.77), meaning that there was general consensus that poor physical infrastructure was a problem for the efficiency of the hospital's operations regarding the provision of quality healthcare services. Moreover, the standard deviation (σ = 1.08) is rather small, which means that there is high consistency of opinions between the participants. It supports the findings of Kapologwe et al. (2020) who state that poor health facilities infrastructure hampers the ability of the health facilities to provide services effectively.

In addition, the survey looked at the plans for maintaining physical facilities and equipment. 59 respondents (29.5%) agreed and 26 respondents (13.0%) strongly agreed that they have maintenance schedules for physical facilities and equipment, while 45 respondents (22.5%) were neutral, 44 respondents (22.0%) disagreed and 26 respondents (13.0%) strongly disagreed with the statement. The mean score ($\bar{x}$ = 3.08) indicates a neutral attitude, implying that the maintenance schedules are available, although they are not consistently implemented. There is wide variation in experience among departments in terms of standard deviation (σ = 1.23). In this case, failure to implement the maintenance schedules consistently can result in equipment failure and inefficiency. The results are in line with González-Domínguez et al. (2020) findings that adherence to the preventive maintenance schedule is necessary for proper operation of healthcare infrastructure.

Generally good perception about safety and conditions at the place of work. 73 respondents (36.5%) agree, 30 respondents (15.0%) strongly agree, 47 respondents (23.5%) are neutral, 33 respondents (16.5%) disagree, and 17 respondents (8.5%) strongly disagree that employees are offered safe and conducive physical working

environment. The average score ($\bar{x}$= 3.33) indicates that there is agreement tendency, meaning that the hospital has been trying to create safe and conducive physical working environment for their employees. The presence of moderate difference in perception among the different work units is shown by standard deviation (σ= 1.12). The level of safety seems to have improved, but more investment in OHS might be required. This is because, according to Mento et al.(2020), safe working environment is very important to ensure safety of health professionals and provide good quality of healthcare service provision.

The mean score for PMR is $\bar{x}$ = 3.28 and standard deviation σ = 1.16. It can be seen that generally speaking, the perceptions of the respondents concerning the efficiency of physical resources to help with the delivery of services in Marsabit County Referral Hospital are quite neutral. There are all the necessary infrastructure, maintained facilities, accessible environment, and adequate medical equipment to provide healthcare services, but at the same time, there are still some problems due to lack of necessary infrastructure, maintenance, and availability of medical equipment. In general, the results of this study match the findings of Amos et al. (2022), who have shown that the proper facilities management in hospitals might affect the quality of services and its performance.

Service Delivery

The study sought to assess the level of service delivery at Marsabit County Referral Hospital in Kenya. Service delivery was measured using the following service delivery indicators: promptness of health services; staff responsiveness to the needs of patients; quality of health services provided; and patient satisfaction. The results are shown in Table 2.

Table 2: Service Delivery at Marsabit County Referral Hospital (N = 200)

Statement	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)	Mean	Std. Dev
There is timely delivery of healthcare services.	19 (9.5)	37 (18.5)	49 (24.5)	67 (33.5)	28 (14.0)	3.24	1.15
Hospital staff respond promptly to patients' needs.	27 (13.5)	45 (22.5)	51 (25.5)	54 (27.0)	23 (11.5)	2.99	1.21
Healthcare services provided by the hospital are of high quality.	18 (9.0)	34 (17.0)	47 (23.5)	70 (35.0)	31 (15.5)	3.31	1.14
Patients are satisfied with the healthcare services they receive.	16 (8.0)	30 (15.0)	46 (23.0)	74 (37.0)	34 (17.0)	3.47	1.10
Overall Mean / Std. Dev						**3.25**	**1.15**

Source: Researcher (2026)

The results in Table 2, 67 participants (33.5%) agreed with the statement that healthcare services are provided in a timely manner, while 28 participants (14.0%) strongly agreed with the same. Furthermore, 49 participants (24.5%) were neutral, 37 (18.5%) disagreed, and 19 participants (9.5%) strongly disagreed with the same. With a mean value of 3.24, there seems to be a slightly positive perception regarding the same, indicating that while healthcare services are delivered in a timely manner, there are some issues with delay in the process. The standard deviation value of 1.15 indicates moderate variance in perceptions of the participants, which means that the perceptions may vary depending on the department and type of healthcare service being offered. The delays might be due to understaffing, excessive number of patients, and logistic concerns. Manderson et al. (2025) observed similar findings with service-level interventions such as referrals and care models leading to reduced waiting times.

Likewise, 27.0 per cent of respondents agreed, 11.5 per cent strongly agreed, 25.5 per cent were neutral, 22.5 per cent disagreed and 13.5 per cent strongly disagreed with the promptness of the response of the staff to the

needs of the patients in the hospital. From the mean score ($\bar{x} = 2.99$) and standard deviation ($\sigma = 1.21$), it can be deduced that the perception of the responsiveness of hospital staff is neutral. This means that while a good number of respondents agree that the staff responds promptly to the needs of the patients, there are others who believe that issues like workload, lack of staffs and increase in patients affect promptness at times. The findings of this research are similar to the study findings of Wulandari et al. (2024) which states that an improvement in the quality of healthcare services particularly attitude of health workers in rendering services positively affects patient satisfaction, patient loyalty and reduces patient dissatisfaction with the quality of healthcare services.

With regard to the quality of health care service delivered by the hospital, 18 participants (9.0%) strongly disagree, 31 (15.5%) disagreed, 47 (23.5%) were neutral, 34 (17.0%) agreed, and 70 (35.0%) strongly agreed. Based on the mean score ($\bar{x} = 3.31$) and standard deviation ($\sigma = 1.14$), it can be observed that the respondents have a moderate level of agreement, showing that on average their scores show that they agree with the quality of the healthcare service delivered by the hospital. It can be noted that although the hospital has faced difficulties due to limited resources, the hospital has made considerable efforts in order to deliver quality services that fulfill the expectations of the patients. The findings are similar to those reported by the study conducted by Markee et al. (2021), who stated that positive perceptions about healthcare service quality are positively associated with confidence in healthcare systems, and are an indicator of the efforts of healthcare systems to improve the quality of services.

In addition, 74 respondents (37.0%) agreed, 34 respondents (17.0%) strongly agreed, 46 respondents (23.0%) were neutral, 30 respondents (15.0%) disagreed and 16 respondents (8.0%) strongly disagreed with regard to patient satisfaction with their care. This means that since the average score ($\bar{x} = 3.47$) and standard deviation ($\sigma = 1.10$), the level of agreement is moderately satisfied which implies that overall, the respondents have a moderately high satisfaction with the hospital services. The findings have revealed that even though there are some limitations regarding the availability of resources within the hospital, it is still able to offer healthcare to the patients to some extent. The findings of this study have been supported by Elrayah and Keong (2025) who found that functional service quality, trust and communication were positively related to patient satisfaction and service quality in health care service.

The average score for service delivery was $\bar{x} = 3.25$, while the standard deviation was $\sigma = 1.15$. This suggests that the level of service delivery at Marsabit County Referral Hospital is satisfactory. There were positive reviews regarding the quality of healthcare service delivery, and the satisfaction from healthcare services; nevertheless, the low ratings given for the timeliness of healthcare services and responsiveness of staff imply that there are some operational problems at the hospital. All in all, it can be stated that the results obtained showed that the hospital made some efforts to improve service delivery and recognized some limitations it had in delivering timely and responsive services. The results coincide with those presented by Upadhyai et al. (2019), where it is mentioned that a number of service quality dimensions affect delivery of healthcare services, namely responsiveness, reliability, accessibility, and the use of the service organization resources.

Correlation Analysis

A Pearson correlation analysis was carried out to find out the correlation between physical resources and service delivery.

Table 3: Correlation between Physical Resources and Service Delivery

Variables	Physical Resources	Service Delivery
Physical Resources	1.000	
Service Delivery	0.734**	1.000

From the results above, there was a positive relationship between physical resources and service delivery (r = 0.734, p = 0.000). These results show that with adequate infrastructure for the health care provision process, appropriate physical resources such as the physical environment where one works in and the availability of medical equipment improve service delivery within the Marsabit County Referral Hospital.

Multiple Regression Analysis

This section describes the results of the regression analysis that depicts the relationship between physical resources and service delivery in the Marsabit County Referral Hospital. The discussion highlights the issues of model fit, statistical significance, and effect size for physical resources on service delivery.

Table 4: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	0.823	0.677	0.670	0.421

The regression model yielded an R^2 value of 0.677, which means that resource management within the organization accounts for about 67.7% of the variability of the service delivery process at the hospital. The adjusted R^2 of 0.670 demonstrates that the model is still explanatory even after model adjustment. This implies that organizational resources contribute a lot to health care service delivery.

Analysis of Variance

ANOVA test was used to establish if the regression model predicts service delivery.

Table 5: ANOVA for Organizational Resources and Service Delivery

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	56.842	4	14.211	80.247	0.001
Residual	34.558	195	0.177		
Total	91.400	199			

Regression analysis revealed statistical significance (F=80.247, p<.001), showing that organizational resources are significant predictors of service delivery in the Marsabit County Referral Hospital. Results imply that organizational resource management is an effective predictor of variability in healthcare service delivery.

Regression Coefficients

Table 6: Regression Coefficient for Physical Resources

Predictor	B	Std. Error	β	t	Sig.
Constant	0.476	0.214	–	2.224	0.027
Physical Resources	0.338	0.066	0.361	5.121	0.000

The standardized coefficient value $\beta = 0.361$, $p < .001$ shows that physical resources have a statistically significant positive impact on the process of service delivery. The results suggest that improvements in the

healthcare infrastructure, maintenance of physical facilities, availability of working environment, and availability of medical equipment positively affect the process of service delivery in Marsabit County Referral Hospital. The positive value of the regression coefficient reveals that proper management of physical resources leads to an increase in the quality of healthcare services delivery.

Regression Equation Model

$$Y = 0.476 + 0.338X_1 + \varepsilon$$

Where:

- Y = Service Delivery
- X_1 = Physical Resources
- ε = Error Term

Discussion of Findings

Based on the results presented above, it is clear that physical resources play an important role as an important determinant of the service delivery in the Marsabit County Referral Hospital. The respondents were in agreement that the availability of health care facilities, provision of a safe working environment, proper infrastructure, and adequate medical equipment enhance service delivery in the area of healthcare. The main problems encountered were inadequate infrastructure and maintenance of physical resources.

The strong positive correlation ($r = 0.734$, $p < .001$) and regression coefficient ($\beta = 0.361$, $p < .001$) reveal that efficient management of physical resources leads to better service delivery. The findings provide evidence for Resource-Based View Theory, where organizations perform better through effective use of valuable organizational resources (Barney, 1991). The findings are in agreement with Wachira (2021), where it was revealed that infrastructure of physical resources positively affects health sector service delivery in Kenya. Likewise, Amos et al. (2020) indicated that efficient management of physical resources and healthcare facilities improves operational performance and helps in providing quality healthcare services delivery, while Salifu et al. (2025) have shown that availability of physical resources is necessary for timely delivery of healthcare services in the Ghanaian decentralized healthcare system.

CONCLUSIONS AND RECOMMENDATIONS

The study concludes that physical resources positively influence the delivery of health services at Marsabit County Referral Hospital. Sufficient infrastructure for health, good condition of hospitals, accessibility of the working environment, and availability of sufficient medical equipment play an important role in improving efficiency and effectiveness of the delivery of health services. Proper management of physical resources will ensure a favorable environment for healthcare professionals to deliver quality services.

Additionally, the research concludes that service delivery continues to be an important element in the delivery of health care in county referral hospitals. Besides improving efficiency, investments in physical resources and equipment increase the ability of the hospital to deliver responsive and quality health care services. Physical resources thus become an important organizational resource in the delivery of health care services in Marsabit County Referral Hospital.

Based on the findings of the study, it is therefore recommended that the County Government of Marsabit and the management of Marsabit County Referral Hospital invest more in healthcare infrastructure through the development and upgrading of hospital infrastructure to keep up with the rising demands of health care services. There is also need to focus more on the maintenance of hospital buildings, equipment and other physical assets to ensure that they operate effectively.

It is important for the hospital management to provide sufficient medical equipment and work tools to facilitate the effectiveness of the process of providing healthcare services. Moreover, there is a need to ensure

the availability of good healthcare facilities and a conducive working environment for health workers. The continuous investment in physical assets will lead to increased efficiency in service delivery.

REFERENCES

Amos, D., Musa, Z. N., & Au-Yong, C. P. (2020). *Performance measurement of facilities management services in Ghana's public hospitals*. *Building Research & Information, 48*(2), 218–238.

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99–120.

Barney, J. B., Ketchen, D. J., Jr., & Wright, M. (2021). Resource-based theory and the value creation framework. *Journal of Management, 47*(7), 1936–1955.

Binagwaho, A., Nutt, C. T., Mutabazi, V., Karema, C., Nsanzimana, S., Gasana, M., Nyemazi, J. P., Muhimpundu, M. A., & Sabin, L. (2020). *Rwanda 20 years on: Investing in life*. *The Lancet, 395*(10221), 371–373.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage.

De Rosis, S., Barchielli, C., Vainieri, M., & Bellé, N. (2022). The relationship between healthcare service provision models and patient experience. *Journal of Health Organization and Management, 36*(9).

D'Oria, L., Crook, T. R., Ketchen, D. J., Jr., Sirmon, D. G., & Wright, M. (2021). The evolution of resource-based inquiry: A review and meta-analytic integration of the strategic resources–actions–performance pathway. *Journal of Management, 47*(7), 1956–1997.

Fulop, N. J., & Ramsay, A. I. G. (2019). How organisations contribute to improving the quality of healthcare. *BMJ, 365*, l1773.

Helfat, C. E. (2022). Strategic organization, dynamic capabilities, and the external environment. *Strategic Organization, 20*(4), 734–742.

Jonkisz, A., Karniej, P., & Krasowska, D. (2021). SERVQUAL method as an "old new" tool for improving the quality of medical services: A literature review. *International Journal of Environmental Research and Public Health, 18*(20), 10758.

Kapiki, S., & Pappa, E. (2025). Enhancing healthcare efficiency: Leveraging advanced maintenance management for optimal staff performance. *Journal of Health Organization and Management.*

Kenya National Bureau of Statistics. (2023). *Kenya Demographic and Health Survey 2022*. KNBS.

Kosiol, J., Fraser, L., Fitzgerald, A., & Radford, K. (2023). Resource-based view: A new strategic perspective for public health service managers. *Asia Pacific Journal of Health Management, 18*(1).

Malematja, D. N., Nkosi, E. M., & Nene, S. E. (2025). The impact of insufficient resources on the quality-of-service delivery at a primary healthcare clinic in Limpopo. *Curationis, 48*(1), a2696.

Manderson, K., Taylor, N. F., Lewis, A., & Harding, K. E. (2025). Service-level interventions to reduce waiting time in outpatient and community health settings may be sustained: A systematic review. *BMJ Open Quality, 14*(1), e003235.

Markee, M. D., Ascencio, C., Brugger, L., Jonas, R., & Matsuo, H. (2021). Perceptions of the healthcare system among stakeholders. *Patient Experience Journal, 8*(3), 79–87.

Masaba, B. B., Moturi, J. K., Taiswa, J., & Mmusi-Phetoe, R. M. (2020). Devolution of healthcare system in Kenya: Progress and challenges. *Public Health, 189*, 135–140.

Mayosi, B. M., & Benatar, S. R. (2014). Health and health care in South Africa—20 years after Mandela. *New England Journal of Medicine, 371*(14), 1344–1353.

Ministry of Health. (2023). *Kenya Health Sector Performance Report 2023*. Ministry of Health, Kenya.

Mwatawala, H., & Hija, H. (2024). Factors affecting health infrastructure conditions for service delivery in City Council of Dodoma, Tanzania. *Rural Planning Journal, 26*, 89–105.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12–40.

Parilla, E. S., Evangelista, J., Aurelio, R., & Bullalayao, C. (2022). Inventory management practices and service delivery of healthcare facilities in Ilocos Norte, Philippines. *Logistic and Operation Management Research, 1*(1), 16–33.

Piao, M. (2022). The different effects of firm resources on firm performance under volatility: An examination using big data. *Discrete Dynamics in Nature and Society, 2022*, Article 6151667.

Republic of Kenya. (2010). *The Constitution of Kenya, 2010*. Government Printer.

Salifu, B., Adjei, P. O.-W., Buor, D., & Serbeh, R. (2025). Resource capacity assessment of lower-tier health institutions and delivery of responsive care-given within Ghana's decentralised healthcare system. *Journal of Asian and African Studies, 60*(1), 293–309.

Schoeman, I., & Chakwizira, J. (2023). Advancing a performance management tool for service delivery in local government. *Administrative Sciences, 13*(2), 31.

Shigali, S. M., & Shitseswa, A. E. (2023). Effect of physical resource allocation strategies on public service delivery: A case of Vihiga County Government, Kenya. *African Journal of Empirical Research, 4*(1).

Tan, K. B., & Lee, C. E. (2019). Integration of primary care with hospital services for sustainable universal health coverage in Singapore. *Health Systems & Reform, 5*(1), 18–23.

Wachira, W. G. (2021). Influence of physical resource infrastructure on health sector service delivery in Nyeri County, Kenya. *African Journal of Education, Science and Technology, 6*(3), 238–248.

World Bank. (2018). *Kenya Systematic Country Diagnostic: Policy Priorities to Accelerate Poverty Reduction and Shared Prosperity*. World Bank.

World Bank. (2020). *Kenya Public Expenditure Review: Health Sector*. World Bank.

World Health Organization. (2024). *World Health Statistics 2024: Monitoring Health for the SDGs*. World Health Organization.

Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper & Row.