

Knowledge Sharing And Performance Of Private Health Facilities In Kisii County, Kenya

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Abstract: Well performing private health facilities afford countries access to quality healthcare and support services, easing the disease burden in public health facilities. Being a knowledge-driven industry, the field of medicine keeps advancing, highlighted by new discoveries in treatments from continuing research. As such, desirable performance among private health facilities would ideally necessitate that healthcare providers adequately share knowledge. By so doing, when one that bears knowledge that is specialized exists the facility, other staffs may continue accessing the knowledge, thus decreasing the probability of committing errors as a result of misinformation. Whereas extant studies attempt to link knowledge sharing and organizational performance, their focus has been on industries other than private healthcare. The present research thus set out to assess the effect of knowledge sharing on the performance of private health facilities in Kisii County, Kenya. The study was grounded on both knowledge-based view, and upper echelon theories. The research adopted both descriptive and explanatory research designs, with the target population comprising 135 staff drawn from all 43 private health entities in Kisii County. The research used a census survey with five top cadre staff from each facility forming the unit of observation. The research involved the gathering of data that is primary by utilizing a questionnaire that is semi-structured. Inferential and descriptive calculations were then computed in data analysis. Findings reveal a statistically significant relationship between knowledge sharing ($\beta = .221$, $\text{Sig.} = .008 < .05$) and performance. It is thus concluded that knowledge sharing significantly influences performance among private health facilities in Kisii County, Kenya. The study recommends that in order to realize improved and superior performance, private health facilities in the country ought to invest in knowledge sharing.

Keywords: Knowledge Sharing, Performance, Private Health Facilities

I. INTRODUCTION

A. BACKGROUND OF THE STUDY

Private health facilities' performance is of eminence both in advanced and advancing economies. This owes to their role in complementing the shortcomings in public health facilities occasioned by funding constraints through the provision of health-related services, medicines and medical products (Nezenega, Gacho & Tafere, 2017). Their importance is particularly pronounced in view of increases in disease burden, case in point the novel Coronavirus Pandemic (COVID-19), that has since its first reported cases towards the end of the year 2019 and its subsequent spread globally, resulted in public

health facilities overstretching their limited resources. In comparison to the resource-constrained public health facilities, characterized by limited care and quality of health services, most private health facilities are well-resourced with infrastructure and innovation (Oraro & Wyss, 2020). As such, well performing private health facilities afford countries access to quality healthcare and support services, easing the disease burden in public health facilities.

Healthcare is a knowledge-driven industry, as highlighted by the continuously advancing field of medicine and new discoveries in treatments from continuing research (Donate & de Pablo, 2019). As such, to effectively offer care to patients, staff and providers of healthcare ought to have the ability to not only disseminate clinical information, but also information

on procedures and processes within the organization as well as latest treatment and drug information (Maravilhas & Martins, 2018). A healthcare system of managing knowledge can therefore establish a flow of information that is more efficient among all staff and providers of healthcare, eventually resulting in enhanced productivity, efficiency and desirability of performance (Khodakarami & Chan, 2018).

Management of healthcare knowledge especially enables health facilities to vigorously make all processes standard and easily offer training on these processes in an accessible manner. To this end, knowledge sharing is particularly instrumental in enabling the transmittance of information across the firm. By so doing, when one that bears knowledge that is specialized exists the facility, other staffs may continue accessing the knowledge, thus decreasing the probability of committing errors as a result of misinformation (Donate & de Pablo, 2019). Knowledge sharing is defined by Esterhuizen *et al.* (2019) as the dissemination of explicit (recorded) and tacit (unrecorded) information from one person or entity to another. The concept has also been defined by Chiu and Chen (2016), as the procedure through which novel knowledge emanating from various sources are transmitted and can eventually result in the generation of novel knowledge, information and understanding. A total of 43% the Kenyan health sector is controlled by facilities in private healthcare, which also make up 22% of services in healthcare. In spite of the contribution by the sector, its rate of growth annually keeps decreasing from 2.6%, 2.3% and 1.9% in 2017, 2018 and 2019 respectively (Korir, Moses & Zeng, 2021). Maina (2015) observes that private health facilities are sought by over 47% of Kenyans. The role of the private health facilities is recognized by the government as instrumental in the realization of the health pillar of the Vision 2030. According to Kioi, Cowden and Karodia (2015), close to 70% of medical doctors in the country work in the private sector, which diminishes poor Kenyan's access to the doctors. A majority of these private health facilities are located in urban centers, most of which in Nairobi County.

Kisii county harbors a number of registered private health facilities, which vary in size. These include satellite facilities of syndicated private hospital chains including the Aga Khan hospital, integrated outpatient healthcare networks including Bliss Medical Centre, private owned hospitals, nursing homes and private-mission hospitals. The system of healthcare in Kisii county is momentarily influenced by the available private facilities, though a majority of residents who can access the facilities are scheme members from their various workplaces (Obwocha, Ayodo, Nyangura & Ondimu, 2016).

B. STATEMENT OF THE PROBLEM

According to the Kisii County Annual Development Plan (2019/2020), Annual Development Plan (2020/2021) and Annual Development Plan (2021/2022), Kisii county has over the last three (3) years leading to the year 2021 reported increased disease rates. Common causes of the high disease rates in the county include Human Immunodeficiency Virus, Acquired Immunodeficiency Syndrome (HIV/AIDS) related illnesses, malaria, diarrhoea, skin diseases and respiratory diseases. Many of these conditions also commonly contribute

to increased hospital visits and high mortality rates, according to the Kisii County government development plans. Also in the county, private health facilities continue to report various operational challenges including high stock-outs of essential medicines and long cycle time, which denotes the length of time taken between ordering supplies from the Kenya Medical Supplies Agency (KEMSA) and delivery, which not only affect their delivery of health services, but also their annual turnover particularly occasioned by the operational challenges including stockouts and long cycle time (Magak & Muturi, 2019).

The foregoing point to a dismally performing healthcare sector in Kisii County, marred by various disease burden and operation-related shortcomings. Accordingly, it is expected that compared to public health facilities operating within a budget, private health facilities will leverage their resources and adopt strategies aimed at addressing the foregoing challenges for desirable performance. Among these strategies include the pursuit of new knowledge to improve clinical outcomes and patient experiences as well as reduce operational inadequacies, as Donate and de Pablo (2019) opine. It however remains scantily explored how private health facilities in Kenya in general and Kisii county in particular practice knowledge sharing and how the same influences organizational performance thereof, presenting a contextual gap that the present study sets out to address.

Whereas studies attempt to link practices in management of knowledge including knowledge and performance of organizations, their focus was on the telecommunication industry (Karani, 2015), public service sector (Wanyama, 2018) and banking sector (Kangogo, 2015), which operate differently from the private health sector, and so the findings may not be applicable to private health facilities in Kisii county, hence the contextual gap necessitating the present study. Further, the foregoing studies only adopted either the descriptive or cross-sectional designs in isolation, while the present study employs both explanatory and descriptive cross-sectional research designs with a view to statistically characterize the variables and articulate the association between the product and manipulated variables. By so doing the study will address the existing methodological gap pertaining to the research designs used in previous related studies. Against this backdrop, the present research sets out to bridge the highlighted methodological, contextual and conceptual gaps on how knowledge sharing affects private health facilities' performance in Kisii County, Kenya; and subsequently test the null hypothesis that knowledge sharing does not have a significant effect on the private health facilities' performance in Kisii County, Kenya (H_0).

C. OBJECTIVE OF THE STUDY

To assess the effect of knowledge sharing on private health facilities' performance in Kisii County, Kenya

D. RESEARCH QUESTION

What is the effect of knowledge sharing on private health facilities' performance in Kisii County, Kenya?

II. LITERATURE REVIEW

A. THEORETICAL REVIEW

Various theories exist relevant to knowledge management that create the foundation of this research. Appropriate to connecting the management of knowledge to the outcomes of an organization with a focus on private health facilities, four theories are hereby reviewed. These comprise the Knowledge-Based View (KBV) theory, Resource-Based View (RBV) theory, Organizational Learning theory, and Upper Echelon Theory.

a. KNOWLEDGE BASED VIEW THEORY

This study is grounded on the KBV theory proposed by Barney (1991). KBV furthers RBV's assertions that foretells that a firm's competitiveness and sustainability is reliant on leveraging the competences and capitals that are characteristic (Penrose, 1959). KBV projects the notion of resources and points out knowledge as the capital which offers the highest value added to a firm (Nonaka & Takeuchi, 1995). Knowledge is regarded in KBV as "justified true belief" and the theory's emphasis is on the overt characteristic of knowledge that is connected to the person (Barney, 1991), that is both not possible and hard to articulate. Staffs' active movement means that, the capability of an organization is reliant on the mechanism of integration compared to the professional information which possessed by staffs.

A firm's capability to incorporate knowledge which persons hold inside an organization establishes its competitive advantage, and therefore competences and repository of knowledge among organizations are the key predictors of corporate outcomes and an advantage of competitiveness that is sustained. Nevertheless, in order to attain competitive advantage that is sustained, there has to be heterogeneity, evaluability and inimitability in a firm's capital (Grant, 2002). KBV regards information as a key resource vital for greater organizational outcomes which is difficult to identify, acquire, sustain and imitate (Rugman & Verbeke, 2002). Competences that are based on knowledge are regarded as the most strategic and significant to sustain and earn competitiveness (Barney, 1991). The ability to acquire knowledge quicker in comparison to rivals may be the only source of competitiveness that is sustained (Geus, 1988).

Abilities and competencies result in performances that is sustained and superior since they are particular to an individual firm. Additionally, these abilities and competencies are unique to that company and temporarily fixed, inimitable, non-substitutable and valuable to customers (DeNisi et al., 2003). Against this backdrop, the present study will employ KBV to demonstrate whether knowledge among private health facilities in Kisii County can be considered a distinctive resource, and how knowledge management capabilities thereof influence their organizational performance.

b. RESOURCE BASED VIEW THEORY

Originated by Penrose (1959), RBV rests on the premise that an organization is a broader set of resources and the

growth of an organization involves the exploitation of existing resources and the development of new ones. The Resource Based View of the firm states that performance dissimilarities occur when organizations that are well successful bear capitals that are valuable, which others lack, enabling them a competitive edge (Wernerfelt, 1984). RBV focuses specially on the inside of the firm, its resources and capabilities, to explain the profit and value of the organization (Penrose, 1980; Wernerfelt, 1984; Grant, 1991; Peteraf, 1993). This theory is applied to explain differences in performance within an industry (Makhija, 2003).

Although the resource-based view of the firm recognizes the important role of knowledge in firms that achieve a competitive advantage, proponents of the knowledge-based view argue that the resource-based perspective does not go far enough to explain deeper insights (Grant, 2002; Barney, 1991). In particular terms, as opposed to bearing features that are peculiar, RBV regards knowledge as a resource that is generic. As such, it fails to make distinct, the various kinds of competencies that are based on knowledge (Rugman & Verbeke, 2002). Such weaknesses leave the knowledge-based view theory unparalleled as the most preferred foundation for knowledge management. In the present study, RBV is adopted to show how various private health facilities create, share, apply and guard knowledge as an intangible resource to earn competitive advantage, and how the same influences organizational performance thereof.

c. ORGANIZATIONAL LEARNING THEORY

Argyris and Schon (1978) put forth the theory of organizational learning and aver that, organizations ought to alter their activities and purposes so as to attain competitiveness in a volatile market (Janz & Prasarnphanich, 2003). An organization that is learning comprises five main features: team learning, systems thinking, psychological frameworks, vision that is shared and individual knack. Nevertheless, in order to realize the full potential of learning, the organization ought to deliberately decide to alter their activities as feedback to an alteration in conditions, deliberately associate activity to result and memorize the result (Serenko et al. 2007). The notion of an organization that is learning promotes firms to change to ways of thinking that are more a more interconnected. Organizations ought to further assume community-like features in which staffs can commit to and be inspired to be more productive (Cha et al., 2008).

The initial phase of the procedure of learning entails the acquisition of information, whereby an organization obtains "memory" of outcome-action connections which are valid, the climatic circumstances that yield its validity, the outcomes' likelihoods, and the ambiguity related to the likelihood. The outcome-action connections are obtained by way of grafting, experiential, benchmarking, and experiments, but they ought to be a deliberate decision to utilize, confirm, or discover an effect and cause, otherwise they will be merely unsighted activities reliant on luck for achievement (Hult et al., 2000). The subsequent phase of the procedure of acquiring information is deduction, in which firms recurrently make comparisons between expected and actual outcomes to either

add to or make their “memory” up to date. Outcomes that are not anticipated ought to be evaluated for interconnection, novel outcome-action connections specified or adapted as need be, and learning augmented. It does not mean in this phase that any activity is carried out. A cross-section of scholars holds that there ought to be activities for any sort of learning to take place, while in contrast, others assert that whatever is important for learning to take place is change in comprehension and growth of the base of knowledge.

The third phase on the procedure of learning is action/adaptation, in which the organization utilizes the knowledge that is already to choose novel outcome-action connection suitable the climatic circumstances. Upon adapting has taken place, the base of knowledge of the organization is made current to entail the novel outcome-action connection, likelihoods, ambiguity, and circumstances that are practice and the learning procedure progresses. This response is a process that is both iterative and continual, and takes place across all phases in the procedure of learning (Debowski, 2006; Serenko *et al.*, 2007). Tacit knowledge is however hard to copy, interpret or replace, as the knowledge is based on a mixture of induction, research and experience which could be fine-tuned across several years (Marquardt, 2011).

Against this backdrop, the theory of organizational learning is adopted in this study to understand the entire knowledge management spectrum of practices, from knowledge creation through knowledge storage, and how each practice influences organizational performance among private health facilities in Kisii County, Kenya.

d. UPPER ECHELON THEORY

According to Hambrick and Mason (1984), the Upper Echelon Theory (UET) holds that organisational outcomes are a direct result of the experience, skills and expertise that management in senior roles provide to the organisation. The theory holds that the approach adopted by the management or boards of directors in undertaking their management role is critical in providing organisation direction.

Phipps and Burbach (2010) assert that the argument underlining the role of management in fostering the organizational goals is debatable since not all managers and leaders can accurately interpret the organizational needs and therefore rely on employees under different categories to innovate and make informed contributions towards the overall organizational direction by their views considered in the decisions. These sentiments are also shared by Carpenter *et al.* (2004) who argue that the success of any organization does not only depend on the competence of the leaders and managers but also the positive contribution given by the organizational employees and other stakeholders like customers, suppliers and also the government interests.

The theory is of pertinence to this research since it endeavors to determine how the upper echelons of private health facilities in Kisii County, particularly heads of such departments relevant to knowledge management as Human Resources, Records or Administration, carry out the various practices in management of knowledge, and how the same predict performance outcomes.

B. EMPIRICAL LITERATURE REVIEW

Tubigi and Alshawi (2018) assessed the impact of knowledge management processes on organizational performance in the airline industry in Germany. The research employed an inductive and deductive method with qualitative approach to guide the study. Gathering of primary information was conducted using interviews while content analysis was applied to extract and analyze the information. The findings showed that knowledge transfer was most common in knowledge management process used by organization but did not influence performance while knowledge usage influenced organization's performance the most. The study was however qualitative in design, using interviews and content analysis while the present study will be quantitative in design, employing structured questionnaires and both descriptive and inferential analyses.

Choi and Lee (2019) conducted research to determine how practices in the management of knowledge are supported by IT, through among others, applying, encoding, sharing, storage, and retrieving knowledge; and how the same predicts outcomes of teams as well as outcomes of the organization. The field study was conducted on two ICT firms in South Korea and involved 139 teams consisting of 743 individuals. The results indicated that whereas knowledge sharing had a positive impact on knowledge application, it did not show a direct impact on team performance. Therefore, knowledge sharing on its own is not enough, organizations must ensure such knowledge is applied to improve team performance and anchored by Information Technology systems. The study narrowly focused on IT-based enablers of knowledge management, which overlooks others aspects of knowledge management.

Zahari, Rahman, Othman and Baniamin (2019) examined how organizational outcomes are predicted by sharing of knowledge among Malaysian insurance firms. The outcomes of the research demonstrated that dissemination of knowledge substantially predicts the outcomes of an organization. The study however only focused on knowledge creation which is a narrow dimension of knowledge management findings of which may therefore not be applicable to the broader concept of knowledge management. The study also focused on the insurance industry, which is a different industrial context from the private health sector, findings of which may also not be applicable in the current study context.

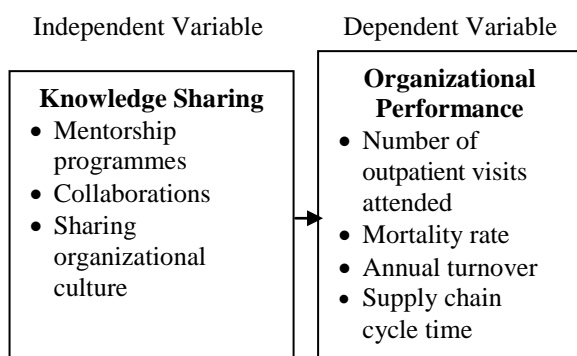
Alonso and Viridiana (2017) examined the implication of implementing knowledge management initiatives to promote positive work environment and customer service in small and medium enterprises targeting a Mexican distribution company for cleaning products. The findings indicated that customer satisfaction was improved after implementing core knowledge management processes such as sharing of innovative ideas within the company. The study did not however show a linkage between knowledge management and organizational performance, as it was focused on articulating the implication of implementing knowledge management initiatives to promote positive work environment and customer service.

Ileri (2017) focused on the Kenya Power company in assessing how transferring knowledge acts as a competitiveness source. Employing a case study design, the

study determined that information is transferred by firms to various organization's departments and between their partners. Within the organization, the dissemination of information led to the improvement of competitiveness in the organization through raising satisfaction of customer, market proportion, reduction in operation cost as well as operation and adoption of technology that is novel. The study however focused on competitiveness which is conceptually different from organizational performance. Whereas the study was conducted in the Kenyan context, a case study approach was adopted with a focus on the Kenya Power company, which is operationally different from the private health sector context. Outcomes of the research may therefore not be generalizable to the current study context.

C. CONCEPTUAL FRAMEWORK

This study adopts a conceptual model from the discussions presented in the literature review, which forms the basis of relationships of current study variables as shown in Figure 2.1.



Source: Researcher (2021)

Figure 2.1: Conceptual Framework

As Figure 2.1 breaks down, the independent variables, knowledge sharing is conceptualized as influencing organizational performance which is the dependent variable.

III. RESEARCH METHODOLOGY

A. RESEARCH DESIGN

The research adopted both explanatory and descriptive research designs. Ghauri and Gronhaug (2010) intimate that, the explanatory survey is utilized when the research being carried out is aimed at elucidating the causal connection between concepts upon computation of numerical information that is gathered objectively and hypotheses are tested empirically. The descriptive study design on the other hand seeks answers to the investigations of what, who, when, how and where, associated with a particular study issue and articulates a phenomenon, population, event or their association (Mertens, 2010). The research design is relevant to this research since it sought to give an articulate account of statistical connections among the independent and dependent concepts. The descriptive research design is further deemed appropriate in the present research as the research utilized

structured questionnaires in data collection at one point in time.

B. TARGET POPULATION

The study's population consists of 135 staff drawn from all 43 private health entities in Kisii County in accordance with the Kisii County Annual Development Plan (2021/2022). These comprised of 5 top cadre staff drawn from each facility, including senior health records and information officers, heads of nursing, senior radiologists, heads of pharmacy and senior medical engineering technologists. Private health facilities in Kisii County were settled on as the target population owing to the consistently increasing burden of disease in the county, as highlighted by the Kisii County Annual Development Plan (2019/2020), Annual Development Plan (2020/2021) and Annual Development Plan (2021/2022), Kisii county has over the last three (3) years leading to the year 2021 reported increased disease rates. This was coupled with a report on the challenges of performance of the County's Private health facilities (Magak & Muturi, 2019).

C. SAMPLING DESIGN AND PROCEDURE

The study adopted a combination of census and purposive sampling. A census approach was adopted in selecting all 135 staff from the 43 private health facilities in Kisii County owing to the relatively manageable size of the population. Purposive sampling was on the other hand adopted in reaching 5 top cadre staff from each facility due to their possession of prerequisite information pertinent to the study. According to Collis and Hussey (2009), census involves the recording, acquisition and enumeration, of information concerning every item in a population in a systematic fashion which is in contrast to selection in which information can only be obtained from the subset of a population.

D. DATA COLLECTION PROCEDURE

The researcher obtained letter of authorization of research from Kenyatta for purposes of obtaining a research permit. The permit of research and letter of authorization were then submitted to the private health facilities in Kisii County during gathering of information, before the administration of the questionnaires. The researcher then first introduced herself to the respondents as well as introduce the study and its objectives. The researcher then proceeded to take the respondents through the questions and demonstrate how to respond. She then left the questionnaire with the respondents and indicate the scope of time within which she would require the dully filled questionnaire and left her contact for collection of completed questionnaire as well as any clarifications sought.

a. VALIDITY

A pilot study was conducted to pretest the questionnaire for validity and reliability. A pilot sample of 14 respondents was selected in this regard, in line with Kothari (2004) who argued that a pilot study sample should be 10% of the sample

projected for the larger parent study. In this research, both content and face validity tests were executed. While *validity of the content* meters if a construct vigorously indicates of all of a *construct's features*, validity of the face meters if the index seems to gauge the construct it was designed to (Kothari, 2004). To check for both face and content validity, expert perspective from the project supervisor was obtained. To this end, the research supervisor assessed and review the instruments, upon which questionnaire items deemed valid was maintained, while invalid questions were either reviewed or eliminated from the questionnaire. Validity tests were passed successfully, with the project supervisor having given a nod for fieldwork.

b. **RELIABILITY**

To ascertain reliability, Cronbach’s alpha was utilized to gauge internal constancy with the threshold set at 0.7. It is similarly opined by Collis and Hussey (2009), that Cronbach Alpha values above 0.7 are “recommended”, while values ranging from 0.4 to 0.7 are “acceptable”. Tashakkori and Teddlie (2010) further postulate that one regards a questionnaire as “highly reliable” if Cronbach Alpha values that fall within 0.82 and 1.00 are recorded; and “sufficiently reliable” if within 0.64 and 0.81. Further, questionnaires are regarded as having “low reliability” if Cronbach Alpha values fall within 0.46 and 0.64; and “not reliable” if the recorded Cronbach Alpha values are within the range of 0.10 to 0.45. Table 3.1 gives a depiction of the test results for reliability.

Variable	Cronbach Alpha	No of Items	Decision
Knowledge Sharing	0.917	5	Sufficiently Reliable
Performance	0.992	4	Highly Reliable
Overall	0.922	9	Highly Reliable

Source: Survey Data (2022)

Table 3.1: Reliability Analysis

Outcomes observable from Table 3.1 are of the indication that Cronbach alpha values for both variables were above 0.70, with performance at a Cronbach alpha value of 0.992 and knowledge sharing at .917). The overall reliability coefficient for the whole questionnaire was 0.922 implying that the questionnaire was reliable.

E. **DATA ANALYSIS AND PRESENTATION**

Information gathered from fieldwork was entered into the Statistical Package for Social Sciences, version 26 after cleaning and coding, before analysis. A calculation of both descriptive and inferential figures was then computed. Descriptive statistics included standard deviations, frequencies, means and percentages were projected by use of figures and tables. Both regression and correlation computations were executed to test the stated hypotheses. The following model of regression was utilized to ascertain how practices in the management of knowledge influence performance.

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

Y = Performance

β_0 is a constant and represents the value of Y when X = 0.

β represents the regression coefficients which measures the average change in the value of the dependent variable

X = Knowledge Sharing

ϵ = Error term

IV. **RESEARCH FINDINGS AND DISCUSSIONS**

A. **RESPONSE RATE**

To determine the return rate of the questionnaires that were administered, the total number of questionnaires that were returned back dully filled was divided by the total number of questionnaires that were administered. Table 4.1 showcases the results.

	Frequency	Percentage
Response (Returned dully filled)	132	97.8
Non-Response (Unreturned/ not dully filled)	3	2.2
Total (Administered)	135	100.0

Source: Survey Data (2022)

Table 4.1: Rate of Response

As shown in Table 4.1, out of the 135 questionnaires that were administered, 132 were returned back dully filled. This brings the overall return rate to 97.8%. The rate of return that was established in this study is regarded as excellent, in tandem with Rea and Parker (1997) who put forth that a rate of return of 50% is “adequate”, a rate of return 60% is “good”; and a rate of return of 70% and above is “excellent”. The rate of return established in the study is also consistent with Oleswell (2013) who avers that a rate of return of above 70% is “excellent”, while a rate of return of 60% is “adequate”. Fowler (1984) similarly intimates that a rate of return of 60% adequately represents the population of the study. The study ascribes the excellent rate of return to observance of the established protocol regard data collection for academic purposes among the participant health facilities. To this end, an authorization letter from Kenyatta University was first presented by the researcher, alongside a research permit from NACOSTI. This research license also proved effective in encouraging response from participants by dispelling any doubt by the participants with regard to the use to which the study findings would be put

B. **DESCRIPTIVE STATISTICS**

The variables advanced in the study were evaluated for their descriptive computations with a view to indicate their manifestations in the private health facilities surveyed. These comprised of knowledge sharing indicated by mentorship programmes, collaborations and sharing organizational culture and organizational performance indicated by number of outpatient visits attended, mortality rate, annual turnover and supply chain cycle time.

a. **KNOWLEDGE SHARING**

The study determined the effect of knowledge sharing on performance of private health facilities in Kisii County,

Kenya. A computation of the descriptive statistics was performed on the concept of knowledge sharing based on “five-point Likert scale”, running from 1 through 5, provided: “No degree” as 1, “Low degree” as 2, “Moderate degree” as 3, “Great degree” as 4, “Very great degree” as 5. Mean values fluctuating from 2.4 downwards imply low approval, while means within 2.5 and 3.4 mean middle-ground approval and means ranging from 3.5 through 5.0 mean high approval. Table 4.1 gives a depiction of the outcomes.

	Mean	Std. Dev
Our facility has mentorship programmes to disseminate knowledge within the facility	4.106	.840
Our facility collaborates with other facilities to share knowledge	4.083	.829
Sharing knowledge is part of our organizational culture	4.099	.740
Briefings are carried out on a regular basis to distribute novel information among staffs	4.076	.825
Novel information is distributed by way of internal memos	4.114	.835
Composite	4.096	0.814

Source: Survey Data (2022)

Table 4.1: Descriptive Statistics for Knowledge Sharing

Outcomes observable from Table 4.1 depict an aggregate average of 4.096 (SD=0.814), meaning that a lot of the participants approve highly, of the questions posed with regard to mentorship programmes, collaborations and sharing organizational culture as attributes of the respective private health facilities’ knowledge sharing practices. In more specific terms, a lot of the participants approved to a notable degree, that novel information is distributed by way of internal memos (4.114); their facility has mentorship programmes to disseminate knowledge within the facility (4.106); sharing knowledge is part of their organizational culture (4.099); their facility collaborates with other facilities to share knowledge (4.083); and that, briefings are carried out on a regular basis to distribute novel information among staffs (4.076).

b. PERFORMANCE OF PRIVATE HEALTH FACILITIES

A descriptive computation of performance of private health facilities in Kisii County, Kenya was carried as indicated by number of outpatient visits attended, mortality rate, annual turnover and supply chain cycle time on a “five-point Likert scale” running from 1 to 5, provided: “No degree” as 1, “Low degree” as 2, “Moderate degree” as 3, “Great degree” as 4, “Very great degree” as 5. Mean values fluctuating from 2.4 downwards imply low approval, while means within 2.5 and 3.4 mean middle-ground approval and means ranging from 3.5 through 5.0 mean high approval. Table 4.2 gives a depiction of the outcomes.

	Mean	Std. Dev
The number of outpatient visits in our facility has increased in the last five (5) years	4.114	.826
The mortality rate in our facility has decreased in the last five (5) years	4.083	.820

Our facility’s annual turnover has increased 4.068 .803
in the last five (5) years
In our facility, the length of time taken to 4.099 .837
process customer orders has decreased in the
last five (5) years

Composite 4.091 0.822

Source: Survey Data (2022)

Table 4.2: Descriptive Statistics for Private Health Facilities

Outcomes observable from Table 4.2 depict an aggregate average of 4.091 (SD=0.822), meaning that a lot of the participants approve highly, of the questions posed with regard to number of outpatient visits attended, mortality rate, annual turnover and supply chain cycle time as attributes of organizational performance of private health facilities. In more specific terms, a lot of the participants approved to a notable degree, that in the respective private health facilities, the number of outpatient visits in our facility has increased in the last five (5) years (4.114); in the facility, the length of time taken to process customer orders has decreased in the last five (5) years (4.099); the mortality rate in our facility has decreased in the last five (5) years (4.083); and that facility’s annual turnover has increased in the last five (5) years (4.068).

The findings imply that most private health facilities surveyed have in the last 5 years recorded a notable improvement in their respective organizational performance. It is particularly notable from the findings that most of the facilities have recorded growth in the number of outpatient visits and annual turnover. There has also been a reduction in the mortality rate and the length of time taken to process customer orders in their facilities, in the last five (5) years. These is attributed by respondents, to improvements in both employee competences and productivity, which consequently lead to operational efficiencies and customer satisfaction from knowledge management practices.

C. INFERENTIAL STATISTICS

The study carried out both regression and Pearson correlation analyses under inferential statistics, in order to model the linear connection between the predictor and product factors and test the advanced hypotheses of the research. These statistical operations were performed, assuming that: there exists a linear connection between the predictor and outcome factors; and that for accuracy of estimation, the concepts are typically spread.

a. PEARSON CORRELATION

To approximate the course and scale of the connection between the predictor and product factors, this research utilized Pearson correlation. To this end, the correlation value (r), depicted the correlation’s scale, while the statistical significance value (Sig.) depicted the association’s significance. Table 4.3 gives a depiction of the outcomes.

	Performance	Knowledge creation	Knowledge sharing	Knowledge application	Knowledge storage
Performance	1				
Knowledge creation	r = .564** Sig. = .000	1			
Knowledge sharing	r = .478** Sig. = .000	r = .579** Sig. = .000	1		
Knowledge application	r = .450** Sig. = .000	r = .293** Sig. = .001	r = .201* Sig. = .021	1	
Knowledge storage	r = -.005 Sig. = .953	r = -.100 Sig. = .253	r = -.133 Sig. = .127	r = .001 Sig. = .994	1

** 2-tailed correlation with significance at 0.01.

* 2-tailed correlation with significance at 0.05.

Table 4.3: Pearson Correlation Matrix

From the depiction in Table 4.3, a significant, positive and moderate linear connection was observed between knowledge creation and performance ($r = .564$; $\text{Sig.} = .000$); between knowledge sharing and performance ($.478$; $\text{Sig.} = .000$); between knowledge application and performance ($r = .450$; $\text{Sig.} = .000$); and between knowledge storage and performance ($.438$; $\text{Sig.} = .000$). There was however a weak, negative and non-significant correlation between knowledge storage and ($r = -.005$; $\text{Sig.} = .953$).

The findings are in agreement with Bihanta *et al.* (2018), Zahari *et al.* (2019) and Yosuff and Daudi (2018) whose studies report a positive association between managing knowledge, knowledge sharing and knowledge application and performance of organizations respectively. The findings are however in contrast with Oztekin *et al.* (2017) who report a positive and significant correlation between storage of knowledge and performance.

b. REGRESSION ANALYSIS

To depict the significance of each independent variable on the dependent variable and hence test the hypotheses, a regression analysis was performed with all other factors held at constant. As a result of the regression computation, three outputs were produced that is model summary, Analysis of Variance (ANOVA) and coefficients. To test the advanced hypotheses, the outcomes of the regression coefficients were interpreted based on their statistical significance. Tables 4.4, 4.5 and 4.6 below present the findings.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.478 ^a	.229	.223	2.86190

a. Predictors: (Constant), Knowledge sharing

Table 4.4 Model Summary

A 0.664 correlation value (R) was observed from the output in Table 4.4, modelling a linear linkage that is strong, among the concepts of knowledge sharing and performance. An Adjusted R² value of 0.223 was also observed, implying that knowledge sharing accounts for 22.3% of performance's variations, and the balance of 77.7% ascribed by other factors which the regression model in this research did not include. From the depiction in Table 4.5, an ANOVA test was also produced from the regression analysis.

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	315.784	1	315.784	38.555	.000 ^b
Residual	1064.761	130	8.190		
Total	1380.545	131			

a. Dependent Variable: Performance

b. Predictors: (Constant), Knowledge sharing

Table 4.5 ANOVA^a

Outcomes of the ANOVA test as per the depiction in Table 4.5 show the modelling of the connection between the adopted knowledge management and performance was of statistical significance ($F = 38.555$, $\text{Sig.} < 0.05$). The outcomes also depict that based on the total squares sum (1380.545), the regression squares sum was 315.784, carried out at 95% level of confidence. This means that the model of regression accounts for approximately 22.9% of the dataset's variability, while the residual squares sum is 1064.761 meaning that 77.1% of the dataset's variability is unaccounted for.

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	7.359	1.471		5.001	.000
	Knowledge sharing	.440	.071	.478	6.209	.000

a. Dependent Variable: Performance

Table 4.6: Regression Coefficients

Table 4.6 reveals that knowledge sharing significantly influence performance at 95% confidence level, while knowledge storage ($\beta = .478$, $\text{Sig.} = .000 < .05$). The finding provides enough evidence to reject the null hypotheses that knowledge sharing is not significantly associated with performance of private health facilities in Kisii County, Kenya (H_{02}). The study therefore concludes that there exists a statistically significant relationship between knowledge sharing and performance of private health facilities in Kisii County, Kenya.

The findings are in agreement with Zahari *et al.* (2019) who demonstrated that dissemination of knowledge substantially predicts the outcomes of among Malaysian insurance firms. Similarly, Nguthari and Kwasira (2015) found that knowledge sharing ($r = 0.664$) had the most influence on performance of legal firms in Nakuru town, Kenya. The finding is however in contrast with Tubigi and Alshawi (2018) who showed that knowledge transfer was most common in knowledge management process used by organization but did not influence performance while knowledge usage influenced organization's performance in the airline industry in Germany. Similarly, Choi and Lee (2019) that whereas knowledge sharing had a positive impact on knowledge application, it did not show a direct impact on team performance among ICT firms in South Korea. The contrast may be attributed to differences in context.

D. CONTENT ANALYSIS

Asked on whether in their experience, knowledge sharing in their facility has influenced their organizational performance, a majority of respondents affirmed that by sharing knowledge among each other and with other facilities through collaborations, the staffs' skills, abilities and

productivity improve which result in improved organizational outcomes. A respondent observed that:

“.....as part of our organizational culture, we share amongst ourselves new information on such things as treatment procedures and patient records. By so doing, we become more productive and effective in the services we provide.....”

Respondent number 84

It is also deducible from the findings, that a majority of the private health facilities in the study area carry out knowledge sharing through a variety of means, including its incorporation into the organizational culture, regular briefings, internal memos, mentorship programmes as well as collaborations with other health facilities. Accordingly, it has been established that there exists a statistically significant relationship between knowledge sharing and performance of private health facilities in Kisii County, Kenya. By sharing knowledge, staffs improve their skills, abilities, productivity and team work, which is perceived to result in improved efficiency, productivity and coordination in the facilities hence desirable organizational performance.

V. CONCLUSIONS AND RECOMMENDATIONS OF THE STUDY

The study determined the effect of knowledge sharing on performance of private health facilities in Kisii County, Kenya. It is concluded based on the results, that there exists a statistically significant relationship between knowledge sharing and performance of private health facilities in Kisii County, Kenya. By sharing knowledge through incorporation into the organizational culture, regular briefings, internal memos, mentorship programmes as well as collaborations with other health facilities; staffs in the facilities benefit from improved skills, abilities, productivity and team work, which in turn results in improved efficiency, productivity and coordination of activities within the facilities hence desirable organizational performance.

The study established that knowledge sharing has a statistically significant on the performance of private health facilities in Kisii County, Kenya. It is therefore recommended that in order to realize improved and superior performance, private health facilities ought to invest in knowledge sharing both within and outside the facilities. It is particularly hereby suggested that private health facilities in the country incorporate knowledge sharing into the organizational culture, by promoting interaction and mentorship among staffs across the job cadres. Private health facilities in the country are also encouraged to leverage regular briefings and internal memos as avenues of disseminating important information and new knowledge. It is also suggested that private health facilities strategically collaborate among each other to share knowledge on important developments in the medical field.

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