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Article

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Employee Involvement and Operational Performance of Private Hospitals in Uganda: The Mediating Role of Knowledge Management

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Abstract
This study examines the mediating effect of knowledge management on the relationship between Employee Involvement and Operational Performance of hospitals in Uganda. A cross-sectional survey was conducted on 53 private general hospitals and primary data obtained. Data analysis was done using Partial Least Squares - Structural Equation Modeling (PLS-SEM) to test the study hypotheses. Results showed that employee involvement had an insignificant direct relationship with Operational Performance. Results further indicated that knowledge management had a positive significant effect on Operational Performance. More so, knowledge management fully mediated the relationship between employee involvement and Operational Performance. Hospitals were advised to create a suitable environment for creating, storing, sharing and utilizing knowledge in order to achieve better operational performance. Furthermore, managers needed to create a motivating work environment and involve staff in day to day hospital activities and management roles in order to improve hospital operational performance.

Keywords: Employee Involvement, Knowledge Management, Operational performance, Total Quality Management (TQM), High Performance Work System (HPWS)

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Introduction

Organizational performance encompasses various dimensions, including financial performance, capital market outcomes, product market performance, stakeholder performance, operational performance, and innovation performance (Jiang et al., 2022; Ali et al., 2021; Adem & Virdi, 2020; Uraon & Gupta, 2020; Lee, 2019; Asghar et al., 2012; Kafetzopoulos & Psomas, 2015; Liu et al., 2013; Shaker & Basem, 2010; Pierre et al., 2009; Dyer & Reeves, 1995; Venkatraman & Ramanujam, 1986). Among these dimensions, operational performance is critical for achieving success in the other areas of organizational performance. Studies suggest that organizations with superior operational performance achieve higher customer satisfaction (Chavez et al., 2016; Abdallah et al., 2016), enhanced financial outcomes (Lee, 2019; Bendickson & Chandler, 2019; Feng et al., 2018), and better market performance (Uraon & Gupta, 2020; Saranga & Nagpal, 2016; Ab Talib et al., 2017). Consequently, it is essential for organizations to identify strategies to enhance operational performance to optimize overall performance.

Operational performance is defined as firm performance in areas such as product/service quality, new product development, customer satisfaction, employee retention, and prompt delivery (Uraon & Gupta, 2020). It also includes aspects like flexibility, delivery time, order efficiency, and inventory turnover (Lyu et al., 2019; Adams et al., 2014). In essence, operational performance reflects organizational efficiency in terms of quality, cost, productivity, and delivery outcomes. Globally and locally, operational inefficiencies in the health sector manifest as high mortality rates, inadequate human resources, elevated costs, low medical product availability, high bed occupancy rates, poor service quality, and slow service delivery (Chachuli et al., 2021; Cutler, 2020; Gandhi & Sharma, 2018; Chellan & Sibiya, 2018; Nuhu et al., 2020). Such inefficiencies are particularly evident in developing economies like Uganda (Warren et al., 2022; Annual Health Sector Performance Report 2019-2020).

Total Quality Management (TQM) has been widely recognized as a robust approach to addressing operational performance challenges (Adem & Virdi, 2020; Modgil & Sharma, 2019; Tanjoyo et al., 2021). While numerous studies explore the relationship between TQM and organizational performance, limited research focuses on the role of employee involvement in operational performance, despite its significance as a TQM practice. Employee involvement, characterized by delegating power, authority, and adopting team-based structures, has been linked to improved operational outcomes (Khattak et al., 2013; Pambreni et al., 2019). Organizations that emphasize employee involvement excel in customer satisfaction, productivity, profitability, reduced absenteeism, and lower turnover (Furst, 2018; Kazimoto, 2016). According to Furst (2018), empowering employees to participate in decision-making fosters improved operational performance. Additionally, employee involvement is associated with sustainability performance (Chen et al., 2020; Hanna et al., 2000), financial performance (Tian & Zhai, 2019; Albuhisi & Abdallah, 2018; Roslin et al., 2019; Narayanan et al., 2022), and innovation performance (Andries & Czarnitzki, 2014; Rangus & Slavec, 2017; Naqshbandi et al., 2019).

Despite extensive studies on TQM practices like customer focus, top management support, process management, continuous improvement, and communication (Saleh et al., 2018; Tortorella et al., 2019; Adem & Virdi, 2020; Baird et al., 2011), employee involvement remains underexplored. Moreover, findings on the relationship between TQM practices and

operational performance are inconsistent, with some studies showing positive effects (Tortorella et al., 2021; Jyoti & Rani, 2017; Galeazzo et al., 2021; Støre-Valen, 2021), while others report negative or insignificant relationships (Shumba et al., 2017). Most of these studies are concentrated in the manufacturing sector, with limited focus on service sectors such as healthcare.

Although research exists on employee involvement, knowledge management, and performance, little attention has been given to the mediating role of knowledge management in the relationship between employee involvement and operational performance. According to the EFQM framework, organizational enablers, such as employee involvement, influence results through the use of organizational resources (Conti, 2007). Knowledge-based resources, which are valuable, rare, inimitable, and non-substitutable, are essential for implementing quality management strategies like employee involvement. These resources can significantly enhance organizational outcomes.

This study aims to examine the mediating role of knowledge management in the relationship between employee involvement and operational performance within Uganda's health sector.

Literature

Theoretical Framework

This study was supported by the EFQM framework and the knowledge based view of the resource based theory. European Foundation for Quality Management (EFQM) framework (1992) guides organizations to identify what they need to change in order to improve performance. The idea with EFQM framework is that continuously improving every aspect of an organization will lead to overall high performance. The framework relates the enablers (things that organization does) and results (the things that the organization achieves). The enablers of the organization include such things as employee involvement, training and any other strategic activity done in the organization to realize better outcomes or results in terms of key performance like Stakeholder results, Customer results, Company results and Business Results (Conti, 2007).

EFQM therefore explains the relevance of employee involvement in influencing operational performance. Furthermore, the framework also shows that organization resources mediate the relationship between the enablers and results of the organization. In line with Knowledge Based View of the Resource Based Theory (Grant, 1996), knowledge is an organization resource that can drive an organization to competitive levels. The knowledge based view therefore complements the EFQM to clearly show knowledge management as a mediator for employee involvement and operational performance relationship.

More so, the theoretical linkage between employee involvement and knowledge management also emanates from the Nonaka's model of knowledge creation (Nonaka and Takeuchi, 1995) and organization culture of employee involvement. According to Nonaka's model, the process of knowledge creation and exchange takes place in four phases: socialization, externalization, internalization and combination and these phases are directly triggered by the involvement culture of the organization characterized by employee empowerment, capability development and team orientation (Bashir Memon et al., 2017). Addison and Belfield's (2000) also show that employee involvement not only enhances workplace efficiency and decisiveness in problem solving, but also enhances the flow of knowledge that

allows individuals to share useful ideas about routine tasks and activities. All these point to the fact the employee involvement influences knowledge management processes which ultimately lead to improved performance.

TQM and Employee Involvement

Employee involvement is one of the integrated systems of Human Resource Management (HRM) practices that interact with other organizational systems to enhance the ability, motivation and opportunities (AMO) of employees. According to Zhai and Tian (2019), HRM practices interact with other organizational systems to generate a synergic effect on improvement in employees' attitude and behavior, which subsequently leads to enhanced operational performance. Employee involvement is one of the HRM practices and a major contributor to the motivation. Others include employee training that enhances the abilities of employees in terms of new skills and expertise. Total Quality Management (TQM) describes the overall wide organization practices aimed at improving quality, promoting process improvement and also ensuring continuous improvement of organization products and services. Many studies of TQM including Sharma, & Modgil (2020), Kebede Adem & Virdi (2021) and many others highlight employee involvement as one of such practices (TQM practices) that have the capacity to bring about success in an organization. Other studies on TQM suggest various other practices including, customer focus, statistical process control, communication, continuous improvement, supplier quality management, top management involvement, employee training, competitive benchmarking, product design and process management (Saleh et al., 2018; Tortorella et al., 2019; Adem & Virdi ,2020; Baird et al.,2011). Among the various TQM practices, extensive literature review has shown that studies on the role of employee involvement in operational performance are scanty despite its importance in encouraging motivation among workers and improving operational performance. It is therefore imperative to test the effect of employee involvement on operational performance since it one of the TQM practice that is vital in ensuring improvement in organizational performance.

The Role of Knowledge Management in Innovation, Organization Efficiency and Sustainability Development

Nazarian et al (2023) analysed the relationship between total quality management (TQM) and the sustainable development of the sports goods industry (SDSGI) through knowledge management (KM) and found that KM partially mediated the relationship between Quality Management practices and Sustainable development characterized by Environmental Sustainability, Social Sustainability and Economic Sustainability. In fact, it was shown that KM highly predicted all the sustainability development dimensions, an indicator of the high relevance of knowledge economy in the sustainability agenda of any economy or country. The study by Nazarian et al. (2023) shows that coupling the total quality management practices like employee involvement and the knowledge management process helps to enable sustainable development. Özlen (2021) also in their study to identify the need for knowledge management implementation and its outcomes evaluated 82 respondents from 74 Turkish manufacturing companies and results indicated that the economic dimension of sustainability appears was the major outcome. According to Quartey (2019), knowledge plays an important role in addressing social, economic, and environmental sustainability issues because understanding of societal transformation is far better if the different kinds of knowledge embedded within the local, regional, national, and global contexts are interlinked towards an

understanding of sustainable development. Organizational learning is an important ingredient for achieving sustainable development goals in the built environment (Raiden & King, 2021)

In relation to knowledge management, innovation and performance, Kengatharan, (2019), states that knowledge-based resource is central to sustainable competitive advantage via innovation and creativity. Crook *et al.*, 2011 also state that institutionalized knowledge is a key ingredient for increased firms' performance through value creation. Marques et al (2016) reiterates that Strategic Knowledge Management affects technological and/or organizational innovations thus resulting in better firm performance. Kengatharan (2019) in the paper entitled "A knowledge-based theory of the firm: Nexus of intellectual capital, productivity and firms' performance" shows that knowledge is instrumental in enhancing firms' performance (profitability and Return On Investment) through productivity (efficiency and resource utilization).Thus, the general financial health of an institution can be achieved by having staff with good knowledge resource and also the relationship is strengthened when efficiency (operational performance) is good.

From this literature, it is clear that knowledge and knowledge management may be harnessed and combined with other organizational strategies like quality management practices to provide a synergy that may be used to realize the most thought after sustainability development or sustainable development goals in most economies. Thus this study looked at how quality practice (employee involvement) and knowledge management bring about operational efficiency of hospitals in Uganda thus realizing the sustainability development in that context.

Hypotheses Formulation

Employee Involvement and Operational Performance

Employee involvement is part of the high performance work system (HPWS) alongside comprehensive recruitment selection, extensive training and development, communication, incentive pay based on performance and employment security (Sun & Mamman, 2022). According to Zhai & Tian (2019) and Al-Ajlouni (2020), HPWS is positively related to organization performance. According to Amah & Ahiauzu (2013), employee involvement positively influences organizational effectiveness and productivity. Tortorella et al. (2021) also indicated the Employee Involvement has a positive mediating effect on the relationship between Industry 4.0 adoption and operational performance improvement. The results of the research by Tortorella et al (2021) thus implied that employee involvement has a direct effect on operational performance. Literature on high performance work systems retaliate that providing employees with opportunity to practice their skills decision making of the organization improves the organizational performance since the employee will be accountable for their actions. The employees therefore perform the activities as though they were their own and this is health for the organization. Jyoti & Rani (2017)'s article on HPWS suggest that employee involvement has a positive impact on employee performance and hence organizational performance like operational performance. Employee involvement is thus crucial ingredient for operational performance that needs to be realized when other internal practices are put forward in the performance improvement plan. Huo et al (2015) examined the effects of different high-involvement HRM practices suggested that when HRM practices are properly adjusted by managers, they can help to achieve the desired operational

performance goals. Hernandez-Matias et al. (2019) also in their study to analyse the effect of different human-related lean practices (HRLP) like employees' HRLP (employee involvement and employee empowerment) on operational performance identified that employee involvement and empowerment was positively related to Operational Performance. According to Støre-Valen (2021), employee involvement in activities such as dialogue meetings, review meetings, workshops have enormous reward to the organization since it makes the employees to become a part of the design team and own the work and this result in cost-effective technical solutions which is one of the dimensions of operational performance. Sendawula et al. (2018) stated that employees are the blood stream of any business and the most valuable assets of every organization as they can make or break the organization's reputation. On the other hand, employee involvement negatively affects operational performance results since most firms involve employees in a lot of activities and extra roles without corresponding remunerations which bleeds demotivation and reduced morale to work (Shumba et al. 2017 ; Galeazzo et al 2021). The contradicting results requires more research to elucidate the relationship and this leads us to assume that;

H1: Employee involvement has a positive effect on operational performance of hospitals in Uganda

Employee Involvement and Knowledge Management

Teh & Sun (2012) in their study to examine the effects of job involvement, job satisfaction, organizational commitment, and organizational citizenship behavior (OCB) on employees' knowledge sharing behavior found that job involvement, job satisfaction and OCB are independent and positively related to employees' knowledge sharing. This is similar to the finding of Bibi & Ali (2017) on Knowledge sharing of academics in higher education institutions in Pakistan who found that intrinsic motivation, extrinsic motivation, interpersonal trust, job involvement, job satisfaction and continuance commitment positively influenced knowledge sharing. It is important to note that knowledge sharing is one of the dimensions of knowledge management(Qasrawi et al., 2017) and thus employee involvement generally influences knowledge management Other authors that agree on the positive effect of employee involvement and knowledge management processes include Salas-Vallina et al., (2020) who assert that there is a significant positive relationship between High Involvement Work System (HIWS) with knowledge absorptive capacity of employees and this relationship is also partially mediated by happiness at work. Knowledge absorptive capacity describes the ability to utilize the obtained knowledge and this knowledge utilization is also an important dimension of knowledge management (Qasrawi et al. 2017). Abbasi et al. (2021) and Michaelis et al. (2015) also asserted that HPWS is positively related to knowledge sharing behavior, an indication of the positive relationship between employee involvement and knowledge management process since employee involvement is part of HPWS .With most of the literature showing the relationship between employee involvement and a few of the dimensions of knowledge management, the question remains as to whether employee involvement affects all the dimensions of knowledge management. Knowledge management involves the creation, storage, transfer/sharing and utilization of knowledge in an organisation (Qasrawi et al. (2017). This thus means that for employee involvement to influence knowledge management, it should affect all the dimensions of employee involvement. Thus we can assume that

H2: Employee involvement has a positive effect on knowledge management

Knowledge Management and Operational Performance

Knowledge based view of the resource based theory suggests that knowledge resource improves performance and elevates the competitive edge of a firm since firm-specific knowledge is inimitable (Grant, 1996). In addition to this theoretical lens, some empirical literature link knowledge management and organizational performance. Choi et al., (2020) in their study "Communities of practice and knowledge management systems: effects on knowledge management activities and innovation performance" done in large and mid-sized companies in Korea found that knowledge management activities positively affect innovation performance. The findings of this study highlight the importance of refining and developing knowledge-based processes to lead an entire organization to higher innovation performance. Al Ahbabi et al., (2019) also identified that knowledge management processes had a positive and significant impact on operational, quality and innovation performance of public sector in the UAE. Other researches that reiterated the positive relationship between knowledge management and operational performance include Balasubramanian et al. (2019), Hong et al., (2018), Al-Sa'di et al. (2017), Pinheiro et al. (2020), Qasrawi et al. (2017) and Deepak & Mahesh (2020). According to Conti (2007), enablers of the organization (what the organization does) affect the results (what the organization achieves) through organization processes. Qasrawi et al. (2017) also recognize knowledge management as one of the organization processes which therefore could enable the relationship between employee involvement and organization performance. The mediation role of knowledge management was studied in the works of Nawaz et al. (2014) and Birasnav (2014) who revealed that knowledge management fully mediates the effect of leadership / top management support, customer focus and information and analysis on organizational performance. Wartini et al (2021) also examined the influence of quality management practices (leadership behaviour such as continuous improvements and customer focus) on organizational performance found that the relationship was mediated by knowledge integration. Ong & Tan (2022) also found that Soft Total Quality Management practices have no significant direct relationship with organizational performance but had a strong relationship when mediated by agility and knowledge management. Though little is known on the mediation role knowledge management on employee involvement and operational performance specifically, the studies by Wartini et al (2021), Nawaz et al. (2014), Birasnav (2014) and Ong & Tan (2022) lead us to assume that such an effect exists.

H3: Knowledge management has a positive effect on operational performance

H4: Knowledge management mediates the relationship between employee Involvement and operational performance

Control Variables

This paper looked the effect of employee involvement on hospital's operational performance. The hospitals in Uganda are both private and government/public. Firstly, to ensure that a homogenous sample of hospitals was obtained, the researchers controlled for the ownership of the hospital in which only private hospitals were allowed in the sample. Secondly, the hospitals in Uganda are ranked according to the level and type of diagnosis they carry out. This starts at the lowest level (Village clinic), to Health centre II at the parish level, to health centre III at the sub county level, to health centre IV at the county level, to General hospital at the district level, to Regional Referral hospital at the regional level and finally to the National referral hospital at the country level. Control for the level of hospitals was also done in which only general hospitals (referral hospitals at district) were considered. This was done

to ensure that the hospitals considered are at the same level and they carry out similar processes

Methodology

Positivism philosophy with deductive research approach guided this study. Positivism suggests that reality is stable and can be observed, described in an objective manner and tends to be causal and quantitative in nature (Saunders et al., 2019; Wahyuni, 2012). Accordingly, an explanatory research design with cross-sectional survey strategy (Aggarwal et al., 2019) was used to identify the influence of independent variable (employee involvement) and the mediating variable (knowledge management) on the dependent variable (operational performance). The research was conducted from private general hospitals in Uganda. This was because the operational performance of the private hospitals is a challenge yet they have better funding opportunities than public hospitals (USAID report, 2015).

The study targeted a total population of 94 private general hospitals and from these; a sample of 76 was used for the main study. This was calculated using Yamane's formula $n = \frac{N}{1+Ne^2}$ where n is the sample size, N is the total number of private hospitals and e is level of significance (Yamane, 1973). Simple random sampling was then used to pick hospitals. Simple random sampling was appropriate since the hospitals were homogeneous (all are private general hospitals with similar processes, structures and controlled by ministry health). From each hospital, one respondent (doctor, administrator, manager or hospital director) was purposively selected to answer the questionnaire depending on their technical, fundamental expertise and experience in hospital operations. The questionnaire was both closed and open ended questionnaires. From the 76 hospitals, 53 gave complete and usable questionnaires accounting for a response rate of 70% which is good (Nulty, 2008).

The 53 hospitals also represented more than 56% of all the private general hospitals. More so, Barclay et al. (1995) and Hair et al. (2014) suggest that the ideal sample size should be at least times 10 times the largest number of inner model paths directed at a particular construct in the structural model. Since the maximum number of inner model paths directed to operational performance construct is 2, then a sample size of (10*2= 20) or more would suffice for this study. The data used for analysis was from 53 hospitals which was representative enough to yield dependable results in line with Hair et al (2014) and Barclays et al (1995). Data was collected between the months of August and October 2021 using a questionnaire survey.

To ensure high levels of validity and reliability, construct measures were adopted from previous literature and oriented to suit the context of the study. The measures of knowledge management were obtained from Qasrawi et al (2017); those for operational performance from Kitchot et al. (2020) and Chavez et al (2016). Chavez et al (2016) highlighted the various items that measure the different dimensions of operational performance i.e. flexibility, quality, cost and delivery. The items of employee involvement were obtained from García et al (2019) and Moideenkutty et al (2011). Garcia et al., (2019) identified the employee involvement measures on general involvement, team involvement and involvement in main tasks at work while Moideenkutty et al (2011) highlighted five items on employee involvement or empowerment. The questionnaire was developed on a 5 point Likert scale with item responses ranging from 1= Strongly Disagree, 2 = Disagree, 3 = Not sure, 4 = Agree, to 5 = Strongly Agree for the main variables while the rest of the questionnaire captured the respondents and hospital demographics.

Prior to data collection, the questionnaire was approved by Ministry of Health specifically the Director General of Health Services who issued an acceptance letter to collect the data in the hospitals. The tool was then pre-tested from 15 private general hospitals yielding 15 responses. This helped to revise and sharpen the tool. The 15 respondents were enough for the pilot in line with Julious (2005). During the pilot, the tool was tested for reliability using Cronbach's alpha, convergent validity using communalities generated by factor analysis, sampling adequacy using KMO and Bartlett's test of sphericity. Items whose loadings (extraction) were 0.4 and above were retained and those with loading below 0.4 were deleted in line with Dahl et al. (2014). The tool was found to have a good sampling adequacy (Kaiser- Meyer-Olkin (KMO) values = 0.646 and Bartlett test of sphericity $\chi^2 = 362.5$ p=0.000) which implied that the sample was adequate for factor analysis and also significant correlations exist among the items respectively. The items that loaded adequately on the respective constructs. The refined questionnaire was used to collect data from the hospitals in the main study.

Analysis and Results

Demographic Statistics

Hospitals' demographics showed that majority of the private hospitals were old with existence of more than 20 years, implemented and were certified with ISO 9000 standards of quality practices, were large in respect to the number of beds and number of employees as most of them had averagely more than 200 usable beds and employ more than 200 employees as in Table 1.

Table 1: Hospitals Profile

	Frequency	Percent	Cumulative Percent
Hospital age			
Less than 10	1	1.9	1.9
10-19 years	5	9.4	11.3
More than 20 years	47	88.7	100
Average number of employees			
0-99 workers	3	5.7	5.7
100-199 workers	5	9.4	15.1
200-299 workers	17	32.1	47.2
300 and above	28	52.8	100
Average number of usable patient beds			
Less than 100	4	7.5	7.5
100-199 beds	8	15.1	22.6
Above 200 beds	41	77.4	100
Teaching status			
Teaching Hospital	49	92.5	92.5
Non-teaching hospital	4	7.5	100

Certification with ISO 9000			
Yes	53	100	100

General Perceptions of Respondents on the Variables of the Study

Analysis for the perceptions of the respondents on the different variables was also done and the results are shown in Table 2

Table 2: General Perceptions of Respondents

	EMPINVOL	KNOWLMT	OPERATIONAL
Valid cases	53	53	53
Mean	4.2770	4.3675	4.1580
Std. Deviation	0.34169	0.33455	0.29665

Notes: EMPINVOL=Employee Involvement, KNOWLMT=Knowledge Management, OPERATIONAL=Operational Performance

From Table 2, it can be seen that respondents had varying perceptions on employee training, knowledge management and the operational performance of their hospitals. Averagely respondents agreed that there was Employee Involvement, Knowledge Management, Operational Performance in the hospitals as depicted by the means (4.2770, 4.3675,4.1580) respectively though there were some respondents who had varying ideas as shown by the standard deviations (0.34169, 0.33455,0.29665) respectively. This could show an idea of a well-designed data collection tool that captures all the varying responses and perceptions of the respondents to each item and general global variables.

Hypotheses Testing Results

PLS –SEM was preferred to model the relationship among the variable since it is efficient when dealing with non-normal data and it can also fit a model when the sample sizes is small (Hair et al, 2014). In this study, the sample size was 76 which was less than 100 hence small according to Hair et al (2014). More so, the Hair et al (2014) goes ahead to state that the ideal sample size necessary for using PLS-SEM is ten times the largest number of inner model paths directed at a particular construct in the inner model. The largest number of inner most paths directed to operational performance construct is 2 implying that a sample of 20 would suffice to use PLS-SEM. Since the used sample was 76 which is greater than 20 then PLS-SEM was ideal in this research.

Cleaned data was exported to SmartPLS to further analyse the relationships that existed among the variables. The Structural model was specified and it contained both the path and measurement models with reflective indicators (Hair et al., 2014).

Measurement Model Evaluation

Cronbach's alpha and composite reliability were used to measure internal consistency. Average variance extracted (AVE) was used to measure convergent validity while item-cross loadings and HTMT (Hetero Trait Mono Trait) ratio were used to measure discriminant validity of the constructs. From Table 3, Cronbach's Alpha and Composite Reliability were both above 0.7 which is an indication of internal consistency. The AVE was above 0.5 which indicates convergent validity for the constructs in line with Purwanto & Sudargini (2021). Results also shows that there was discriminant validity since the loadings of the indicators on the constructs were much higher than the cross loadings on the other constructs. This result

concurs with HTMT ratio results in Table 4 which showed that the HTMT ratio for all constructs were below 0.9 in line Henseler et al (2015).

Table 3: Internal Consistency and Convergent Validity Tests

	Cronbach's Alpha	rho_ A	Composite Reliability	Average Variance Extracted (AVE)
Employee Involvement	0.780	0.790	0.849	0.530
Knowledge Management	0.848	0.853	0.892	0.624
Operational Performance	0.853	0.881	0.894	0.629

Path Relationships for the Mediated Model

Collinearity diagnostics were also estimated and both inner and outer VIF values were less than 5, an indication of lack of multicollinearity in line with Shrestha (2020). The mediation model yielded knowledge management as the only significant predictor of operational performance (β=0.518, p=0.001) while employee involvement showed an insignificant effect on operational performance (β= 0.125, p=0.458) as shown in Table 5. Employee involvement also had a positive significant effect on knowledge management.

Table 4: Hetero-Trait Mono-Trait Ratios and Item Cross-Loadings on the constructs

	Employee Involvement	Knowledge Management	Operational Performance
Employee Involvement			
Knowledge Management	0.826		
Operational Performance	0.546	0.689	

From Table 5, the R Square for operational performance of 0.373 shows that both employee involvement and knowledge management explain 37.3% of the variation in operational performance while the remaining 62.7% is due to other factors that affect operational performance which were not included in the model. The R square of 0.467 shows that 46.7% of the variation in knowledge management is explained by employee involvement and the remaining 53.3% is due to other factors not yet considered. Hypothesis testing was done by considering the path coefficients and their significances for both the direct and indirect effects as in Table 5. The direct effect of employee involvement on operational performance was

insignificant while the indirect effect of employee involvement through knowledge management was significant implying full mediation in line with Zhao et al. (2010).

Table 5: Path Coefficients and the Coefficient of Determination for the Mediated Model

Direct effects

Path	Path Coefficient	P values
EI → OP	0.125	0.458
EI → KM	0.684	0.000
KM → OP	0.518	0.001

Indirect effects

Path	Path Coefficient	P values
EI → KM → OP	0.354	0.002

Coefficient of Determination

	R Square	R Square Adjusted
KM	0.467	0.457
OP	0.373	0.348

Notes: EI=Employee Training; KM=Knowledge Management; OP=Operational Performance

Further, an assessment of the effect sizes (*f Square)* in Table 6 showed that knowledge management had a high effect on operational performance i.e. $f^2 = 0.228$ while employee involvement had a low effect on operational performance $f^2 = 0.013$ according to Cohen (1988). Furthermore, employee involvement has a very high effect on knowledge management $f^2=0.878$. The model had a good predictive relevance for both operational performance and knowledge management with Q^2=0.202 and 0.255 respectively in line with Hair et al. (2021) as in Table 6.

Table 6: Assessment of Effect Sizes and Predictive Relevance of the Model

F-Square Effect Size (f^2)

	Employee Involvement	Knowledge Management	Operational Performance
Employee Involvement	0.000	0.878	0.013
Knowledge Management	0.000	0.000	0.228

Q Square Predictive Relevance (Q^2)

	SSO	SSE	Q^2 (=1-SSE/SSO)
Employee Involvement	265	265	0.000
Knowledge Management	265	197.542	0.255
Operational Performance	265	211.449	0.202

The Variance Accounted for (VAF) by Knowledge Management in Table 8 showed the importance of KM as mediator. The specific indirect effect of KM on EI-OP relationship accounted for 74% unlike direct effect which accounted for 26%. Since much of the effect of employee involvement on operational performance goes through the mediator, it is an indicator of full mediation

Table 6: Variance Accounted for (VAF) by the mediator

Paths	Direct Effect	Specific Effect	Indirect	Total Effect	VAF
EI -> KM -> OP	0.125	0.354		0.479	74%

We also used the importance performance map analysis to identify the important key areas in an organization that can be changed to realize more improvement. This test indeed is necessary for performance improvement (Abalo et al., (2007)). Hu et al (2009) shows that IPMA can be done by plotting the median values of the performance and importance of the latent variables and indicators on a four quadrants map and identifying were each Independent Variable lies in relation to their importance –performance values. In this study, the IPMA analysis was done to help the managers of the hospitals identify where to concentrate their efforts most so as to improve the operational performance of the hospitals.

IPMA results shows that knowledge management is more important in predicting operational performance than employee involvement with importance values 0.518 and 0.480 respectively. The actual performance levels of hospitals in employee involvement and knowledge management was 70% and 82% respectively. Both variables are highly important in enabling good operational performance of hospitals though knowledge management is more important thus the hospitals needed to increase the implementation of employee involvement and knowledge management processes in order to improve operational performance. More so, the results show that the level of knowledge management implementation should be maintained while the hospitals need to concentrate the efforts and resources at employee involvement.

Discussion

There is an overwhelming support in empirical literature for the use of employee involving in the decision making by delegating power, authority and adopting team-based structures to improve operational performance (Khattak et al, 2013; Pambreni et al, 2019). Employee involvement and teamwork fosters employee motivation and success through the opportunities to learn and to practice new skills which ultimately leads to improvement in performance. The test for the relationship between employee involvement and operational performance for the data collected in Uganda's health sector yielded insignificant results at 5% level of significance. This result contradicted those that assert a positive relationship (Khattak et al, 2013; Pambreni et al, 2019; Tortorella et al, 2021) and extend the thinking of Galeazzo et al (2021), Parker (2003), Shumba et al., (2017) and Beehr et al. (2010). Galeazzo et al (2021) asserted that in sometimes employee involvement is associated with extra-roles that leads to stress and demotivation thus not improving individual and organization

performance (Parker, 2003; Beehr et al., 2010). Furthermore, Shumba et al., (2017) in their study on health workers' perception of organization culture of PNFP (Private Non-for Profit) health facilities and its effects on employee retention in Uganda using thematic content analysis identified that high workload affected job satisfaction, which in turn negatively influenced retention. Mostly, the high workload in private hospitals is not commensurate with the reward (Shumba et al., 2017) which affects performance.

The positive path coefficient between the two variables however continues to show agreement that employee involvement improves operational performance in line with most literature. The researcher thinks that the insignificant results could be due to reasons related to the context of the study since only private hospitals were considered.

These findings are in line with Marchington and Wilkinson (2005) who argued that for employee involvement to yield significant results on organizational performance it must be that which belongs to high stages of the escalator of participation like co-determination and control and these findings were also supported by Tian and Zhai (2019).

However, if employee involvement is done as per Marchington and Wilkinson (2005) suggestions, employee involvement could significantly influence operational performance. In the context of Uganda, the healthcare is majorly divided into public and private hospitals where the remunerations in the private hospitals are at the discretion of the owners of the hospitals. In private hospitals especially those that are faith based, like Nakasero hospital, Nsambya hospital, Lubaga hospital, Rugarama hospital and other, the quality of services are much better that private hospitals that are owned by individuals. This is due to the fact that there is enough manpower employed and also the salaries are better. If involvement of employees in any activity is tagged to payment, then the issue of insignificant effect would barely exist. Furthermore, most of the faith based hospitals are supported by government in areas that are technical and also those aspects that require a lot of funds. There is a need for partnership of all forms of private hospitals with the government in order to provide the crucial resources like trained health workers in order to improve quality and delivery of the services.

With this argument therefore, a partial mediation of knowledge management on relationship between employee involvement and operational performance is more realistic than full mediation which was obtained in this study. However, more research in the hospital sector by considering both public and private hospitals could solve this problem by identifying whether full mediation should be upheld.

Knowledge management as a process required the efforts and dedication of all the sections of the hospitals if it to be achieved. This is so because the management alone may not possess the knowledge needed for effective service delivery thus requiring the staff to get involved. Team work is thus very crucial for effective knowledge management since sharing becomes easier. Scholars who studied the effect of employee involvement on knowledge management largely agreed on a positive significant effect (Teh & Sun, 2012; Bibi & Ali, 2017, Salas-Vallina et al., 2020) though most of them tested the relationship in manufacturing sector. The results of the test in Uganda's hospitals in this study did not show significantly different relationship in which a positive significant result was obtained (β=0.684; p=0.000). Involving staff in the activities of the hospitals therefore triggers motivation to create and share valuable information for the general success of the hospitals. In Uganda's context and more so in

private hospitals, the level of employee involvement is high in which the staff are highly engaged in management and execution of the hospitals activities and process. In such engagements, the staffs get to share valuable information and knowledge at workplace which helps them to efficiently carry out the duties. The sharing and transfer of key information is seen a vital in building a knowledge base and this explains the positive results of the relationship between employee involvement and knowledge management.

Knowledge management was found have a positive and significant effect on the operational performance (β= 0.365; p=0.012) as in table 5 which was in agreement with Choi et al. (2020), Balasubramanian et al (2019), Deepak & Mahesh (2020), and the knowledge based view theory by Grant (1996). The results implied that hospital staffs value the need for sharing knowledge and collaboration if they are to achieve efficiency and effectiveness in hospital operations. Specifically, knowledge management processes help to capture valuable information, allow easy access to knowledge resources and also reduces time wasted in searching for information from other sources outside the organization. Contextually, the results convey a message that hospitals in Uganda need to invest heavily in knowledge management implementation since this has been realized as a conduit for achieving better operational results. This may be achieved by ensure that a system of knowledge creation and sharing is functioning efficiently to ensure smooth utilization, transfer and generation of new ideas in the hospitals. Nonaka's model of knowledge creation and transfer need to be implemented in Uganda's hospitals. It is worth noting that Uganda and most other countries in Africa and beyond need systems especially those aimed at encouraging storage of knowledge and information for use. Results of a questionnaire based survey done to assess knowledge systems in health in 46 sub-Saharan countries of Africa generally found that, ministries of health tend not to have an explicit knowledge management framework and do not map knowledge sources and flows for policy-making (Zielinski et al., 2014). The current study will thus form a basis and an encouragement to most countries about the importance of having a sound healthcare knowledge management system since knowledge management has been found to have a high and positive effect on operational efficiency. These systems need to be enhanced and more so encourage the development and improvement of the other dimensions of knowledge management especially knowledge sharing and transfer since this helps the vital knowledge to trickle down to all the departments and thus improve efficiency at all levels of the hospital

Regarding the mediation effect of knowledge management, the tests yielded a full mediation results in which the indirect effects were positive and significant (β= 0.354; p=0.002) and direct effect of employee involvement and operational performance was insignificant (β=0.125; p=0.458). The positive mediation effect obtained was in line with Qasrawi et al. (2017) and Ong & Tan (2022). The partial mediation shows the great value that creating, retaining and implementing valuable information and ideas brings in ensuring that the hospitals achieve efficiency and effectiveness. Furthermore, the positive mediation results show that employee involvement in hospitals is healthy for performance improvement but it could even be made much better if engaging staff enables them to create useful information necessary for betterment of the hospital activities. The results also imply that contextually, employee involvement alone may not yield good operational performance results but Knowledge management can help employees to share ideas and generate knew knowledge and it is this knowledge that brings value to the organization or hospital. In line with that, it

is imperative that Uganda's health sector puts forward staff involvement as an important strategy for easy implementation of the knowledge management processes and improve the operational performance of the hospital.

Conclusions

This study has provided new evidence to support the claim that knowledge management is a very important ingredient for enabling good operational performance and also fully mediates the relationship between employee involvement and operational performance. The study has generally concluded that involving employees alone does not significantly influence good operational performance. Employee involvement should be followed by proper management and implementation of knowledge management processes (creation, storage, sharing/transfer and utilization of knowledge) if it is to be of value to an organization. Specifically, employee involvement motivates the staff to execute organization activities as their own and also encourages team working which enables flow of ideas and better ways of executing hospital activities. This study improves the EFQM framework by adding that employee involvement improves the performance when knowledge management is in place. The research also shows that combining EFQM and Resource Based Theory and AMO theory better explains operational performance.

From a practical perspective and the IPMA results, this research recommends that hospital managers need to ensure that the right knowledge management structures are put in place to enable creation, proper storage, knowledge transfer and utilization of new knowledge. Proper technology like cloud computing facilities need to be installed to enable storage and easy access of knowledge to all staff. Managers need to implement the practices that improve the abilities, motivation and provide opportunities for the staff in line with AMO theory if they are to benefit from employee involvement and engagement. Government and policy makers need to improve the communication channels like online communication such that there is cheaper internet to enable knowledge sharing between health providers and the public.

This study has several limitations. Firstly, only private hospitals were used in the study. This could have an effect on the outcomes if both private and public hospitals are considered. Despite the limitation, policy makers in Uganda especially those in the health sector and other service based organizations like financial services could find the results of this study very useful. Similar studies should therefore be done to test the derived model in both public and private hospitals including those health facilities at lower levels like health centre IV and also other service – oriented organizations like schools, universities, banks and hotels to validate the applicability of the derived model in the general service sector. Longitudinal study is needed to test and ascertain the impact of changes in the training on operational performance after a long period of time. Moreover, more research needs to be done to test whether knowledge management mediates the relationship between other quality management practices with Operational Performance in order generalize the mediating role of knowledge management on all quality management practices and operational performance since employee involvement is widely been regarded as quality management practice in literature. More research could also be done to identify whether some moderating factors exist that explain the relationship between employee involvement and operational performance. Specifically, factors such as hospital size, hospital age, hospital location and external factors like government policies could be tested for possible moderation. Lastly, the results obtained

in this study need to be validated by testing the relationships in other contexts both developed and developing for generality.

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