

ANALYSIS OF QUALITY MANAGEMENT PRACTICES AND ORGANIZATIONAL PERFORMANCE OF PRIVATE HEALTHCARE FACILITIES IN NAIROBI COUNTY, KENYA

¹Beatrice Dinda, ²Dr. Patrick B.Ojera, ³Dr. Bulitia Godrick Mathews

¹Department: Business Administration, School of Business Administration, Maseno University

²Department: Business Administration, School of Accounting & Finance, Maseno University

³Department: Business and Economics, School of Accounting and Finance, Muranga University of Technology

Abstract: The health sector contributes 2.5% of the GDP in Kenya. Private healthcare facilities control 43% of the health sector in Kenya. Private healthcare sector has a significant market share, approximately 50% in Sub – Saharan Africa. In Kenya, it contributes 22% of all health services. Despite the sector’s contribution, its annual growth rate continues declining from 5.2%, 3.5% and 2.3% in 2008, 2009 and 2010 respectively. Healthcare is different from other industries and because of the complexity of the provider- patient relationship, the asymmetry of knowledge and patient vulnerability, proponents of value need to focus on quality. The study adopted correlational survey research design. The population was 52 chief operation managers of 52 private health facilities accredited by NHIF in Nairobi. Pilot results ($N=10$) revealed 51-item instrument reliability ranged between $\alpha=0.700$ and $\alpha=0.867$. Further, results revealed that only three dimensions of quality management practices namely: ICT ($\beta = 0.266, p = 0.001$); process management ($\beta = 0.329, p = 0.007$) and top management support ($\beta = 0.192, p = 0.037$) had positive significant effect on organizational performance. The study concluded that quality management practices (Information Communication Technology, Process Management, Top Management Support) were significant predictors of organizational performance; quality management practices is a critical antecedent of organizational performance in private healthcare facilities in Nairobi. Quality management practices ($\beta=0.162, p=0.000$) has a positive effect on organizational performance. Recommendations were that facilities should continue enhancing and instituting effective quality management practices as these efforts improve organizational performance. The study provided a quality management framework that will aid healthcare policy makers in strengthening the relationship between quality of care and organizational performance.

Keywords: Quality Management Practices, Organizational Performance, Private Healthcare Facilities.

1. INTRODUCTION

Quality management practices and organizational performance

Quality management practices are those practices followed to ensure the highest level of customer satisfaction in a product or service (Juran, 1989). The Project Management Institute (PMI) Project Management Body of Knowledge (PMBOK) and American Society for Quality (ASQ) define quality as the degree to which a set of inherent characteristics

fulfill requirements. According to the National Health Sector Strategy (NHSSP) 2005-2010, weak management system is cited as one of the key factors contributing to the decline in the health status of Kenyans.

Studies on quality management practices have focused on manufacturing industry, Cheah, S., Amirula, S., & Shahbudin, T. (2011), that deal with products like electronics and automobiles consequently, very little is known on how QMPs such as ICT, process management, workforce management, Top Management Support influence organizational performance of private healthcare facilities in Nairobi County.

Performance is a contextual concept associated with the phenomenon being studied (Hofer, 1983). Organizational performance comprises the actual output or results of an organization as measured against its intended outputs or goals and objectives (Richard, Devinney, Yip & Johnson, 2009). The concept of organizational performance is based upon the idea that an organization is the voluntary association of productive assets, including human, physical, and capital resources, for the purpose of achieving a shared purpose (Alchian & Demsetz, 1972; Barney, 2001; Jensen & Meckling, 1976; Simon, 1976). Abas and Yaacob (2006), opine that a single performance measure is inadequate to represent overall organizational performance. Appropriate performance dimensions spawn effectiveness, efficiency and adaptability (Walker and Ruekert, 1987). Tangen (2002) posits that measurement should be based on a limited number of measures that consist of financial and non-financial parameters. However, a major part of literature has tended to limit itself to considering only financial aspects of performance, ignoring the other outputs such as efficiency, patient satisfaction, effectiveness which are a major focus of this study.

Effect of quality management practices on organizational performance

In order to achieve a higher performance in the process management practice, it is important to increase the feeling of empowerment among employees and to involve the people closest to the process in the quality efforts. A study carried out in Greece by Hur (2009) focused on the influence of management practices on how government organizations work. In Nigeria, Adeoti and Lawal, (2012) studied interpersonal quality among the medical personnel and established that in the healthcare system, quality is influenced by a variety of factors including individual exchanges of the medical personnel and their interactions with patients. In Uganda, Musenze (2013) in a similar study found that the application of quality management practices should focus on improving the quality of personnel.

The context of Hur's (2009) analysis is a government set up; however, it may not be replicable in private healthcare sub-sector. Both studies by Adeoti & Lawal, (2012) and Musenze (2013) focused much on aspects of quality management such as leadership and technology and neglected other aspects such as process management, top management support and workforce management. The studies also ignored the effect of these quality management practices on organizational performance.

Brah and Lim, (2006) conducted a study on the effect of quality management and technology on organizational performance of logistics companies in Singapore. Tiwari and Chaudhari, (2012) carried out a study on the effects of technology on the implementation of TQM in India. Their data was collected from 50 journals related to marketing, finance, information system and research development. The findings of the comparative study indicated that the adoption of new technology is implemented within a clear context of organizational strategic objectives. Both the studies and other scholars have paid attention to explore the issues of ICT in relation to enhanced training (L&D); little is known on how ICT affect efficiency in private healthcare facilities.

Vermeulen and Crous (2010) studied organizational factors that facilitate Total Quality Management (TQM) in the Public health sector in South Africa. They found out that managements in public healthcare facilities in South Africa unlike those in the private sector were lacking commitment to employee involvement and the provision of adequate training programs to develop their skills and capabilities. A similar research by Adza-Awude, (2012) in Ghana indicated that co-operation and support by management determined their level of job satisfaction. Previous research in Kenyan hospitals has revealed leadership gaps and poor communication between senior administration and lower cadres as an impediment to achieving better practice (Nzinga, 2009 & Amos, 2009). According to a study by Nzinga, Mbaabu and English (2013), management training for senior health professionals has been recognized as a priority.

These studies were conducted in the context of public healthcare facilities which may not be replicable in private healthcare facilities, whereas studies have been conducted on the correlation between top management support and effectiveness, no research has tested the effect of these management practices on organizational performance.

Mahour, (2006) carried out a study on the effects of management practices on operational and business results in Iran. A validated and reliable survey instrument was used for the study to collect data from 31 project managers/consultants in the petroleum industry in Iran. The results of the correlation analysis of the petroleum sector indicated that top management support is the major driver of quality management which significantly correlates with other management practices

The Study by Mahour, (2006) revealed that customer orientation is not significantly correlated with external quality results (profitability). The study also concurs that top management support, employee training, and employee involvement are statistically significant variables in explaining the variability in internal quality results.

Private Health Sector in Kenya

Private healthcare in Kenya contributed 2.9% of the 4.7% of health expenditure in the year 2012. The sector contributes 22% of all health services (2009/2010 Kenya National Health Accounts). There has been concern from the public and various stakeholders for the government to strengthen and revitalize the management of the health sector in the country especially on the quality of medical personnel hired in hospitals and their capacity in dealing with the numerous health issues that patients have (Jones, 1995). Some practitioners also specialize in the sale of pharmaceuticals but do not carry out any diagnosis of the problem before sale of drug (Leonard and David, 2000; Wangombe, 1998). If quality of healthcare in both public and private hospitals in Kenya continues to deteriorate, the number of Kenyans seeking medical services out of the country is set to increase further reducing the health sector contribution to Kenya's GDP.

The private healthcare sector in Kenya comprises the activities of agents who are largely outside the control of government (Kamilu, 2004). These include individuals who privately own health facilities and seek to make profit in the healthcare sector, clinics and hospitals owned by private employers and those operated by religious missions and other non-governmental organizations (NGO's). These agents play a significant role in provision of health services in Kenya, however the issue of lack of adequate and quality healthcare services is still present (Kamilu, 2004).

Inadequate working conditions, coupled with low job satisfaction and instability, are bound to demotivate health workers and impact retention. Ojaka, Olango and Jarvis (2014) conducted a study seeking to establish the factors affecting motivation and retention of primary healthcare workers in three different regions in Kenya. Previous research in Kenyan hospitals has revealed leadership gaps and poor communication between senior administration and lower cadres as an impediment to achieving better practice (Nzinga, 2009 & Amos, 2009).

According to Ojaka *et al.* (2014), adequate training, job security, salary, supervisor support, and manageable workload are critical satisfaction and retention factors for healthcare workers. However, their study did not show any association of workforce management and financial viability of healthcare facilities. According to a study by Nzinga, Mbaabu and English (2013), management training for senior health professionals has been recognized as a priority and should be provided. This study, therefore, seeks to establish the effect of quality management practices on organizational performance of private healthcare facilities in Nairobi, Kenya.

Statement of Problem

Private healthcare has a significant market share in many countries, approximately 50% in Sub – Saharan Africa and 22% in Kenya. However, annual growth rate continues declining at 5.2% in 2008, 3.5% in 2009, 2.3% in 2010 and 1.7% in 2011. Recent history has demonstrated inability to determine the harm of many medical products prior to their widespread use in clinical practice. Inefficient utilization of resources, centralized decision making, inequitable management information systems, outdated health laws, inadequate management skills at all levels, worsening poverty levels, increasing burden of disease, and rapid population growth are all issues that are directly or indirectly affecting performance of healthcare facilities in Kenya. The main purpose of this study was to analyze the effect of quality management practices on organizational performance of private healthcare facilities in Nairobi, Kenya. Little is known on how top management support influences organizations effectiveness since majority of firms have based their examination

of productivity measures on financial parameters ignoring non-financial aspects. It could be these ignored non-financial indicators such as efficiency, patient satisfaction, and effectiveness that are of significance.

Research Hypothesis

$H_0: \beta_1 = 0$ There is no effect of quality management practices on organizational performance of healthcare facilities in Kenya.

Scope of the Study

This study analyzed relationship between quality management practices and organizational performance of healthcare facilities in Nairobi, Kenya. Nairobi is a metropolitan County with residents from various cultures beliefs and practices. The county also has the largest and the most number of private healthcare facilities as well as headquarters of most healthcare related institutions thus the most appropriate geographic location for this study. Study was limited to 55 private healthcare facilities accredited by National Hospital Insurance Fund (NHIF) in Nairobi County.

Justification of the Study

This study will be of value to the healthcare sector particularly private healthcare sub-sector. Private healthcare organizations will embrace high quality standards, understanding that unhappy customers tend to complain to other potential customers and thus discourage them from patronizing with the firms. Clients will benefit from improved quality of healthcare services, while facilities will experience better performance and eventually growth and expansion. The study findings shall serve as a benchmark by which providers can assess their quality management practices in an effort to provide the needs and expectation of the patients in a better way. Government agencies may use the findings in policy reforms geared towards the growth of private healthcare sub-sector. The policy makers and regulators will have an opportunity to understand the prevailing situation in the industry and use their understanding to formulate desirable policies or in planning. This study will generate knowledge in the field of quality management practices and organizational performance. Scholars may also find the findings of this study useful as a basis for further research.

2. RESEARCH METHODOLOGY

This study adopted correlational survey research design. This design is useful in describing the characteristics of a large population. This study took place in Nairobi County. Nairobi County was chosen as the study area, first, because the County has the highest number of private healthcare facilities compared to other Counties in Kenya. Population of study comprised of the 55 private healthcare facilities accredited by NHIF in Nairobi County. 3 healthcare facilities were used in pretesting stage; therefore target population was 52 private healthcare facilities in Nairobi County. Chief Operations Managers responded to the questionnaire from each facility. Total respondents were 52 facilities. The sample size consisted of all the 52 healthcare facilities accredited by NHIF in Nairobi County. Out of the 55 facilities, 3 were used in pretesting. The sample size was selected using census sampling technique. Primary data was collected by use of self-administered questionnaires. The two main types of data were primary and secondary sources. Secondary data was obtained from health facility and government healthcare reports. A structured survey questionnaire was administered to the respondents who were required to complete all the sections. Chief Operations Manager from each facility filled the questionnaire. The questionnaire contained three sections. Section A sought demographic information, while sections B and C sought information on quality management practices and organizational performance respectively. Respondents included Chief Operations manager because he/she is responsible for the daily operations and routinely reports of the organization, he has in depth information on facility performance and expansion plans. Likert type point scales ranging from strongly agree (1) to strongly disagree (7) were used to capture specific indicators for the objective. In this study a seven point scale was used because it sufficiently provided clear distinction between the points. Test retest reliability employed Cronbach's alpha coefficients for unstandardized items of the various constructs which ranged from 0.700 to 0.857 and the Cronbach's alpha based on standardized items ranged from 0.726 to 0.867. The study hypothesis was tested through correlation analysis and results are presented in tables and charts. The statistical package (IBM SPSS Statistics 20) was used to aid in data analysis. Qualitative data was analyzed using content analysis. Results of qualitative data analysis are presented in descriptive narrative form. Inferential data analysis was done using Pearson correlation coefficient and regression analysis. Pearson correlation coefficient was used to measure the strength and direction of the

relationship between dependent variable and independent variables. Results of quantitative data analysis were presented in charts and tables. Interpretations and explanations were presented in prose format. Bulk raw results of descriptive and inferential data analysis such as correlation and factor analysis tables were presented in appendices.

3. RESULTS AND DISCUSSIONS

This section presents the results of the study followed by the discussion of the findings in light of the research objective. This part is divided into two main sections. The first section addresses the descriptive aspects of the data such as the demographic characteristics of the respondents and the description of the measure of quality management practices and organizational performance. In the second section, the results of the test hypotheses are discussed beginning with the main effects and ending with the moderating effects of the associated variables.

Characteristics of the Respondents

The majority (53.8%) of the respondents were female compared to 46.2% who were male. Most of the management position in private health facilities were occupied by individuals who are in middle adult age of 31-35 years. Majority of the respondents representing 52.8% have had a work experience ranging between 5-10 years in their service to private healthcare facilities based in Nairobi County, Kenya.

Quality Management Practices

The study sought to establish the existence of measures of quality management practices in private health care facilities in Nairobi descriptively as shown below.

Descriptive Statistics of measures of quality management practices

	Mean	Std. Deviation	N
measure of ICT	6.0848	.68629	52
Process management	5.9488	.53009	52
Workforce management	5.9560	.60098	52
Top management support	6.0175	.60343	52
Overall mean	6.1926	.60519	52

Source: Survey data, (2016)

On a seven point Likert scale, respondents were asked to show their level of agreement with four constructs namely: ICT, process management, workforce management and top management support. The findings revealed an overall mean= 6.192 and S.D=0.6051, suggesting that the respondents were in agreement that quality management practices is a prevalent activity in private health care hospitals in Nairobi. The finding revealed further that the measure of ICT with a mean of 6.0848 and S.D=0.68629, had the highest significant factor while Process management with a mean of 5.9488 and S.D=0.53009, had the lowest significant factor as a construct of quality management practices. This finding implies that measures of ICT which includes the adoption of proper information system, adequate ICT facilities in hospitals are adopted and embraced by employees to a greater extent.

Organizational Performance

In this study, organizational performance was operationalized as: efficiency, patient satisfaction, financial viability and effectiveness. On a 7 point Likert scale, the respondents were asked to consider their score on their level of agreement with 12 items used to measure organizational performance. The table below illustrates the response to the measure of organization performance.

Descriptive Statistics on performance measures

	Mean	Std. Deviation	N
Efficiency	6.0927	.84112	52
Patient satisfaction	6.0288	.56384	52
Financial viability	5.9415	.57526	52
Effectiveness	6.0629	.56707	52
Overall mean	6.781	0.637	

Source: Survey data, (2016)

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It is evident from the above results that the prevalent view among the respondents regarding organizational performance was at an overall mean score of 6.781 (SD.=0.637) suggesting that majority of responses were in agreement of the view that performance measures are at high level. All variables have mean values around or slightly below the mean composite organizational performance of 6.787. This further suggests that private health care hospitals have recorded a satisfactory organization performance across all its four dimensions namely: efficiency, patient satisfaction, financial viability and effectiveness.

Determining the Effect of Quality Management Practices on organization performance

The objective was to determine whether quality management practices across its four dimensions had an effect on organizational performance of private healthcare facilities in Kenya. This was actualized through the testing of the null hypothesis stated as; $H_0: \beta_i = 0$ There is no effect of quality management practices on organizational performance of healthcare facilities in Kenya. The first step to conducting multiple regression analysis in order to test this stated hypothesis was by conducting correlation analysis. Quality management practices was measured by four parameters namely: ICT, Process management, workforce management and top management support. The results of bivariate association between quality management practices measures and organizational performance are discussed below.

ANOVA Results on the Relationship between Quality Management Practices and Organizational Performance

	1	2	3	4	5
measure of ICT (1)	1				
Process management (2)	.712**	1			
Workforce management(3)	.719**	.789**	1		
Top management support(4)	.598**	.728**	.744**	1	
Organizational Performance(5)	.794**	.826**	.783**	.751**	1

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

Source: Survey data, (2016)

There is significant positive association between organizational performance and all the four dimensions of quality management practices as indicated above. Specifically, organizational performance has a significant positive association with ICT ($r = 0.794^{**}$, $p = 0.000$), process management ($r = 0.826^{**}$, $p = 0.000$), organizational performance and workforce management ($r = 0.783^{**}$, $p = 0.000$), organizational performance and Top management support ($r = 0.751^{**}$, $p = 0.000$) at 95% confidence level.

The direction and magnitude of effect of each of the quality management practices were eventually established using a multiple regression model whose findings were presented in the tables highlighted below.

ANOVA Results on the Relationship between Quality Management Practices and Organizational Performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11.130	4	2.783	47.158	.000
	Residual	2.773	47	.059		
	Total	13.904	51			

Source: Survey Data, (2016)

- a. Predictors: (Constant), Top management support, measure of ICT, process management and Workforce management
- b. Dependent Variable: Organizational Performance

The above data tests revealed that $F(4, 47) = 47.158$ at $p = 0.000$, an indication that the model fits the given data well.

Summary of Quality Management Practices-Organizational Performance Model

Model	R	Change Statistics				Sig.	F
		Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change		
1	.895 ^a	.801	.784	.24291	.801	47.158	4 47 .000 2.111

Source: Survey Data, (2016)

- a. Predictors: (Constant), Top management support, ICT, Process management, Workforce management

b. b. Dependent Variable: Organizational Performance

The model summary shows that the proportion of variance in the organizational performance that is explained by the independent variables (quality management practices) is 80.1% ($R^2=0.801$). However, 19.9% changes in organization performance could be explained by the other factors outside the model. The shrinkage between $R^2=0.801$ and adjusted $R^2=0.784$ was 0.017 and suggests that model was quite stable for prediction as the adjusted R^2 is too close to R^2 . The value of Durbin-Watson is 2.111. Generally the value of the Durbin-Watson statistic ranges from 0 to 4. As a rule of thumb, the residuals are uncorrelated if the Durbin-Watson statistic is approximately 2. A value close to 0 indicates strong positive correlation, while a value of 4 indicates a strong negative correlation. The computed value is also close to 2, which indicates the absence of serial correlation.

Estimated Regression Coefficients for quality management practices-Organizational Performance Model

Model	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
	B	Std. Error	Beta	T	Sig.	Tolerance	VIF
(Constant)	.767	.395		1.942	.058		
ICT	.266	.076	.350	3.506	.001	.427	2.341
Process management	.329	.117	.334	2.812	.007	.301	3.327
Workforce management	.089	.107	.103	.836	.407	.282	3.545
Top management support	.192	.090	.222	2.142	.037	.394	2.539

Source: Survey Data, (2016)

a. Dependent Variable: Organizational Performance

The above results shows that out of the four dimensions of independent variables, only three dimensions which include: ICT ($\beta = 0.266, p = 0.001$); process management ($\beta = 0.329, p = 0.007$) and Top management support ($\beta = 0.192, p = 0.037$) had positive significant effect on organizational performance. The unstandardized β coefficient of ICT shows that units change in the level of ICT causes 0.266 standard deviation in organizational performance level and the change is significant as shown by the p-value while a unit change in process management and top management support causes 0.329 and 0.192 standard deviation in organizational performance levels of private health care facilities in Nairobi respectively. Other variable, Workforce management ($\beta = 0.089, p = 0.407$) had insignificant positive effects on the organizational performance levels of private health care facilities in Nairobi. The coefficient of a constant term was at ($\beta = 0.767, p = 0.058$) and is significant. The VIF values ranged from 2.341 to 3.545 and these are within the range recommended by Pan and Jackson (2008), and Rogerson (2001). Therefore, the regression results indicated that quality management practices exert a statistically significant positive effect on the levels of organizational performance of private health care hospitals. Therefore, the null hypothesis stated as; $H_0: \beta_i = 0$ There is no effect of quality management practices on organizational performance of performance of healthcare facilities in Kenya is rejected.

4. SUMMARY

The objective of the study was to determine the effects of quality management practices on organizational performance of private healthcare facilities in Nairobi, Kenya. Its null hypothesis was that there is no effect of quality management practices on organizational performance of healthcare facilities in Kenya. The findings reveal that out of the four dimensions of quality management practices, only three dimensions which include: ICT, process management and Top management support had positive significant effect on organizational performance. Therefore, quality management practices exert a statistically significant positive effect on the levels of organizational performance of private health care facilities.

The study also revealed that these non- financial constructs of organizational performance such as (efficiency, patient satisfaction and effectiveness) are important and should be considered by healthcare facilities as measures of performance.

5. CONCLUSIONS

Based on the second results, it is concluded that, quality management practices are critical antecedent of organizational performance in private healthcare hospitals in Nairobi. This finding makes an important contribution in terms of isolating variables that constitute quality management practices (ICT, process management and Top management) that are key in terms of influencing organizational performance levels.

The finding further implies that controlling quality management practices significantly intensifies performance levels of private health care facilities. Therefore, organizational performance can be enhanced by aligning and controlling of quality management practices as contingency factors that have a significant influence on this relationship.

Recommendations

In view of the findings and conclusions of the study, the following recommendations were made. The private healthcare facilities should invest and implement proper information and communication systems and equip all the employees with ICT skills as this will greatly enhance organizational performance. The private health care hospital should also institute proper process management by monitoring service processes effectively as this practice will enhance their organizational performance. Finally, top management should also be supportive, and should offer attractive reward systems for employee motivation. They should encourage the spirit of teamwork as these practices will enhance organizational performance.

The third conclusion is that quality management practices as was practiced by private healthcare facilities improve their organizational performance levels through its interactive effect. In line with this conclusion, the following recommendations can be drawn: hospital managers should integrate quality management practices with other quality practices so that they can jointly enhance organizational performance in a complimentary manner.

Limitations of the Study

Notwithstanding the immense contributions to the body of the knowledge on quality management practices and organizational performance modeling, it is paramount to evaluate the results in the context of the study limitations. First, the choice of survey design as the preferred methodological choice for the study has a profound effect especially on the measurement problems. Surveys and their cross-sectional nature of data will imply that conclusions are generally limited by virtue of being collected at one point in time and do not give the sequence of events. However, studies based on cross-sectional data tend to provide information for subsequent studies in the same areas of interest.

The second limitation relates to the fact that the current study focused only on the private healthcare facilities in Kenya. Concerns have been raised by previous scholars as to whether focus on a single industry was enough to make results of the study more generalizable to other industries. However, the focus of such a study conferred the obvious advantage of control for industry effects.

Suggestions for Further Studies

Based on the foregoing conclusions on the findings of this study, the researcher suggested the following future research directions in the field relating to the quality management practices-organizational performance relationship.

First, this study used cross-sectional data to test the hypothesis on the relationship between quality management practices and organizational performance. It only provided a snapshot picture at a single point in time. Therefore, there is need to conduct a longitudinal study to provide even more conclusive evidence of the above relationship.

Given that the current study is limited to a few organizations in one service industry, the assertion that there is relationship between quality management practices and organizational performance would need to be validated by further research. Perhaps an effective way to validate this assertion is by focusing future studies on various other unrelated industry players through comparative studies between the players.

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