
**INFLUENCE OF PROACTIVENESS ON PERFORMANCE OF
HEALTHCARE UNITS IN NAIROBI COUNTY, KENYA**

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Abstract

The main purpose of this study was to explore how proactiveness influences the performance of healthcare units in Nairobi County, Kenya. The study specifically sought to determine how the five indicators of proactiveness namely: barriers and accident prevention, safety management, disease prevention, hazard analysis and availability of tool sets influence the performance of healthcare units in Nairobi County. To compete effectively, healthcare units must constantly improve their performance by reducing maternal mortality, reducing child mortality and increasing the number of referrals to the healthcare unit. The study adopted a survey research design and the target population were the healthcare units in Nairobi County. The target population was healthcare units in Nairobi, comprising County Hospitals, Health Centres and Health Clinics totalling to 71 and the sample size was 49. Data was collected using questionnaires and analysed using SPSS and Microsoft Excel. Inferential data analysis was carried out by the use of factor and correlation analysis. Regression models were fitted and hypothesis testing carried out using multiple regression analysis and standard F and t tests. The findings of this study from multiple regression analysis indicated that proactiveness positively influenced performance of healthcare units in Nairobi County. The study results led to the conclusion that proactiveness improves the performance of Healthcare units in Nairobi County. The study recommends that healthcare units should focus on practicing barriers and accident prevention, carrying out hazard analysis, carrying out disease prevention, carrying out safety management and using tool sets during service to clients since their practice is necessary to ensure improved performance.

Keywords: Proactiveness, Barriers and accident prevention, Safety management, disease prevention, Hazard analysis and, tool sets, Healthcare unit, performance.

Introduction

Reduction of maternal and child mortality remains a major challenge to attaining global social and economic development. Worldwide, more than 515,000 women die each year from pregnancy and childbirth complications while four million babies die within the first week (neonatal period) of life. Almost all of the maternal deaths occur across all developing countries where 450 women per every 100,000 live births die during pregnancy, childbirth or at postpartum period (ROK, 2006; WHO, 2007) as cited in Kiprono (2009). In a healthcare unit, proactiveness represents its constant seeking for new opportunities by anticipating and acting on future wants and needs in the market, involving introduction of new products or services before

competitors. It includes coming up with ways or barriers and accident prevention, hazard analysis, tool setting, safety management and disease prevention.

Healthcare industry, also referred to as medical industry, is an aggregation of sectors within the economic system that provides goods and services to treat patients with curative, preventive, rehabilitative, and palliative care. The modern health care industry is divided into many sectors and depends on interdisciplinary teams of trained professionals and paraprofessionals to meet health needs of individuals and population at large. This industry is one of the world's largest and fastest-growing industries' consuming over 10% of gross domestic product (GDP) of most developed nations (RoK, 2011).

World Health Organization (WHO) revealed that health costs paid into the Health care industry in the United States in the year 2011 consumed 17.9% of the Gross Domestic Product, being the largest of any country in the world and that it will continue its upward trend to reach 19.6% of the GDP by 2016. It also revealed that in the year 2001, for the Organization for Economic Corporation and Development (OECD) countries the average was 8.4% with the United States (13.9%), Switzerland (10.9%), and German (10.7%) being the top. In Kenya however, only 4.6% of the nation's GDP was invested in its healthcare industry which has a serious implication for the country's urgent healthcare problems (RoK, 2011).

Although Kenya is making significant gains in promoting awareness of health and wellness, preventable diseases remain a serious issue. Malaria is one of the country's biggest problems with thousands of children dying every year from this treatable disease. Improving access, coverage and quality of health services depends on the ways services are organized and managed, and on the incentives influencing providers and users. In market-based health care systems, such services are usually paid for by the patient or through the patient's health insurance company (RoK, 2011). Other mechanisms include government-financed systems (such as the National Health Services in the United Kingdom, & NHIF in Kenya).

Kenya's Vision 2030 for health is to provide "equitable and affordable health care at the highest affordable standard" to her citizens. Good health is expected to play an important role in boosting economic growth, poverty reduction and the realization of social goals. The majority of Kenyans still do not have access to affordable health care. Under the Vision 2030, Kenya was to restructure the health delivery system and also shift the emphasis to "promotive" care, in order to lower the nation's disease burden. This has improved access and equity in the availability of essential health care and result in a healthy population that will effectively participate in the development of the nation (RoK, 2007).

Wangal waet *al.*, (2012), in their research on Effectiveness of Kenya's community Health Strategy in delivering community-based maternal and new-born health care in Busia County, revealed that maternal mortality ratio and neonatal mortality rate trends in Kenya have remained unacceptably high. That the implication on the Kenya health policy and practice is for the policy to focus on people centeredness and participatory approaches in delivery of health care services.

In the year 2007, the ministry of Public Health and Sanitation adopted a community health strategy to reverse the poor health outcomes in order to meet Millennium Development Goals 4 and 5 (RoK, 2011).

Statement of the problem

Proactiveness is a company's posture of constant seeking for new opportunity by anticipating and acting on future wants and needs in the market, involving introducing of new products or services before competitors. Proactiveness shows a firm's aggressive pursuit of market opportunities and a strong emphasis on wanting to be among the very first to implement innovation in its industry (Rauch *et al.*, 2009).

More needs to be investigated about how healthcare units may impact on Healthcare unit performance in Kenya and especially determining performance in terms of reduced maternal death, reduced child mortality and increased referrals. Most of the researches have been in the manufacturing sector, micro and medium enterprises and also in Kenyan large enterprises and not much has been done to measure performance of Healthcare units. Many of the Healthcare units, in their process of transformation to the market economy are accepting new business approaches and models, one of them being proactiveness. The process of its acceptance goes slowly and wrought with different problems.

Medical Care is characterized by enormous inefficiency with high costs and poor outcomes. These high costs lead to poor performance by the Healthcare units, but practicing of proactiveness can help reduce the costs through innovation and creativity. In other industries characterized by inefficiency, efficient firms expand to take over the market, or new firms enter to eliminate inefficiencies which do not happen in medical care (Cutler, 2010).

Globally Healthcare units are still performing poorly although they registered a decrease in the number of child deaths from 12.5 million in 1990 to 8.8 million in the year 2008 (Danzhenet *al.*, 2010) as cited in Wangal waet *al.*, (2012). This decrease in child death is an indication of improved performance of the Healthcare units. Wangalwaet *al.*, (2012) also revealed that neonatal deaths accounted for about one third of child deaths and that they are linked closely to slow progress in reduction of maternal mortality. The high maternal and new-born mortality in the sub- Saharan Africa is related to unsafe maternal and new-born health practices.

These poor performance in the Health sector; maternal and neonatal health trend in Kenya is a replica of other sub-Saharan African countries where the maternal mortality ratio is estimated to be 488 women per 100,000 live births which has not significantly changed over the last decade as reported by the Kenya Demographic and Health Survey (2003) as cited in Wangal waet *al.*, (2012). Kenya Demographic and Health Survey (2008-2009) observed an improved performance in the Health sector due to the under- five reduced mortality between the years 2003 and 2008 from 36% and 32% respectively but neonatal mortality marginally declining by 6.1%. Wangal

waet *al.*, (2012) revealed that maternal mortality ratio and neonatal mortality rate trends in Kenya have remained unacceptably high.

Health Sector Working Group Report (2012) reported an improved performance in the sector with a reduction of under-five and infant mortality but reported a poor performance on the side of maternal mortality having deteriorated from 414 in 2003 to 488 deaths per 100,000 live births in 2008-9. Dustin (2010) revealed that in Kenya, the overall under five child mortality ratios is approximately 121 per 1000 live births, which is roughly double the global average. This is a measure that reveals poor performance of the Healthcare sector. Dustin (2010) also observed that this number drops significantly to 90 per 1000, for the wealthiest 20% of the population, while it jumps to nearly 150 for the poorest 20%.

Experience over the years has shown that to improve maternal new-born health and reduce morbidity and mortality, efforts should focus on building capacities at individual, family, community levels to ensure appropriate self-care, prevention, and care-seeking behaviour. These practices are associated to practices of Proactiveness. Elder *et al.*, (1999) as cited in Wangalwaet *al.*, (2012) revealed that limited resource settings, community-level interventions are potentially effective ways to address the problem at its roots, as decisions to seek and access healthcare are strongly influenced by the social-cultural environment.

The Healthcare units have a great potential for improvement in terms of reduced maternal mortality, reduced child mortality and through increased referrals if only they practice proactiveness. The study investigated how proactiveness influences performance of Healthcare units in Kenya. Kenyan healthcare units, in their process of reducing maternal mortality, reducing child mortality and increasing referrals, need to accept and practice proactiveness (barriers and accident prevention, safety management, safety management, disease prevention, hazard analysis and availability of tool sets). Poor quality health care leads to increased maternal mortality, increased child mortality and reduced referrals to the healthcare units. However, not enough studies have been done locally to unearth the influence corporate entrepreneurship has on performance of Healthcare Units in Kenya. This study therefore sought to fill the knowledge gap by determining how proactiveness influences the performance of Healthcare units in Kenya.

Objectives of the study

The overall objective of this study was to determine the influence of proactiveness on Performance of healthcare units in Nairobi City County.

Literature Review

Proactiveness is a company's posture of constant seeking for new opportunities by anticipating and acting on future wants and needs in the market, involving introduction of new products or services before competitors. Kocel (1995) cited in Kaya and Veysel (2007) has used the concept of proactiveness with the meaning of "giving direction" to the events by affecting and forecasting the future needs, expectations and changes instead of going behind them. The firm

moving first can gain extraordinary benefits and become a pioneer in forming brand image by profiting these opportunities. To be proactive is to anticipate future needs and take action on this basis. In Healthcare industry, it includes coming up with ways or barriers to accident prevention, hazard analysis, tool setting, safety management and disease prevention.

Entrepreneurs are proactive who seek for opportunities and do not rely on luck. They act quickly and decisively to make the most of opportunity before someone else does, as this is the only way to achieve success. Knight (1997) argues that in today's increasing global competitive environment, proactiveness is seen as an important vehicle for survival of firms and for higher performance. Therefore, being a first mover in pursuing new opportunities and participating in developing markets is closely related to firm level entrepreneurship activities. Knight (1997) argues that entrepreneurial firms are active rather than reactive to their environment. Lumpkin and Dess (1996) relate proactiveness to initiative and first-mover advantages and to taking initiative by anticipating and pursuing new opportunities. Lumpkin and Dess (1996) aver that proactiveness may be "crucial to an entrepreneurial orientation because it suggests a forward-looking perspective that is accompanied by innovative" and entrepreneurial activity.

Pro-activeness shows a firm's aggressive pursuit of market opportunities and a strong emphasis on wanting to be among the very first to implement innovation in its industry (Rauch *et al.*, 2009). Pro-activeness is an opportunity-seeking, forward looking perspective characterized by the introduction of new products and services ahead of the competitors and acting in anticipation of future demand (Lumpkin & Dess 1996; Rauch *et al.*, 2009). Miller (1983) defines pro-activeness as an indication of a company's determination to pursue promising opportunities, rather than merely responding to competitors' moves. According to Lumpkin and Dess (1996), proactiveness refers to how a firm relates to market opportunities in the process of new entry. They added that pro-activeness involves pursuing opportunities and the will to respond aggressively to competitors.

Wieland (1999) stated that pro-activeness gives firms the ability to present new products or services to the market ahead of competitors, which also gives them a competitive advantage. Pro-active firms have a greater tendency to lead than to follow in the development of new procedures and technologies and the introduction of new products and services (Lumpkin & Dess, 1996). An entrepreneurial firm instils flexibility and grants individuals and teams the freedom to exercise their creativity to champion new ideas (Wang, 2008). These activities by the firm's team enable the firm to be more pro-active in introducing new products. Pro-activeness suggests an emphasis on initiating activities. It is closely related to innovativeness. For example, new product innovation is part of innovativeness but also forms part of pro-activeness by the firm (Lumpkin & Desks, 1996).

According to Lumpkin and Desks (1996), the importance of being a first-mover or pioneer has been frequently emphasized in the entrepreneurial process since Schumpeter. Proactive firms are likely to be first-movers when they face threats and/or opportunities in their environment, Agate

al., (2009) as cited in Linier (2015). In the business world, proactive firms tend to be leaders, rather than followers of other corporations (Lumpkin & Desks, 1996). According to Zahra and Gravis (2000), proactiveness, such as first entry, can improve a firm's performance. The first entrants tend to exploit opportunities before their rivals and enjoy significant strategic advantage in the markets Zahra and Gravis (2000).

Research Methodology

This study adopted a mixed research design that is both descriptive and correlation. The descriptive survey design was adopted to investigate and explore the study variables for an in-depth understanding of the individual variables. The correlation approach was adopted to help investigate how the indicators of proactiveness influence the performance of healthcare units. Descriptive survey is a method of collecting data by interviewing or administering a questionnaire to a sample of individuals (Orodho, 2003). The design can also be used when collecting data about people's attitudes, opinions, habits or any of the variety of education or social issues (Orodho & Kombo, 2002). The research also explored into secondary sources of information gathered or obtained through previous researches on the topic of proactiveness. Mugenda and Mugenda (2003) aver that exploratory research is good for analysing social scenarios that are characterized by qualitative factors that are not quantitative in nature.

The descriptive survey design is only involved in the in-depth exploration of the study variables without looking into the relationships between them. The study objectives involve determination of the relationship between proactiveness and performance of healthcare units in Nairobi County. To draw conclusions on these objectives, the correlation design was adopted to help in the determination of the relationship between the variables.

Study Population

The target population of this study was 71 Healthcare Units in Nairobi County consisting of Hospitals, Health centre, Dispensaries and Health Clinics. The study has investigated whether these Healthcare Units have adopted corporate entrepreneurship constructs and the Healthcare Unit's performance in terms of reduced child mortality, reduced maternal death and increased referrals. Nairobi Hospital and Kenyatta Referral Hospitals were left out as they are in their own category and are only two. At the County Hospital, the Medical Superintendent was required to fill the questionnaire, at the Health centre: a Clinical Officer was required to fill the questionnaire while at the Health Clinic/ Dispensary the Nurse in charge was required to fill the questionnaire. A drop and pick method was conducted to all 49 Health Officers in the three categories of Health Units in Nairobi. The list of the Healthcare Units in Nairobi is as per Nairobi City County records of 26th January 2015.

Sample and Sampling Methods

The sample size was obtained using stratified random sampling technique because the population is non-homogeneous. The researcher did a stratified random sampling of Hospitals, Health centres and Health Clinics as the sub- samples for the study excluding the referral hospitals

(Kenyatta National Referral Hospital and Nairobi Hospital) due to their advanced level. The sample size is of 49 Healthcare Units with each of the remaining three categories allocated equal proportions as per their contributions of 24, 35 and 41 per cent of the total 49 Health units. This is represented by 12 County Hospitals, 17 Health centres and 20 Health Clinics. The respondents were Medical Superintendents for County Hospitals, Clinical Officers for Health centres and Nurse in Charge for Health Clinics.

Data Collection Tools

The main tool for data collection used in the study is a structured questionnaire. The structured questionnaire was divided into three different parts in order to capture information from different parts of the Healthcare Unit. The first part of the questionnaire seeks demographic information of the respondent and that of the Healthcare Unit to enable a clear understanding of the Healthcare Units in Kenya; the second part is to capture information on the level of adoption of proactiveness constructs (barriers and accident prevention, safety management, disease prevention, hazard analysis and availability of tool sets); the third part of the questionnaire is to capture information on child mortality, maternal death and on number of referrals.

The questionnaire was designed to address each specific objective as captured in the study (Mugenda & Mugenda, 2003). For each part of the questionnaire, a combination of closed and open ended questions was used to collect data that represents the dependent variable (performance of Healthcare unit) and independent variable (proactiveness). Observation technique was also used since the questionnaires were self-administered. Observation on how the respondents answer the questions makes it possible for research assistants to clarify areas that the respondents have not clearly understood, hence, clarification and simplification of the research questions was made possible, thereby enabling respondents to provide accurate response. Secondary data was obtained through review of published and unpublished entrepreneurship related literature. Previous research studies undertaken in the entrepreneurship field, management and firm performance from previous studies undertaken in other parts of the World also provided a good source of secondary literature.

Information contained in annual reports and other documented literature, proved very useful in providing the necessary secondary information during the study. Further secondary information was obtained through the internet by visiting various Websites to access publications relevant to the study. This made it possible to have an in-depth assessment, appreciation and understanding of the existing literature.

Results and Discussion

Analysis of Demographic profile of respondents

The quantitative data collected from the demographic profile section were subjected to descriptive analysis using Warp's v.5 statistical software. The demographic profile of target respondents (gender, age, and education level) was presented in terms of frequency and percentage scores. On the level of education, majority (49.2%) of the key respondents were

undergraduate degree holders, 28.8% diploma holders and 22% of the respondents were holders of post-graduate degrees. On the length of service with healthcare units, majority (39%) of respondents had worked with the healthcare units for 4 to 6 years. Another 32.2% had worked for up to 3 years with the healthcare units and only 10.2% of the respondents had worked in the healthcare units for less than 1 year. The researcher also sought to determine the trainings that the respondents had received during the service to the unit. The majority (37.3%) of the respondents had received more than 4 trainings for the period they had been in service with the healthcare units, 49.2% had had between 2 to 4 trainings and 3.4% of the respondents had not undertaken any training since they joined the healthcare units. These results revealed that nearly all the respondents had undertaken a number of trainings which means they were able to offer services that were of quality to the patients and use the latest equipment in the market.

The units were categorized based on the main sponsor of the units. The majority (25.4%) of the units being studied were privately sponsored units, 22% were sponsored by churches, 20.3% sponsored by the central government, 18.6% by county government and only 13.6% of the units were mission hospitals. The Research also sought to find out the length of the period that the units had been in operation. Most of the healthcare units had been in operation for less than 10 years. This constituted about 32.2% of the units studied while 25.4% of the units had been operating for between 10 to 15 years. This means that over 60% of the units that were studied had been in operation for only up to 15 years. Less than 30% had operated for more than 20 years. On the Number of employees, the majority (39%) of the healthcare units had 50 employees or less. Another 18.6% of the healthcare units had 51 to 100 employees. Only 15.3% of the healthcare units had more than 200 employees with 10% having more than 300 employees to offer service.

Analysis of Survey response

Questionnaires were delivered to the 49 units, out of which 41 were returned. This represents a response rate of 83.7% of the sample which the researcher considered an adequate response rate. This is in line with Magenta and Magenta (2012) who stated that a response rate of 50% is adequate, 60% and above as good and above 70% very good (See Table 1).

Table 1: Response rate

Sector	Sample size	Returned	Response rate
County Hospitals	12	10	83.333%
Normality testing Health Centre	17	14	82.353%
Health clinics	20	17	85.000%
Total	49	41	83.673%

Source: Research Data (2018)

Normality testing

Univariate normality tests were run for all independent and dependent variables and scenes and kurtosis examined. The common rule-of-thumb for normality is scenes to be within the range of -3 and +3 and Kurtosis to be within the range of negative or positive eight(8) (Kline, 1998).From the analysis, the scenes coefficients were all within the acceptable range of -3 and +3. According to Moran (2006) and Hair *et al.*, (1998), data in psychometric studies are often not normally distributed

Table 2: Results for normality testing

Latent variable	Skewness	Kurtosis
Proactiveness	-2.464	7.993
Performance of healthcare	-0.063	-0.104

Source: Research Data (2018)

Internal Consistency assessment

Internal consistency of the research instrument was measured using Cranach’s alpha. Reliability should be 0.7 or higher or if it is an exploratory research, 0.6 or higher is acceptable (Boozy and Yi, 1988).More conservatively the Cranach’s alpha coefficients should be equal to or greater than 0.7 (Nunn ally & Bernstein, 1994). Table 3 summarizes these findings:

Table 3: Results for Internal Consistency assessment

Latent variables	Alpha reliability coefficients
Proactiveness	0.881
Performance of healthcare	0.632

Source: Research Data (2018)

In this study construct validity was tested for Convergent and discriminate validity which were the evidence of construct validity. The data analysis revealed that the AVE values for proactiveness was 0.608 while for Performance was 0.563.The AVE coefficients for the latent reflective variables used in this study were above the recommended minimum of 0.5 thus confirming convergent validity of the construct used in this study. Table 4 shows the latent reflective variables together with their corresponding AVE coefficients

Table 4: Average Variances Extracted

Latent variables	AVE coefficients
Proactiveness	0.608

Performance of healthcare

0.563

Source: Research Data (2018)

Descriptive statistics for the latent variable measurement items

The independent variable the researcher studied was pro-activeness. The mode was used as the average being that the variable indicators were also measured categorically on an ordinal scale of 5. To measure this variable, the respondents were asked how much they agreed with the statement that barriers and accident preventions are carried out; to this statement, 28.8% of the respondents observed that barriers and accident preventions at their healthcare units are never carried out; 8.5% of the respondents observed that barriers and accident preventions at their healthcare units are rarely carried out; 6.8% of the respondents observed that barriers and accident preventions at their healthcare units are sometimes carried out; 28.8% of the respondents observed that barriers and accident preventions at their healthcare units are usually carried out. The remaining 27.1% of the respondents observed that barriers and accident preventions at their healthcare units are always carried out. The modal class of the responses to this indicator was found to be 1. This has implications that on average, barriers and accident prevention are never carried out in the healthcare units.

These results are in agreement with those of Watson (2017) on Fall prevention in an Acute Care Hospital. Watson surveyed the challenges encountered by Patients, Staff and Administrators using a mixed method approach. The research revealed that; 1. Most falls occurred in the Medicine and Neurosciences units and that it was frequent between 10.00 am and 12.00pm when staffs were generally preoccupied with multiple tasks. 2. The research recommended a change on how the hospital assessed falls risk and 3. Contributing factors to the fall included; inadequate hospital policies, lack of staff education and patient cognitive and mobility issues while in hospital.

The study sought to find out the perception of respondents on the indicator that hazard analysis is carried out; to this statement, 3.4% of the respondents observed that hazard analysis is never carried out in their healthcare units; 6.8% of the respondents observed that hazard analysis is rarely carried out in their healthcare units; 10.2% of the respondents observed that hazard analysis is sometimes carried out in their healthcare units. A majority of the respondents (50.8%) observed that hazard analysis is usually carried out in their healthcare units. The remaining 28.8% of the respondents observed that hazard analysis is always carried out in their healthcare units. The modal class of the responses to this indicator was found to be 4. This implies that on average, hazard analysis is usually carried out in the healthcare units.

Hazard analysis is a measure of proactiveness and from the responses, the healthcare units are practicing proactiveness except about 3.4% who never carry out hazard analysis actions and 6.8% who rarely carry out the exercise. This is an indication that about 80.8% of the healthcare units are practicing proactiveness while only 10.2% are not practicing it.

Considering the indicator on the level of agreement with the statement that disease prevention is carried out; to this statement, 0% of the respondents observed that in their healthcare units, disease prevention is never or rarely carried out; 8.5% of the respondents observed that in their healthcare units, disease prevention is sometimes carried out; 33.9% of the respondents observed that in their healthcare units, disease prevention is usually carried out; 57.6% of the respondents observed that in their healthcare units, disease prevention is always carried out. The modal class of the responses to this indicator was found to be 5, implying that on average, disease prevention is always carried out in the healthcare units. Disease prevention being an indicator of proactive behaviour, from the response the research observed that the healthcare units carry out proactiveness, although 8.5% observed that it is only sometimes that they practice.

The respondents from the healthcare units were also asked on whether safety management is carried out; to this statement, 3.4% of the respondents disagreed and observed that safety management is never carried out in their healthcare units. None of the respondents gave the observation of the healthcare unit rarely carrying out safety management; 11.9% of the respondents observed that it is only sometimes that their healthcare units carry out safety management; 32.2% of the respondents observed that their healthcare units usually carry out safety management. The remaining 52.5% of the respondents observed that their healthcare units always carry out safety management. The modal class of the responses to this indicator was found to be 5. The implication here is that on average, safety management is always carried out in the healthcare units although 3.4% of the respondents observed that their healthcare units never carry out safety management.

This is an indicator that there is need for healthcare units to reinforce safety management programmes which agrees with a research carried out by Barrow (2012). Barrow's research was on patient safety culture in the Gambia Public Hospitals using a cross- Sectional Survey. Barrow's research revealed that workers in Gambia have a low perception about patient safety culture and physicians were found to give a negative opinion and were less likely to give a positive opinion about the factors of patient safety culture. The research recommended training of healthcare workers on patient safety and broad based research including all categories of healthcare organizations are highly recommended in order to improve patient safety culture Barrow (2012).

The respondents were also asked whether there are tool sets used during service to clients; to this statement, only 3.4% of the respondents disagreed to the statement observing that their healthcare units never have tool sets to use during service to clients; 3.4% of the respondents observed that their healthcare units rarely use tool sets during service to clients; 13.6% of the respondents observed that in their healthcare units it is only sometimes that tool sets are used during service to clients; 8.5% of the respondents observed that their healthcare units usually use tool sets during service to clients. Most of the respondents (71.2%) observed that their healthcare units always use tool sets during service to clients. The modal class of the responses to this

indicator was found to be 5. This has an implication that on average, tool sets are always used during service to clients in the healthcare units.

Path analysis

The model development and path analysis involved two stages which included the measurement (outer model) and analysis and the second stage thus structural modeling (inner model) and analysis (Hensley, Ringlet, & Sestet, 2012).The statistical reliability assessment for the latent variable indicators was done by analyzing the ‘outer model’ (measurement model) which consisted of the latent variable indicators and the paths connecting them to their respective reflective latent variables. In this study, outer model loadings were used in measuring reflective latent variables.

Table 5: Outer model assessments results

Latent variable Indicators	Proactiveness latent variable	Performance latent variable
Pr1	0.684	0.730
Pr2	0.924	0.383
Pr3	0.865	0.501
Pr4	0.899	0.439
Pr5	0.927	0.374
Per1	0.422	0.907
Per2	0.938	0.748
Per3	0.367	0.930
Per4	0.769	0.739
Per5	0.467	0.884

Note: Loadings and cross-loadings shown are unroasted and after Kaiser Normalization

Source: Research Data (2018)

Results of the structural model (Inner model)

Assessment of the structural model (inner model) was done using Warp’s statistical software v.5. The path analysis involved using an algorithm in which factor scores were estimated by

averaging all the indicators associated with the latent variables. P-values were calculated through the process of Resembling. This analysis was done to answer the objective of the study which was to determine the influence of proactiveness on Performance of healthcare units in Nairobi County. From the path analysis the following observations were made. The results revealed a positive relationship between proactiveness and Performance of healthcare (beta=0.5281; P=<0.001) as shown in Table 6.

Table 6: Path coefficients and P values

Latent variable	Path Coefficient(beta - estimates)	Standard error	P-value	Significance of path
Proactiveness				
Performance	0.528	0.126	<0.001	Significant

Source: Research Data (2018)

Variance explained-(R²)

The square multiple correlations (R²) is the measurement of percentage of variation that is explained by a model. The results for variance explained (R-squared) for the independent variables was R² = 0.278 for Performance of healthcare units. The explanatory power of the structural model was evaluated by examining the squared multiple correlation (R²) value in the final dependent constructs.

Assessments of the global model fit

The global (overall) model fit can be assessed by means of inference statistics, thus the tests of model fit, or through the use of fit indices (Hensley et al., 2016, p.9) .The results of fit indices are captured in Table 7.

Table 7: Model fit and quality indices

Average path coefficient (APC)	0.528	P=0.011	comments
Average R-squared (ARS)	0.278	P<0.001	
Average full collinearity VIF (AFVIF)	1.341	Acceptable if <= 5. ideally <= 3.3	
Tenenhous GoF (GoF)	0.383	small >= 0.1 medium >= 0.25 large >= 0.36	

Source: Research Data (2018)

From the analysis, the model fit and quality indices confirmed this model to be fit with the data collected as the APC and R-squared significant in the model. APC values are deemed acceptable if the value is equal to or less than five. This indicated good quality index for the model. The Average R-squared (ARS) Coefficient was $ARS = 0.278$ with P values below 0.5. The minimum threshold requirement is that P-values should be less than 0.5 for the Average R-squared (ARS) of the model.

Conclusion

This study examined the influence of proactiveness on the performance of healthcare units in Nairobi County. Specifically, the study examined the influence of barriers and accident prevention, safety management, disease prevention, hazard analysis and availability of tool sets on the performance of healthcare units' in Nairobi County. The results of the discussions indicated that healthcare units that engage in proactiveness activities perform better than those that do not.

Recommendations

Healthcare units that wish to compete in the global stage may do so by practicing proactiveness through carrying out barriers and accident prevention, practicing safety management, carrying out disease prevention, carrying out hazard analysis and through availing of tool sets to the workers. There is need to adapt proactiveness for excellent service delivery by every institution to ensure it boost the performance of the healthcare units and that patients are delivered with the right service and in the best way possible.

Areas for further research

Further research should carry out a comparative study of the various healthcare units and compare and contrast how the indicators of proactiveness: barriers and accidents prevention, safety management, disease prevention, hazard analysis and availability of tool sets influence the performance of healthcare units. We also suggest that the researchers should do interviews that are more detailed in explaining questions and follow up questions to establish in details the influence proactiveness has on performance of healthcare units.

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