FACTORS AFFECTING IMPLEMENTATION OF KNOWLEDGE MANAGEMENT PRACTICES IN HEALTH BASED NGOS IN KENYA: A CASE STUDY OF FAMILY HEALTH OPTIONS KENYA

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The Strategic JOURNAL of Business & Change MANAGEMENT
ISSN: 2312-9492 www.strategicjournals.com
Vol. 4, Iss. 2 (14), pp 218 - 241, May 11, 2017, www.strategicjournals.com, ©strategic Journals

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Accepted: May 9, 2016

ABSTRACT

The advancements in healthcare delivery along with knowledge management practices present challenges in terms of adoption. Knowledge Management practices have benefited many sectors and it is believed that the same will also benefit the health sector if implementation is properly planned and executed. Knowledge Management has become a critical aspect of healthcare delivery whose role has become a fundamental element and a key asset in organization effectiveness. Knowledge management not only enhances interaction between health institutions, hospitals, clinicians, and patients but also meets the demand for care that is growing with the increase of population. In the health sector healthcare service delivery provides opportunity to incorporate knowledge management practices to improve on the operations and other related healthcare functions. However, knowledge management implementation is still elusive in the health based sector. The general objective of this study therefore was to examine the factors affecting implementation of knowledge management practices in the health based NGOs in Kenya. Specifically the study sought to examine how Organization culture and structure affect the implementation of knowledge management practices at FHOK. The target population was the health based organizations in Kenya. The study population was limited to Family Health Options Kenya. A census survey that was conducted included 95 FHOK staff from four medical facilities plus the head office, all based in Nairobi County. Data was collected using a structured self-administered questionnaire as a tool to get responses. The questionnaires were designed on the bases of the study objectives. The study adopted a descriptive survey design and descriptive statistics data analysis method was applied to analyze numerical data gathered using SPSS. A multiple regression model was applied to determine the relationship between the dependent and independent variables. The statistics obtained were interpreted and conclusion drawn from the results. The study established that organization culture and organization structure had a significant effect on knowledge management implementation. It was recommended that a national knowledge management for health strategy be formulated and circulated as one of the standards and guidelines to effective healthcare delivery.

Key Words: *Organization Structure, Organization Culture, Knowledge Management*

INTRODUCTION

Healthcare knowledge base is increasing at a remarkable rate along with the rapid advances in medicine and service delivery forcing the clinicians to rely greatly on knowledge so as to keep pace with the latest research, standards and guidelines in the medical field (Anderson and McDaniel 2012) Health institutions therefore, need to apply knowledge management so as to influence new innovations on curative, preventive and effective service delivery. Knowledge management is a set of activities that are aimed at improving organization's operational activities, business processes including decision making, organizational culture, behaviors, products, services leading to overall performance improvement (King, 2011).

According to Sola and Ayobani (2013) knowledge management is a systematic process whose purpose is to acquire and organize both tacit and implicit knowledge to enable other employees use the same so as to be more effective, productive and able to sustain competitive advantage. It therefore enables organizations to cultivate, nurture and exploit individual and organization knowledge coming from diverse levels and contexts throughout the organization for its sustainability. It also develops systems and processes to acquire and share intellectual assets in order to maximize the value of an organization's intellectual base across diverse functions and disparate locations.(Stankosky 2008).

K4health toolkits (2014) give components of knowledge management practice to include people, culture, technology and structural processes. The argument is that knowledge management practice cannot exist without the people and structures for which technology serves as an enabling mechanism.

Knowledge management practice is crucial in improving the healthcare delivery in spite of complexity of health systems (Adderson and McDaniel 2012) This is confirmed by El Morr and Subercase (2010) who state that knowledge management practices enhance the quality of health care hence improves on health life. Adderson and Mc Daniel(2012), emphasizes that knowledge management practice if implemented, it would increase the reach and impact of health programs and allow health workforce to grow in skill and confidence leading to quality healthcare. The authors state that in spite of the NGOs having vast knowledge in respective organizational aspects, that knowledge is however, not recognized as an asset resulting to stagnation of implementation of knowledge management practices and most often rendering the process retrogressive.

World Bank defines Non-governmental organizations (NGOs) as private organizations that pursue activities to relieve suffering, promote, protect and provide social services for community development. NGOs are active in a cross section of sectors including health and are meant to contribute to the development of communities in respective areas. According to the World Bank, it is difficult to approximate data on NGO populations worldwide due to lack of reliable data, the frequency with which new organizations develop, and the fact that incorporation statuses vary by country. However, Human Development Report (2015) states that solid rough estimate amounts to more than 10 million NGOs. According to Holmen (2014), Africa was estimated to have over 200,000 NGOs. Currently HENNET (2015) has a registered paid up membership of 99 health based NGOs.

Family Health Options Kenya (FHOK) was registered as a national healthcare based NGO in Kenya in 1957. She is volunteer based; the pioneer and largest sexual and reproductive health NGO in Kenya with high commitment to promoting sexual and reproductive health (SRH) as a core healthcare service including family planning. FHOK provides holistic and integrated Reproductive Health (RH) services across the country and serves over 2 million clients annually. The services revolve around curative and preventive health (FHOK, 2015). FHOK has staff

strength of 280 with the medical facilities having a total of 164 permanent employed medical practitioners. She has health research oriented and donor funded programs and project activities most often drawn and managed by respective managers. Her training institute conducts health courses that target both pre-service and in-service students.

Statement of the Problem

Healthcare sectors rely heavily on knowledge and evidence based medicine in their healthcare activities. Healthcare knowledge production and its use is therefore crucial in enhancing new innovations on curative, preventive and effective services to the clients. Knowledge management is however more complex in health-focused organizations and even more so in NGOs as it is often in the context of emergency and is non-deferrable (Bordoloi and Islam 2012).

Healthcare based organizations specifically NGOs have been stagnant in the implementation process of knowledge management practice (Anderson and McDaniel, 2005) This is reaffirmed by widespread evidence from UoN School of Business Repository (2015) that knowledge management practice has been proved to increase organization performance yet its implementation face stagnation. This is confirmed by Bali et al (2011) who state that knowledge management faces numerous obstacles during implementation rendering to stagnation of the whole process. Malhotra (2012) also supports and states that knowledge management initiatives incur great financial and human resources without success.

According to Akhavan etal (2005) 50% of knowledge management practice systems implemented fail to achieve their original goals. Masoti and Masheka (2010) add that 45 organizations representing 65% were resistant to knowledge management implementation in Kenya which hinders the expected contribution of healthcare delivery in Kenya. The authors focus on how knowledge management practices are carried out in organizations in Nairobi and describe challenges in organizational culture, organizational strategy and organizational leadership as inhibiting elements. While Akhavan Ondari-Okemwa (2004) investigation on knowledge in Sub-Saharan Africa identifies inadequate information and communication technologies as some the factors inhibiting knowledge management. Cheruiyot,(2012) studies reveal that managers in manufacturing enterprises fail if institutionalized knowledge management practices is not embraced. These studies directly address knowledge management in healthcare NGOs.

Bordoloi and Islam (2012) state that knowledge management as a paradigm in health-focused organizations is relatively new and there exists minimal research to guide the stakeholders. With the identification of the critical role that knowledge management plays in the health sector, the question arises on why knowledge management practices fail. While it is evident that there are limitations to the implementation of knowledge management that require identification, little empirical evidence enumerates the factors which affect the implementation in health based NGOs. This study therefore sought to examine the factors affecting the implementation of knowledge management among the health based NGOs in Kenya with recommendations.

Study Objective

The general objective of this study was to examine factors affecting implementation of knowledge management practices in health based NGOs in Kenya. The specific objectives were:

- To determine how organizational structure affect implementation of knowledge management practices in FHOK
- To assess how organization culture affect implementation of knowledge management practice at FHOK

LITERATURE REVIEW

Theoretical Framework

The Knowledge-based Theory

This theory views organizations as distributed knowledge systems which means that they are composed of knowledge embodied individuals and their social interactions. This theory postulates that knowledge is the only resource that provides sustainable competitive advantage, and therefore attention and decision-making should focus primarily on knowledge and the competitive capabilities developed from it. The key contribution of the knowledge based view is the assertion that knowledge can be managed as an organizational resource that in turn, hopefully, constitutes competitive advantage.

Choo et. al., (2002) assert that the capacity to manage human intellect and to transform intellectual output into a service or a group of services embodied in a product is fast becoming the critical executive skill of this era. It is therefore crucial to manage knowledge as an organization asset in this competitive environment.

Knowledge Management Theory

The theoretical assumptions in this theory are based on the notion of knowledge sharing as a core element of knowledge management. It explains the concept of trust in knowledge sharing. According to Ardichvili et al (2003) different kinds of trust need to be present for efficient knowledge sharing to be possible. This theory states that efficient knowledge sharing requires clarity of roles. From this perspective, teams and networks comprise of interconnections between human and non-human actants - documents, devices and people. This theory stresses that one of the main influential factors in knowledge sharing is the existing of an organization culture that supports effective sharing of knowledge. While culture is seen as a key barrier to success of knowledge management implementation, knowledge is one of the most important aspects of organizational culture (Keinfeld,2001).

According to Zucker (2000) organizational culture defines the range of autonomy, trust and values which have a strong impact on the communication, the sharing of knowledge and the innovativeness of an organization. The author states that, "knowledge is as much cultural as it is technical". The theory sites common language as a tool that needs to be acceptable by other employees to ensure tacit knowledge is well made explicit. Tracy etal (2005) adds that the transfer of tacit knowledge into explicit knowledge (within the individual) and the transfer of explicit knowledge between people (within or between organizations) are the two actions underlying knowledge management theory. This theory also views knowledge management as dependent on the commitment of top management, without which knowledge management initiative is ineffective. The theory can explain specific objective one, two and three.

Conceptual Framework

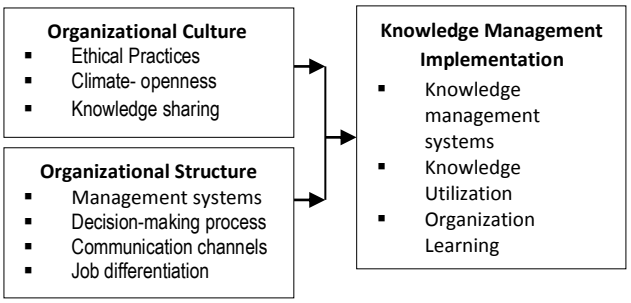

Figure 1: Conceptual Framework

Organization Culture

Brache (2002) defines culture as values, rules, practices, rituals and norms through which an organization conducts business. Levin etal (2004) agree and states that culture encompasses the values, beliefs, attitudes and behaviour of an organization. Ribiere (2001) adds that culture is the character or identity of an organization on how things are done in an organization. McKinlay

and Williamson (2010) confirm and capture culture as 'the way we do things around here' and 'the way we treat each other here'.

Goffee and Jones (2009), views culture as simply a 'community' and an outcome of how individuals share knowledge. According to King (2011), artifacts (or symbols) are the most manifest aspects of culture consisting of the constructed physical and social environment of an organization such as logos, mottos, service charters, mission and vision statements. This is supported by Ribiere (2001) who says that culture is reflected by artifacts that can be noticed by just visiting a company such as office spaces, dressing code, and jargon use. Ribiere (2001) in his research studies also emphasize that culture will be determined through the organization history, interviews, observation of workers' behaviors, so as to establish the precondition of trust to foster knowledge management practice. Hofstede (2001) however classifies culture as a collective programming of the mind that distinguishes the members of one group or category of people from one another (www.ejkm.com).

Gold, Malhotra and Segars (2001) view organization culture as the most significant factor in effective knowledge management. According to Chen (2013) if health organization management deploys knowledge management practices without consideration of its users' culture the overall success of the initiative will be impeded severely. The author finds culture as the greatest barrier to the success of any knowledge management solution in an organization. Sunassee and Sewry (2002) support this and quotes case studies where knowledge management initiatives have failed because of improper management of culture. Alam etal (2009) add that knowledge come from people and their relationship and experiences with each other; however, developing a culture that embraces sharing through the collective intelligence and knowledge of people brings challenges.

According to Megdadi etal (2012) culture plays a vital role in any organization. He adds that where people in an organization are afraid of sharing their knowledge, implementation stalls. Wong (2005) and Hasanali (2002) refer to different studies that emphasize on the importance of culture being 'knowledge friendly'. Rubenstein-Matano etal (2000) also sites numerous examples where knowledge management implementation has failed because the approach was incompatible with the culture therein. Er-ming etal (2006) in their research established that top management such as superiors and managers play a role in establishing, building and promoting a culture of trust to enhance knowledge sharing. Tiwana (2000) confirms through research studies that support and commitment from top management and employees in initiating a knowledge culture enables success in the knowledge management implementation. Studies show that knowledge management initiatives will fail without the cultural element of trust (www.ejkm.com). It is therefore extremely essential to extensively stimulate trust in an environment that allows workers to share information. This is supported by Kluge etal (2001) whose research studies of a variety of organizations revealed that, most of them attempted to implement knowledge management but failed due to lack of appropriate cultural context that would nurture trust, openness, cooperation and thirst for knowledge.

According to Janz and Prasarnphanich (2003) effective organization culture provides support and incentives as well as encourages knowledge related activities by creating suitable environments for knowledge accessibility. Oliver and Kandadi (2006) adds that organization culture influences the knowledge related behaviors of individuals, teams, units and organization as a whole because it importantly influences the determination of which knowledge is appropriate to share, with whom and when. Alavi and Leidner (2001) however, view culture as either a major catalyst or a major hindrance to knowledge creation and sharing. Sharrat and Usoro (2011)

say that culture should be developed that is based on trust and integrity so as to minimize knowledge hoarding. This is confirmed by Yusuf and Wanjau (2014) who add that an organization must have a strong culture that values trust, openness and sociability to stimulate people's interactions and knowledge sharing. Debowsk (2006) affirms that during innovation, from the initial creative idea to the experimentation and sharing, an effective knowledge culture encourages people to look for opportunities to work towards creative alternatives. Smith and Lumba (2008) however, state that an organization that operates in a culture that is receptive to knowledge generation and sharing would be more receptive to knowledge management practices.

In healthcare industry there exists culture mix from doctors, nurses, pharmacists, biochemists among others and then the administrative staff. According to Chen (2013) health knowledge experts exercising knowledge sharing may have conflict with individual mind-sets. The author says that medical practitioners do not necessary believe in the sharing of knowledge hence may present a challenge to the success of knowledge management. Ryu et al (2003) adds that healthcare provider norms have an effect on knowledge sharing behavior, adoption and use of knowledge management practices. Chen (2013) however, says that organization culture in operation is strongly tied to long standing medical practices and methodologies citing the existing custom whereby medical practices have relied upon practitioners as knowledge experts providing diagnoses and treatments rather than knowledge databases.

Organizational Structure

Sharrat and Usoro (2011) states that organizations with a centralized bureaucratic management can stifle the creation of new knowledge whereas a flexible decentralized organizational structure encourages knowledge sharing particularly of tacit nature. This is supported by Beijerse, (2000) who describes a company "3M" as having encouraged innovation and knowledge sharing by flattening their structure and decentralizing the decision making process.

According to Sharrat and Usoro (2011),organizations that rely on quick and adaptive responses as a competitive advantage need a flat organizational structure and short lines of communication among and between employees and management thus allowing employees to make important decisions at all levels. Gold et al (2000) confirms and states that a team based non-hierarchical, self-organizing organizational structure is the most effective for knowledge management practice. This is supported by Claver-Cortes et al (2007) who states that a flexible organizational structure has an important role on the successful knowledge management implementation. The author further suggest that flexible organizational structures assist to achieve decentralization of decision making process by facilitating the communication process at all organization levels. Yusuf and Wanjau (2014) emphasize that organization structure characterized by positive decision making, ease of information flow and cross-functional teams contribute positively to knowledge sharing.

According to Wang and Ahmed (2003) the structure of knowledge-based organizations must be created in higher levels of structural dimensions to include trust-based relationship, externally-oriented interactive relationship, and emotional-inclusive relationship. Herrmann (2011) however states that an organization that is badly role-modelled by those highest in the organizations hierarchy can hinder knowledge management. The author emphasizes that high ranking staff may consider themselves to be more important than others thus manifesting in not sharing information.

According to Hermann (2011) most organizations in Africa are hierarchical structured hence staff are influenced by the line managers behavior, with the high ranking members of the organization being viewed as unreliable. Unreliability and non-cooperation within an

organization hierarchy makes it difficult to implement knowledge management. Van de Ven (2005) however states that constant interaction and two way exchanges of knowledge and experience between individuals within the organization assists creation and sharing of knowledge. Edwards, Hall and Shaw (2005) confirms and add that in hospitals, healthcare providers that are involved in adjacent or connecting activities must be able to share knowledge especially where their knowledge overlap. The authors state that in knowledge management practice, there needs to have an overseer such as in management, leadership and facilitation of the same and also appropriate communication channels so as to harmonize implementation.

Knowledge Management Implementation

According to Sull (2005), organizations can get onto a new track or out of the status quo by making transforming commitments which are made by selecting an anchor in form of knowledge management which in this case is a valuable resource and a benchmark in Kenya's blue print – Vision 2030 under innovation, science and technology

According to Sunassee and Sewrey (2002), a knowledge management implementation strategy must be a function of the business strategy otherwise it will fail to accomplish goals that are tangible to the organization. Chen (2013) further says that the underlying principles of knowledge management implementation are directed at facilitating collaboration, increasing operational efficiencies, protecting organization's intellectual capital, and avoiding high rate of attrition. Major benefits of knowledge management implementation in a health set up, according to Chen(2013) is to improve quality of care and services, reduction of health care costs and improvement in the coordination of information amongst facilities. However, the author states that implementation of knowledge management practice in healthcare industry is complex and known to become either successful or failure.

According to Sensky,(2002) and Bali etal,(2005), implementation of knowledge management practices in healthcare delivery organizations is dependent on culture, human resources management for health and IT infrastructure that will facilitate sharing, transfer and easy secure storage. Masoti and Masheka (2010) findings confirms this and states that the challenges faced by organizations are how to create and implement knowledge management practices through synergy with other enablers such as organization culture, strategy and leadership using IT infrastructure and leadership dimensions within an organization. This is further confirmed by Ghosh and Scott (2007) who note that healthcare benefits are dependent on the levels of knowledge management infrastructure that includes structure, technology and human capability.

According to Adenfelt and Lagertron (2006), the enabling factors that allow knowledge management practice to take place are divided into two perspectives with the first being the social perspective which encompasses; organization culture, organization structure and individual teams. The second perspective encompasses information technology According to Bellinger (2004) and Reinhardt, etal (2003) the IT dimension of knowledge management while important is not essentially the only one. Knowledge resides in peoples' minds relationships and experiences therefore the human dimension is crucial in marshalling the organization's assets. Shortell and Kaluzny, (2000) argues that in healthcare delivery, the primary loyalty of professionals belong to their profession rather than to the organization. This is further stated by Bordoloi and Islam (2012) who argues that healthcare delivery has moved from physician-patient relationship to customer-company relationship where healthcare is delivered by a team of healthcare professionals wherein each specialize in a single aspect of healthcare.

BenMoussa and Chihab (2009) study states that cultural issues are part of the largest obstacle to implementing knowledge management. Daveport and Beck (2013) study findings indicate that most organizations use IT but added that a synergy with other enablers of knowledge management such as organization culture among others is necessary. This is confirmed by Bechina and Ndleta who states that structure has a strong influence on IT infrastructure as there is interaction between human and technology (www.ejkm.com). All the four enablers interrelate as subsystems of the knowledge management system otherwise without each of them, Knowledge management implementation will fail.

Empirical Review

Organization Culture

In a research study by Heejun Park et al (2004) the results of the data analysis revealed enough evidence to establish a correlation between cultural attributes and the implementation of knowledge management. Consequently, Adenfelt and Largerstron (2005) in their study on knowledge management enablers, found that establishment of an appropriate culture will encourage employees to create and share knowledge. The Conference Board (2000) (encompassing 200 senior executives from 158 global companies) who conducted an empirical study showed that culture is a key barrier to success on knowledge management practices. The studies emphasis that most knowledge strategies revolve around increasing efficiencies mainly because it is easier to exploit what is known through exploitation of knowledge culture otherwise lack of it would render knowledge management ineffective. The studies point out that culture is core in knowledge management practices and manages the challenges associated with both external and internal integration.

In their study of several companies, Richard McDermott and Carla O'Dell (2001) found that culture plays an important role in the success of knowledge management implementation. The authors give examples where well designed knowledge tools and processes failed because people believed they were already sharing knowledge or better still, senior managers didn't support it or just waited to see it fail. The main findings were that however strong your commitment to knowledge management implementation, the organization culture is core and will stall the process if not managed well. This is confirmed by Ernst and Young (2002) research study where survey showed that senior executives found culture at 80% to be the barrier to knowledge management implementation

Organization Structure

Adenfelt and Largerstrom (2006) research findings, knowledge management implementation get affected by the existing structure. Chen and Huang (2007) research report, decentralized structure was more supportive in knowledge management implementation efforts in that this motivated staff to participate in decision-making process leading to sharing of knowledge. According to Annah Ujwany-Gil (2011) study report, application of knowledge management elements necessitates changes in all functional areas, without which implementation of knowledge management practices will encounter barriers and difficulties at all levels in the entire sector.

Knowledge Management Practices

In this era of the knowledge based economy, use of knowledge has become crucial to organization's survival and success in competitive environment, problem solving, decision making, organizational performance, enhancements and innovation. Knowledge according to Pang, Gray and Evans (2006) is the enemy of disease hence has a bigger impact on health and disease than any drug or technology likely to be introduced in the next decade.

Studies such as those of Chen and Huang (2009) and Fugate et al. (2010) confirm that knowledge management process has positive effect on operational and organizational performance however, studies by Wissensvernetzung (2003) show that 20-30% of the processes fail.

Reviews on knowledge management in the healthcare industry by Nailakanta et al. (2009) show that knowledge management is systemically more complex in healthcare than other sectors. This is supported by Bordoloi and Islam (2012) whose study show that several barriers and enablers to adoption of knowledge management practices bring about complexity in healthcare. Research studies by Maingi (2007) further show that most of the people in Kenya are still not aware of what Knowledge Management entails hence the barrier to effective knowledge management implementation. This is confirmed through research by Masoti and Masheka (2010) that knowledge management is not well understood by most organizations within Nairobi hence the implementation failure.

RESEARCH METHODOLOGY

The study adopted a descriptive survey design. This design is used in preliminary and exploratory studies to allow researchers to gather information, summarize, present and interpret for the purpose of clarification (Orodho, 2002). The target population was the health based organizations in Kenya, which are according to HENNET, (2015), there are 99 registered Non-governmental organizations dealing with health issues in Kenya. However, since a case study was adopted, the study population was thus limited to Family Health Options, Kenya (FHOK) that comprised of facilities in Head office, Nairobi West, Phoenix, Kibra and Eastleigh branches. This was considered as the unit of analysis of this study. The study adopted census approach since the population of the study was 95 employees.This is within the range recommended by Mellenbergh and Hand, (2008) of 50 to 200 which is a small population. A survey was conducted through email to collect quantitative data using a semi structured questionnaire. The questionnaires were developed and designed by the researcher, based on the specific objectives. The draft questionnaire was sent out to the identified respondents and this assisted the researcher to verify that there were no problems with the questions in the instrument and also ascertain the level of cooperation and understanding from the respondents. This enabled the researcher to make necessary corrections in good time, foresee and prepare adequately for any other problem that could have occurred before conducting the actual data collection. On data analysis the study was expected to generate quantitative data. Descriptive statistics data analysis method was applied to analyze numerical data gathered.

DATA ANALYSIS AND DISCUSSION

From the study, the target population was 95 where 68 respondents responded and returned the questionnaires. This constituted a 71.57% response rate. The researcher conducted pilot study in order to establish the consistency of the results they would produce. The findings from the respondents' general information indicated that a projected 52.9% of the respondents were females, 45.6% were males and 1.5% were transgender.

The study sought to find out the level of education of the respondents in the facilities. The results show that there was heterogeneity in the education level among FHOK workforce with about 13.2.% of the employees having a post graduate degree, 25.0% having Bachelor's degree, 45.6% having diploma and 16.2% having a KCSE certificate. Those with postgraduate degree though in the least percentage (13.2%) are either in the leadership or are senior healthcare consultants. This means that quality of care was well distributed. When a client required specialized and intensive healthcare, it was readily available. Those with Bachelor's degree had been

recruited right from the Universities in respective healthcare areas including non-medics such as in accounts and procurement. Majority of respondents were with diplomas at (45.6%) due to the fact that the paramedics in medical clinics have diplomas in related medical areas as has been the tradition from national medical training colleges in respective areas. The respondents with KCSE at (16.2%) are most probably clinic attendants, Nursing Aids or messengers in respective facilities. The level of education fitted well with the FHOK healthcare workflow. The study sought to find out how long the respondents involved in the study had been in their current facilities. There was variation in working experience with 44.1%, 19.1% of the respondents having less than 11 years. 22.1% and 14.7% of the respondents had over 12 years working experience.

The respondents were asked to indicate their status within the organization. From the findings senior level workforce comprises only 16.2%. This may be attributed to the number of specialist consultants in respective areas. Majority of the respondents were in the middle level at 54.4%. This group more often works under the specialists' direction apart from the usual daily routines, and bears the volume of the clients traffic flow in the entire facility. This group is very crucial in implementation of knowledge management practices if supported by those in the senior level.

This study research was conducted in five FHOK facilities within Nairobi County. It sought to find out which facility the respondents were attached. From the findings, 44.1% of the respondents worked at FamilyCare Medical Centre, Nairobi West. It is the biggest FHOK medical facility in Nairobi County and has both 24 hours inpatient and outpatient including maternity facilities. This explains the high number of respondents where majority of the healthcare specialists were based. 29.4% of the respondents worked at the head office and houses the department of Information and Knowledge Management.7.4% of the respondents worked at Phoenix House in Nairobi's CBD, 10.3% at Eastleigh branch and 8.8% at FamilyCare Medical Centre, Kibra which is situated within the largest slum in Nairobi and in Kenya. The clinicians act as essential agents to effective health knowledge system through daily interaction between respective branches for quality healthcare.

The study sought to establish the age of the various respondents. The findings from the respondents' general information indicated that FHOK has a considerable young workforce with only 10.3% of the employees having over 49 years, 23.5% of the employees were within 40-49 years, 33.8% were within 30-39 years and 32.4% were within 20-29 years.

Organization culture

Ethical Practices

On whether there were open and frank information exchanges between levels in FHOK, 51% of respondents answered no while those who answered yes scored less at 48.5% . Given the diversification of professional skills and experiences in the medical field, clinicians with respective specialised knowledge within their speciality will tend to frankly open up to those within their level.

This study sought to establish if there was an incentive and benefit policy for new idea suggestions at all levels. The results showed a projected 77.9% of respondents felt that there were no incentives and benefit policy for new ideas suggestions at all levels, while 22.1% felt there were incentives and benefits for new ideas at all levels. This explains a lack of policy for rewards or incentives which would enhance knowledge acquisition.

Respondents were requested to state if FHOK staff had responsible behaviour and high learning disposition. The results showed that majority of respondents at 70.6% agreed with the statement that FHOK staff had highly responsible and

learning disposition while only 29.4% of respondents thought otherwise.

The rtudy sought to determine how well the respondent experimented and implemented new ideas to improve on once performance. The results showed that 79.6% of respondents gave a response of fair and good. This can be explained through the monthly forums where individual clinicians are encouraged to come up with evidence based suggestions on how respective areas can be strengthened or improved for best healthcare delivery.

The study also sought to explore how well are the standards and rules for the employees influence creation, sharing and usage of knowledge. The results showed that standards for employees influence on creation, sharing and usage of knowledge are well done with over 60% of the respondents giving the response as fair.

This study sought to explore how well are intellectual property rights observed when conducting any FHOK business. The results showed that observation of intellectual property rights when conducting FHOK business performed good at 33.8% and 27.9% fair with less than a third of the staff responding poorly done.

Environmental Climate

The study sought to explore how well is the pronouncement of complements and cooperation at all times. The results showed that 38.2% of the respondents thought it as fair while 29.4% thought as good, 19.1% as poor with 7.4% and 5.9% as excellent and extremely poor respectively.

This study sought to establish how well was the pronouncement of complements and cooperation at all times. The results showed that openness and confidence in FHOK was fairly grounded at 36.8%. 25% of respondents said good and 22.1% said poor.

This question sought to establish how well were the differences of opinions encouraged, respected and routinely recognised. The results showed that 328% of respondents confirmed that differences of opinions are encouraged, respected and routinely recognised among the workforce. 22.4% of respondents said good while 23.9% said poor. 14.9% said extremely poor while 6% said excellent

Knowledge sharing

My ability to create and share knowledge is valued, recognised and encouraged

The question was intended to find out if the respondent's ability to create and share knowledge is valued, recognised and encouraged. The results showed a projected 64.7% of the respondents confirmed that they are valued, recognized and encouraged to create and share knowledge. 35.3% didn't think it is true.

The respondents were requested to indicate whether all FHOK staff perceive the same purpose and feel bound by it. From the findings, 64.7% of respondents are encouraged, recognised and valued in their knowledge creation and sharing while 35.3% didn't think it is true.

The study sought to establish whether the respondent is normally encouraged to engage on intense debates and dialogues on key strategic issues without fear. From the findings, 70.6% of respondents confirmed that they were not encouragement to engage in debates and dialogue on key strategies while 29.4% thought it to be true.

Organization structure

Management Systems

The study sought to find out if FHOK structure has designed positions entitled with knowledge management administration and development. From the findings 50% of respondents confirmed that FHOK structure has designed positions with knowledge management administration and development, however, 32.4% didn't think there were designed positions while 17.6% of respondents were not sure.

The study sought to find out if there is knowledge management integration in the organization structure to ensure control in respective monitoring process. From the findings a projected 52.6% of the respondents confirmed that knowledge management is integrated in the organization structure, 25% said it is not and 22.1% were not sure.

The respondents were requested to indicate if there were clear defined roles with responsibility and authority for good working relationships. From the findings, FHOK seems to have considerably clearly defined roles with responsibility and authority for good working relationship with 57.4% of the respondents saying yes, 35.3% saying no while 7.4% were not sure.

The respondents were requested to indicate if FHOK structure enhanced teamwork, decentralization of power and control. From the findings 79.4% of the respondents were aware that FHOK structure enhances teamwork, decentralization of power and control. 11.8% said no while 8.8% of the respondents said they were not sure.

The study sought to indicate if the structure enhanced control, authority and top-down communication flow. From the findings, 57.4% of respondents confirmed that the structure enhances control, authority and top down communication flow while 35.2% didn't think so and 7.4% were not sure.

The study sought to find out how well the structure facilitates decentralization of decision making at all levels as way of enhancing knowledge management. From the findings the structure facilitates decentralization of decision making with a response rate of 38.2% for fair , 23.5% for good, 10.3% poor, 19.1% for extremely poor and 5.9% as excellent.

This study was intended to establish how well the structure facilitates decentralization of decision making at all levels. The results show that FHOK structure is fairly (33.8%) characterized by participative decision making, ease of information flow and cross function teams. 23.5% of the respondents confirmed good, 20.6% extremely poor,11.8% poor and 7.4% as excellent.

Communication Channels

The respondents were requested to give their opinion on how well the structure is networked to facilitate interaction and open communication with each other at all levels. From the findings, 32.4% of respondents scored good, 29.4% scored fair, 23.5% poor,7.4% extremely poor and 4.4% excellent.

The study sought to find out how well are the communication channels in ensuring timely information transmission and quick response. From the findings, 35.3% and 35.3% of the respondents confirmed good and fair respectively. 17.6% and 2.9% said poor and extremely poor respectively.

Job differentiation

The study sought to find out how well the structure facilitates clear lines of responsibilities without role conflicts. From the findings, 35.3% of the respondents reported as fair, 27.9% poor and 26.5% good. This is explained within the healthcare delivery process where every clinician has clear roles and responsibilities for quality healthcare delivery. Equally, non-clinicians require clear lines of responsibilities to motivate them perform better.

The study sought to find out how well the structure facilitates formation of teams, workgroups and collaboration with clear roles. From the findings, 30.9% of the respondents confirmed the statement as fair, 26.5% as good, 23.5% as poor and 7.4% as excellent and extremely poor respectively.

The study sought to find out if the structural design is non-hierarchical, self-organizing and democratic management style. From the findings, majority of respondents (72.1%) thought that the structural design is not non-hierarchical, self-

organizing and democratic while 25% thought it to be true.

The respondents were asked to say if the structure is hierarchical and centralized with a bureaucratic management style. From the findings, 50% of respondents thought as not true while those who responded true were 47.1 %.

This study sought to find out if the structure is flat, flexible, decentralised with short lines of communication between and among employees and management. From the findings, 66.2% of the respondents confirmed as true while 30.9% as not true.

Knowledge management practices at FHOK

Knowledge management systems

This study sought to find out if respondents understand the role of knowledge management practice. From the findings, a projected 72.1% of the respondents understood the role of knowledge management while 27.9% did not.

The study intended to establish if knowledge management practice is necessary in FHOK**.** From the findings, 89.7% of the respondents thought that knowledge management practice is necessary while 7.4% of respondents didn't think so.

The respondents were requested to score in a scale of 1 to 100, the success of knowledge management Implementation in FHOK. From the findings, 45.6% of respondents confirmed the success of knowledge management to be over 50% (Fig.4.28).This explains the extent the sensitization process has reached.

The respondents were requested to indicate the access points they use for health information consumption. From the findings, the Website was highly used by the respondents to access healthcare information while respective data bases and expert systems followed with 28.42% and 10.53 respectively. Executive information systems was least used with 2.11%.

This study sought to establish how well is the consistence in aligning staff with tools, content and processes that facilitate knowledge flow. From the findings, 44.1% of the respondents indicated moderately good while 20.6% and other 20.6% of respondents thought it to be moderately poor and extremely poor respectively.

This study sought to establish how well are the professional standards and guidelines pools monitored, updated and shared as they change continually. From the results, 39.7% of the respondents thought it to be moderately good while 30.9% of the respondents thought it to be moderately poor.

This study sought to examine how well has knowledge management systems supported decision making in drug prescriptions and disease management protocols. From the findings, 58.8% of respondents thought it moderately good followed by 16.2% that said very good.

The study sought to find out how well FHOK has enhanced the preservation and conservation of knowledge for re-use. From the findings, 51.5% of the respondents thought it is moderately good followed by 25% of respondents that said it is moderately poor.

Knowledge Utilization

The study intended to find out how well has knowledge management practices been recognized as a tool to prevent duplicate or redundant operations. From the findings, 27.9% of respondents thought it moderately poor, 26% as moderately good,25% as very good,8.8% as extremely poor and 7.4% as excellent.

The study sought to establish how well has knowledge management practice in FCMCs reduced operating costs and improved on operational excellence. From the findings, 51.5% of respondents confirmed as moderately good,27.9% as very good,10.3% as excellent,7.4% as moderately poor and 2.9% as extremely poor.

This study sought to find out how well has knowledge management practices been effected in FHOK to improve workforce efficiency and productivity. The results show that 39.7% of the respondents thought it as moderately good,

22.1% as moderately poor, 17.6 as extremely poor, 14.7% as very good and 5.9% as excellent.

Respondents were requested to indicate how well has employee satisfaction improved through leveraging the expertise of people across the organization. From the findings, 35.3% of the respondents thought it as moderately good , 25% as extremely poor , 19.1% as moderately poor ,14.7% as very good and 5.9% as excellent.

Organization Learning

The study sought to establish if there was increased collaboration, sharing of best practices, Communities of Practice and lessons learned, resulting to improved performance. From the findings, 51.5% of respondents confirmed that there was no increased collaboration, sharing of best practices communities of practice and lesson learned while a valued 48.5% thought accepted.

This study sought to find out if application of knowledge management practices in FHOK provides evidence of organization transformation, innovation and learning. From the findings, 57.4% of respondents confirmed as true while 42.6% of the respondents thought as untrue.

This study sought to find out if lack of knowledge management implementation at FHOK result to the risk associated with knowledge loss and hoarding. From the results, 86.8% of respondents thought to be true while 13.2% thought to be untrue.

This study sought to establish if FHOK has clear defined responsibilities for knowledge management initiatives. From the findings, 84.2% of the respondents thought it to be true while 52.5% of the respondents thought to be untrue.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

From the findings on organization culture, majority of the respondents acknowledge that there were open and frank information exchange between levels with 51.5%,confidence and openness with 36.8% and responsible behaviour with high learning disposition with 70.6%. This was within the ethics of the healthcare provider. This agreed with Organization knowledge creation theory that denotes a body of knowledge being possessed by the organization and being drawn on in its actions, just as knowledge possessed by an individual is drawn on in his or her actions. According to this theory, responsible behaviour focuses on the knowledgeability of action connoting action, doing and practice.

From the study results, experimentation and implementation of new ideas, observation of IPR and recognition and encouragement to create and share knowledge is well applied with 35.3%, 33.8% and 64% respectively. The findings support the theoretical framework of organizational knowledge creation where the aptitude of the organization as a whole is to create and share new knowledge and epitomize it in services and systems. However, contrary to Organization knowledge creation theory that emphasizes on close interactions/discussions and dialogue for knowledge creation and sharing, 70.6% of staff are normally not encouraged to engage on intense debates and dialogues on key strategies. This however can be explained in the nature of required workflow. Clinicians are not moulded in their trainings to engage in intense debates but rather to manage diseases often emergency oriented and evidence based So in the medical clinics, knowledge sharing would not to be applicable through intense debates and dialogues but rather through creative and evidence based healthcare consultations with the professional experts.

The exchange of ideas, observation of intellectual property rights and openness contributed to better service delivery as explained by the Knowledge management theory which emphasizes on climate of positivity, trust and openness that is essential for knowledge creation, learning and sharing. This agrees with De Long and Fahey (2000) research studies that reveals that minimal open and frank exchanges between levels, affect knowledge management is negatively.

The overall findings on culture confirm that ethical practices and environment climate set a benchmark for positive knowledge management practices resulting to better healthcare delivery. However, the findings on knowledge sharing contradict with Chen (2013) who states that medical practitioners do not however necessarily believe in knowledge sharing. Nevertheless, in healthcare settings information exchange is normally done between specific expertise as clients need utmost urgent healthcare delivery that is collaborative in nature within specific speciality.

The findings indicate that culture plays an important role in the implementation of knowledge management practices through the application of ethics, environment climate and knowledge sharing.

According to findings on organization structure, there are designed positions entitled with knowledge management (50%) which is also integrated within the structure as agreed by 52.9%. This strengthens implementation of knowledge management practices within FHOK and is within the theoretical framework of Organizational knowledge creation.

The structure enhances teamwork and decentralization of power/control by 79% and by 38.2% in decision making. This allowed sharing of knowledge through expertise groups who engage each other at cross levels resulting to embracement best practices with lessons learnt. Consequently, creation, sharing and transfer of evidence based knowledge is easy leading to better healthcare delivery as confirmed through the Organizational knowledge creation theory. The findings also showed and agreed with Knowledge management theory, that the structure enhances control, authority and top-down communication flow at 57.4%. This is a norm in health institutions especially hospitals where there has to be professional specialist chain of command for health advice. This can be interpreted whereby respective policies, standards, guidelines, rules and regulations from WHO that are domesticated, have to be observed for quality healthcare delivery so as to curtail negligence and errors. This is within the theoretical framework of Intellectual Capital theory that emphasizes on competency. There are no role conflicts at 35.3% with facilitation of interaction and open communication at 32.4%. In a healthcare facility, role conflicts would be detrimental to service delivery. This is line with Knowledge Management theory that states that efficient knowledge management requires clarity of roles.

The findings point to the structure being self-organizing/democratic and decentralized with short lines of communication between staff and management at 72.1% and 66.2% respectfully. This strengthens and allows easier application of knowledge management practices for better healthcare. This is in line with the Knowledge Management theory where transfer of tacit knowledge into explicit knowledge between people is fundamental for knowledge transfer and sharing. The study has shown that structure has an important role in knowledge management practice.

The findings on knowledge management practices showed that the role of knowledge management practices was not only well understood with over 72% but respondents think it is necessary with over 89%. This explained the reason over 50% respondents thought that knowledge management is successful. This fitted well with The Knowledge –based theory that attention and decision-making should realign with the business procedures and focus primarily on knowledge and the capabilities developed from it. The use of Website as a tool to access health information overrides others with over 49% followed by research data bases with 28.42%. The least used and the most important are expert systems, organization memory and executive information systems with each having less than 11%. This may explain some gaps existing in e- health

information access skills. This is contrary to Intellectual Capital theory where appropriate respective information systems are required without which knowledge management practice will negatively be affected.

On knowledge management systems, the findings scored moderately well in alignment of tools, content and processes that facilitate knowledge flow, availability of standards and guidelines for updates knowledge management support for decision making in disease management and preservation and conservation of knowledge for re-use. This explains the rationale above that knowledge management is necessary and its role is recognized in healthcare operations. This is supported by the Organization knowledge creation theory. On knowledge utilization, the findings show that knowledge management has not prevented duplication of operations at 27.9% moderately poor and 26.5% moderately good. This may be attributed to some facilities having not been installed with CMIS.

On reduced operating costs and excellence, improved workforce efficiency/productivity and satisfaction through leveraging the expertise of employees, the response was moderately good. This explains why there is evidence of transformation, innovation and learning at 86.8% on organization learning. This agrees with Organizational creation knowledge theory and Pension etal (2012) that indicates that knowledge management practices improve organizational operational activities such as reduction of costs and errors. There is no increased collaboration, sharing of best practices, lesson learnt and CoP at a value of 57.4%, Additionally there was a risk of loss and hoarding of knowledge if knowledge management practices are not implemented at 86.8%. This is within the theoretical framework of Organizational knowledge creation where collaboration and sharing of best practices, Community of Practice and lesson learnt is core to knowledge management practice.

At 84.2%, the findings agree with Intellectual Capital theory on clear defined responsibilities for knowledge management initiatives where professional people need to be entrusted with tasks that they are skilled in. The study findings show that information technology as an abler to interactions between functions through the use of platforms is crucial as shown in Chapter Two, Knowledge management theory confirms this when it observes that information technology enables interconnection between human and non-human actants- documents, devices and people for better knowledge sharing, collaboration and information storage. The findings therefore confirm that all the above objectives when interconnected, affect knowledge management implementation.

Conclusion

It was evident from the findings of this study that organization culture has an effect on the implementation of knowledge management practices at FHOK. Employees embrace their professional ethics, and the environment climate being fairy conducive. With trust and openness, close interaction between levels, recognition and being valued translate into sharing knowledge with ease. This objective had been met with the success of the strategy being attributed to the hard work and dedication of the employees in embracing the knowledge culture within the organization and outside the organization specifically from the patients. Non-involvement in intense debates and dialogue on key strategies seems unfamiliar in health ethics as experts within the chain of command seem to take that role. This therefore is insignificant and does not affect knowledge implementation process.

It is also evident that organization structure for health had an effect on the implementation of knowledge management practices at FHOK. The findings showed the structural design embraced knowledge management implementation.

In line with the research objectives, the results confirm that health based NGOs manage knowledge through use of practices such as a conducive environment coupled with professional

ethics, structural designs favorable to knowledge sharing, policy strategies, trainings and communication. The study concludes that there was neither understudy or induction programs nor is there a staff retention policy or a policy for preservation and conservation of knowledge which translated to knowledge loss, hoarding and lack of knowledge transfer leading further to knowledge drain which is critical in a health based industry.

The research investigated the topic in the context of health based NGOs and showed the effect of the enablers for effective knowledge management practice. Knowledge management was found to involve employees as individuals, their relationships between individuals, groups or teams within the organization and also the organization's subsystems, tools and routines that are embedded in the organization system. The findings therefore established that culture and structure were enabling elements in the investigation of knowledge management implementation. It however showed that organization structural was more significant. Based on this study finding, the nature of organization culture and the type of organization structure significantly affected implementation of knowledge management in health based NGOs.

Recommendations of the Study

The study recommended that a national knowledge management for health strategy be formulated and circulated as one of the standards and guidelines to effective healthcare delivery. Also it should establish a senior position within the structure for a knowledge management professional responsible for knowledge management practices and development and embed knowledge management within the organization policies, standards and guidelines, working documents, objectives and programming.

Proposed Areas for Further Study

Further research on the role of healthcare policy makers and top leadership in the implementation of knowledge management practices in the health sector so as to clearly determine their impact on the same. Further research on the clinicians' attitude towards knowledge production and sharing with a view to establishing the reasons behind the low usage of available clinical decision support platforms, low score on mobile use and persistent health knowledge hoarding which affects critical disease diagnosis and management including treatment. Further research should focus on clients' and development partners' view of the impact of knowledge management practices in the health based facilities. Further research should include the low score on computational attendance and participation in workshops and conferences (CoP) which otherwise curtails knowledge creation and sharing.

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