

Knowledge Sharing And Retention In South African Healthcare System

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Abstract - Knowledge sharing and retention is vital in healthcare organizations, mainly because healthcare practitioners are required to be innovative in providing medical care, and be always ready to take new medical knowledge opportunities that can assist in caring for the patients. The absence of knowledge sharing and retention practice in healthcare organizations can lead to the occurrences of various medical faults that can lead to unexpected deaths. The purpose of this study is to analyze and provide means of knowledge sharing and retention in the South African healthcare system. A qualitative research method was used to carry out the study. Actor Network Theory (ANT) was adopted to underpin this study. The study revealed that whilst there were challenges that hinder knowledge sharing and retention in the South Africa Health System, knowledge sharing and retention was happening informally in many cases. Health practitioners daily shared the knowledge with colleagues without even realizing the effort. Patient care was also identified as the main influencing factor for knowledge sharing from the case study.

Keywords; Actor Network Theory; Healthcare Sector; Healthcare Practitioners; Information and Communication Technology Knowledge Management; Knowledge Sharing; Knowledge Retention

I. INTRODUCTION

The demand for primary healthcare services is expected to increase due to factors such as the rise in chronic and complex diseases, workforce shortages, increasing health care costs, and advances in technology (Wakerman & Humphreys, 2011). Managing knowledge is becoming the centre of everything that happens in the healthcare environment today. There is therefore, need to have speedy access to an extensive range of materials for accurate information to help deliver the best possible services for patients by healthcare practitioners (Shaari et al. 2015). The healthcare sector is knowledge-intensive in the sense that it has a great amount of intangible assets and intellectual capital.

Knowledge sharing and exchange has been identified as being highly relevant to the healthcare sector (both government and private) as it can provide greater accountability and evidence-based practice in health planning, policy-making and service delivery (Tetroe et al. 2008). From the health point of view, knowledge sharing is significant in ensuring that the relevant information gets to the right people and used for the right purposes at the right time (Du Plessis, 2007). This study therefore defines

knowledge sharing as the interaction of patient information or knowledge between healthcare professionals. In this case knowledge sharing should occur through collaborative communication channels so that patient knowledge is always available and is leveraged upon to provide the best possible healthcare services, to improve the quality of patient care and to achieve patient satisfaction.

According to Haughom and Advisor (2014), solving problems and making decisions in healthcare is profoundly dependent on access to knowledge. In today's increasingly complex environment, it is becoming important for healthcare organizations to effectively manage both internal knowledge and externally generated knowledge in order to provide the best possible healthcare, achieve operational excellence, and foster innovation. Bell et al (2010) emphasizes that a well-organized and effective strategy for knowledge management in healthcare can help organizations achieve these goals.

It is a fact that, when employees leave jobs, voluntarily or not, employers lose the institutional knowledge that the employees take with them, and many organizations lack sufficient transfer programs to stop the loss (Peña, 2013). Institutional memory loss is a problem that can impact an organization's capability to advance its mission successfully. According to Tinline (2016), many organizations are at risk of losing their memory because workers switch jobs, without passing to other workers what they've learned. This can impact on the service delivery and the day-to-day running of the organization.

As the pressure on hospitals mounts to better their health systems and increase patient care, the management of the knowledge resources become increasingly essential, (Wickramasinghe & Davison, 2004). The advantage of sharing and retaining knowledge, therefore, is to assist those in the organization to benefit from the gathered

knowledge and information so as to improve service delivery to patients and, most importantly, to undertake an organization's day-to-day operation efficiently and effectively.

II. BACKGROUND OF THE STUDY

With the increase in the population of South Africa of about 55 million, which is coupled with decrease in life expectancy to an average of about 49.7 years (StatsSA, 2015), there is more pressure on the already under resourced healthcare sector (McGinnis, 2016). As a result of this growing population, healthcare institutions are required to accommodate more patients for preventive and end of life needs. The health care system is not only faced with issues of lack of resources, but also a high turnover of employees and lack of trained employees (Guptill, 2011). The few employees in the system often change work from time to time, leaving the institution without skills required to carry out their daily operations (Tim, 2013). This results in difficulties in accessing patient records, monitoring disease information and difficulty in continuing with all other health related operations.

Due to this high turnover of employees, health institutions are currently faced with a shortage of healthcare practitioners, which impedes the ability of the sector to carry out its core mandate of patient care (Beath, 2012). Knowledge sharing and retention remains the solution to this problem. Even though the importance of knowledge and experience sharing practices are mentioned by various studies such as (Adem, 2010; Ipe, 2003; Andualem et al., 2013) they are poorly practiced especially in hospitals in under resourced countries like South Africa. The absence of this crucial an systematic knowledge sharing retention programs in hospitals is an important cause for the occurrence of various medical errors, missing-diagnosis, wrong treatment, increased multi drug resistance and unprecedented deaths (Chetley, 2006).

III. THEORETICAL FRAMEWORK

Actor Network Theory (ANT) was chosen as a suitable theory to underpin this study. Actor network theory (ANT) also known as enrolment theory, was first introduced to the social sciences during the mid-1980s by Bruno Latour and Michel Callon (Walsham, 1997). The term actor is typically used to denote both human beings and non-humans such as technological artifacts that interact within networks of other actors (Walsham, 1997). An actor is either a human or non-human entity (e.g. pencil, automobile, computer, and others) that possesses the ability to perform action. This means that the data collection, analysis of the data and interpretation of the results of the analysis will be channeled by this theory. The reason for using ANT to underpin the study was that it provides a basis for the study: both as an understanding of the essence of what is investigated in the study, and how to obtain knowledge about the phenomena studied. ANT is useful to understanding processes of knowledge sharing within the organizational context. ANT's emphasis on empirical enquiry allows the researcher to see the relations among different actors in the network (Doolin & Lowe, 2002). Paying attention to the actors' actions throughout the different stages of establishing the network, ANT assists in interpreting the events and explaining the outcome.

IV. RESEARCH METHODOLOGY

This research has adopted qualitative research approach. This is because the study is based primarily on narrative information collected from interviewees and direct observation. This allowed the researcher to get a better understanding of how knowledge is shared and retained in the organization, and allows for more follow up questions until the subject was well understood. Reason and Rowan (2004) stated that the core element of a qualitative research approach is basically to connect meanings to the experiences of respondents and their lives. The

qualitative method helped the researcher to understand the subject and be able to describe and analyze the processes of knowledge sharing in the healthcare organization in a more detailed way by presenting the healthcare practitioners' views.

a. Research Design

For the purpose of this study, the Case Study was regarded as the most relevant design to capture the activities of the organization in terms of knowledge sharing and retention. The case study will be referred to as Health Institution South Africa (HISA) due to privacy agreement. HISA is situated in the Gauteng province of South Africa. HISA is the 3rd largest hospital in the world, occupying around 173 acres, with approximately 3 200 beds and about 6 760 staff members. The facilities are housed in 429 buildings with a total surface area of 233 795 m². Approximately 70% of all admissions are emergencies, including approximately 160 victims of gunshot wounds per month. Accident, emergency and ambulance represent the busiest services, counting for over 350 daily patients. Every year, about 150 000 inpatient and 500 000 outpatient cases are registered. Approximately 60 000 patients per year are treated in the Maternity Hospital. This is the reason why it was chosen as the case to study, as it's one of the biggest and busiest health institution.

b. Data collection

There are many types of techniques in the collection of data such as written material, interviews, questionnaires, observation, focus groups discussions, protocols and different documents that may be relevant to the study (Jarvinen, 2000). For the purpose of this research, the data was sourced in a form of extensive interviews with the hospital's Medical Practitioners (physicians/doctors), Professional Nurses & Information and Communication (ICT) specialists. In addition, hospital's information such as hospital strategies,

procedure manuals, hospital protocols and policies provided during the study served as a valuable sources of secondary data. Observation was also used to gather information on behavior of the targeted participants on knowledge sharing as they work

V. RESULTS AND DISCUSSION

A. Findings of the research questions

1) What are the factors influencing knowledge sharing in healthcare system?

The findings from this study show an understanding of the influencing factors on knowledge sharing in HISA. The factors are as follows:

a) Management

Management plays a vital role in developing plans and enforcing decision making in organizations. It is, therefore, true that the management in this organization strongly encourages knowledge sharing and teamwork and acknowledges that in a hospital environment one cannot work in isolation. They regard the aim of knowledge sharing like sharing all opinions, ideas, experiences, skills and suggestions as helpful.

This is supported by the study by Lee et al. (2006) which revealed the fact that top manager support to knowledge sharing, impacted on improved quality and level of sharing knowledge. The support of coworkers and their supervisor as well as their encouragement for sharing knowledge can also be an influencing factor in knowledge sharing (Kulkarni, Ravindran, & Freeze, 2006).

b) Patient care

Healthcare practitioners are sharing knowledge for better patient care management. After conducting the interviews in all the targeted medical units, it was clear that the knowledge and information sharing is important for employees in order to perform their daily tasks. Interviews with different practitioners revealed that communication and sharing of knowledge is of utmost importance in order for them to fulfill HISA's mission pledge of "caring is our mission".

c) Self-Development

The need for self-development and career development also came out as one of the influencing factors that encourage the healthcare practitioners to share knowledge with their colleagues. Employees also attend trainings, workshops and some are even furthering their studies in a quest to gain more knowledge for their career development.

This is in line with the statement of Karia and Asaari (2006) that employee empowerment and the willingness of employee to self-develop themselves, positively affect organizational commitment, and organizational commitment has a positive relationship with knowledge sharing.

d) Politics

Politics in an organization is when certain people, especially with power, influence what must happen and the behaviour of other people. People with authority usually apply their power to influence the result of certain events.

During the interviews, it was discovered that there is lot interferences by the Health Provincial Office on the procuring of the ICT

equipment. All requests to procure IT technologies must be submitted to the Provincial Office which in most cases ends up being rejected. The gap in thinking between the senior management and the institution in terms of the vision of ICT within the institution, also affect how things must be done. Senior Management are not in ICT and they sometimes feel like ICT is not important and therefore they don't link their strategies with ICT. Tetroe et al. (2008) in their study ascertain to this.

2) What are the current tools and techniques used for knowledge sharing in the healthcare sectors?

HISA has in place different methods to share information and knowledge amongst employees. This study showed that knowledge is shared amongst employees mostly through personal contact; meetings, in-service trainings, workshops, symposiums, and conferences. ICT technologies such as email and other transversal systems are also used as a method of information sharing. Information is also shared using hospital documents like policies, procedure manuals, hospital protocols, which are accessible to everybody at all the times.

a) Formal and informal meetings

All the medical departments have their daily, weekly and monthly meetings where they discuss issues that impact their work. Various healthcare practitioners are involved in these meetings, which contribute to knowledge sharing in the organization. In all these meetings, the knowledge that is not easy to share through explicit means is mainly shared face to face among the employees.

They also organize one monthly meetings where different practitioners who have interest in the same subject convene and discuss related issues. This provides an opportunity for the practitioners to learn more and share experiences with each other. There are also

meetings convened with other health practitioners from other hospitals. In these meetings all the interested parties meet and share information and knowledge on the issues that affect their work, problems they encounter and their solutions. In these forums constant interaction between explicit and tacit knowledge occurs.

b) Doctors rounds

It is a norm at HISA that every time a Doctor takes rounds to see patients, he or she is accompanied by other related healthcare practitioners. This senior practitioner, would mostly include junior doctors, nurses and allied service practitioners. This is done to make sure that not only the doctor has knowledge about the patient's diagnosis, but also, all other parties. This is another way of teaching and in turn knowledge sharing with others.

During the rounds, Doctors explain and discuss the relevant information with all practitioners involved. This was observed in the Renal Medical Unit, as the doctor was seeing a patient. Firstly, the doctor made sure that all parties are present with him, and went on to explain all the medical procedures he was going to undertake. Questions were asked during the treatment by both the junior doctors and nurses, and the doctor answered all questions. Some of the practitioners also had books with them to take notes of the important information. All the information about the patient was written in the patients file, so that when another Doctor comes, he or she knows the status of the patient.

c) Internal academic day

This is a forum for discussing medical cases held weekly on Wednesdays in the hospital. In this forum Doctors are encouraged to present clinical papers and cases. The hospital does not command attendance to this forum, and it is therefore the responsibility of an individual to

voluntarily participate. Nevertheless, the meetings have been going on for a long time and are attended by doctors of different specialties as well as other interested healthcare practitioners. Doctors from neighboring hospitals are also invited to participate in this forum.

This forum brings together different healthcare practitioners to discuss patients' cases. The objective is mainly to share knowledge about patients and to determine an appropriate course of action. The medical doctors also select the cases of different patients and present them to the group.

d) Workshops, conferences and symposiums

The HISA, being an academic hospital, encourages its employees to attend formal national and international conferences, workshops and symposiums where different medical-related issues are discussed. Workshops are also held between different hospital departments regarding ongoing programmes, current issues and experiences. During these workshops, more experienced employees educate their peers on different subjects or present their cases in more detail. Education in the organization occurs daily as the practitioners are nursing the patients. Doctors explain the procedures to junior doctors and nurses as they work. Nursing managers also take the responsibility of continuously teaching and orientating the newly recruited nurses.

e) Hospital documents

All interviewees stated that there are various documents containing information that is important to their work. The documents include policies, procedure manuals, hospital protocols, quality assurance documents and many others. It was discovered that all the employees have access to these documents, as they are stored in places where it is easy for all to access. The

documents are stored manually, and updated as and when is necessary. Employees explained that the documents usually work as a starting point of references.

During the study, the researcher observed and confirmed the documents' availability. The documents are stored and classified in a way that is easy for retrieval. The documents are also easy to use. These documents are available in all the hospital medical units, and all healthcare practitioners in those units have access to them. The documents are updated to be relevant to the information needs of the employees at all the time.

f) ICT Transversal systems

Sharing of knowledge in the organization also takes place through emails, intranet and other ICT transversal systems. During the interviews the Information Technology IT manager also mentioned the introduction of new systems namely; Radiology Information System (RIS) and Picture Archiving System PAS. There is will also be an archiving system for X-ray images, whereby a patient file will be linked to X-ray image. This assists other health practitioners to access the patient's files with ease. There is also a Facebook page for HISA Doctors, which allows them to share knowledge and information.

3) What are the challenges of knowledge sharing in the healthcare sector?

Most employees admitted that there were challenges that made it impossible to share knowledge with others in the organization. The interesting part, was that the low level practitioners reported more problems than the high level ones.

a) Time constrains

The biggest impediment to knowledge sharing identified by the participants in HISA was the time factor. Most of the respondents complained of lack of time to share knowledge. They explained that due to the nature of their work, they do not get time to convene with colleagues and share information and knowledge. Health practitioners in HISA were mostly overwhelmed with work pressures and therefore failed to share critical knowledge and information with teammates. Here are some comments by respondents to illustrate the time constraint;

“I am stealing 30 minutes of my time for this interview. Even for attending meeting, we sometimes send other people because there is no time to go there. We sometimes lose opportunities to attend workshop and symposium because we are always busy in this hospital”

“Time is a major issue in this hospital. No one has extra time to devote to the knowledge sharing”

“The numbers of patients we are seeing are too much, the staff members are limited, and there is a serious shortage, and that makes it difficult for us to get enough time to sit and share with others”

“I think shortage of staff is the main challenge. When one is in the ward it is difficult to go out and do other things. If we can have enough staff, it would be possible to go out to meet other people, and are able to share”

“Nurses are overloaded. You find that one nurse is looking after 40 patients”

These finding are in line with what Zhou and Nunes (2016) who revealed in their study that the healthcare practitioners are mostly very busy and have a lot of work, therefore, they are more

concerned with attending to the immediate needs of the patients and were likely not to prioritize necessary communication and knowledge sharing.

b) Technology constrains

The study revealed a technology-related barrier to knowledge sharing in HISA. Most of the participants reported insufficient technology resources such as computers and access to the internet; that facilitates easy access of information. Though most of the healthcare practitioners are computer literate, in many cases more than 10 employees are sharing one or two computers in many medical departments. The shortage of computers makes the sharing of information in HISA very difficult.

Participants' comments illustrate these points to emphasize the constraints:

“Most do not have access to the internet, and only use manual documents to access information”

“Most of the healthcare practitioners can access internet from the library which operates only 8 hours in a day”

“The only way to share electronic information is through e-mail. Electronic communications are not always clear and often require verbal follow-up. It is mostly difficult to project the proper meaning of the information via e-mail”

“Hospital documents like procedure manuals, policies etc are stored manually, and will only be shared on one physical location”

“The organization does not have proper knowledge management system for knowledge sharing, and the employees rely solely on emails to share the information”

This is in line with what Gorry (2008), who conducted two case studies on Knowledge Sharing in the public sector in the United State of America found that inadequate technology is one of the main barriers to knowledge sharing.

c) Language barrier

Language is the instrument that individuals employ to communicate what they know. Another problem discovered in this study was the problem of lack of common language. There are health practitioners from different races and ethnic groups in this organization. The most popular language used by employees in this organization is IsiZulu and English. Other languages include Tswana, Venda and Sepedi. Employees feel more comfortable using their vernacular, which cannot be understood by all. Employees are expected to use English as a medium of communication, but sometimes others decide to speak in their own vernacular.

The important role of language in knowledge sharing process is described by Husted & Michailova (2002) even more vital when differences in native languages of the employees increases the ambiguity substantially. In their study they revealed that good verbal and written communications are essential for efficient knowledge sharing.

Other challenges identified include; resistance to change, attitudes of a person giving or receiving information, and lack of recognition by management. The challenges, identified provide evidence that the organization need to improve on how they promote knowledge sharing.

VI. LIMITATION OF THE STUDY

Knowledge Management is an extensive area to study. Taking that into consideration, this study only focused on knowledge sharing and retention and issues related to it. There are many healthcare organisations/ hospitals in South Africa, but this study only conducted the research in one public hospital, thus limiting the generalization to other hospitals. And the fact that the study was only conducted in one hospital, it may not produce same findings if it was conducted in the other hospitals. In the chosen organisation (HISA). there are many different business units which are dependent on knowledge sharing for effective functioning of its operations, however, the researcher chose to focus on the core business of the organisation which is healthcare. Even though the study was conducted on almost all the medical units in the organisation, it was not possible to interview all the healthcare professionals in those units, thus the views of this research are may be limited only to those that have participated.

VII. CONCLUSION

The literature review revealed that, being a knowledge driven industry, healthcare provision provides opportunity to incorporate knowledge management practices to improve processes. Knowledge management and more specifically knowledge sharing has a huge value to the health care sector especially hospitals and clinics. This study also revealed that health professionals, especially nurses and physicians daily use developed domain knowledge in combination with experiential knowledge to deliver quality patient care.

The findings from this study also gave an understanding of the influencing factors on knowledge sharing in HISA. It was clear that the knowledge and information sharing is important for employees in order to perform their daily tasks. It was also evident that communication

and sharing of knowledge is of high importance in the care for the patients.

The study also revealed that there are sufficient tools and techniques to allow the sharing of knowledge in the organization, and most of the healthcare professional are aware and make use of those tools. Most of the healthcare professionals are sharing the knowledge without even realising they are doing it, as it is part of their daily activities. In hospitals it is a norm for Doctors to be accompanied by other healthcare practitioners like nurses when taking patients round. This is one of the most effective way of knowledge sharing done informally at HISA.

The study also revealed that ICT plays a pivotal role in the sharing of knowledge in hospitals. Most healthcare practitioners make use of ICT in their daily activities. ICT facilities,

which are mostly the computer, were found to be available in all areas of the hospital. Most of the healthcare practitioners are computer literate and have computers or laptops in their offices. (the finding indicate that they did not have enough – this conclusion is contrary to the findings rephrase to be in line with the findings)

Challenges to sharing knowledge exist at HISA. The identified challenges were time constraints, technology constraints, and language barrier. Some of the healthcare practitioners are still reluctant and do not participate fully in knowledge and information sharing in this organization. Some employees blamed management for not playing a sufficient role in encouraging knowledge sharing. Time constrains was a common challenge to all the healthcare practitioners at CHBH due to the nature of their work and more so the size of the hospital and the numbers patients it caters for. Summarise the conclusion

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