ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
SCHOOL OF INFORMATION SCIENCE
AND
SCHOOL OF PUBLIC HEALTH

ASSESSMENT OF KNOWLEDGE SHARING PRACTICES AND CONTINUOUS LEARNING COMMITMENT OF HEALTH CARE PROFESSIONALS IN HOSPITALS IN HAWASSA.

BY

AMEZENECH AYELE GEBREHIWOT

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ASSESSMENT OF KNOWLEDGE SHARING PRACTICES AND CONTINUOUS LEARNING COMMITMENT OF HEALTH CARE ROFESSIONALS IN HOSPITALS IN HAWASSA.

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A Thesis Submitted to the School of Graduate Studies of Addis Ababa University in Partial Fulfillment of the Requirements for the Degree of Master of Science in Health Informatics

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Examiner 2 _____Signature _____Date_____

Declaration

I declare that the thesis is my original work and has not been presented for a degree in any other university.

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ACRONYMS

CoP	Community of Practice
CSA	Central Statistics Agency
HIMSS	Healthcare Information & Management Systems Society
IP	Principal Investigator
IT	Information Technology
KM	Knowledge management
KS	Knowledge sharing
MNC	Multinational Company
OL	Organizational learning
SNNPRS	Southern Nations Nationalities and Peoples Regional State
SPSS	Statistical Package for Social Sciences (Software)
WHO	World health Organization

ABSTRACT

Knowledge management is the organization, creation, sharing and flow of knowledge within organizations. Creation of knowledge teams, sharing of best practices, and intellectual capital teams were common activities that were taking place in knowledge management initiatives to improved overall organization performance. Knowledge sharing involving a group of like-minded individuals engaged in sharing their knowledge resources, insights, and experiences for a defined objective. Individuals learn from organization, other individuals and new combinations of existing individual from knowledge sharing. However there is no previous study which conducts on assessment of knowledge sharing practice and continuous learning commitment of health care professionals in hospitals in Hawassa. This study is conducted to look into the level of knowledge sharing practices and continuous learning commitments of health professionals in hospitals and also identify factors associated with knowledge-sharing practice. A cross-sectional study with both quantitative and qualitative methods was conducted among two public hospitals and two private hospitals in Hawassa from December 2013 to June 2014. Total of 275 respondents was selected using simple random sampling technique. The data was collected using self administered structured questionnaire and to supplement the quantitative study in-depth interviews was conducted. The data was entered, cleaned and analyzed using SPSS-Version 16. Frequencies and percentages were used to describe the study population and Logistic regression with 95% confidence interval was used to assess the presence and degree of association between dependent and independent variables. Fifty four percent (53.95%) and 58.35% participants were engaged in active knowledge sharing practice and 75% and 70.7 % were committed to learn new things in their daily activity through knowledge sharing practice from public and private hospitals respectively. The factors that were independent predictors of knowledge sharing in hospital were profession, work experience, sex, salary, willingness, communication channel, knowledge sharing opportunity and intrinsic motivation, extrinsic motivation, trust and interpersonal characteristics. There is association between knowledge sharing practice and learning commitment in private hospitals. From this study most of the respondents were aware of the importance of knowledge sharing and were committed to learn new things in their daily activity through knowledge sharing but only half of respondents were engaged on active knowledge sharing practice. Work experience, willingness, knowledge sharing opportunity and intrinsic motivation were common independent predictors of knowledge sharing practice in public and private hospitals. So stake holders and owners should device a way for strengthen knowledge sharing practice through improving all the hinderers of knowledge sharing.

CHAPTER ONE

1. 1. Introduction

Information exchange and knowledge sharing are now accepted in the development sector as essential to effective partnership and collaboration (Ballantyne et al, 2000). Knowledge is information that has been analyzed to provide meaning or value or evaluated as to implications for the operation. It is also comprehension gained through study, experience, practice, and human interaction that provides the basis for expertise and skilled judgment (USA department army, 2012). Two distinct kinds of knowledge are widely accepted (tacit and explicit)(Akehurst et al., 2011).

Explicit knowledge is formal knowledge that can be packaged as information and can be found in the documents of an organization: reports, articles, manuals, patents, pictures, images, video, sound, software etc. Tacit knowledge is personal knowledge embedded in individual experience and is shared and exchanged through direct, eye-to-eye contact (Borghoff &Pareschi, 1997).

Knowledge management (KM) is the organization, creation, sharing and flow of knowledge within organizations (Capturing, organizing, and storing knowledge and experiences of individual workers and groups within an organization and making this information available to others in the organization) (Kannappavar et al., 2007). World Health Organization (WHO) defines knowledge management as “a set of principles, tools and practices that enable people to create knowledge, and to share, translate and apply what they know to create value and improve effectiveness”. Creation of knowledge teams, sharing of best practices, development of knowledge databases, creation of knowledge

centers, collaborative technologies and intellectual capital teams were common activities that were taking place in knowledge management initiatives (Kannappavar et al., 2007). The “intermediate outcomes” of KM are improved organizational behaviors, decisions, products, services, processes and relationships that enable the organization to improve its overall performance.

Just like business organization, Knowledge and knowledge sharing in healthcare have both an individual and an organizational dimension. Individual, involving: - Patient attributes and staff members of a healthcare organization. Organizational, where healthcare is benefited from knowledge and knowledge processes by enabling them to understand their own organizational capacity to maintain and improve quality patient services and to respond to the need to coherently create new knowledge by becoming a learning organization (Bali, 2005).

Learning and the development and use of knowledge are not separable activities. In the networked world, perpetual processes of learning are supported by vast, accessible, continuously changing resources of explicit and tacit knowledge. There are also circumstances when knowledge sharing may be considered a learning process for the sharer (Jacobs &Roodt, 2007).

Knowledge retrieval, Knowledge exchange and Knowledge creation are the three basic types of knowledge sharing. During each activity there is knowledge sharing from the organization to the individual, from individual to other individuals, among individuals and retrieving existing organizational knowledge, exchanging existing individual knowledge and generating new knowledge (knowledge creation) are takes place

respectively. During this process, individuals learn from organization, other individuals and new combinations of existing individual or organizational knowledge (Ackerman et al., 2003).

Many scholars argue that although learning occurs to individuals, it is also expressed in group and organizational routines (Rogers & Nicolaas 1998, Silverman 1997).

The purpose of this study is seek to understand the knowledge sharing practices and continuous learning commitment of health care professionals and to identify factors that affects knowledge sharing in hospitals in Hawassa and this will enable organizations to proactively take measures to enhance knowledge sharing that will improve organizational effectiveness and individual learning.

The study has five chapters. The first chapter deals with the introduction of the study, the statement of the problem, objective and scope of the study. The second chapter presents literature review in the area of knowledge sharing, individual learning and discuss related works that asses the practice of knowledge sharing and learning commitment. The third chapter discusses the methodology followed for data collection, data analysis and interpretation. The findings, data interpretation, discussion and strength and limitation of the study are presented in chapter four. Finally, the fifth chapter brings to an end of this study with conclusion and recommendations.

1.2. Statement of the Problem

Knowledge management systems (KMSs) provide the healthcare sector with systematic means of managing knowledge more effectively. However, to achieve the potential benefit of KMSs, knowledge must be shared. Knowledge sharing allows the healthcare organizations to make better use of the expertise and skills of their healthcare professionals and enables healthcare professionals to implement their best practices and to create new ideas so that high quality healthcare services can be delivered (Abidi S.2001).

The emergence of different organizations in the nation and the related increase in the requirement of skilled labor force leads for competition of organizations to hire and maintain the best employees. Hence staffs turnover becomes one of the major human resource problems of most organizations. Employees move from one organization to the other and from one industry to the other for different reasons. Sometimes it is the attraction of a new job or the prospect of a period outside the workforce which 'pulls' them like higher salary or better benefits on other occasions they are 'pushed' due to dissatisfaction in their present jobs to seek alternative employment. There is high health professionals' turnover in health facility under hawassa city administration but the health facility administration hire the new graduate professional to replace the professionals who leaves the organization. he medical doctor's turnover rate in Hawassa referral hospitals ranged from 55-84 % in the last 4 years with 67 % of the employed doctors on average leaving the hospital every year (Admassu Baffa, 2013).

All individuals have a unique, personal store of knowledge gained from life experiences, training, and formal and informal networks of friends and professional acquaintances (USA department of army, 2012). When an experienced employee leaves an

organization, their valuable knowledge also walks out of the organization door. The organization apparently not only loses a great deal of effort that it has taken all the years in bringing up the employee but also loosening its credibility to maintain its status as having competitive knowledge workers. Therefore, it is crucial for the organization to constantly run the knowledge among its employees so that at any time even when one employee leaves, the rest will be able to continuously maintain the knowledge needed for the job (Robertson, 2004). All hospitals which are in Hawassa facilitate professional's knowledge sharing among each other's and makes the environment is suitable for professionals improve their skill through knowledge sharing. This mobility of experienced and knowledgeable health care professionals will obviously lead to loss of knowledge.

Therefore there assessing knowledge sharing and continuous learning commitment of health professionals and identifying factors affecting knowledge sharing in hospitals in Hawassa are exclusively important to provide quality healthcare and keep organizational competency.

1.3. Significance of the Study

Knowledge is now being seen as the most important strategic resource in organizations, and the management of this knowledge is considered critical to organizational success (Tian et al., 2009). The study is helpful to understand knowledge sharing practice and continuous learning commitment of health professionals in hospital in Hawassa.

In this study factors that influence knowledge sharing practice and continuous learning commitment of health care professionals in public and private hospital in Hawassa was identified. Once those factors were identified, the outcome will have the following advantage. First it will enable organizations to take appropriate measures in terms of strategic approach and policy development for enabling health professionals share their knowledge and improve their knowledge through practice knowledge sharing. Second it will provide professionals information and guidance related to the practice of knowledge sharing and help to develop their practice with this respect. Third, the result of this study will be used as input for health facilities to identify and arrange the conditions that will enable the health workers to share knowledge. Forth, directions with respect to which factors are most important or most significant for, the hospital to focus hospital resources on achieve high quality health services. Additionally the study identifies the link between knowledge sharing practice and health professionals' learning commitments. The study also offered some suggestions, for practitioners, on the ways they may promote and nurture the most important factors found.

1.4. Objectives of the Study

1.4.1. General Objective

The general objective of this study is to assess knowledge sharing practices and continuous learning commitments of health professionals in public and private hospitals in Hawassa.

1.4.2. Specific Objective

The specific objectives of the study are:-

- To assess the knowledge sharing practices and continuous learning commitment of health care professionals in their work place.
- To identify the factors that influence or hinder knowledge sharing practice and continuous learning commitment of health care professionals in public and private hospitals.
- To identify the association between knowledge sharing practices of health care professionals and their continuous learning commitments.

1.5. Research questions

- Do health professionals use organizational knowledge sharing practices?
- What factors contribute and hinder the knowledge sharing practice of health professionals in hospital?
- What is the relationship between health professional knowledge sharing practice and their continuous learning commitments?

1.6. Scope of the Study

In the process of knowledge sharing, individuals serve as knowledge generator and knowledge receptor. Individuals generate knowledge by exchanging their ideas and experience through socialization. Those individuals in the organization (hospitals) constitute administrative staff, health care professionals and supportive staff. The scope wise this study is focused at evaluating practice and skills of knowledge sharing and professional development of health facilities in Hawassa. It is limited to private

and public hospitals in the city and try to look into the practice of health care professionals except par time professionals. It did not address that of other administrative and supportive staff and also due to time and logistic reasons the variables that have the potential to affect knowledge sharing were not included.

CHAPTER TWO

Literature Review

2.1. Knowledge Management

Knowledge management is a broad concept that can be interpreted in many different ways. Some people see knowledge management as being all about controlling and channeling knowledge flows within the company, assuming that these can be codified. Software-companies, on the other hand, often see knowledge management as a way to extract 'knowledge' from complex information flows, while other people interpret knowledge management as the act of making knowledge accessible to professionals inside the company or, in some cases, actually guiding professionals within the company. Knowledge management and sharing knowledge can be approached in a technical perspective, a process perspective and an intellectual capital perspective (Huysman&Wit, 2002).

Knowledge management focuses on knowledge processes which include knowledge creation, acquisition, refinement, storage, transfer, sharing and utilization. These processes support organizational processes involving innovation, individual learning, collective learning and collaborative decision making (Bali, 2005).

Knowledge management in health care is “aligning people, processes, data and technologies to optimize information, collaboration, expertise, and experience in order to drive organizational performance and growth” according to a current knowledge management special interest subgroup of the Healthcare Information & Management Systems Society (HIMSS), a multidisciplinary group of health care IT professionals,

clinicians, managers, and consultants grappling with the application of the knowledge management discipline to the health care industry (Acharyulu, 2011). This study mainly concentrates on the health professionals knowledge sharing and continuous learning commitment based on shared knowledge these may advantageous to improve individual as well as organizational performance through sharing personal perspectives, ideas, experience and information.

2.2. Knowledge Definition

Knowledge is not just a part of the reality. It is a reality viewed from a certain angle. Knowledge is created through the synthesis of contradictions, instead of finding an optimal balance between contradictions (Nonaka& Toyama, 2003).Knowledge is more than just information. In addition, it contains experiences, skills and insights. These forms of knowledge are produced during day-to-day interactions (Huysman& Wit, 2002).

Organizational knowledge is the collection of knowledge which exists in the organization that has been derived from current and past employees. This knowledge is "owned" by the organization in that the organization can take this knowledge and codify it in some way to preserve it within the organization itself even when an employee has left the company (Bali, 2005).

As described in the introduction part two distinct kinds of knowledge are widely accepted (tacit and explicit). In knowledge management, the labels tacit and explicit are chiefly used, but other disciplines use different names (Akehurst et al., 2011). Explicit (codified) knowledge can be easily understood because it can be codified and carried out through formal and methodical language in books, archives, databases and libraries (Lahti

&Beyerlein, 2000) whereas Tacit (implicit) knowledge can hardly be formalized and transmitted because it is closely connected to individuals as it bases on intuition,values and viewpoints that were developed through experiences (Lahti &Beyerlein, 2000). Nonaka and Takeuchi, also stress these characteristics as they state that tacit knowledge is personal and context-specific depending on acquired knowledge, beliefs, emotions and personal skills. Organizations incorporate tacit knowledge in organizational routines (Nonaka and Takeuchi 1995). Ackerman argues that tacit knowledge is the foundation for sustainable competitive advantages of an organization as it is difficult to formalize and thus hard to be imitated (Ackerman et al., 2003). According to Nonaka and Takeuchi knowledge sharing is a process of interactions between explicit and tacit knowledge. The interactions between tacit and explicit knowledge lead to the creation and sharing of new knowledge. The combination of the two categories makes it possible to conceptualize four conversion patterns (Nonaka and Takeuchi 1995).

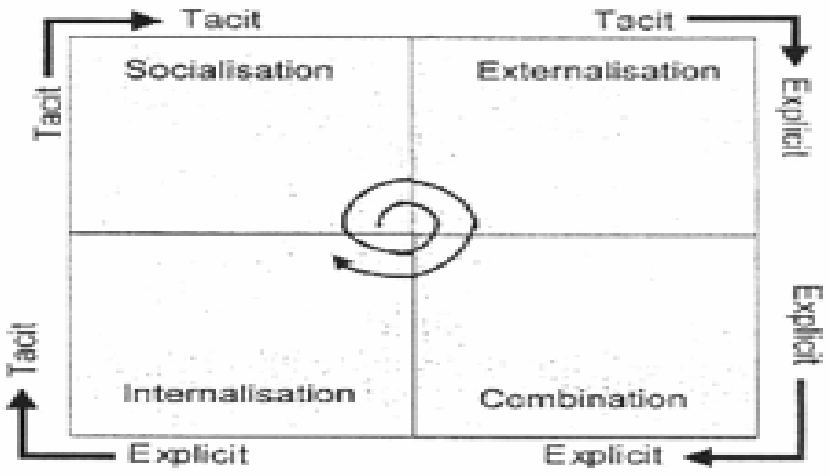

Figure 1 **Nonaka´s (1995) Model of Knowledge Creation Processes**

Characteristics of each process (Nonaka and Takeuchi 1995):

- **Socialization** – This is the first mode of the knowledge creation processes. The tacit knowledge is transformed through a socialization process between individuals. The process of transferring ideas directly to or have them challenged by fellow employees is a way to share and create personal knowledge. In short, the key to gain tacit knowledge is through experience and social interaction, for instance, apprenticeship, informal meetings outside the workplace, interacting with customers and suppliers.
- **Externalization** – This is a process of articulating tacit knowledge to explicit knowledge that is codifiable, comprehensible and modifiable. This means that the individual's intentions, norms and beliefs then become integrated with the group's knowledge. This can be done by different techniques such as metaphors and analogies, ideas can be expressed through images or words as well as concepts and figurative language.
- **Combination** – This is a process of converging explicit knowledge to more complex and systematic set of explicit knowledge. For instance concepts can be put into also called "knowledge system", which can be achieved by meetings, documenting and computer networks. The knowledge is combined, edited or processed to form new knowledge.
- **Internalization** – This is a process of embodying explicit knowledge to tacit knowledge explicit knowledge is shared throughout the organization and then converted into tacit knowledge by individuals. This requires the individual to identify knowledge relevant for him/herself within the pool of organizational knowledge. It is very much related to learning by doing, for example through; training programs, simulations and experiments.

2.3. Knowledge Sharing

Knowledge sharing has been identified as a major focus area for knowledge management; it is related to communication (Tian et al., 2009). In the knowledge management manner of speaking, knowledge sharing (KS) can be regarded as a systematically planned and managed activity involving a group of like-minded individuals engaged in sharing their knowledge resources, insights, and experiences for a defined objective (Veronique, 2010).

Knowledge sharing is the process where individuals mutually exchange their (implicit and explicit) knowledge and jointly create new knowledge. This process is essential in translating individual knowledge to organizational knowledge. Every knowledge sharing process consists of both bringing (or "donating") knowledge and getting (or "collecting") knowledge (Thomas et al., 1997). Process approach towards knowledge-sharing provides insights into knowledge management, emphasizing the knowledge development process and how knowledge is passed on between individuals (Huysman& Wit, 2002). Sharing knowledge about successes and failures will become an increasingly important tool for policy makers to learn and adapt the experience of others to their own context and make their own innovations (Dianne & Staples, 2010). Knowledge sharing among individuals with different domains and expertise can create organizational knowledge that is beyond what one individually owns. Individuals who share organizationally relevant information, ideas, suggestions, and expertise with one another would be able to jointly create new knowledge (Dianne & Staples, 2010). Therefore, Knowledge sharing at the individual level would be a basic step toward creating organizational knowledge (Jun & yoo, 2011). Process approach towards knowledge-

sharing provides insights into knowledge management, emphasizing the knowledge development process and how knowledge is passed on between individuals (Huysman&Wit, 2002). The quality of the knowledge to be transferred/learned (tacit versus explicit) affects knowledge sharing (Nonaka and Takeuchi, 1995).

Knowledge and knowledge sharing in healthcare have both an individual and an organizational dimension.

- **Individual, involving**
  - Patient attributes for whose benefit healthcare establishments are established, where knowledge and information can assist patients to appreciate their condition and help them to maintain their treatments, and
  - Staff members of a healthcare organization that can only properly satisfy an employment role if they have relevant knowledge.
- **Organizational**: Where healthcare is benefited from knowledge and knowledge processes by enabling them to understand their own organizational capacity to maintain and improve quality patient services and to respond to the need to coherently create new knowledge by becoming a learning organization (Bali, 2005).

2.4. Types of Knowledge Sharing

- **Knowledge retrieval.** Knowledge sharing from the organization to the individual has the purpose of retrieving existing organizational knowledge. During knowledge retrieval the individual learns from the organization (Ackerman et al., 2003).

- **Knowledge exchange.** Knowledge sharing from an individual to other individuals has the purpose of exchanging existing individual knowledge. During this process, individuals learn from other individuals (Ackerman et al., 2003).
- **Knowledge creation**. Knowledge sharing among individuals has the purpose of generating new knowledge. Knowledge creation in the case of internal learning results from new combinations of existing individual, shared, or organizational knowledge (Ackerman et al., 2003).

2.5. Knowledge sharing approach

Hansen puts forward two strategic approach often utilized by the consulting industry: codification and personalization (Hansen et al., 1999).

2.5.1. Codification

The codification strategy means that knowledge is codified, stored in databases or information systems where it can be accessed by other actors within the organization. Other tools for codification could be training, emails, meetings etc. The codification is described as extracting knowledge from the individual which makes it possible to access for other organizational members. This method is more feasible for firms with more standardized problems where reusing knowledge keeps costs down. When a product or package based on knowledge is created, it can be utilized over and over again to generate revenue. Hansen suggests that investment in IT infrastructure can be used to gather and distribute codified knowledge (Hansen et al., 1999).

2.5.2. Personalization

The personalization emphasizes on utilization of personal contacts. Technologies like computers are not used to store knowledge but to provide possibilities for actors in the company to contact each other. The solution to a problem is reached by communication between different organizational actors. This form of knowledge sharing is costly in time and in pecuniary resources. The process cannot be systematized and is thus hard to make more efficient. On the other hand, firms applying this strategy can most often charge more for their services. For firms with a personalization strategy, more informal information channels are beneficial. These could be social relationship; build of trust, friendship and respect etc. IT has a different role here in comparison to the codification approach as it is primarily used for direct communication (Hansen et al.).

In personalization, dialogue is an important tool. Ballantyne and Tsoukas & Vladimirou emphasize that it is not enough to have knowledge it must also be disseminated to the members of the organization. Thus it is important to create explicit rules and principles. Because of the dynamic nature and the constant flux of knowledge and information, these should just serve as guidelines to shape the collective understanding and facilitate the emergence of learning through practice (Ballantyne 2004, Tsoukas&Vladimirou, 2001).

2.6. Organizational Learning

The growing intensity and dynamism of competition has forced firms to focus their long term strategies on resources and capabilities. Intellectual capital has emerged as one of the firm critical resources and the ability to build and exploit intellectual capital has

become their most strategically significant capability. Many theorists consider it as a combination of customer capital, organizational capital and human capital. Here, human capital serves as a collective term for an organization's core competences, the skills and knowledge that the enterprise draws on to create and innovate in order to remain competitive. Therefore, any attempt to exploit intellectual capital for competitive advantage must be based on a sound understanding of an organization's current approach to acquiring, sharing and utilizing knowledge (Antonova et al.).

Organizational learning is one of the important ways in which the organization can sustainably improve its utilization of knowledge (King, 2009). It is seen as an institutionalizing process through which individual knowledge becomes organizational knowledge management is perceived here as comprising organizational practices that facilitate and structure knowledge sharing among knowledge workers (Huysman & Wit, 2002). Knowledge sharing enables employees to share their insights and experiences in order to allow faster and more cost effective project completions (Geraint, 1998). Employees can draw upon the experiences of others in their pursuit of finding solutions to problems. Redundancy of work is decreased as employees are not re-creating knowledge (Arora, 2002). The essence of organizational learning is the (re)construction of organizational knowledge such as organizational norms, procedures, technologies, stories etc. Through knowledge-sharing, individual knowledge may become collective (organizational) knowledge while this accumulated knowledge will in turn influence subsequent action.

Organizational learning is consisting of externalizing, objectifying and internalizing consecutive moments. Externalizing knowledge refers to the process through

which personal knowledge is exchanged with others. Objectifying knowledge refers to the process through which knowledge becomes an objective reality. During internalizing knowledge, this objectified knowledge is used by individuals in the course of their socialization. In relation to organizational learning processes, knowledge sharing can be analyzed as consisting of these three knowledge-sharing activities. Externalizing individual knowledge such that knowledge becomes communicated; objectifying this knowledge into organizational knowledge such that knowledge becomes taken for granted; and internalizing this organizational knowledge by members of the organization. They made visual the various processes that make up innovation and institutionalization, or knowledge creation and recreation by the use of a knowledge-sharing cycle (Huysman& Wit, 2002).

2.7. The Individual Learning Trap

Learning and the development and use of knowledge are not separable, standalone activities. In the networked world, perpetual processes of learning are supported by vast, accessible, continuously changing resources of explicit and tacit knowledge (Rangachari, 2009).Through the engagement of knowledge in to practice learning can be occurred. Learning is becoming the member of a community as it is about the acquisition of knowledge (Rolls-Royce, 2008). An individual learning perspective is closely related to the process approach as learning is geared towards individual knowledge development and increasing competences. In the knowledge society it is very important for organizations that individual employees continue to develop their knowledge. The individual is the knowledge vessel and the leaning potential is linked to individual leaning abilities.

Outing personal interactions, individual knowledge becomes collective knowledge while this knowledge in turn influences subsequent individual learning. Consequently, learning in the form of institutionalizing information should include processes of adapting to external knowledge. Basically, adapting to external knowledge happens in two ways: by reacting to information given in the form of feedback and by learning from the experiences of other organizations.

Learning processes can be supported by various knowledge-sharing processes: internalization by knowledge gathering and externalization by knowledge exchange (for the purpose of reuse or creation). Objectification takes place as part of these knowledge-sharing processes but at a much slower pace.

Externalization: reuse or renewal/Knowledge exchange takes place between individuals. Individuals share their knowledge with other people in the organization and this in turn begets shared knowledge. During the process of externalization personal knowledge is transferred to others. Externalization can take place in different ways; via formal channels such as meetings and project groups as well as through informal channels such as conversations in the corridors. Besides direct personal contact, externalization is supported by communication technology such as the telephone, intranet applications, and pen and paper (Huysman & Wit, 2002).

2.8. Factors Influencing Knowledge Sharing

Since knowledge is one of the most important strategic resources in any organization. An organization should investigate ways to increase its use of the knowledge it already possesses. One step towards realizing this goal is to identify factors that

encourage or discourage knowledge transfer in organizations. Once knowledge transfer is understood in this organizational context, managers might be able to implement strategies to boost organizational efficacy through better knowledge management.

The researcher has also identified the six knowledge sharing barriers in a Chinese consulting company's social and cultural context (i.e. Hierarchical organizational structure, Individual's hierarchy consciousness, Personal network, Modesty, Competitiveness in the organizational culture, Low organizational commitment). Knowledge sharing facilitator in a chinese consulting company's social and cultural context (Developing the informal learning partnership among the group members, developing like-mindedness, developing a dynamic dialogue environment, Building and maintaining group knowledge repository). There are four barriers that are related to process of socialization and there are two barriers that are related to process of externalization (Yang et al., 2012). The study conducted in an American based Multinational Company (MNC) in Malaysia about knowledge sharing, barriers to knowledge sharing, and strategies to promote knowledge sharing (Wai et al. 2009) the study indicate that management support is the barriers for knowledge sharing.

Based on a Review of Factors Affecting Knowledge Sharing Behavior, Rehman et al. have been identified include organizational culture, organizational size, organizational climate, IT, rewards, job factors and stressors are the main Factors Affecting Knowledge Sharing (Rehman et al, 2011).

Riege identified the three-dozen potential sharing barriers (categorized in individual, organizational and technology barriers.

Riege identified barriers originating from individual behavior or people's perceptions and actions can relate to either individuals or groups within or between

business functions. He has identified some barriers to sharing knowledge at the individual level are general lack of time to share knowledge, apprehension of fear for job security, low awareness on the benefits of KS, differences in experience level, lack of contact time and interaction, poor verbal and interpersonal skills, age differences, gender differences, lack of social network, difference in education levels, lack of trust in people, fear of not receiving recognition, lack of trust in knowledge source accuracy and cultural differences (Riege, 2005).

Riege outlined several major organization-based barriers to knowledge sharing are, unclear/missing integration between KM initiatives into company's goals, lack of leadership and managerial direction, shortage of formal and informal spaces, lack of transparent rewards and recognition system, unsupportive corporate culture, low priority on knowledge retention on experienced staffs, shortage of appropriate infrastructure, deficiency of company resources for adequate KS practices, environment/layout of work area, hierarchical organization structure and size of business unit (Riege, 2005).

Riege also list several major technology barriers to knowledge sharing which includes, lack of integration of IT systems processes, lack of technical support, lack of maintenance of integrated IT systems, people's unrealistic expectation on IT, lack of compatibility between diverse IT systems processes, restriction due to mismatch between need requirements and IT system, people's reluctance to use IT systems and lack of training for familiarization of IT systems and processes (Riege, 2005).

Based on a review of theory and research related to knowledge sharing Ipe (Ipe, 2003) has been identified the major factors that influence knowledge sharing between individuals in organizations are the nature of knowledge, motivation to share, opportunities

to share, and the culture of the work environment are significant factors by themselves but do not exert their influence on knowledge sharing in isolation.

Hinds & Pfeffer identified those cognitive and motivational limitations towards knowledge sharing. Cognitive limitations are related to the way experts store and process information. It is often hard for experts to put their knowledge into words that are understandable to non-experts. They overestimate non-experts' information processing capability and basic knowledge level, and underestimate the time non-experts need to complete and understand certain tasks. Where cognitive limitations are related to an individual's ability to share knowledge, motivational limitations are related to their willingness to share knowledge. Different incentives and disincentives for this willingness are distinguished by Hinds &Pfeffer, such as team level rewards, internal competition, status differences, degree of formalization and the individual's relationship to the organization. With regard to this latter influence on people's willingness to share, Hinds & Pfeffer point towards trust as an important variable. The extent to which coworkers are trusted to reciprocate favors (i.e., provide their knowledge in return) and the organization is trusted not to use provided knowledge against an individual, determines this individual's willingness to actively share knowledge with others inside this organization (Hinds & Pfeffer, 2003). On the study of intra-firm transfer of best practices which conducted by Szulanski identified that the sender's lack of motivation is one of the barriers to knowledge transfer. Other studies, however, have documented different results (Szulanski, 1996). On the basis of data from four Korean organizations Bock and Kim identified that motivational factors were negatively correlated with knowledge sharing (Bock & Kim, 2002). In another study of 27 Korean organizations concluded that anticipated extrinsic

rewards exert the negative effect of individuals' knowledge-sharing attitudes (Bock et al., 2005). It was believed that extrinsic motivation is a short-term approach and cannot create a lasting commitment to sharing knowledge (Kohn, 1993).

In a study conducted in Bahirdar Felegehiwot hospital to assess the knowledge sharing behavior among health professionals the majority of the participants are not frequently engaged in knowledge sharing activity, because of the lack of formal and informal knowledge sharing opportunities. The hospital has no infrastructures which help to facilitate knowledge sharing. The majority of respondents are not motivated to share knowledge due to lack of incentives and poor management support of the KS activity of the hospital. In that study knowledge sharing opportunity, communication channel, motivation, resource allocation, and high education were found as an independent predictor of knowledge sharing practice (Adem, 2010).

In the study conducted in hospital under Addis Ababa health bureau to assess knowledge sharing practice of health care professionals identified that majority of the participants are not satisfied with their current job. The participants had intrinsic motivation to knowledge sharing. 56.8% of the participants share their knowledge informally and there is lack of both formal and informal knowledge sharing opportunity. In that study job satisfaction, intrinsic motivation high level of motivation and communication channel were found as an independent predictor of knowledge sharing practice (Tirualem, 2011).

The role of the information technology in sharing knowledge has been a center of debate (Maccoby, 2003). While some investigators are of the opinion that knowledge management (KM) initiatives could be successful without using IT tools (Hislop, 2002).

Other researchers have, however, identified IT as a variable that could impact knowledge sharing for the fact that technology is one of the important pillars of knowledge management (Maccoby, 2003). In study conducted to assess the use of IT by New Zealand healthcare organizations illustrated that most of the responding organizations use IT for knowledge sharing. It was reported that 83% of participants used email for exchanging documents as attachments, 78% of participants published documents and 72% of respondent's accessed documents on networks. Teleconferencing, videoconferencing and email lists were reported as being used by more than 50% of responding organizations; however, use of electronic discussion forums and blogs was reported in less than 50%, publishing contact details were used by less than 50% of participants (Nor'ashikin et al). One of the factors that affect knowledge sharing is the individual level; this is particularly significant as the heart of any effective change is the people themselves (Davis, 1998 35).

CHAPTER THREE

Methodology

3.1. Study Area Description

The study was conducted at Hawassa, the capital of SNNPR, and the center of Sidame zone. Which is located in the Southern Nation's Nationalities and Peoples Region on the shores of lake Hawassa in the great Rift Valley; 273 km south of Addis Ababa Via DebreZeit and 1125 km north of Nairobi. Geographically the City lays between 703′ latitude North and 38° 28′ Longitudes east. Based on the result of the 2007 national census the population of Hawassa is projected to be 316,842 (163,039 male and 153,803 females). Of which 201,027 (63.45%) are urban dwellers while the remaining 115,576 (36.48%) live in the rural area.

The potential of health coverage of the city administration is 70% in 2012. There are one referral hospital(federal hospital), one district hospital, three private hospitals, seven health centers, 15 health posts, 47 private clinics, 47 drug stores, 12 diagnostics laboratories and 12 pharmacies in the city administration (Hawassa City Administration Finance and Economic development department, 2013).

There were a total of 486 health care professionals consisting of nurses, medical doctor/general practitioners, specialists, dentist, health officer laboratory technician/technologists, pharmacists, anesthetists, health assistants, physiotherapists, x-ray technicians and sanitarian working in hospital that included under the study in Hawassa. The professional variability enables the researcher intended to easily illustrate

the strengths, weaknesses, challenges, and issues faced within and/or among health professions knowledge sharing practice and their continuous learning commitment under the study variables (dependent and independent variables) which enhance the integrative health care service delivery.

3.2. Study Design and Period

This cross sectional study was carried out from December 2013 to June 2014. Using pre designed questionnaire to collect both quantitative and qualitative data from public and private hospitals of Hawassa. A cross-sectional study was selected because it is relatively cheaper/easier to conduct the study with the bounds of the study budget. Moreover it helps the researcher take smaller sample size and collect the required qualitative as well as quantitative data within the study period.

The study involved both quantitative and qualitative techniques to insure data quality. Rogers and Nicolas suggest that "the complementarily of mixing qualitative and quantitative methods have pointed to the need to consider both epistemology and the technical aspects in carrying out and resolving tensions in combined work (Rogers &Nicolaas,1998). Quantitative research methodology is generally regarded as objective, structured and reliable but over-systematic and lacking in validity. Qualitative research on the other hand is seen as subjective, unstructured and unreliable, but provides rich data and is usually considered to be more valid than quantitative research (Silverman, 1997). Quantitative data was necessary because it enable the researcher to explore the magnitude of health professional's experience of knowledge sharing practice and their continuous learning commitment, whilst qualitative data was used for discovering attitudes, beliefs

and perceptions health professionals towards knowledge sharing and continuous learning commitment.

3.3. Source Population and Study Subject

The source of population for the quantitative study was all health professionals who work in public hospital and private hospital in Hawassa and the source population for the qualitative study was all medical directors, department heads or team leaders in each hospital.

The study subjects were all health professionals who work in public and private hospital those were selected during the sampling procedure. The research was conducted on a total population of 486, of which 434 health professional's work in governmental hospital and 52 health professionals were working in private hospital. A total of 275 participants (223 from public hospital and 52 from private hospital) were selected for the quantitative study. For the qualitative study 18 (10 from public hospital and 8 from private hospital) were selected. Different department heads of the hospital were selected using purposive sampling method.

The study participants were selected using random and proportional sampling method. As the study involves knowledge sharing practices among same and similar groups of health professionals proportional samples were selected from each category of professionals (Pharmacist with laboratory technician, nurse with pharmacist, specialist with nurse, specialist with pharmacist, specialist with laboratory technician and laboratory technician with nurse) and within the same category of professionals (nurse with nurse,

laboratory with laboratory, pharmacist with pharmacists and specialist with specialist) and their continuous learning commitment which enable health care professionals improve their knowledge based on sharing knowledge.

3.4. Inclusion and Exclusions Criteria

- **Inclusion Criteria: -** All health professionals who were employees of public and private hospital with a minimum qualification of diploma were included in the study.
- **Exclusion Criteria** – Employees of hospital who did not fulfill the minimum qualification i.e. diploma and per time were excluded.

3.5. Sample Size and Sampling Procedure

3.5.1. Sample Size Determination

3.5.1.1. Quantitative Study

To determine the number of study participants required for this study the researcher used the following rule to decide on the sample size. The basic rule is, the larger the sample, the better the representativeness. But such a generalized rule is not too helpful to a researcher who has a practical decision to make about a specific research situation (Leedy & Ormrod, 2005).

As describes in the previous section, the total study subjects in the study hospital were 486 (434 from public hospital and 52 from private hospital). As the researcher compare the population of public hospital to private hospital, the number of study population in private hospital were too small (<100) though the researcher was decided to

survey the entire population of private hospital and public hospital's population should be sampled using single population proportion

formula. i.e.

A single population proportion formula was used to take the appropriate sample size.

$$n = Z(\alpha/2)^2 \frac{p(1-p)}{d2}$$

Where:

n= the desired sample size of respondent.

p= (P stands for the prevalence or proportion of important factors to be studied). In this study p is proportion of health care professionals involved in knowledge sharing behavior and learning practice

Z α/2=Critical value at 95% confidence level of certainty (1.96)

d= Precision (margin of error)

N=source population. Based on this formula with 95% CI, Z α/2=1.96, p= 0.5, d =0.05.

Based on the assumption, the calculated sample size (n) was = $n= (1.96)^2 \times \frac{0.5(0.5)}{0.0025} =$

384.But, since the size of the source population was less than 10,000 the sample size was

Corrected using the formula:

Corrected sample size = $\frac{nxN}{n + N}$

Where:

- n is the non-corrected sample size
- N is the size of the source population

Thus = $\frac{384x434}{384 + 434}$

Sample size =**203**

Non response rate = 10 % x 203 = 20

Total sample size=203+20=223

223 participants were used from public hospital for quantitative study, and then the participants of private hospital were selected as a total. i.e. 52 participants were used from private hospital.

3.5.1.2. Qualitative Study

An in depth interview was conducted with a total of 18 participants that includes medical directors and department heads from respective departments of each hospital.

3.5.2. Sampling procedure

Quantitative Study

Regarding hospital, one district hospital(Adare) and one referral hospital, which is federal hospital were sampling frame for public hospital and also three private hospital (Asher, Kibru and BeteAbrham) were sampling frame for private hospital in the study. One federal (referral) hospital, one district hospital and two private hospitals were selected for the study.

All health professionals that were directly involved in health care service delivery at the sampled hospital were included in the study. Respective profiles of professionals were retrieved from human resource department of each hospital to calculate the proportional allocation of sample size in each hospital. The numbers of participants for the quantitative study were allocated to each hospital and also to each department in hospitals using proportional size sampling technique. Participants from each department in the selected hospital were selected using simple random sampling. Because each individual in the sampling frame should has the same chance of being included in the sample. The use of simple random sampling removes the possibility of any bias, conscious or unconscious, on the part of the researcher in selecting the sample from the sampling frame (Forthofer N. et al.).

As described in the previous section for quantitative study the total sample size was equal to the total population if the population is too small (i.e. <100). So the study was

survey the entire population of the private hospital i.e. the total population of private hospital were 52 which is less than 100.

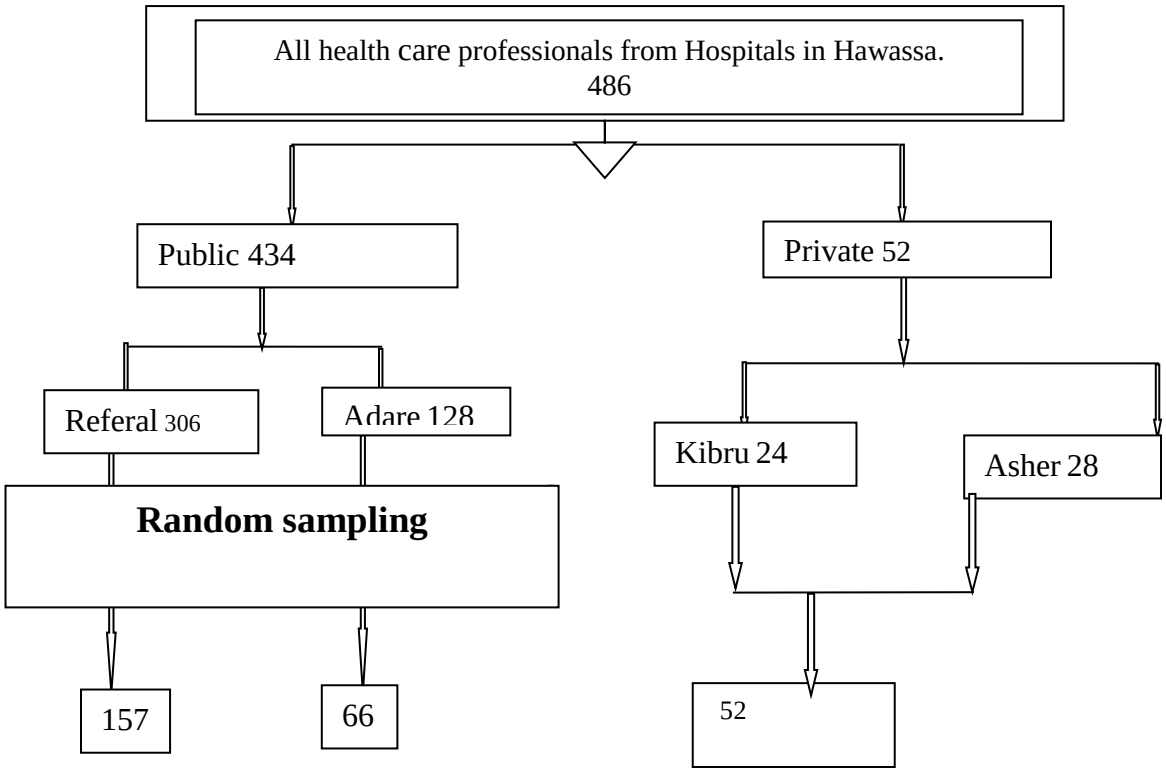

Figure 2 **Schematic presentation of sampling procedure for quantitative data**

3.6. Data Collection Procedure

Information regarding the status of knowledge sharing practice and continuous learning commitment of health professional and main factors that affect knowledge sharing practice were collected by trained data collector using self-administered questionnaires for quantitative study, and a total of 275 health professionals were included (223 from public hospital and 52 from private hospital). For qualitative study medical directors, team leaders

and department heads were interviewed in order to confirm the questioners' responses and to assess some points which was not focused by the quantitative study.

Quantitative part

- Self-administered questionnaires were adopted from literatures of similar studies (Tirualem 2011, Adem 2010, Almahamid et al. 2010) and some minor modification was made in demographic profile of the respondent age group, work experience and salary. Both open and close ended questions were included.
- Prior to data collection pretest was conduct on eleven health professionals of Bete Abreham primary hospital (5% public hospital sample). Based on the pretest necessary corrections were made on the questionnaire.
- Two degree holders were recruited as data collectors and they were trained for a day about how to collect disseminate questionnaires give instructions or guides, secure informed consent and collect the filled questionnaires by the PI.
- The self-administered questionnaire was distributed to the study subjects.
- continuous follow up and supervision was also made by the principal investigator throughout the data collection till completion of data collection for ensuring data collection techniques and to check all the filled questioners for the analysis and securely handled.
- A total of 262 (48 from private and 214 from public hospitals) completed questionnaires were collected. This indicates 96% response rate.

Qualitative part

The qualitative part is used to gather more information that may not be clearly identified by doing quantitative part of the study alone data from the interview was collected by taking notes. A total of 18 key informants (10 from public 8 from private hospital) were involved in the in-depth interview. The participants for this qualitative study were from department team leaders of laboratory, pharmacy, medical ward and outpatient department, pediatrics ward and outpatient department, surgical ward, labor ward, maternal and child health unit. Saturation and redundancy of ideas were used to limit the questions and number of in-depth interviews and the average time taken was 25-40 minutes. In this study at least five participants provide the same response for one question determine the saturation level of ideas and number of participants. The principal investigator collected the qualitative data through note taking and each in-depth interview was conducted in Amharic for ease of communication and later transcribed verbatim, translated in to English and finally summarized for write up.

3.7. Data Processing and Analysis

Quantitative data was initially entered and cleaned using SPSS version-16 by the principal investigator. Frequencies were used for describing the study population in relation to relevant variables. Bi-variable and multivariable analysis was done to assess the presence and degree of association between dependent and independent variables. For the qualitative study, the data that was collected and analyzed using thematic analysis, finally summarized for write up.

3.8. Data Quality Management

Data quality was assured using different techniques.

- Self-administered structured questionnaire and interview guide were adopted from literatures of similar studies. Both open and close ended questions were included.
- Data collectors and supervisors were selected and training was given to them for one day about the contents of the questionnaire by principal investigator.
- Frequent supervision was done by the principal investigator. Problems encountered at the time of data collection were reported immediately by data collectors and appropriate action was taken by principal investigator.
- The questionnaires were checked for missing values and inconsistency. Questionnaires that were found to have lots of missing values and inconsistencies excluded from the study and considered as none responded. None of the questionnaires excluded from the study.
- In line with the quantitative data collection the qualitative data collection was conducted by the principal investigator for smooth communication; this clarified many ‘vague’ issues which would have been misunderstood or misrepresented had some other person other than the principal investigator conducted the interview.
- The principal investigator was also being in the area till completion of data collection for an overall supervision towards ensuring data collection techniques and to check all the filled questioners for the analysis and securely handled.

3.9. Study Variable

This study was mainly emphasized on the level of health professionals in the case of knowledge sharing practice which include knowledge sharing intention, intention to encourage knowledge sharing, and their learning commitment under sharing personal knowledge under the following variable.

3.9.1. Dependent Variables

Knowledge sharing practice, Continuous learning commitment.

3.9.2. Independent variables

- Job satisfaction
- Motivation
- Willingness to share knowledge
- Knowledge sharing opportunity
- Knowledge sharing channel,
- Trust
- Awareness
- Interpersonal characteristics
- Fear of loss of personal competitiveness
- Technological factors

3.10. Operational Definitions

- **Awareness:** is the state of being aware, or having knowledge of knowledge sharing in daily works.
- **Collaboration:** Work with another person or group in order to achieve or do something
- **Commitment:** The act of binding themselves (intellectually or emotionally) to improve their knowledge in knowledge sharing practice.

- **Communication channel**: Refers to channels used for knowledge sharing purpose including face to face communication, use of telephone, internet and use of manuals, bulletin boards, patient medical records.
- **Continuous learning: U**nchanged or uninterrupted: continuing without changing, stopping, or being interrupted in space or time
- **Contradictions:** consists of a logical incompatibility between two or more propos
  - **Extrinsic motivation:** For the purpose of special outcome likes to get reward, acknowledgement, incentives etc. Health care professionals share know how to their colleagues.
  - **Health care professionals**: In this study include- specialists, general practitioners, dentists, health officers, nurses, laboratory technicians, pharmacists and pharmacy.
  - **Information technology:** Information technologies are as much about creating direct connections among people through such applications as electronic mail, chat-rooms, video-conferencing and other types of groupware as they are about storing information in databases and other types of repositories.
  - **Institutionalizing**: Is the process whereby practice becomes sufficiently regular and continuous to be described as institutional
  - **Interpersonal characteristics:** Occurring among health care professionals involving several people with different field the study focus on how individuals build and maintain important relationships in knowledge sharing.
  - **Intrinsic motivation:** Being inherently interesting or enjoyable to share experience, know how to their colleagues.

- **Knowledge sharing opportunities:** Things that used by health care professionals through the knowledge sharing activities within the hospital staff.
- **Knowledge sharing practice:** Can be defined as level of how far one can do knowledge sharing.
- **Knowledge sharing:** Is the exchange of experience, events, thoughts or understanding of work related things that is used to improve their performance and to achieve quality health care services.
- **Knowledge:** Experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information.
- **Reconstruction:** Something that has been re-created from the evidence available.
- **Software:** Programs and applications that can be run on a computer system, e.g. SPSS version 16 or database.
- **Synthesis:** The process of combining different ideas, influences, or objects into a new whole.
- **Willingness:** Refers to the participant's (knowledge owner) willingness to explain know how, experience or skills to their colleagues, and to get additional information and knowledge about how to perform the task colleagues tell me about it.

3.11. Ethical Consideration

This study was conducted after getting permission from the ethical clearance committee of Addis Ababa University through the department of health informatics. Data was collected after getting permission from the managing director of each hospital under the study and the medical director of referral hospital. Information sheet and written consent forms were deliver along with each questionnaire and all the subjects were asked if they were willing to participate in the study; and. informed verbal consent was obtained from all study subjects. Objective of the study was discussed with each participant and privacy was maintained during interview. All the questionnaires were distributed for all eligible participants in such a way that the participants were helped in case they face difficult. All the information collected from the participants was kept in secrete to maintain confidentiality.

CHAPTER FOUR

Findings

4.1. Findings of quantitative Data

The findings of the study are presented in an incorporated manner of qualitative and quantitative data. The quantitative results on each outcome measure used in the assessment are reported and explored by the qualitative results. This approach in reporting the results helps in understanding the results of the study and especially that the two methods (quantitative and qualitative) were designed in such a way that the results would be complementary. From the health professional category of two public hospital and three private hospital in Hawassa town which were included in the study.

Table 1 ***The number of participants and questionnaire in hospitals, Hawassa, 2014.***

	No of health professionals	participants	Distributed Questionnaire	Returned Questionnaire
Public	434	223	223	214
Private	52	52	50	48
Total	486	275	273	262

4.1.1. Socio demographic Characteristics of Study Participants.

Table 2 ***Socio demographic characteristics of participants in hospital, Hawassa 2014.***

Variable Name	Variable interval	Number of respondent's frequency (%).	
		Public hospital	Private Hospital
Sex	Male	124(57.9%)	30(62.5%)
	Female	90(42.1)	18(37.5%)
Age group	Less than 20 years	4(1.9%)	0(0%)
	21-30	166(77.6%)	30(62.5%)
	31-40 Majority of the	38(17.8%)	14(29.2%)
	41-50 years	6(2.8%)	2(4.2%)
	More than 50	0(0.0%)	2(4.2%)
Educational level	Specialist	3(1.4)	10(20.8%)
	Medical Doctor (GP)	2(4.2%)	0(0%)
	Doctorate Degree	9(3.5%)	
	Master's Degree	8(3.7%)	
	First degree	126(58.9%)	8(16.7%)
	Diploma	66(30.8%)	26(54.2%)
Profession	Medical doctor (GP)	11(5.1%)	2(4.2%)
	Laboratory technician	56(26.2%)	12(25.0%)
	Nurse	81(37.9%)	16(33.3%)
	Pharmacist	37(17.3%)	6(12.5%)
	X-ray technician	8(3.7%)	2(4.2%)
	Specialist	7(3.3%)	8(16.7%)
	Other	14(6.5%)	2(4.2%)
Working experience	≤ 5 years	146(51.0%)	24(50.0%)
	6-10 years	39(13.6%)	14(29.2%)
	11-15 years	16(5.6%)	8(16.7%)
	>15 years	13(4.5%)	2(4.2%)
Current salary per month	Up to BR.1200 - 2200	105(49.1%)	30(62.5%)
	2201-3200	88(41.1%)	4(8.3%)
	3201-4200	16(7.5%)	4(8.3%)
	4201-5200	5(2.3%)	
	Above5200		10(20.8%)

Table 2 summarizes socio demographic characteristics of study participants in hospitals in Hawassa.

Out of the total respondents, 124 (57.9%) in public and 30(62.5%) in private hospitals were male. In terms of age, the 10 year age interval shows that majority of the participants 166(77.6%) from public and30(62.5%) from private hospitals were between 21-30 years old followed by respondents of age 31-40 which account for 38(17.8%) public and 14(29.2%) private hospital participants. From total study participants 81(37.95) from public and 16 (33.3%) from private hospitals were nurse, 56(26.2%) from public and 12(25%) from private hospitals were Laboratory technician/Technologist, 18(8.4%) from public and 10(20.9%) from private hospitals were medical doctors and specialist and the rest were sanitarians, health officers, x-ray-technicians, anesthetists, physiotherapists and health assistants. In public hospitals one hundred twenty six (58.9%) had first degree and above where as 66 (30.8%) had diploma and 22 (12.8%) had doctorate degree, master degree and specialization whereas in private hospitals, 26(54.2%) were diploma holders, 10(20.8%) were specialist. The distribution for work experience in hospitals was: less than 5 year: 131(61.2%) from public and 24(50%); 6-10 year: 54(25.2%) from public and 14(29.2%) from private hospitals. One hundred and five(49.1%) public 30(62.5%) private hospitals participants have salaries between Birr 1200-2200 per month, 88(41.1%) public and 4(8.3%) private hospitals participants have- salaries between in the range of Birr 2201-3200 per month.

4.1.2. Job Satisfaction

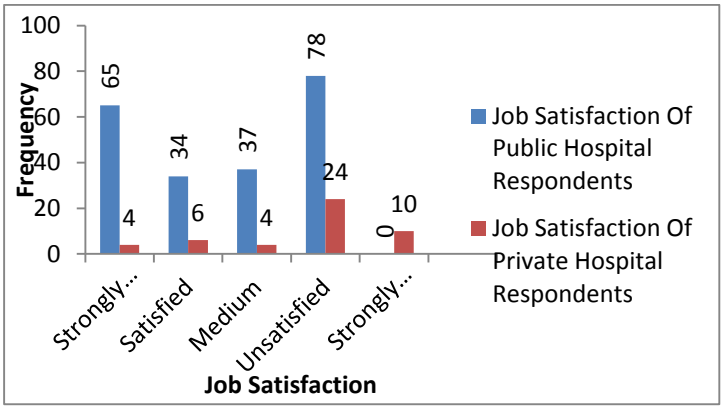

Figure 3 Job satisfaction of health professionals in hospital, Hawassa, 2014.

Figure.3 summarizes the responses of participants on job satisfaction.

The result show that 78 (36.4%) of public and 34 (70.8%) private hospital participants were reported that they were not satisfied with their current job. The cause of job dissatisfaction were lack of attractive salary, inadequate opportunity for further education and lack of reward and recognition system for the work they did (see Table 3).

Table 3 ***Cause of job dissatisfaction of health professionals in hospitals, Hawassa, 2014.***

Coues of Job dissatisfaction	Frequency (Percentage)	
	Public N (%)	Private N (%)
Inadequate /no opportunity for further education and training.	35(45%)	20(58%)
Lack of attractive salary.	45(58%)	17(50%)
Lack of reward and recognition system for the work you did	36(46%)	14(42%)
Inadequate /no opportunity for further education and training/ and Lack of attractive salary.	27(35%)	14(42%)
Lack of attractive salary and reward and recognition system for the work you did.	31(39.2%)	12(35%)
Lack of attractive salary, Inadequate /no opportunity for further education and training and reward and recognition	26(33.8%)	9(26%)

4.1.3. Motivation

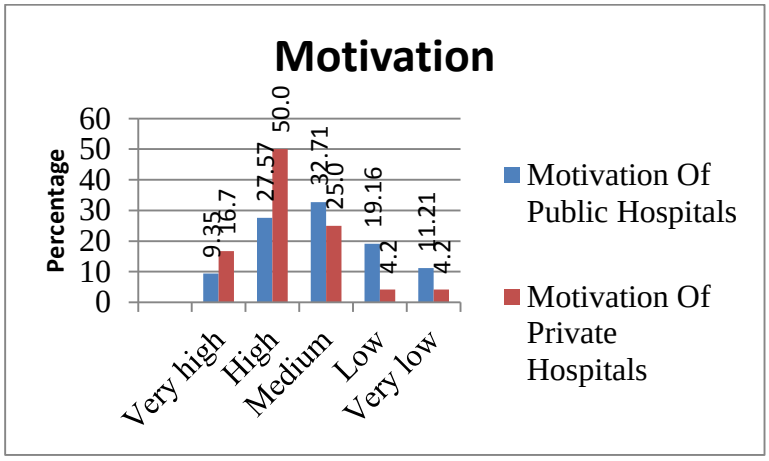

Figure 4 **Motivation Level of health professionals towards knowledge sharing in hospital, Hawassa, 2014.**

Figure 4 summarizes the responses of participant's level of motivation to wards knowledge sharing in hospitals in Hawassa. The study participants level of motivation to wards knowledge sharing classified in to five: Very low, low, medium, high, and very high. Out of the total public hospital participants, 129 (60.3%) have medium/high and 20(9.3%) have very high motivation towards knowledge share practice in their hospital staff. Out of the total private hospital participants, 32 (66.7%) have very high/high motivation, 12(25%) have medium motivation towards knowledge share practice in their hospital staff.

4.1.4. Motivation Scheme

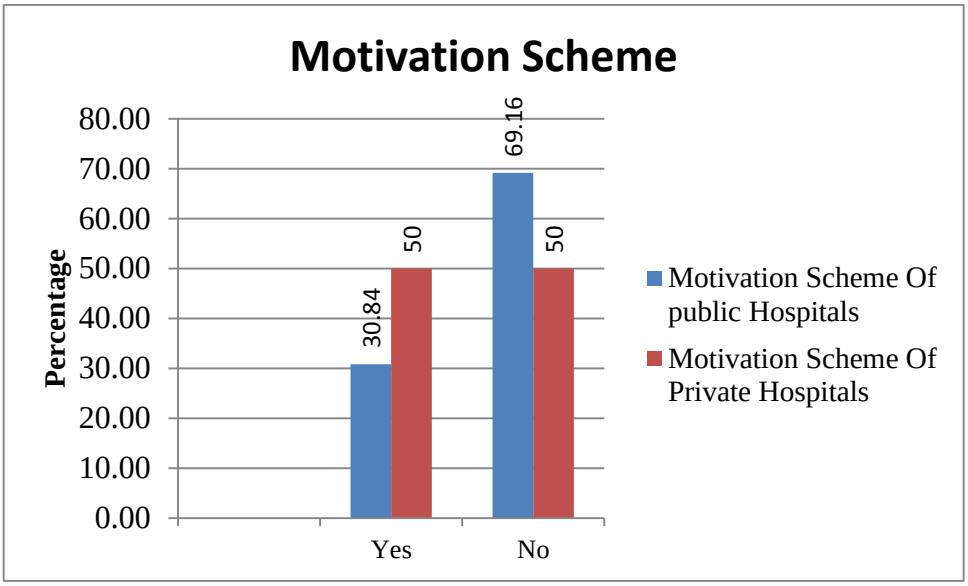

Figure 5 **Motivational Scheme for knowledge sharing practice in hospital, Hawassa, 2014.**

Figure 5 summarizes the responses of participant's motivation scheme for knowledge sharing practice in hospital in Hawassa.

Out of the total participants 211(69%) public and 24 (50%) private hospital participants reported that there is no motivational scheme in their hospital for knowledge sharing practice within their hospital like acknowledgement of their contribution, reward and other.

4.1.5. Willingness

Table 4 *Willingness of the respondents to share knowledge in hospital, Hawassa, 2014.*

Willingness Item		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
I am willing to explain my know-how, experience or skills to my colleagues.	Public N (%)	19(8.9%)	26(12.1%)	30(14.0%)	90(42.1%)	49(22.9%)
	Private N (%)	4(8.3%)	6(12.5%)	8(16.7%)	14(29.2%)	16(33.3%)
If I need additional information and knowledge about how to perform the task, colleagues are likely to tell me about it.	Public N (%)	23(10.7%)	16(7.5%)	33(15.4%)	105(49.1%)	37(17.3%)
	Private N (%)	4(8.3%)	10(20.8%)	8(16.7%)	14(29.2%)	12(25%)

4.1.6. Factors Affecting Knowledge Sharing Practice

4.1.6.1. Knowledge sharing opportunity

Table 5 ***Knowledge sharing opportunity in hospitals, Hawassa, 2014.***

Knowledge Sharing opportunity		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
My Hospital uses senior personnel to mentor junior employees.	Public N (%)	41(19.2%)	33(15.4%)	52(24.3%)	71(33.2%)	17(7.9%)
	Private N (%)	1(12.5%)	14(29.2%)	10(20.8%)	10(20.8%)	8(16.7%)
Sharing your knowledge informally (including coffee ceremony talk, corridor side discussion)	Public N (%)	56(26.2%)	46(21.5%)	76(35.5%)	27(12.6%)	9(4.2%)
	Private N (%)	10(20.8%)	12(25%)	16(33.3%)	7(14.5%)	3(6.2%)
My Hospital develops knowledge sharing mechanisms (There is periodic plan to acquire, organize and share knowledge in the hospital).	Public N (%)	87(40.7%)	52(24.3%)	47(22.0%)	14(6.5%)	14(6.5%)
	Private N (%)	2(4.2%)	14(29.2%)	14(29.2%)	10(20.8)	8(16.7%)
Formal opportunities like training program and workshop within the hospital for knowledge sharing	Public N (%)	57(26.6%)	65(30.4%)	43(20.1%)	37(17.3%)	12(5.6%)
	Private N (%)	8(16.7%)	10(20.8%)	16(33.3%)	12(25%)	2(4.2%)

Table 4 summarizes, out of the total participants 139 (65.0%) public and 30 (62.5%) private hospitals participants were willing to share their know-how, experience, or skills to their colleagues, while forty five (21%) Public and 10 (20.8%) private hospital participants were not willing to share their know-how, experience, or skills to their colleagues. One hundred forty two (66%) public and 26(54.2%) private hospitals participants were believed that their colleagues tell them if they need additional information and knowledge to perform their task, 62(29%) public and 14(27.1%) private hospital participants were not believe that their colleagues tell them if they need additional information and knowledge to perform their task.

Table 5 summarizes, out of the total study participants seventy four (34.6%) public and fifteen (41.7%) private hospital participants reported that their hospital did not uses senior personnel to mentor junior employees, 88(41.1%) public and 18(37.5%) private participants reported that their hospital uses senior personnel to mentor junior employees. One hundred two (47.7%) public and 22(45.8%) private hospital participants were disagreed/strongly disagreed on the presence of informal knowledge sharing like coffee ceremony talk, corridor side discussion. One hundred thirty-nine (65%) public and 16(33.4%) private hospital participants were disagreed/strongly disagreed on the presence of periodic plan to acquire, organize and share knowledge in the hospital. One hundred twenty two (57%) public and 18 (37.5%) private hospital participants were disagreed/strongly disagreed on the presence of formal opportunity like training program and workshop within the hospital for knowledge sharing.

4.1.6.2. Knowledge Sharing Channel

Table 6 ***Frequency of using communication channels for knowledge sharing in hospital, Hawassa, 2014***

Knowledge sharing channel		Never	Rarely	Sometimes	Often	Always
How frequently do you share knowledge obtained from workshop and training to the hospital staff?	Public N (%)	46(21.5%)	58(27.1%)	55(25.7%)	53(24.8%)	2(0.9)
	Private N (%)	2(4.2%)	24(50%)	14(29.2%)	6(12.5%)	2(4.2%)
How frequently do you share knowledge gained from guidelines, journals, and book to the hospital staffs?	Public N (%)	55(25.7%)	54(25.2%)	47(22%)	49(22.9%)	9(4.2%)
	Private N (%)	4(8.3%)	4(8.3%)	24(50%)	16(33.3%)	0
How frequently do you use face to face communication to share knowledge with colleagues?	Public N (%)	44(20.6%)	44(20.6%)	38(17.8%)	66(30.8%)	22(10.3%)
	Private N (%)	2(4.2%)	8(16.7%)	14(29.2%)	16(33.3%)	8(16.7%)
How frequently do you use intranet and internet to share knowledge with colleagues?	Public N (%)	52(24.3%)	48(22.4%)	42(19.6%)	54(25.2%)	18(8.4%)
	Private N (%)	12(25%)	14(29.2%)	12(25%)	10(20.8%)	0
How frequently do you use phone to share knowledge with colleagues?	Public N (%)	66(30.8%)	64(29.9%)	34(15.9%)	42(19.6%)	8(3.7%)
	Private N (%)	8(16.7%)	2(4.2%)	20(41.7%)	16(33.3%)	2(4.2%)
How frequently do you use knowledge artifacts including education materials, bulletin boards, manuals, and patient medical record for knowledge sharing?	Public N (%)	54(25.2%)	70(32.7%)	42(19.6%)	38(17.8%)	10(4.7%)
	Private N (%)	2(4.2%)	14(29.2%)	14(29.2%)	10(20.8%)	8(16.7%)

Table 5 summarizes the responses of study participants on frequency of knowledge sharing using communication channels in hospital in Hawassa.

Out of the total 88(41.1%) public hospital study participants were used face to face knowledge sharing channel. The second frequently used channel is intranet and internet which are used by 72 (33.6%) of the respondents. The third frequently used channel is phone which is used by 58(25.1%) of the respondents frequently. The least frequently used knowledge sharing channel is artifacts including education materials, bulletin boards, manuals, and patient medical record which is used by 48 (22.5%) of the respondents, 54(25.2%) of the respondents never use this channel, 70(32.7) use rarely and 42(19.6%) of the respondents use this channel sometimes.

Out of the total private hospital 24 (50%) participants use face to face knowledge sharing channel frequently. The second frequently used channel is phone which is used by (37.5%) of the respondents frequently. The third frequently used channel educational materials, bulletin boards, and patient medical records which are always and often used by (37.6%) of the respondents, (29.2%) of the respondents use this channel sometimes while (33.4%) rarely and never use this channel. The least frequently used knowledge sharing channel is workshop and Training which is used by (16%) of the respondents used often and always used, (29.2%) of the respondents sometimes use this channel, (54%) were rarely/never use this channel.

4.1.6.3. Trust

Table 7 *Trust among health professionals to share knowledge in hospital, Hawassa, 2014.*

Trust		Strongly disagree	Disagree	Neither disagree nor	Agree	Strongly agree
I trust knowledge of my co-workers.	Public N (%)	10(4.7%)	24(11.2	28(13.1%)	118(55.1%)	34(15.9%)
	Private N (%)	4(8.3%)	6(12.5%)	6(12.5%)	14(29.2%)	18(37.5%)
If I got into difficulties at work, I know my coworkers would try and help me out.	Public N (%)	15(7.0%)	27(12.6	21(9.8%)	112(52.3%)	39(18.2%)
	Private N (%)	8(16.7%)	4(8.3%)	2(4.2%)	20(41.7%)	14(29.2%)
If I share knowledge with in my organization my colleagues will believe that I am very concerned about their welfare	Public N (%)	0(0%)	23(10.7	61(28.5%)	90(42.1%)	40(18.7%)
	Private N (%)	4(8.3%)	6(12.5%)	10(20.8)	16(33.3%)	12(25%)

4.1.6.4. Awareness

Table 8 ***Health professional's awareness for knowledge sharing in hospital, Hawassa, 2014.***

Awareness		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
I am aware of the importance of knowledge sharing in daily works.	Public N (%)	22(10.3%)	27(12.6%)	44(20.6%)	84(39.3%)	37(17.3%)
	Private N (%)	2(4.2%)	6(12.5%)	14(29.2%)	10(20.8)	16(33.3%)
Knowledge sharing would help me not to repeat the same mistake.	Public N (%)	4(1.9%)	36(16.8%)	58(27.1%)	89(41.6%)	27(12.6%)
	Private N (%)	4(8.3%)	8(16.7%)	2(4.2%)	14(29.2%)	20(41.7%)
Knowledge sharing help to acquire new ideas, technologies, skills or techniques.	Public N (%)	21(9.8%)	38(17.8%)	63(29.4%)	74(34.6%)	18(8.4%)
	Private N (%)	10(20.8%)	4(8.3%)	2(4.2%)	16(33.3%)	16(33.3%)

Table 7 summarizes the responses of study participants on trust of health professionals to share knowledge in hospital in Hawassa.

Out of the total study participants one hundred fifty two (80%) public and 32 (66.7%) private hospital participant have trust on their coworker's knowledge. One hundred fifty one (70.5%) public and 34(70.9%) private hospital participants were agreed/strongly agreed with getting help from their coworkers when they get difficulties at work, 42(19.6%) public and 12(25%) private hospital participants were disagreed/strongly disagreed on getting help from their co-workers when they get difficulties at work. One hundred thirty (60.8%) public and 28 (58.3%) private hospital participants were agreed/strongly agreed with the statement that if they share knowledge with in their organization their colleagues will believe that they are very concerned about their welfare, twenty three (10.7%) public and 10 (20.8%) private hospital disagreed/strongly disagreed with the statement that if I share knowledge with in my organization my colleagues will believe that I am very concerned about their welfare.

Overall majority 70.4 % of public and 31(65.3%) private hospitals participants agree on the presence of trust among employees within their organization.

Table 8 summarizes the responses of study participant's awareness about knowledge sharing practice in hospital in Hawassa.

Out of the total study participants 121 (56.6 %) public and 26 (54.1 %) private hospital respondents were aware of the importance of knowledge sharing in their daily works, 49(22.9%) public and 8(16.7%) private hospital participants did not have awareness on the importance of knowledge sharing in their daily works. One hundred Sixtieen116 (54.2%)

public and 34 (70.9%) private hospital respondents were agreed/strongly agreed that knowledge sharing would help them not to repeat the same mistake, 40(18.7%) public and 12 (25%) private hospital participants were disagreed/strongly disagreed that knowledge sharing would help them not to repeat the same mistake. Ninety two (43%) public and 32(66.6%) private hospital participants were agreed/strongly agreed with the statement that knowledge sharing help to acquire new ideas, techniques and skills, 59(27.6%) public and 14(29.1%) participants were disagreed/strongly disagreed with the statement that knowledge sharing help to acquire new ideas, techniques and skills.

In general 51.3% public and 14(63.9%) private hospital participants were aware of the importance of knowledge sharing in public hospitals.

4.1.6.5. Fear of Loss of Personal Competitiveness

Table 9 ***Health professionals Fear of loss of personal competitiveness as a result of knowledge sharing in hospital, hawassa, 2014.***

Fear of loss of personal competitiveness		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Sharing knowledge would reduce my personal Competitiveness.	Public N (%)	110(51.4%)	25(11.7%)	15(7.0%)	41(19.2%)	23(10.7%)
	Private N (%)	14(29.2%)	6(12.5%)	6(12.5%)	6(12.5%)	16(33.3%)
Sharing knowledge would waste my time or increase my work load	Public N (%)	122(57.0%)	39(18.2%)	17(7.9%)	24(11.2%)	12(5.6%)
	Private N (%)	6(12.5%)	6(12.5%)	8(16.7%)	20(41.7%)	8(16.7%)
Exclusive ownership of knowledge would make me outstanding and important person	Public N (%)	79(36.9%)	30(14.0%)	56(26.2%)	37(17.3%)	12(5.6%)
	Private N (%)	8(16.7%)	4(8.3%)	14(29.2%)	14(29.2%)	8(16.7%)

4.1.6.6. Intrinsic Motivation

Table 10 ***Health professional's intrinsic motivation to share knowledge in hospital, Hawassa, 2014.***

Intrinsic motivation		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
I enjoy helping colleagues by sharing my knowledge.	Public N (%)	24(11.2%)	25(11.7%)	21(9.8%)	95(44.4%)	49(22.9%)
	Private N (%)	6(12.5%)	8(16.7%)	12(25%)	10(20.8%)	12(25%)
I am confident in my ability to provide knowledge that others in my organization consider valuable.	Public N (%)	16(7.5%)	10(4.7%)	21(9.8%)	124(57.9%)	43(20.1%)
	Private N (%)	8(16.7%)	8(16.7%)	10(20.8%)	8(16.7%)	14(29.2%)

Table 9 summarizes the responses of study participants' about fear of loss of personal competitiveness as a result of knowledge sharing practice in hospital in Hawassa.

Out of the total study participants, one hundred thirty five (63.1%) public and 20 (41.7%) private hospital respondents did not believe that sharing knowledge would reduce their personal competitiveness. One hundred sixty one (75.2%) public and 12 (25%) private hospital respondents did not consider that on the statement that sharing knowledge would waste time or increase work load. One hundred nine (50.9%) public and 12(25%) private hospital participants were disagreed/strongly disagreed on the idea of exclusive ownership of knowledge would make them outstanding and important person in the organization.

Table 10 summarizes the responses of study participant's intrinsic motivation for knowledge sharing practice in hospital in Hawassa.

Out of the total study participants 167 (78 %) public and 22 (45.9 %) private hospital respondents were have had confidence in their ability to provide knowledge to others within the organization. Twenty six (12.2 %) public and 16(33.4 %) private hospitals participants did not have confidence in their ability to provide knowledge to others within the organization. One hundred forty four (67.3 %) public and 22(45.8%) private respondents were enjoyed in helping colleagues by sharing knowledge. Forty nine (22.9%) public and 14(29.2%) private hospital respondents did not enjoy in helping colleagues by sharing knowledge.

Overall the majority 72.65% public and 45.85% private hospital respondents were had intrinsic motivation to share their knowledge to others.

4.1.6.7. Extrinsic Motivation

Table 11 ***Health professional's extrinsic motivation to share knowledge in hospital, Hawassa, 2014.***

Extrinsic motivation		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Sharing knowledge to get more chance to show your skill to others	Public N (%)	31(14.5%)	0	37(17.3%)	125(58.4%)	21(9.8%)
	Private N (%)	10(20.8%)	10(20.8%)	16(33.3%)	12(25%)	0
Getting admiration for your job when u teach or share your skills	Public N (%)	28(13.1%)	9(4.2%)	32(15.0%)	102(47.7%)	43(20.1%)
	Private N (%)	18(37.5%)	12(25%)	10(20.8%)	8(16.7%)	0
Sharing your knowledge to get more chance of promotion	Public N (%)	16(7.5%)	45(21.0%)	63(29.4%)	86(40.2%)	4(1.9%)
	Private N (%)	8(16.7%)	8(16.7%)	12(25%)	14(29.2%)	6(12.5%)
Receiving appropriate financial value when you transfer your know how to others	Public N (%)	63(29.4%)	78(36.4%)	18(8.4%)	36(16.8%)	19(8.9%)
	Private N (%)	10(20.8%)	8(16.7%)	16(33.3%)	12(25%)	2(4.2%)

Table 11 summarizes the responses of study participant's extrinsic motivation for knowledge sharing practice in hospital in Hawassa.

The result show that 146(68.2%) public and 12(25%) private hospital respondents were share their knowledge frequently to show their skill to others, 31(14.5%) public and 20(41.6%) private hospital participants were never share their knowledge to show their skill to others.

One hundred forty five (67.8%) public and 8(16.7%) private hospital respondents get admiration frequently when they share their skill and knowledge to others. Ninety (42.1%) public and 20(41.7%) private hospital respondents were share their knowledge frequently to get more chance of promotion. One hundred forty one (65.8%) public and 18 (37.5%) private hospital respondents were never get appropriate financial value when they share their knowledge to others. 28.15% respondents were frequently get extrinsic motivation to share their knowledge to others

4.1.6.8. Interpersonal (Team) Characteristics

Table 12 *Interpersonal characteristics of health professionals for knowledge sharing in hospital,Hawassa, 2014.*

Interpersonal (team characteristics)		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Communication among my colleagues is very open on job related issue.	Public N (%)	35(16.4%)	17(7.9%)	40(18.7%)	105(49.1%)	17(7.9%)
	Private N (%)	4(8.3%)	12(25%)	6(12.5%)	14(29.2%)	12(25%)
In your Hospital employees are co-operative and helpful when asked for some information or advice.	Public N (%)	27(12.6)	35(16.4%)	58(27.1%)	82(38.3%)	12(5.6)
	Private N (%)	2(4.2%)	10(20.8%)	10(20.8%)	20(41.5%)	6(12.5%)

4.1.6.9. Technological Factors

Table 13 ***Technological factors for knowledge sharing in hospital, Hawassa, 2014.***

Technological Factors		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
My Hospital invests in IT systems that facilitate knowledge sharing like internet, intranet, etc. that allow employee to share knowledge.	Public N (%)	35(16.4%)	26(12.1%)	27(12.6%)	101(47.2%)	25(11.7%)
	Private N (%)	20(41.7%)	12(25%)	8(16.7%)	8(16.7%)	0

Table 12 summarizes the responses of study participant's Interpersonal characteristics for knowledge sharing practice in hospital in Hawassa.

Out of total study participants 122 (57 %) public and 26 (54.2 %) private hospital participants were had communication among their colleagues are very open on job related issue. Ninety four (43.9%) public and 26 (54%) participants agree/strongly agree on the statement that in their hospital employees are co-operative and helpful when asked for some information or advice (see Table 12).

Table 13 summarizes technological factors for knowledge sharing in hospital in Hawassa.

Table 13 shows that out of the total study participants 126 (58.9 %) public and 8(16.7%) private hospital participants were reported that their hospital invests in IT systems that facilitate knowledge sharing like internet, intranet, etc. that allow employee to share knowledge.

4.1.7. Learning Commitment of Health Care Professionals in hospital

Perceptions of health professionals learning commitment in hospital were described as follows, the only way to measure this is through their levels of agreement with the items that relate to the learning commitment within hospital context. Out of the total study participants 116 (74.8%) public and 38(78.2%) private hospital participants were reported that they were agree/strongly agree that they are eager to learn more specific knowledge and skills to achieve job goals. One hundred seventy one(79.9%) public and 30(62.5%) private hospital participants were agree/strongly agree that they believe that they would gain new ideas, technologies, skills or techniques as a result of sharing knowledge. One hundred sixty seven (78%) public and 38(79.2%) private hospital respondent were believed that all knowledge sharing opportunity are advantageous to them to improve their knowledge. One hundred sixty (74.8%) public and 30(62.5%) private hospital participants were strongly agree/agree that they often learn new information and skills to stay at the forefront of their profession. One hundred forty three (66.8%) public and 34(66.7%) private hospital participants were agree /strongly agree that they quickly learn new methods to solve problems from their colleagues. One hundred seventy three (80%) public and 36(75%) private hospital participants were strongly agree/agree that they were believed that all learning opportunities are advantageous to the firm (see table 14).

Table 14 ***Health care professional's learning commitment in hospital, Hawassa, 2014.***

Learning Commitments		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
I am eager to learn more specific knowledge and skills to achieve job goals.	Public N (%)	15(7%)	18(8.4%)	21(9.8%)	76(35.5%)	84(39.3%)
	Private N (%)	2(4.2%)	6(12.5%)	2(4.2%)	18(37.5%)	20(41.7%)
I believe that I would gain new ideas, technologies, skills or techniques as a result of sharing knowledge.	Public N (%)	10(4.7%)	11(5.1%)	22(10.3%)	67(31.3%)	104(48.6%)
	Private N (%)	2(4.2%)	6(12.5%)	10(20.8%)	14(29.2%)	16(33.3%)
I believe that all knowledge sharing opportunity are advantageous to me to improve my knowledge.	Public N (%)	16(7.5%)	5(2.3%)	26(12.1%)	75(35%)	92(43%)
	Private N (%)	2(4.2%)	4(8.3%)	4(8.3%)	18(37.5%)	20(41.7%)
Often learn new information and skills to stay at the forefront of my profession.	Public N (%)	4(1.9%)	17(7.9%)	33(15.4%)	96(44.9%)	64(29.9%)
	Private N (%)	6(12.5%)	4(8.3%)	8(16.7%)	18(37.5%)	12(25%)
I quickly learn new methods to solve problems from my colleagues.	Public N (%)	24(11.2%)	11(5.1%)	36(16.8%)	74(34.6%)	69(32.2%)
	Private N (%)	6(12.5%)	4(8.3%)	6(12.5%)	26(54.2%)	8(12.5%)
I believe that all learning opportunities are advantageous to the firm.	Public N (%)	6(2.8%)	6(2.8%)	29(13.6%)	75(35%)	98(45%)
	Public N (%)	2(4.2%)	4(8.3%)	6(12.5%)	28(58.3%)	8(16.7%)

4.1.8. Determinants of Knowledge Sharing Practice of health professionals.

In binary logistic regression of sociodemographic variables, working experience of health professionals and profession in public and, sex and salary in private hospitals were the significant predictors of overall knowledge sharing practice of health care professionals (Table 15). Accordingly, in public hospitals health professionals having work experience of > 10 years were 4.07 times more likely to be practice knowledge sharing with colleagues with (COR: 4.07 [95% CI:1.36,12.18]), ($P < 0.00$), compared to those having work experience of <=10 years. Those health professionals whose profession is specialist were 0.41 time more likely to practice knowledge sharing with other staff with (COR: 0.41 [95% CI: 0.13, 1.23]) ($P < 0.00$) compared to those professionals whose profession is nurse. The health professionals whose profession were others (HO.X-ray, Anesthetics.) were 1.08 times more likely to practice knowledge sharing with other staff (COR: 1.08 [95% CI 0.33, 3.51]), ($P < 0.00$). Whereas, in private hospitals females were less likely to practice knowledge sharing with their colleagues by 35.6% compared to those respective male professionals (COR: 0.50 [95% CI: 0.23, 1.08]) ($P < 0.05$). Health care professionals with salary Birr >4200 per month were 0.88 times more likely to practice knowledge sharing than those professionals with salary Birr <=42000 per month with (COR: 0.88 [95% CI: 0.45, 1.74]) ($P < 0.05$).

Statically significant predictors were also identified from independent variable for fitting overall knowledge sharing practice of health care professionals (Table 16).Though, in public hospitals the first four most powerful predictors of independent variable are health care professionals who were willing to participate in knowledge sharing practice 0.40 times more

likely with(AOR:0.40[95% CI: 0.20,0.77]), (P < 0.00) than those professionals who were not willing to participate in knowledge sharing practice. The health care professionals who had knowledge sharing opportunity are 0.13 times more likely to practice knowledge sharing than who have not knowledge sharing opportunity with (AOR:0.13[95% CI: 0.05,0.34]),(p < 0.001) . Those professionals who had use communication channels were 0.29 more likely to practice knowledge sharing than who had not use communication channel with (AOR:0.29[95% CI: 0.13,0.66]),(p < 0.001) . The odds of health care professionals who had intrinsic motivation are 0.03 times more likely to practice knowledge sharing than who had not have intrinsic motivation with (AOR:0.03[95% CI: 0.16,0.66]), (P <0.00). Whereas, in private hospitals the first five most powerful predictors of independent variable are health care professionals who were willing to participate in knowledge sharing practice 0.04 times more likely with(AOR:0.04[95% CI: 0.01,0.25]), (P <0.00) than those professionals who were not willing to participate in knowledge sharing practice. The health care professionals who had knowledge sharing opportunity are 0.12 times more likely to practice knowledge sharing than who have not knowledge sharing opportunity with (AOR:0.12[95% CI: 0.03,0.43]),(p < 0.001) . Those professionals had intrinsic motivation are 0.08 times more likely to practice knowledge sharing than who had not have intrinsic motivation with (AOR: 0.08[95% CI: 0.02, 0.32]), (P <0.00).The health care professionals who had have strong interpersonal characteristics are 0.06 times more likely to practice knowledge sharing than those professionals who had not have strong interpersonal characteristics (AOR: 0.06[95% CI: 0.01, 0.28]), (P <0.00). Health care professionals who had trust their colleagues to share their knowledge 0.15 time more likely to practice knowledge

sharing than those professionals who had not have trust their colleagues to share their knowledge (AOR:0.15[95% CI: 0.03,0.75]), (P <0.00).

Bivariate logistic regression analysis for knowledge sharing practice and learning commitment of health care professionals, in private hospitals knowledge sharing practice significantly associated with learning commitment of health professionals ($p<0.05$) (see table 17).

Table 15 Association between socio demographic variable and knowledge sharing practice in hospitals in Hawassa, 2014.

Variables		Knowledge sharing practice				COR[95% CI]	
		Public		Private		Public	Private
		No	Yes	No	Yes		
Sex	Male	79(67.7%)	45(36.3%)	20(66.7%)	10(33.3%)	1	1
	Female	58(64.4%)	32(35.6%)	6(33.3%)	12(66.7%)	1.03[0.58-1.81]	0.50[0.23-1.07]*
Age	<=30	112(52.3%)	58(27.1%)	24(50%)	20(41.7%)	1	1
	30-40	21(9.8%)	17(7.9%)	0	2(4.2%)	1.03[0.18-5.82]	0.83[0.46-1.50]
	>40	4(1.9%)	2(0.9%)	2(4.2%)	0	1.62[0.26-9.93]	1.61[0.00-1.50]
Profession	Nurse	105(49.1%)	43(20.1%)	14(29.2%)	8(16.7%)	1	1
	specialist	25(11.7%)	27(12.6%)	8(10.7%)	8(16.7%)	0.41[0.13-1.23]**	0.57[0.24-1.36]
	others	7(3.3%)	7(3.3%)	4(8.3%)	6(12.5%)	1.08[0.33-3.51]	1.00[0.37-2.66]
Educational level	Specialist /medical doctors/	6(2.8%)	83.7%	20(41.7%)	16(33.3%)	1	1
	Degree	84(39.3%)	50(23.4%)	2(4.2%)	2(4.2%)	3.29[1.00-10.78]	0.80[0.41-1.54]
	Diploma	47(22%)	19(8.9%)	4(8.3%)	4(8.3%)	1.47[0.77-2.78]	1.00[0.14-7.09]
salary	<=4200	135(64.6%)	74(35.4%)	18(47.4%)	20(52.6%)	1	1
	>4200	2(40%)	3(60%)	10(100%)	0	0.36[0.06-2.23]	0.88[0.45-1.74]*
Work experience	<=10	112(60.5%)	73(39.5%)	20(52.6%)	18(47.4%)	1	1
	>10	25(86.2%)	4(13.8%)	6(60%)	4(40%)	4.07[1.36-2.18]**	0.90[0.47-1.70]

Table 16 Association between selected variable and knowledge sharing in hospitals in Hawassa, 2014.

Variables		Knowledge sharing practice				COR[95%CI]		AOR[95%CI]	
		Public hospital		Private hospital		public hospital	*Private Hospital*	Public Hospital	*Private Hospital*
		NO	Yes	NO	Yes				
Job satisfaction	Satisfied	63(63.6%)	36(36.4%)	6(60%)	4(40%)	1	*1*	*1*	1
	Unsatisfied	74(64.3%)	41(35.7%)	20(52.6%)	18(47.4%)	1.03[0.58-1.80]	*0.67[0.18-2.36]*	*0.92[0.52-1.63]*	0.68[0.18-2.58]
Willingness	No	57(78.1%)	16(21.9%)	18(90%)	2(10%)	1	*1*	*1*	
	Yes	80(56.7%)	61(43.3%)	8(28.6%)	20(71.4%)	0.368[0.19-0.70]**	*0.11[0.02-0.48]***	*0.40[0.20-0.77]***	0.04[0.01-0.25]**
Communication channel	No	125(68.3%)	58(31.7%)	22(61.1%)	14(38.9%)	1		*1*	1
	Yes	12(38.7%)	19(61.3%)	4(33.3%)	8(66.7%)	0.29[0.13-0.64]**	*0.63[0.32-1.24]*	*0.29[0.13-0.66]***	0.46[0.15-1.43]
Knowledge sharing opportunity	No	130(70.3%)	55(29.7%)	24(75%)	8(25%)	1	*1*	*1*	1
	Yes	7(24.1%)	75.922(%)	2(12.5%)	14(87.5%)	0.13[0.05-0.33]**	*0.33[0.15-0.74]***	*0.13[0.05-0.34**]*	0.12[0.03-0.43]**
Awareness	No	87(70.2%)	37(29.8%)	10(71.4%)	4(28.6%)	1		*1*	1
	Yes	50(55.6%)	40(44.4%)	16(47.1%)	18(52.9%)	0.53[0.30-0.93]*	*0.40[0.12-1.27]*	*0.53[0.30-0.95]*	0.39[0.12-1.30]
Fear of loss of personal competitiveness	No	118(66.7%)	59(33.3%)	16(57.1%)	12(42.9%)	1	*1*	*1*	1
	Yes	19(51.4%)	18(48.6%)	10(50%)	10(50%)	0.52[0.26-1.08]	*0.75[0.35-1.58]*	*0.49[0.23-1.03]*	0.97[0.37-2.57]
Interpersonal characteristics	No	67(72%)	26(28%)	18(90%)	2(10%)	1	*1*	*1*	1
	Yes	70(57.9%)	51(42.1%)	8(28.6%)	20(71.4%)	0.53[0.29-0.95]	*0.11[0.03-0.48]***	*0.53[0.29-0.94]*	0.06[0.01-0.28]**

Extrinsic motivation	No	60(69.8%)	26(30.2%)	24(66.7%)	12(33.3%)	1	*1*	*1*	1
	Yes	77(60.2%)	51(39.8%)	2(16.7%)	10(83.3%)	0.65[0.36-1.17]	*0.50[0.25-1.00]**	*0.75[0.41-1.37]*	0.29[0.08-1.07]
Technological Factor	No	63(71.6%)	25(28.4%)	22(55%)	18(45%)	1	*1*	*1*	1
	Yes	74(58.7%)	52(41.3%)	4(50%)	4(50%)	0.56[0.31-1.01]	*0.81[0.44-1.53]*	*0.56[0.31-1.00]*	0.88[0.31-2.50]
Trust	No	55(73.3%)	20(26.7%)	12(85.7%)	2(14.3%)	1	*1*	*1*	1
	Yes	82(59%)	57(41%)	14(41.2%)	20(58.8%)	0.52[0.28-0.96]*	*0.16[0.04-0.74]***	*0.52[0.27-0.97]*	0.15[0.03-0.75]**
Intrinsic motivation.	No	56(80%)	14(20%)	24(80%)	6(20%)	1	*1*	*1*	
	Yes	81(56.2%)	63(43.8%)	2(11.1%)	16(88.9%)	0.32[0.16-0.63]**	*0.25[0.10-0.61]***	*0.03[0.16-0.66]***	0.08[0.02-0.32]**

*p-value <0.05 **significant association at p-value <0.01

Table 17 Association between knowledge sharing practice and continuous learning commitment of health professionals in hospitals in Hawassa, 2014.

Variables		Learning commitment				COR[95%CI]		AOR[95%CI]	
		Public hospital		*Private Hospital*		Public Hospital	*Private Hospital*	Public Hospital	Private Hospital
		NO	Yes	NO	Yes				
Knowledge sharing practice	No	50(36.5%)	87(63.5%)	8(30.8%)	18(69.2%)	1	1	1	
	Yes	22(28.6%)	55(71.4%)	2(9.1%)	20(90.9%)	0.696[0.380-1.274]	0.225[0.97-5.17]*	0.763[0.410-1.420]**	0.85[0.26-2.77]**

*p-value <0.05 **significant association at p-value <0.01

4.2. Findings of qualitative Data

A total of 18 key informants 10 informants from public hospital and 8 from private hospital, selected from leader of laboratory case team, pharmacy case team, OPD case team, pediatrics ward & surgical ward, labour ward, maternal and child health unit were involved in the in-depth interview.

The informants were defined knowledge sharing is exchanging of what you know with in hospital employee. All of the informants were stated that "*knowledge sharing culture within the hospital is not that much good means the experience of giving knowledge to others and gaining knowledge from others is good but not that much active as expected*". They also explained the main ways of knowledge sharing within the hospital. They stated that there were formal and informal knowledge sharing opportunities within hospital.

Formal: weekly meeting based on one-Five teams structure, training conducted by other organizations, and rarely some bulletins prepared and send from other organizations. And in the hospital morning session and ward rounds are good opportunities for sharing knowledge between the health professionals.

Informal: *these mean that when somebody wants to know about something, he or she would ask someone else for it and they get what they want to know*".

Four from public hospital and three private hospital informants said that "*knowledge sharing value depends on the individual's perspective some individual's gives value and actively involved in informal and formal exchange of information/ideas with staff, but majority of the staff member did not give value they miss meetings*". Three public hospital informants stated that

"There are individuals in our hospital with positive attitude for knowledge sharing and who ask other people with more experience to get additional knowledge on the other side *There are individuals who want to ask for knowledge even if they face problem (medical errors) they prefer to ask individuals who have similar profession and qualification that is why because they fear negative respect that may come from other".* They describe the negative respect that "*sometimes some qualified professional who asked for taking correction or to share knowledge to lower qualified profession they see this like personal drawback/reflect discrimination like ask the type of institution they graduate from".*

The rest informants said that "*The staff members give value and actively participates in any condition which is suitable to share knowledge*"

The key informants were also asked about the work place settings with regard to knowledge sharing. Four public hospital and majority of private hospitals informants said that "*There is training opportunity and workshop but the work place is not conducive for. And the hospital did not actively promoted informal knowledge sharing because of its lack of time for professionals to participate in the case of informal knowledge sharing the best way of informal knowledge sharing for professionals was face to face communication between two professionals on the concerned issue, especially for doctors and specialist*".

Three private hospital respondents said that "*No conducive environment for knowledge sharing because the organization is business oriented which always play with time so time sharing to knowledge sharing considered just like wasting time."* The respondents were also asked the question do you view the sharing of knowledge as actively promoted and supported by senior management in the hospital? Most public hospital and two private hospitals informants

were said:"*yes actively promoted but knowledge sharing determine by individual interest means they mainly concern the question why? And from whom I am exchanging information? They need the same educational level and profession shares their knowledge"*. Five private hospital respondents said that *"First there is no interest and initiative for knowledge sharing among employees. If there were interest of knowledge sharing, the management and our superiors would support us".*

The key informants were also asked to answer the question "What are the major existing challenges in implementing efficient knowledge sharing within the hospital? Most of them gave the same answer that

1. Lack of individual interest is one of the key challenges in implementing knowledge sharing.
2. In public hospitals absence of support from their superiors and motivation scheme.
3. Individuals miss weekly meeting that emphasized on knowledge sharing sessions like morning meeting among the nurses in contrast to the physicians and this has hampered the effective transfer of knowledge.

4.3. Discussion

This study has tried to assess the knowledge sharing practice and continuous learning commitment of health care professionals in hospital in Hawassa and to identify factors affecting the knowledge sharing practices of health professionals.

Knowledge sharing occurs at the individual and organizational levels. For individual employees, knowledge sharing is giving some useful knowledge to colleagues to help them get something done better, more quickly, less costly, or more efficiently. For an organization, knowledge sharing is capturing, organizing, reusing, creating and transferring experience-based knowledge that resides within the organization and making that knowledge available to others in the business activities (Scarbrough, 2003; Lin, 2007). For an organization, the sharing of knowledge among its employees creates many benefits. It allows the organization to build on past experience and knowledge, respond more and more quickly to problems, create new ideas and insights, and prevents reinventing the wheel or repeating past mistakes. For the individual on the other hand, the sharing of knowledge is a more equivocal proposition (Cyr & Choo, 2010). Without knowledge sharing, learning is limited to an individual level, from which an organization can only profit as long as employees intend to apply their knowledge (Hsiu-Fen Lin, 2006). The term organizational learning may refer to individual learning within the organization, the entire organization learning as a collective body, or anywhere in between these extremes. Learning inside an organization or a team is much more complicated and involves relationships and interactions between people and also personal characteristics of persons within an organization or a team (Bennet & Bennet, 2004).

The result of the study indicates that 53.95% and 58.35% of professionals from public and private hospitals respectively practiced knowledge sharing with their colleagues within the organization. Likewise the findings from qualitative interviews also indicate that there is high degree of knowledge sharing practice among health professionals in private as well as public hospitals. Almost all respondents reply that there is knowledge sharing practice in their hospital even though it is below their expectations. .

Findings of this study are consistent with a study conducted in Addis Ababa health bureau at selected hospitals (Tirualem, 2011). In this study it was observed that 50.3% of study participants practiced knowledge sharing among colleagues. In another study conducted in felegehiwot hospital, Baher Dar, Amhara Regional State, knowledge sharing was among professionals was 82.3% (Adem, 2010).

In measuring the perception of health professionals towards knowledge sharing, using the measuring tool studies indicate that knowledge sharing is an activities to help communities of people work together, facilitating the exchange of their knowledge, enabling learning and increasing their ability to achieve individual and organizational goals (Hsiu-Fen Lin, 2006). Similarly the findings of the current study revealed that majority of participants (75% from public and 70.7 % from private hospital) were committed to learn new things in their daily activity through knowledge sharing. This indicates that the learning commitment of health professionals to learn new things in their daily activity through knowledge sharing was high. Moreover, knowledge sharing was perceived as an independent predictor of learning commitment in private hospitals.

Job satisfaction is a function of individual's job-related expectations and the results the worker receives when performing one's job (Locke, 1969; Köseoğlu, Bektaş, & Soylu, 2008). It may arise from individual integration in the group and from perceiving the group as being successful (Martins,Milliken, Wiesenfeld, & Salgado, 2003; Lauring & Selmer, 201). Job satisfaction and knowledge sharing are two crucial elements that are necessary to support objectives. Employees require information to do their work in a responsive and efficient manner, and they are more likely to be motivated to engage to function effectively if they are satisfied with their work (Bontis, Richards, & Serenko, 2011). There is a strong relationship between employee satisfaction and knowledge sharing in public sector. Job satisfaction was found to be related to willingness and eagerness to share knowledge (Almahamid et al., 2010).

The current study also tried to look in to the level of satisfaction of health professionals in respective study hospitals. The result of the study show that 36.4% c and 70.8% participants from public and private hospitals respectively were not satisfied with their current job. Lack of attractive salary and/or benefit packages and inadequate opportunity for further education were perceived cause of job dissatisfaction. As compared, less number of professionals working in public hospitals were dissatisfied than private hospital participants. This means professionals working in private hospitals are relatively speaking satisfied than those who were working in private hospitals.

This study is a beat different from the findings of the two similar studies in this respect where the proportion of professionals who were not satisfied was relatively higher (57.2% and 73.7) (Tirualem, 2011, Adem, 2010). This difference may be attributed to temporal changes in the

health system administration and health care service providers benefit packages. Further studies to examine the changes in health care administration may be required.

In this study it was observed that job satisfaction is not independent predictor of knowledge sharing practice of health care professionals in public and private hospitals. This finding is quite different from the findings of Tirualem(2011) where job satisfaction was an independent predictor of knowledge sharing (Tirualem,2011).

The result of the study showed that majority respondents (60.3%) from public hospital had medium and high motivation to share their knowledge to their hospital staff. This figure is slightly higher than studies conducted in Addis Ababa which reveals 41.7% of the participants had medium motivation to share their knowledge to their hospital staff (Tirualem, 2011). In private hospital, 66.7% participants have very high/high motivation, which is higher than the results from public hospital. This may be because of motivational scheme which 50% of the participants of private hospital agreed on the presence of motivational scheme for knowledge sharing practice within their hospital whereas, 31% of the participants of public hospital agreed on the presence of motivational scheme for knowledge sharing practice within their hospital. This indicates that in multivariate analysis high and very high level motivation is the independent predictor of knowledge sharing practice in health care professionals. So level of motivation is the independent predictor of knowledge sharing practice in health care professionals in private hospital.

Out of the total study participants 72.65% public and 45.5% private hospital participants had intrinsic motivation to knowledge sharing. Public hospital participants were consistent with

the study which done in by Tirualem (2011) as identified 74.7% had intrinsic motivation to knowledge sharing.

In the multivariate analysis intrinsic motivation is an independent predictor of knowledge sharing practice in public and private hospitals. This is consistence with the study conducted in hospitals under Addis Ababa health bureau by Tirualem (Tirualem, 2011). On the other side, 61% public and 28.15% private hospital participants frequently get extrinsic motivation to share their knowledge.

In the multivariate analysis extrinsic motivation showed significant association to knowledge sharing practice of health care professionals in crude analysis but did not show association after adjusting for other variables in private hospitals.

The fairness of the organization is built on the trust among members in the organization (Bock et al., 2005). A trusting and equal climate can facilitate knowledge sharing (Hooff and Huysman, 2009; Hsu and Lin, 2008). Trust is extremely important in the sharing of knowledge ((Davenport & Prusak, 1998). Wcich plays a crucial role in how employees transfer and share knowledge with others (Turner & Makhija, 2006).

The result of the study show that 70.4% and 65.3% participants from public and private hospital participants respectively agreed on the presence of trust among co-workers. Public hospital result is slightly higher than result of study conducted by Tirualem as identified 66.7% of the participants have mutual trust among themselves (Tirualem 2011). Similarly Adem (2010) identified 59% of the participants have mutual trust among themselves. In the multivariate analysis trust is independent predictors of knowledge sharing practice in private hospitals. In

public hospitals trust showed significant association to knowledge sharing practice of health care professionals in crude analysis but did not show association after adjusting for other variables.

Suitable awareness mechanism is an advantageous approach for improving knowledge sharing, because awareness is probably one of the best tools for maintaining the community in activity –learning collaboratively. It becomes an evident requirement for knowledge sharing (Díaz A. & Canals G., 1900)

The result of this study show that 51.3% of public and 63.9% of private hospital participants were aware of the importance of knowledge sharing in their daily works which is slightly lower than the study conducted by Tirualem that identified 82.9% participants were aware of the importance of knowledge sharing in their daily works(Tirualem, 2011) and by Adem that identified 88.7% of the participants were reported to be aware of the importance of knowledge sharing in their daily works (Adem,2011).

In the multivariate analysis awareness showed significant association to knowledge sharing practice of health care professionals in crude analysis but did not show association after adjusting for other variables in public hospitals.

The majority of 63% public hospital participants did not have fear of loss of personal competitiveness as a result of knowledge sharing. Whereas, 30.6% private hospital participants were did not have fear of loss of personal competitiveness as a result of knowledge sharing. This indicates that health professionals in private hospital more exposed to fear of loss of personal competitiveness than public hospital.

The presence of knowledge sharing opportunity is one of the determinant factors that affect knowledge sharing. The opportunities to share knowledge in organizations can be both

formal and informal in nature. Formal opportunities include training programs, structured work teams, and technology-based systems that facilitate the sharing of knowledge. Informal opportunities include personal relationships and social networks that facilitate learning and the sharing of knowledge. The study result shows that 52.2% public hospital and 52.8% private hospital participants were disagreed/strongly disagreed on the availability of formal and informal opportunity for knowledge sharing which was consistence. This is also supported by the qualitative study as most of the informants said that most of the time they share their knowledge formally and informally. Informal is more adaptable than formal.

In the multivariate analysis showed that knowledge sharing opportunity is an independent predictor of knowledge sharing practice of health care professionals in both public and private hospital which is contradict with the study with the study conducted by Tirualem (Tirualem,2011) and by Adem (Adem, 2010).

The other factor which influences knowledge sharing activity is information technology dimension. In the multivariate analysis showed that communication channel is an independent predictor of knowledge sharing practice of health care professionals in public hospital which is similar with the study done by Tirualem (Tirualem, 2011) and by Adem (Adem, 2010).

In this study health professionals use different communication channels; face to face communication being the most frequently used channel both in public and private hospitals followed by internet and Intranet in public and phone in private hospitals..

This may be because of hospital invests in IT systems that 58.9 % public hospital participants reported that their hospital invests in IT systems that facilitate knowledge sharing like internet, intranet, etc. that allow employee to share knowledge. On the other hand, 66.7% private

hospital participants reported that their hospital did not invests in IT systems that facilitate knowledge sharing like internet, intranet, etc. that allow employee to share knowledge which show really opposite result. It system had a positive relationship on knowledge sharing. It improves an organization's performance as well as increasing the rate of knowledge sharing within the organization (Davenport & Prusak, 1998). In qualitative study as four public hospital informants of in-depth interview reported that face –to-face communication and phone are the most frequently used means.

In the multivariate analysis the result shows that there is no association between technological factors and knowledge sharing practice of health care professionals in both private and public hospital.

Social identification shows the degree to which team members could acknowledge their own identity (y) in the characteristics that they share with their team members (y) resulting in a feeling of belongingness to the team (Ellemers et al., 2004). A stronger identification with their team makes people define their work in terms of group goals and group roles, and it brings them to perceive themselves as representatives of a team, who are more willing to share their knowledge (Van der Vegt & Bunderson, 2005). Sharing of knowledge supposes the willingness to contribute to a common goal and to see organizational knowledge as a common good. It includes helping others with their work, sharing information resources and initiative to come up with suggestions when it is recognized that colleagues need the knowledge that a person has available (Podsakoff et al., 2000). a strong team identity is an important stimulus for knowledge sharing. Knowledge, unlike other resources, does not diminish when it is given to others, but it is

apparently not free for all. Team members are cautious to whom they share their knowledge. Knowledge sharing flourishes better in groups with a common identity (Rosendaal B., 2009).

The result shows that 50.45% public and 54.1% private hospital participants were reported that there is strong interpersonal interaction within hospital staff. In the multivariate analysis showed that interpersonal characteristics is an independent predictor of knowledge sharing practice of health care professionals in private hospital.

4.4. Strengths and Limitations of the study

4.4.1. Strengths

- Both qualitative and quantitative data were collected so that an issue rised by one method could be strengthened by the other.
- This study is probably among a few studies of its kind in Ethiopia as to the knowledge of the principal investigator, which is believed to pave the way to other related researches.
- This study had 96% response rate for the quantitative study which is high response rate.

4.4.2. Limitations

- In hospital system setting, employee consists of administrative staff, health professionals (Medical doctors, Nurses, etc.) and other supportive staff. But this study was deal only with health professional's knowledge sharing practice and their continuous learning commitment.
- Even though this study focused on the listed hospital in Hawassa, did not take the type of environment (stable or dynamic) and size into consideration.
- This study only considered knowledge sharing practice and learning commitment of health professionals in public and private sectors it did not considered quality of knowledge sharing.
- Due to time and logistic reasoning the study participants were exclude par timer professionals and include limited factors.
- The stage of knowledge sharing elevates with the time span of hospital life and this study did not gain insight into how long the hospital had been practicing knowledge sharing.

4.4.3. Future Research

- Future research may choose take other organizational variables such as, organizational size, business strategy, organizational structure, task difficulties, and type of environment (stable or dynamic) into account, including par timer professionals and considered quality of knowledge sharing.

CHAPTER FIVE

Conclusions and Recommendations

5.1. Conclusions

The overall knowledge sharing practice and continuous learning commitment of health care professionals in public and private hospitals and identify the factors that affect knowledge sharing practice of health care professionals in this study is the subject of the research.

To achieve this objective, data are collected through questionnaire from health professionals of public and private hospitals staff.

The response obtained from the questionnaire point out that, both private and public hospitals participants in private and public hospital were have awareness of the importance of knowledge sharing and also agreed on the presence of trust among coworkers. But only half of participants in public as well as private hospitals practice knowledge sharing. Majority of the participants in both public and private hospitals committed to learn new things in daily activity through knowledge sharing. Knowledge sharing is an immortal mechanism to improve the skill set of employees within an organization and therefore the competitiveness of an organization (Davenport & Prusak, 1998).

Almahamid, McAdams, and Kalaldeh's (2010) research findings showed that there is a significant relationship between knowledge sharing practices and employees' learning commitment. The Basic reason of knowledge sharing is to make easy knowledge shift from one person to another person, to take in the knowledge from outside and then adopt it. It is very necessary for the employees to learn knowledge from experiences gathered by the colleagues in

inter and intra departments, internal processes and even from the outside organizations (Madsen, Mosakowski, & Zaheer, 2003). In this study the researcher investigated the influence of knowledge sharing on learning commitment, and found that there is association between knowledge sharing practice and learning commitment in private hospitals only. The factors that were independent predictors of knowledge sharing practice in public hospital includes Scio demographic variables profession and work experience and other independent variables are willingness, communication channel, knowledge sharing opportunity and intrinsic motivation. Whereas, in private hospital Scio demographic variables sex and salary and other independent variables knowledge sharing opportunity, willingness, intrinsic motivation, extrinsic motivation, trust and interpersonal characteristics.

5.2. Recommendations

From the findings of this study, the following recommendations are forwarded.

This analysis may help managers to fully understand the significance of organizational knowledge sharing practices in facilitating employees' learning commitments. Practically, this study provides a guide for practitioners on how knowledge sharing practices play a critical role in ensuring a quick and easy adjustment improvement of employee's skill.

It also shows that effective and efficient job satisfaction can be achieved by a greater level of continuous learning.

- There should be mechanism for knowledge sharing like preparing knowledge sharing opportunity as periodic meeting, training, and workshops at department, and hospital level.
- There should be motivational scheme to motivate employees to improve their knowledge sharing practice such as good working environment, acknowledgement of their contributions, and reward within the hospital.
- There should be conducive environment for employee to support formal as well as informal knowledge sharing.
- Individuals should be give emphasis for any knowledge sharing opportunity like meeting, group discussion and morning session.

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ANNEX

ANNEX A Information Sheet

***Good morning/good afternoon*.**

My name is _____. I came from Addis Ababa University; I am working for an investigator doing my thesis for the partial fulfillment of master's degree in health informatics. The purpose of this study is to have insight about the knowledge sharing practices and continuous learning commitment of health professionals and to identify the factors that encourage and discourage knowledge sharing among health professionals. You will use self-administered questions to clarify about your background, knowledge sharing practice and continuous learning commitment and your challenge for knowledge sharing.

No personal identifiers will be attached/ recorded to the questionnaire. All the data obtained will be kept strictly confidential by using only code numbers and will be stored in locked file cabinets at to be accessed only by the principal investigator. Your participation in the study is up on purely voluntary basis. What we learn from this study will help to design appropriate intervention programs to alleviate the knowledge sharing problems. Your honest and genuine participation in responding to the questions prepared is very important and highly appreciated.

If you agree to participate in this study I will give you the questionnaire.

Would you be willing to participate? ☐ Yes ☐ No

Principal investigator: Amezenech Ayele Mob. 0912-124952

Email. amez_aye@yahoo.com

ANNEX B

Consent form

Considering the information you get from the general information sheet, I would like to thank you in advance for spending some time with us in answering the questions related to the issues.

Sincerely

AmezenechAyele.

Health informatics department.

Addis Ababa University.

ANNEX C

Questionnaire Survey Item

General Background

This section is concerned with your background. This information will help identify varying trends in responses for different groups of health professionals. Please remember that your responses are completely ANONYMOUS.

Name of Respondent: Age of respondent:

Gender of respondent: Respondent level of education:

Part 1: Socio-Demographic Profile of the Respondent

I. Please make √ sign your answer or write in the space provided that represents your most appropriate answer.

1. Your gender? ☐ Male ☐. Female

2. What is your age? ----------

3. Your Profession?

☐ Medical doctor (GP) ☐ X-ray technician

☐ Laboratory technician ☐ Anesthetist

☐ Nurse ☐ Dentist

☐ Pharmacist ☐ Specialist

☐ Sanitarian

☐ Other specify_____.

4. Your highest educational level?

☐ Specialist ☐ Master's Degree

☐ Medical Doctor (GP) ☐ First degree

☐ Doctorate Degree ☐ Diploma

☐ Others please specify._____

_____

_____.

5. How many years do you have worked in hospital? _____

6. What is your Current Salary (per month) in Etb? _____

II. Job satisfaction and Level of motivation of the participants in hospital.

7. How satisfied are you with your current job?

- ☐ Strongly satisfied,
- ☐ Satisfied,
- ☐ Medium,
- ☐ Unsatisfied,
- ☐ Strongly unsatisfied

8. If your answer for question number 7 is "unsatisfied/ strongly unsatisfied", which of the following is/are the cause of your dissatisfaction (possible to choose more than one answer)?

- ☐ Inadequate /no opportunity for further education and training/
- ☐ Lack of attractive salary
- ☐ Lack of reward and recognition system for the work you did
- ☐ Other specify_____

_____

9. How much are you motivated to transfer knowledge in the hospital?

- ☐ Very low
- ☐ Low
- ☐ Medium
- ☐ High
- ☐ Very high

10. Is there motivational scheme in the hospital to motivate knowledge sharing practice?

- ☐ Yes
- ☐ No

11. If your answer for question number 10 is "Yes", write the type of motivation scheme in your hospital._____

_____

_____

PART III: Knowledge Sharing Practices

This section is concerned with investigating knowledge sharing practices. Please insert an X in the appropriate column. The options range from 1(strongly disagree), 2(disagree), 3(neither disagree nor agree), 4 (agree), and 5 (strongly agree).

	Knowledge Sharing Practices opportunity	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
1	My Hospital uses senior personnel to mentor junior employees.					
2	My Hospital groups employees in work teams.					
3	My Hospital invests in IT systems that facilitate knowledge sharing like internet, intranet, etc. that allow employee to share knowledge.					
4	My Hospital develops knowledge sharing mechanisms (There is periodic plan to acquire, organize and share knowledge in the hospital).					
5	My Hospital offers a variety of training and development programs.					
6	I trust knowledge of my co-workers.					
7	If I got into difficulties at work, I know my coworkers would try and help me out.					
8	If I share knowledge with in my organization my colleagues will believe that I am very concerned about their welfare					
9	I am aware of the importance of knowledge sharing in daily works.					
10	Knowledge sharing is important in daily works.					
11	Knowledge sharing help to acquire new ideas, technologies, skills or techniques.					
12	Sharing knowledge would reduce my personal Competitiveness.					
13	Sharing knowledge would waste my time or increase my work load					
14	Exclusive ownership of knowledge would make me outstanding and important person in the organization.					
15	I enjoy helping colleagues by sharing my knowledge.					
16	When I share my knowledge with Colleagues, I believe that my future requests for Knowledge will be answered.					
17	I have full confidence in the skills of my coworkers.					

18	Sharing knowledge to get more chance to show your skill to others.					
19	Getting admiration for your job when u teach or share your skills					
20	Sharing your knowledge to get more chance of promotion.					
21	Receiving appropriate financial value when you transfer your know how to others.					
22	My Hospital offers a variety of training and development programs.					
23	Communication among my colleagues is very open on job related issue.					
24	If I need additional information and knowledge about how to perform the task, colleagues are likely to tell me about it.					
25	In your Hospital employees are co-operative and helpful when asked for some information or advice.					
26	I am willing to explain my know-how, experience or skills to my colleagues.					

Please insert an X in the appropriate column. The options range from 1(Never), 2(Rarely), 3(sometimes), 4 (Often), and 5 (Always).

	Knowledge Sharing Practices	Never	Rarely	Sometimes	Often	Always
1	How frequently do you share education results, research findings with your colleagues in your hospital?					
2	How frequently do you share know-how with the hospital staff?					
3	How frequently do you share knowledge obtained from workshop and training to the hospital staff?					
4	How frequently do you share knowledge gained from guidelines, journals, and book to the hospital staffs?					
5	How frequently do you use face to face communication to share knowledge with colleagues?					

6	How frequently do you use intranet and internet to share knowledge with colleagues?					
7	How frequently do you use phone to share knowledge with colleagues?					
8	How frequently do you use knowledge artifacts including education materials, bulletin boards, manuals, and patient medical record for knowledge sharing?					
9	How frequently do employees communicate with each other teams or groups for sharing information and knowledge?					
10	How frequently can employees freely access to the majority of document, information and knowledge within hospital?					
11	How frequently do you receive appropriate financial value when you transfer your know-how to other colleagues?					
12	How frequently do you share your knowledge, to get more chance of promotion?					
13	How frequently do People give admiration for your Job when u teach or share your own skills?					
14	How frequently do you share your knowledge, to get more chance to show your skills to the other colleagues?					

PART IV: Employees' Learning Commitments

This section is concerned with investigating the employees' learning commitments. Please insert an **X** in the appropriate column. The options range from 1(strongly disagree), 2(disagree), 3(neither disagree nor agree), 4 (agree), and 5 (strongly agree).

	Learning Commitment	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
1	I am willing to spend extra time taking part in the internal and external training courses provided by the firm.					
2	I am eager to learn more specific knowledge and skills to achieve job goals.					
3	I believe that I would gain new ideas, technologies, skills or techniques as a result of sharing knowledge.					
4	Knowledge sharing would help me not to repeat the same mistake as happened to my colleague.					
5	I believe that all knowledge sharing opportunity are advantageous to me to improve my knowledge.					
6	I believe that all learning opportunities are advantageous to the firm.					
7	To me, being able to learn constantly is very important.					
8	I take action to improve work performance deficiencies.					
9	I often learn new information and skills to stay at the forefront of my profession.					
10	I quickly learn new methods to solve problems from my colleagues.					
11	I am continually learning new skills for my job.					
12	I take responsibility for staying current in my profession.					
13	I try to learn skills for my job before they are needed.					
14	I enjoy learning new approaches for conducting work.					
15	I take responsibility for acquiring new skills.					

ANNEX D

INTERVIEW GUIDE

Interview guide for to assess knowledge sharing among health professionals*:*

1. How would you generally describe knowledge sharing culture at your hospital?
2. What are the main ways of sharing knowledge within the hospital/department?
3. Do you feel employees at the hospital value knowledge sharing? Do you find them willing to share knowledge with fellow employees?
4. Do you view the sharing of knowledge as actively promoted and supported by senior Management in the hospital? How/why?
5. Does your hospital have a mechanism in place that allows the sharing of knowledge among the employees?
6. What are the existing challenges/problems in implementing efficient knowledge sharing (In terms of facilities, human resources communication channel, attitude, and skill of the staff,) and how influential l is the challenges?