EXAMINING INDIVIDUAL, JOB AND PERCEIVED ORGANIZATIONAL CLIMATE FACTORS IN RELATION TO THE KNOWLEDGE SHARING BEHAVIOR

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ABSTRACT

This study examined the direct relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge- sharing behavior. The study also investigated the moderating effect of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge-sharing behavior. A total of 650 questionnaires were personally distributed to respondents from five Tanzanian public hospitals (Muhimbili National Hospital, Ligula Referral Hospital, Mnazi Mmoja Hospital, Sekou Toure Reginal Hospital Mwanza and Mbeya Referral Hospital) after permission was granted by the hospital management. Out of the 650 questionnaires distributed, 476 questionnaires were returned, representing a response rate of 73%. However, only 439 questionnaires were usable for final analysis. The hypotheses for direct and moderating effects were tested using Smart PLS. The findings of the PLS path model indicated that individual capabilities, career advancement, personal values, and perceived organizational climate are significantly and positively related to knowledge- sharing behavior. Regarding the subjective norms as a moderator in the relationship between exogenous latent variables and the endogenous latent variable, subjective norms were found to moderate the relationship between individual capabilities, job characteristics, perceived organizational climate and knowledge- sharing behavior. The research results reported in this study suggest the need to enhance individual capabilities, career advancement, personal values, and perceived organizational climate as a way of encouraging knowledge- sharing behavior among the healthcare professionals. Apart from that, the hospital management also needs to consider the role of subjective norms when planning to enhance healthcare professionals' knowledge- sharing behavior, especially when involving individual capabilities, job characteristics and perceived organizational climate.

Keywords: Knowledge- sharing behavior, individual capabilities, job characteristics, perceived organizational climate, subjective norms

ABSTRAK

Kajian ini mengkaji hubungan langsung antara keupayaan individu, peningkatan kerjaya, nilai individu, ciri-ciri pekerjaan, persepsi iklim organisasi dan gelagatperkongsian pengetahuan. Kajian ini juga mengkaji kesan penyederhana norma subjektif ke atas hubungan antara keupayaan individu, peningkatan kerjaya, nilai individu, ciri-ciri pekerjaan, persepsi iklim organisasi dengan gelagat perkongsian pengetahuan. Sebanyak 650 borang soal selidik telah diedarkan secara peribadi kepada responden di lima buah hospital awam di Tanzania (Muhimbili National Hospital, Ligula Referral Hospital, Mnazi Mmoja Hospital, Sekou Toure Reginal Hospital Mwanza and Mbeya Referral Hospital). Namun, daripada jumlah tersebut, hanya sebanyak 476 soal selidik telah diterima semula dengan kadar maklum balas adalah sebanyak 73 peratus. Walau bagaimanapun, sebanyak 439 soal selidik boleh digunakan bagi analisis selanjutnya. Hipotesis ke atas kesan langsung dan kesan penyederhanadiuji dengan menggunakan analisis Smart PLS. Dapatan kajian bagi hubungan langsung menunjukkan bahawa keupayaan individu, peningkatan kerjaya, nilai individu, dan persepsi iklim organisasi mempunyai hubungan yang signifikan dan positif dengan gelagat perkongsian pengetahuan. Sementara itu, dapatan bagi ujian penyederhana menunjukkan bahawa norma subjektif memainkan peranan sebagai penyederhana dalam hubungan keupayaan individu, ciri-ciri pekerjaan, persepsi iklim organisasi dan gelagat perkongsian pengetahuan. Dapatan kajian yang diperolehi daripada kajian ini mencadangkan tentang perlunya bagi meningkatkan keupayaan individu, kerjaya, nilai individu dan persepsi iklim organisasi dalam usaha untuk menggalakkan gelagat perkongsian pengetahuan dalam kalangan pengamal perubatan. Selain itu, pengurusan hospital juga perlu mengambil kira peranan norma subjektif ketika membuat perancangan untuk meningkatkan gelagat perkongsian pengetahuan terutamanya yang melibatkan keupayaan individu, ciri-ciri pekerjaan dan persepsi iklim organisasi.

Kata kunci: Gelagat Perkongsian Pengetahuan; Keupayaan Individu: Ciri-ciri Pekerjaan: Persepsi Iklim Organisasi; Norma Subjektif

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

Knowledge is considered as the most important resources for the organization (Kim & Lee, 2013; Suppiah & Singh Sandhu, 2011; Yi, 2009). It is regarded as part of the key strategy to utilize and build a sustainable competitive advantage in a business environment. As such, knowledge management is becoming more popular despite the field is new in the academic arena. Knowledge management is a very wide research field that can be investigated from different angles such as knowledge identification, formation, organization, storage, sharing, employing and preservation. Among these facets, knowledge sharing behavior is becoming a progressively popular discipline of interest to academics and practitioners, particularly when the human factor of knowledge management is involved (Dougherty, 1999; Yi, 2009). How knowledge can be shared as a collective organizational asset is considered serious and challenging subject matter in knowledge management (Aktharsha & Sengottuvel, 2016). Knowledge sharing behavior connects organizations and subordinates or among individuals by the process of transferring knowledge from an employee to an institutional level, and hence it serves competitive worth for the institutions including healthcare institutions (Lin, 2007).

Knowledge sharing behavior is comparatively a new practice that healthcare institutions are struggling to institutionalize (Kim, Newby-Bennet & Song, 2012). The notion of

knowledge sharing behavior is focused on the principle that knowledge is not an item that resides in an individual's mind; instead, it is a personal understanding of an entity that should be codified and shared (McInerney, 2002; Nonaka & Takeuchi, 1995). Knowledge sharing behavior in hospitals can be defined as the process of elucidating and propagating knowledge related to issues concerning healthcare, using a collaborative communication medium for improving the skills and capabilities among healthcare workers (Abidi, 2007). Knowledge sharing behavior enables healthcare workers, together with their institutions, to create more new knowledge as well as effectively utilize existing knowledge, skills and expertise in the medical profession in order to achieve best performance in their services (Abidi, 2001; Tuan, 2013). Knowledge sharing takes place in healthcare institutions when a physician is not competent in or familiar with a particular case or disease and seek the required knowledge from a more competent colleague through consultation practices (González-González, 2007; Payne, Mendonça, Johnson & Starren, 2007). In addition, knowledge sharing can be practiced when medical workers team together to tackle a particular case (Firdaus, Uryadi & Govindaraju, 2011). Therefore, it is essential for the healthcare professionals to share knowledge in order to improve their knowledge and capabilities. Research demonstrates that knowledge sharing behavior can be an important tool to improve organizational performance in multifaceted work environments requiring a team oriented work practices (Liao, Fei & Chen, 2007; Lin, 2008).

In any part of this world, social welfare and economic development are considered as the ultimate goals of any legitimate and credible government (Ali, Ali & Raza, 2011),

and therefore, governments are responsible to manage the public resource to guarantee availability of social welfare through their established organizations (public healthcare institutions). Public healthcare institutions are comprised of hospitals under full management of government, enhancing health and well-being of the people (Mboera, Senkoro, Mayala & Shayo, 2007). Public healthcare institutions are involved in a broad range of activities including restore, promote, and maintain health of the people. Generally, these services have greater impacts on a country's welfare, life expectancy and overall economic growth based on availability of healthier workforces. Specifically, public healthcare institutions enhance improvement in healthcare outcomes for populations through realization of objectives of preventing diseases and environmental health consequences. It has been reported that public healthcare sectors account for 5.992% to 6.317 of the GDP (World Bank, 2014), and the consequences of such services on well-being and enabled quality life are just ostensibly massive (Blolad, Simone, Burkholder, Slutsker, & De Cock, 2012).

However, the Tanzanian public healthcare institutions have been performing awfully largely because of the healthcare professional related performance problems. The problem of poor performance among healthcare sector has been a topic of substantial discussion (Mboera et al., 2007). Despite massive investment in training healthcare professionals and infrastructures, and expensive expenditures, in running healthcare institutions has become challenging task towards achievement of quality delivering of healthcare services. The Tanzanian public healthcare institutions have experienced declines in performance since late 1967s during the nationalization of sectors, it was time

the government of Tanzania acquired complete control of all social-economic sectors. The objective was to build a socialist egalitarian society with public ownership of the economy (Ngowi, 2009).

In more recent periods, the problems in healthcare sectors have unfortunately reached on the extent that Tanzanian public healthcare institutions almost healthcare service delivering collapsed by increasing under-utilization of healthcare facilities; weak disease, investigating system; poor availability of proper diagnosis and treatment of diseases; and lack of effective health information; education and communication programs (Mboera et al., 2007). In fact, the problem of the healthcare institutions has led to negative repercussions, including missing diagnosis, wrong treatment, unexpected deaths as well as lowering of well- being of an average Tanzanians (Mrisho et al., 2007).

In a survey conducted in Tanzania, Norbert and Lwoga (2013) recognized some notable problems that indirectly impact medical doctors and nurses' willingness to execute knowledge sharing behavior and healthcare professional performance generally, and eventually causing to overall performance problems of public healthcare institutions in Tanzania. These notable problems include, lack of enough time to participate in knowledge sharing behavior due to the being overwhelmed by extreme workloads, lack of knowledge sharing culture, and lack of management support the creation of the mechanisms and infrastructures such as Information Communication Technology (ICT). Other management related problems influencing healthcare professional knowledge sharing behavior and performance include the nature of human resource practices in

almost all in the public healthcare institutions (Leshabari, Muhondwa, Mwangu & Mbembati, 2008).

As an outcome of these problems, some healthcare professionals become extremely disappointed, and consequently, have lost confidence and trust in management of their healthcare institutions, eventually leading high magnitude dissatisfaction among healthcare professionals. As consequences, and reflections of the healthcare professionals' dissatisfaction contributed towards the brain drain of Tanzanian medical doctors and nurses to the well developed countries or from public healthcare institutions to private healthcare institutions (Juma, Kangalawe, Dalrymple & Kanyenda, 2012; Kwesigabo et al., 2012). Other commonly observable healthcare professionals related problems include lack of communication, repeating the same mistake in treatment, lack of information sharing culture, low knowledge level among healthcare professionals, low commitment towards sharing of knowledge and low quality of healthcare services, thus, depicting low performance of healthcare professional's knowledge sharing behavior.

The performance problems and shortcomings of the Tanzanian public healthcare sector could more appropriately be associated to ineffectiveness and inefficiencies management approaches. Previous studies have portrayed that the present management abilities to install the culture of sharing knowledge, skills, favorable medical job characteristics, and motivation among their healthcare professionals are totally inadequate to overcome performance challenges of various Tanzanian healthcare institutions, especially public

hospitals (Kwesigabo et al., 2012; Laki, 2008; Leshabari et al., 2008; Norbert & Lwoga, 2013). In fact, the ability of management of public hospitals to successfully motivate and maintain positive healthcare performance might be the utmost tough challenge and a critical obligation to ensure the public healthcare sector in order. However, successful achievement and sustaining positive healthcare professional performance for the prospective functioning of Tanzanian public healthcare institutions is excelling becoming an avoiding challenge regarding the workforce diversity with a multi-ethnic, religious and cultural backgrounds (Eliphas & Maket, 2015; Leshabari et al., 2008; Mboera et al., 2007; Norbert & Lwoga, 2013).

In 2002, massive poor performance faced by public healthcare institutions in Tanzania led to government under ministry of health and welfare to think of introducing several reforms to stimulate healthcare professionals to perform at the highest level. However, till to date sustaining performance improvement among healthcare professionals, including their institutions still remain an important issue which has not been resolved. Indeed, several reform programs may fail to deliver anticipated outcomes if fundamental factors, including indoctrinating the arts of individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and development of subjective norms for the public healthcare institutions among medical doctors and nurses, that can trigger healthcare professionals' motivation to execute the culture of knowledge sharing behavior remained neglected.

Individual capabilities refer to the individual potentialities for achieving a desirable outcome and individual development (Qizilbash, 2007). Individual capabilities are motivating employees to perform at maximum level and enhance organizational performance (Mayo, 2000). Career advancement is an employee's upward movement on the organizational ladder which, accompanied by an increase in salary and status (Zhao & Zhou, 2008). Career advancement is considered as the mean for acquiring new skill and knowledge due to opting to perform new and more challenging tasks (Wang-Cowham, 2008). Personal values are beliefs that control individual behavior or action (Pinto, Nique, Añaña & Herter, 2011). Job characteristics refer to task related attributes, including task identity, task significant, skill varieties, task autonomy and performance feedback (Rehman & Mahmood, 2011). The perceived organizational climate is individual perception of organizational practices, policies and procedures (Shadur, Kienzle & Rodwell, 1999). On the other hand, subjective norms are normative beliefs related to a person's probability to perform a behavior that is executed by an important person or group (Ajzen, 1991). Subjective norms were found to be significantly related to positive employee results, especially knowledge sharing behavior (Aktharsha, Ali & Anisa, 2012; Skaik, 2014; Wu & Zhu, 2012).

The present study explores the moderating effect of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior. Performance of organizational knowledge sharing behavior by healthcare professionals can be an important remedy for improving performance and effectiveness in the Tanzanian public

healthcare institutions. Literature has provided support to the role of knowledge sharing behavior in improving the effective running of the organization (Chen, Chang, Lin & Chen, 2008; Huang, Chiu & Lu, 2013; Kim & Ko, 2014; Su, Ahlstrom, Li & Cheng, 2013). Research has also shown that knowledge sharing behavior has no relationship to counterproductive work behavior (Kim, Newby-Bennet & Song, 2012), which means that an individual with high on knowledge sharing behavior will not show deviant behavior that brings negative impact on service delivery and production. Thus, ineffective public healthcare institutions are anticipated to improve their knowledge sharing behavior, performance when their institutions install and practice the concepts of individual capabilities, career advancement, personal values, job characteristics, and perceived organizational climate and emphasize the development of subjective norms among healthcare professionals.

1.2 Problem Statement

The government of Tanzania, in particular, the Ministry of Health and Social Welfare has a vision for the country to achieve high quality of livelihood by the year 2025 (Ministry of Health and Social Welfare, 2013a). In order to realize this, healthcare sector needs knowledgeable and skillful healthcare professionals to implement the main objective of vision and meet the challenges ahead successfully. In this regard, development of human capital should be a top priority for the Tanzanian healthcare sector and knowledge sharing behavior should be one of the tools to achieve the goals. As argued by Kwesigabo et al. (2012) and Sirili et al. (2014), Tanzanian government through its Ministry of Health

and Social Welfare must be prepared to create a knowledge, expertise and skill through education. They believe that knowledge is considered as a mean for accomplishing this vision. Thus, the current government allocates TSH 28.7 billion in 2015 to the Ministry of Health and Social Welfare to further reinforce the education and training system for healthcare professionals.

A knowledge based economy is a platform to maintain a rapid development of healthcare professional skills and knowledge and to boost competitiveness for effective healthcare service delivery so as to realize the objectives of Vision 2025. It also builds up healthcare professional's capabilities and innovation in confronting medical problems to achieve high quality of livelihood. In fact, this commitment needs a high level of capability and knowledge management. According to Yu (2003), various factors need to be employed in order to achieve such goal. Among them is the requirement for knowledge management, particularly knowledge sharing behavior to be put in place by all healthcare institutions.

Over the last two decades, the role of medical and healthcare institutions in Tanzanian society has been widened to cover the importance of knowledge sharing. Therefore, it is important to study issues on knowledge sharing in the healthcare industry, particularly in developing countries, Specifically, Tanzania, where disease outbreak is a major problem (Jabr, 2007). This requirement relies on tacit knowledge that exists in the minds of individual healthcare professionals functioning within communities. However, for the healthcare institutions to gain significant benefit from the knowledge management

system, medical knowledge should be shared. This is because knowledge sharing helps hospitals to make better use of expertise and skills of their healthcare professionals. Also, it allows healthcare workers to utilize their superior practices; and creates new insights and ideas for effective delivery of excellent healthcare services (Abidi, 2001). Based on the above arguments, there is an urgent need to conduct more relevant studies in the healthcare sector because the healthcare sector is centered on knowledge and consistently learns from mistakes to make improvements (Adler, 2003; Lin & Stead, 2009).

Knowledge sharing behavior among healthcare professionals plays a significant role in developing practical and clinical skills. Specifically, it is enhancing better and faster access, sharing knowledge, skills and utilizing of available ideas (Rimal & Lapinski, 2009). Though the practice of knowledge sharing is poor among healthcare professionals, particularly in Tanzania (Laki, 2008; Norbert & Lwoga, 2013; Omary, Lupiana, Mtenzi & Wu, 2010; Szogs & Wilson, 2006; Yonazi, 2011). Consequently, limited knowledge sharing behavior has led to decrease of quality healthcare services, increase in the complications in handling difficult cases, wrong treatment, unexpected death, and severe injury. In addition, it leads to failure to achieve competitive advantage (Rimal & Lapinski, 2009; WHO, 2000). This poor knowledge sharing culture among healthcare professionals exists for several reasons such as lack of management support to share knowledge, lack of knowledge sharing culture, lack of time, poor Information Communication Technology (ICT) infrastructure, and lack of motivation to share knowledge (Laki, 2008; Norbert & Lwoga, 2013).

In regard with inadequate and unsatisfactory knowledge sharing behavior among Tanzanian healthcare professionals. This study specifically is using recorded data between 2008 and 2013 to determine the prevalence of insufficient knowledge sharing behavior among healthcare professionals in Tanzanian healthcare institutions. Norbert and Lwoga, (2013) reported that only 21.9% of healthcare professionals had interest to engage in knowledge sharing practices. In the same study, it was also indicated that only 30.7% of medical doctors and nurses physically shared health information, including patients' diagnosis, disease information and management of diseases. Therefore, the implementation of knowledge sharing behavior among healthcare professionals is becoming more important to overcome the low level of knowledge sharing practice and improve performance in healthcare institutions. A well-established knowledge sharing behavior among healthcare professionals within healthcare institutions will increase the quality of healthcare services.

Apart from that, the Tanzanian healthcare sector is facing a tremendous brain drain as many trained medical doctors and nurses are leaving the country to work abroad, particularly in the developed countries (Kalipeni, Semu, Mbilizi, Clemens & Pettersson, 2012). It is reported that as of 2012, about 67% of Tanzanian born medical doctors and nurses are working abroad and only 33% of native-born doctors are employed in the country with over 40 million population (Ministry of Health and Social Welfare, 2013). Currently, brain drain contributes about 77% of the shortage of healthcare professionals in Tanzanian hospitals (Sirili, Kiwara, Nyongole & Frumence, 2014). According to the Ministry of Health and Social Welfare (2013), the ratio for shortage of healthcare

professionals is 1: 20,000 which means that one medical doctor serves 20,000 patients. This worrisome situation is mainly contributed by the brain drain (Sirili et al., 2014).

In fact, the brain drain has led the Tanzanian government to lose more than 1,500 healthcare workers per year (Ministry of Health and Social Welfare, 2013a) which resulting in the inequity in the distribution of healthcare professionals in terms of numbers and geographical distribution, and in knowledge and skills mix of health professionals (Sirili et al., 2014). Not only it leads to the shortage of medical doctors and nurses, it also leads to the increase of morbidity and mortality rates since there are not enough qualified professionals to diagnose and combat diseases (Elinaza, 2014). As a result, it will be difficult to realize the Millennium Development Goals (MDGs) in healthcare services by 2025 (Juma et al., 2012).

In order to reduce the negative effects of brain drain on the country's healthcare sector, including loss of critical healthcare knowledge, skills and expertise, there is a strong need for the government to indoctrinate the habit of knowledge sharing behavior among the Tanzanian healthcare professionals. Eventually, the inculcation of knowledge sharing behavior will enhance healthcare knowledge to remain in the organization before healthcare professionals quit from the healthcare organization, in particular, and the nation, in general. Thus, there is a great need to carry out this study in order to propose mechanisms that will facilitate knowledge sharing behavior.

Even though, Ministry of health and welfare has invested heavily in reform programs and competency based planning(education) to among medical doctors and nurses, the competency base planning and reform programs have not facilitated knowledge sharing behavior among healthcare professionals (Norbert & Lwoga, 2013; Omary, Lupiana, Mtenzi & Wu, 2010). Nevertheless, there are very limited empirical studies examine the knowledge sharing behavior among healthcare professionals (medical doctors and nurses), (Aktharsha et al., 2012; Currie, Finn & Martin, 2007; Wu & Zhu, 2012), especially in Tanzanian public healthcare institutions (Laki, 2008; Norbert & Lwoga, 2013). Other researches were carried out in Agriculture (Benard, 2013), and industry (Szogs & Wilson, 2006). The aim of the present study to investigate knowledge sharing behavior among Tanzanian public healthcare professionals. The main objective is to investigate factors that influence knowledge sharing behavior.

Several factors have been suggested as antecedents of knowledge sharing behavior. The prominent predictors of knowledge sharing behavior are related to the individuals, jobs and organization. Individuals, jobs and organizational factors have been crucial in comprehending the perceptions and behavior of subordinates in the workplace because they are able to influence employee's perceptions and behavior (Davenport, Prusak & Webber, 1998; Lengnick-Hall & Lengnick-Hall, 2003; Lönnqvist, Verkasalo, Wichardt & Walkowitz, 2013; Organ, Podsakoff & MacKenzie, 2006; Yoo & Torrey, 2002). To date, some of the individuals, jobs and organizational factors that were being studied in relation to knowledge sharing behavior at workplace include agreeableness (Cabrera, Collins & Salgado, 2006; Wang & Yang, 2007), technology (Aulawi, Sudirman, Suryadi

& Govindaraju, 2009; Parirokh, 2008; Wu & Zhu, 2012), communication (Al-Alawi, Al-Marzooqi & Mohammed, 2007; Cheng, Yeh & Tu, 2008; Liu & Liu, 2011; Wickramasinghe & Widyaratne, 2012), organizational culture (Cavaliere & Lombardi, 2001; Friesl, Sackmann & Kremser, 2011; Jeon, Kim & Koh, 2011; Mäkelä, Andersson & Seppälä, 2012; Suppiah & Singh Sandhu, 2011; Witherspoon, Bergner, Cockrell & Stone, 2013), job satisfaction (Mogotsi & Fletcher, 2011; P.-L. Teh & Sun, 2012), and trust (Al-Alawi et al., 2007; Amayah, 2013; Fathi, Eze & Goh, 2011; Gupta, 2008; Xu, Li & Shao, 2012).

In general, these studies found that agreeableness, communication, technology, organizational culture and trust play an important role in influencing knowledge sharing behavior. Despite the above mentioned empirical studies on the role of individuals, jobs and organizational factors in determining employees' knowledge sharing behavior in the workplace, available literature shows that only a few studies focused on the effect of individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate on knowledge sharing behavior. Even if there are studies on individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate on knowledge sharing behavior, the studies were limited to investigating knowledge sharing intention. However, in reality, employees are expected to engage in actual knowledge sharing, which is the knowledge sharing behavior (Teh, Yong, Chong & Yew, 2011; Xu et al., 2012; Yang & Lai, 2011) considering that knowledge sharing intention will not allow better comprehending of actual knowledge sharing of employees' participation at work place. Additionally,

individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate are considered in this study because they play a significant role in triggering knowledge sharing behavior among employees (Cabrera et al., 2006; Cavaliere & Lombardi, 2001; Foss, Husted & Michailova, 2010; Lin, Lin & Ye, 2015; Menguc, Auh & Kim, 2011; Yang & Lai, 2011).

Furthermore, several scholars generally agreed that individual, job and perceived organizational factors such as individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate at the workplace are more effective at influencing knowledge sharing behavior than other individuals, jobs and organizational factors (Cavaliere & Lombardi, 2001; Foss et al., 2010; Lin et al., 2015). However, as depicted earlier, there are limited empirical studies that have investigated individual capabilities, career advancement, personal values, job characteristics and organizational climate on knowledge sharing behavior. Such neglect was to a large extent unfortunate as individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate directly influence an employee to engage in knowledge sharing behavior (Cabrera et al., 2006; Lin et al., 2015).

Hence, individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate are crucial factors for the accomplishment of knowledge sharing behavior goals. In addition, such previous studies reveal conflicting findings (Amayah, 2013; Cabrera et al., 2006; Fullwood, Rowley & Delbridge, 2013; Isika, Ismail, Fauzi & Khan, 2013; Staples & Webster, 2008; Tohidinia & Mosakhani,

2010) and thus proposing possible operation of moderator that could strengthen the relationship. In this regard, subjective norms could strength the relationship between knowledge sharing behavior and its determinants. Therefore, subjective norms could be one of mechanisms which can assist healthcare workers to experience strong perception of the individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate towards knowledge sharing behavior.

Relevant literature also shows that subjective norms are well established factors that exercise a significant influence on knowledge sharing behavior in the workplace. Subjective norms refer to the individual thinking that other people anticipate him or her to perform a particular behavior which is executed by an important person or group (Ajzen, 1991). Subjective norms play a significant role in comprehending individual behavior because they are able to influence individual behavior to execute a particular behavior (Ajzen, 2002). Specifically, this study suggests that perceived subjective norms as potential moderator towards better understanding the relationship between knowledge sharing behavior and its determinants.

Therefore, subjective norms were suggested as a moderator in this study because it is yet to be investigated, and such consideration could lead to theoretical understanding; and reveal empirical evidence on how subjective norms strengthen the effects of perceived individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate on knowledge sharing behavior. The knowledge sharing

behavior would be stronger for individuals having higher sense of subjective norms than for low subjective norms individuals.

In addition, despite several studies that have investigated different factors that influence employee to engage in knowledge sharing behavior, most of them were conducted mainly in United States, Europe and Asia (Aktharsha & Anisa, 2012; Chang, Huang, Chiang, Hsu & Chang, 2012; Currie et al., 2007; Esmaeilzadeh, Sambasivan, Kumar & Nezakati, 2013; Jabr, 2007; Kim et al., 2012; Okoroj, Velu & Sekaran, 2014; Okoroji, Velu & Sekaran, 2013; Tuan, 2013a, 2013b). Hence, knowledge sharing behavior needs further investigation in Tanzania, specifically, among healthcare professionals because the results of previous researches may not be generalizable to the Tanzania context due to the differences in institutional culture, organizational structure, leadership style, working conditions, status of the institutions, characteristics of healthcare professionals, level of economy, technological level, and geographical location.

From theoretical perspectives, researchers have used various theories to understand the underlying causes of knowledge sharing behavior at workplace (Cai, Li & Guan, 2016). To date, some of the theories that have been employed to understand the underlining causes of knowledge sharing behavior include: social learning theory (Bandura, 1977); theory of planned behavior (Ajzen, 1991); norms of reciprocity (Gouldner, 1960), expectancy theory (Vroom, 1964); leader member exchange theory (Dienesch, Liden, & Liden, 1986); social capital theory (Coleman, 1990); and attachment theory (Bowlby, 1969). For this study, social exchange theory (Blau, 1964) and social impact theory

(Latane, 1981) are used. One possible reason for employing different theories apart from those mentioned above in understanding the underlying causes of knowledge sharing behavior is because of the complex nature of human behavior. As such, relying on one or two theoretical viewpoints to describe individual's perception and behavior is not satisfactory enough.

Additionally, based on the literature, it is indicated that there is a shortage of studies applying social impact theory and social exchange theory to understand the underlying factors of knowledge sharing behavior among healthcare professionals. Since, it is indicated that most of the previous studies (Ismail & Yusof, 2010; Liang, Liu & Wu, 2008; Tsai, 2001) that employed social impact and social exchange theories were conducted among non-healthcare professionals and in non-healthcare institutions, such as managers of a public financial organization, university students and IT professionals.

Therefore, based on the above-mentioned gaps and the suggestions for further researches, this study investigates the moderating impact of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate, and knowledge sharing behavior among Tanzanian healthcare professionals.

1.3 Research Questions

Based on the problems discussed above, the central question for this study would be, "what factors are considered critical in influencing knowledge sharing behavior?"

Specifically,

1. To what extent individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate relate to knowledge sharing behavior?
2. To what extent the subjective norms moderate the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior?

1.4 Research Objectives

This study is conducted with the intention to:

1. Examine the effect of the individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate on the knowledge sharing behavior; and
2. Investigate the moderating effect of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior.

1.5 Significance of Study

This study focuses on the investigation of individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate on knowledge sharing behavior. It also examines the moderating effect of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior. The findings would contribute to both theory and practice. From a theoretical perspective, the potential findings from this study will contribute to the current body of knowledge on knowledge sharing behavior. Furthermore, this study contributes to the existing body of knowledge by providing empirical support on the role of individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate in mitigating knowledge sharing behavior. By integrating subjective norms as moderator of the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior, this study will help researchers in identifying factors that are more likely to be moderated towards knowledge sharing behavior.

The moderating effect of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior could be explicated from two theoretical perspectives. These two theoretical perspectives are social exchange theory (Blau, 1964) and social impact theory (Latane & Nida, 1980). Social exchange theory

suggests that employees are likely to engage in knowledge sharing behavior when they perceive that individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate installed by their institution is effectively imposed. Social impact theory suggests that knowledge sharing behavior is implemented from imitation and modeling.

Thus, individuals imitate their most important referent person or group behaving in helping subordinates through sharing knowledge. It is likely to motivate employees to reciprocate by engaging in the same behavior of sharing knowledge. The findings of this study also validate the social exchange theory (Blau, 1964) and social impact theory (Latane & Nida, 1980) in several aspects. From the perspective of social exchange theory, the present study confirms the positive and significant relationships between individual capabilities, career advancement, personal values, perceived organizational climate and knowledge sharing behavior in organizations.

As such, the present findings validated and extended the social exchange theory by portraying that knowledge sharing behavior is determined by the perception towards the senior employees (senior healthcare professionals) or top management who supports junior employees in growing their capabilities, career, pleasure to help others, and the mutual trust environment. The current study validates social impact theory (Latane & Nida, 1980) by demonstrating the moderating role of subjective norms in the relationship between individual capabilities, job characteristics, perceived organizational climate and knowledge sharing behavior. Therefore, the findings of this study validated and extended

the social impact theory by depicting that knowledge sharing behavior is determined by perception of social influence from the very important referent person or group who is engaging in sharing knowledge behavior.

Practically, the findings of the study may also provide an effective contribution to the healthcare management, especially in Tanzania on the mechanisms for increasing employee knowledge sharing behavior. This study will provide empirical evidence on the role of individual capabilities, career advancement, personal values, job characteristics, and perceived organizational climate on knowledge sharing behavior. Thus, helping the healthcare institution's management to identify the most important factors in encouraging knowledge sharing behavior among healthcare professionals. This is a broader contribution that extends beyond the Tanzanian context.

1.6 Scope of Study

The aim of this study is two-fold. First, to investigate factors that might relate to knowledge sharing behavior. Five independent variables, namely individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate are tested against knowledge sharing behavior. Second, is to investigate the moderating effects of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior. Data for this quantitative study were collected through the distribution of questionnaires to 650 healthcare professionals

from five public hospitals in Tanzania, namely Muhimbili National Hospital (MNH), Ligula Referral Hospital (LRH), Mnazi Mmoja Hospital (MMH), SekouToure Regional Hospital Mwanza (SRHM) and Mbeya Referral Hospital (MRH). The study was cross-sectional, where the data were collected at one point of time. The data collected for this study were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). Statistical software is suitable in dealing with complex models involving many variables.

1.7 Definition of Key Terms

The following are the key terms and their definitions used in this study.

Knowledge sharing behavior: Knowledge sharing behavior is the degree to which personnel involves in actual knowledge sharing with other institutional workforces (Aktharsha et al., 2012).

Individual capabilities: Individual capabilities are personal perceptions of experience, network, skills, abilities, expertise, knowledge, and awareness that he or she possesses as the means for achieving a desirable outcome and individual development (Mayo, 2000).

Career advancement: Career advancement is an employee upward movement in the organizational ladder that is accompanied by an increase in salary and status (Zhao & Zhou, 2008).

Personal values: Personal values are exclusive beliefs that control individual behavior or actions (Pinto, Nique, Añaña, & Herter, 2011).

Job characteristics: Job characteristics are task identity, task significance, skills variety, task autonomy and individual performance feedback delivered by the organization (Rehman & Mahmood, 2011).

Perceived organizational climate: Perceived organizational climate is an individual perception towards institutional practices, policies and procedures (Shadur, Kienzle, & Rodwell, 1999).

Subjective norms: Subjective norms are defined as individual perceptions on social pressure to execute or not to execute particular behavior or action (Ajzen, 1991).

Healthcare professionals: Healthcare professionals are medical doctors and registered nurses (Lemmergaard, 2009).

1.8 Organization of Chapters in Thesis

This chapter is the first of five chapters in this thesis. Chapter 2 gives a general review of the literature on knowledge sharing behavior. The concepts of knowledge, knowledge management and knowledge sharing behavior are also presented. Discussion in Chapter 2 continues with past empirical findings on factors that might relate to knowledge sharing

behavior. The chapter also discusses the research framework tested in the study and its' underpinning theories. The chapter concludes with the development of the research hypotheses.

Chapter 3 describes the method for the study, namely the research design and procedure. The chapter reports the selection of participants, sample size and technique and the development of questionnaire for this research. Chapter 3 ends with a brief description of the strategies and procedures used to analyze the data that were collected from the survey.

Chapter 4 reports the results of the study. This includes descriptive statistical analysis of the respondents and the measurement model such as assessment of the individual item's reliability, internal consistency reliability, convergent validity, discriminant validity, the significance of path coefficients, the amount of R-squared value, effect size and predictive relevance of the model. The results are summarized in a number of tables to facilitate interpretation.

Chapter 5 discusses the interpretation of the research findings of the study. The findings were compared to those found in the past research reviewed in chapter 2. New findings are also discussed. The chapter ends with a discussion on limitation of the study, their implications for researchers and practitioners, and some suggestions for future research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter discusses issues related to knowledge sharing behavior as presented and discussed in the management literature. These issues are reviewed to provide a theoretical foundation for the research. It begins by describing the concept of knowledge, knowledge management and knowledge sharing behaviors followed by findings from past studies on knowledge sharing behavior. This chapter then reviews how individual capabilities, career advancement, personal values, job characteristics, organizational climate and subjective norms relate to knowledge sharing behavior. It concludes by discussing the underpinning theories, the research framework, and the development of hypotheses.

2.2 Knowledge, Knowledge Management and Knowledge Sharing Behavior

2.2.1 Knowledge

Many definitions of knowledge have been put forward in the literature. For example, Ling (2009) portrayed knowledge as valuable information mixed with experience, interpretation, context and reflection. Gera (2012) defined knowledge as the understanding of or capacity for taking action effectively in conflicting situations. It is acquired by those experienced in a particular field or undertaking appropriate studies. In

other writings, Bender and Fish (2000) regarded knowledge as information that is interpreted by individuals and its application follows the purpose for which it is needed. Knowledge can be traced to organizational rules, personal experience, job related documents and work procedures (Lu, Leung & Koch, 2006).

Knowledge can be categorized into three: first is data, which is regarded as raw material without meaning. Second is information with meaning and understanding; and third is knowledge itself. It occurs when information is manipulated with the relevant purpose in order to convince people. It is done through personal application, values and beliefs (Al-Alawi, Al-Marzooqi & Mohammed, 2007; Al-Zu'bi, 2011). Thus, knowledge comprises of specific information and past experiences that assist effective and efficient decision-making and correct actions (Al-Zu'bi, 2011). Knowledge has also been defined as "a fluid mix of experience, value, contextual information and expert insight that provides a framework for evaluating and incorporating new experience and information" (Olomolaiye & Egbu, 2005: 127).

According to Alavi and Leidner (2001), Carlsson, El Sawy, Eriksson and Raven (1996), and Hicks, Dattero and Galup (2007), knowledge is considered as valid belief that can enhance effective and efficient actions. Knowledge is a state of mind, a process, an object, capability, and the situation of accessing particular information. State of mind refers as a state of knowing through experience or undertaking training and it enhances an individual's ability to expand the knowledge and apply it to meet the organization's requirements. Knowledge, as an object, is considered as something which can be kept,

preserved for future use and manipulated. It signifies the storage of data, information, and explicit knowledge and enables the manipulation of one by another. Process, as one of the views on knowledge is relying on applications of the experts. The process perspective concentrates more on dynamic facets of knowledge, such as creating, adapting, learning, communication and sharing.

Knowledge, as capability, refers to the personal capability of learning, experience, interpreting and applying knowledge for organizational decision matters (Carlsson et al., 1996). Finally, accessibility condition relies on the organizational knowledge for easy access and retrieval of contents. As Markus (2001:58) remarks, ‘‘Only explicit knowledge is the province of information technology, including the communication systems by which people informally share their observations, and the more formal repositories in which structured knowledge is stored for later reuse.’’ These views suggest that organizations have the responsibility of managing knowledge. Moreover, knowledge can be stored in various means. In the modern world, knowledge is considered to be accumulated in repositories and documents as well as residing in the mind of people. It is displayed through individual actions and behavior (Al-Alawi et al., 2007).

In other writing, Ho (2013) considered knowledge to be the most important source and strategy that can assist organizations to remain competitive and achieve competitive advantage. However, as argued by Gera (2012), knowledge can only be considered as an instrument for competitive advantage when it is used effectively in problem solving,

decision-making, and performance improvement. It is regarded as one of the most valuable assets for the organization to flourish and it is a powerful engine of production (Kakabadse, Kouzmin, & Kakabadse, 2001). It enhances both individual and organizational performance and innovation (Voelpel & Han, 2005). Therefore, knowledge is considered as the basic instrument for creativity and innovation in building organizational value (Caemeli, Gelbard & Reiter-Palmon, 2013).

Knowledge is an intellectual asset of the employees that is different from one individual to another, and its exploitation is limited to the capacity of a particular person (Connelly, Zweig, Webster & Trougakos, 2012; Kakabadse et al., 2001). Currently, knowledge is considered as a fundamental economic and political resource. This signifies that nothing will be achieved either in the economy, or political arena without the presence of knowledge (Gloet & Berrell, 2003). The positive impact on the economy and politics, therefore, relies on knowledge. For Bender and Fish (2000) and Aktharsha et al. (2012), knowledge is a strategic resource for organizations to remain and gain competitive advantage under prevailing and tremendous global competition which exists among firms. As such, it is a useful tool for better organizational decisions and strong competitive edge (Gera, 2012). Knowledge can be acquired by various means, such as reading, training, education, counting, gathering, the reckoning, explanation, rules or principles, reasoning and long-time experiences (Bender & Fish, 2000; Kakabadse et al., 2001). The following section discusses the classification of knowledge.

a. Tacit Knowledge

Tacit knowledge refers to the specific capabilities, skills, knowledge, assumptions and expertise that reside in a person's mind (Al-Zu'bi, 2011; Huang, Davison & Gu, 2011). It is a type of knowledge which is considered difficult to formalize and transmit (Borges, 2013). For example, if it is fixed in stories, it can be transmitted when elaborations of those stories are conserved in audio or written versions (Huang et al., 2011). Tacit knowledge is sometimes known as implicit knowledge which refers to unarticulated knowledge concealed in human minds (Li & Gao, 2003; McInerney, 2002). Tacit knowledge is obtained through sharing experiences, imitation and reflection from knowledge holders (Alwis & Hartmann, 2008).

According to Huang et al. (2011), tacit knowledge can be converted to explicit knowledge through the knowledge creation process that flows through four stages: socialization, externalization, combination and internalization. However, it is recommended that transformation of tacit knowledge to explicit knowledge through those stages can enhance the knowledge of the loss of its originality (Voelpel & Han, 2005). However, many researchers have declared that all tacit knowledge can flow through those stages (Al-Zu'bi, 2011; Huang, Davison & Gu, 2011).

There are some factors which are considered as creating drawbacks for tacit knowledge sharing. These include time, physical distance, value and cultural differences. On the other hand, there are factors that seem to foster tacit knowledge sharing and these include

trust among members, face-to-face interaction, time, effort and informal organizational structures (Al-Zu'bi, 2011; Cyr & Choo, 2010; Huang et al., 2011).

b. Explicit Knowledge

Explicit knowledge is the knowledge that has been expressed, documented and recorded for formalization as organizational knowledge (Huang et al., 2011). This type of knowledge is considered very easy to codify and it can be found in the form of cases, reports or documents (Al-Zu'bi, 2011; McInerney, 2002). It is also considered as the type of knowledge which is produced by academic institutions and can be found in textbooks, research papers and opinions found in articles, which is shared among academicians and practitioners (Gera, 2012). Explicit knowledge can be disseminated by different mechanisms such as operating manuals, software, publications and informal discussions. These are considered as an effective means for knowledge sharing in academic institutions (Al-Zu'bi, 2011; Gera, 2012).

2.2.2 Knowledge Management

Knowledge management is the process of creating, using, sharing and protecting of knowledge (Liu, 2008). Knowledge usage involves application of knowledge in organizational activities (Masa'deh, Tarhini & Obeidat, 2016), while knowledge sharing relies on knowledge dissemination and collection; it is a significant factor for effective implementation of knowledge management (Mason & Pauleen, 2003). Knowledge

protection involves entrenching of knowledge in repositories and in individual minds (Al-Zu'bi, 2011; Argote, McEvily & Reagans, 2003). The fundamental objective of knowledge management is to ensure that knowledge is created, transferred, shared and applied to the entire organization for sustainability and success (Alavi & Leidner, 2001; Bock, Kankanhalli & Sharma, 2006; Masa'deh, Tarhini & Obeidat, 2016).

Knowledge management is also defined as the process of acquiring, sharing, utilizing and keeping of knowledge (Bock et al., 2005; Kim & Ko, 2014). The knowledge management theory emerged due to the tremendous use of knowledge in business and, it is considered as one of the most popular fields in literature (Al-Alawi et al., 2007). Thus, the value of knowledge is considered by the way an organization uses knowledge in activities such as producing goods and delivering services.

Strategically, how knowledge is managed is considered as an important tool of competitive advantage (Dube & Ngulube, 2012; Zhang & Jiang, 2015). Knowledge management has been considered by both academicians and practitioners (Su et al., 2013) since it enables organizational competitiveness in the dynamic global market (Leppänen, Hopsu, Klemola & Kuosma, 2008). Knowledge management relies on organizational improvement areas, including business or organizational process reengineering, total quality improvement, human resource management, and information systems (Metaxiotis, Ergazakis & Psarras, 2005). Knowledge management is a broad strategy which involves a combination of management tools and practices with the intention of developing knowledge assets of an organization (Gloet & Berrell, 2003). Knowledge

management is regarded as the process of developing, sharing and utilizing knowledge within the organization in order to sustain and gain competitive advantage, which are regarded as crucial for the survival of an organization (Edvardsson, 2008). Knowledge management is used in various organizational practices such as decision-making, innovation of products, and generating profits (Edvardsson, 2008). It is an important factor for determining the performance of an organization (Wang, Yang & Management, 2007b).

Knowledge management involves storing of knowledge, and when the stored knowledge is utilized by the firm, it has significant impact on the organization as it serves to reduce the cost of communication and enables organizations to uptake a large number of projects at the same time (Edvardsson, 2008). Moreover, sustainability in competitive advantage is brought about by knowledge management and the ability of institutions to learn and adapt specific ways or methods of performing their activities (Borges, 2013).

Furthermore, effective knowledge management implementation relies on key factors, such as motivation, ability and opportunity. Ability refers to the individual's capability to generate, hold and disseminate knowledge gathered from training and past experiences of others (Nadler, Thompson & Boven, 2003). Motivation focuses on extrinsic incentives from an organization to its workers who demonstrate a willingness to create and share knowledge with others (Menon & Pfeffer, 2003). Opportunity refers to an individual's chance to generate, keep and contribute knowledge to others (Nadler et al., 2003). This is

drawn from an individual attempt, experience and learning from each other through members' interaction (Argote et al., 2003).

Many organizations have realized the significance of knowledge management, including performance improvement through easy retrieval of needed knowledge, better quality of services and products, employee satisfaction through the acquisition of knowledge from other organizational members and getting rewards, reducing prospective loss of intellectual capital when subordinates quit the organization, and enhancing decision-making. This, in turn, leads to the gaining of competitive advantage (Yang, 2008).

In short, knowledge management is based on exploitation and improvement of organizational knowledge in order to realize organizational goals. In fact, knowledge management involves managing of both tacit knowledge and explicit knowledge (Ikujiro, Nonaka & Noboru, 1998). Management is always concerned with knowledge identification, creation and sharing. For effective knowledge management, there is a high demand for a system which will enhance knowledge creation and conservation in repositories, as well as improvement and enabling knowledge sharing and learning (Rowley, 2000).

2.2.3 Knowledge Sharing Behavior

Knowledge sharing behavior is the process whereby employees are involved in actual exchange and creation of knowledge in order to enhance intellectual capital, brain power and individual as well as organizational performance (Lin, 2008). Thus, knowledge

sharing behavior is considered as the process whereby organization members tend to mutually exchange or propagate ideas, experiences, technology, skills and intellectual capital (Al-Zu'bi, 2011; Henttonen, Kianto & Ritala, 2016). The process involves contributing and collecting knowledge (Hooff & Ridder, 2004; Tangaraja, Mohd Rasdi, Ismail & Abu Samah, 2015). Knowledge donating means sharing knowledge with others; while knowledge collecting is the receiving of knowledge from other members of an organization.

However, according to Su et al. (2013), knowledge sharing is not merely dissemination of information to others, but is a process based on an individual knowledge sharing, intention which is the personal readiness to support others to gain and sustain capabilities. It focuses on teaching, learning and sharing new and old knowledge (Su et al., 2013). Thus, personal willingness is a key factor for successful knowledge sharing among organizational members, which in turn, enables knowledge sharing behavior and benefits organizations by enhancing organizational knowledge and performance (Park et al., 2009).

Moreover, knowledge sharing behavior is considered as a major component of knowledge management and successful knowledge sharing implementation leads to the creation of knowledge, organizational learning and organizational performance, all of which can help the organization to sustain and gain competitive advantage (Huang et al., 2013; Kim & Ko, 2014; Su et al., 2013). Most knowledge which is shared in the

organization is related to the organizational rules and policies, operational procedures, individual experiences and work-related manuals (Al-Zu'bi, 2011).

Knowledge sharing behavior is the most important strategy used for the betterment of an organization. Knowledge sharing behavior can be successfully implemented by both knowledge donors and collectors (Bock et al., 2006). Organizational performance will be achieved effectively and efficiently when employees are communicating various ideas, insights, experiences, expertise, practices and preferences (Liao, Fei & Chen, 2007; Lin, 2008). This will enable organizations to respond promptly to problems, bring forth more new ideas and insights and avoid repeating the same mistakes, thus, creating the passage to sustain competitive edge and achieve competitive advantage (Cyr & Choo, 2010). On the other hand, lack of knowledge sharing is a serious problem with the organization since it can lead to poor performance, organizational inefficiency and ineffectiveness, which in turn, lead to failure to withstand tremendous global level competition (Al-Zu'bi, 2011).

Knowledge sharing behavior is regarded as an important approach for organizations to sustain competitive advantage and performance improvement. However, there are barriers which impede successful knowledge sharing among organizational members, such as lack of motivation to share, ability to learn and apply new knowledge as well as source reliability (Kwok & Gao, 2006). Thus, knowledge sharing behavior is considered a feeble link in knowledge management since it does not take place naturally due to the individuals' tendency to hoard and reject knowledge from other members naturally, or

due to the fear of losing power, lack of incentives and limited time (Bock et al., 2006). Yang (2007) depicted some unintentional factors that might distort originality of knowledge during the knowledge sharing process, which are considered as challenges, such as misinterpreted information, failure to remember the real content of the knowledge, and total disregard for the knowledge by members. These factors lead to incomplete knowledge sharing and transfer.

Therefore, knowledge sharing behavior among staff can be successful if these impediments are eradicated through extrinsic reward, channel richness and ensuring absorption capabilities among the recipients of knowledge (Masa'deh et al., 2016). Absorption capability refers to a person's learning ability and utilizing shared knowledge for the betterment of an organization. Channel richness focuses on the relationship between the knowledge contributor and knowledge recipient, and their cultural backgrounds. It is important to ensure employees work together in dependent tasks in order to foster friendliness, which in turn, can lead to knowledge sharing behavior (Kwok & Gao, 2005).

Knowledge sharing behavior can be carried out successfully when trust exists between the knowledge provider and knowledge recipient (Quiqley et al., 2007; Szulanski et al., 2004). The degree to which the knowledge recipient trusts the knowledge provider plays a great role in willingness to absorb new knowledge and apply it. It is noted that when a recipient has low trust on the knowledge provider, he or she tends to have a lower absorption of new knowledge and its utilization. On the other hand, when the trust is

high, the absorption initiatives and application of the new knowledge, increase correspondingly (Quiqley et al., 2007).

Norms of knowledge sharing should be developed with the team since it can influence easy transfer of knowledge among the members (Argote et al., 2003). This can result in team mingling, leading team members to be motivated to share knowledge with their colleagues (Quiqley et al., 2007). The tendency of interaction enhances trust and friendliness which facilitate smooth knowledge sharing. Norms refer to the shared behavior expectations developed due to the regular interaction of team members which later becomes stable (Quiqley et al., 2007). When the knowledge provider has strong norms, it will tend to overcome perceived costs of sharing knowledge with the team members (Borgatti & Cross, 2003; Quiqley et al., 2007). In knowledge sharing behavior, knowledge is regarded as a public good, an asset which is available to all employees, regardless the employee is contributing or not contributing to the organizational knowledge (Galletta et al., 2003; Marks et al., 2008). Thus, people may become free riders, and they may absorb knowledge without contributing to that knowledge (Bock et al., 2005).

According to Marks et al. (2008), the tendency to share knowledge is facilitated by various factors, such as managerial promptness, group identification and social value orientation. Managerial promptness is the situation whereby managers tend to control subordinates by reminding them about the importance of the goal, rivals as well as beating competitors by sharing knowledge, which in turn, can lead to high knowledge

sharing among members. Group identification encourages cooperation among people, which leads to readiness to share knowledge. Social value orientation is the situation whereby member groups are more collectivist. They are more satisfied when group goals are met. These people will then be willing to share knowledge with their fellow members in the organization.

Many scholars and practitioners have emphasized on the importance of knowledge sharing behavior among employees in order to increase organizational effectiveness (Gloet & Berrell, 2003; Gupta, 2008; Tsai, 2001; Tuan, 2013; Yang, 2007). According to Huang et al. (2013), an organization will be able to increase effectiveness and efficiency as well as productive when it encourages knowledge sharing and utilization of new knowledge among recipients. In trying to develop the much-needed practice of knowledge sharing, it is noted that motivation can play a great role (Gagne, 2009; Huang et al., 2013; Javernick-will & Asce, 2012).

In today's competitive organizational environment, there is higher requirement for knowledge sharing among members of an organization in order for the organization to survive (Chen, 2011; Liu, 2008). In fact, knowledge sharing is considered as a legitimate organizational activity that makes many organizations strive hard in order for knowledge sharing behavior to take place. It is done by encouraging organization members to work in teams to solve difficult problems (Liu, 2008) and working together in a team facilitates knowledge sharing among members.

Although knowledge sharing behavior is the keystone of the majority of the organizations (Riege, 2005). However, some of the organizations are not capable to practice as knowledge based institutions because knowledge sharing behavior is not practiced accordingly. It is regarded that the sharing of knowledge is mostly an organizational core issue (Alavi & Leidner, 2001). Though, the process of sharing knowledge is too difficult, especially tacit knowledge whenever a person is not willing to share. Knowledge sharing behavior among employees has been recognized as the positive mechanism for the organization to survive, but the factors that reinforce knowledge sharing behavior in the institutional context are not well understood (Bock, Lee, Zmud, & Kim, 2005). Therefore, it is not something stranger that employees are not ready to engage in knowledge sharing behavior with other organizational members. It is essential to comprehend some driving factors that make individuals to participate in knowledge sharing behavior and how an institution can enhance knowledge sharing behavior from both practical and research viewpoint.

Employees do not always ready to participate in knowledge sharing behavior and they may not share their knowledge as much as organization's expectations. It is reinforced by Nordin, Daud, and Osman (2012) that the main problem in knowledge management is motivating people to practice knowledge sharing behavior, which leads the practice to be in minimal standard for the most of the organizations. The lower level of knowledge sharing behavior also has become a problem in healthcare institutions (Aktharsha, Ali & Anisa, 2012). Healthcare institutions, including hospitals normally involve in utilizing and delivering of both tacit and explicit knowledge. In the healthcare institutions, there

are expert medical doctors and nurses that own both tacit and explicit knowledge with experiences in their fields, therefore, it is the best place for practicing the knowledge sharing behavior.

Unfortunately, even though knowledge sharing behavior is very crucial to both healthcare professionals and their institutions, the level of knowledge sharing behavior is very low to among Tanzanian public healthcare professionals (Laki, 2008; Norbert & Lwoga, 2013). This is because, lack of management support to share knowledge, lack of motivation to share knowledge, and lack of knowledge sharing culture among healthcare professionals. Even though, Ministry of health and welfare has invested heavily in reform programs and competency based planning to among medical doctors and nurses, the competency base planning and reform programs have not facilitated knowledge sharing behavior among healthcare professionals (Norbert & Lwoga, 2013; Omary, Lupiana, Mtenzi & Wu, 2010).

Nevertheless, there are very limited empirical studies examine the knowledge sharing behavior among healthcare professionals (medical doctors and nurses), (Aktharsha et al., 2012; Currie, Finn & Martin, 2007; Wu & Zhu, 2012), especially in Tanzanian public healthcare institutions (Laki, 2008; Norbert & Lwoga, 2013). Other researches were carried out in Agriculture (Benard, 2013), and industry (Szogs & Wilson, 2006). The aim of this study to investigate knowledge sharing behavior among Tanzanian public healthcare professionals. The main objective is to investigate factors that influence knowledge sharing behavior. In prior studies, it has been indicated that knowledge

sharing behavior is influenced by both social and behavioral factors (Hassandoust et al., 2011).

Next, previous studies on knowledge sharing behavior are discussed.

2.2.3.1 Studies on Knowledge Sharing

Many studies have depicted various factors that influence knowledge sharing behavior (ARahman, Osmangani, Daud, Chowdhury & Hassan, 2015; Barker, 2015; Cao & Xiang, 2012; Fullwood et al., 2013; Goh & Sandhu, 2013; Isika et al., 2013; Killingsworth, Xue & Liu, 2016; Kuo, 2013; Liu & Liu, 2011; Liu & Fang, 2010; Mogotsi & Fletcher, 2011; Ramasamy & Thamaraiselvan, 2011; Teh & Sun, 2012; Wang, Huang & Yang, 2012; Witherspoon, Bergner, Cockrell & Stone, 2013; Xu et al., 2012; Xiaohong Zhang, Long, Wang & Tang, 2015). Some studies have focused on individual factors (Cabrera et al., 2006; Wang et al., 2007; Wolfe, 2008) and some have focused on organizational factors. It is very important to outline why employees might be willing to share knowledge since the recognition of the factors that influence knowledge sharing behavior will assist both practitioners and academicians to understand what is required to encourage organizational citizenship behavior (Hassandoust et al., 2011). Knowledge sharing behavior can be successfully implemented with the help of hard factors, such as utilization of computers; and soft factors, which refer to the people's relationship or an individual's relationship with his or her department or organization, which species are regarded as organizational and individual factors (Hooff & Ridder, 2004).

Various factors are regarded as the individual factors that influence knowledge sharing behavior among employees. Al-Zu'bi (2011) and Lin (2008) proposed organizational citizenship behavior. This is a personal behavior which is not connected to organizational incentives, but still has a positive outcome on organizational effectiveness, such as altruism, courtesy, sportsmanship, consciousness and civic virtue that can influence knowledge sharing behavior among the organizational staff. In the above studies, the researchers found that all five components of organizational citizenship have significant influence on knowledge sharing behavior. The implication of their finding is that low knowledge sharing behavior among the staff is facilitated by lack of organizational citizenship behavior. It is the role of the institutions to encourage cooperate culture which will enhance organizational citizenship, which in turn, can lead to knowledge sharing behavior.

Organizational factors are those factors created by the organization to foster knowledge sharing behavior among subordinates. Xu et al. (2012) suggested motivation, social support, disposition to trust, and cognitive and affective trust as the factors that can influence knowledge sharing among the staff. In their study, it is indicated that trust as cognitive and affective trust has a positive significant influence on knowledge sharing behavior among the subordinates and trust plays a greater role in knowledge sharing behavior. Thus, it is considered that when trust among subordinates is high, employees will be willing to share and utilize the new knowledge.

Wang (2004) considers the organizational culture as a major tool for fostering knowledge sharing among members in an organization because it upholds knowledge development and sharing among organizational members. It is suggested that collectivism, as one of the facets of organizational culture has an influence on knowledge sharing behavior, since culture enables a person to focus more on others, which in turn, leads to a cohesive knowledge sharing behavior (Voelpel & Han, 2005). Al-Alawi et al. (2007) propounded specific organizational cultural factors that influence knowledge sharing behavior. They declared that information systems, rewards, communication, organizational structure and trust as factors of organizational culture (Gupta & Govindarajan, 2000), have a positive influence on knowledge sharing behavior among organizational members. It implies that knowledge sharing behavior is connected to organizational culture.

Subjective norms, organizational climate, and anticipated reciprocal relationship among members of an organization are factors that can facilitate knowledge sharing behavior (Block et al., 2005). In a study conducted by Block et al. (2005) on the factors that promote and prohibit knowledge sharing, intention, it is found that subjective norms, organizational climate, and anticipated reciprocal relations have a positive relationship with knowledge sharing behavior. Thus, it is the role of an organization to promote interpersonal relationship and cohesive interaction so as to enable knowledge sharing behavior.

The work environment and secured trust are factors that can foster knowledge sharing behavior among subordinates in an organization (Demirel & Goc, 2013). The work

environment refers to the environment which allows interaction among employees to share knowledge which should be promoted by the organization; while secured trust is a trust which exists in the employee-employer relationship. This type of trust draws out organizational commitment, which in turn, enhances knowledge sharing behavior among organizational members (Demirel & Goc, 2013). Thus, knowledge sharing will enhance both employees' and organizational development.

Hassandoust et al. (2011) used the Theory of Reasoning, Action (TRA) to examine factors that influence knowledge sharing behavior. Their study depicts trust, competition, anticipated reciprocal relationship and willingness to share knowledge. Identification, collectivism and organizational culture are factors that have an influence on knowledge sharing. Their findings indicate that trust, anticipated reciprocal relationship and willingness to share knowledge are considered as personal attitude; while organizational culture and identification are regarded as subjective norms which have a positive influence on knowledge sharing intention. Moreover, the results show that competition has no effect on knowledge sharing behavior.

Aktharsha et al. (2012) asserted that knowledge sharing behavior is enhanced by intention, attitude and subjective norms towards knowledge sharing and perceived behavioral control. In their study, which examined factors that influence knowledge sharing behavior of knowledge workers, it is found that intention, attitude and subjective norms towards knowledge sharing and perceived behavioral control to have significant influence on knowledge sharing behavior. Moreover, the study justifies that the

determinants of knowledge sharing behavior are intention and perceived behavioral control. In addition, the findings reveal that attitude toward knowledge sharing, subjective norms and perceived behavioral control are factors that influence intention to share knowledge.

Su et al. (2013) established the Leader-Member Exchange (LMX) and Chinese Tradition as the factors which have greater influence on knowledge sharing behavior. LMX refers to the good exchange relationship between leaders and subordinates. In the study conducted on 304 employees in the Yangzi Delta area in China, it is found that LMX and Chinese Tradition have a positive impact on knowledge sharing behavior. Furthermore, the findings provide awareness on the role of LMX in enhancing knowledge sharing among employees, which in turn, leads to organizational knowledge.

Auh and Menguc (2013) studied pay-for-performance, strength of knowledge sharing norms, and co-worker relationship quality as the factors that contribute knowledge sharing behavior. Pay-for-performance refers to the compensation in relation to the performance outcome; strength of knowledge sharing norms is undocumented rules initiated and adopted by members to govern knowledge sharing behavior; and co-worker relationship quality refers to the extent of friendly relationship. In their study conducted to examine the impact of pay-for-performance under the influence of strength of knowledge sharing norms and co-worker relationship quality, it is indicated that pay-for-performance does not influence knowledge sharing behavior. Moreover, strength of

knowledge, norms and co-workers' relationship quality reveals a negative relationship with both pay-for-performance and knowledge sharing behavior.

Park et al. (2009) proposed three components of organizational justice; distributive justice, procedural justice and interaction justice that can foster knowledge sharing behavior. Distributive justice refers to the equality in offering rewards to the subordinates; procedural justice relies on fairness in dealing with individual decision matters; and interaction justice focuses on fairness in treating subordinates. In their study on the influence of organizational justice on knowledge sharing behavior, it is depicted that all facets of organizational justice tend to influence knowledge sharing behavior positively and significantly. Thus, it draws the attention of the management of organizations to ensure organizational justice, especially interaction justice, is practiced fostering knowledge sharing behavior.

Cao and Xiang (2012) conducted a study to investigate the influence of knowledge governance, including formal and informal knowledge governance, on knowledge sharing to among 339 employees in 39 Chinese strategic firms. The findings indicated that both formal and informal knowledge governance has a positive significant effect on knowledge sharing. The findings imply that formal and informal knowledge governance is important enablers of knowledge sharing in an organization.

Killingsworth et al (2016) conducted a study involving 115 students who undertaking business studies from three large universities in USA, China and Peru. They investigated

the impact of team environment factors of trust and affiliation and the motivation factors of perceived reciprocal benefits and importance of enjoyment on knowledge sharing behavior. The findings indicted that trust, reciprocal benefits and enjoyment are positively and significantly related to knowledge sharing behavior. On the other hand, affiliation is not significantly related to knowledge sharing behavior. The findings suggest that trust, reciprocal benefits and enjoyment are significant determinants of knowledge sharing behavior.

Evidence from those previous studies indicate that both organizational and individual factors have been considered by researchers and practitioners as important for enabling knowledge sharing behavior among organizational members (Cabrera et al., 2006; Fullwood, Rowley & Delbridge, 2013; Goh & Sandhu, 2013; Isika et al., 2013; Kuo, 2013; Liu & Liu, 2011; Liu & Fang, 2010; Mogotsi & Fletcher, 2011; Ramasamy & Thamaraiselvan, 2011; Teh & Sun, 2012; Wang & Yang, 2007; Wang, Huang, & Yang, 2012; Witherspoon, Bergner, Cockrell & Stone, 2013; Wolfe & Loraas, 2008; Xu, Li & Shao, 2012). However, there are limited studies carried on healthcare institutions and focusing on healthcare professionals. Most of these studies were conducted in non-healthcare contexts such as academic context (Fullwood et al., 2013; Goh & Sandhu, 2013; Ramasamy & Thamaraiselvan, 2011) and others in the IT context (Hassandoust, Logeswaran & Kazerouni, 2011; Wang & Yang, 2007; Xu et al., 2012).

Furthermore, comprehensive review on the previous studies shows that even those few studies on knowledge sharing behavior in the healthcare sector were carried out in the

Unites States of America (USA), Europe and Asian countries (Aktharsha & Anisa, 2012; Chang, Huang, Chiang, Hsu & Chang, 2012; Currie et al., 2007; Kim et al., 2012; Okoroj, Velu & Sekaran, 2014; Okoroji, Velu & Sekaran, 2013; Tuan, 2013a, 2013b); while there is a shortage of studies carried out in African countries, particularly in Tanzania. Since there are differences in organizational structure, institutional culture, technological level, leadership style, working conditions, status of the institutions, characteristics of healthcare professionals, level of the economy, and geographical location, it is recommended that knowledge sharing behavior studies can be carried out in other cultural and geographical locations in order to generalize the findings (Okoroji et al., 2013; Tuan, 2013b).

2.3 Individual Capabilities

Individual capabilities refer to the personal abilities to engage in knowledge sharing behavior (Kankanhalli, Tan & Wei, 2005). These include varied collection of proficiencies which motivate an individual to share knowledge and perform particular activities (Qizilbash, 2007). Individual capabilities signify personal experience, network, skills, abilities, expertise, knowledge, commitment, self-efficacy and awareness that a person possesses as the means for achieving desirable outcomes and individual development (Bontis & Serenko, 2007; Mayo, 2000; Noor & Salim, 2011). In fact, individual capabilities can show the potential of a person (Hartog, 2001). Due to the potential significance of individual capabilities, system of performance must be

established to connect it to personal competencies and abilities in order to develop individual behavior (Lengnick-Hall & Lengnick-Hall, 2003).

Individual capabilities have been depicted by different authors as having a positive influence on individual behavior, such as in knowledge sharing behavior. For example, it is declared that individual capabilities tend to influence the performance of an organization (Mayo, 2000). This is due to the individual's positive belief that his or her skills, awareness, expertise and self-efficacy can lead to better performance. In this case, individual capabilities can also act as the means for achieving knowledge sharing behavior in the healthcare sector as well. In addition, awareness as an antecedent of individual capabilities is considered as a potential tool for achieving effective knowledge management programs (Chong & Pandya, 2003).

2.3.1 Past Studies on Individual Capabilities and Knowledge Sharing Behavior

In the past studies, in individual capabilities dimension has been considered by researchers and practitioners as important for enabling knowledge sharing behavior among organizational members (Cabrera et al., 2006; Chiang et al., 2011; Gupta et al., 2012). However, till today, only a few studies have established the link between individual capabilities and knowledge sharing behavior within the context of the healthcare sector, specifically in Tanzanian healthcare institutions. Furthermore, most of the studies that have utilized individual capabilities have been conducted for academic (Isika et al., 2013; Mogotsi & Fletcher, 2011) and IT contexts (Cabrera et al., 2006;

Gupta, 2012; Jo & Joo, 2011; Yang & Lai, 2011). In fact, most of these studies were carried in developed countries (Cabrera et al., 2006; Gupta, 2012; Isika et al., 2013; Jo & Joo, 2011; Yang & Lai, 2011) with only a few studies in less developed countries like Tanzania (Benard, 2013).

Previous studies have also shown mixed results on the relationship between individual capabilities and knowledge sharing behavior (Akhavan et al., 2013; Cabrera et al., 2006; Chiang et al., 2011; Gupta et al., 2012; Isika et al., 2013; Jo & Joo, 2011; Kwok & Gao, 2005; Liu & Fang, 2010; Mogotsi & Fletcher, 2011; Teh & Sun, 2012; Yang & Lai, 2011). The study conducted by Isika et al. (2013) involving 300 academic staff from Universiti Malaya in Malaysia indicated that experience, as an antecedent of individual capabilities has no influence on knowledge sharing behavior; while the study by Cabrera et al. (2006) among IT staff in MNCs in USA revealed that experience has a significant effect on knowledge sharing behavior. All these authors have suggested the need for future studies in different contexts, such as in healthcare institutions in order to better generalize the findings.

On the other hand, studies conducted by Cabrera et al. (2006) and Chiang et al. (2011) have tested commitment as an antecedent of individual capabilities; they showed that it has significant impact on knowledge sharing behavior. However, the studies by Gupta et al., (2012) and Jo & Joo, (2011) involving 228 IT employees in India and 452 Korean manufacturing employees respectively indicated that commitment has no significant influence on knowledge sharing behavior. Studies by Mogotsi & Fletcher (2011) and Teh

& Sun (2012) revealed that commitment has a negative effect on knowledge sharing behavior. Motivation, also as an antecedent of personal capabilities is found to be not significant on knowledge sharing behavior when tested on 2,000 Wikipedia members in Taiwan (Yang & Lai, 2011); and a 169-virtual community sample in China Chen et al., 2012). In their studies, Akhavan et al. (2013) and Liu & Fang (2010), showed motivation to have a significant impact on knowledge sharing behavior when examined among 317 research centre employees in Iran and 375 employees of the social affairs sector in Taiwan, respectively. Thus, more studies need to be carried out in different contexts and geographical settings such as in the Tanzanian healthcare sector to justify the findings.

2.4 Career Advancement

Career advancement is an employee's upward movement in the organizational ladder, accompanied by an increase in salary and status (Zhao & Zhou, 2008). In fact, career advancement can motivate an individual to undertake risky activities (Gibson & Cohen, 2003). Therefore, apart from being a mean for achieving promotion and salary increase, career advancement can also enable the acquiring of new skills and knowledge due to opting to perform new and more challenging tasks (Wang-Cowham, 2008). Previous studies indicated that career advancement was measured by five items adapted from Kankanhalli, Tan and Wei, 2005.

Career advancement can also enhance the growth of an organization as it influences individuals to perform effectively and efficiently, which then lead to organizational

growth (Yang & Wan, 2004). It is considered that a positive perception of career advancement can encourage individuals to engage in knowledge sharing practices (Davenport, Prusak & Webber, 1998).

2.4.1 Past Studies on Career Advancement and Knowledge Sharing Behavior

Evidence from previous studies has indicated that career advancement is regarded by researchers as significant for enhancing knowledge sharing behavior (Akhavan et al., 2013; Cabrera et al., 2006; Lin, 2007; Wickramasinghe & Widyaratne, 2012). However, the review of literature shows that there are only a few studies that have presented the link between career advancement and knowledge sharing behavior within the context of the healthcare sector, especially in Tanzanian hospitals (Benard, 2013).

Most studies were carried out in the west and Asian countries and have focused on IT, petroleum and education contexts (Akhavan et al., 2013; Cabrera et al., 2006; Fullwood et al., 2013; Kim & Ko, 2014; Lin, 2007; Olomolaiye & Egbu, 2005; Tohidinia & Mosakhani, 2010; Wickramasinghe & Widyaratne, 2012).

Moreover, the literature review shows inconsistent findings on the relationship between career advancement and knowledge sharing behavior (Akhavan et al., 2013; Cabrera et al., 2006; Cheng et al., 2009; Fullwood et al., 2013; Kumar & Rose, 2012; Lin, 2007; Olomolaiye & Egbu, 2005; Tohidinia & Mosakhani, 2010; Wickramasinghe & Widyaratne, 2012). This implies that the link is not yet confirmed. Studies have been

carried out by Akhavan et al., (2013) which employed about 317 research centre staff in Iran; Kumar & Rose, (2012) involving 472 public institution employees in Malaysia; Wickramasinghe & Widyaratne, (2012) on 150 participants from software developers in Sir Lanka; Lin (2007) on 172 participants from large companies in Taiwan; and Cabrera et al., (2006) which carried on 372 employees of IT Multinational corporation in USA. The findings of these studies indicated that career advancement is positively and significantly related to knowledge sharing behavior.

However, in the studies conducted by Olomolaiye and Egbu (2005) on 26 organizational employees in Scotland; and Tohidinia and Mosakhani (2010) involving 502 employees in Iranian oil companies, career advancement is not significantly related to knowledge sharing behavior. In the studies carried out by Fullwood et al. (2013) comprising 230 employees from universities in the UK; and Cheng et al. (2009) on 119 students in a Malaysian university, career advancement is found to have a weak significant relationship with knowledge sharing behavior. Under such mixed findings, there is a need to undertake more empirical studies that can better link career advancement and knowledge sharing behavior in the healthcare work context, especially in the Tanzanian setting to corroborate the relevance of the link.

2.5 Personal Values

Personal values are exclusive beliefs that control individual behavior or actions (Pinto, Nique, Añaña & Herter, 2011). Personal values are categorized into two types: terminal

values and instrumental values. Terminal values refer to an individual's belief towards achievement of desirable outcome while instrumental values are individual's beliefs on the mechanisms of acquiring desirable goals (Rokeach, 1973). Personal values are said to differ from one geographical location to another and it influences the extent to which institutional and managerial activities can be executed effectively without copying personal values from one cultural setting to another (Janeiro & Nelson, 2014). It has been found in previous studies as having a significant influence on individual behavior (Lönnqvist, Verkasalo, Wichardt & Walkowitz, 2013). It can also influence knowledge sharing behavior among healthcare professionals.

2.5.1 Past Studies on Personal Values and Knowledge Sharing Behavior

The evidence from past studies has demonstrated that personal values elements are regarded by researchers as important for determining individual behavior (Boer & Fischer, 2013; Bye et al., 2011; Finegan, 1994; Kumar & Rose, 2012; Suar & Khuntia, 2010). However, only a few studies have established the link between personal values and knowledge sharing behavior within the context of the healthcare sector, especially in Tanzanian hospitals (Benard, 2013). In fact, previous studies have indicated that personal values have been studied in behavioral sciences and revealed to have an influence on actual behavior and actions in the education, manufacturing and voting contexts, especially in the west and Asian countries such as the UK and India (Boer & Fischer, 2013; Bye et al., 2011; Finegan, 1994; Jayawardhena, 2004; Kumar, 2012; Schwartz et al., 2010; Suar & Khuntia, 2010). For example, in the study conducted by Boer & Fischer (2013) using a meta-analysis with the intention to test the influence of personal values on

social attitudes, it is found that personal values have a significant influence on social attitude; and in the study of Bye et al. (2011) involving 1,474 students from Ghana, Germany and Turkey, personal values are revealed to have a significant effect on the impression management. Kumar (2012) employed about 220 public organization employees in India, and found personal values to have a positive and significant relationship with job satisfaction. Moreover, the study carried out by Suar and Khuntia (2010) among 340 participants from the manufacturing industry in India showed that personal values have a significant influence on work behavior. In addition, the study by Schwartz et al. (2010) which comprised 1,003 participants in the UK to test the influence of personal values on voting revealed that personal values significantly influence voting. Therefore, based on the above discussion on personal values in previous studies, this study intends to examine the influence of personal values on knowledge sharing behavior moderated by subjective norms since personal values are believed to probably have a positive effect on knowledge sharing behavior (Kanaan, 2013; Marks et al., 2008; Wu & Zhu, 2012).

2.6 Job Characteristics

Job characteristics comprise of task identity, task significance, skills variety, task autonomy and an individual's performance feedback (Rehman & Mahmood, 2011). Job characteristics can also be described as task-related attributes, including characteristics of the task itself and consisting of autonomy, skills, benefits, feedback, advancement opportunities and knowledge acquired on that task (Chen, 2009). Hackman and Greg (1975) propounded five job characteristics elements by giving a description of each,

starting with task identity that refers to identified work which is supposed to being done by an individual employee. Second, skills variety refers to the different sorts of skills needed to perform a task or work. Third, task significance refers to the impact of a job on other employees. Fourth, autonomy indicates employees' freedom to execute tasks, including to map out what is be done in what time and mechanisms to be used. Last, feedback refers to comments or responses about the employee's job performance as revealed by his or her supervisor, peer workers and clients.

The job characteristics dimension is said to be an important dimension with significant influence on organizational citizenship behavior, since it tends to draw out an individual's perception of how worthy are the responsibilities and tasks (Organ, Podsakoff & MacKenzie, 2006).

2.6.1 Past Studies on Job Characteristics and Knowledge Sharing Behavior

Evidence from past studies has shown that job characteristics are considered by researchers as significant for enhancing knowledge sharing behavior (Foss et al., 2009; Menguc et al., 2011). However, literature review shows that there are only a few studies that have established the link between job characteristics and knowledge sharing behavior within the context of the healthcare environment, especially in Tanzanian healthcare institutions (Benard, 2013). Most studies were carried out in the industrial, MNCs as well as education contexts and in western countries (Cabrera et al., 2006; Foss et al., 2009; Menguc et al., 2011; Staples & Webster, 2008a). Moreover, the literature review also reveals mixed findings on the relationship between job characteristics and knowledge

sharing behavior (Cabrera et al., 2006; Cavaliere & Lombardi, 2001; Foss et al., 2009; Liu et al., 2010; Menguc et al., 2011; Staples & Webster, 2008a). For example, studies conducted by Foss et al. (2009) involving 186 employees working in MNC oil companies operating in the UK and Germany; Cavaliere & Lombardi (2001) on 754 employees of manufacturing industries in Italy; and Menguc et al. (2011) on 222 industry personnel operating in USA, tried to examine the empirical relationship between job characteristics and knowledge sharing behavior. It is revealed that job characteristics have an indirect and significant influence on knowledge sharing behavior. Hence, there is a need to carry out more empirical studies that can link job characteristics and knowledge sharing behavior in the healthcare setting and the Tanzanian environment to validate the relevance of the link.

In other studies, involving 204 university library staff in Taiwan and 824 university members in Jamaica, Liu et al. (2010) and Staples and Webster (2008) found that job characteristics have no significant effect on knowledge sharing behavior. Thus, there is a need to conduct more empirical studies that can indicate more clearly the relationship between job characteristics and knowledge sharing behavior in the healthcare context and the Tanzanian setting to confirm the relevance of the results.

In addition, a study conducted by Cabrera et al. (2006) indicates that job characteristics have a direct and significant effect on knowledge sharing behavior. Thus, there is required to conduct more studies in different contexts, such as in the Tanzanian healthcare sector to understand how job characteristics affect knowledge sharing

behavior. It is therefore vital to conduct more empirical studies that can connect job characteristics and knowledge sharing behavior in the healthcare sector and the Tanzanian cultural setting to justify the relevance of the findings.

2.7 Perceived Organizational Climate

Perceived organizational climate is an individual's perception of institutional practices, policies and procedures (Shadur, Kienzle & Rodwell, 1999). Perceived organizational climate is also the existing attitudes and orientation that provide real-world significances (Saleh & Wang, 1993). It is considered that perceived organizational climate has a significant impact on satisfaction of the employees, workforce empowerment, effectiveness of an organization and in drawing out organizational citizenship behavior (Li et al., 2010). Perceived organizational climate can therefore be a potential mechanism for fostering knowledge sharing behavior among employees (Yoo & Torrey, 2002).

2.7.1 Past Studies on Perceived Organizational Climate and Knowledge Sharing Behavior

Evidence from previous studies has proven that perceived organizational climate has been considered by researchers as significant for enhancing knowledge sharing behavior (Li et al., 2010; Tohidinia & Mosakhani, 2010; Wu & Zhu, 2012; Yang & Lai, 2011). However, the literature review reveals only a few studies have established the link between perceived organizational climate and knowledge sharing behavior within the context of the healthcare sector, especially in Tanzanian hospitals (Benard, 2013). Most

studies were carried out in the manufacturing, education, IT and oil company contexts (Amayah, 2013; Bock & Kim, 2001; Li et al., 2010; Wu & Zhu, 2012; Yang & Lai, 2011); and these studies were conducted in Western and Asian countries (Amayah, 2013; G. Bock & Kim, 2001; Li et al., 2010; Tohidinia & Mosakhani, 2010; Wu & Zhu, 2012; Yang & Lai, 2011).

Moreover, the literature review has revealed inconsistent findings on the relationship between perceived organizational climate and knowledge sharing behavior (Amayah, 2013; Bock & Kim, 2001; Cabrera et al., 2006; Li et al., 2010; Tohidinia & Mosakhani, 2010; Wu & Zhu, 2012; Yang & Lai, 2011). In the studies conducted by Yang and Lai (2011) on 200 academic staff in Taiwan; Wu and Zhu (2012) involving 180 employees in Chinese manufacturing companies; and Li et al. (2010) in 442 IT designers located in the south of China, perceived organizational climate is revealed to have an indirect and significant impact on knowledge sharing behavior. Another study carried by Lin, Lin and Ye (2015) investigated perceived organizational climate as among the factors that influence knowledge sharing behavior. The findings revealed that perceived organizational climate has a positive significant effect on knowledge sharing behavior. Thus, Lin, Lin and Ye (2015) have suggested for similar future studies to be carried in different cultural contexts due to the suitability of perceived organizational climate in influencing knowledge sharing behavior.

However, in a study conducted by Amayah (2013) involving 461 academic employees in USA public academic institutions, perceived organizational climate shows the negative

effect on knowledge sharing behavior. In the study conducted by Bock and Kim (2001) employing 467 employees of public organizations in Korea, perceived organizational climate has no significant influence on knowledge sharing behavior. The study conducted by Tohidinia and Mosakhani (2010) on 502 employees in Iranian oil companies depicts that knowledge sharing behavior has an indirect and positive effect on knowledge sharing behavior. Therefore, further studies in different contexts such as in the healthcare sector are required to validate the findings.

2.8 Subjective Norms

Subjective norms are normative beliefs related to an individual's probability to execute a behavior that is performed by important persons or group (Ajzen, 1991). Subjective norms are also defined as an individual's thinking that other people anticipate him or her to engage in performing a behavior (Fishbein & Ajzen, 1975). In fact, subjective norms rely on the belief that an individual's behavior or action reflects that of important persons or groups (Hansen & Avital, 2005). It is considered that subjective norms imply perception of social pressure to perform or not to perform the behavior (Gagne, 2009). Subjective norms are significant determinants of behavioral intention when subjective norms are extremely favorable to the person (Ajzen, 1991; Cordano, 2000).

Subjective norms have been shown to have a significant influence on knowledge sharing, intention in different contexts (Bock et al., 2005; Krogh et al., 2008; Lin & Lee, 2004; Ryu, Ho & Han, 2003), which also having a significant effect on knowledge sharing behavior among healthcare workers in the Tanzania setting.

2.8.1 Past Studies on Subjective Norms and Knowledge Sharing Behavior

The evidences from past studies indicate that subjective norms are believed to be an important factor for enriching knowledge sharing behavior (Aktharsha & Anisa, 2012; Bock et al., 2005; Chen, 2011; Jeon et al., 2011; Lin & Lee, 2004; Skaik, 2014; Wu & Zhu, 2012; Zhang & Ng, 2012b). However, the literature review presents that very few studies have been carried out to link subjective norms and knowledge sharing behavior within the context of the healthcare sector, especially in Tanzanian hospitals. Most of the studies were conducted in education, IT, commonwealth countries, agriculture, construction and oil company contexts (Bock et al., 2005; Chen, 2011; Jeon et al., 2011; Skaik, 2014; Tohidinia & Mosakhani, 2010; Wu & Zhu, 2012; Zhang & Ng, 2012b); and these studies were carried out in western and Asian countries (Aktharsha & Anisa, 2012; Bock et al., 2005; Chen, 2011; Jeon et al., 2011; Lin & Lee, 2004; Tohidinia & Mosakhani, 2010; Wu & Zhu, 2012). Moreover, there are only a few studies that have tried to establish an empirical link between subjective norms and knowledge sharing behavior (Aktharsha & Anisa, 2012; Bock et al., 2005; Chen, 2011; Jeon et al., 2011; Wu & Zhu, 2012; Zhang & Ng, 2012b). Aktharsha and Anisa (2012) established an empirical relationship between subjective norms and knowledge sharing behavior by investigating the effect of subjective norms on knowledge sharing behavior. The study was carried out on 152 nurses among hospitals in India and the result shows subjective norms have indirect and positively significant effect on knowledge sharing behavior. Thus, Aktharsha and Anisa (2012) suggested similar studies should be conducted in another cultural setting such as Tanzania.

Wu and Zhu (2012) conducted a study to examine the influence of subjective norms on knowledge sharing behavior. The study was conducted on 180 workers of a manufacturing company in China. The finding indicates that subjective norms have a significant effect on knowledge sharing behavior. Wu and Zhu (2012) recommended for future research on different participants in other geographical locations in order to generalize the results.

Jeon et al. (2011), who investigated the empirical relationship between subjective norms and knowledge sharing behavior on 282 communities of practice members in Korea found that subjective norms have an indirect and significant effect on knowledge sharing behavior. Jeon et al. (2011) has paved the way to conduct further studies in another industrial context and cultural setting such as Tanzania to validate the findings.

Chen (2011) carried out an empirical study to examine the mediating effect of subjective norms on the relationship between organizational climate, resource fit and knowledge sharing behavior. The investigation was conducted on 200 teachers of higher education in Taiwan. The results show that subjective norms have a significant mediating effect on knowledge sharing behavior. However, the findings cannot be generalized in other contexts and geographical locations, due to the differences in organizational culture and practices. Therefore, further studies are required to generalize the findings.

Tohidinia and Mosakhani (2010) empirically studied the mediating effect of subjective norms between determinants of knowledge sharing and knowledge sharing behavior. The

study was conducted on 502 employees of Iranian companies. The findings reveal that subjective norms have a mediating impact on the relationship between knowledge sharing determinants and knowledge sharing behavior. Thus, Tohidinia and Mosakhani (2010) suggested further studies in different contexts and cultural settings to generalize the findings.

Furthermore, Zhang and Ng (2012) conducted a study to examine the influence of subjective norms on knowledge sharing behavior. The study was carried out on 172 staff of a construction company in China. The results indicate that subjective norms have a weak significant effect on knowledge sharing behavior. Therefore, more empirical investigations are needed in different work settings such as in the hospital setting in order to validate the findings.

2.8.2 Subjective Norms as Potential Moderator

Subjective norms construct have been defined as perceived social pressure to execute or not execute the behavior which is performed by important referent persons or group (Ajzen, 1991: 188). Subjective norms construct is regarded as normative beliefs which vary from individual to individual in relation to the behavior (Ajzen, 2002; Stenius, Hankonen, Haukkala & Ravaja, 2015). Specifically, according to Ajzen (1991) employees who perceived themselves as highly influenced by subjective norms, the stronger should be individual to perform the behavior.

Based on the literature, subjective norms construct is well instituted factor that produces a significant effect on different behaviors, including disclose personal information behavior (Heirman, Walrave & Ponnet, 2013), behavior intention (Ajzen, 1991; Cordano, 2000), and leadership behavior (Ringersma, 2015). Furthermore, subjective norms construct was positively related to knowledge sharing behavior (Aktharsha, Ali & Anisa, 2012; Chen, 2011; Lin & Lee, 2004; Tohidinia & Mosakhani, 2010). Thus, individuals with high level of subjective norms are more likely to participate in knowledge sharing behavior than those with lower level of subjective norms. Despite of the available empirical studies on the role of subjective norms in explicating variety of the person's behavior, however, there are limited studies have been carried out to investigate the subjective norms construct as potential moderator on the relationships between predictors and behavior outcome. As such, this necessity for additional empirical study on the moderating role of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior in order to have a better understanding of the predicting role of subjective norms construct.

In this study, subjective norms construct was used as moderator to examine if this construct plays a significant role in strengthening the positive effect of individual capabilities, career advancement, personal values, job characteristics, and perceived organizational climate on knowledge sharing behavior. In fact, investigating subjective norms construct as a moderator could maximize researchers' theoretical comprehension

and offer them empirical evidence on how subjective norms might be a potential moderator.

2.9 Gaps in the Literature

From the literature review, several deductions can be portrayed. First, this study examines the moderating role of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior. A number of determinant variables of knowledge sharing behavior have been depicted in literature. To date, some determinants of knowledge sharing behavior have been studied include agreeableness (Cabrera, Collins, & Salgado, 2006; Wang & Yang, 2007), technology (Aulawi, Sudirman, Suryadi & Govindaraju, 2009; Parirokh, 2008; Wu & Zhu, 2012), communication (Al-Alawi, Al-Marzooqi & Mohammed, 2007; Cheng, Yeh & Tu, 2008; Liu & Liu, 2011; Wickramasinghe & Widyaratne, 2012), organizational culture (Cavaliere & Lombardi, 2001; Friesl, Sackmann & Kremser, 2011; Jeon, Kim & Koh, 2011; Mäkelä, Andersson & Seppälä, 2012; Suppiah & Singh Sandhu, 2011; Witherspoon, Bergner, Cockrell & Stone, 2013), job satisfaction (Mogotsi & Fletcher, 2011; P.-L. Teh & Sun, 2012), and trust (Al-Alawi et al., 2007; Amayah, 2013; Fathi, Eze & Goh, 2011; Gupta, 2008; Xu, Li & Shao, 2012).

Despite these empirical studies, literature shows that very limited studies have considered the effects of individual capabilities, career advancement, personal values, job characteristics, and perceived organizational climate on knowledge sharing behavior.

Even though there are studies on knowledge sharing, the studies were limited to investigating specific knowledge sharing, intention (Goh & Sandhu, 2013; Wang, 2004; Wolfe & Loraas, 2008). Hence, in order to comprehend the actual knowledge sharing rather than intention among Tanzania healthcare professionals, the present study intends to examine the influence of individual capabilities, career advancement, personal values, job characteristics, and perceived organizational climate on knowledge sharing behavior.

Secondly, a comprehensive review of literature shows that there are conflicting findings considering the relationship between individual capabilities, career advancement, job characteristics, perceived organizational climate and knowledge sharing behavior (Akhavan et al., 2013; Amayah, 2013; Cabrera et al., 2006; Fullwood et al., 2013; Menguc et al., 2011; Schwartz et al., 2012; Tohidinia & Mosakhani, 2010; Wickramasinghe & Widyaratne, 2012). On the other hand, there are limited studies which have conducted to investigate personal values and knowledge sharing behavior, but personal values antecedent is considered to be a critical determinant of individual behavior. Thus, this study incorporated personal values with individual capabilities, career advancement, job characteristics, and perceived organizational climate to be tested against knowledge sharing behavior under the moderating effect of subjective norms, in order to understand the underlying causes of knowledge sharing behavior. By doing so, the present study intends to better comprehend and portray the predicting factors of knowledge sharing behavior among healthcare professionals in the Tanzanian public healthcare institutions.

Overall, this study incorporates individual capabilities, career advancement, personal values, job characteristics, and perceived organizational climate as the independent variables. Knowledge sharing behavior is evaluated as practices that significantly overcome performance deficiencies in an organization and it is treated as the dependent variable. Finally, subjective norms are included as a moderator to better understand and illustrate the influence of individual capabilities, career advancement, personal values job characteristics, and perceived organizational climate on knowledge sharing behavior.

2.10 Underlying Theories

There are several theories that can describe the trend of knowledge sharing behavior, including the social capital theory, expectancy theory (Vroom, 1964), norms of reciprocity theory (Gouldner, 1960), social exchange theory (Blau, 1964), social, cognitive theory, theory of planned behavior (Ajzen, 1991), theory of reasoned action (Ajzen & Fishbein, 1980), and social impact theory (Latane, 1981).

The norm of reciprocity theory describes the expectation of the society whereby people will tend to act in the way other people are acting. If people either act positively and beneficially or negative and not beneficially, other people will act the same due to the social norms of reciprocity. For the strengthening of organizations, the norm of reciprocity theory is a most significant tool since it can generate, motivate, endure and standardize behavior cooperatively. The same applies to the expectancy theory (Vroom, 1964) which propounds that people tend to perform a particular behavior by relying on the outcome of their performance behavior and it is influenced by attitude, beliefs and

perception. The intention is to try overcoming unpleasable negative outcomes. It is considered that personal efforts can be determined by expected consequences which reside in an individual's mind (Porter, 1968). This study employs the social impact theory and social exchange theory as the underpinning theories to explain the underlying causes of knowledge sharing behavior and its predictor factors as explained below.

2.10.1 Social Impact Theory (SIT)

The Social Impact Theory (SIT) is considered as a significant theory in the area of the individual, group behavior and interpersonal impact (Jackson, 1987). SIT "is a theory that uses mathematical equations to predict the level of social impact created by specific social situations" (Latane, 1981).

The SIT specifies that the impact dispersed among targeted individuals, including co-workers and other organizational members (Jackson, 1987). It is indicated that the effectiveness of impact on target individuals depends on the strength and immediacy of the source person (Hass, 1981). Usually, a person with high status and expertise has more impact on target individuals than a person with low status (Knowles, 1980). The theory was established as a meta theoretical framework for reproducing circumstances where individual traits, behavior or beliefs are influenced by the people who surround him or her (Nettle, 1999).

The SIT is appropriate for describing knowledge sharing behavior and the moderating role of subjective norms on the relationship between individual capabilities, career

advancement, personal values, job characteristics, and organizational climate and knowledge sharing behavior, since it hypothesizes a circumstance in which attributes acquired by the social group around a person are necessary for practicing knowledge sharing behavior; and instigates the moderating effect of subjective norms on the relationship between knowledge sharing behavior and its determinants.

The SIT is widely utilized in research to forecast behavior of human beings. The SIT was employed to envisage the effect of language change on biases in language acquisition (Nettle, 1999); to predict public opinion (Nowak, Szamrej & Latané, 1990); and to predict the role of nervousness and tension in performing in front of an audience (Jackson & Latané, 1981). It has also been used to underpin attitude change for computer simulations in a group or society (Nowak et al., 1990).

In describing the moderating role of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior employing principle underlying social impact which provides the elements of subjective norms (social pressure), the current study proposes that the extent to which individual capabilities, career advancement, personal values, job characteristics, and perceived organizational climate are able to influence individuals to participate in knowledge sharing behavior differ depending upon the level of the person's subjective norms. The stronger the person's subjective norms anticipating other people who expecting him or her to perform behavior the high likely he or she will participate in knowledge sharing behavior.

Provided the empirical support for social impact theory across different institutional setting, it is suggested that this theory would offer an empirical support for subjective norms as a moderator on the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior.

2.10.2 Social Exchange Theory (SET)

The fundamental rationale of social and economic exchange has been recognized by various studies in the areas of sociology, anthropology and psychology (Blau, 1964; Haas & Deseran, 1981; Molm, Takahashi & Peterson, 2000). Economic exchange is considered as selling and buying of particular goods or resources to satisfy personal needs or wants, while social exchange is regarded as exchanging actions of non-solid and solid materials with high or low costs and benefits among individuals (Blau, 1964; Haas & Deseran, 1981). According to Blau (1964), exchange of those materials is discretionary conducted with reciprocal expectation, whereby there are no mechanisms to enforce particular benefits.

In fact, social exchange facilitates the foundation of norms of responsibility in assisting knowledge provider, which eventually leads to reciprocity (Cropanzano, 2005). Thus, this kind of responsibility is considered as voluntary because there are no mechanisms that can enforce receivers to respond reciprocally. In such scenario, sense of trust, obligation and commitment play a significant role (Blau, 1964; Cropanzano, 2005; Liao, 2008). It is absolutely different from the economic exchange, where commitment is no more

significant once exchange is already done. Therefore, it is claimed that social exchange is determined by an individual's positive anticipation and psychological obligations which are considered to start slowly, and when there is frequent exchange, there are equilibrium and rationale (Molm et al., 2000).

The SET is commonly utilized by many scholars to underpin knowledge sharing behavior (Boh et al., 2013; Huang et al., 2008; Liao, 2008; Tsai & Cheng, 2012; Zhang & Ng, 2012). The SET relies on providing social relationships which yield greater advantages than charges. The relationships will generate trust among members (Blau, 1964; Huang et al., 2008).

In fact, the social exchange and norm of reciprocity theories impose unstipulated obligations which identify behavior of human beings; whenever an individual treats another individual fairly, it will create a sense of expected compensation from the other individual in the future. Thus, knowledge sharing behavior can be considered as a sort of social exchange, which is underlined in the SET. Whenever individuals contribute their skills, expertise and knowledge to the co-workers or group members, it draws out a sense of obligation and reciprocal expectation from the others who will share their knowledge, skills and expertise in the future (Bock et al., 2005; Tsai & Cheng, 2012). Thus, it is anticipated that this theory would offer a support for the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior.

Base on literature review, it is shown that there are limited studies employing social impact theory and social exchange theory to understand and explicate underlying factors of knowledge sharing behavior among medical doctors and nurses. Because, it is revealed that most of the previous studies (Ismail & Yusof, 2010; Liang, Liu & Wu, 2008; Tsai, 2001) that applied these theories were carried out among non-healthcare professionals, such as university students, public financial managers and IT professionals.

2.11 Research Framework

Figure 2.1 shows the proposed research framework tested in this study. The research framework was developed based on past studies on knowledge sharing behavior and on the SIT and SET. In this study, five independent variables, namely individual capabilities, career advancement, personal values, job characteristics, and perceived organizational climate (independent variable) are chosen to be tested against knowledge sharing behavior (dependent variable). Subjective norms construct is the moderating variable in this study.

The SIT has been adopted to explain social behavior by previous studies (Jackson & Latané, 1981; Nettle, 1999; Nowak et al., 1990). The SIT suggests that social pressure exists and the SIT can predict the likelihood of an individual to perform a behavior (Latane, 1981).

Individual capabilities are beliefs based on a collection of proficiencies which enable an individual to perform particular activities or behavior (Qizilbash, 2007). Therefore,

consistent with the SIT (Latane, 1981), such beliefs as well as social pressure can make an individual use the knowledge sharing mechanism to seek and share knowledge among organizational members (Latane, 1981; Noor & Salim, 2011), which can enhance knowledge sharing behavior. According to the SET (Blau, 1964), when individuals have a positive perception of their organization, they will likely demonstrate individual capabilities towards knowledge sharing behavior.

Career advancement is upward movement of an employee in the organizational ladder, accompanied by an increase in salary and status (Zhao & Zhou, 2008). In fact, career advancement can make an individual undertake various risky activities or behavior, including knowledge sharing behavior (Gibson & Cohen, 2003). Therefore, career advancement, apart from been regarded as a means of achieving promotion and an increase in salary, it can also be the chance for acquiring new skills and knowledge due to opting for new and more challenging tasks (Wang-Cowham, 2008). It is considered that positive perception of career advancement can encourage an individual to engage in knowledge sharing practices (Davenport et al., 1998). Consistent with the SET, perceived organizational support of career advancement can motivate individuals to participate in knowledge sharing behavior with other employees.

Personal values are exclusive beliefs that control an individual's behavior or actions (Pinto et al., 2011). It has been found in the previous studies that it has a significant influence on an individual's behavior (Lönnqvist et al., 2013), specifically with

knowledge sharing (Bock, Lee, Zmud & Kim, 2005; Wu & Zhu, 2012). Therefore, it can also influence knowledge sharing behavior among healthcare professionals.

Job characteristics refer to the task identity, task significance, skills variety, task autonomy and an individual's performance feedback (Rehman & Mahmood, 2011). Job characteristics can also be described as an individual's perception related to task attributes, including characteristics of the task itself and consist of autonomy, skills benefits, feedback, advancement opportunities and knowledge acquired on the task (Chen, 2009). In relation to the SET, individuals who perceive the organizations and appreciate them will tend to develop a positive attitude to execute the knowledge sharing behavior.

Organizational climate is an individual's perception of institutional practices, policies and procedures (Shadur et al., 1999). In fact, organizational climate tends to prevail when there is contact between people and their surroundings; thus, such interaction acts as a motivational tool towards the creation of organizational climate (Li et al., 2010). In connection with SET, when an organization ensures a supportive organizational climate, employees tend to develop a willingness to engage in knowledge sharing behavior with other organizational members.

Generally, an individual's knowledge exchange relationship with co-members is very important for the employees' knowledge development and organizational performance (Huang et al., 2013). Based on the SET unstipulated obligations which rely on reciprocity

norms, an individual's exchange relationship with fellow members is highly affected by obligations which are not specified. Individual capabilities, career advancement, personal values, job characteristics and organizational climate are prominent mechanisms for enhancing unspecified obligations among individuals as stipulated above.

Subjective norms refer to an individual's thinking that other people anticipate him or her to engage in a performing a behavior (Fishbein & Ajzen, 1975). Consistent with the SIT and the SET, having the realization that a group expects an individual to execute a particular behavior or action will develop a sense of obligation of the individual towards knowledge sharing behavior.

In compliance with the SIT (Latane, 1981) and SET (Blau, 1964), the model comprises of the following variables: individual capabilities, career advancement, personal values, job characteristics and organizational climate as predictor variables. In this study, subjective norms are established as the moderator of the relationship between individual capabilities, career advancement, personal values, job characteristics, and organizational climate and knowledge sharing behavior. The variables and constructs are adopted from past studies (Hackman & Oldham, 1974; Noor & Salim, 2011; Schwartz & Bilsky, 1987; Sharratt & Usoro, 2003; Tohidinia & Mosakhani, 2010). Knowledge sharing behavior can be the outcome of individual capabilities, career advancement, personal values, job characteristics, and organizational climate and subjective norms among employees in their daily health care activities.

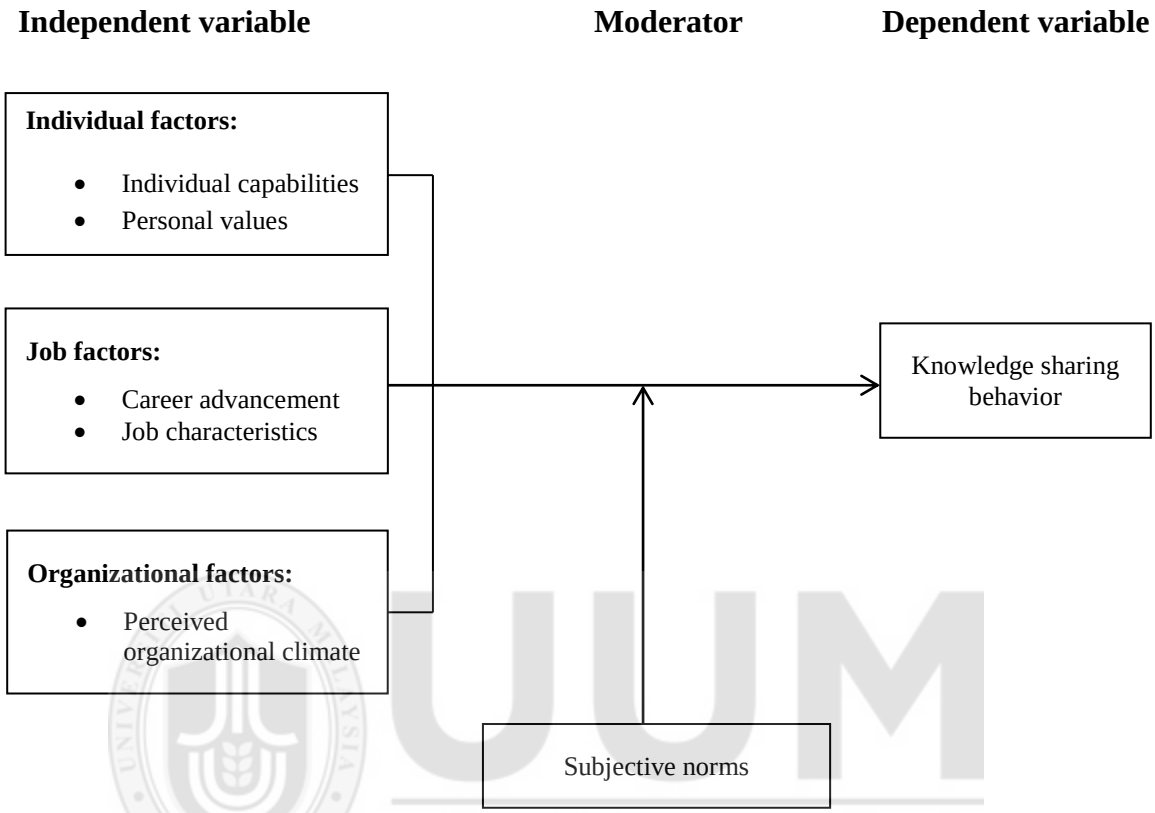

Figure 2.1. Research Framework

2.12 Development of Hypothesis

2.12.1 Individual Capabilities and Knowledge Sharing Behavior

Knowledge sharing behavior is defined as the extent to which knowledgeable individuals are typically involved in knowledge sharing with other people in their organization. It can lead to effective organizational performance (Aktharsha et al., 2012; Lin, 2008). Of late, knowledge sharing behavior has been recognized as an activity of the society that takes

place within a specific system in which knowledge is demonstrated as a valuable resource to the organizational members (Gupta, 2012).

Despite the massive growing acknowledgement on significance of knowledge sharing behavior, it is depicted that knowledge sharing behavior is still under-investigated empirically (Hansen & Avital, 2005; Kim & Lee, 2013), especially in the healthcare sector (Currie et al., 2007). Previous studies have suggested individual capabilities as an antecedent to knowledge sharing behavior (Cabrera et al., 2006; Chiang et al., 2011; Gupta et al., 2012). However, the relationship between individual capabilities and knowledge sharing behavior has been found to be insignificant (Cabrera et al., 2006). Thus, more research is needed to reveal further empirical justification on the relationship between individual capabilities and knowledge sharing behavior.

Individual capabilities signify personal perception of experience, network, skills, abilities, expertise, knowledge, commitment, self-efficacy and awareness that he or she possesses as the means for achieving desirable outcomes and individual development (Bontis & Serenko, 2007; Mayo, 2000; Noor & Salim, 2011). In fact, individual capabilities depict the potential of a person (Hartog, 2001). Due to the potential significances of individual capabilities, a system of performance must be established to connect personal competencies and abilities in order to develop individual behavior (Lengnick-Hall & Lengnick-Hall, 2003). This is due to the individual's positive belief that his or her skills, awareness, expertise and self-efficacy can lead to enhanced performance (Mayo, 2000). In this case, individual capabilities can act as the means for

achieving knowledge sharing behavior, even in the healthcare sector since it is perceived that outputs of knowledge sharing behavior, including individual capabilities of a knowledge management system are helpful in their task performance (Bock et al., 2006). Some studies have been conducted to investigate the relationship between perceived individual capabilities and knowledge sharing behavior (Cabrera et al., 2006; Gupta et al., 2012; Isika et al., 2013; Jo & Joo, 2011; Teh & Sun, 2012). However, there are only a few studies on individual capabilities related to knowledge sharing behavior (Cabrera et al., 2006; Chiang et al., 2011; Gupta et al., 2012). The current study intends to make a unique contribution to the prevailing individual capabilities-knowledge sharing behavior literature by examining a new mechanism on which the relationship is developed.

A solid understanding of the relationship between individual capabilities and knowledge sharing behavior is very significant to the establishment of the hypotheses for the current study. Individual capabilities can create a lot of willingness, which in turn, can influence individual attitude and behavior (Mayo, 2000). Therefore, an individual's positive attitude and behavior can promote individual capabilities among members (Hsu & Lin, 2008). Empirically, there are some studies (Mayo, 2000) that have shown that individual capabilities can yield individual beliefs, attitude and performance behavior which could lead to knowledge sharing behavior among people. Projecting a positive relationship between individual capabilities and knowledge sharing behavior is related to some findings of the studies. Cabrera et al., (2006) conducted an empirical study to establish the influence of individual capabilities on knowledge sharing behavior in their study carried out among IT staff in MNCs in USA; they revealed that individual capabilities

have a significant effect on knowledge sharing. The SET (Blau, 1964) highlights how individual capabilities are a critical mechanism for enhancing knowledge sharing behavior.

According to the theory, social exchange tends to produce an individual's unspecified obligations which also prevail in the individual capabilities construct. When an individual perceives that sharing knowledge with other members can be a mechanism for improving capabilities and performance, he or she ought to reciprocate the knowledge sharing behavior among people. In addition, individual capabilities are supported by the SIT (Latane, 1981). According to this theory, individual behavior is predicted by social pressure, which influences individuals either to perform or not to perform a behavior. Thus, personal beliefs and attitude have engaged in knowledge sharing behavior among people.

Based on the above discussion, the following hypothesis is proposed:

H1: There is a positive relationship between individual capabilities and knowledge sharing behavior.

2.12.2 Career Advancement and Knowledge Sharing Behavior

Career advancement is upward movement of an employee in the organization ladder that is accompanied by an increase in salary and status (Zhao & Zhou, 2008). In fact, career advancement can make an individual increase his or her experiences by undertaking various risky activities (Gibson & Cohen, 2003). Therefore, apart from been regarded as

a means of achieving promotion and an increase in salary, career advancement is also a chance of acquiring new skills and knowledge due to opting for new and more challenging tasks (Wang-Cowham, 2008).

Empirically, career advancement is related to knowledge sharing behavior (Akhavan et al., 2013; Cabrera et al., 2006; Lin, 2007; Wickramasinghe & Widyaratne, 2012). The argument is also supported by the SET (Blau, 1964). According to the theory, individual exchange relationship enhances unspecified obligations which identify behavior of human beings; whenever an organization treats other employees fairly, it creates a sense of expected compensation from individuals in the future. Thus, career advancement can draw out a sense of obligation in strengthening knowledge sharing among subordinates. The more the career advancement the greater the knowledge sharing behavior. Therefore, the following hypothesis is proposed:

H2: There is a positive relationship between career advancement and knowledge sharing behavior.

2.12.3 Personal Values and Knowledge Sharing Behavior

Personal values are exclusive beliefs that control an individual's behavior or actions (Pinto et al., 2011). Personal values are categorized into two types: terminal values and instrumental values. Terminal values refer to an individual's belief towards achievement of desirable outcomes while instrumental values are individual beliefs on the mechanisms of acquiring desirable goals (Rokeach, 1973). The present study does not consider

terminal and instrumental values, it focuses on the main antecedent of personal values. Empirically, the relationship between personal values and knowledge sharing behavior is supported by previous studies (Jeon et al., 2011; Wu & Zhu, 2012). Also, the SET (Blau, 1964) posits that the positive feeling of organizational support will enhance an individual's personal values to help others via knowledge sharing behavior. Thus, due to these opinions, the study proposes the following hypothesis:

H3: There is a positive relationship between personal values and knowledge sharing behavior.

2.12.4 Job Characteristics and Knowledge Sharing Behavior

Job characteristics refer to task identity, task significance, skills variety, task autonomy and an individual's performance feedback (Rehman & Mahmood, 2011). Job characteristics can also be described as task related attributes, including characteristics of the task itself and consist of autonomy, skills, benefits, feedback, advancement opportunities and knowledge acquired on that task (Chen, 2009). Empirically, job characteristics have a significant relationship with knowledge sharing behavior (Foss et al., 2009; Menguc et al., 2011). Thus, it may likely be perceived that the job characteristics affect knowledge sharing behavior in the Tanzanian healthcare sector. This relationship has been proposed by the SET (Blau, 1964). According to the theory, an individual who feels appreciated by the organization will tend to develop a positive attitude to execute the knowledge sharing behavior. Thus, the study formulates the following hypothesis due to these discussions:

H4: There is a positive relationship between job characteristics and knowledge sharing behavior.

2.12.5 Perceived Organizational Climate and Knowledge Sharing Behavior

Perceived organizational climate is an individual's perception of institutional practices, policies and procedures (Shadur et al., 1999). In fact, the perceived organizational climate tends to prevail when there is contact between people and their surroundings. Thus, such interaction acts as a motivational tool towards the creation of perceived organizational climate (Li et al., 2010). Empirically, it has been revealed that trust has a significant correlation with knowledge sharing behavior (Li et al., 2010; Tohidinia & Mosakhani, 2010; Wu & Zhu, 2012; Yang & Lai, 2011). The relationship is reinforced by the SET (Blau, 1964). According to the theory, when an organization ensures a supportive perceived organizational climate, employees tend to develop a readiness to engage in knowledge sharing behavior with other members.

Therefore, a positive perception of perceived organizational climate relies on personal recognition about organizational support as propounded by the SET, which then leads to the individual's obligation to share knowledge. This is also applied in the healthcare context. Relying on the above views, the study proposes the following hypothesis:

H5: There is a positive relationship between perceived organizational climate and knowledge sharing behavior.

2.12.5 Subjective Norms as Moderatior

Subjective norms are normative beliefs related to an individual's probability to execute a particular behavior that is performed by an important person or group (Ajzen, 1991). Subjective norms are also defined as an individual thinking that other people anticipate him or her to engage in performing a behavior (Fishbein & Ajzen, 1975). In fact, subjective norms rely on the belief that an individual's specific behavior or action reflects that of an important person or group (Hansen & Avital, 2005). Subjective norms imply perception of social pressure to perform or not to perform a particular behavior (Gagne, 2009). Subjective norms are significant determinants of behavioral intention when subjective norms are extremely favorable (Ajzen, 1991; Cordano, 2000).

Subjective norms can be a mechanism to moderate the relationship between individual capabilities, career advancement, personal values, job characteristics, and perceived organizational climate and knowledge sharing behavior. The argument is supported by theories, such as the SET (Blau, 1964) and SIT (Latane, 1981). According to the SET, if an individual is highly influenced by social pressure, he or she will develop unspecified obligation, devotion and cohesiveness to perform or not to perform behavior, including knowledge sharing behavior (Gagne, 2009). In addition, the person will be ready to act according to group needs. On the other hand, the SIT (Latane, 1981) describes that individual behavior to a large extent is influenced by the people surrounding him or her. Thus, subjective norms are likely to moderate the relationship between individual

capabilities, career advancement, personal values, job characteristics, and perceived organizational climate and knowledge sharing behavior.

As reviewed in the literature, there are wide discussions on the possible association between individual capabilities, career advancement, personal values, job characteristics, and perceived organizational climate and knowledge sharing behavior (Boer & Fischer, 2013; Bye et al., 2011; Cabrera et al., 2006; Finegan, 1994; Foss et al., 2009; Gupta et al., 2012; Naresh Kumar & Rose, 2012; Li et al., 2010; Lin, 2007; Menguc et al., 2011; Suar & Khuntia, 2010; Tohidinia & Mosakhani, 2010; Wickramasinghe & Widyaratne, 2012; Wu & Zhu, 2012; Yang & Lai, 2011).

Based on these past empirical findings, the following hypotheses are proposed:

H6: Subjective norms moderate the relationship between individual capabilities and knowledge sharing behavior.

H7: Subjective norms moderate the relationship between career advancement and knowledge sharing behavior.

H8: Subjective norms moderate the relationship between personal values and knowledge sharing behavior.

H9: Subjective norms moderate the relationship between job characteristics and knowledge sharing behavior.

H10: Subjective norms moderate the relationship between perceived organizational climate and knowledge sharing behavior.

2.13 Conclusions

This chapter discussed the concept of knowledge, classification of knowledge, knowledge management, and knowledge sharing behavior. Apart from that, this chapter discusses factors that influence knowledge sharing behavior such as individual capabilities, career advancement, personal values, job characteristics, and perceived organizational climate. It also discusses subjective norms and its moderating potentiality on the relationship between individual capabilities, career advancement, personal values, job characteristics, and perceived organizational climate and knowledge sharing behavior. Chapter Two ends with underpinning theories and hypotheses development.

CHAPTER 3

METHOD

3.1 Introduction

Chapter 2 reviewed the past empirical studies on knowledge sharing behavior and issues to be addressed by this study while this chapter discussed the method of the study. Chapter 3 begins with the discussion on research design followed by the sampling frame, questionnaire development and collection procedure. It then concludes with the strategies for analyzing the data.

3.2 Research Design

Research design is the master plan that illustrates methods and procedures used by researchers to collect and analyze the data (Zikmund, 2000). In this study, a quantitative approach is employed. Quantitative design is more suitable for this study as it allows the use of statistical-based methods for collecting and analyzing numerical data to comprehend the relationship between variables (Creswell, 1994). This aligned with the objective of this study, which is to examine the direct relationship between individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate, and knowledge sharing behavior as well as to examine the moderating effect of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate, and knowledge sharing behavior.

For this study, the unit of analysis is the individual healthcare professionals and the primary data for this study were gathered through a survey questionnaire. Respondents' perception about individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate, and subjective norms are the basis for understanding their influence on knowledge sharing behavior. Therefore, an individual is considered suitable to be taken as the unit of analysis to test all the variables shown in the research framework. The study was conducted in a natural environment where the researcher's interference was minimal. Finally, a cross-sectional design was used where the data were collected at one point of time as the design is simple, inexpensive and allows for data collection in a relatively short period.

3.3 Population and Sampling Design

3.3.1 Population

The population for this study is healthcare professionals who are medical doctors and registered nurses working in Tanzanian health institutions. Healthcare institutions were selected for the present study based on the following reasons. Firstly, healthcare professionals are the bedrock of the health system in a country (Kwesigabo et al., 2012) and the success of every healthcare institution and health system depends mostly on the healthcare professionals' potentialities (Juma et al., 2012). Secondly, it is due to the tremendous shortage of healthcare professionals caused by brain drain in the Tanzanian public healthcare sector (Juma et al., 2012; Kwesigabo et al., 2012).

As of 2013, there are 237 public hospitals in Tanzania. However, only five public hospitals were chosen for this study. It is not practical to conduct a study on all 237 public hospitals and therefore, only five public hospitals were determined to be the sample size in order to generalize the findings for the entire country.

The five hospitals were selected for the present study because they are located in most populated geopolitical zone with estimated population 12 million out of the total estimated Tanzania population of 44 million (National Bureau of Statistics, 2013). Hence, the five hospitals are giant referral hospitals represented the important Tanzanian regions and hospitals for efficient operation and sustainability delivering healthcare services. The nation depends largely on the efficient functioning of the five public healthcare institutions.

Additionally, the five hospitals are very important, since, they have many medical doctors and nurses who are most affected by the brain drain compared to the rest hospitals (Juma, Kangalawe, Dalrymple & Kanyenda, 2012).

The five hospitals were Muhimbili National Hospital (MNH), Ligula Referral Hospital (LRH), Mnazi Mmoja Hospital (MMH), SekouToure Reginal Hospital Mwanza (SRHM) and Mbeya Referral Hospital (MRH). The total number of medical doctors and registered nurses working in these five hospitals at the time of the study was 2,018. The list of healthcare professionals (medical doctors and nurses) as population elements for five healthcare institutions was obtained from the healthcare payroll offices of the respective

hospitals after top management approval. Table 3.1 shows the distribution of healthcare professionals for these five hospitals.

Table 3.1
Distribution of healthcare professionals in five hospitals

	Name of Hospital	Total number of healthcare professionals
1.	Muhimbili National Hospital (MNH)	1200
2.	Ligula Referral Hospital (LFH)	223
3.	Mnazi Mmoja Hospital (MMH)	116
4.	Sekou Toure Reginal Hospital Mwanza (SRHM)	136
5.	Mbeya Referral Hospital (MRH)	343
	TOTAL	**2018**

3.3.2 Sampling Size

Sample size is a specific number of the individuals or respondents nominated from large population for conducting a survey (Sekaran, 2013). Since it is not practical to collect data from the whole population, a sampling process was conducted to determine the sampling size. Many scholars have agreed that larger sample size will enable greater power of a statistical test (Borenstein, Rothstein & Cohen, 2003; Kelley & Maxwell, 2003). Thus, in this study, the determination of sample size was done by using two approaches. First is by using G*Power 3.1 software to determine the minimum sample size (Mayr, Edgar, Buuchner, & Faul, 2007). This analysis is a statistical process for establishing an appropriate sample size for carrying out an empirical study (Bruin, 2006). Relying on parameters such as medium effect size f^2 (0.15), the significant level of an

alpha (α err prob; 0.05, Power (1-β err prob; 0.95) and five independent variables which are individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate, it is found that a minimum of 138 sample size is needed for testing regression of the models (Cohen, 1992; Mayr et al., 2007).

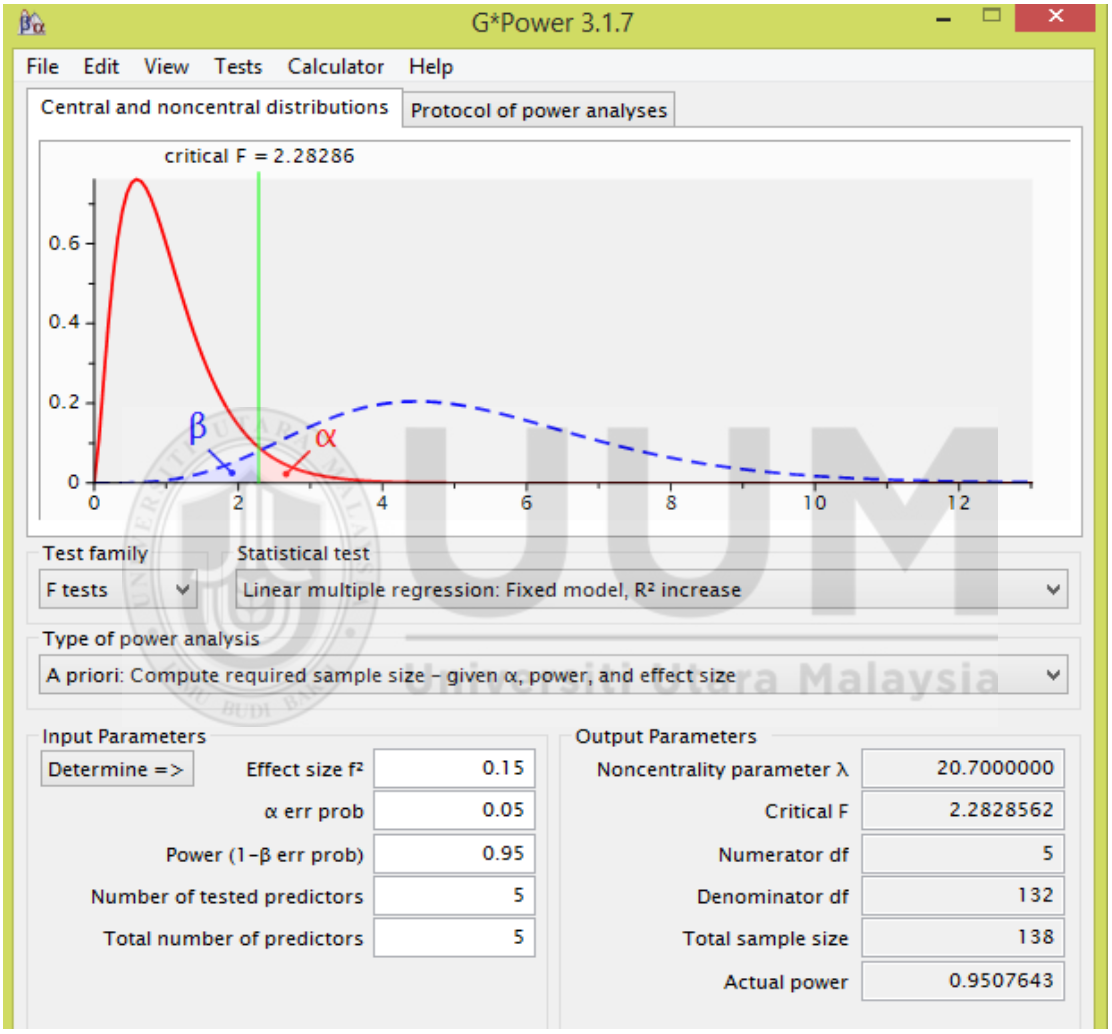

Figure 3.1. The priori power analysis output

However, relying on the priori power analysis output per se would not be enough as the response rate in the Tanzania, setting is not good (Lwehabura & Stilwell, 2008; Mrisho et al., 2007; Walker Walker, & Ganea, 2013). Thus, there is a need to rely on other methods

to establish a sufficient sample size of the available population. Relying on the response rate situation, this study also used a priori analysis power to determine sample size as proposed by Krejcie and Morgan (1970). Based on the population of 2018 people, the sample size table suggested by Krejcie and Morgan (1970) is 322.This means 322 healthcare professionals are needed to represent the whole study population. This sample size fits Roscoe's rule of thumb where a sample that is larger than 30 and less than 500 is appropriate for most research. However, the researcher decided to distribute 650 questionnaires with the intention to receive high response rate. As argued by Hair, Black, Babin, Anderson and Tatham (2006), a large sample size is needed in order to generalize the whole population.

3.3.3 Sampling Technique

This study intends to generate its sample of five healthcare institutions. Thus, this implies a need for stratified random sampling. Stratified random sampling is the sampling technique which is used to create strata of sample elements by picking up the elements from every stratum through a simple, random procedure (Sekaran, 2013). The stratification based on public hospitals.

The stratified probability sampling technique is employed in this study since it is considered to provide equal opportunity to each individual to be chosen as the sample of the study (Sekaran, 2013). The study also employed disproportionate sampling decision which involves drawing respondents from every stratum by not considering a particular

percentage (Sekaran & Bougie, 2010). The disproportionate sampling decision was made as some stratum or strata comprised too large a population and others too small. It was also done to reduce expenses in collecting data from a single or more strata compared to other strata (Sekaran, 2003).

In addition, the study utilized probability sampling technique. This sampling technique gives an equal chance to every individual to be selected as the sample size (Sekaran, 2003). The benefits of this technique are that it eliminates sample selection bias and enhances high generalizability of the research results (Cavana, Delahaye & Sekaran, 2001; Gay & Diehl, 1992; Salkind, 2003). The random numbers were generated by utilizing Microsoft Excel software after obtaining the list of healthcare professionals from the management of each sampled hospital. This was done by applying "rand" function in Microsoft Excel spreadsheet.

Table 3.2
Distribution of respondents for each hospital

Hospital	Total number of healthcare professionals (N=2018)	Total respondents (S = 650)	Percentage of sample
Muhimbili National Hospital (MNH)	1200	287	44%
Ligula Referral Hospital (LRH)	223	92	14%
MnaziMmoja Hospital (MMH)	116	77	12%
SekouToureReginal Hospital Mwanza (SRHM)	136	84	13%
Mbeya Referral Hospital (MRH)	343	110	17%
Total	**2018**	**650**	**100%**

3.4 Operational Definitions and Measurements

The measurement adopted in this study and their operational definitions are discussed in several subsections. The discussion begins with the dependent variable and this followed by the independent variables, mediating variable and moderating variable.

3.4.1 Knowledge Sharing Behavior Measures

Knowledge sharing behavior is the dependent variable. Knowledge sharing behavior is operationalized as the extent to which healthcare professionals are involved in the actual sharing of knowledge with each other through written contributions, organizational communication, personal interaction and communities of practice (Yi, 2009).

The knowledge sharing behavior scale was adapted from Yi (2009) and known as, "Knowledge Sharing Behavior Scale"(KSBS). The scale has four dimensions, namely written contributions, organizational communications, personal interactions and communities of practice.

Written contributions refer to the employees' behavior towards contributing information, ideas and expertise through written contributions by submitting reports and posting ideas to the database of the organization, which are beneficial to the individuals and the

organization. In this dimension, sharing knowledge is done through individual-to-document channel (Yi, 2009).

Organizational communications include individual behavior of knowledge sharing in official interactions with or across departments and teams. For example, the project groups or working teams that regularly meet for problem solving or brainstorming sessions to acquire ideas from other employees. This dimension explains how knowledge sharing is implemented through formal social interactions of an individual-to-group channel (Yi, 2009:69).

Personal interactions include individual behaviors that knowledge is exchanged in formal contacts among organizational members, including chatting during lunch time and assisting other employees who approach them. In this dimension, knowledge is exchanged through the informal interactions of an individual-to-person channel (Yi, 2009:69).

Communities of practice refers to "behaviors of sharing knowledge within communities of practice, which are voluntary groups of employees communicating around a topic with common interests in a non-routine and personal way, as previously described. In other words, knowledge is shared through informal social knowledge interactions of a person-to-group channel"(Yi, 2009: 69-70).

In this study, knowledge sharing behaviors were measured using 28 items developed by Yi (2009). This 28-item knowledge sharing behavior scale has been shown to be both reliable and valid for measuring knowledge sharing behavior. Several studies have reported that the scale has adequate internal consistency (Cronbach's alpha ranging from .72 to .98) (Ramayah, Yeap & Joshua, 2014; Suppiah & Sandhu, 2011, Yi, 2009). The 28 items were rephrased by changing the wordings of the original version to suit agree-disagree response scales used for this study. The original and adapted versions of the 28 items are shown in Table 3.3 and in the section one of the questionnaire.

Table 3.3
Original and adapted versions of knowledge sharing behavior items

Dimension	Original version	Adapted version
Knowledge Sharing Behavior- Written contributions	Submit documents and reports.	I share documents and reports
	Publish papers in company journals, magazines, or newsletters	I publish papers in institutional journals, magazines, or newsletter
	Share documentation from personal files related to current work	I share documentation from personal files related to current work
	Contribute ideas and thoughts to company online databases	I contribute ideas and thoughts to hospital online databases
	Keep others updated with important organizational information through online discussion boards.	I keep others updated with important organizational information through online discussion boards.
Knowledge sharing behavior-Organizational communications	Express ideas and thoughts in organizational meetings	I express ideas and thoughts in organizational meetings
	Participate fully in brainstorming sessions	I participate fully in brainstorming sessions
	Propose problem-solving suggestions in team meetings	I propose problem-solving suggestions in team meetings

	Answer questions of others in team meetings.	I answer questions of others in team meetings
	Ask good questions that can elicit others' thinking and discussion in team meetings	I ask good questions that can elicit others' thinking and discussion in team meetings
	Share success stories that may benefit the company in organizational meetings	I share success stories that may benefit the company in organizational meetings
	Reveal past personal work-related failures or mistakes in organizational meetings to help others avoid repeating these	I share past personal work-related failures or mistakes in organizational meetings to help others avoid repeating these.
	Make presentations in organizational meetings	I make presentations in organizational meetings
Knowledge sharing behavior-Personal interactions	Support less-experienced colleagues with time from personal schedule	I support less-experienced colleagues with time from personal schedule
	Engage in long-term coaching relationships with junior employees	I engage in long-term coaching relationships with junior employees
	Spend time in personal conversation (e.g., discussion in hallway, over lunch, through telephone) with others to help them with their work-related problems	I spend time in personal conversation (e.g., discussion in hallway, over lunch, through telephone) with others to help them with their work-related problems
	Keep others updated with important organizational information through personal conversation.	I keep others updated with important organizational information through personal conversation
	Share passion and excitement on some specific subjects with others through personal conversation	I share passion and excitement on some specific subjects with others through personal conversation
	Share experiences that may help others avoid risks and trouble through personal conversation	I share experiences that may help others avoid risks and trouble through personal conversation
	Have online chats with others to help them with their work-related problems	I have online chats with others to help them with their work-related problems

Table 3.3
continued

Knowledge sharing behavior-Communities of practice	Spend time in e-mail communication with others to help them with their work-related problems	I spend time in e-mail communication with others to help them with their work-related problems
	Meet with community members to create innovative solutions for problems that occur in work.	I meet with community members to create innovative solutions for problems that occur in work.
	Meet with community members to share own experience and practice on specific topics with common interests	I meet with community members to share own experience and practice on specific topics with common interests
	Meet with community members to share success and failure stories on specific topics with common interests	I meet with community members to share success and failure stories on specific topics with common interests
	Meet with community members to work to encourage excellence in community's practice	I meet with community members to work to encourage excellence in community's practice
	Support personal development of new community members	I support personal development of new community members
	Send related information to members through community e-mail list	I send related information to members through community e-mail list
	Share ideas and thoughts on specific topics through company supported online community-of-practice system.	I share ideas and thoughts on specific topics through company supported online community-of-practice system

In this study, participants rated their degree of agreement with the knowledge sharing behavior statements based on a five-point scale, whereby 1 = strongly disagree and 5 = strongly agree. Table 3.4 shows the KSB items used in this study.

Table 3.4
Knowledge sharing behavior items

Variable	Dimension	Operational definition	Item	Authors
Knowledge sharing behavior	Written contributions	Actual sharing of knowledge among each other through written contributions	1. I share documents and reports	Yi (2009)
			2. I publish papers in institutional journals, magazines, or newsletters	
			3. I share documentation from personal files related to current work	
			4. I contribute ideas and thoughts to hospital online databases	
			5. I keep others updated with important organizational information through online discussion boards	
Knowledge sharing behavior	Organizational communications	Actual sharing of knowledge among each other through organizational communication	6. I express ideas and thoughts in organizational meetings	Yi (2009)
			7. I participate fully in brainstorming sessions	
			8. I propose problem-solving suggestions in team meetings	
			9. I answer questions of others in team meetings	
			10. I ask good questions that can elicit others' thinking and discussion in team meetings	
			11. I share success stories that may benefit the organization during the meetings	
			12. I share past personal work-related failures or mistakes in organizational meetings to help others avoid repeating these	
			13. I make presentations at hospital meetings	
	Personal interactions		14. I support less-experienced colleagues with time from personal schedule	
			15.I Engage in long-term coaching relationships with junior employees	
			16. I spend time in personal	

		conversation (e.g., discussion in hallways, over lunch, through telephone) with others to help them with their work-related problems 17. I keep others updated with important organizational information through personal conversation. 18. I share a passion and excitement on some specific subjects with others through personal conversation 19. I share experiences that may help others avoid risks and trouble through personal conversation 20. I have online chats with others to help them with their work-related problems 21. I spend time in e-mail communication with others to help them with their work-related problems	
Communities of practice	Actual sharing of knowledge among each other through communities of practice	21. I spend time in e-mail communication with others to help them with their work-related problems 22. I meet with community members to create innovative solutions to problems that occur at work. 23. I meet with community members to share own experience and practice on specific topics with common interests 24. I meet with community members to share success and failure stories on specific topics with common interests 25. I meet with community members to work to encourage excellence in community's practice 26. I support personal development of new community members 27. I share related information to	Yi (2009)

	members through community E-mail list 28. I share ideas and thoughts on specific topics through company supported online community-of-practice system.

3.4.2 Individual Capabilities Measures

Individual capabilities construct is the first independent variable. It is operationalized as the confidence in one's ability to provide knowledge that is valuable to the teammates (Kalman, 1999). Individual capabilities are measured using four items adopted from Kalman (1999). Past studies have reported that the scale has adequate internal consistency (Cronbach's alpha ranging from .88 to .96) (Chen & Chen, 2009a; Kankanhalli, Tan & Wei, 2005; Kumar & Rose, 2012; Witherspoon, Bergner, Cockrell & Stone, 2013; Zhang & Ng, 2012b). In this study, participants rated their degree of agreement with the individual capabilities statements based on a five-point scale, whereby 1 = strongly disagree and 5 = strongly agree. Table 3.5 shows the individual capabilities items used in this study.

Table 3.5
Individual capability items

Variable	Operational definition	Items	Authors
Individual capability	The confidence in one's ability to provide knowledge that is valuable to the teammates	1. I have the confidence in my ability to provide knowledge that teammates consider useful 2. I have the experience needed to provide useful knowledge to the construction team 3. I can provide useful knowledge as well as other teammates 4. I am proud of the knowledge that I can be able to share with teammates	Kalman (2009)

3.4.3 Career Advancement Measures

Career advancement is the second independent variable in this study. Career advancement is operationalized as the degree to which a healthcare professional considers knowledge sharing behavior will influence his or her career positively (Kankanhalli, Tan & Wei, 2005). Career advancement was measured using five items adapted from Kankanhalli, Tan and Wei (2005). The scale has been shown to have adequate internal consistency (Cronbach's alpha ranging from .60 to .93) (He, Fang & Wei, 2009; Kumar & Rose, 2012; Tohidinia & Mosakhani, 2010; Zhang & Ng, 2012b).

The five items adapted for this study were rephrased to suit the context of this study. Table 3.6 shows the original and adapted versions.

Table 3.6
Original and adapted versions of career advancement items

Original version	Adapted version
It is important to get a higher salary when I share my knowledge through EKRs	It is important to get a higher salary when I share my knowledge
It is important to get a higher bonus when I share my knowledge through EKRs	It is important to get a higher bonus when I share my knowledge
It is important to be promoted when I share my knowledge through EKRs	It is important to be promoted when I share my knowledge
It is important to get more job security when I share my knowledge through EKRs	It is important to get more job security when I share my knowledge
It is important to get a better work assignment when I share my knowledge through EKRs	It is important to get a better work assignment when I share my knowledge

In this study, participants rated their degree of agreement with career advancement statements based on a five-point scale whereby, 1 = strongly disagree, and 5 = strongly agree. Table 3.7 shows the career advancement items used in this study.

Table 3.7
Career advancement items

Variable	Operational definition	Items	Authors
Career advancement	Healthcare professional considers knowledge sharing behavior will influence his or her	1. I will receive higher salary in return of my knowledge sharing behavior 2. I will receive higher bonus in return of my knowledge sharing behavior	Kankanhalli, Tan and Wei (2005)

	career positively	3. I will be promoted in return of my knowledge sharing behavior 4. I will enjoy an increased security in return of my knowledge sharing behavior 5. I will get better work assignment in return of my knowledge sharing behavior

3.4.4 Personal Values Measures

Personal values are the third independent variable. In this study, personal values are operationalized as the degree of one's perception of pleasure obtained from helping others through knowledge sharing behavior (Kankanhalli, Tan & Wei, 2005). Four items were adapted from Kankanhalli, Tan and Wei (2005) to measure personal values. The scale has been shown to have adequate internal consistency (Cronbach's alpha ranging from .95 to .96) (He & Wei, 2009; Jeon, Kim & Koh, 2011; Kankanhalli, Tan & Wei, 2005; Wu & Zhu, 2012). The four items adapted for this study were rephrased to suit the context of the study. For example, Table 3.8 shows the original and adapted versions.

Table 3.8
Original and adapted versions of personal values items

Original version	Adapted version
I enjoy sharing my knowledge with others through communities of practice	I enjoy sharing my knowledge with other healthcare professionals
I enjoy helping other members by sharing my knowledge through communities of practice	I enjoy helping other healthcare professional members by sharing my knowledge
It feels good to help other members by sharing	It feels good to help other healthcare professional

Original version	Adapted version
my knowledge through communities of practice	members by sharing my knowledge
Sharing knowledge with others through communities of practice gives me pleasure	Sharing knowledge with other healthcare professionals gives me pleasure

In this study, participants rated their degree of agreement with the personal values statements based on a five-point scale, whereby 1 = strongly disagree and 5 = strongly agree. Table 3.9 shows the personal values items used in this study.

Table 3.9
Personal values items

Variable	Operational definition	Items	Authors
Personal values	The degree of one's perception of pleasure that obtained from helping others through knowledge sharing behavior	1. I enjoy sharing my knowledge with other healthcare professionals 2. I enjoy helping other healthcare professional members by sharing my knowledge 3. I feel good to help other healthcare professional members by sharing my knowledge 4. Sharing knowledge with other healthcare professionals gives me pleasure	Kankanhalli, Tan and Wei (2005)

3.4.5 Job Characteristics Measures

Job characteristics construct is the fourth independent variable. They are operationalized as the extent to which jobs performed by healthcare professionals need skills variety, task identity, task significance, task autonomy and feedback (Hackman & Oldman, 1974). In this study, job characteristics were measured using eight items developed by Hackman and Oldman (1974). In past studies, the scale has shown to have adequate internal consistency (Cronbach's alpha ranging from .67 to .90) (Bontis et. al, 2011; Casey & Robbins, 2010; Cavalier & Lombardi, 2001; Hackman & Greg, 1975). In this study, participants rated their degree of agreement with job characteristics statements based on a five-point scale, whereby 1 = strongly disagree and 5 = strongly agree. Table 3.10 shows the job characteristics items used in this study and shown in section five in the questionnaire.

Table 3.10
Job characteristics items

Variable	Operational definition	Items	Authors
Job characteristics	The extent to which jobs performed by healthcare professionals need skills variety, task identity, task significance, task autonomy and feedback	1. I have the freedom to carry out my job the way I want to 2. I have the opportunity to complete the work that I have started 3. My supervisor frequently discusses matters related to my job performance 4. My job requires me to use a number of complex, high-level skills 5. The results of my work have a significant effect on other people's lives and well-being 6. My job gives me the chance to use my	Hackman & Oldman (1974)

	personal initiative or judgment in carrying out the work 7. I have the authority to make decisions that improve the quality of my work 8. My supervisor provides me with constant feedback about how I am doing

3.4.6 Perceived Organizational Climate Measures

Perceived Organizational climate is the fifth independent variable in this study. Perceived organizational climate is operationalized as the perception of the work environment by the members of the organization, including the work conditions, encouragement from superiors, team support and resources in the work environment (Chen & Hu, 2008). Eight items developed by Chen and Hu (2008) were used to measure perceived organizational climate. As shown in past studies, the scale has adequate internal consistency (Cronbach's alpha ranging from .85 to .87) (Chen, Chuang & Chen, 2012; Chen & Hu, 2008; Yu, Yu & Yu, 2013). The eight items were rephrased to suit the context of this study where the unit of analysis is change to individual level. The original and adapted versions are shown in Table 3.11.

Table 3.11
Original and adapted versions of perceived organizational climate items

Original version	Adapted version
Our company often encourages employees to propose new ideas	In this organization, I often been encouraged to propose new ideas
Employees in our company have been praised for their innovation behavior	In this organization, I have been praised for my innovation behavior

Employees in our company challenge each other's ideas through positive thinking	In this organization, I can challenge other's ideas through positive thinking
Superiors in our company expect that their staff can work in a more creative way	In this organization, I was expected to work in a more creative way
Our company offers a sufficient budget to support the development of an innovative project	In this organization, sufficient budget is provided to support the development of an innovative project
It is acceptable in our company for a staff member to fail to achieve the expected outcome while carrying out an innovative learning plan	In this organization, it is acceptable for staff member like me to fail to achieve the expected outcome while carrying out an innovative learning plan
Superiors in our company value the contribution made by each member of their staff	In this organization, my superior value the contribution I made
The staff in our company can freely exchange ideas	In this organization, I can freely exchange ideas

In this study, participants rated their degree of agreement with the perceived organizational climate statements based on a five-point scale, whereby 1 = strongly disagree and 5 = strongly agree. Table 3.12 shows the perceived organizational climate items used in this study.

Table 3.12
Perceived organizational climate items

Variable	Operational definition	Items	Authors
Perceived Organizational climate	The perception of work environment by the members of the organization, including the working conditions, encouragement from superiors, team support and resources in the work environment	1. In this organization, I often been encouraged to propose new ideas 2. In this organization, I have been praised for my innovation behavior 3. In this organization, I can challenge other's ideas through positive thinking 4. In this organization, I was expected to work in a more creative way 5. In this organization, sufficient budget is provided to support the development of an innovative project 6. In this organization, it is acceptable for staff member like me to fail to achieve the expected outcome while carrying out an innovative learning plan 7. In this organization, my superior value the contribution I made 8. In this organization, I can freely exchange ideas	Chen & Hu, (2008)

3.4.7 Subjective Norms Measures

Subjective norms are the moderating variable. In this study, subjective norms are operationalized as the degree to which one believes that people who bear pressure on one's action expect one to perform the behavior in question multiplied by the degree of one's compliance with each of one's referents (Bock, Lee, Zmud & Kim, 2005). Six items were adopted from Bock, Lee, Zmud and Kim (2005) to measure subjective norms.

Past studies have reported that the scale has adequate internal consistency (Cronbach's alpha ranging from .82 to .94) (Bock, Lee, Zmud & Kim, 2005; Chen & Chen, 2009b; Goh & Sandhu, 2013; Jeon, Kim & Koh, 2011; Wu & Zhu, 2012). In this study, participants rated their degree of agreement with the subjective norms statements based on a five-point scale, whereby 1 = strongly disagree and 5 = strongly agree. Table 3.13 shows the subjective norms items used in this study.

Table 3.13
Subjective Norms

Variable	Operational definition	Items	Authors
Subjective Norms	The degree to which one believes that people who bear pressure on one's action expect one to perform the behavior in question multiplied by the degree of one's compliance with each of one's referents (Bock, Lee, Zmud & Kim, 2005)	1. My CEO thinks that 1 should share my knowledge with other members in the organization. 2. My immediate supervisor thinks that I should share my knowledge with other members in the organization. 3. My colleagues think 1 should share my knowledge with other members in the organization. 4. Generally speaking, I try to follow the CEO's policy and intention 5. Generally speaking, I accept and carry out my boss's decision even though it is different from mine. 6. Generally speaking, I respect and put to practice my colleague's decision.	Bock et al., (2005)

3.5 Layout of the Questionnaire

In this study, the questionnaire was prepared in English as healthcare professionals in Tanzania can and often use English in their work. Each participant in this survey received a 12-page questionnaire accompanied with a letterhead. The questionnaire that was used in this study is shown in Appendix A.

Section 1 of the questionnaire asked respondents about their knowledge sharing behavior and there are twenty-eight items. Section 2 which consists of four items asked respondents about their individual capabilities. In section 3, there are five items that asked respondents about their career advancement. Section 4 with four questions asked about personal values. In section 5, there are eight items asking respondents about job characteristics. Section 6 consists of eight items asking about perceived organizational climate and there are six items in Section 7 that asked about subjective norms. Section 8, the final section of the questionnaire, is on demographic variables. A number of demographic variables were also measured for descriptive and control purposes. These include gender, age, highest academic qualifications, current monthly salary received, number of years with the present organization and the position. This information is necessary to show that the sample is representative and to ensure that generalization to the wider population of organizations and employees can be made.

3.6 Pilot Test

A pilot study was carried out in order to determine the reliability and validity of the measures (Flynn, Sakakibara, Schroeder, Bates & Flynn, 1990). It is important to conduct a pilot study because the original scales that were adapted in the study were established mainly in South Korea (Bock et al., 2005; Chen & Hu, 2008; Hung, Chen & Lee, 2009; Jeon et al., 2011); USA (Yi, 2009); Malaysia (Goh & Sandhu, 2013; Ramayah et al., 2014; Suppiah & Sandhu, 2011); and Singapore (Kankanhalli, Tan & Wei, 2005).

A total of 60 questionnaires were distributed to Tanzanian healthcare professionals from May 2015 to June 2015. However, only 42 were returned and found usable, giving a response rate of 70%. It should be noted that these 42 healthcare professionals were not considered in the actual data collection. Smart PLS 2.0 M3 software was used to determine the internal consistency, reliability and discriminant validity of the latent constructs (Ringle, Wende& Will, 2005). Specifically, the Partial Least Squares (PLS) Algorithm was assessed to achieve the average variance extracted (AVE) and composite reliability coefficient of each latent construct (Geladi & Kowalski, 1986). This pilot study adopted the rule of thumb which suggests that the composite reliability coefficient should range from 0.7 and above (Bagozzi & Yi, 1988; Hair, Ringle & Sarstedt, 2011). Meanwhile, AVE should range from 0.5 and more (Fornell & Larcker, 1981). Furthermore, for satisfactory discriminant validity, the AVE of each latent construct should be higher than its correlation and correlations with other constructs (Fornell & Larcker, 1981). Table 3.14 shows the AVE and composite reliability coefficients of the latent constructs.

Table 3.14
Reliability and validity of constructs (n=42)

Latent constructs	No. of Indicators	Average Variance Extracted	Composite Reliability
KSB Written contribution	2	.78	.87
KSB Organizational communication	5	.84	.96
KSB Personal interaction	5	.85	.96
KSB Communities of practice	3	.75	.90

Individual capabilities	4	.80	.94
Career advancement	5	.87	.97
Personal values	4	.85	.96
Job characteristics	5	.86	.97
Perceived organizational climate	6	.57	.88
Subjective norms	5	.75	.94

In Table 3.15, the square root of AVE of each latent construct was compared to its correlations and correlations in other constructs; and indicated that the square roots of the AVE are higher than the correlations among latent variables, depicting sufficient discriminant validity (Fornell & Larcker, 1981).

Table 3.15
Discriminant validity

Latent Constructs	1	2	3	4	5	6	7	8	9	10
CA	**.930**									
ICs	.489	**.892**								
JCs	.765	.749	**.927**							
KSB CPractice	.581	.718	.691	**.86**6						
KSB OCommuni	.673	.818	.890	.736	**.914**					
KSB PInteraction	.470	.848	.757	.825	.874	**.920**				
KSB WC	.825	.510	.701	.725	.640	.559	**.881**			
POrg Climate	.608	.680	.768	.674	.825	.755	.617	**.752**		
PValues	.207	.622	.592	.550	.623	.646	.391	.469	**.924**	
SNorms	-.584	-.517	-.535	-.474	-.500	-.341	-.723	-.585	-.343	**.863**

Note: The bold faces (bolded numbers) stand for the square roots of AVE of each latent construct and none bolded values signify the correlation.

3.7 Data Collection Procedure

Before the actual data collection was conducted, the questionnaire was sent to experts in knowledge sharing behavior for content validity. Once the questionnaire was validated by the experts, including a Professor and a Senior Lecturer from Universiti Utara Malaysia, a pre-test was conducted with 10 healthcare professionals in Tanzania. The purpose of conducting a pre-test is to ensure the adequacy of items, including the wording, phrases and the flow of the items in the questionnaire.

The actual data collection process begun after the pilot study was conducted. First, a formal letter was sent to all five selected hospitals under study explaining the background

of the study and seeking their permission to conduct the survey. Through the initial telephone conversation, the researcher introduced himself, explained the purpose of the call and asked for an appointment with the hospital management to conduct the survey. Once the permission was received, the process of distributing the questionnaires began.

The researcher personally administered and collected all the completed questionnaires, the researcher did the briefing on the purpose and the nature of the survey with each respondent. Each respondent was assured that all the information given will remain confidential at all times and will be used for the study only. They were not required to identify themselves in that they did not have to put their names on the questionnaire. Respondents were then given 30 minutes to complete the questionnaire. More time was given to those who could not complete the forms in 30 minutes. For respondents who were not able to fill out the questionnaire during the meeting, a follow-up telephone reminder was done to remind respondents about returning the questionnaire.

3.8 Technique of Data Analysis

This study used PLS path modelling and smart PLS 2.0 M3 software (Ringle et al., 2005) to analyze the theoretical model. PLS path modeling is regarded as the most appropriate technique for analyzing data in the present study for the following reasons: Firstly, PLS SEM provides more appropriate and valid results, while other methods of analysis such as software package employed for statistical analysis (SPSS), often finding in less clear conclusion and would demand several analyses (Bollen, 1989; Chin, Marcolin & Newstead, 2003). Additionally, Tabachnick and Fidell (2007) proclaim that

SEM is one of the most powerful statistical tools in behavioral and social sciences that have the capability of testing several relationships simultaneously.

Secondly, despite the huge amount of research on the relationship between knowledge sharing behavior and its predictors, previous studies have shown that the moderating effect of subjective norms on the influence of individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate on knowledge sharing behavior has not yet been explored. Furthermore, the intention of this study is to envisage the role of individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate and subjective norms in maximizing the possibility of healthcare professionals (employees) engaging in knowledge sharing behavior at healthcare institutions. This research is explorative and employs the social exchange and social impact theories. A path modelling approach needs to be utilized because it has been recommended that if the research intends to predict or extend an existing theory, PLS path modelling should be used (Hair et al., 2011; Henseler, Ringle & Sinkovics, 2009).

Thirdly, compared to other path modelling software such as AMOS and Analysis of Moment Structures, the Smart PLS 2.0 M3 software is known for its friendly graphical user interface, which can assist users to make a moderating impact for path models including interaction influences (Temme, Kreis & Hildebrandt, 2006).

From the data analysis, the study follows several steps. First, collected data was screened by employing SPSS to ensure it is appropriate for further PLS analysis. Second, to assess the measurement model, including assessment of the individual item's reliability, internal consistency reliability, convergent validity and discriminant validity (Hair et al., 2011; Henseler et al., 2009).

Third, the present study carried out the standard bootstrapping procedure with a 5,000 bootstrap samples and applying 439 cases to assess the structural model (Hair et al., 2011; Hair, Sarstedt, Ringle & Mena, 2012; Henseler et al., 2009). Specifically, this study used PLS path modelling to calculate the significance of path coefficients, the amount of R-squared value, effect size and predictive relevance of model (Hair, Hult, Ringle & Sarstedt, 2014). Fourth, the supplementary PLS-SEM which is a moderator analysis was carried out after the analyses of the main PLS path model. Consistent with the approaches suggested by Chin, Henseler and Wang (2010) and Henseler and Fassott (2010) on the moderating, analysis in PLS path models, the current study used the two–stage approach to test the moderating effect of subjective norms on the relationship of individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate with knowledge sharing behavior. Lastly, the moderating effects were ascertained by employing Cohen's (1988) effective size formula as depicted in Table 4.13.

3.9 Conclusions

This chapter explains the research method and describes how the sample of respondents is obtained, the selection of the respondents, development of the questionnaire, operational definition of variables, measurement and the pilot study, the data collection procedure and techniques of data analysis. This study adopts a cross-sectional research design in which data that were collected are analyzed and statistically interpreted. The unit of analysis is individual healthcare professionals who are working in five selected Tanzanian public hospitals. The sample for this study was chosen using the stratified probability sampling technique. This study adopts measurement scale from prior literature to measure seven constructs: individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate, subjective norms and knowledge sharing behavior. The next chapter, Chapter 4 presents the findings.

CHAPTER 4

FINDINGS

4.1 Introduction

Chapter 4 reports the results of the study. This chapter begins by reporting the response rate and the demographic characteristics of the participants. It then presents the screening process and continues with a report on utilizing PLS path modeling. This chapter analyzes the measurement model through the reliability of an individual item, internal consistency reliability, convergent validity, discriminant validity and cross-loadings analysis of measures used. In addition, this chapter analyzes the structural model which includes the significance of the path coefficients, the intensity of the R-squared values, effect size and predictive relevance of the model. Lastly, this chapter presents the PLS-SEM analysis.

4.2 Response Rate

A total of 650 questionnaires was distributed between September and November 2015 to healthcare professionals in five Tanzanian public hospitals. A total of 476 questionnaires was returned at the end of the data collection period, yielding a response rate of 73%. However, only 439 questionnaires were returned for further analysis. Table 4.1 presents the summary of the respondents' response rate.

Table 4.1
Response rate of the questionnaires

Hospital	Total survey distributed	Total survey received	Percentage
Muhimbili National Hospital (MNH)	287	193	42
Ligula Referral Hospital (LRH)	92	75	16
MnaziMmoja Hospital (MMH)	77	58	12
SekouToureReginal Hospital Mwanza (SRHM)	84	63	13
Mbeya Referral Hospital	110	82	17
Total	**650**	**471**	**100.00**

4.3 Demographic Characteristics of the Participants

Table 4.2 presents the participants' demographic characteristics. It is noted that 67.2% of the 439 participants in this survey were female. Most of the participants (42.6%) were aged between 21-30 years old while the majority of the participants (62.4%) were married. In terms of academic qualification, 51.7% holding a diploma. Out of 439 participants, 83.8% earned a monthly income below USD 2000. As for the number of years with present organization, 32.1% had served their hospital for more than 7 years. As shown in Table 4.2, the majority of the participants (74.3%) were nurses. Lastly, most of the respondents (36.90%) had been in their present position between 1-3 years.

Table 4.2
Demographic characteristics of the respondents (n=439)

Demography	Frequency	Percentage
Gender		
Male	144	32.8
Female	295	67.2
Age		
21 -30 years	187	42.6
31 - 40 years	145	33.0
41 - 50 years	73	16.6
51 - 60 years	32	7.3
61 years and above	2	0.5
Marital Status		
Single	143	32.6
Married	274	62.4
Divorced	22	5.0
Highest academic qualification		
Secondary	0	0
Certificate	65	14.8
Diploma	227	51.7
First Degree	134	30.5
Master	11	2.5
PhD	2	0.5

Table 4.2
Continue

Monthly salary		
Below USD 2000	368	83.8
USD 2001 – USD 3000	32	7.3
USD 3001 – USD 4000	16	3.6
Above USD 4000	23	5.2
Number of years with present organization		
Less than a year	79	18.0
1 – 3 years	138	31.4
4 – 7 years	81	18.5
More than 7 years	141	32.1
Position		
Doctor	112	25.3
Nurse	327	74.3
Years in the present position		
Less than a year	74	16.9
1 – 3years	162	36.9
4 – 7 years	102	23.2
More than 7 years	101	23.0

4.4 Data Screening

Data were examined for data entry accuracy, outliers and distributional analysis before performing the primary analysis.

4.4.1 Missing Value Analysis

The SPSS dataset indicates that out of the 29,202 data points, 12 or 0.041% are indiscriminately missed. Specifically, knowledge sharing behavior has two missing values, individual capabilities have four missing values, career advancement has three missing values, job characteristics have two missing values and subjective norms have one missing value. No missing value is found in personal values and organizational climate.

Although in the data set, there is no agreeable percentage of missing values for creating valid statistical inference, scholars generally have established that missing rate of 5% or less is not significant (Tabachnick & Fidell, 2007). It is also proposed by researchers that the easiest method for replacing missing values is by mean substitution if the total missing data percentage is less than 5% (Little & Rubin, 1987; Tabachnick & Fidell, 2007). Thus, current study used mean substitution to arbitrarily replace missing values (Tabachnick & Fidell, 2007). Table 4.3 indicates the total and percentage of arbitrarily missing values in the current study (see Appendix B for SPSS outputs).

Table 4.3
Missing value analysis

Variables	Missing Values
Knowledge Sharing Behavior	2
Individual Capabilities	4
Career Advancement	3
Personal Values	0
Job Characteristics	2
Perceived Organizational Climate	0
Subjective Norms	1
Total Missing Values	12 out of 29,202 data point
Percentage of Missing Values	0.041%

Note: Missing values percentage is achieved by dividing the total number of arbitrarily missing values for the whole data set by total number of data points by 100

4.4.2 Assessment of Outliers

Outliers are defined by Barnett and Lewis (1994) as "observations or subsets of observations which appear to be inconsistent with the remainder of the data"(p. 7). It is considered that the presence of outliers in the data set may distort the estimates of regression coefficients and render the findings unreliable (Verardi & Croux, 2008). In this study, the frequency tables were used for all variables, utilizing minimum and maximum statistics in order to identify any observation which exists outside the SPSS value mark as an outcome of wrong data entry. However, there was no value detected outside an expected range.

This study conducted both univariate and multivariate outliers for the collected data (Hair, Black, Babin & Anderson, 2010; Tabachnick & Fidell, 2007). Firstly, the data were examined to detect univariate outliers by employing standardized values with cut-off of ±3.29 ($p < .001$) as proposed by Tabachnick and Fidell (2007). Consistent with Tabachnick & Fidell (2007) principle for identifying outliers, 32 univariate outliers (i.e.19, 20, 25, 26, 40, 53, 75, 84, 98, 99, 143, 149, 161, 193, 231, 234, 251, 254, 258, 351, 408, 411, 439, 445, 448, 451, 453, 461, 465, 467, 468, 469) were identified and deleted instantly from the data set since they influenced the accuracy of further data analysis techniques. Secondly, multivariate outliers were determined utilizing Mahalanobis distance (D2). According to Tabachnick and Fidell (2007), Mahalanobis distance (D2) is "the distance of a case from the centroid of the remaining cases where the centroid is the point created at the intersection of the means of all the variables" (p. 74). Therefore, in line with Tabachnick and Fidell, (2007), based on 61 observed items of the current study, the suggested threshold of chi-square is 101 ($p = 0.001$). Mahalanobis values that surpassed this threshold must be deleted. Following this criterion, none of the cases was detected as being multivariate outliers. Thus, after deleting 32 univariate outliers, the final dataset in the present study is 439.

4.5 Non-response Bias

Lambert and Harrington (1990) defined non-response bias as "the differences in the answers between non-respondents and respondents" (p. 5). In regards with the method to approximate probability of non-response bias, it is recommended to

compare the early and late respondents which relies on the time-trend extrapolation approach (Armstrong & Overton, 1977). The scholars asserted that late participants have the same features with non-respondents. Meantime, in order to reduce non-response bias, Lindner and Wingenbach (2002) suggested that the minimum response rate should be 50%. Thus, the respondents in the current study were divided into two major groups: those who filled the questionnaires within five weeks were considered as early respondents while those who filled the questionnaires after five weeks were late respondents (Vink & Boomsma, 2008). A higher number of respondents in the sample of this study, i.e. 331 equals to 75% filled the questionnaires within five weeks, while the rest or 108 which is equivalent to 25% responded after five weeks.

The present study conducted independent t-test in order to identify any possible non-response bias on major study constructs, including individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and subjective norms. The results of independent-samples t-test are illustrated in Table 4.4.

Table 4.4
Results of independent-samples t-test for non-response bias

Variables	Response Group	N	Mean	Std. Deviation	Levene's Test for Equality of Variances	
					F	Sig.
KSB	Early Response	331	3.6461	.58940	1.573	.210
	Late Response	108	3.7612	.60565		

ICs	Early Response	331	4.1763	.64965	.699	.404
	Late Response	108	4.2500	.68273		
CA	Early Response	331	3.7852	.87231	3.050	.081
	Late Response	108	4.0664	.79393		
PVs	Early Response	331	4.4690	.57206	.093	.761
	Late Response	108	4.4954	.61235		
JCs	Early Response	331	3.9558	.62543	.084	.772
	Late Response	108	4.0301	.61945		
POC	Early Response	331	3.5536	.71241	3.612	.058
	Late Response	108	3.7396	.57502		
SNs	Early Response	331	3.8263	.66453	.859	.354
	Late Response	108	4.0630	.73657		

As reported in Table 4.4, the findings of independent-sample t-test indicate that the significance values of equal variance for every construct of the seven major constructs of this study is higher than 0.05 significance level of Levene's test for equality of variances as proposed by Pallant (2011) and Field (2009). Thus, this indicates that there is no violation in assumption of equal variances between those who filled the questionnaire early and those who responded late. Therefore, it is inferred that the current study is not concerned with the problem of non-response bias since the study achieved 54% as the minimum response rate which can be deemed that there is no existence of non-response bias among the major constructs (Lindner & Wingenbach, 2002).

4.6 Descriptive Analysis of the Latent Constructs

This section presents descriptive statistics of the latent variables employed in the current study. In this study, means and standard deviations were used to compute descriptive statistics of the latent variables. A five-point scale anchored by 1 = strongly disagree to 5 = strongly agree was employed to measure all latent variables used in this study. Table 4.5 presents the results.

Table 4.5
Descriptive statistics for latent variables

Variables	Number of Items	Mean	Std. Deviation
Knowledge Sharing Behavior	28	3.67	.595
Individual Capabilities	4	4.19	.658
Career Advancement	5	3.85	.861
Personal Values	4	4.48	.582
Job Characteristics	8	3.97	. 624
Perceived organization Climate	8	3.60	.685
Subjective Norms	5	3.88	.690

As shown in Table 4.5, the means of the variables range from 3.60 to 4.48. Specifically, the mean of knowledge sharing behavior is 3.67 and its standard deviation is .595. The descriptive analysis indicates that healthcare professionals with individual capabilities have a higher mean value of 4.19 with standard deviation value of.658. The mean value for individual perception on career advancement determined by knowledge sharing behavior is 3.85 while standard deviation is .861

which is the highest standard deviation value of latent variables compared to other standard deviation values. Descriptive analysis for personal values reveals the highest mean value of 4.48 with its standard deviation value of .582. On the other hand, the mean value of job characteristics is 3.97 while its standard deviation is .624 which is among the highest standard deviation values. Perceived organizational climate has a mean value of 3.60 which is relatively low compared to others but with a standard deviation value of .685 which is higher than knowledge sharing behavior. Finally, descriptive analysis reveals the mean score for subjective norms is 3.88 and a standard deviation value of .690.

The next section reports the findings of PLS confirmatory factor analysis after presenting the results on SPSS preliminary data analysis.

4.7 Assessmemt of PLS-SEM Path Model Findings

Henseler and Sarstedt (2013) recommended that the goodness of fit (GoF) index is not appropriate for model validation (Hair et al., 2014). It is also shown that the GoF index is not suitable for validating model since it cannot split valid models from the non-valid ones (Henseler & Sarstedt, 2013). However, the results of PLS path in this study were evaluated and reported by the two-steps process following the recommendation of Henseler, Ringle and Sinkovics (2009). The steps include assessment of the measurement model and the structural model (Hair, Hult, Ringle & Sarstedt, 2014; Henseler et al., 2009; Reinartz et al., 2009).

4.8 Assessment of Reflective Measurement Model

All seven constructs in the present study have reflective measurement models as shown by the arrows pointing from the construct to the indicators. Therefore, this study is based on assessment of measurement models which entails evaluating reliability of individual items, internal consistency reliability, convergent validity and discriminant validity (Duarte & Raposo, 2010; Hair et al., 2014; Hair, Ringle & Sarstedt, 2011; Henseler et al., 2009).

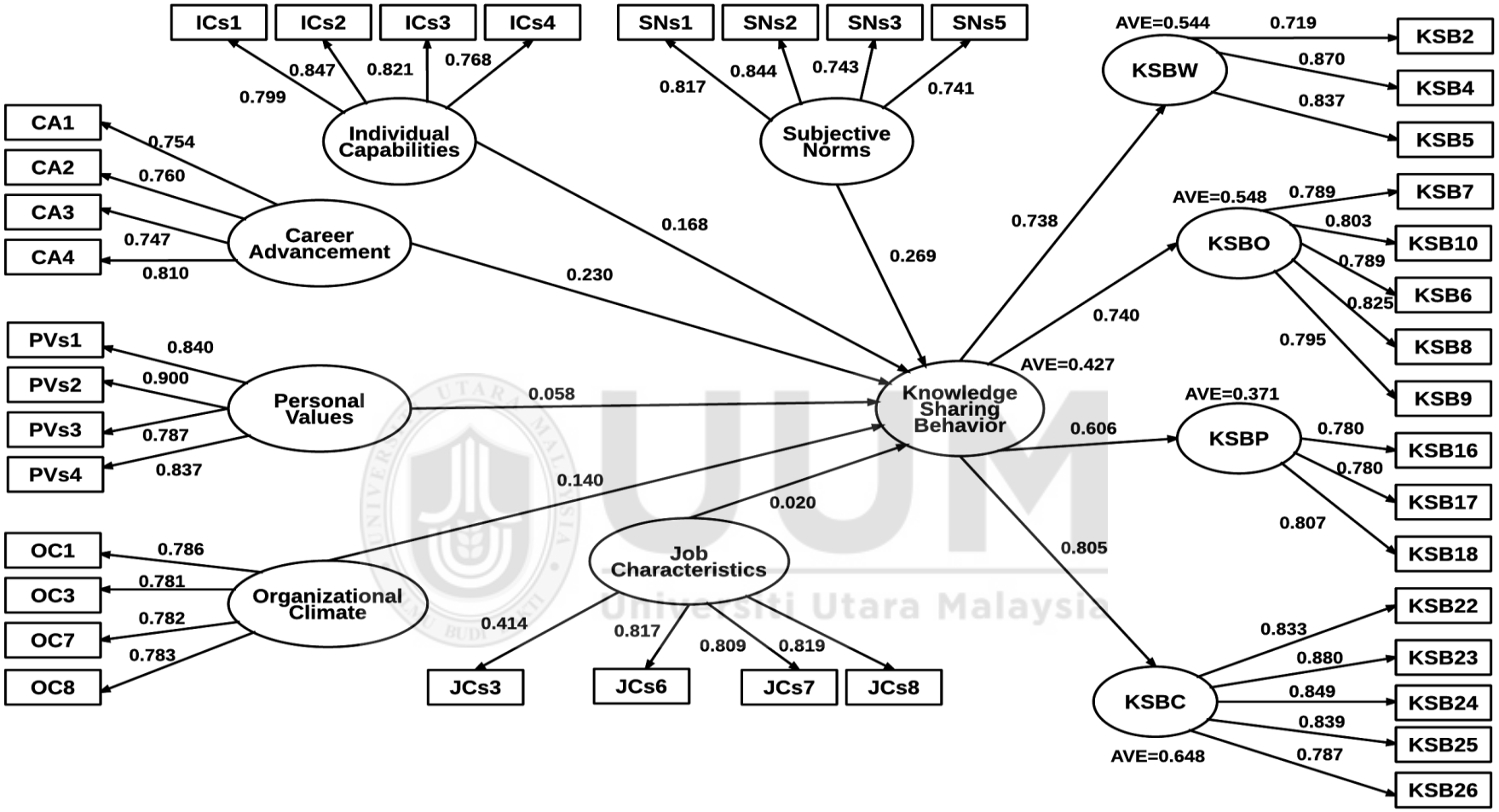

Figure 4.1. Measurement model

4.8.1 Individual Item Reliability

In this study, individual reliability was determined by checking the outer loadings of each measurement construct (Hair et al., 2014; Joe Hair et al., 2012). Considering the rule of thumb that involves maintaining items with loadings between .40 and .70 (Hair et al., 2014), 22 items were deleted out of 62 items since these items had loadings below 0.40. Therefore, the model had 40 items remaining with loadings ranging between 0.414 and 0.900 (shown in Table 4.8).

4.8.2 Internal Consistency Reliability

Internal consistency reliability is the degree to which all items in the study are measuring the same concept (Bijttebier et al., 2000; Sun et al., 2007). The estimators employed to assess internal consistency reliability of this instrument are Cronbach's alpha coefficient and composite reliability coefficient (Mccrae, Kurtz, & Terracciano, 2011; Peterson & Kim, 2013). In ascertaining the internal consistency reliability of the measures adopted, the present study opted for composite reliability coefficient. The composite reliability coefficient was chosen due to two main reasons. Firstly, composite reliability coefficient tends to offer lesser estimated bias of reliability compared to Cronbach's alpha coefficient because composite reliability coefficient considers the actual contribution of an individual loading unlike Cronbach's alpha, which considers all items contribute equally to the constructs of the study (Gotz, Liehr-Gobbers & Krafft, 2010). Secondly, Cronbach's alpha is not suitable because it can underestimate or overestimate the

reliability of the scale while composite reliability considers differences that exist in loadings of indicators which overestimate or underestimate the reliability of the scale and it can be elucidated in a similar way as the interpretation by Cronbach's alpha. Regardless of the reliability coefficient employed, a reliability value above .70 is considered as satisfactory internal consistency in the model while a value less than .60 is regarded as not having reliability. The results are contained in Table 4.6.

Table 4.6
Items loadings, composite reliability and average variance extracted

Constructs	Items	Loadings	CR	AVE
Career Advancement	CA1	0.754	0.852	0.589
	CA2	0.760		
	CA3	0.747		
	CA4	0.810		
Individual Capabilities	ICs1	0.799	0.883	0.655
	ICs2	0.847		
	ICs3	0.821		
	ICs4	0.768		
Job Characteristics	Jcs3	0.414	0.817	0.541
	Jcs6	0.817		
	Jcs7	0.809		
	Jcs8	0.819		
Knowledge Sharing Behavior	KBS7	0.612	0.899	0.362
	KSB10	0.567		

Table 4.6
Continue

	KSB16	0.474		
	KSB17	0.472		
	KSB18	0.495		
	KSB2	0.477		
	KSB22	0.681		
	KSB23	0.669		
	KSB24	0.661		
	KSB25	0.691		
	KSB26	0.668		
	KSB4	0.669		
	KSB5	0.629		
	KSB6	0.623		
	KSB8	0.577		
	KSB9	0.575		
	KBS7	0.612		
	KSB16	0.780		
	KSB17	0.780		
KSB-Personal Interaction	KSB18	0.807	0.832	0.622
	KSB22	0.833		
	KSB23	0.880		
	KSB24	0.849		

Table 4.6
Continue

KSB-Communities of Practice	KSB25	0.839	0.922	0.702
	KSB26	0.787		
	KSB2	0.719		
	KSB4	0.870		
KSB-Written Contribution	KSB5	0.837	0.852	0.659
	KSB6	0.789		
	KBS7	0.789		
	KSB8	0.825		
KSB-Organization Communication	KSB9	0.795	0.899	0.640
	KSB10	0.803		
	OC1	0.786		
	OC3	0.781		
Perceived organization Climate	OC7	0.782		
	OC8	0.783	0.864	0.613
	PVs1	0.840		
	PVs2	0.900		
Personal Values	PVs3	0.787	0.907	0.709
	PVs4	0.837		
	SNs1	0.817		
	SNs2	0.844		
Subjective Norms	SNs3	0.743	0.867	0.620
	SNs5	0.741		

Note: AVE (Average Variance Extracted) = (Summation of the square of the factor loadings), (summation of the square of the factor loadings) + (summation of the error variances); CR(Composite Reliability)= (Square of summation of the factor loadings), (summation of the square of one factor loadings)+(summation of the square of the variances).

In interpreting internal consistency reliability, the present study used composite reliability coefficient, relying on the rule of thumb propounded by Bagozzi and Yi (1988) and Hair et al. (2011). They recommended that the composite reliability coefficient should range from .70 and above. The composite reliability coefficients of the latent constructs in Table 4.8 indicate that the composite reliability coefficients of every latent construct ranges from .817 to .90 whereby each of them is more than the threshold value of .70. Thus, it shows adequate internal consistency of measures utilized in the present study (Bagozzi & Yi, 1988; Hair et al., 2011).

4.8.3 Convergent Validity

Convergent validity is the degree to which items really represent the latent constructs and tend to correlate with other measures of the similar latent construct (Hair et al., 2006). In this study, convergent validity was evaluated by assessing the AVE of every latent construct as recommended by Fornell and Larcker (1981). Chin (1998) suggested that the AVE of every latent construct should range from .50 and above as the means of achieving sufficient convergent validity. Consistent with Chin (1998), the AVE values as indicated in Table 4.8 reveal the great convergent validity which is higher than .50 on their relevant constructs. Thus, it shows adequate convergent validity.

4.8.4 Discriminant Validity

Discriminant validity is the degree to which a specific latent construct is dissimilar to other latent constructs (Duarte & Raposo, 2010). In this study, discriminant validity was determined by employing AVE as recommended by Fornell and Larcker, (1981). This was obtained by relating the correlation among latent variables with square roots of an AVE (Fornell & Larcker, 1981). The discriminant validity can be evaluated by the rule of thumb suggested by Fornell and Larcker (1981) who recommended the utilization of AVE such that the square root of the AVE of each latent construct should be higher than its correlation with any other latent variable in the research model (Fornell & Larcker, 1981).

Therefore, as indicated in Table 4.7, a comparison was done among correlations of latent constructs with the square root of the AVE in order to achieve discriminant validity (i.e., bold values). Table 4.7 portrays all square roots of the AVE are higher than the correlation among latent constructs which depict sufficient discriminant validity (Fornell & Larcker, 1981).

Table 4.7
Fornell- Larcker criteria analysis for checking discriminant validity of first order constructs

Construct	CA	ICs	JCs	KSBC	KSBO	KSBP	KSBW	OC	PVs	SNs
CA	**0.768**									
ICs	0.462	**0.809**								
JCs	-0.449	-0.861	**0.736**							
KSBC	0.447	0.344	-0.355	**0.838**						
KSBO	0.423	0.340	-0.290	0.304	**0.800**					
KSBP	0.396	0.461	-0.419	0.392	0.329	**0.789**				
KSBW	0.293	0.187	-0.181	0.486	0.474	0.286	**0.812**			
POC	0.586	0.371	-0.344	0.435	0.359	0.342	0.299	**0.783**		
PVs	0.245	0.195	-0.380	0.250	0.087	0.162	0.162	0.221	**0.842**	
SNs	0.552	0.479	-0.462	0.466	0.436	0.403	0.306	0.588	0.222	**0.787**

Note: the square root of AVE values is shown on the diagonals and printed with bold, non-diagonal elements are the latent variable correlation. CA= Career Advancement, ICs= Individual Capabilities, JCs= Job Characteristics, KSBC= Knowledge Sharing Behavior Communities of Practices, KSBO= Knowledge Sharing Behavior Organizational Communication, KSBP= Knowledge Sharing Behavior Personal Interaction, KSBW= Knowledge Sharing Behavior Written Contribution, POC= Perceived Organizational Climate, PVs= Personal Values, SNs= Subjective Norms.

Furthermore, discriminant validity can be determined by comparing the indicator loadings with cross-loadings (Chin, 1998). In order to achieve sufficient discriminant validity, it is recommended that all indicator loadings should be greater than the cross-

loadings. The comparison between the indicator loadings and other reflective indicators is shown in Table 4.8 which suggests sufficient discriminant validity for further analysis.

Table 4.8
Cross loadings

Item	CA	ICs	JCs	KSBC	KSBO	KSBP	KSBW	OC	PVs	SNs
CA1	.754	.276	-.297	.367	.326	.327	.256	.448	.251	.404
CA2	.760	.443	-.396	.269	.377	.287	.193	.429	.182	.447
CA3	.747	.441	-.384	.350	.314	.296	.223	.472	.119	.439
CA4	.810	.268	-.306	.380	.285	.304	.223	.448	.196	.407
ICs1	.345	.799	-.683	.262	.224	.356	.121	.250	.168	.410
ICs2	.410	.847	-.762	.356	.305	.408	.210	.368	.174	.424
ICs3	.404	.821	-.758	.264	.241	.383	.107	.306	.132	.390
ICs4	.328	.768	-.576	.214	.323	.341	.149	.260	.155	.322
Jcs3	-.201	-.153	.414	-.213	-.052	-.157	-.164	-.159	-.807	-.200
Jcs6	-.373	-.762	.817	-.302	-.236	-.335	-.117	-.313	-.169	-.394
Jcs7	-.381	-.759	.809	-.276	-.287	-.355	-.142	-.260	-.155	-.379
Jcs8	-.330	-.699	.819	-.248	-.219	-.341	-.129	-.257	-.228	-.350
KSB22	.394	.313	-.305	.833	.244	.381	.414	.379	.174	.407
KSB23	.372	.235	-.260	.880	.203	.295	.417	.350	.199	.389
KSB24	.412	.294	-.323	.849	.245	.296	.376	.342	.269	.404
KSB25	.348	.288	-.300	.839	.269	.363	.419	.363	.233	.384
KSB26	.348	.312	-.296	.787	.311	.303	.410	.387	.173	.369
KSB6	.338	.333	-.287	.278	.789	.287	.434	.276	.082	.361
KBS7	.356	.323	-.288	.250	.789	.363	.377	.240	.100	.320
KSB10	.338	.235	-.191	.216	.803	.223	.361	.304	.102	.332
KSB8	.344	.270	-.213	.224	.825	.231	.343	.330	.032	.406
KSB9	.315	.192	-.169	.243	.795	.201	.376	.288	.031	.326

KSB16	.317	.339	-.308	.353	.212	.780	.204	.231	.134	.306
KSB17	.324	.381	-.344	.276	.290	.780	.210	.312	.096	.351
KSB18	.297	.372	-.338	.299	.276	.807	.262	.266	.152	.297
KSB2	.177	.068	-.087	.306	.270	.185	.719	.202	.078	.176
KSB4	.300	.206	-.200	.442	.450	.265	.870	.266	.190	.284
KSB5	.222	.161	-.139	.421	.411	.239	.837	.254	.113	.270
POC1	.541	.298	-.296	.376	.301	.265	.260	.786	.144	.507
POC3	.409	.258	-.217	.296	.292	.256	.208	.781	.226	.435
POC7	.417	.288	-.292	.369	.285	.274	.248	.782	.236	.432
POC8	.461	.318	-.265	.311	.241	.274	.214	.783	.080	.462
PVs1	.187	.136	-.378	.218	.036	.146	.148	.159	.840	.191
PVs2	.173	.159	-.334	.255	.022	.172	.143	.194	.900	.202
PVs3	.163	.107	-.252	.135	.011	.054	.060	.154	.787	.153
PVs4	.274	.219	-.295	.203	.175	.133	.155	.217	.837	.188
SNs1	.462	.357	-.367	.374	.344	.322	.294	.578	.146	.817
SNs2	.508	.405	-.388	.406	.395	.305	.233	.502	.176	.844
SNs3	.372	.362	-.344	.342	.228	.296	.209	.394	.216	.743
SNs5	.386	.384	-.355	.344	.387	.345	.223	.363	.170	.741

4.9 Assessment of Significance of the Structural Model

After examining the reflective measurement model, next was to determine the structural model. The standard bootstrapping procedure was employed in this study with 5,000 bootstrap samples and 439 cases in order to test the significance of the path coefficients (Hair et al., 2014; Hair et al., 2011; Henseler et al., 2009). Figure 4.2 and Table 4.9

portray the estimates for a full structural model which incorporate the moderator variable (i.e., subjective norms). In this study, knowledge sharing behavior was conceptualized and estimated as a second order construct in the reflective structural model. It is because the study needs to theorize and evaluate the influence of the higher-order construct (knowledge sharing behavior) rather than the effect of its dimensions (Polites, Roberts & Thatcher, 2012). Additionally, the higher order constructs, specifically, knowledge sharing behavior successfully enables to increase theoretical parsimony and reduce model complexity (Akter et al., 2010; Becker, Klein & Wetzels, 2012).

At the beginning, Hypothesis 1 predicted that individual capabilities are positively related to knowledge sharing behavior. The findings in Figure 4.2 and Table 4.9 indicate a positive significant relationship between individual capabilities and knowledge sharing behavior ($\beta = 0.199$, $t = 3.065$, $p<0.01$). Thus, Hypothesis1 is supported.

Hypothesis 2 predicted that career advancement is positively related to knowledge sharing behavior. Results of Figure 4.2 and Table 4.9 show that career advancement is positively and significantly related to knowledge sharing behavior ($\beta = 0.227$, $t = 4.977$, $p<0.01$), thus supporting the postulation of this study contained in Hypothesis 2.

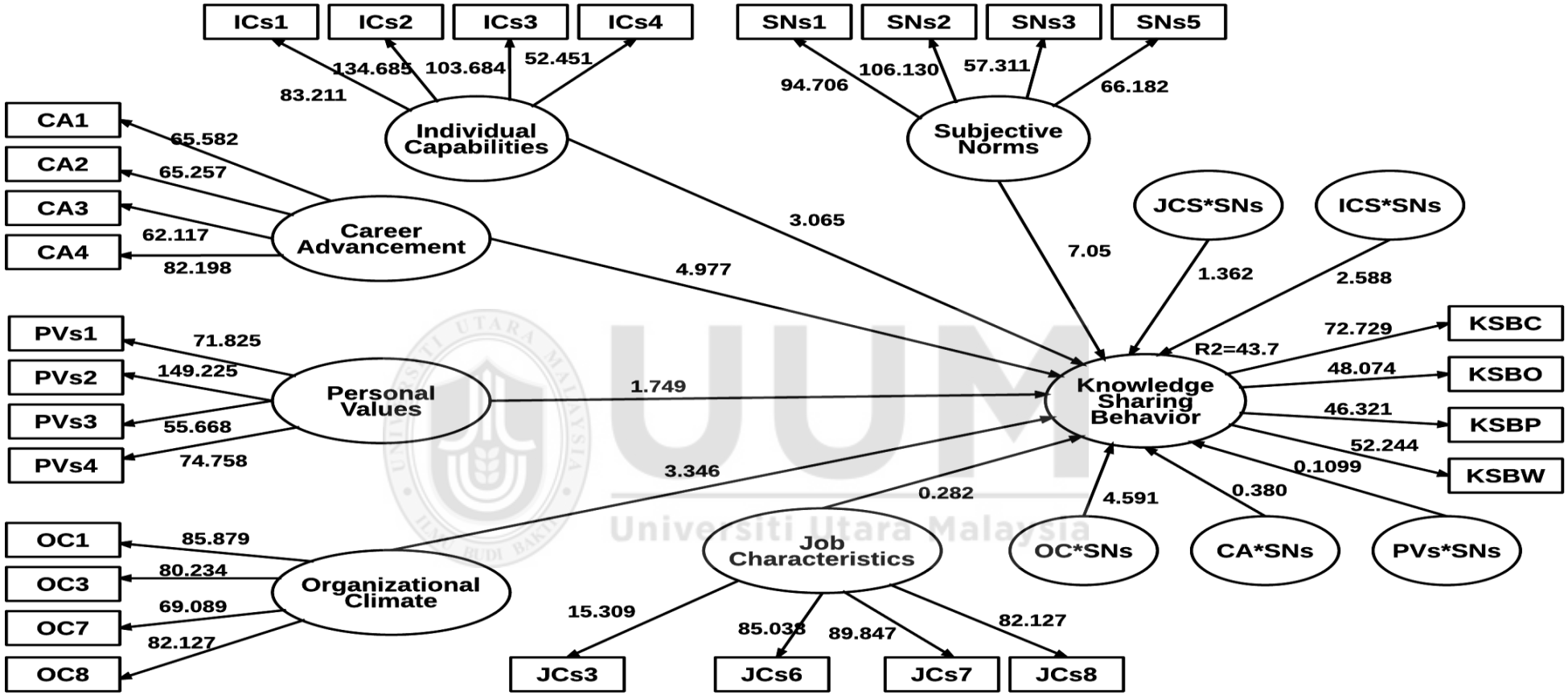

Figure 4.2. Structural model with moderator

Hypothesis 3 envisaged that personal values are positively related to knowledge sharing behavior. Results in Table 4.9 and Figure 4.2 reveal a positive significant relationship between personal values and knowledge sharing behavior ($\beta = 0.055$, $t = 1.749$, $p < 0.05$). The hypothesis is thus supported.

Hypothesis 4 anticipated that the job characteristics construct is positively related to knowledge sharing behavior. The findings in Table 4.9 show that there is a positive and non-significant relationship between job characteristics and knowledge sharing behavior ($\beta = 0.020$, $t = 0.282$, $p>0.1$). Thus, hypothesis 4, is not adequately supported.

Hypothesis 5 predicted there is a positive relationship between perceived organizational climate and knowledge sharing behavior. The results in Table 4.9 show that perceived organizational climate has a positive significant relationship with knowledge sharing behavior ($\beta = 0.134$, $t = 3.346$, $p< 0.01$). Therefore, Hypothesis 5 is fully supported.

Table 4.9
Hypothesis testing (Direct and moderating effect, including before and moderating effect)

Hypothesis	Beta	Standard Error	T Statistics	P-value	Decision
Individual Capabilities -> Knowledge Sharing Behavior	0.199	0.065	3.065	0.001***	Supported
Career Advancement -> Knowledge Sharing Behavior	0.227	0.046	4.977	0.000***	Supported
Personal Values -> Knowledge Sharing Behavior	0.055	0.032	1.749	0.041**	Supported
Job Characteristics -> Knowledge Sharing Behavior	0.020	0.070	0.282	0.389	Not Supported
Organization Climate -> Knowledge Sharing Behavior	0.134	0.040	3.346	0.000***	Supported
Individual Capabilities * Subjective Norms -> Knowledge Sharing Behavior	0.158	0.061	2.588	0.005***	Supported
Career Advancement * Subjective Norms -> Knowledge Sharing Behavior	-0.011	0.029	0.380	0.352	Not Supported
Personal Values * Subjective Norms s -> Knowledge Sharing Behavior	0.088	0.080	1.099	0.136	Not Supported
Job Characteristics * Subjective Norms s -> Knowledge Sharing Behavior	0.105	0.077	1.362	0.087*	Supported
Perceived organizational Climate * Subjective Norms s -> Knowledge Sharing Behavior	0.097	0.021	4.591	0.000***	Supported

Note: ***Significant at 0.01 (T-values >1.96, **significant at 0.05 (T-values >1.65), *significant at 0.1 (T-values >1.30)

4.9.1 Assessment of Variation Explicated in the Endogenous Latent Variable

The R-Squared value is recognized as the coefficient of determination. It is considered to be an essential criterion for evaluating the structural model in PLS-SEM (Hair et al., 2011, 2012; Henseler et al., 2009). R-squared value is used to represent the proportion of variation in the dependent variable (s) that can be explicated by one or more independent variables (Elliott & Woodward, 2007; Hair et al., 2010; Hair et al., 2006). The amount of R-squared value relies on the context of the research (Hair et al., 2010). However, Falk and Miller (1992) recommended the minimum accepted amount of R-squared value should be 0.10. Chin (1998) proposed R-squared value which starts from 0.67 is considerable, 0.33 is moderate and 0.19 is weak. Table 4.10 depicts the R-squared value of the endogenous latent variable

Table 4.10
Variance explicate in the endogenous latent variable

Latent Variable	Variance Explained
Knowledge Sharing Behavior	43.7%

As shown in Table 4.10, the research model explicates 43.7% of the total variance in Knowledge sharing behavior. This means that the six sets of variables used in the study (i.e. individual capabilities, career advancement, personal values, Job characteristics, perceived organizational climate and subjective norms) collectively explain 43.7% of the

variance of KSB. Thus, consistent with Falk and Miller, (1992) and Chin (1998), the endogenous latent variable (knowledge sharing behavior) achieves acceptable amount of R-squared value which is regarded as moderate.

4.9.2 Assessment of Effect Size (f2)

Effect size refers to the relative effect of a specific independent variable on a dependent variable which is recognized by the changes in R-squared value (Chin, 1998). It is computed as the increase of R-squared of the latent variable to the connected path, which is relative to the proportional variable of unexplained variance (Chin, 1998). Hence, effective size is explained by the formula propounded by Cohen (1988), Selya, Rose, Dierker, Hedeker, & Mermelstein (2012) and Wilson, Callaghan, Ringle, and Henseler (2007).

$$\text{Effect Size } (f^2) = \frac{R^2\ Included - R^2\ Excluded}{1 - R^2\ Included}$$

In the formula, it is stated that f2 value of 0.02 is small, 0.15 is moderate and 0.35 is strong. Table 4.11 presents effect sizes of the latent variables of the structural model.

Table 4.11
Effect sizes of the latent variables

Constructs	R Square-Included	R-Squared Excluded	f-squared	Effect Size
ICs	0.437	0.427	0.018	Small
CA	0.437	0.409	0.050	Small
PVs	0.437	0.435	0.004	Very Small
JCs	0.437	0.437	0.000	None
POC	0.437	0.428	0.016	Very Small
SNs	0.437	0.401	0.064	Small

As depicted in Table 4.11, the effect size for individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and subjective norms are 0.018, 0.050, 0.004, 0.000, 0.016 and 0.064 respectively. Thus, consistent with Cohen's (1988) rule of thumb, the effect size of the six exogenous latent variables on knowledge sharing behavior can be taken as very small and small.

4.9.3 Assessment of Predictive Relevance

This study utilized Stone-Geisser test of predictive relevance by employing blind- folding procedure (Geisser, 1974). The Stone-Geissertest of predictive relevance is employed as an additional tool for assessing GoF in PLS-SEM (Duarte & Raposo, 2010). Therefore, the present study utilized blindfolding to envisage the predictive relevance of the research model. It is crucial to understand that "blindfolding procedure is only applied to endogenous latent variables that have a reflective measurement model operationalization"

(Sattler, Volckner, Riediger & Ringle, 2010, p. 320) while reflective measurement model "specifies that a latent or unobservable concept causes variation in a set of observable indicators"(McMillan & Conner, 2003, p. 1). Since endogenous latent variables employed in this study are reflective in nature, a blindfolding procedure was primarily used to test the endogenous latent variable. Additionally, a cross-validated redundancy measure (Q^2) was used to assess the predictive relevance of the research model (Chin, Henseler & Wang, 2010; Geisser, 1974; Hair, Ringle, & Sarstedt, 2013; Ringle, Sarstedt & Straub, 2012). Q^2 refers to the condition which determines suitability of the model in predicting omitted data cases (Chin, 1998; Hair et al., 2014). The predictive relevance is considered to be adequate when Q^2 of the research model is higher than zero (Henseler et al., 2009). Furthermore, the predictive relevance becomes more when the research model has greater positive Q^2 values. Table 4.12 portrays the findings of the cross-validated redundancy values of Q^2 test.

Table 4.12
Construct cross-validated redundancy

Total	SSO	SSE	1-SSE/SSO
KSB	1756	1362.91693	0.223851

As indicated in Table 4.13, the cross-validation redundancy measures, i.e. Q^2, for the endogenous latent variable is higher than zero, indicating the presence of predictive relevance of the model (Chin, 1998; Henseler et al., 2009).

4.9.4 Testing Moderating Effect

In this study, the estimated strength of the moderating effect of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate on knowledge sharing behavior was detected by applying a product indicator approach using PLS-SEM (Chin et al., 2010; Chin, Marcolin & Newstead, 2003; Henseler & Fassott, 2010). The product term approach is suitable in the present study since the moderating variable is continuous in nature (Rigdon, Schumacker & Wothke, 1998). Henseler and Fassott (2010) stated that "given that the results of the product term approach are usually equal or superior to those of the group comparison approach, we recommend always using the product term approach" (p. 721).

In applying the product indicator approach to examine the moderating effect of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate on knowledge sharing behavior, it is important to create the product terms between the indicators of the exogenous latent variables and that of the moderating variable. Thus, the product terms could be employed as interacting indicators in the structural model (Kenny & Judd, 1984). Furthermore, the strength of the moderating effect in this study was achieved by following the rule of thumb propounded by Cohen (1988) who suggested an examination of the effect size. Table 4.9 and Figure 4.2 above indicate the estimates after employing a product indicator approach to ascertain the moderating effect of subjective norms on the

relationship between individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate on knowledge sharing behavior.

Hypothesis 6 states that subjective norms moderate the relationship between individual capabilities and knowledge sharing behavior. The present relationship is stronger for individuals with greater subjective norms than those with weaker subjective norms. As anticipated, the findings in Table 4.9 and Figure 4.2 show that the interaction terms for ICs x SNs ($\beta = 0.158$, $t = 2.588$, $p < 0.01$) is statistically significant. Thus, Hypothesis 6 is supported. The moderating effect of subjective norms on the relationship between individual capabilities and knowledge sharing behavior was plotted by using information from path coefficients, consistent with the procedures proposed by Aiken and West (1993) and Marcus and Schuler (2002). Subjective norms strengthen the positive relationship between individual capabilities and knowledge sharing behavior.

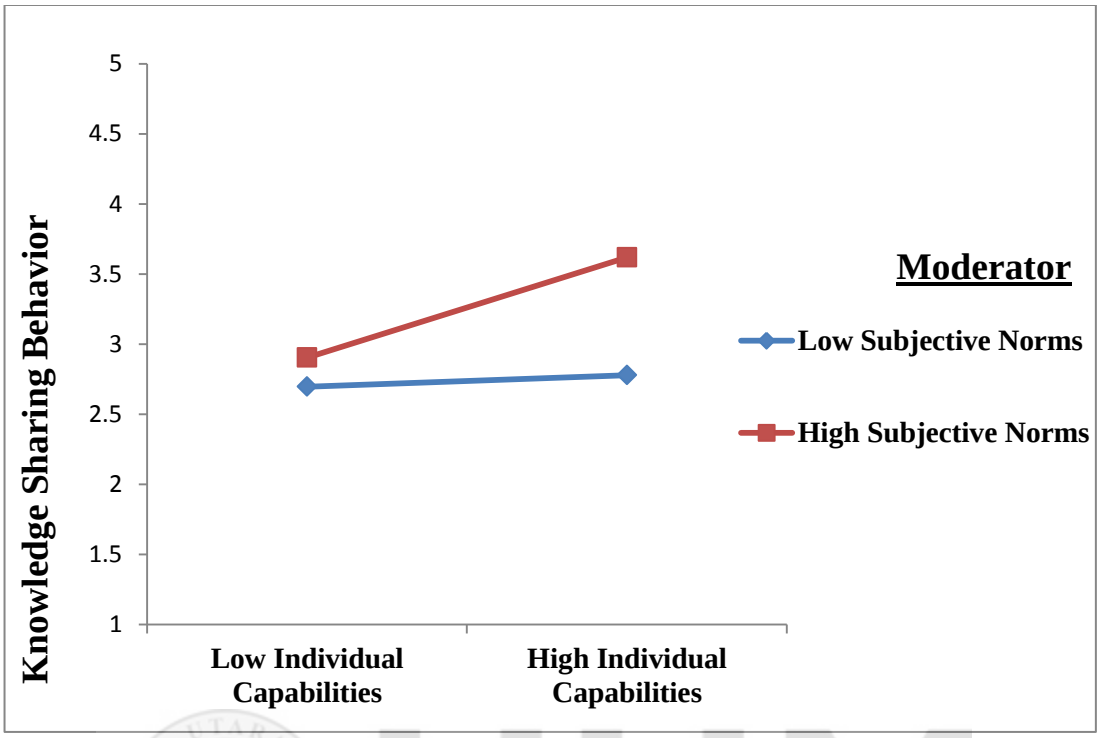

Figure 4.3. Interaction effect of individual capabilities and subjective norms on knowledge sharing behavior

The above Figure 4.3 depicts the moderating effect of subjective norms on the relationship between individual capabilities and knowledge sharing behavior which indicates a strong positive relationship between individual capabilities and knowledge sharing behavior for individuals with high subjective norms than it is for individuals with low subjective norms.

On the other hand, the findings in Table 4.9 do not support Hypothesis 7 which asserted that subjective norms moderate the relationship between career advancement and knowledge sharing behavior. Specifically, the relationship is not significant ($\beta = -0.011$, $t = 0.380$, $p>0.1$).

Similarly, Hypothesis 8 of which subjective norms moderate the relationship between personal values and knowledge sharing behavior is also not supported. The results in Table 4.9 depict that the relationship between personal values and knowledge sharing behavior is not moderated by subjective norms ($\beta = 0.088$, $t = 1.099$, $p>0.1$).

Hypothesis 9 states that subjective norms moderate the relationship between job characteristics and knowledge sharing behavior. The present relationship is stronger for individuals with greater subjective norms than those with weaker subjective norms. As predicted, the findings in Table 4.9 and Figure 4.4 show that the interaction term for job characteristics x subjective norms ($\beta = 0.105$, $t = 1.362$, $p < 0.10$) is statistically significant. Thus, Hypothesis 9 is supported. The moderating effect of subjective norms on the relationship between job characteristics and knowledge sharing behavior was plotted by employing information from path coefficients, consistent with the procedures proposed by Aiken and West (1993) and Marcus and Schuler (2002). Subjective norms strengthen the positive relationship between job characteristics and knowledge sharing behavior

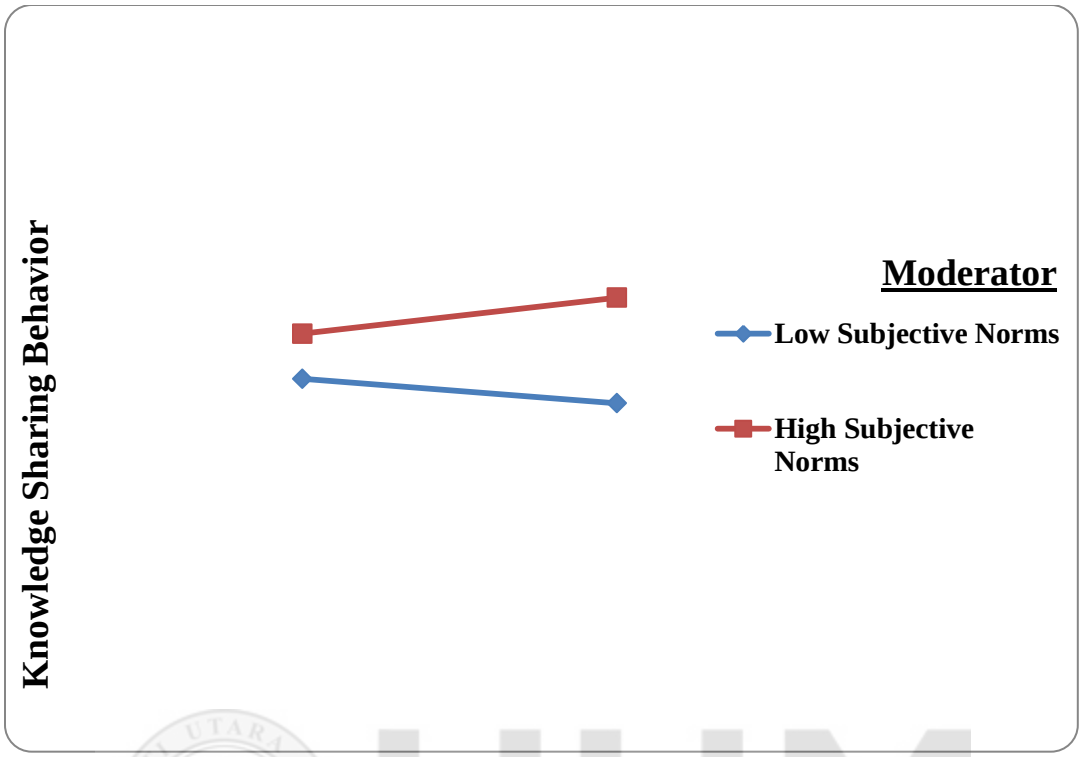

Figure 4.4. Interaction effect of job characteristics and subjective norms on knowledge sharing behavior

Graphically, the above Figure 4.4 shows that subjective norms moderated the relationship between job characteristics and knowledge sharing behavior which this relationship is weaker (less positive) for individuals with higher subjective norms than it is for individuals with low subjective norms.

Lastly, the results in Table 4.9 and Figure 4.5 support Hypothesis 10 which predicted that subjective norms moderate the relationship between perceived organizational climate and knowledge sharing behavior. The relationship is stronger (more positive) for individuals with high subjective norms than those with low subjective norms. Subjective Norms strengthen the positive relationship between perceived organizational climate and knowledge sharing behavior

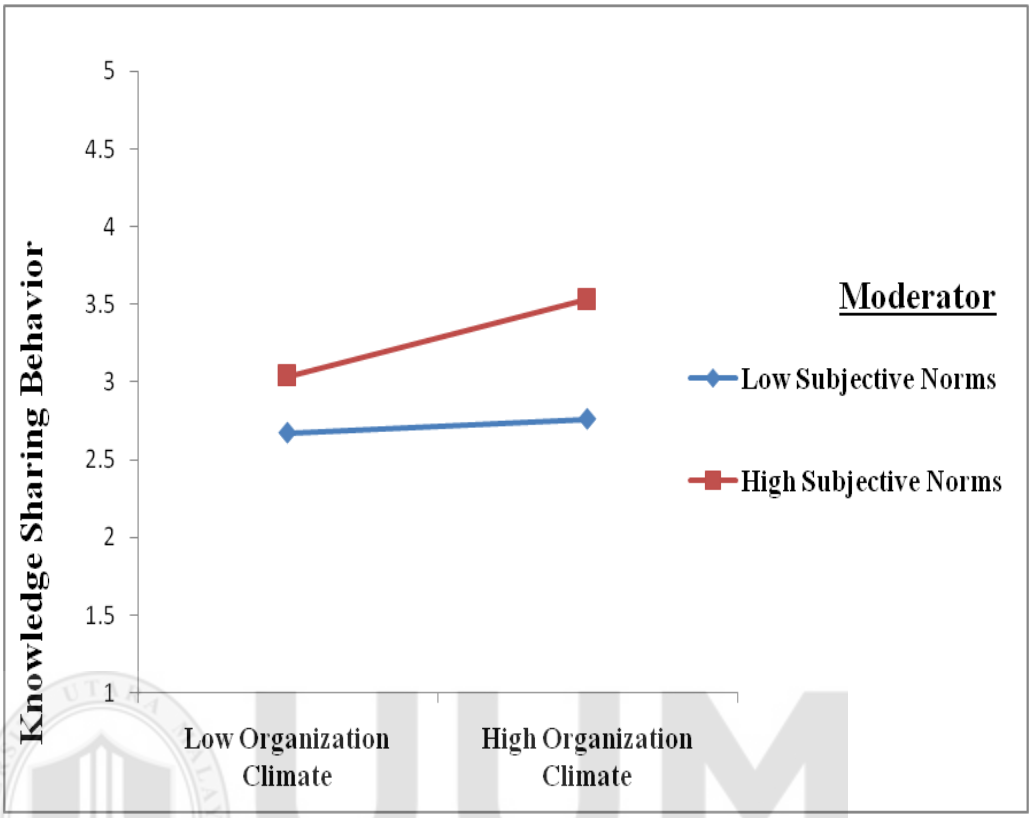

Figure 4.5. Interaction effect of perceived organizational climate and subjective norms and knowledge sharing behavior

Indication in Figure 4.5 above depicts that the moderating effect of subjective norms on the relationship between organizational climate and knowledge sharing behavior in which the relationship between perceived organizational climate and knowledge sharing behavior is stronger (i.e, more positive) for individuals with higher subjective norms than it is for individuals with low subjective norms.

4.9.5 Ascertaining the Strength of the Moderating Effects

To examine the strength of the moderating effect of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics and organization climate and knowledge sharing behavior, Cohen's effect size was computed. The strength of the moderating effects can be evaluated by comparing the R-squared value of the major effect model with the R-squared value of the full model that integrates both exogenous latent variables and moderating variable (Henseler & Fassott, 2010; Wilden, Gudergan, Nielsen, & Lings, 2013). Hence, the strength of moderating effects can be explicated using the formula propounded by Cohen (1988) and Henseler & Fassott (2010).

Effect Size of Moderator (f^2) = $$\frac{R^2 \, Model \; with \; Moderator - R^2 \, Model \; without \; the \; Moderator}{1 - R^2 \, Model \; with \; Moderator}$$

Moderating effect size (f2) value of 0.02 can be regarded as weak, 0.15 as moderate and 0.35 and more as strong (Cohen, 1988; Henseler & Fassott, 2010). Chin et al. (2003) suggested that a low effect size does not lead to the results being insignificant. Even a small interaction effect can be meaningful under extreme moderating conditions, "If the resulting beta changes are meaningful, then it is important to take these conditions into account" (Chin et al., 2003 p. 211). The findings of the strength of the moderating effect of subjective norms construct is depicted in Table 4.9. Consistent with Cohen (1988) and Henseler and Fassott's (2010) rule of thumb for examining the strength of the moderating effect, Table 4.13 indicates the effect size of moderating effect is 0.064, portraying that moderating effect is small.

Table 4.13
Effect size of moderator

R-squared	Included	Excluded	f-squared	Effect size
Subjective Norms	0.437	0.401	0.064	Small

4.10 Summary of Findings

Table 4.14 presents the summary of the results of all hypotheses as postulated in the previous sections.

Table 4.14
Summary of hypotheses

Hypotheses	**Statements**	**Decision**
H1	There is a positive relationship between individual capabilities (ICs) and knowledge sharing behavior (KSB)	Supported
H2	There is positive relationship between career advancement and knowledge sharing behavior (KSB).	Supported
H3	There is positive relationship between personal values and knowledge sharing behavior (KSB).	Supported
H4	There is positive relationship between job characteristics and knowledge sharing behavior (KSB)	Not supported
H5	There is positive relationship between perceived organizational climate and knowledge sharing behavior (KSB).	Supported
H6	Subjective norms moderate the relationship between individual capabilities and knowledge sharing behavior (KSB).	Supported
H7	Subjective norms moderate the relationship between career advancement and knowledge sharing behavior (KSB).	Not supported

H8	Subjective norms moderate the relationship between personal values and knowledge sharing behavior (KSB).	Not supported
H9	Subjective norms moderate the relationship between job characteristics and knowledge sharing behavior (KSB).	Supported
H10	Subjective norms moderate the relationship between perceived organizational climate and knowledge sharing behavior (KSB).	Supported

4.11 Conclusions

This chapter presents the grounds for using PLS path modeling as the technique for testing the theoretical model. The present study also shows the fundamental findings based on assessment of significance of the path coefficients. In general, the self-report mechanism has played a significant role in depicting the moderating effect of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate and knowledge sharing behavior. Specifically, the path coefficient exposes a significantly positive relationship between individual capabilities and knowledge sharing behavior, career advancement and knowledge sharing behavior, personal values, and knowledge sharing behavior and perceived organizational climate and knowledge sharing behavior. On the other hand, there is no significant relationship between job characteristics and knowledge sharing behavior.

However, the major concern is the moderating effect of subjective norms on the relationship between five predictor latent constructs and one endogenous latent variable. The results from PLS path coefficient show that four out of five hypotheses are

significant and supported in this study. Specifically, the subjective norms construct positively moderates the relationship between: (1) individual capabilities and knowledge sharing behavior; (2) job characteristics and knowledge sharing behavior; and (3) perceived organizational climate and knowledge sharing behavior. Further findings, the implications of this study, suggestions for conducting future research and conclusion are discussed in the next chapter (Chapter Five).

CHAPTER 5

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the findings of the study in light of the literature reviewed on knowledge sharing behavior and the hypotheses developed in Chapter 2. The study explains and extends previous research on knowledge sharing behavior. The results, as reported in Chapter 4, are discussed in the sections below. The chapter concludes with a discussion on the implications of the study, its limitations and directions for future research.

5.2 Summary of the Research Findings

The main objective of the present study is to examine the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior. The study also investigates the role of subjective norms as a moderator in the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior.

Smart PLS was conducted to test both the direct and indirect relationships of the 10 hypotheses developed in this study. In regard to the direct relationship between

exogenous latent variables and endogenous latent variable, four out of five hypotheses (H1, H2, H3, and H5) tested were supported. The findings from the PLS path model indicate that individual capabilities, career advancement, personal values, and perceived organizational climate are significantly and positively related to knowledge sharing behavior.

With regard to subjective norms as a moderator in the relationship between exogenous latent variables and the endogenous latent variable, five hypotheses (H6, H7, H8, H9 and H10) were proposed. However, only three hypotheses (H6, H9, H10) are supported. Specifically, subjective norms are found to moderate the relationship between individual capabilities and knowledge sharing behavior, job characteristics and knowledge sharing behavior, and perceived organizational climate and knowledge sharing behavior.

5.3 Individual Capabilities, Career Advancement, Personal Values, Job Characteristics, Perceived Organizational Climate, and Knowledge Sharing Behavior

5.3.1 Relationship between Individual Capabilities and Knowledge Sharing Behavior

Individual capabilities defined as the personal abilities to engage in knowledge sharing behavior (Kankanhalli, Tan & Wei, 2005). These include varied collection of proficiencies which motivate an individual to share knowledge and perform particular activities (Qizilbash, 2007). The current findings show that individual capabilities are

positively and significantly related to knowledge sharing behavior. The findings are not surprising as individuals who are confident in their ability to provide knowledge to others would normally share their knowledge. As argued by Cho, Chen and Chung (2010) and Endres et al. (2007), individuals would engage in the knowledge sharing when they have the confidence to provide useful knowledge to their co-workers. Since the respondents in this study are the doctors and registered nurses who are equipped with knowledge, expert in the areas and highly skilled in their profession, this might explain the reasons why individual capabilities are positively related to knowledge sharing behavior.

The positive relationship implies that, as management increases the level of individual capabilities to their employees, the employees, in turn, respond by participating in knowledge sharing behavior. The reciprocal subordinates' behavior is consistent with social exchange (Blau, 1964). Social exchange theory emphasizes that individuals are psychologically obligated and hence bounded to return benefits they acquired from the individual that benefited them (Blau, 1964). This finding substantiates with most of the past individual capabilities- knowledge sharing behavior studies conducted in the healthcare sector (Chen, Chang, Lin & Chen, 2008; Okoroj, Velu & Sekaran, 2014; Zhou & Nunes, 2016).

5.3.2 Relationship between Career Advancement and Knowledge Sharing Behavior

Career advancement is defined as an employee's upward movement in the organizational ladder, accompanied by an increase in salary and status (Zhao & Zhou, 2008). The present finding showed that career advancement was positively related to knowledge sharing behavior and thus, in line with previous studies in the healthcare sector (Shaffique, 2016; Tabrizi & Morgan, 2014; Tseng, Liu, Cheng & Chao, 2012). As proposed by Davenport and Prusak (1998a), individuals who gain the highest reputation for knowledge sharing through career advancement will likely participate in the knowledge sharing behavior. Similarly, and consistent with social exchange theory (Blau, 1964), as suggested that when management provides higher reputation to the employees for sharing knowledge through career advancement, it will ultimately motivate the subordinates to engage in knowledge sharing behavior.

Additionally, one possible explanation for the positive and significant relationship between career advancement and knowledge sharing might be because career advancement was regarded as a motivating factor or a reward for sharing knowledge. As argued by (Ahmad & Daghfous (2010), that when career advancement is linked with knowledge sharing behavior increases the competitiveness and hence escalates the knowledge sharing willingness. Thus, career advancement might be an important factor in determining knowledge sharing behavior among employees, and it may be compulsory

to establish career advancement to motivate employees to engage in knowledge sharing behavior.

5.3.3 Relationship between Personal Values and Knowledge Sharing

Personal values are exclusive beliefs that control individual behavior or actions (Pinto, Nique, Añaña & Herter, 2011). In this study, it was found that personal values are positively and significantly related to knowledge sharing behavior. Healthcare professional exhibit knowledge sharing behavior as an outcome of their satisfaction with the management which understand and nurture their personal values. Therefore, the finding is congruent with social exchange theory (Blau, 1964), which positions that when an individual does a kindness for another person, there is an anticipation of some favorable return in the future. Thus, it is likely that knowledge sharing behavior portrayed by the respondents in this study is a gratitude to the handling they might have acquired from their management.

Moreover, the current findings indicate that when individuals perceive obtaining pleasure from helping others through sharing of knowledge, they are more inclined to participate in knowledge sharing behavior. In the healthcare sector, healthcare professionals work in a team, therefore they enjoy helping their fellow employees and consequently engage in knowledge sharing behavior (Tabrizi & Morgan, 2014). Thus, it is anticipated that the sample of respondents who were obtained from public healthcare institutions would demonstrate knowledge sharing behavior as a result a doctor or a nurse is considered as a noble profession as it involves saving human life. Indirectly, the pleasure can be

experienced when they see the positive changes that they made to their patients or to the public by sharing the knowledge with them or with their colleague. This is consistent with the argument given by Wasko and Faraj (2005). They argued that individuals are motivated to share knowledge when they perceive it is as pleasing and interesting to help others. The present result also supports similar works conducted in the healthcare sector (Mohammad, Samadhi, Govindaraju & Suryadi, 2013; Tabrizi & Morgan, 2014).

5.3.4 Relationship between Job Characteristics and Knowledge Sharing Behavior

Job characteristics can be defined as task-related attributes, including characteristics of the task itself and consisting of autonomy, skills, benefits, feedback, and knowledge acquired on that task (Chen, 2009). In this study, the findings showed that there were no relationship between job characteristics and knowledge sharing behavior. This result is consistent with the previous studies in the healthcare sector (Kim & Lee, 2013; Okoroji, Velu, & Sekaran, 2013). One plausible explanation might be that the respondents did not perceive management if consider that the jobs performed by health care professionals strictly need skills variety, task identity, task significance, and task autonomy. Since it is witnessed that medical workers such as doctors and nurses execute the tasks beyond their specializations, it means there is no enough task identity, autonomy and skill variety required to execute such tasks consequently leads dissatisfaction (Maestad, 2006). In fact, this is experienced due to the human resource crisis in Tanzanian healthcare institutions (Sirili, Kiwara, Nyongole, & Frumence, 2014). Employees will only be obligatory to reciprocate decently to whom they receive well (Blau, 1964). In the case of the current

study, management behavior of not strictly considering that the jobs performed by healthcare professionals require skills variety, task identity, task significance, and task autonomy may have failed to instigate healthcare professionals to exhibit knowledge sharing behavior, because medical workers have not personally received consideration for the job they perform that require skills variety, task identity, task significance, and task autonomy.

5.3.5 Relationship between Perceived Organizational Climate and Knowledge Sharing Behavior

Perceived organizational climate is defined as the perception of the work environment by the members of the organization, including the work conditions, encouragement from superiors, team support and resources in the work environment (Chen & Hu, 2008). In this study, perceived organizational climate was related to knowledge sharing behaviour. The result indicates that when healthcare professionals perceive that their working environment involve high interpersonal trust, fairness, and friendless from co-workers, they are more willing to share knowledge. Therefore, the finding is in line with social exchange theory (Blau, 1964), which depicts that when an employee or management does the favor for another employee, there is an expectation of the favorable return in the future. Thus, it is likely that knowledge sharing behavior portrayed by the respondents in this study is an appreciation for the best treatment and support they might receive from their management and fellow employees. In fact, it is projected that the sample respondents who were obtained from public healthcare institutions would display knowledge sharing behavior as the consequence of the high interpersonal trust, fairness,

and friendless (perceived organizational climate) from co-workers and management. The current finding supports past similar studies in healthcare context (Tseng et al., 2012).

5.4 Subjective Norms as Moderator

The second objective of this study is to investigate the moderating effect of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behaviour. In this study, individual capabilities and personal values are treated as individual factors, career advancement and job characteristics as job factors and perceived organizational climate as an organizational factor. Specifically, the aim is to investigate whether the subjective norms can strengthened the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior.

The current findings indicate that subjective norms moderate the relationship between individual capabilities and knowledge sharing behavior. The finding implies that knowledge sharing behavior among healthcare professionals in a highly subjective norm environment is higher than among healthcare professionals in a low subjective norms environment. As discussed in the literature, subjective norms refer to the perception of social pressure to perform or not to perform a particular behavior (Gagne, 2009). It is normal that staff prefers to abide by the expectations of senior healthcare professionals and top management in terms of engaging in knowledge sharing behavior through individual capabilities. The present moderating result is supported by the social impact

theory (Jackson, 1987) in two ways: (1) top management and senior healthcare professionals are an important referent group. When they treat junior staff well, show strong commitment, care for their well-being, mentor and share knowledge, employees become motivated to look up to their senior staff and top management as role models to the extent that they develop confidence and positive attitude towards knowledge sharing behavior; and (2) the more employees are influenced by social impact or pressure from important referent groups, the more confident they become to engage in knowledge sharing behavior. Therefore, one way employees respond to social impact or social pressure from important referent groups is by emulating the important referent group and developing a strong sense of individual capabilities, ultimately, demonstrating knowledge sharing behavior that can benefit subordinates and the institution.

Subjective norms also moderate the relationship between job characteristics and knowledge sharing behavior. The result is not surprising as the nature of the jobs performed by healthcare is mentoring and consultant oriented, they are operating in a friendly social pressure drawn from subjective norms will find it is easy to witness knowledge sharing behavior among healthcare professionals. The current finding supports the social impact theory (Jackson, 1987). When top management and senior healthcare professionals treat junior staff well, shows strong commitment, care for their well-being, be their mentor and sharing their knowledge, employees will also be motivated to act in the same way.

The current study also revealed a significant moderation role of subjective norms on the relationship between perceived organizational climate and knowledge sharing behavior. The current findings indicate that knowledge sharing behavior among healthcare professionals in a low subjective norm, the environment is lower than those healthcare professionals in a highly subjective norm, the environment, even though the healthcare professionals in both environments had high perceived organizational climate. As portrayed in the literature, subjective norms refer to the perception of social pressure to perform or not to perform a particular behavior (Gagne, 2009). It is normal that employees prefer to abide by the expectations of senior healthcare professionals and top management in terms of participating in knowledge sharing behavior through perceived organizational climate. As described by the social impact theory (Jackson, 1987), when top management and senior healthcare professionals treat junior staff well, shows strong commitment, care for their well-being, be their mentor and sharing their knowledge, employees will also be motivated to act in the same way. Apart from that, the social impact or pressure from important referent groups make them more motivated to participate in knowledge sharing behavior.

However, subjective norms did not moderate the relationship between career advancement and knowledge sharing behavior and between personal values and knowledge sharing behavior. One of the reasons why subjective norms did not moderate the relationship between career advancement and knowledge sharing behavior might be be as the result of recognized nature of the healthcare professional itself. Healthcare professionals have high autonomy, which reduces the influence from senior healthcare

professionals to instigate knowledge sharing behavior through career advancement. Therefore, subjective norms have little or no ability to support growth and development of perception of healthcare professionals on career advancement towards knowledge sharing behavior. In addition, career advancement acted as a strong motivation factor that encourage healthcare professionals to share knowledge without the need to be pressured. This might explain why subjective norms as external pressure did not strengthen the relationship between career advancement, personal values and knowledge sharing behavior.

As for personal values and knowledge sharing behaviour, the result is unexpected and proposes that there is an unanticipated decline in the helpful role of the subjective norms in Tanzania public healthcare institutions. This consequence could be ascribed to the fact that knowledge sharing behavior, difficulty to alter based on external pressure that derived from subjective norms due to the non-supportive subjective norms. Additionally, personal values operated as an intrinsic motivation factor that promote healthcare professionals to engage in knowledge sharing behavior without external pressure that exerted by subjective norms.

5.5 Research Implication

5.5.1 Theoretical Implications

The current findings have contributed to the current body of knowledge on knowledge sharing behavior in several ways. First, the findings from the current study have given

empirical evidence on the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and healthcare professionals' knowledge sharing behavior. In this study, individual capabilities, career advancement, personal values, perceived organizational climate were found positively related to knowledge sharing behavior except for job characteristics.

The present findings also contribute to the body of knowledge by testing the individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior within the context of the healthcare sector in general, and specifically in the Tanzanian healthcare sector. Most of the studies that have employed individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate have been conducted in the academic context (Isika, Ismail, Fauzi & Khan, 2013; Mogotsi & Fletcher, 2011), and others in the IT context (Cabrera et al., 2006; Gupta, 2012; Jo & Joo, 2011; Yang & Lai, 2011). In addition, most of these studies have been carried out in developed countries, like USA, Canada and UK (Cabrera et al., 2006; Gupta, 2012; Isika et al., 2013; Jo & Joo, 2011; Yang & Lai, 2011), with only a few studies being carried out in less developed countries, such as Tanzania. Thus, the empirical findings from this study will give new perspective on how knowledge sharing behavior related to its determinants by providing additional demographic bases for comparative studies and validation considering the significant relationship between individual capabilities, career advancement, personal values, perceived organizational climate and knowledge sharing behavior in Tanzanian context

Finally, the present findings also contribute to the body of knowledge by including subjective norms as moderator in the relationship between individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate, and knowledge sharing behavior. Thus, this study does more than just validate the positive impact of individual capabilities, job characteristics and perceived organizational climate on healthcare professionals' knowledge sharing behavior as established in the past literature (Akhavan et al., 2013; Cabrera et al., 2006; Chiang, Han & Chuang, 2011; Li et al., 2010; Tohidinia & Mosakhani, 2010). The present study empirically showed that knowledge sharing behavior among healthcare professionals in a low subjective norm, the environment is lower than those healthcare professionals in a highly subjective norm, the environment, even though the healthcare professionals in both environments had high individual capabilities, job characteristics and perceived organizational climate. Therefore, hospitals' management needs to consider the role of subjective norms in the effort of enhancing the knowledge sharing behavior among the healthcare professionals.

5.5.2 Implications for Practice

The current research findings have several implications for management of the hospitals. The research results demonstrate that individual capabilities, career advancement, personal values, and perceived organizational climate were among the factors that had a positive impact on knowledge sharing behavior. The management of the hospital needs to continually improve their healthcare professional's capabilities by providing them with

training and development. Secondly, to improve healthcare professionals' career path by providing more opportunities to grow and advance in medical settings. Third, in still good values in the workplace in relation to knowledge sharing and finally, provide a favorable perceived organizational climate that encourage innovativeness, fairness, mutual trust and open conversation about exchange idea through, for example the hospital social media in order to enhance both knowledge sharing behavior and perceived organizational performance.

In terms of the role of subjective norms as moderator, it was found that healthcare professionals with high perception of individual capabilities, job characteristics and perceived organizational climate in a higher subjective norm, environment, tend to have higher knowledge sharing behavior than those in a low subjective norms environment. Therefore, to develop a culture of subjective norms in the healthcare setting, the management of healthcare institutions should encourage the notion of subjective norms in management practices, human resource policies and programs in order to enhance knowledge sharing behavior in the healthcare environment and other organizations. This includes encouraging top management, senior medical doctors and nurses, assisting junior healthcare professionals through mentoring process, consultations and team work technique which will develop concern for junior healthcare professionals. In return, it will facilitate knowledge sharing behavior and organizational performance.

In summary, the above recommendations are suggestive of the types of actions that hospital's management can take to enhance knowledge sharing behavior among

healthcare professionals. It is hoped that the findings from this study can trigger new thinking among the management of the hospitals regarding institutionalization of knowledge sharing behavior. The research findings of the present study suggest individual capabilities, reputable job characteristics, favorable perceived organizational climate and subjective norms can facilitate healthcare professionals' knowledge sharing behavior.

5.6 Limitations and Direction for Future Research

Though the current study has supported several proposed hypotheses between the exogenous and endogenous variables, there are limitations in the design of this study that might influence the interpretation and generalizations of these findings. These issues are discussed next.

The study was aimed at understanding the knowledge sharing behavior among the healthcare professionals in Tanzania. However, the study only focused on healthcare professionals in the public hospitals. Though the current study did not intend to compare knowledge sharing behavior between healthcare professionals in public and private hospitals, different findings might be discovered among healthcare professionals in the private hospitals due to differences in leadership style and management policy. This provides a direction for future research. In addition, this study focuses on only five major public hospitals, which are most affected by the brain drain as the scope of the study.

Further study can be conducted involving more than five public hospitals, in order to have a broad generalization of the findings.

Apart from that, the study used quantitative approach using a single method of data collection. Though the quantitative approach allows for collecting and analyzing numerical data to comprehend the relationship between variables, it does not provide in-depth investigation on the knowledge sharing behavior among healthcare professionals in Tanzania.

Furthermore, the study employed a cross section design. Though a cross section design is simple, inexpensive and allows for collection of data in a relatively short period, this method offers limited information regarding how the whole knowledge sharing behavior process takes place. Perhaps, in the future, it may be worth investigating knowledge sharing behavior using longitudinal study.

Another limitation of this study is that the data provided in this study are from a single source that includes the perception on individual capabilities, career advancement, personal values, job characteristics, perceived organizational climate and knowledge sharing behavior. In future research, it would be desirable to have these measures that are not provided by the same person.

There is also a need for future research to extend the exploration of knowledge sharing behavior among healthcare professionals by examining other possible variables. As

indicated by the current findings, the research model only explained 43.7% of total variance in knowledge sharing behavior. Thus, another 56.3% may be explained by other variables not tested in the current research model.

In summary, while there are some limitations associated with the approach used here, the results of this research provide useful findings that should be of interest to both researchers and practitioners.

5.7 Conclusions

The aim of the present study is to investigate factors that might relate to healthcare professionals' knowledge sharing behavior. The main concern of this study is the role of individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate on knowledge sharing behavior. This study also further examines the moderating effect of subjective norms on the relationship between individual capabilities, career advancement, personal values, job characteristics and perceived organizational climate on knowledge sharing behavior. The findings indicate that all the variables tested except job characteristics do relate positively to knowledge sharing behavior.

An important contribution made by this study is the moderating effect of subjective norms. The current findings show that subjective norms do moderate the relationship between individual capabilities, job characteristics, perceived organizational climate and

knowledge sharing behavior. However, subjective norms did not moderate the relationship between career advancement, personal values and knowledge sharing behavior.

It is hoped that through examination of individual capabilities, job characteristics, perceived organizational climate, career advancement, personal values, and subjective norm, a more complete understanding of knowledge sharing behavior will be achieved.

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APPENDIX A QUESTIONNAIRE

A STUDY ON KNOWLEDGE SHARING BEHAVIOR

Dear Participant,

Thank you for agreeing to participate in this research.

I would appreciate it if you could answer the questions carefully as the information you provide will influence the accuracy and the success of this research. It will take no longer than 30 minutes to complete the questionnaire. All answers will be treated with strict confidence and will be used for the purpose of the study only.

If you have any questions regarding this research, you may address them to me at the contact details below.

Thank you for your cooperation and the time taken in answering this questionnaire.

Yours sincerely,

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SECTION ONE

DIRECTION: Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by circling the number in the range given.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. I share documents and reports	1	2	3	4	5
2. I publish papers in institutional journals, magazines, or newsletters.	1	2	3	4	5
3. I share documentation from personal files related to current work.	1	2	3	4	5
4. I contribute ideas and thoughts to hospital online databases	1	2	3	4	5
5. I keep others updated with important organizational information through online discussion boards.	1	2	3	4	5
6. I express ideas and thoughts in organizational meetings	1	2	3	4	5
7. I participate fully in brainstorming sessions	1	2	3	4	5
8. I propose problem-solving suggestions in team meetings	1	2	3	4	5
9. I answer questions of others in team meetings	1	2	3	4	5
10. I ask good questions that can elicit others' thinking and discussion in team meetings	1	2	3	4	5
11. I share success stories that may benefit the company in organizational meetings	1	2	3	4	5
12. I share past personal work-related failures or mistakes in organizational meetings to help others avoid repeating these.	1	2	3	4	5

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
13. I make presentations in organizational meetings	1	2	3	4	5
14. I support less-experienced colleagues with time from personal schedule	1	2	3	4	5
15. I engage in long-term coaching relationships with junior employees	1	2	3	4	5
16. I spend time in personal conversation (e.g., discussion in hallway, over lunch, through telephone) with others to help them with their work-related problems	1	2	3	4	5
17. I keep others updated with important organizational information through personal conversation	1	2	3	4	5
18. I share passion and excitement on some specific subjects with others through personal conversation	1	2	3	4	5
19. I share experiences that may help others avoid risks and trouble through personal conversation	1	2	3	4	5
20. I have online chats with others to help them with their work-related problems	1	2	3	4	5
21. I spend time in e-mail communication with others to help them with their work-related problems	1	2	3	4	5
22. I meet with community members to create innovative solutions for problems that occur in work.	1	2	3	4	5
23. I meet with community members to share own experience and practice on specific topics with common interests	1	2	3	4	5

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
24. I meet with community members to share success and failure stories on specific topics with common interests	1	2	3	4	5
25. I meet with community members to work to encourage excellence in community's practice	1	2	3	4	5
26. I support personal development of new community members	1	2	3	4	5
27. I share related information to members through community e-mail list	1	2	3	4	5
28. I share ideas and thoughts on specific topics through company supported online community-of-practice system.	1	2	3	4	5

SECTION TWO

DIRECTION: *Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by* ***circling*** *the* ***number*** *in the range given*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. I have the confidence in my ability to provide knowledge that teammates consider useful	1	2	3	4	5
2. I have the experience needed to provide useful knowledge for the construction team	1	2	3	4	5
3. I can provide useful knowledge as well as other teammates	1	2	3	4	5
4. I am proud of the knowledge that I can be able to share with teammates	1	2	3	4	5

SECTION THREE

DIRECTION: *Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by* ***circling*** *the* ***number*** *in the range given*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. It is important to get a higher salary when I share my knowledge	1	2	3	4	5
2. It is important to get a higher bonus when I share my knowledge	1	2	3	4	5
3. It is important to be promoted when I share my knowledge	1	2	3	4	5
4. It is important to get more job security when I share my knowledge	1	2	3	4	5
5. It is important to get a better work assignment when I share my knowledge	1	2	3	4	5

SECTION FOUR

DIRECTION: *Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by* ***circling*** *the* ***number*** *in the range given*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. I enjoy sharing my knowledge with others healthcare professionals	1	2	3	4	5
2. I enjoy helping other healthcare professional members by sharing my knowledge.	1	2	3	4	5
3. It feels good to help other healthcare professional members by sharing my knowledge	1	2	3	4	5
4. Sharing my knowledge with others healthcare professionals gives me pleasure	1	2	3	4	5

SECTION FIVE

DIRECTION: *Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by* ***circling*** *the* ***number*** *in the range given*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. I have freedom to carry out my job the way I want to.	1	2	3	4	5
2. I have opportunity to complete work that I have started	1	2	3	4	5
3. My supervisor frequently discusses matters related to my job performance	1	2	3	4	5
4. My job requires me to use a number of complex, high-level skills	1	2	3	4	5
5. The results of my work have a significant effect on other people's lives and well-being	1	2	3	4	5
6. My job gives me the chance to use my personal initiative or judgment in carrying out the work	1	2	3	4	5
7. I have the authority to make decisions that improve the quality of my work.	1	2	3	4	5
8. My supervisor provides me with constant feedback about how I am doing.	1	2	3	4	5

SECTION SIX

DIRECTION: *Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by* ***circling*** *the* ***number*** *in the range given*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. In this organization, I often been encouraged to propose new ideas	1	2	3	4	5
2. In this organization, I have been praised for my innovation behavior	1	2	3	4	5
3. In this organization, I can challenge other's ideas through positive thinking	1	2	3	4	5
4. In this organization, I was expected to work in a more creative way	1	2	3	4	5
5. In this organization, sufficient budget is provided to support development of an innovative project	1	2	3	4	5
6. In this organization, it is acceptable for staff member like me to fail to achieve the expected outcome while carrying out an innovative learning plan	1	2	3	4	5
7. In this organization, my superior value the contribution I made	1	2	3	4	5
8. In this organization, I can freely exchange ideas	1	2	3	4	5

SECTION SEVEN

DIRECTION: *Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by* ***circling*** *the* ***number*** *in the range given*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. My CEO thinks that I should share my knowledge with other members in the organization.	1	2	3	4	5
2. My boss thinks that I should share my knowledge with other members in the organization.	1	2	3	4	5
3. Generally speaking, I try to follow the CEO's policy and intention.	1	2	3	4	5
4. Generally speaking, I accept and carry out my boss's decision even though it is different from mine.	1	2	3	4	5
5. Generally speaking, I respect and put in practice my colleague's decision.	1	2	3	4	5

PERSONAL INFORMATION

This part contains few demographic information pertaining to yourself. **Please tick (√)** in the box or write your response in the space provided.

---

1. **My gender:**

   ☐ Male ☐ Female

2. **My age:**

   Please specify: _____ years old.

3. **My marital status:**

   ☐ Single ☐ Married ☐ Divorced / Separated / Widowed

4. **My highest academic qualification:**

   ☐ Secondary School
   ☐ Certificate
   ☐ Diploma
   ☐ First Degree
   ☐ Master Degree
   ☐ Doctoral Degree

5. My current monthly salary:

☐	Below USD 2000	☐	USD 2001 – USD 3000
☐	USD 3001 – USD 4000	☐	Above USD 4000

6. Number of years with present organization:

☐	Less than a year	☐	1 – 3 years
☐	4 – 7 years	☐	More than 7 years

7. My current position: _____

8. Number of years in present position:

☐	Less than a year	☐	4 - 7 years
☐	1 - 3 years	☐	More than 7 years

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY

APPENDIX B – SMART PLS OUTPUT (MEASUREMENT MODEL)

Composite Reliability

	Composite Reliability
CA	0.851548
ICs	0.883496
JCs	0.816631
KSB	0.899099
KSBC	0.921713
KSBO	0.898986
KSBP	0.831755
KSBW	0.851867
OC	0.863808
PVs	0.906753
SNs	0.866810

Average Variance Extracted (AVE)

	AVE
CA	0.589414
ICs	0.654973
JCs	0.541140
KSB	0.361523
KSBC	0.702180
KSBO	0.640344
KSBP	0.622407
KSBW	0.658613
OC	0.613250
PVs	0.709009
SNs	0.620120

Discriminant Validity Fornell – Lacrcker Criterium

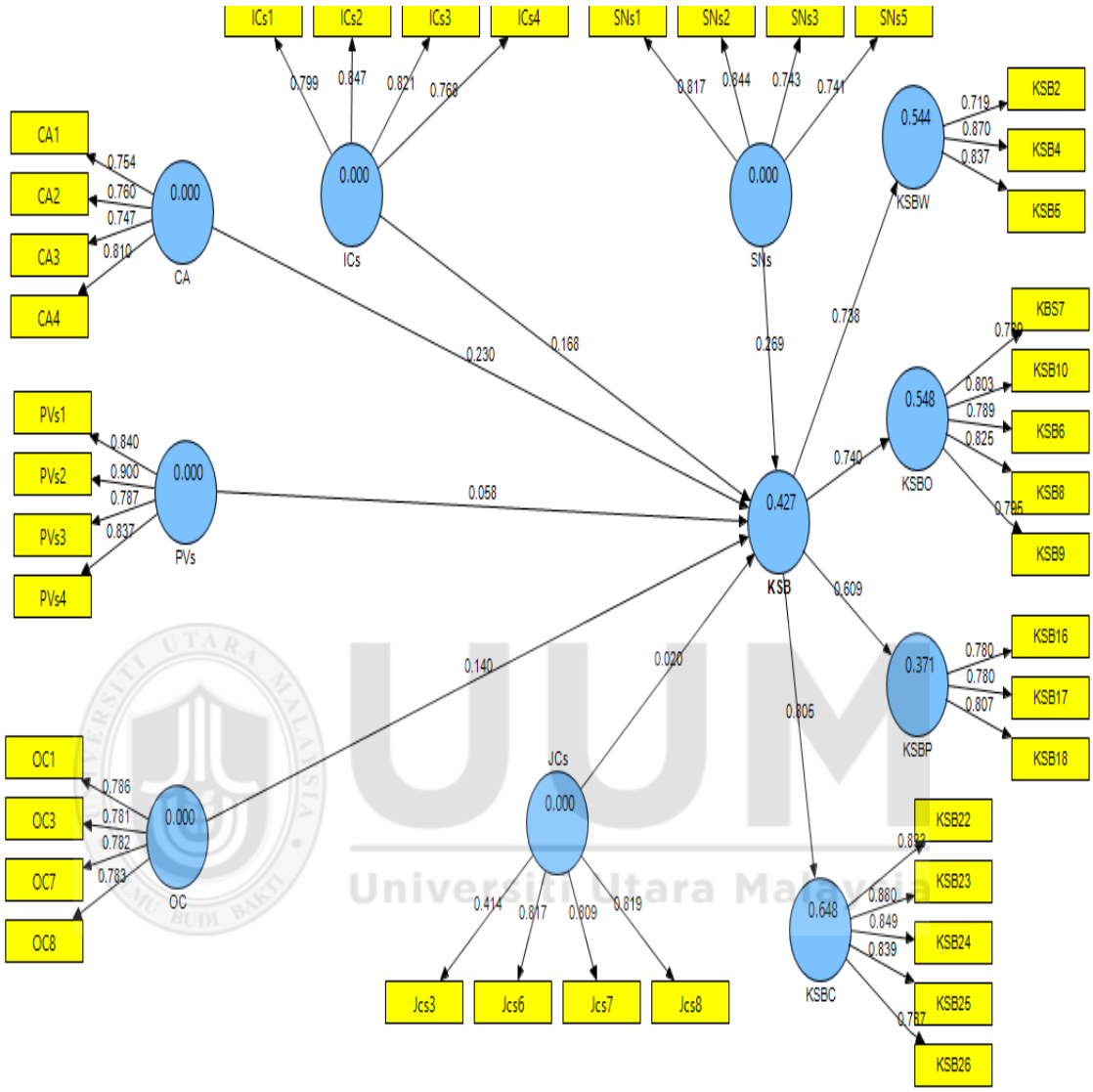
	CA	ICs	JCs	KSBC	KSBO	KSBP	KSBW	OC	PVs	SNs
CA	1.000									
ICs	0.462	1.000								
JCs	-0.449	-0.861	1.000							
KSBC	0.447	0.344	-0.355	1.000						
KSBO	0.423	0.340	-0.290	0.304	1.000					
KSBP	0.396	0.461	-0.419	0.392	0.329	1.000				
KSBW	0.293	0.187	-0.181	0.486	0.474	0.286	1.000			
OC	0.586	0.371	-0.344	0.435	0.359	0.342	0.299	1.000		
PVs	0.245	0.195	-0.380	0.250	0.087	0.162	0.162	0.221	1.000	
SNs	0.552	0.479	-0.462	0.466	0.436	0.403	0.306	0.588	0.222	1.000

Cross Loadings

	CA	ICs	JCs	KSBC	KSBO	KSBP	KSBW	OC	PVs	SNs
CA1	**0.754**	0.276	-0.297	0.367	0.326	0.327	0.256	0.448	0.251	0.404
CA2	**0.760**	0.443	-0.396	0.269	0.377	0.287	0.193	0.429	0.182	0.447
CA3	**0.747**	0.441	-0.384	0.350	0.314	0.296	0.223	0.472	0.119	0.439
CA4	**0.810**	0.268	-0.306	0.380	0.285	0.304	0.223	0.448	0.196	0.407
ICs1	**0.345**	**0.799**	-0.683	0.262	0.224	0.356	0.121	0.250	0.168	0.410
ICs2	0.410	**0.847**	-0.762	0.356	0.305	0.408	0.210	0.368	0.174	0.424
ICs3	0.404	**0.821**	-0.758	0.264	0.241	0.383	0.107	0.306	0.132	0.390
ICs4	0.328	**0.768**	-0.576	0.214	0.323	0.341	0.149	0.260	0.155	0.322
Jcs3	-0.201	-0.153	**0.414**	-0.213	-0.052	-0.157	-0.164	-0.159	-0.807	-0.200
Jcs6	-0.373	-0.762	**0.817**	-0.302	-0.236	-0.335	-0.117	-0.313	-0.169	-0.394
Jcs7	-0.381	-0.759	**0.809**	-0.276	-0.287	-0.355	-0.142	-0.260	-0.155	-0.379
Jcs8	-0.330	-0.699	**0.819**	-0.248	-0.219	-0.341	-0.129	-0.257	-0.228	-0.350
KSB16	0.317	0.339	-0.308	0.353	0.212	**0.780**	0.204	0.231	0.134	0.306
KSB17	0.324	0.381	-0.344	0.276	0.290	**0.780**	0.210	0.312	0.096	0.351
KSB18	0.297	0.372	-0.338	0.299	0.276	**0.807**	0.262	0.266	0.152	0.297
KSB22	0.394	0.313	-0.305	**0.833**	0.244	0.381	0.414	0.379	0.174	0.407
KSB23	0.372	0.235	-0.260	**0.880**	0.203	0.295	0.417	0.350	0.199	0.389
KSB24	0.412	0.294	-0.323	**0.849**	0.245	0.296	0.376	0.342	0.269	0.404
KSB25	0.348	0.288	-0.300	**0.839**	0.269	0.363	0.419	0.363	0.233	0.384
KSB26	0.348	0.312	-0.296	**0.787**	0.311	0.303	0.410	0.387	0.173	0.369
KSB2	0.177	0.068	-0.087	0.306	0.270	0.185	**0.719**	0.202	0.078	0.176
KSB4	0.300	0.206	-0.200	0.442	0.450	0.265	**0.870**	0.266	0.190	0.284
KSB5	0.222	0.161	-0.139	0.421	0.411	0.239	**0.837**	0.254	0.113	0.270
KSB6	0.338	0.333	-0.287	0.278	**0.789**	0.287	0.434	0.276	0.082	0.361

KBS7	0.356	0.323	-0.288	0.250	**0.789**	0.363	0.377	0.240	0.100	0.320
KSB8	0.344	0.270	-0.213	0.224	**0.825**	0.231	0.343	0.330	0.032	0.406
KSB9	0.315	0.192	-0.169	0.243	**0.795**	0.201	0.376	0.288	0.031	0.326
KSB10	0.338	0.235	-0.191	0.216	**0.803**	0.223	0.361	0.304	0.102	0.332
OC1	0.541	0.298	-0.296	0.376	0.301	0.265	0.260	**0.786**	0.144	0.507
OC3	0.409	0.258	-0.217	0.296	0.292	0.256	0.208	**0.781**	0.226	0.435
OC7	0.417	0.288	-0.292	0.369	0.285	0.274	0.248	**0.782**	0.236	0.432
OC8	0.461	0.318	-0.265	0.311	0.241	0.274	0.214	**0.783**	0.080	0.462
PVs1	0.187	0.136	-0.378	0.218	0.036	0.146	0.148	0.159	**0.840**	0.191
PVs2	0.173	0.159	-0.334	0.255	0.022	0.172	0.143	0.194	**0.900**	0.202
PVs3	0.163	0.107	-0.252	0.135	0.011	0.054	0.060	0.154	**0.787**	0.153
PVs4	0.274	0.219	-0.295	0.203	0.175	0.133	0.155	0.217	**0.837**	0.188
SNs1	0.462	0.357	-0.367	0.374	0.344	0.322	0.294	0.578	0.146	**0.817**
SNs2	0.508	0.405	-0.388	0.406	0.395	0.305	0.233	0.502	0.176	**0.844**
SNs3	0.372	0.362	-0.344	0.342	0.228	0.296	0.209	0.394	0.216	**0.743**
SNs5	0.386	0.384	-0.355	0.344	0.387	0.345	0.223	0.363	0.170	**0.741**

New Measurement Model



APPENDIX C – PLS-SEM STRUCTURAL MODELS

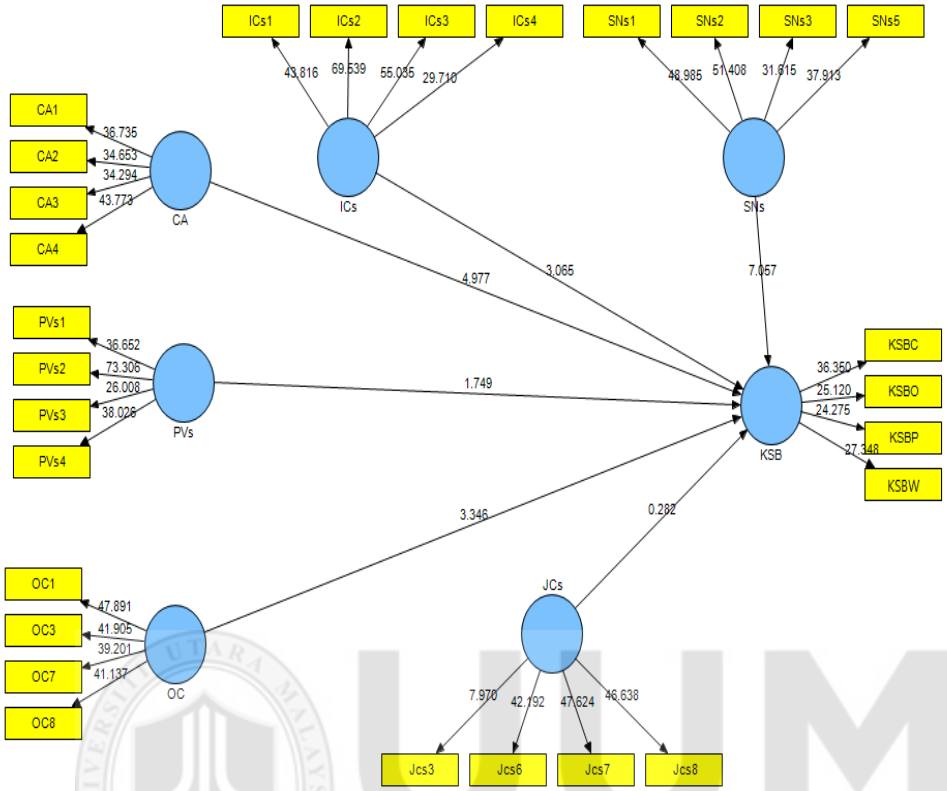
Mean, STDEV, T-values, P-values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (|O/STERR|)	P Values
CA -> KSB	0.227	0.226	0.046	0.046	4.977	0.000
ICs -> KSB	0.199	0.196	0.065	0.065	3.065	0.001
JCs -> KSB	0.020	0.015	0.070	0.070	0.282	0.389
OC -> KSB	0.134	0.137	0.040	0.040	3.346	0.000
PVs -> KSB	0.055	0.056	0.032	0.032	1.749	0.041
SNs -> KSB	0.262	0.259	0.037	0.037	7.057	0.000

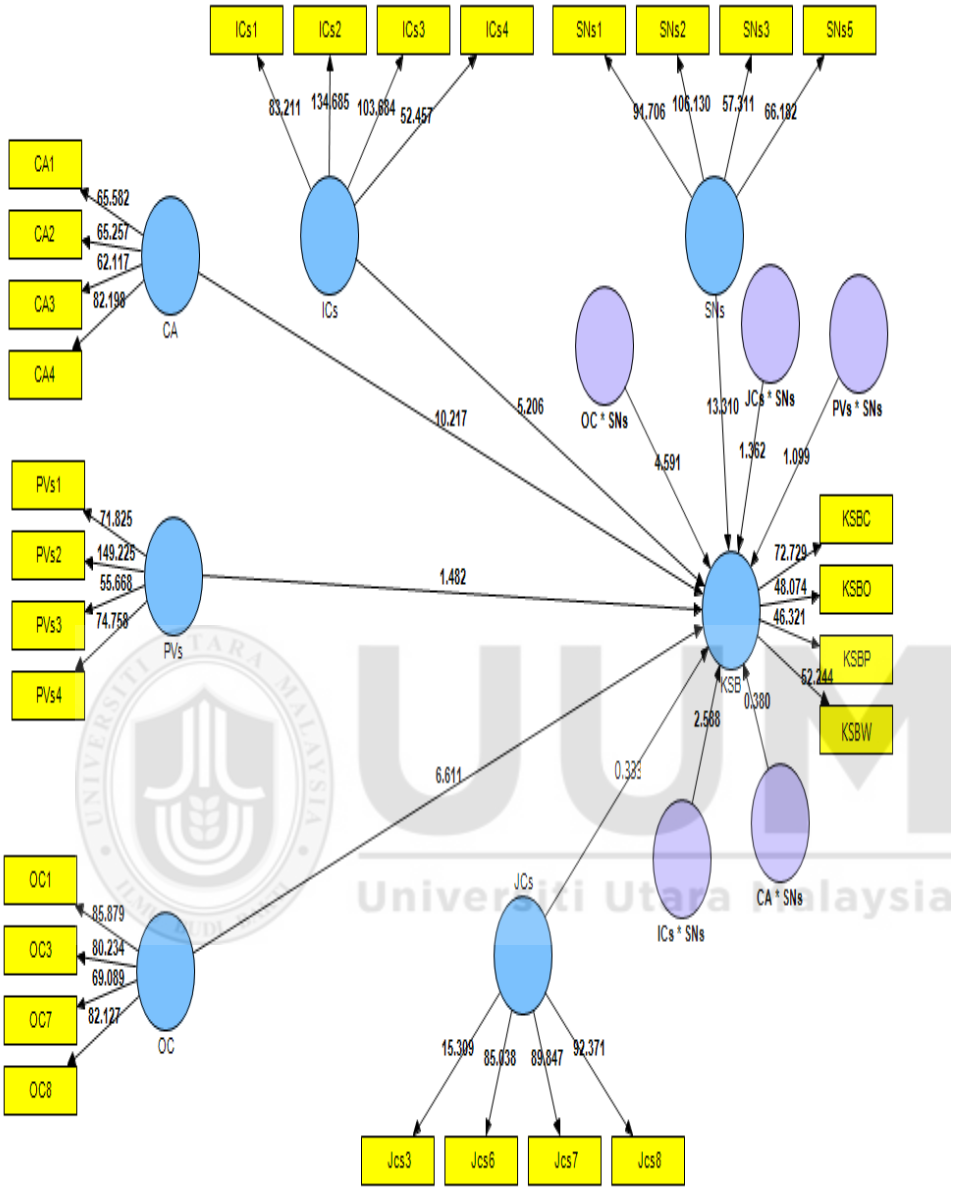
Mean, STDEV, T-values, P-values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (|O/STERR|)	P Values
CA * SNs -> KSB	-0.011	-0.003	0.029	0.029	0.380	0.352
ICs * SNs -> KSB	0.158	0.126	0.061	0.061	2.588	0.005
JCs * SNs -> KSB	0.105	0.081	0.077	0.077	1.362	0.087
OC * SNs -> KSB	0.097	0.096	0.021	0.021	4.591	0.000
PVs * SNs ->KSB	0.088	-0.007	0.080	0.080	1.099	0.136

Structural Model Direct



Moderation Model



Coefficient of Determination (R2)

AF

	R square
KSB	0.42699

Effect Size (f2)

Constructs	R Squared - included	R Squared - excluded	f-squared	Effect size
ICs	0.437	0.427	0.0178	Small
CA	0.437	0.409	0.0497	Small
PVs	0.437	0.435	0.0036	Very small
JCs	0.437	0.437	0.000	None
OC	0.437	0.428	0.0160	Very small
SNs	0.437	0.401	0.0639	Small

Predictive Relevance (Q2)

Total	SSO	SSE	1-SSE/SSO
KSB	1756.000000	1362.916928	0.223851