

# Predictors of Knowledge Sharing Behaviour: Case of the Tanzanian Healthcare Sector

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**Abstract:** *Purpose*–The purpose of this paper is to examine the factors that influence knowledge sharing behaviour among healthcare professionals in Tanzania.

*Design/Methodology/Approach*–This paper is a quantitative research paper. The data were collected from healthcare professionals using a questionnaire and analyzed utilizing multiple regressions.

*Findings*–Individual capabilities, career advancement and personal values were positively and significantly influence on knowledge sharing behaviour.

*Research Limitations/Implications*–The study was carried out in public hospitals and focuses on the Tanzanian healthcare professionals, which restricts the generalizability of the findings to non-healthcare professionals in other geographical settings as well as in different contexts. Another limitation is culture differences across various regions and countries which inhibit knowledge sharing behaviour found in Tanzanian healthcare institutions. Direct relationship subject to lack of understanding as to why there is a positively significant influence of individual capabilities, career advancement and personal values on knowledge sharing behaviour.

*Practical implications*–The variables identified as influential factors on knowledge sharing behaviour could assist management to build a knowledge sharing culture for developing knowledge sharing behaviour in healthcare institutions.

*Originality/value*–The present study contributes to the body of knowledge on knowledge sharing behaviour in healthcare institutions.

**Keywords:** *Healthcare institutions, healthcare professionals, knowledge sharing behaviour, individual capabilities, career advancement, personal values.*

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## I. INTRODUCTION

Knowledge is considered as a very potential resource for achieving organizational competitive advantage (Dube & Ngulube, 2012). In this era of globalization, there are rapid changes in terms of products, markets, technologies and competitors as well as societal changes which require organizations to upgrade their capabilities in order to comply with these prevailing changes (Aktharsha, Anisa, & Ali, 2012). A significant factor to adequately respond to changes is new knowledge creation and enhancement (Krogh, Kim, & Erden, 2008). Since knowledge sharing behaviour is regarded as the first step to creating new knowledge and increasing the value of existing knowledge, both practitioners and academicians are starting to pay more attention to this aspect (Krogh et al., 2008).

In addition, internal knowledge and knowledge sources are now extending beyond organizational boundaries; such knowledge, including the knowledge about customer needs, which is considered important to the organization, is helping to nurture new ideas on products and the innovation process (Hippel, 1988). Thus, organizations should consider improving individual capabilities, career advancement and personal values to benefit from these ideas as suggested as enablers of knowledge sharing behavior in healthcare institutions.

Several research studies have indicated that government organizations and private sector institutions as well as non-profit organizations have been struggling to escalate knowledge, knowledge sharing and creation of new knowledge (Krogh et al., 2008). In healthcare institutions, knowledge sharing behavior is regarded as the critical tool for realizing significant gains and sustaining the competitive edge (Dube & Ngulube, 2012). Knowledge sharing behaviour in the healthcare sector has become essential for treating patients, because healthcare professionals must be research-oriented and creative in undertaking medical practices as well as acquiring knowledge through organizational learning opportunities, including knowledge sharing behaviour (Lipshitz & Popper, 2000).

Despite its importance, knowledge sharing behaviour is not effectively executed among healthcare professionals (Krogh et al., 2008; Ting, Wang, Tse, & Ip, 2011). Knowledge is considered as a source of power

and reputation within communities. Healthcare professionals may be reluctant to share their knowledge for fear of losing their power and reputation (Krogh et al., 2008). Moreover, time constraints as a result of meetings and weak IT infrastructures can limit knowledge sharing behaviour among healthcare professionals (Zhou & Nunes, 2012).

Despite the massive growing acknowledgement on the importance of knowledge sharing behavior and prevailing problem in knowledge sharing behavior in healthcare sector, limited studies have been carried out on knowledge sharing behavior (Aktharsha et al., 2012; Currie, Finn, & Martin, 2007; Wu & Zhu, 2012), particularly in the context of Tanzania. Most of the studies on knowledge sharing behavior were conducted in none healthcare sector such as academic context (Isika, Ismail, Fauzi, & Khan, 2013; Mogotsi & Fletcher, 2011) and IT context (Cabrera et al., 2006; Gupta, 2012; Jo & Joo, 2011; Yang & Lai, 2011).

Moreover, most of these studies in both healthcare sector and none healthcare sector were conducted in developed countries (Aktharsha et al., 2012; Cabrera et al., 2006; Currie et al., 2007; Gupta, 2012; Isika et al., 2013; Jo & Joo, 2011; Wu & Zhu, 2012; Yang & Lai, 2011). Thus, due to the differences in leadership style, organizational culture, working conditions, level of economy and geographical setting, it is suggested that knowledge sharing behavior studies should be conducted in other geographical location and cultural setting in order to validate and generalize the findings (Okoroji, Velu, & Sekaran, 2013; Tuan, 2013). Therefore, this study aims to examine the relationship between individual capabilities, career advancement and personal values and knowledge sharing behavior among healthcare professionals in Tanzanian health care sector. The findings of this study would contribute to the body of knowledge by revealing the significant role of individual capabilities, career advancement and personal values in understanding knowledge sharing in the context of healthcare sector among healthcare professionals in a developing country.

The current paper is organized as follows: It commences with an introduction, followed by the theoretical background, the research methodology and data analysis. Finally, the conclusion and discussion, implications and suggestion for future research are provided.

## II. LITERATURE REVIEW

### The Theory of Planned Behaviour (TPB)

The TPB (Ajzen, 1991) is possibly the most important and the most admired socio-psychological model for forecasting human behaviour in specific contexts (Ajzen, 2001). The TPB is an extension of the theory of reasoned action (TRA) (Ajzen & Fishbein, 1980). This extension is due to the finding that human behaviour is not 100 percent voluntary and cannot be controlled. This finding led to the introduction of perceived behavioural control (PBC) as a new determinant. Thus, the new PBC factor has improved the TPB.

According to the TPB, intention (I) and PBC are considered as the primary determinants of an individual's behavioural action. Intention refers to the individual's willingness to perform a behaviour or action. This intention is developed by the individual's attitude (A) towards a behaviour, subjective norms (SNs) and PBC. It is considered that each determinant has a significant effect on behaviour. Attitude (A) towards behaviour refers to behavioural beliefs. Behavioural beliefs are beliefs based on the anticipated outcomes of a particular behaviour and judgment about the good and the bad of an executed behaviour. SNs rely on normative beliefs. Normative beliefs are based on beliefs on the perceived social pressure from a very potential referent person or people to execute or not to execute particular behaviour. Thus, normative beliefs and inspiration to conform to the referent person's anticipations lead to SNs. PBC is subject to control beliefs. Control beliefs refer to the beliefs or the perception of the availability of resources that may enhance or obstruct the execution of a specific behaviour. Control beliefs and perceived power lead to PBC. PBC supersedes intention since individuals are willing to perform tasks they can succeed in. The greater an individual's belief in owning potential resources, the less difficulty one expects and greater perceived control over the behaviour. Figure 1 indicates the components of TPB. This study adopts the TPB as the underpinning theory for explicating and predicting the influence of individual capabilities, career advancement and personal values on an individual's knowledge sharing behaviour. TPB is preferred over TRA in this study because the TPB is able to explain an individual's actual behaviour better than the TRA.

### Knowledge sharing behaviour in the healthcare sector

Knowledge sharing behaviour is considered as a new practice that the healthcare sectors struggling to institutionalize (Kim, Newby-Bennet, & Song, 2012). It is defined as, 'team members sharing task-relevant ideas, information and suggestions with each other' (Srivastava, Bartol, Locke, & van Tonder, 2006). The notion of knowledge sharing behaviour is premised on the assertion that knowledge should be codified and shared rather than allow it to reside in an individual's mind (McInerney, 2002; Nonaka & Takeuchi, 1995). Knowledge sharing behaviour is a significant team process because if there is no knowledge sharing among members, then it becomes difficult to identify individual resources and it will remain under-exploited (Argote, 2012). Consequently, knowledge sharing behaviour is an important element that determines an institution's

performance (Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000; Petty & Wegner, 1998; Srivastava et al., 2006).

Knowledge sharing behaviour is important in healthcare institutions because healthcare professionals have different perspectives, backgrounds, observations, knowledge and skills (Dougherty, 1992). These backgrounds and skills as well as observations should be shared in order to improve both individual and organizational capabilities. Due to the importance of knowledge sharing behaviour, the healthcare sector has been advised to nurture a conducive environment whereby healthcare professionals are free to share their potential (Kim et al., 2012).

### III. RESEARCH FRAMEWORK AND HYPOTHESIS

The research framework adopted in this work is shown in Figure 1. The research model contains three independent variables and a single dependent variable. The independent variables are individual capabilities, career advancement and personal values; while the dependent variable is knowledge sharing behaviour. The main objective of this study is to examine the influence of each independent variable on the dependent variable as shown by the arrows in Figure 1. In order to test the influence of each variable on the dependent variable, three hypotheses are developed.

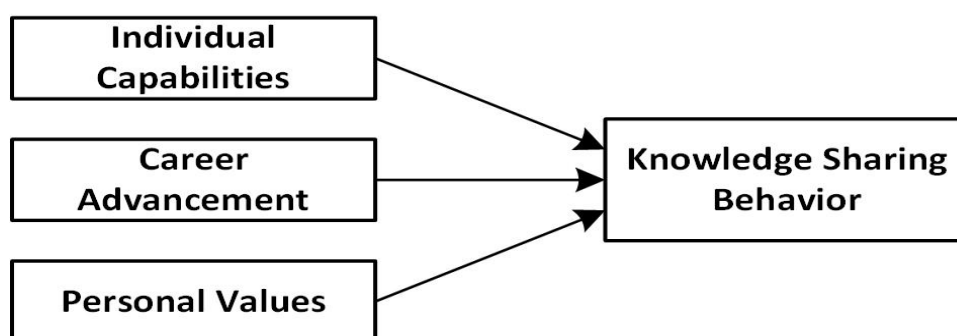


Figure 1: Research Framework

#### Individual capabilities

Individual capabilities refer to an individual's skills, knowledge, commitment, expertise and abilities as the means to the achievement of specific goals (Bontis & Serenko, 2007; Noor & Salim, 2011). These are considered as personal potentialities (Hartog, 2001). Individual capabilities are treated in this study as antecedent knowledge sharing behaviour. Individual capabilities have been portrayed as significant determinants in previous studies (Cabrera et al., 2006; Gupta, Samaria, & Sarda, 2012). According to the TPB, individual capabilities can be considered as PBC which is a determinant of the TPB. Thus, an individual who is perceived sharing skills, knowledge, experience and capabilities will develop readiness to engage in knowledge sharing behaviour. Therefore, the following hypothesis is suggested:

*H1: Individual capabilities have a positive effect on knowledge sharing behaviour.*

#### Career advancement

Career advancement refers to the employee's growth as an institutional leader, commensurate with increase in salary and status (Zhao & Zhou, 2008). It is not only considered as a mechanism for achieving promotion and higher salary, but is also the means for acquiring new knowledge and skills to handle new tasks (Wang-Cowham, 2008). An individual who positively perceives career advancement tends to practice various perilous activities (Gibson & Cohen, 2003). This then can lead to the possibilities of engaging in knowledge sharing behaviour. This is supported by the TPB, whereby career advancement is considered as an attitude towards specific behaviour. An individual, who possesses positive belief on knowledge sharing behaviour as the means for achieving career advancement, will be more likely to engage in knowledge sharing behaviour. This proposition is supported by previous empirical studies (Akhavan, Rahimi, & Mehralian, 2013; Cabrera et al., 2006; Lin, 2007a). Therefore, based on these arguments, the following hypothesis is proposed:

*H2: Career advancement as a positive effect on knowledge sharing behaviour.*

#### Personal Values

Personal values refer to the individual's beliefs that control actions or behaviour (Pinto, Nique, Añaña, & Herter, 2011). They are considered as critical mechanisms for achieving desirable goals (Rokeach, 1973). Personal values are considered as antecedents of individual behaviour (Lönnqvist, Verkasalo, Wichardt, & Walkowitz, 2013). In turn, they can have a significant effect on knowledge sharing behaviour among employees. This notion is supported by the TPB (Ajzen, 1991). Personal values are regarded as attitude towards behaviour in the TPB. A greater positive belief in personal values can motivate an individual to participate in knowledge sharing behaviour. Thus, the next hypothesis is proposed:

*H3: Personal values have a positive effect on knowledge sharing behaviour*

## IV. RESEARCH METHODS

### Research design

Based on the extant literature (Kalman, 1999; Kankanhalli, Tan, & Wei, 2005; Yi, 2009), a research questionnaire was developed. This study selected the healthcare sector for two reasons: first, the healthcare sector is characterized as having limited knowledge sharing behaviour among healthcare professionals (Teh & Sun, 2012); and second, the Tanzanian healthcare sector is faced with a tremendous shortage of healthcare professionals caused by brain drain (Juma, Kangalawe, Dalrymple, & Kanyenda, 2012). In order to examine possible factors for this problem of limited knowledge sharing behaviour, we distributed 650 questionnaires to healthcare professionals working in five Tanzanian government hospitals. In order to have a higher response rate, we reminded our respondents through several telephone calls and short messaging system (sms) to their heads of departments. With these endeavours, we managed to obtain 472 responses, equivalent to 72 percent as returned and usable questionnaires.

### Measurement

This questionnaire was adapted from previous studies. The list of items is indicated in the Appendix. We conducted pre-test of the questionnaire by engaging two experts including a Professor and a Senior Lecturer from University of Utara Malaysia.

These two experts were needed to evaluate reliability and content validity, relevance of the context, organization of the items and checking wordings and phrases. We did minor revisions based on the feedback from them. The measurement items were adopted and adjusted as follows: for knowledge sharing behaviour from Yi (2009); individual capabilities from Kalman (1999); and career advancement and personal values from Kankanhalli et al. (2005). The present study utilized a five-point Likert scale to measure all items as follows: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree.

## V. DATA ANALYSIS

### Scale Validation

Convergent validity and discriminant validity were examined. Convergent validity refers to the extent to which factors expected to measure a single construct correlate with the intended constructs (John & Benet, 2000). Convergent validity was assessed by using average variance extracted (AVE); we adopted the rule of thumb that AVE should be between 0.5 and above (Fornell & Larcker, 1981). This study managed to achieve sufficient convergent validity since the AVE of each latent construct ranges from 0.622 to 0.756. Discriminant validity is the extent to which the constructs do not correlate with each other (Fornell & Larcker, 1981). We examined discriminant validity by using square roots of AVE and we considered that the square roots of AVE of each latent construct should be greater than the square roots of its correlation and any other construct (Fornell & Larcker, 1981). Therefore, the present study has satisfactory discriminant validity because the square root of AVE of each latent construct is higher than its correlation and any other construct.

We determined individual item reliability by checking factor loadings of each measurement construct. We adopted the rule of thumb that factor loadings of each item should be from 0.4 and above (Hair, Hult, Ringle, & Sarstedt, 2014). Hence, we managed to achieve sufficient individual item reliability because our factor loadings range from 0.725 to 0.988. We examined internal consistency reliability by employing composite reliability of coefficient of each latent construct, which should be from 0.70 and above (Bagozzi & Yi, 1988). This study achieved satisfactory internal consistency reliability because composite reliability of each latent construct ranges from 0.832 to 0.925. Table 1 shows the measurement model has satisfactory individual item reliability, internal consistency reliability and convergent validity; while Table 2 shows discriminant validity.

**Table 1: Items Loadings, Composite Reliability, and Average Variance Extracted (AVE)**

Constructs	Items	Loadings	Composite Reliability	AVE
Career Advancement	CA1	0.845	0.907	0.709
	CA2	0.905		
	CA3	0.784		
	CA4	0.830		
Individual Capabilities	ICs	0.988	0.925	0.756
	ICs1	0.830		
	ICs3	0.843		
	ICs4	0.803		

	KBS7	0.794		
	KSB10	0.794		
KSBO	KSB6	0.791	0.899	0.640
	KSB8	0.826		
	KSB9	0.794		
	KSB16	0.785		
KSBP	KSB17	0.776	0.832	0.622
	KSB18	0.806		
	KSB22	0.833		
	KSB23	0.881		
KSBC	KSB24	0.849	0.922	0.702
	KSB25	0.839		
	KSB26	0.786		
	KSB2	0.725		
KSBW	KSB4	0.861	0.852	0.659
	KSB5	0.842		
	PVs1	0.850		
Personal Values	PVs2	0.867	0.909	0.714
	PVs3	0.872		
	PVs4	0.789		

**Table 2: Discriminant Validity**

Constructs	CA	ICs	KSBC	KSBO	KSBP	KSBW	PVs
CA	<b>0.842</b>						
ICs	0.187	<b>0.869</b>					
KSBC	0.251	0.314	<b>0.838</b>				
KSBO	0.085	0.328	0.304	<b>0.800</b>			
KSBP	0.163	0.445	0.393	0.330	<b>0.789</b>		
KSBW	0.160	0.162	0.486	0.473	0.286	<b>0.812</b>	
PVs	0.184	0.606	0.190	0.345	0.333	0.056	<b>0.845</b>

## VI. HYPOTHESES TESTING

Regression analysis was conducted to test the hypotheses and recognize the relationship between the exogenous and endogenous latent constructs. The findings show that all hypotheses (H1, H2 and H3) are supported. Therefore, the proposed theoretical model is supported. Individual capabilities ( $\beta=0.38$ ,  $\rho < 0.01$ ); career advancement ( $\beta=0.14$ ,  $\rho < 0.01$ ); and personal values ( $\beta=0.10$ ,  $\rho < 0.05$ ) have significantly related on knowledge sharing behaviour. The three exogenous latent constructs (individual capabilities, career advancement and personal values) significantly contribute to the variance in knowledge sharing behaviour (adjusted  $R^2=0.244$ ). The results are indicated in Table 3

**Table3: Hypothesis Testing (Direct Effect)**

Hypotheses	Beta	SE	T Statistics	P value	Decision
ICs -> KSB	0.38	0.05	7.86	0.00***	Supported
CA -> KSB	0.14	0.04	3.15	0.00***	Supported
PVs -> KSB	0.10	0.06	1.70	0.04**	Supported

Note: \*\*\*Significant at 0.01\*\*significant at 0.05,\*significant at 0.1.

## VII. DISCUSSION

This study proposes a model of the variables that influence knowledge sharing behaviour in public hospitals. The findings from the regression analysis show a statistically positive relationship between individual capabilities and knowledge sharing behaviour. This finding is consistent with most of the previous studies on knowledge sharing behaviour (Cabrera et al., 2006; Chiang, Han, & Chuang, 2011; Gupta et al., 2012). One possible explanation for this finding may be that an individual capabilities may be a requirement for an employee to engage in knowledge sharing behaviour. The finding also depicts that the management of public hospitals should promote a culture of knowledge sharing behaviour by improving individual capabilities.

The current research results indicate that career advancement was positively and significantly related with knowledge sharing behaviour. This finding is supported by most of the previous studies (Akhavan et al., 2013; Cabrera et al., 2006; Lin, 2007b). One possible reason for this finding is that individual who has positive perception on career advancement will be attained through knowledge sharing are obvious motivated to participate in knowledge sharing behaviour. This notion is connected to the fact that career advancement can strengthen the relationship with knowledge sharing behaviour (Akhavan et al., 2013); the higher the career advancement prevailing in an institution, the more the knowledge sharing behaviour among organizational members.

The personal values construct is a positively significant predictor of an employee's involvement in knowledge sharing behaviour. This finding shows that the greater the personal values, the more the healthcare professionals participate in knowledge sharing behaviour. This finding is consistent with the TPB (Ajzen, 1991), that attitude towards behaviour has a positively significant effect on actual behaviour. Thus, the personal values construct is considered as attitude towards behaviour, having a positively significant relationship with knowledge sharing behaviour.

Identifying variables that affect knowledge sharing behaviour could assist practitioners build knowledge sharing culture to promote knowledge sharing behaviour within government hospitals. Managers in healthcare institutions should emphasize on the development of individual capabilities, career advancement and personal values to assist knowledge sharing behaviour. Tacit knowledge which resides in individuals' minds is acquired through interaction among organizational members, and can be exchanged more easily among employees in the same work setting and in existing social networks (S. J. H. Yang & Chen, 2008). The creation of knowledge sharing culture should take into consideration the proposed factors, such as individual capabilities, career advancement and personal values, that can influence knowledge sharing behaviour in public hospitals.

### **VIII. CONCLUSION AND IMPLICATIONS**

The present study proposes a model of constructs that influence knowledge sharing behaviour in the context of public healthcare institutions. The regression analysis reveals a positively significant effect on the relationship between individual capabilities, career advancement and personal values, respectively, on knowledge sharing behaviour. Individual capabilities and career advancement are identified to be the most robust predictors of knowledge sharing behaviour in the public healthcare sector. Thus, the managers of public hospitals must give specific emphasis to designing activities and programs to develop individual capabilities and career advancement to propagate knowledge sharing behaviour among healthcare professionals. In addition, future studies should ascertain other factors, such as the impact of gender and age, on knowledge sharing behaviour.

The public healthcare sector should promote knowledge sharing behaviour among healthcare professionals by emphasizing on the development of individual capabilities, career advancement and personal values. The current study can be utilized to create strategies to improve and maintain knowledge sharing behaviour among organizational members. This study emphasizes on knowledge sharing behaviour and healthcare institutions can nurture a favourable environment for knowledge sharing behaviour by identifying appropriate factors that have a positive impact.

Previous studies have established a link between organizational culture and organizational citizenship behaviour. Future research could examine the degree to which individual capabilities, career advancement and personal values can be utilized not only to assist with knowledge sharing behaviour, but also to encourage organizational citizenship behaviour.

There are three limitations to the findings of this research. First, there are many healthcare institutions in Tanzania. Since the present study was carried out in healthcare institutions focusing only on medical doctors and nurses, the findings cannot be generalized to the other healthcare and non-healthcare professionals. Consequently, factors that influence employees to share knowledge and recommendations from the present study may not be the same among non-healthcare professionals and in different research contexts. Thus, this study should be extended by using non-healthcare professionals in different research contexts, to enable these results to be generalized on other employees in different contexts. Second, employees' attitudes towards knowledge sharing behaviour are not the same across different cultures. This might limit the relevance of our findings to other regions and countries. Therefore, there is a need to conduct more studies in non-African

regions as well as in different countries in order to enable applicability of our findings. Third, this study does not investigate the underlying factors on why there is a positively significant relationship between the independent variables and the dependent variable. Thus, more studies are needed to comprehend why there exists a positively significant relationship between individual capabilities, career advancement and personal values as independent variables and knowledge sharing behaviour as the dependent variable.

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