The Role of Subjective Norms in the Relationship between Personal Values, Organizational Climate and Knowledge Sharing Behavior

Siti Zubaidah Othman¹, Mohd Faizal Mohd Isa¹ and Mohamed Abbasi Baloozi²

¹Universiti Utara Malaysia, Malaysia, {zubaidah@uum.edu.my, m.faizal@uum.edu.my}
²Tanzania Public Service College, Tanzania, {baloozijunior@yahoo.com}

ABSTRACT
This study examines the direct relationship between personal values, organizational climate and knowledge sharing behavior. The study also investigates the mediating effect of subjective norms on the relationship between personal values, 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, Mzansi Mmoja Hospital, Sekou Toure Reginal Hospital Mwanza and Mbyea Referral Hospital) after permission was granted by the hospital management. Hypotheses for this study were tested using Partial least square-structural equation modeling (PLS-SEM). The results show that personal values, organizational climate and subjective norms were positively significantly related to knowledge sharing behavior. Also, both personal values and organizational climate were positively related to subjective norms. Meanwhile, the findings for mediating effect showed that subjective norms mediate the relationship between personal values and knowledge sharing behavior and between organizational climate and knowledge sharing behavior.

Keywords: Knowledge sharing behavior, personal values, organizational climate, subjective norms.

I INTRODUCTION
Generally, knowledge can be described as expertise or understanding which resides in individuals’ minds as well as in organizational repositories and acquired through experience, interaction and publication (Alwis & Hartmann, 2008; Gebretsadik, Mirutse, Tadesse, & Terefe, 2014; Gera, 2012). In healthcare setting, knowledge sharing is the process of disseminating knowledge related to the medical practices, utilizing a collaborative medium of communication for developing knowledge skills and capabilities among health care professionals (Abidi, 2007). Though knowledge sharing behavior is crucial in healthcare setting in ensuring the quality delivery of health care services, the level of knowledge sharing behavior in healthcare organizations is extremely low (Teh & Sun, 2012). This is due to the lack of inter-professional shared fundamentals, lack of common medical practices, inconsistency in the interpretation of patient diagnosis and situations as well as the absence of incorporating training programs (Zhou & Nunes, 2012).

Despite the substantially mounting recognition of the important benefits of knowledge sharing behavior in the healthcare sector, only a small number of studies on knowledge sharing behavior (Hansen & Avital, 2005; Kim & Lee, 2013) have highlighted healthcare professionals (Currie et al., 2007, Wu & Zhu, 2012). Moreover, these studies have been conducted in Asian and western countries (Aktharsha, Ali, & Anisa, 2012; Chang, Huang, Chiang, Hsu, & Chang, 2012; Currie, Finn, & Martin, 2007; Esmailzadeh, Sambasivan, Kumar, & Nezakati, 2013; Okoroji, Velu, & Sekaran, 2013; Tuan, 2013). The findings cannot be generalized in other settings, like Tanzania, due to cultural and developmental differences. Therefore, the present study was conducted with intention to investigate factors that contribute to knowledge sharing behavior among healthcare professionals in Tanzania.

II LITERATURE REVIEW
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 productivity 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).

Although, knowledge sharing behavior is the keystone of the majority of the organizations, some of the organizations are not capable to practice as knowledge based institutions because knowledge sharing behavior is not practiced accordingly.
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. In other writing, Alhalhouli, Hassan and Chen (2014) have highlighted barriers to knowledge sharing and these include individual barrier (e.g., lack of time, lack of interaction, difference in education levels, difference in national culture), organizational barrier (e.g., lack of leadership, lack of formal and informal space to share, physical work environment, and existing corporate culture) and technological barriers (e.g., unrealistic expectation of employees, reluctance to use it systems, lack of training, and lack of communication).

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, the level of knowledge sharing behavior is very low among Tanzanian public healthcare professionals (Norbert & Lwoga, 2013). Though, Ministry of Health and Welfare has invested heavily in reforming programs and competency based planning to among medical doctors and nurses, it does not facilitated knowledge sharing behavior among healthcare professionals (Norbert & Lwoga, 2013; Omary, Lupiana, Mtenzi, & Wu, 2010).

In addition, empirical studies examine the knowledge sharing behavior among healthcare professionals (medical doctors and nurses) are also limited (Aktharsha et al., 2012; Currie, Finn, & Martin, 2007; Wu & Zhu, 2012), especially in Tanzanian public healthcare institutions (Norbert & Lwoga, 2013). Therefore, the aim of this study is to investigate knowledge sharing behavior among Tanzanian public healthcare professionals.

III RESEARCH HYPOTHESES

A. Personal values and knowledge sharing behavior

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 through knowledge sharing behavior. Thus, the following hypothesis is proposed:

H1: There is a positive relationship between personal values and knowledge sharing behavior.

Personal values and subjective norms

Personal values develop people to perform a behavior to benefit others without anticipating anything in return (Wu & Zhu, 2012). Based on SET, such people may develop norms of reciprocity, which will drive them to engage in knowledge sharing behavior. Previous literature has indicated that personal values are antecedents of subjective norms (Tohidinia & Mosakhani, 2010; Wu & Zhu, 2012). Therefore, the following hypothesis is proposed:

H2: There is a positive relationship between personal values and subjective norms.

Organizational climate and knowledge sharing behavior

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). Relying on the above findings, the study proposes the following hypothesis:

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

Organizational climate and subjective norms

Organizational climate is considered as an antecedent of subjective norms (Wu & Zhu, 2012). Organizational climate refers to the common judgment of its employees about the institution as a whole (Ashkanasy, 2008). It has been shown that positive judgment about the organization may influence employees’ performance (Hofmann, Morgeson, & Gerras, 2003). Prior studies have indicated that there is a positive relationship between organizational climate and subjective norms (Bock et al., 2005; Tohidinia & Mosakhani, 2010; Wu & Zhu, 2012). Thus, the following hypothesis is proposed:
H4: There is a positive relationship between organizational climate and subjective norms.

Subjective norms and knowledge sharing behavior
Subjective norms are antecedents of intention towards a behavior (Tohidinia & Mosakhani, 2010). Subjective norms have indicated a significant correlation with knowledge sharing, intention in previous literature (Bock et al., 2005; Lin & Lee, 2004; Ryu, Ho, & Han, 2003). Perceived subjective norms are signs of individual's readiness to conform to other organizational members (Blue, Wilbur, & Marston-Scott, 2001). Because people prefer to be recognized and comprehended by other organizational members, positive perception of subjective norms plays a significant role in establishing their intention to share knowledge (Sun & Scott, 2005). Therefore, the following hypothesis is formulated:

H5: Subjective norms positively related to knowledge sharing behavior

Mediating roles of subjective norms
Krogh, Kim and Erden (2008) found that subjective norms mediate the relationship between community features (shared goals, caring) and knowledge sharing intention. However, they did not further elaborate on the consequences, such as personal values and organizational climate on knowledge sharing behavior. In other study, Bock et al. (2005) found that subjective norms mediate organizational climate and intention to share knowledge. Based on the previous studies discussed above, it is clear that only a few studies exist on the relationship between personal values and organizational climate and knowledge sharing behavior. Therefore, the present study asserts that it is essential for scholars to explore the relationship between personal values and organizational climate and knowledge sharing behavior by investigating its mediators. Based on previous literature, Bock et al. (2005); and Wu and Zhu (2012) posited that both personal values and organizational climate contribute to subjective norms and subjective norms contribute to knowledge sharing (Chen & Chen, 2009). According to the SET (Blau, 1964), employees who abide by norms of reciprocity as an outcome of trust, perceive higher subjective norms, hence producing intended behavior. Therefore, hypotheses 6 and 7 are proposed:

H6: Subjective norms mediate the relationship between personal values and knowledge sharing behavior

H7: Subjective norms mediate the relationship between organizational climate and knowledge sharing behavior.

IV METHOD

A. Participants
A total of 439 healthcare professionals in Tanzanian public hospitals (144 male, 295 female) participated in this study. Majority of the respondents (187) aged between 21 – 30 years old. Out of 439, 274 of them are married. In terms of highest education level, majority of the respondents (227) had a diploma. Majority of the participants (368) earned below USD 2000. Most of the respondents (141) have been with the hospital for more than 7 years. Majority of the participants (327) are nurses. Most of the participants (162) in this study have been in their position between 1 to 3 years.

Measures
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. 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. 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 organizational climate. 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.

V RESULTS

A. Scale validation

Individual item reliability
Individual item reliability is assessed by checking factor loadings of each construct (Hair, Hult, Ringle, & Sarstedt, 2014). Factor loadings which did not perform well were eliminated (Hair et al., 2014). The minimum value for factor loadings to be maintained is 0.40. In this study, the factor loadings of all items range from 0.725 to 0.881. Therefore, all items of KSB, PVs, OC and SNs performed well in measuring the underlying constructs.
Table 1: Items Loadings, Composite Reliability, And Average Variance Extracted (AVE)

<table>
<thead>
<tr>
<th>Items</th>
<th>Loadings</th>
<th>Composite Reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSB7</td>
<td>0.793</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KSB10</td>
<td>0.794</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KSB O</td>
<td>KSB6</td>
<td>0.791</td>
<td>0.922</td>
</tr>
<tr>
<td></td>
<td>KSB8</td>
<td>0.826</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KSB9</td>
<td>0.795</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KSB16</td>
<td>0.785</td>
<td></td>
</tr>
<tr>
<td>KSB P</td>
<td>KSB17</td>
<td>0.776</td>
<td>0.899</td>
</tr>
<tr>
<td></td>
<td>KSB18</td>
<td>0.806</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KSB22</td>
<td>0.833</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KSB23</td>
<td>0.881</td>
<td></td>
</tr>
<tr>
<td>KSB C</td>
<td>KSB24</td>
<td>0.849</td>
<td>0.832</td>
</tr>
<tr>
<td></td>
<td>KSB25</td>
<td>0.839</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KSB26</td>
<td>0.786</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KSB2</td>
<td>0.725</td>
<td></td>
</tr>
<tr>
<td>KSB W</td>
<td>KSB4</td>
<td>0.861</td>
<td>0.852</td>
</tr>
<tr>
<td></td>
<td>KSB5</td>
<td>0.842</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OC1</td>
<td>0.785</td>
<td></td>
</tr>
<tr>
<td>Org.</td>
<td>OC3</td>
<td>0.781</td>
<td>0.864</td>
</tr>
<tr>
<td>Climate</td>
<td>OC7</td>
<td>0.783</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OC8</td>
<td>0.784</td>
<td></td>
</tr>
<tr>
<td>Personal Values</td>
<td>PVs1</td>
<td>0.850</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PVs2</td>
<td>0.867</td>
<td>0.909</td>
</tr>
<tr>
<td></td>
<td>PVs3</td>
<td>0.872</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PVs4</td>
<td>0.789</td>
<td></td>
</tr>
<tr>
<td>Subjective norms</td>
<td>SNs1</td>
<td>0.817</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SNs2</td>
<td>0.845</td>
<td>0.867</td>
</tr>
<tr>
<td></td>
<td>SNs3</td>
<td>0.744</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SNs5</td>
<td>0.740</td>
<td></td>
</tr>
</tbody>
</table>

**Internal consistency reliability**

Internal consistency reliability refers to the degree to which items interrelate to one another (Yi, 2009). Internal consistency entails that multiple items weigh the same construct and interrelate with one another. Internal consistency reliability is determined by using composite reliability of each latent construct and adopted the rule of thumb which states that the composite reliability of each latent construct should be from 0.70 and above (Bagozzi & Yi, 1988). As indicated in Table 1 above, the composite reliability coefficients of KSB organizational communication, KSB personal interaction, KSB communities of practices, KSB written contribution, OC, PVs and SNs are 0.922, 0.899, 0.832, 0.852, 0.864, 0.909 and 0.867. This indicated that the items execute very well in terms of the reliability of KSBO, KSBP, KSBC, KSBW, OC, PVs and SNs.

**Convergent validity**

Convergent validity is the degree to which one measure correlates with other measures developed to measure the same construct (Yi, 2009). An average variance extracted (AVE) is used to determine convergent validity and AVE of each latent construct should exceed 0.5. Table 1 shows the AVE values of KSBO, KSBP, KSBC, KSBW, OC, PVs, and SNs exceed 0.5 and range from 0.613 to 0.714. Thus, this study achieved sufficient convergent validity.

**Discriminant validity**

Discriminant validity is the extent to which the measures are not correlated to the similar measures developed to measure different constructs (Yi, 2009). Discriminant validity is assessed by utilizing the square roots of AVE, and adopted the rule of thumb that states that the square root of AVE of each latent construct should be greater than its construct and other constructs (Fornell & Larcker, 1981). As indicated in Table 2, the square roots of AVE are shown in bold faces which demonstrate discriminant validity of KSB, OC, PVs and SNs. All square roots of AVE values are higher than their correlations and correlations in other constructs.

Table 2: Discriminant Validity

<table>
<thead>
<tr>
<th>Constr</th>
<th>KSB C</th>
<th>KSB O</th>
<th>KSB P</th>
<th>KSB W</th>
<th>OC</th>
<th>PVs</th>
<th>SNs</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSBC</td>
<td>0.838</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KSBW</td>
<td>0.486</td>
<td>0.473</td>
<td>0.286</td>
<td>0.812</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OC</td>
<td>0.435</td>
<td>0.358</td>
<td>0.341</td>
<td>0.299</td>
<td>0.78</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PVs</td>
<td>0.190</td>
<td>0.345</td>
<td>0.333</td>
<td>0.056</td>
<td>0.29</td>
<td>0.84</td>
<td>3</td>
</tr>
<tr>
<td>SNs</td>
<td>0.466</td>
<td>0.436</td>
<td>0.402</td>
<td>0.305</td>
<td>0.58</td>
<td>0.43</td>
<td>0.78</td>
</tr>
</tbody>
</table>

**B. Hypotheses testing**

**Structural Model**

The estimation of the model is assessed by examining the significance of path coefficients of each hypothesis in the research model. Table 3 shows the findings of hypothesis testing of the structural relationships among the latent constructs.
The results indicate that all hypotheses in this study have significant impact, which indicates all hypotheses are supported. PVs ($\beta=0.098$, $p<0.05$), OC ($\beta=0.249$, $p<0.01$) and SNs ($\beta=0.373$, $p<0.01$) have a positive impact on KSB. Both PVs ($\beta=0.285$, $p<0.01$) and OC ($\beta=0.508$, $p<0.01$) have a positive relationship with SNs. Both mediating effects of SNs have a positive mediating impact ($\beta=0.191$, $p<0.01$) ($\beta=0.107$, $p<0.01$) on the relationships between PVs and KSB and OC and KSB respectively. Therefore, it is concluded that the research model is supported by the data collected.

**Table 3: Hypothesis Testing (Direct Effect And Mediating Effects)**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Beta</th>
<th>Std Error (STERR)</th>
<th>T</th>
<th>P</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVs -&gt; KSB</td>
<td>0.098</td>
<td>0.048</td>
<td>2.06</td>
<td>.020**</td>
<td>Supported</td>
</tr>
<tr>
<td>PVs -&gt; SNs</td>
<td>0.285</td>
<td>0.038</td>
<td>7.54</td>
<td>.000***</td>
<td>Supported</td>
</tr>
<tr>
<td>OC -&gt; KSB</td>
<td>0.249</td>
<td>0.054</td>
<td>4.59</td>
<td>.000***</td>
<td>Supported</td>
</tr>
<tr>
<td>OC -&gt; SNs</td>
<td>0.508</td>
<td>0.040</td>
<td>12.83</td>
<td>.000***</td>
<td>Supported</td>
</tr>
<tr>
<td>SNs -&gt; KSB</td>
<td>0.373</td>
<td>0.055</td>
<td>6.77</td>
<td>.000***</td>
<td>Supported</td>
</tr>
<tr>
<td>PV-&gt;SNs- -&gt;KSB</td>
<td>0.191</td>
<td>0.032</td>
<td>5.97</td>
<td>.000***</td>
<td>Supported</td>
</tr>
<tr>
<td>OC-&gt;SNs- -&gt;KSB</td>
<td>0.107</td>
<td>0.023</td>
<td>4.74</td>
<td>.000***</td>
<td>Supported</td>
</tr>
</tbody>
</table>

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

**VI DISCUSSIONS**

The present study indicates that personal values, organizational climate and subjective norms are related to knowledge sharing behavior. In this study, healthcare professional exhibit knowledge sharing behavior as an outcome of their satisfaction with the management which understand and nurture their personal values. Apart from that, the result also 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.

This study also shows that subjective norms are positively affected by personal values and organizational climate. Furthermore, the current study presents new evidence that subjective norms mediate the relationships between personal values, organizational climate and knowledge sharing behavior in the healthcare sector. The findings indicate that individuals will be motivated to engage in knowledge sharing with others when there is a social pressure (subjective norms) to do so.

**VII CONCLUSION**

In short, the findings indicates that when individuals have positive perceptions of personal values, organizational climate and social pressure (subjective norms), there are more willing to share their knowledge with others.

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