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# Effect of Attitude and Individual Perception on Knowledge Sharing in Peshawar University: An Empirical Study

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This paper attempts to develop a model that would be looking at the effects of some knowledge-sharing factors such individuals' perception, and attitude on knowledge sharing in University of Peshawar. Data from 244 randomly selected respondents from the target population have been collected through a questionnaire. Confirmatory factor analysis has been employed to check the validity and reliability of the adopted questionnaire along with the individual. Structural Equation Modeling technique has been employed. To test hypotheses of the study, regression model has been employed. Findings indicate that individual perception and attitude of the employees are all significant and positive predictors of knowledge sharing in the target population. Notwithstanding, individuals' perception has been proved to be the most influential factor within the overall model. Study of the extant literature reveals that research on this sub-area of knowledge management, in general and in universities, in particular, appears very sparse. To fill in that research gap this study has been undertaken. The study has some common limitations. With all the limitations, the results of the study have both practical and theoretical implications. The study recommends some future directions for further studies in the domain of knowledge management.

***Keyword:*** Knowledge sharing, TRA, individual perception, attitude,

For the effective and efficient utilization of organization resources, knowledge management has got central role (Zboralski, 2009). This underpins the importance of a number of initiatives which are critical for accruing its potential benefits. Within these initiatives, knowledge management is one that ensures how knowledge resources are utilized for the improved functioning of an organization. It aims at planning, organizing and achieving organizational goals and objectives. For this, one needs to fully exploit the existing store of knowledge within an organization. In this milieu, the challenging task is to assimilate the knowledge store of the employees with focus on creation of new knowledge by the said workforce; and the success of an organization hinges on coping with this task (Lin, 2007). This workforce or community of practice (CoP) is considered a critical mean to cherish and improve learning and knowledge sharing in organizations (Lesser & Storck, 2001; Zboralski, 2009). Though there is a strong criticism over the unwanted tilted attention paid to the idea compared to the practical implications.

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Contribution of Authors:

1.Dr. Rabia Ishrat has contributed in selecting the research domain, methodology, data collection and data analysis, and drafting of paper. This manuscript is an extended form of her PhD thesis on knowledge Sharing.

2. Dr Wali Rahman has worked on methodology and guided to improve the theoretical part of the study and critically reviewed and improved the literature, draft and references.

Researchers (e.g., Ipe, 2003) contend that it is the very workforce of the organization that enable the organization to effectively utilize the knowledge that they actually produce, dissiminate and utilize it for its benefits. There is a need of a culture that supports and encourages employees to have a set of behaviors is required to actuate it (Chow & Chan, 2008). However, acceptability of a reality does not certify that the desired goal would be achieved. This requires active interactions among the employees, employing various techniques to convert individual knowledge into organizational knowledge (Ardichvili, Maurer, Li, Wentling, & Stuedemann, 2006; Nahapiet & Ghoshal, 1998) as it is very vital for the competitiveness of organizations. Organizations are required to motivate employees to be a part of this activity as employees have been found unwilling to participate in knowledge sharing (Du Plessis, 2007; Schmetz, 2002). The importance and complexity of knowledge sharing, its barriers and factors that could improve it have widely been acclaimed (Ardichvili, et al., 2006; Connelly & Kelloway, 2003; Ho, 2009; Riege, 2005; Yu & Chu, 2007). The two theories—resource-based theory (RBT) and knowledge-based view of the firm (KBV) —have been given due weightage in knowledge sharing discussions. In these discussions the commonly known factors like, IT, culture of the organization, structure and design of the organization, employees' motivation, and, above all, the support of the top management, have been identified (Ardichvili, et al., 2006; Chen, Huang, & Hsiao, 2010; Kwok & Gao, 2005). However, the effectiveness of these factors has always been acknowledged in the presence of strong social relationships (Cross, Parker, Prusak, & Borgatti, 2001; Lesser & Storck, 2001; Ramasamy, Goh, & Yeung, 2006).

By analysis of the existing literature it is evident that both KBV and RBT are mechanical approaches to knowledge management and have very little to do with the willingness of the work force to voluntarily share their respective knowledge with their co-workers. The study of the extant literature also exhibits that past studies have not brought under research discussion another relevant theory—theory of reasoned action. This theory theorizes that success it the product of both volition and leadership (Chow & Chan, 2008; Ramasamy, et al., 2006; Wong, Wong, Hui, & Law, 2001). The central theme of these studies is that besides extrinsic rewards and organizational climate, social capital is a critical factor that makes the difference in terms of knowledge sharing. Researchers (Chow & Chan, 2008), through an empirically survey, have tested different social factors with the objective to investigate their level of influence on knowledge sharing. It can easily be noted that they have studied it from their cultural perspective. It has also to be noted that it is not only the TRA that could be the only driving force behind the decision, it is also the attitude to behavior process model that affects employees' decision either to share or not to share their respective knowledge. Therefore, there is a need to (1) empirically study and validate the findings of Chow and Chan (2008), and (2) conceptually integrate attitude to behavior process model in the decision process of knowledge sharing in academic institutions as according to Sohail and Daud (2009) limited contribution has been made in the area of education sectors in terms of knowledge sharing.

## Literature Review

### Knowledge and types of knowledge

Knowledge as a social construct, by no means, is a new concept for the modern world to ponder upon, but as a contributing factor in strengthening an organization and as a central factor in the success of organization has got currency relatively recently. Keeping that in mind, many authors, researchers and philosophers have explained it from various aspects**.** For example, knowledge is true belief which is justifiable (Nonaka, Von Krogh, & Voelpel, 2006). It has been

described as an object, state of mind, a state of having access to the capability or information, and a process. By considering it as an object, it is assumed that it is a thing which can be stored; by a state of mind it is believed to have fact of knowing something which helps the human to expand their own experiences in the form of knowledge and its applicability to the real time problem solving in an organization; by a state of having access to the information, it is asserted that the information and expertise are organized in a content form which can be utilized at a time when information is required, same as for capability it is assumed that knowledge is something that can be interpreted and utilized when one decides; and by process it means the compilation and utilization of expertise (Alavi & Leidner, 2001). Knowledge has also been described as the understanding of human, objects, concepts, theories and also the way things are handled (Antal, 2000).

Previous literature is replete with discussion that has looked into the diversity of knowledge from diverse angles. Listing them all is beyond the scope of this study. However, some important aspects of knowledge are touched upon only to affect a linkage of this study with the previous ones. For instance, knowledge is divided into two broader categories 1) Formal knowledge and 2) Informal knowledge. The former is gained from the published sources such as books, manuals, reports etc. and can easily be transferred from one person to another. Whereas, the latter can only be obtained from real life experiences and social interactions that can be used to support formal knowledge (Conklin, 1996). Similarly, Polany (1967) has identified four types of knowledge: 1) professional; 2) coordinating; 3) object based; and 4) know-how knowledge. While Cook and Brown (1999) look at knowledge from the two aspects of knowledge theory i.e. possession & practice. By possession it meant to be in the ownership of someone. From this aspect it occupies the cognitive aspect and deals knowledge as an object/entity or resource that helps in promoting effectiveness of an organization (Nonaka, et al., 2006).

**Knowledge management**

“Knowledge management may simply be defined as doing what is needed to get the most out of knowledge resources" (Irma, Becerra-Fernandez, & Sabherwal, 2010, p. 39). Wiig (1997) defines it in terms of its objectives. For him knowledge management has two objectives: 1) to enable an enterprise to ensure its survival and give it competitive advantage; and 2) to utilize its knowledge assets in the best possible manner. Additionally, KM is defined as a composite of knowledge creation, knowledge assimilation, knowledge dissemination and its practical application to explore new opportunities that help in the enhancement of organizational performance (Yang, 2011). On the whole, KM is considered as a combination of different behaviors, technologies and processes which are designed for the efficient management of information to advance innovation, learning, decision making and other success keys to business (Kane, 2014). It has become the main constituent of management and is commonly believed as a field to serve the business world as a tool of business. In the words of Lambe (2011) it was “fueled by a confluence of computing availability, propagation through consulting firms, and conference promotion” (p. 179).

**Knowledge sharing**

Extant literature replete with the evidences that knowledge sharing is the most important ingredient that plays vital role in the development of an organization (Lee, 2001; Nonaka & Takeuchi, 1995; Shin, 2004). For researchers (e.g., Lee, 2001; Yassin, Salim, & Sahari, 2013) it is an important and key factor of KM processes in organizations. It is believed that knowledge held by an

employee in an organization must be transferred to other workers for its proper utilization and effectiveness (Cabrera, Collins, & Salgado, 2006). Researchers (e.g., Cummings & Teng, 2003) believe that this leads to success which is subject to a number of factors, like the quality and intensity of the ownership that the receivers have, the commitment with which it has been created, and their level of satisfaction that they have with the knowledge they have shared. This further causes value creation which is very critical the competitiveness of the organizations. Notwithstanding, this is not a self or system generated product, it is the product of the collective potential of the workforce to manage the knowledge resources received through a linkage of interactions (Andrawina, Govindaraju, Samadhi, & Sudirman, 2008).

There are a number of terms being used for KS. The most commonly used term for KS is knowledge transfer (Awad & Ghaziri, 2004; Massa & Testa, 2009). Notwithstanding, they are not synonyms. There are differences between the two. Researchers argue that knowledge transfer refers to the application of current knowledge from one person to another. It means it takes place in one direction and connotes that the main source of knowledge is the owner. Whereas, KS encompasses broader meanings. It deals with the interactions, absorptions and invention of new knowledge which is believed a two-directional phenomenon and is the product of interaction and transaction between two or more than two individuals (Boyd, Ragsdell, & Oppenheim, 2007).

**Knowledge sharing in Public and Private Organizations and HEIs**

The extant literature, no doubt, recognizes the critical nature of knowledge sharing in the form of a well-concentrated attention from scholars in the domain of knowledge management with special emphasis on knowledge sharing in both the private as well as public sectors. Knowledge sharing is a composite process of mutual exchange/transfer of the existing knowledge and the creation of new knowledge. In this process, organizational members are being supported to acquire knowledge and disseminate it within organization (Van Den Hooff & De Ridder, 2004). Some researchers (e.g., Ipe, 2003; Parekh, 2009), commonly, accept it that it leads to competitive advantage and enhanced organizational performance. In a survey study in Europe in 1999 regarding KS by Bock and Kim (2002), reveals that nearly 94% of the respondents are of the opinion that people should share what they know with others in the organization. And that is why the most important factor of KM discussed nowadays is KS (Ford, 2001), and plays vital role in the success of business firms (Davenport & Prusak, 1998) as it leads to foster knowledge deployment to those sections which require knowledge and can greatly be benefited from it (Syed-Ikhsan & Rowland, 2004). And it happens because employees have, generally, been found with positive attitude towards KS (Bock & Kim, 2002).

**Knowledge sharing enablers**

Knowledge, whether explicit or implicit, does not happen to be shared by itself or in vacuum. Certain conditions, termed as enablers, are required to affect it. Correia (2013) describes KS enablers as a set of factors or organizational conditions such as its design, managerial setups, technological infrastructures and culture that provide environment and support knowledge sharing. In other words, they are described as tools that let workforce to be the source of new knowledge and afterwards, share it within the organization (Lin, 2007). Among these factors, Chow and Chan (2008) found, in their empirical study, that social network (SN) and shared goals (SG) are directly related to the subjective norms and attitude towards KS whereas, social trust (ST) is indirectly related to KS. Similarly, Bautista and Bayang (2015) validate the findings of Chow and Chan (2008) and opine that SN, ST, and SG are significantly related to attitude, subjective norms and intentions

towards KS. In other words, it is the attitude of a person towards KS that controls his or her intent towards his actual performance (Ajzen & Fishbein, 1980). Besides, individual's perception and awareness regarding KS plays vital role in the effective and efficient KS processes (Davenport & Prusak, 1998; Khan, 2014).

**Theoretical and conceptual background**

The extant literature bespeaks of the existence of a very close inter-relationship between behaviour and attitude and the study of this relationship holds a central theme in the argumentative research. In this persuasion research, central postulation is: if one wants to change the behaviour, they must realize that it could only be affected by changing the attitude. There have been two commonly discussed theoretical models that explain this attitude-behaviour relationship. The first model/theory is the theory of reasoned action (Ajzen & Fishbein, 1969) which postulates that an individual's behavior is not a reflex action, rather is well planned in advance; and the second is attitude-to-behavior process model which assumes that human behavior is the product of her/his attitude. In other words, researchers conclude that the theory of reasoned action has an inherent predictive capacity in decision making in organizations (Southey, 2011). By close examination of this attitude-behaviour relationship, one comes across four factors and the quality of each factor determines an employee's attitudes more or less predictive of his/her behavior. They are: specificity (general vs. specific); person (the respondent); situation (when and how); and attitude (attitude formation). The nature of these factors is subject to the culture dimension (Hofstede, 1980) that an individual lives in. If paraphrased, it means that if an individual lives in a culture that prefers individualism will prefer to act under the influence of the theory of reasoned action (as she/he is comparatively free to plan the resultant behavior) whereas if an individual lives in collectivist culture will be under the influence of attitude-to-behavior process model (as the spontaneous behavior is the outcome of the deep-rooted attitude).

Ajzen and Fishbein (1969, 1977) theory of reasoned action has entangled the attention of the researchers since it has been proposed. The theory postulates that it is human attitude that is instrumental in the actualization of their behavior. And that this link between attitude and behaviour is conscientious and well-deliberated. Furthermore, they are capable of linking their attitude and the possible implications for any action they would like to take (Fazio & Roskos-Ewoldsen, 2005). The assumption in its essence explains volitional behaviors. Researchers (e.g., Hale, Householder, & Greene, 2002) contend that this assumption excludes a wide range of behaviors like, impulsive, spontaneous, habitual, and the behaviors that require special skills, unique opportunities and cooperation resources. Anyway, it still has a lot of explanatory powers in explaining the attitude-behavior relationship. The theory postulates that the strongest or the most proximal predictor of volitional behavior is an individual's behavior intention and that behavioral intentions are the results of both attitude toward representing different behaviors and the subjective norms related to it. As all these three aspects of the theory have strong bearings in organizational settings, their applications in knowledge management hold merit. Keeping the above theoretical discussion in mind, the researchers propose the following conceptual model:

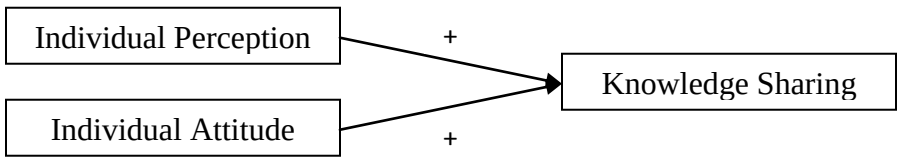


*Figure 1* Conceptual Model of the Study

**Individual perception and knowledge sharing**

Individual's perception about the necessity and exchange of information or teaching material plays important role in KS (Kim & Ju, 2008). A study on factors affecting KS in the library of Dhaka Universities by Khan (2014) revealed that 91 % individual perceived that users are friendly while sharing knowledge, 4.3 % showed non-friendliness of the users, and 4.3 % were embarrassed to share knowledge. Researchers believe that the current "knowledge boom" is the product of diverse factors and the most important driving force for efficiently and effectively knowledge sharing is the perception and reality resides the individuals' minds (Davenport & Prusak, 1998). Previous studies suggest that perceptions of information ownership hold central position in knowledge sharing and have positive relationship with it (Jarvenpaa & Staples, 2001).

Wiewiora, Murphy, and Trigunarsyah (2010) opine that employee perception could be stimulating success factor of KS since it enhances the trust among workforce. In the view of Rahman (2011) employees have six types of perceptions. These are: KS practices, the benefits, hindering factors, the very actions, the technologies involved, all the factors that employees believed to be instrumental. While empirically validating these findings Hidayanto, Hapsari, Alfina, and Sucahyo (2013) they find it vital and suggest that employees' perception should be known for the reason of evaluating the condition of KS in organization. For them intrinsic aspects of the employees are more important than extrinsic ones. The TPB postulates that even in the presence of other variables such as attitude and subjective norms one should not ignore perceived behavioral control for evaluating the behavior of the employees (Ajzen, 1991). In the light of afore mentioned discussion, the researchers put to test the following hypothesis:

**H1.** The higher the individuals' perception of knowledge of sharing, the organization will experience more knowledge sharing.

**Attitude towards knowledge sharing**

A person's satisfactory and uncomplimentary evaluation of an individual, entity, situation, behavior, etc. is referred to as attitude of that person. This notion of a person, in favour of or against some behaviour is generally taken as an individual's assessment of that behavior when it comes to action (Kim, Chun, & Song, 2009). This assessment is believed to affect certain behaviors socially and has indirect impact on the intention towards knowledge sharing (Haque, Ahlan, & Razi, 2015). Attitude of a person towards sharing knowledge is, generally, believed to command his or her intention towards his actual performance (Ajzen & Fishbein, 1980). Likewise, many researchers assume the significance of this attitude as a precursor and an important factor in knowledge sharing (Kuo & Young, 2008). According to Tohidinia and Mosakhani (2010) this attitude in favor of knowledge sharing significantly and positively related to knowledge sharing. In the view of Ajzen and Fishbein (1970), attitude of individuals towards KS can be identified by assessing their belief about KS besides apparent consequences of KS that can affect attitude toward this behavior (Chiou, 1998). Other researchers argue that attitude may also act as a mediator between personal factors and intention to KS (De Vries, Van den Hooff, & de Ridder, 2006). It is also believed that attitudes are extracted from the cognitive system and is, therefore, a potentially influencing factor in affecting intention towards knowledge sharing (Yih-Tong, & Scott, 2005). Studies (e.g., Khan, 2014; Olatokun & Nneamak, 2013) found that intention to knowledge sharing is the outcome of positive attitude towards it. Based on the preceding discussion, the researchers posit the following hypothesis for validation:

**H2.** The more favorable the organizational members' attitude toward knowledge sharing, the organization will experience more knowledge sharing.

## Method

The current research study is a survey study based on an adopted questionnaire from Chow and Chan (2008) with simple customization. Its target population is University of Peshawar having a total population of 571 (as per university site). Random sampling technique has been employed. For sample size determination, Krejcie and Morgan (1970) guidelines have been followed. Keeping that in mind, sample size for the current study is 244. To assess measure model for each construct SEM technique was employed. This is because SEM is considered one of the important statistical models used to describe and study the relationship between multiple variables its wide applicability in assessing measurement model (Hair, Anderson, Babin, & Black, 2010). For testing hypotheses of this study, regression technique was employed. However, before regression, individual model fitness for each construct has been carried out through individual CFAs to see the relevance and fitness of measurement model. For this purpose some commonly known fit statistics like chi-square, comparative fit index, goodness-of-fit index, root mean square residual, and root mean square error of approximation are used.

The questionnaire has personally been administered, keeping in view all the research ethics, like confidentiality, voluntary participation, etc., in mind. The questionnaire is comprised of three parts with total 11 items (attitude towards knowledge sharing= 5, individual perception of knowledge= 3, and knowledge sharing= 5) excluding the part that was supposed to collect demographic information. Question items on the three variables are 5-points Likert based scale (1= Strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree). Establishment of rapport with the participants to motivate them to respond enthusiastically and with full responsibility and assuring the confidentiality of the responses provided by them plays important role in getting less biased responses. The questionnaire has a covering letter wherein the purpose of the research study has been highlighted. Besides, the instrument has also been cross-checked for reliability and validity through expert's opinions, correlation matrix, and pilot testing. Cronbach's alpha values for reliability of the constructs are (Attitude = 0.91, Individual Perception= 0.90, Knowledge Sharing = 0.84). SPSS and AMOS have been used as statistical tools. Finally, regression analyses were made by using the OLS method.

## Results

### Sample characteristics and descriptive statistics

Though the sample for current study was calculated as 250 but a total of 317 questionnaires were distributed among respondents of 20 departments of the target university. In all 244 questionnaires were collected back. The response rate remained 84%. It is believed that descriptive statistics for nominal or ordinal data is significant only for providing an overview and summary statistics such as frequencies and percentages (Gaur & Gaur, 2006). Therefore, detailed description of the respondents is provided in various frequency tables in the subsequent section. The common variables related to demographics are age, gender, designation, current and total experience.

**Age:** Detailed descriptive statistics related to age of the respondents is presented in table 1. Results in the table exhibit that majority of the respondents are of the middle age (n= 67) and seniors (n= 83) comprising a valid percentage of 34 and 27 respectively, followed by young age (n= 65) in terms of categories used with a percentage value of 26.6, while the ratio of last category (n= 29) is about 11.9 percent.

**Table 1**

*Age of the Faculty Members (N=244)*

| | | Frequency | Percent | Cumulative Percent |
|---|---|---|---|---|
| Valid | 25-35 | 65 | 26.6 | 26.6 |
| | 36-45 | 67 | 27.5 | 54.1 |
| | 46-55 | 83 | 34.0 | 88.1 |
| | 56 & above | 29 | 11.9 | 100.0 |
| | **Total** | **244** | **100.0** | |

**Gender:** Table 2 provides the gender wise detail of the respondents. The table indicates that greater number of females (n= 130) has responded to the survey, comprising a valid percentage of 53.4, whereas, the percentage of male respondents is 46.7 (n=117).

**Table 2**

*Gender of the Faculty Members (N=244)*

| | | Frequency | Percent | Cumulative Percent |
|---|---|---|---|---|
| Valid | Female | 130 | 53.3 | 53.3 |
| | Male | 114 | 46.7 | 100.0 |
| | **Total** | **244** | **100.0** | |

**Designation**: Table 3 indicates the designation wise detail of the respondents. The table shows most of the respondents are Assistant Professor (n= 107), comprising a valid percentage of 43.9, followed by Lecturer (n=80) with a percentage of 32.8, and then by Professor (n=57) with a valid value of 23%.

**Table 3**

*Designation of the Faculty Members (N=244)*

| | | Frequency | Percent | Cumulative Percent |
|---|---|---|---|---|
| Valid | Lecturer | 80 | 32.8 | 32.8 |
| | AP | 107 | 43.9 | 76.6 |
| | Prof | 57 | 23.4 | 100.0 |
| | **Total** | **244** | **100.0** | |

**Experience**: Table 4 indicates the total experience wise detail of the respondents. The table shows most of the respondents are in the category of 1-5 (n=19.7), 11-15 (n= 20) respectively, followed by highly experienced people (n= 43) 17 %, while the ratio of last category represents only 7 percent responses (n= 17).

**Table 4**

Total Experience of the Faculty Members (N=244)

| | | Frequency | Percent | Cumulative Percent |
|---|---|---|---|---|
| Valid | 1-5 yrs | 48 | 19.7 | 19.7 |
| | 6-10 yrs | 43 | 17.6 | 37.3 |
| | 11-15 yrs | 49 | 20.1 | 57.4 |
| | 16-20 yrs | 44 | 18.0 | 75.4 |
| | 21-25 yrs | 43 | 17.6 | 93.0 |
| | 25 & above | 17 | 7.0 | 100.0 |
| | **Total** | **244** | **100.0** | |

**Descriptive statistics for the constructs:** Table 5 provides the detail about the constructs of the study. The results show that means of the construct were in accordance to the number of questions used for each variable in the constructs. Similarly, all constructs indicate somewhat close standard deviation.

**Table 5**

*Means and Standard Deviations for the Construct (N=244)*

| Variables | Minimum | Maximum | Mean | St. Dev |
|---|---|---|---|---|
| Attitude towards KS | 1 | 5 | 18 | 5 |
| Individual perception | 1 | 5 | 11 | 3 |
| Knowledge Sharing | 1 | 5 | 18 | 5 |

**CFA for attitude towards KS**

Figure 2 presents the actual measurement model for the Attitude towards KS construct. The model described here is a single factor model with five indicators. By analysis measurement estimation, it was identified that this model fits well. The $\chi^2$ value of 5.35 with 5 degrees of freedom was statistically insignificant at p >0.37. As per other fit statistics the model was acceptable as (Standardized RMR = 0.046, RMSEA = 0.017, CFI = 0.99 and GFI = 0.99. The final results of confirmatory factor analysis for the Social Network with five indicators are provided in table 6.

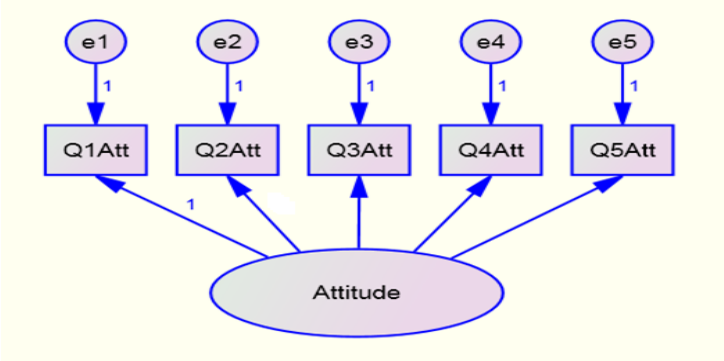


*Figure 2*: Individual Model fit for attitude

**Table 6**

*Confirmatory Factor Analysis for Attitude towards KS*

| Indicators | Completely standerdized loadings | Indicator Relaibility | Error Varince |
|---|---|---|---|
| Att1 | 0.19 | 0.89 | 0.96 |
| Att 2 | 0.86 | 0.89 | 0.32 |
| Att 3 | 0.13 | 0.91 | 1.4 |
| Att 4 | 0.16 | 0.90 | 1.2 |
| Att 5 | 0.62 | 0.90 | 1.0 |

**Fit Statistics**

Chi-Square = 5.35 (*df= 5, p=0.0.37)*
Standardized RMR= 0.046
RMESA= 0.017
GFI= 0.99
CFI= 0.99

Note: *All the values were significant at $p < 0.05$

**CFA for individual perception towards KS**

Figure 3 presents the actual measurement model for the individual perception towards KS construct. The model described here is a single factor model with three indicators. By analysis measurement estimation, it was identified that this model fits well. The $\chi^2$ value of 1.63 with 1 degrees of freedom was statistically insignificant at $p > 0.20$. As per other fit statistics the model was acceptable as (Standardized RMR = 0.044, RMSEA = 0.051, CFI = 0.99 and GFI = 0.99. The final results of confirmatory factor analysis for the social network with three indicators are provided in table 7.

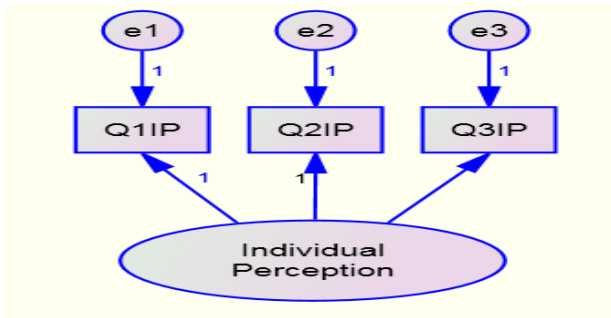


*Figure 3:*Individual Model Fit for Individual Perception towards KS

**Table 7**

*Confirmatory Factor Analysis for Individual Perception towards KS*

| Indicators | Completely standerdized loadings | Indicator Relaibility | Error Varince |
|---|---|---|---|
| IP1 | 0.82 | 0.86 | 0.29 |
| IP 2 | 0.86 | 0.85 | 0.31 |
| IP 3 | 0.88 | 0.83 | 0.45 |

**Fit Statistics**

Chi-Square = 1.63 (*df= 1, p=0.0.20)*
Standardized RMR= 0.044
RMESA= 0.051
GFI= 0.99
CFI= 0.99

Note: *All the values were significant at p < 0.05

**CFA for knowledge sharing**

Figure 4 presents the actual measurement model for the knowledge sharing construct. The model described here is a single factor model with five indicators. By analysis measurement estimation, it was identified that though chi-square values don't support the model fitness well but the other fit statistics such as RMR, RMSEA, CFI, and IFI proves this model to be a fit model. The chi-square value of 15.4 with 6 degrees of freedom was statistically insignificant at p >0.017. As per other fit statistics the model was acceptable as (Standardized RMR = 0.080, RMSEA = 0.081, CFI = 0.99 and GFI = 0.98. The final results of confirmatory factor analysis for the knowledge sharing with five indicators are provided in table 8.

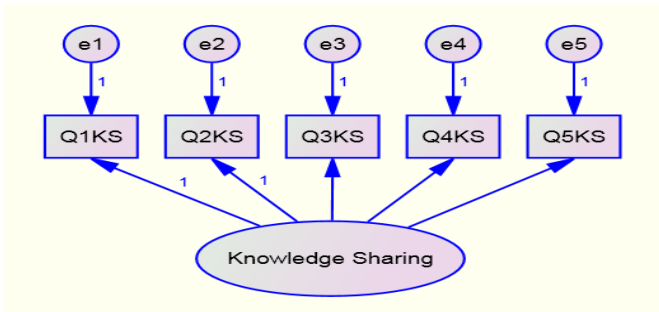


*Figure 4* Individual Model fit for Knowledge sharing

**Table 8**

*Confirmatory Factor Analysis for Knowledge Sharing*

| Indicators | Completely standerdized loadings | Indicator Relaibility | Error Varince |
|---|---|---|---|
| KS1 | 0.83 | 0.92 | 0.40 |
| KS 2 | 0.83 | 0.76 | 0.33 |
| KS 3 | 0.90 | 0.74 | 0.29 |
| KS 4 | 0.86 | 0.74 | 0.42 |
| KS 5 | 0.87 | 0.76 | 0.62 |

**Fit Statistics**

Chi-Square = 15.4 (*df= 65, p=0.017)*
Standardized RMR= 0.080
RMESA= 0.081
GFI= 0.98
CFI= 0.99

Note: *All the values were significant at p < 0.05

**Regression analysis**

The statistics in the form of model summary provided in table 9 explained that adjusted R square was 0.68 for overall model which is accepted as a good model (Nau, 2017). Data was tested for normality, multicollinearity and hetroscedasticity prior running the final equation, where all three assumptions were satisfied. The two predictors of the model in the regression outputs produced adjusted $R^2 = 0.68$, F (265), $p < .000$. Results in table 9 demonstrate that organizational members' attitude and individuals' perception of the knowledge have significant positive regression weights, confirming that employee have positive attitude towards knowledge sharing in the organization. Furthermore, positive perceptions of knowledge sharing are instrumental factors in increasing the process of KS in organizations.

**Table 9**

*Regression Model Fit Statistics*

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | .462 | .154 | | 3.009 | .003 | | |
| | Att. | .163 | .040 | .150 | 4.051 | .000 | .940 | 1.064 |
| | IP | .660 | .031 | .779 | 20.990 | .000 | .940 | 1.064 |

Adjusted R Square: 0.68; F value: 265; and *p* value: 0.000. Dependent Variable: KS

**Hypothesis 1** investigated the relationship between knowledge sharing and the individuals' perception. Since the standardized path coefficient of 0.66, the *t* value of 20.9, and p- value .000 were highly significant, the hypothesis has strongly been supported by the empirical data. Similarly, **hypothesis 2** was supposed to investigate the relationship between knowledge sharing and the organizational members' attitude towards KS. Since the standardized path coefficient of 0.16, the t value of 4.05, and p- value .000 were highly significant, the hypothesis has also been strongly supported by the empirical data.

## Discussion

**The effect of individuals' perception on knowledge sharing**

The current study hypothesized that individuals' perception is a positive predictor of knowledge sharing in organization. The findings from the analysis of the empirical data exhibit support for this prediction. In other words, it can be said that individuals' perception had strong bearing on knowledge sharing in the target population. Put in other words, it would mean that if employees have higher perception of knowledge of sharing, the organization will experience more knowledge sharing. The results of the current study are in line with some previous studies (e.g., Davenport & Prusak, 1998; Khan, 2014; Wasko & Faraj, 2013).

The relationship of individuals' perception and knowledge sharing was extracted from the social exchange theory (Blau, 1965), which posits that persons being engaged in social interface expect that such interactions will lead in some way to societal rewards such as respect, status and approval. This suggests that individual's perception (i.e. enhanced reputation in the organization) greatly affect their participation especially in the form of sharing knowledge. A study on why knowledge should be shared by Wasko and Faraj (2013) explores individual's perception based upon reputation, enjoying helping others and helpfulness of contribution. As per their findings,

mostly, individuals with the perception of good reputation in the social network and helpfulness of sharing the knowledge were found more encouraged to share knowledge.

In addition, individual perception from theoretical perspective also communicate that it is not only reason or planned behavior that always participate in stimulating knowledge sharing behavior of the employees but it is also the certainty of the immediate situation that stimulates knowledge sharing. As this study examined both the perspectives of knowledge sharing i.e. reasoned action and perception in the immediate situation, it could be concluded that the empirical data have supported the contention and wherein it had become clear that respondents are more inclined towards perceiving the immediate situation is more evident. From the aforesaid discussion, it could be concluded that employee's perceptions, whether in the form of financial or social gains in mind, are significantly and positively influenced to share knowledge in organization. Thus, there is a strong lesson for the management not to ignore human perception in the immediate situation for designing and placing best practices to develop human behavior towards knowledge sharing.

**The effect of organizational members' attitude on knowledge sharing**

The current study hypothesized that organizational members' attitude is a positive predictor of knowledge sharing. This prediction was also supported by the empirical data. The results in table 9 clearly indicate a strong and positive relationship between employees' attitude towards knowledge sharing and actual knowledge sharing in the target population. The results of the current study are in line with the previous studies (e.g., Ajzen & Fishbein, 1980; Khan, 2014; Kuo & Young, 2008; Luturmas & Indarti, 2016; Rahman,Osmangani,Daud,Fattah, 2016; Olatokun & Nneamaka, 2013; Tohidinia & Mosakhani, 2010).

The findings of current study are based upon the most popular theory of reasoned action presented by Ajzen (1969) which says that behavior of a person is thoughtfully planned in advance. It emphasizes that a person's intention is very much important in the commission of any action such as sharing knowledge. This theory has two important factors i.e. personal factors (attitude) and societal factors (subjective norms). In the light of this theory, the current scenario confirms that the faculty members in the target population are greatly influenced by their attitude while sharing knowledge in the organization. Ideally, it can be said that positive attitudes manifest good behaviors. However, in some situations the case can be vice verse, which means if attitude of a person is changed the behavior will automatically change.

To conclude, attitude of a person plays vital role in setting the stage for behavior towards sharing knowledge in an organization. Previous researches and findings of this study support this contention. Therefore, it should be given proper attention while formulating strategies to share knowledge. Also, this study examined the importance of knowledge sharing from both the (TRA and attitude-to-behavior process model) perspectives and suggests that if organizations want to boost their knowledge sharing behavior among their employees, policy makers should not lose sight of these aspects as they play important role in the organizational knowledge sharing.

**Conclusion**

The target of the current study was the factors effecting employees' knowledge sharing in organizations. Specifically, the research examined faculty members, in the oldest university of

Khyber Pakhtunkhwa. Of particular interest were the effects of perception of the employees, and attitude on knowledge sharing. The empirical results made it obvious that these factors do influence knowledge sharing behavior. A proposed model has been empirically tested. The results of the tested model indicated that independent variables have significant bearing on the dependent variable. To sum it up, there is explicit and implicit message for the policy makers and practitioners to formulate, in the light of these findings, policies which could encourage employees and promote such a culture where employees could easily and freely share their respective knowledge.

**Implications**

The present study examined knowledge sharing as a dependent variable that is affected by two independent variables, i.e., individuals' perception, and attitude as independent variables. The outcomes are sufficient to explain both theoretical and practical implications. First, the current study represents the theoretical or first-hand research regarding the antecedents and significances of knowledge sharing in a public-sector university of Khyber Pakhtunkhwa. Though knowledge sharing is a much-studied phenomenon, firstly the emphasis and target of these researches is, mostly, the developed world. Secondly, these studies have been undertaken on multinational companies (Voelpel & Han, 2005). And that is why countries like Pakistan have been termed "under-researched" country in HR practices (Aycan et al., 2000). Recently, Akbari and Ghaffari (2017) suggested that there is a need to design and develop strategic perspectives in the area of human resource, because it plays key role in the formation and development of knowledge-based organizations. Researchers have shown keen interest in conducting knowledge sharing studies in the public-sector organizations because private sector companies are already practicing it (Kim & Lee, 2005; Titi Amayah, 2013). The results also suggest the promotion of a culture wherein members are encouraged to share their skills, expertise, information and all other resources with full zest and responsibility. There is a need of designing policies that are instrumental in fostering KS attitude and behavior for enhancing the creativity and modernization. This can uplift the capabilities of the employees which in turn extends career opportunities and organizational success.

**Recommendations for Future Research**

An effort has been made to provide a conceptual foundation for knowledge sharing through this study. The study is expected to have intensified the level of understanding regarding knowledge sharing and its impact on employees' work-related attitude and behavior. However, this need not be treated as a holistic study. Future research should examine the ways (such as the use of cognitive therapy and cognitive behavior therapy to change the attitude of the employees requiring psychological treatment (Ford-Martin, 2017) to boost the current identified factors and to suggest better strategies to officially implement those ways. This study is purely quantitative. Therefore, qualitative aspects should be explored with the help of qualitative analysis for more in depth understanding of the findings. Besides, research is also desired to explore other factors affecting knowledge sharing found to have theoretical base in previous knowledge management research with the endeavor to look at a broader organizational atmosphere. Moreover, the study can be replicated in other settings. As universities are supposed to be career oriented and teaching staff are considered more qualified and profession oriented, the relative weights of knowledge sharing could differ as a purpose of the type of organization. Therefore, future research carried out in other settings can help in further improvement and in the enhancement of the generalizability of the research findings. Future research should include the university management while exploring various factors effecting knowledge sharing. Lastly, this study is conducted in one time and in one

university; therefore, a longitudinal study is recommended as it would be more contributive by means of comparing the continuous responses and changes over the time.

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