An Empirical Investigation of the Effect of Subjective Norms on Knowledge Sharing: Gender Perspectives

Dr. Rabia Ishrat[1], Prof. Dr. Wali Rahman & Dr. Waheed-ur-Rehman

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A B S T R A C T

Knowledge sharing, among other aspects of knowledge management, has attained special attention in the knowledge economy. To fully grasp the concept researchers have looked into different factors with different perspectives that affect knowledge sharing. However, the extant literature speaks little about the gender perspective in this regard. In this milieu the aim of current research is to empirically look into the effect of a relatively important factor (subjective norms) on knowledge sharing from gender perspective. To empirically test the assumption, data from 244 randomly selected respondents from the target population (University of Peshawar) has been collected through a tested questionnaire. The data was analyzed through structure equation modeling technique. Results of the current research indicated that subjective norms have important role in enhancing knowledge sharing from both male and female perspectives, as the results were in line with the acceptable ranges for male and female separate and collective models. This showed that male and female both possess positive behavior towards knowledge sharing while considering the Subjective Norms. This paper contributes to the existing knowledge in terms of the application of theory of reasoned action in the current setup. Organizations, especially academia, are expected to be benefitted from the findings of this research through better understanding of the gender perspective and to setup policies accordingly. In the end future directions have also been provided.

[1]Sarhad University of Science & Information Technology, mayarwali@gmail.com

INTRODUCTION

Knowledge is a key and critical factor for organizational success Oufkir, Fredj, and Kassou (2017). It has been found an instrumental factor in value creation, strategy development, and market competitiveness (Nonaka & Takeuchi, 1995). It is the most critical human capital and strengthening this capital leads to innovation and creation of new avenues for the developments of organizations (Rahman, Rahman, Khan, & Anwar, 2017). Researchers are in agreement that effective and efficient utilization of organizational resources is only possible through knowledge management (Davenport & Prusak, 1998; Zboralski, 2009). It plays vital role in providing directions to properly utilize knowledge resources for better functioning of an organization. This focus on knowledge has caused the shift from dependency on natural resources to intellectual assets (Omotayo, 2015). However, this theoretical recognition of the value of knowledge has to be practically applied in organizations. This paradigm shift has exposed organizations to a knowledge challenge as how to create, disseminate, and use knowledge (Vines, Jones, & McCarthy, 2015). Coping with this challenge has, now, become the question of survival for any organization. In other words, organizations' dependency on knowledge has deepened and the integration of the current knowledge with the new knowledge for the purpose to enhance the success of an organization (Lin, 2007; Teigland, 2003) has increased. As a response organizations are searching for resources to meet this knowledge demand.

Researchers (e.g., Dai, Byun, & Ding, 2019) believe that gender diversity has a positive relationship with new venture teams. While discussing about the gender perspective researchers (Sharif, Lodhi, Iqbal, & Saddique, 2021) have found that knowledge sharing quite higher in the male employees as compares to female employees. This has become an instrumental factor for engaging the attention of the scholar to explore this aspect as there are differences in the knowledge sharing behavior of both genders. In addition, Khosravifar, Jalili, Jalilian, Mirzaei-Alavijeh, and Morovati (2021), while working on the gender perspective of knowledge sharing suggested that there is a need to further explore the issue of knowledge sharing behaviors from gender perspective. Hence, this study!

In order to specify the scope of the study, within the four components of knowledge management (discovery of knowledge, capturing knowledge, processing the knowledge, and sharing of knowledge (Meihami & Meihami, 2014)—the last component is considered the most important ingredients in the development of an organization (Lee, 2001; Nonaka & Takeuchi, 1995; Shin, 2004).

"An organization's ability to effectively leverage its knowledge is highly dependent on its people, who actually create, share, and use the knowledge" (Ipe, 2003, p. 341). To strengthen this ability of an organization, it needs to develop a set of behaviors (Chow & Chan, 2008). However, before strengthening this capability, organization needs to encourage active interaction among the employees, employing various techniques to convert individual knowledge into organizational knowledge (Alexandre, Martin, Li, Wentling, & Stuedemann, 2006). Only technology will not serve the purpose, it is more about relationships among the employees that promote learning and information exchange (McInerney & Mohr, 2007). Employees' motivation is critical in making them part of this activity because employees consider knowledge their property and have been found generally reluctant to share it (Du Plessis, 2007; Schmetz, 2002).

Notwithstanding, it has been observed that information on factors affecting knowledge sharing

is limited in developing countries (Asrar-ul-Haq & Anwar, 2016; Lashari, Bhutto, Rashdi, & Abro, 2017; Schacter, Gilbert, Wegner, & Hood, 2011). That is why researchers Akbari and Ghaffari (2017) emphasize on the need of designing and developing strategic perspectives in the area of human resource. Researchers have given relatively less attention to gender while studying knowledge sharing and its creation, with some prominent exceptions (Connelly, 2003; Huebner, 2019; Khosravifar et al., 2021). Keeping this in mind, researchers have explored the various factors in relation to knowledge e.g. social network (Guo & Chen, 2010), social trust (Cheng-Hua, Yuan-Duen, Wei, & Li-Ting, 2007), shared goals (Chow & Chan, 2008), individual's perception and awareness of the situation (Davenport & Prusak, 1998; Khan, 2014), regarding KS sharing. By closely observing the extant literature, it has been found that there is a scarcity of empirical studies that looks into the effects of subjective norms on knowledge sharing from gender perspective. Therefore, this paper is an attempt in that direction with the aim to empirically investigate the perception of employees (both male and female). This study is undertaken in Peshawar University, being the largest and old public university in the province. The data is based on the University Prospectus of 2015-16 as it was the latest document at the when the data was being collected.

LITERATURE REVIEW

Knowledge and knowledge management (KM)

The term knowledge is not new to the world but its relative importance has started gaining central role, because people have started, recently, noticing that among many other factors this factor is a critical contributor and one of the promising disciplines for the organizations (Maheshwarkar & Sohani, 2019). Keeping that in mind, many authors, researchers and philosophers have explained it from various aspects. However, For example, knowledge is true belief which is justifiable (Nonaka, Krogh, & Voelpel, 2006). It has been described as understanding of human, objects, concepts, theories and also the way things are handled (Antal, 2000).

"Knowledge management may simply be defined as doing what is needed to get the most out of knowledge resources" (Irma & Rajiv, 2010, p. 39). It is considered as a process of creation, assimilation, dissemination and application of organizational knowledge to explore new opportunities that help in the enhancement of organizational performance (Yang, 2011). Knowledge management, in the recent most scenarios, has become the main constituent of management. It is commonly believed that knowledge management was recognized as a field to serve the business world as a tool of business in the early 1990s when it was promoted by 4 Cs (Computing availability; Consulting; Conference; and Commerce) concept. 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 is replete with the fact 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). Researchers also witness KS as an important and key factor of KM processes in organizations (Das & Van-de-Ven, 2000; Islam, Jasimuddin, & Hasan, 2019; Lee, 2001; Yassin, Salim, & Sahari, 2013). It is believed that knowledge held by an employee in an organization must be shared with other workers for its proper utilization and effectiveness. But it cannot be transferred the way we transfer goods. It relies on cognition and, for that matter, rebuilding behaviour is indispensable (Zheng, 2017).

The literature on KM has been using various terms for KS. The most commonly used term for KS is knowledge transfer (Awad & Ghaziri, 2004; Massa & Testa, 2009; Yahya & Goh, 2002). Notwithstanding, there is a difference between the two(Zheng, 2017). Researchers argue that

knowledge transfer refers to the application of current knowledge from one person to another. Such as, Alavi and Leidner (2001) differentiate the two by stating that "knowledge" is laden with uniqueness and has value in the context of knowledge management system as compared to the traditional information systems. This describes that it takes place in one direction which gives an assumption that the main source of knowledge is the owner. Whereas, KS is considered a broader term than knowledge transfer. KS deals with the interactions, absorptions and invention of new knowledge which is believed to be in two directions and occurs between two or more individuals (Boyd, Ragsdell, & Oppenheim, 2007).

Subjective Norms and Knowledge Sharing

By explanation, subjective norm is a normative belief without including motivation to comply. It is the perceived social pressure under which an individual behaves. Among many factors effecting knowledge sharing subjective norms have also been found instrumental. Subjective norm may be defined as "the perceived social pressure to perform or not to perform the behavior" (Ajzen, 1991, p. 188). Subjective norms may be perceived as to the individual's perception of the expected behavior among special groups and in a certain condition (Ajzen & Fishbein, 1970). Researchers have explained subjective norms from various aspects. For instance, Lapinski and Rimal (2005) classify it in collective norms of persons' social network and of the society as a whole. They further classify these norms into two classes—injunctive and descriptive norms. Injunctive norms "refer to people's beliefs about what ought to be done" in certain circumstances; whereas, descriptive norms "refer to beliefs about what is actually done by most others in one's social group" (p. 130).

Norms play a very important social role. It is believed that norms define the mutual consent of community towards acceptable attitudes and behavior. As institutions are also social entities, these norms greatly affect the KS intentions in academic infrastructure (Jolaee, Nor, Khani, & Yusoff, 2014; Skaik & Othman, 2014). To support SN to be important factor in sharing knowledge Tohidinia and Mosakhani (2010) opine that subjective norms are among the key factors that may influence the intention towards human behavior to share knowledge. Likewise, relationship of subjective norms with KS has been evidenced as significant in various studies (Lin & Lee, 2004; Ryu, Ho, & Han, 2003). Similarly, for the acknowledge of individuals in their organization, subjective norms are considered important to support and form their intention for sharing knowledge (Sun & Scott, 2005). Likewise, Lapinski and Rimal (2005) identify that, social norms including subjective norms which have mixed effects on the human behavior which ultimately effects KS. Similarly, it is argued that attitude and subjective norms serve greatly on human behavior towards KS, as these together are considered predictive of behavior (Al-Swidi, Huque, Hafeez, & Shariff, 2014; Shih & Farn, 2008; Trafimow & Fishbein, 1994). Keeping in view the importance of subjective norms and the existing gap of examining it from gender perspective, assumption for the current study is that "The higher the organizational members' knowledge of subjective norms with respect to knowledge sharing, the organization will experience more knowledge sharing" for both male and female separately and collectively.

THEORETICAL AND CONCEPTUAL BACKGROUND

Theory of Reasoned Action (TRA)

The theory of reasoned action presented by Ajzen and Fishbein (1967) has been in favor among the researchers since it has been proposed. This theory postulates that "attitudes guide behavior through conscious consideration of and deliberation about a person's attitude and its implications for a given course of action" (Fazio & Roskos-Ewoldsen, 2005, p. 53). The assumption in its essence

explains volitional behaviors. However, on close scrutiny it appears that the assumption excludes a wide range of behaviors like, impulsive, spontaneous, habitual, and the behaviors that require special skills, unique opportunities and cooperation resources (Hale, Householder, & Greene, 2002). Anyway, it still has a lot of explanatory powers in explaining the attitude-behavior relationship. In the light of the theory, this research hypothesizes that in an individual's volitional behaviour, the most influential factor is one's behavioural intention. Furthermore, this behavioral intention, in turn, is the result of both attitudes 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.On the basis of the above discussion the following conceptual model is proposed:

| Subjective Norms | $\xrightarrow{\quad + \quad}$ | Knowledge Sharing |

Figure 2   Conceptual Model of the Study

Research Methodology

The current research study is a survey study based on an adopted questionnaire from Chow and Chan (2008) with simple customization. Total population, as per Peshawar University Prospectus (2015-16) is 502. The total faculty members including lecturers, assistant professors and full professors of the target population. Simple random sampling technique has been employed with a sample size of 244 respondents. To assess the measure model data was collected through questionnaire which has personally been administered, keeping in view all the research ethics, like confidentiality, voluntary participation, etc., in mind. Besides, validity and reliability of the instrument have been checked through expert's opinions, correlation matrix, and pilot testing. Cronbach's alpha for reliability (Subjective Norms = 0.75, & Knowledge Sharing = 0.87) is being used. Statistical Package for Social Sciences (SPSS) 20th edition was used initially for descriptive analysis. Finally, analysis were made and represented by using Structure Equation Modeling with AMOSE in SPSS.

Sample characteristics and descriptive statistics

Though the sample for current study was calculated as 250 as per Krejcie and Morgan (1970) sample size table, to be on the safe side, the sample size has been increased to 271 with the help of non-respondents' adjustments (Council, 2013; Gorard & Taylor, 2004) where 0.28 is considered to be non-responsive rate for the current study. In total, 244 questionnaires were collected back with response rate of 77%. 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. Demographic variables used in the study includes: University Name, age, gender, designation, current and total experience.

Frequency tables for the demographic profile of the respondents

Age: Table 1 provides the detail descriptive analysis about the age of the respondents. The table clearly shows that most 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)*

Age	Frequency	Valid Percent
25-35	65	26.6
36-45	67	27.5
46-55	83	34
56 & above	29	11.9
Total	**244**	**100**

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)*

Gender	Frequency	Valid Percent
Female	130	53.3
Male	114	46.7
Total	**244**	**100.0**

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

Table 3   *Designation of the Faculty Members (N=244)*

Designation	Frequency	Valid Percent
Lecturer	80	32.8
AP	107	43.9
Prof	57	23.4
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)*

Experience	Frequency	Valid Percent
1-5 yrs	48	19.7
6-10 yrs	43	17.6
11-15 yrs	49	20.1
16-20 yrs	44	18.0
21-25 yrs	43	17.6
25 & above	17	7.0
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 the constructs indicate somewhat close standard deviation.

Table 5		*Means and Standard Deviations for the Constructs (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 Subjective Norms

Figure 1 presents the final measurement model for the Subjective Norms construct. This model for the subject construct is also a single factor model with three indicators. By analyzing the measurement estimation, it was found that initially the model did not fit well because the value of RMSEA (0.11) was slightly above the acceptable value. To achieve fitness, an additional constraint was applied on a second indicator. With the application of this constraint model fitness was achieved. Final values for this construct with three indicators are provided below the figure.
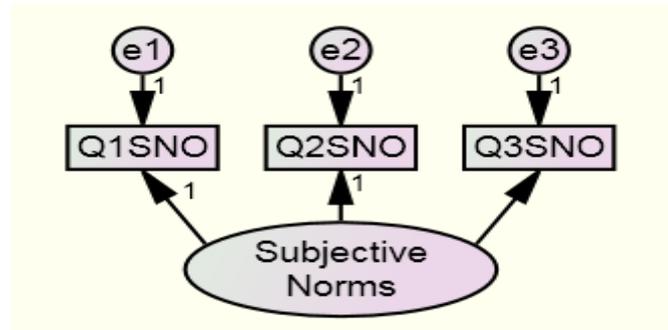

Figure 1   CFA for subjective norms

Fit Statistics
Chi-Square = 4.41 (*df= 1, p=0.035*)
Standardized RMR= 0.064
RMESA= 0.11
GFI= 0.98
CFI= 0.99

CFA for Knowledge Sharing

Figure 2 presents the final measurement model for the Knowledge Sharing construct. This model for the subject construct is also a single factor model with five indicators. By analyzing the measurement estimation, it was found that the initial model did not fit well. Rather it was observed that error term 1 and error term 2 were highly correlated so by connecting these two the model fitness was achieved. Final values for this construct with five indicators are provided below figure 2.
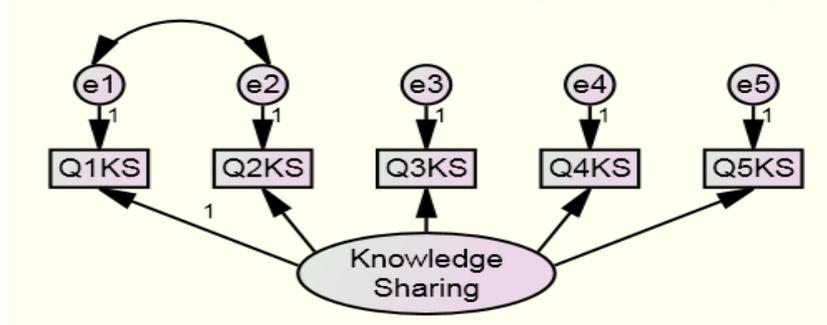

Figure 2   CFA of knowledge sharing

Fit Statistics
Chi-Square = 4.9 (*df= 4, p=0.20*)
Standardized RMR= 0.14
RMESA= 0.045
GFI= 0.99

Structural Equation Modeling

In social science research it is almost impossible to specify the numbers of variables that couldthoroughly explain a certain phenomenon. There is always a possibility of a large number of variables that constitute location advantages. However, it is not possible to include all such variables in a single study. The best option is to include only those variables which literature support and are appropriate to the area of the study. This process is termed model specification and is undertaken with the help of Structural Equation Modeling. It is employed when a researcher wants to predict the value of a dependent variable based on the value of two or more other independent variables to identify their relationships(Nachtigall, Kroehne, Funke, & Steyer, 2003). Based on this, the researcher has set the objective of assessing how subject norms are contributing to enhance knowledge sharing in the target population from gender perspectives. To ascertain the level of relevancy the data was scanned and passed through different tests (Normality, Multicollinearity, and Heteroscedasticity) and the values achieved have been looked into the light of the standards of acceptability within each test. These tests validity that the data is normally distributed and there is neither problem of multicollinearity nor heteroscedasticity. On the basis of these results it was concluded that data is fit for SEM analysis.

Figure 3 and table 6 presents the final actual structural equation measurement model for the overall construct. The model for this construct is a collective model with two indicators i.e. one dependent and one independent variables. This model was separately run for male and female. By running the model with these indicators and looking the values for different fit indices, it was found that for male the values were within the acceptable level (GFI=0.99, CFI=0.99, RMR=0.043, and RMSEA=0.084). Similarly, it was found that for female the values were also within the acceptable level (GFI=0.92, CFI=0.97, RMR=0.042, and RMSEA=0.097). After checking the model for both male and female separately, it was relooked for both male and female collectively to get an insight for the differences. And it was observed that while running the model for collective view the values were in acceptable ranges (GFI=0.92, CFI=0.97, RMR=0.040, and RMSEA=0.10).
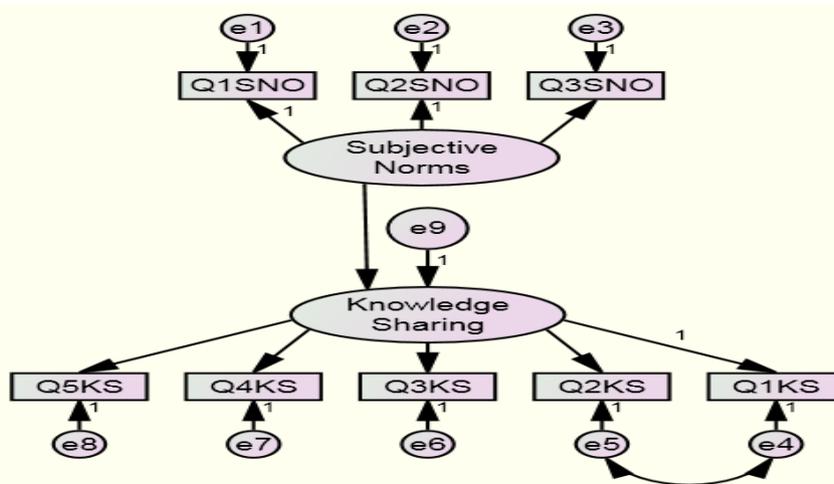

Figure 3 Structural Equation Model
Table 6 *Fit Statistics for Male, Female and Both*

Fit Statistics	Male	Female	Both
Chi-Square	24.3 (*df= 19, p=0.09*)	25.8 (*df= 19, p=0.2*)	73.5 (*df= 19, p=0.00*)
Standardized RMR	0.043	0.042	0.040
RMESA	0.084	0.097	0.10
GFI	0.99	0.92	0.92
CFI	0.99	0.97	0.97

DISCUSSION

The current study validated the effect of subjective norms as a positive predictor on knowledge sharing from gender perspectives. The empirical results of the study supported this assumption for both male and female separately; and for both collectively too. This signifies that, like other variables validated by other researchers, subjective norms of individuals also affect employees' behavior regarding knowledge sharing in organization. These results clearly support the view that subjective norms strongly affect knowledge sharing in an organization. In other words, it would mean that employees, whether male or female in an organization consider subjective norms as an important factor while sharing knowledge and they believe that subjective norms positively relate to knowledge sharing in an organization. The findings of the current study are again in line with the findings of the previous studies on the effect of subjective norms on knowledge sharing (Ajzen & Fishbein, 1980; Castaneda & Ríos, 2013; Chow & Chan, 2008; Shih & Farn, 2008).

Theory of reasoned action (Ajzen, 1980) supports the importance of subjective norms while understanding the factors effecting knowledge sharing. As per TRA subjective norms pay vital role in changing once intention to share knowledge which supports the knowledge sharing behaviors of employees in an organization. However, by close study of the findings, it is clear that though subjective norms play important role in sharing knowledge. While reviewing the literature, it was observed that there is comparatively less contribution on Knowledge management and particularly knowledge sharing from the research perspective within the context of Pakistan (Shah & Mahmood, 2015). Hence this study could serve the purpose of fulfilling the subject gap to some extent. Furthermore keeping in view the gender perspective it is believed that it serves as creating moderation between the perception of people regarding knowledge sharing and their intentions as stated by Xiaolin Lin and Wang (2020), so as of current study.

In nutshell, subjective norms have very strong bearing as a predictor on knowledge sharing behavior of employees in an organization as justified by literature and the empirical evidence from the current findings. It may also be added that there is a need to make the employees well aware about the importance of subjective norms for enhancing knowledge sharing culture in all organizations especially in education sector, which is possible by providing awareness sessions like seminars, workshops, trainings etc. Furthermore, such norms should be established by the policy makers that may result in the creation of social bonding between staff whether male or female, so that greater knowledge sharing takes place leading to the overall successful management of knowledge in an organization. As stated earlier that knowledge management is a must for organizations to be competitively on different edge then other organizations.

CONCLUSION

Importance of knowledge sharing is undeniable as evident from the literature. In this milieu, many scholars believe that further research is needed to promote knowledge sharing in various organizations especially in the education sector of the developing countries. Therefore, current study looked at the role of one factor i.e., Subjective Norms on knowledge sharing from gender perspective, to fulfill a portion of the highlighted gap. This was achieved through empirical data collected from the faculty members of Peshawar University, the oldest university of the province. The results of the tested

model indicated that the factor in the study has significant impact on knowledge sharing in the target population, and the perception of male employees does not differentiate then the female employees' perception.

Therefore, it is assumed that the results of the study have sufficient food for thought for the policy makers for formulating more pragmatic policies for the promotion of knowledge sharing in organizations in general and in Peshawar University in particular. Empirical findings of the study suggest that organizations should promote a culture where employees could easily decide as to what sort of action they are required to take by enhancing their "know-what" knowledge and deepen the roots of subjective norms among the employees. The study also contributes towards minimizing the gap between theoretical knowledge and practical knowledge by providing empirical evidence by considering the effect of important factors in transferring the individual knowledge to the organizational knowledge.

The study was limited to the academic institution only. It is, therefore, suggested that future studies may investigate the same in other setups adding creativity perspective of male and female. Future research could also focus on the objective perspective of subjective norms and knowledge sharing in order to have and overall opinion. An to have more in-depth understanding of the issue, adopting qualitative perspective will open new avenues for further research.

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