

## An Updated Model to Enhance Knowledge Sharing among Stakeholders in Jordanian Hospitals Using Social Networks

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**Abstract:** Survival of any organization heavily depends on knowledge sharing, however, the variables that enhance or dissuade knowledge sharing behaviors in the Jordanian hospitals has not been poorly recognized. Therefore, this paper is aimed at determining the obstacles that prevent stakeholders in Jordanian hospitals from sharing their knowledge; and furthermore we have developed a conceptual model, based on Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM), to improve our understanding in terms of the factors, which affect knowledge sharing behaviors of knowledge workers in the Jordanian hospitals. To achieve the objective of examining the barriers that hinder the stakeholders from knowledge sharing in Jordanian hospitals, we have conducted an interview survey with the stakeholders in the Jordanian hospitals, to get their viewpoints. Therefore, we interviewed 15 of the workers in the various sectors in Jordanian hospitals and we have analyzed the results, which showed that, 18 out of 36 universal barriers are affecting the knowledge sharing behavior. By comparing these results with previous studies, we developed a conceptual model, to improve and encourage stakeholders to share knowledge, among them.

**Key words:** Knowledge sharing • Social Networks • TPB • TAM • Jordanian hospitals • Knowledge Sharing Behaviour • Knowledge Sharing Barriers

### INTRODUCTION

Knowledge is an important strategic resource for all organizations. It could help organizations to gain competitive advantage [1]. In health care, knowledge is the main assets of the organizations, as it's enable the organizations to accomplish best medical results. In recent times, healthcare organizations are attempting to build knowledge management systems and provide training to enhance the use of owned knowledge. However, shift to the use of knowledge management systems in healthcare organizations faces many challenges and barriers, like increased cost, higher demand towards responsibility and openness, as well as minimizing experience of employees [3].

The key to the success of any knowledge management is the communication among individuals, particularly on sharing knowledge among the individuals [4]. Knowledge sharing is related to the willingness and readiness of individuals to share their

knowledge with others [6]. However, effective knowledge sharing among individuals depends on the individuals' knowledge sharing behaviors. The lack in knowledge sharing in an organization is considered as one of the main barriers in knowledge management initiative [5]. There are factors that could aid the knowledge sharing behaviors as well as, there are a number of obstacles, which restrict individuals from sharing their knowledge [11].

Social networks currently are regarded as the best means to create and share knowledge among communities of practice in healthcare organizations [2]. Social network sites enable people to connect with each other, online [7] irrespective of global frontiers. Mostaghimi and Crotty (2011) [8] have said that, the increase in the use of social networks have brought the world into a single window. Savalle *et al.* (2010) [9] have argued that this shrinking of world leads to the emergence of a new sort of organization. Perhaps, the exchange of expertise might enhance the knowledge

management in the organizations; this will result in producing desired results. A result of the significance of knowledge sharing behavior, it is essential to recognize the factors, which improve knowledge sharing among people by social networks.

A practical model for knowledge sharing is crucial to support knowledge management system in an organization. To facilitate knowledge sharing, this research has identified the barriers that prevent the knowledge sharing among stakeholders (i.e. doctors, pharmacists and nurses) in Jordanian hospitals. We have also identified the factors that enhance the knowledge sharing; and finally we have proposed a conceptual model, based on TPB and TAM, to facilitate and enhance knowledge sharing behaviors.

### Literature Review

**Knowledge Sharing:** From the reviewing of the knowledge sharing literature, we found that, there is no comprehensive definition about knowledge sharing. Each scholar has their own perspectives, definitions and explanations of knowledge sharing. According to Mooradian, *et al.* [10], knowledge sharing is the process of individuals sharing their experiences and knowledge and making it available to other coworkers inside the organization. In addition, Tan *et al.* (2010) [3] have defined knowledge sharing as an activity to disseminate the information, values and ideas among more than one party; in order to create and rebuild knowledge to be understandable to all parties. Likewise, Connelly and Kelloway [6] have described knowledge sharing as a range of behavior, which entail the transfer of information or support to others. According to several studies [11, 12, 13, 14, 15], these behaviors are affected by a number of barriers, which divided into three categories and are:

- *Individual barriers:* such as, lack of time, fear, awareness, domination, usability, past mistake, experience, time, communication, age, gender, social application, education, ownership, people, accuracy; and cultural differences,
- *Organizational barriers:* such as, incorporation of knowledge management approach and sharing pursuits, lack of leadership, lack of official and casual places to share, lack of translucent incentives and recognition systems, existing corporate culture, deficiency of company, external competitiveness, communication and knowledge

flows, actual work atmosphere, internal competition, ordered business, dimension of enterprise; and

- *Technological barriers:* such as, lack of incorporation of IT techniques and procedures, absence of technological assistance, impractical goals of employees, lack of compatibility, mismatch, reluctance to use IT systems, lack of training and lack of communication [11-15].

To enhance the behaviors of knowledge sharing among the stakeholders in Jordanian hospitals, this study determines the strongest barriers that affect the behaviors. Based to the analysis, a number of factors that enhance the behavior of the stakeholders toward knowledge sharing are defined. These factors are considered as general behavioral factors that impact the behavior of knowledge sharing among people.

**Factors Influencing Knowledge Sharing Behavior:** A lot of studies have been conducted on the behavioral factors that impact the knowledge sharing among employees and these studies cover different prospective such as, conceptual [16], qualitative [17], laboratory experiments [18] and surveys studies [15, 19-21]. The studies have revealed a number of factors that impact the knowledge sharing behaviors of individuals. These factors are divided into: 1) technological factors, which are characterized as one of the difficult issues in knowledge sharing [21, 22]; 2) inspirations and providing rewards to motivate knowledge sharing [6], personality [20], organizational climate [19, 21], reciprocal benefits [19, 21, 23], leadership [19, 24, 25] and access to knowledgeable people in the organization [26].

These factors are associated with a number of theories and models and Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM) are adopted through this work in order to propose the new conceptual model. The purpose of the proposed model is to enhance the behavior of the stakeholders in the knowledge sharing. Since that, there is a need to explore more about TBP and TAM models.

**Theory of Planned Behavior (TPB):** According to Ajzen (1991) [27] TPB has been the most influential and most commonly used approach to explain, predict and clarify human behavior in specific context [28].

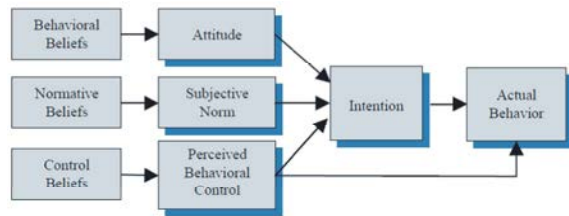


Fig. 1: Components of TPB (Ajzen, 1991)

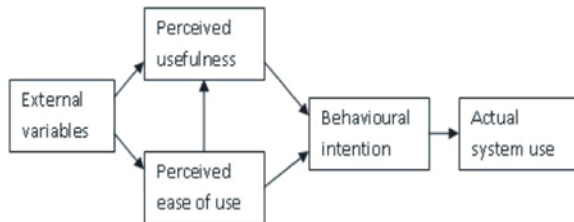


Fig. 2: Components of TAM (Davis, 1989)

This theory is an extension and development of the Theory of Reasoned Action (TRA) [29]. This extension and development is the result of the emergence of that behavior, *which is not cent percent non-reflex and within command*. This outcome resulted in the introduction of a novel aspect, which is perceived as behavioral control. This concept reveals that, the intent of an individual depends on a specified aspect of behavior [30]. All the elements of TPB, such as, mind-set towards behaviour, subjective norms, perceived behavioural controls which are parts of the intention [27] are measured as factor that will determine the actual behaviour. As shown in Figure 1.

**Technology Acceptance Model (TAM):** The TAM determines the informal interactions among characteristics of system design, perceived usefulness, perceived ease of use, attitude toward using and actual usage behaviour. Typically, TAM provides a beneficial reflection of the factors, by which design choices influence user acceptance and need to be valuable in the situations positioned for forecasting and evaluating user acceptance of IT [31, 44]. As shown in Figure 2.

This paper has adopted TPB and TAM, because they are most commonly used in healthcare and provides a useful framework to understand the key factors that play a role in people's behaviours [32, 33].

**Related Works:** A lot of studies have examined and measured behaviors of people, in terms of knowledge sharing, by using TRA, TPB and TAM. Ryu *et al.*

(2003) [34] have examined the behaviors of doctors in terms of knowledge sharing in hospitals. By using the TRA and TPB, it has been found that, a doctor's perceived social pressure to involve or not to involve in sharing knowledge, has significant impact on the behavioral intentions to share knowledge. Furthermore, the study has found that, attitude and perceived behavioral control have an impact on knowledge sharing behavior of doctors. The study has suggested that, the administration to give more attention of creating an environment, where doctors can be positive subjective norms and attitudes towards knowledge sharing. Also, those accountable for knowledge management systems should make more effort to promote access to doctors in the workplace.

Additionally, Wu and Zhu (2012) [21] have examined the behaviours factors, which enhance knowledge sharing behaviors of knowledge workers in the organizational context by using the TPB, motivation theory, social exchange theory, economic exchange theory and self determination theory. They have measured the impact of perceived organizational incentives, perceived reciprocal benefits, perceived reputation enhancement, perceived loss of knowledge power, perceived satisfaction in assisting others, perceived business environment and resources and technologies on the knowledge sharing among knowledge, in the business perspective. The aforementioned study has discovered that, most of the aspects assist the improvement of knowledge sharing and have considerable impact on the knowledge sharing, except perceived organizational incentives, which had moderate impact on the attitude towards knowledge sharing.

Shahand Khalid (2013) [35] have measured knowledge sharing behavior in dairy sector. Their research model and hypotheses are based on the behavioral theories, i.e. TRA, TPB and TAM. The study has demonstrated that, mind-set, objective and behavior have reciprocal beneficial immediate consequences to knowledge sharing in dairy products industries. On the other hand, subjective norms and perceived behavioral control have non-considerable ideals, instead have vulnerable beneficial immediate consequences towards knowledge sharing.

It appears valuable to observe that, the findings of Ryu *et al.* (2003) [34], Wu and Zhu, 2012 [21] and Shah and Khalid, 2013[35], reveal that, there are a lot of differences between the impact of factors on the

knowledge sharing behaviors among coworkers and these differences may be diverse according to the dissimilarity of organizations and regions; this encourages the intention of this research to extend the theory of planned behavior, with the aim to determine the factors that impact the knowledge sharing among stakeholders in Jordanian hospitals, to enhance the readiness of those stakeholders for knowledge sharing, by using social networks, because different mediums might have different results, even in measuring the same dimensions.

## MATERIALS AND METHODS

**Sample and Data Collection:** According to Riege (2005) [11], Vargas and J. (2010) [12], Jana and Das (2007) [13] and Casali (2009) [14] there are 36 barriers that impact the individuals' behavior of knowledge sharing as discussed previously in the literature review and these barriers are universal barriers. In this work, we have studied the impact of these barriers on the knowledge sharing between stakeholders in the Jordanian hospitals. Also in this paper we have determined the barriers with strongest impact. In order to reach the required result, we have conducted a number of interviews with stakeholders in the Jordanian hospitals; we have interviewed randomly selected five doctors, nurses and pharmacists on the government, military and private sectors.. The interviews questions have been adopted from [36]. Forty percent of the respondents have been selected from government hospitals, forty percent from military hospitals and twenty percent from special hospitals.

**Statistical Analysis:** We have identified 73%, percentage of knowledge sharing among stakeholders in the Jordanian hospitals and the use of the face-to-face method is the most widely used (46%). The chart (1) illustrates the results in details.

According to Riege *et al.* (2005) [11] the barriers have been divided into three categories: 1) Individual, 2) organizational and 3) technology barriers. This study has examined each category separately. Consequently, the study has found that, there are only 18 barriers out of 36 universal barriers in all categories, which clearly hinder the knowledge sharing in Jordanian.

**Individual Barriers:** For the individual barriers category, this research has found that there are 7 barriers that hinder stakeholders from sharing their

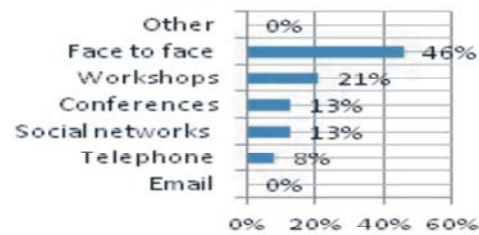


Chart 1: The percentage for the knowledge sharing among stakeholders in the Jordanian hospitals depending on the method used

Table 1: Individual barriers that impact stakeholders from knowledge sharing

| Barriers                            | Mean   | Std. Devi. |
|-------------------------------------|--------|------------|
| Lack of Time                        | 4.3333 | .81650     |
| Fear Sharing                        | 3.1333 | .99043     |
| Lack of awareness                   | 3.4000 | 1.05560    |
| Strong hierarchy                    | 2.8667 | 1.06010    |
| Past mistake - Inadequate capture   | 3.6000 | .91026     |
| Differences in levels of experience | 4.1333 | .63994     |
| Lack of interaction                 | 3.6667 | 1.17514    |
| Poor verbal                         | 2.9333 | 1.38701    |
| Difference of age                   | 2.8667 | 1.18723    |
| Difference of gender                | 2.7333 | 1.09978    |
| Lack of SN                          | 2.8667 | 1.30201    |
| Difference of education levels      | 3.9333 | 1.03280    |
| Taking ownership                    | 3.8667 | .51640     |
| Lack of trust in people             | 3.2667 | .79881     |
| Lack of trust in accuracy           | 3.0000 | .92582     |
| Difference in national culture      | 3.8667 | 1.06010    |

knowledge and impact the behaviour of stakeholders, who work in Jordanian hospitals as shown in Table (1).

According to these results the study concludes that, the most influential barriers to knowledge sharing are: a lack of time, past mistakes, experience, lack of interaction, education, ownership and cultural differences.

**Organizational Barriers:** There are 12 universal organizational barriers, which affect the behavior of knowledge sharing, this paper has found that, there are only 5 organizational barriers that prevent stakeholders from sharing knowledge in Jordanian hospitals, as shown in Table (2).

By examining Table (2) this study concludes that, the organizational barriers that influence the knowledge sharing are: lack of leadership, shortage of formal and informal spaces to share, existing corporate culture, deficiency of company and physical work environment.

Table 2: Organizational barriers that impact stakeholders from knowledge sharing

| Barriers                                   | Mean   | Std. Dev. |
|--|--------|-----------|
| Integration of KM Strategy                 | 3.2000 | .56061    |
| Lack of leadership                         | 4.3333 | .48795    |
| Lack of formal and informal space to share | 4.8667 | .35187    |
| Lack of transparent rewards                | 3.2667 | .59362    |
| Physical work environment                  | 4.2000 | .41404    |
| Communication and knowledge flow           | 3.1333 | .91548    |
| External competitiveness                   | 2.6667 | .89974    |
| Internal competitiveness                   | 2.6667 | .89974    |
| Hierarchical organization structure        | 2.2000 | .94112    |
| Size of business                           | 2.2667 | .45774    |
| Existing corporate culture                 | 3.6000 | .63246    |
| Deficiency of company                      | 4.0000 | .37796    |

Table 3: Technology barriers that impact stakeholders from knowledge sharing

| Barriers                              | Mean   | Std. Dev. |
|---------------------------------------|--------|-----------|
| Lack of integration of IT systems     | 3.1333 | .74322    |
| Lack of technical support             | 3.0667 | .45774    |
| Unrealistic expectations of employees | 4.2000 | .41404    |
| Lack of compatibility                 | 3.7333 | .45774    |
| Mismatch                              | 4.5333 | .51640    |
| Reluctance to use IT systems          | 4.8000 | .41404    |
| Lack of training                      | 4.9333 | .25820    |
| Lack of communication                 | 4.6000 | .50709    |

Table 4: One-way statistical analysis table describe the barriers which affect knowledge sharing according to the nature of work.

| Barriers type             | Nature of work | Mean   | Std. Deviation |
|---------------------------|----------------|--------|----------------|
| Lack of awareness         | Doctor         | 3.2000 | 1.30384        |
|                           | Pharmacist     | 4.2000 | .83666         |
|                           | Nurse          | 2.8000 | .44721         |
|                           | Total          | 3.4000 | 1.05560        |
| Lack of trust in people   | Doctor         | 3.6000 | .89443         |
|                           | Pharmacist     | 3.2000 | .83666         |
|                           | Nurse          | 3.0000 | .70711         |
|                           | Total          | 3.2667 | .79881         |
| Lack of trust in accuracy | Doctor         | 3.6000 | .89443         |
|                           | Pharmacist     | 2.8000 | .44721         |
|                           | Nurse          | 2.6000 | 1.14018        |
|                           | Total          | 3.0000 | .92582         |

**Technology Barriers:** The developments in Information Technology (IT) have made it easier to retrieve, store or share knowledge. Many organizations use IT to facilitate knowledge sharing and integration. The statistical analysis has found that, there are 6 technological barriers, which impact stakeholders from sharing knowledge in Jordanian hospitals, as shown in Table (3).

Based on Table (3) the technological barriers that impact the knowledge sharing among stakeholders are: unrealistic expectations of employees, lack of compatibility, mismatch, reluctance to use IT systems, lack of training and lack of communication.

The interview and the one-way statistical table display the results in accordance with the nature of works in the hospitals (i.e. doctors, pharmacists and nurses) as shown in Table (4). There are three (3) barriers affect the knowledge sharing. These barriers are the awareness, people and accuracy.

The mean value for awareness is 3.4; but, from the perspective of pharmacists it is 4.2, which declare the high effect of this factor at the pharmacists comparing with the doctors and nurse. Furthermore, the mean value for the factors people and accuracy are 3.2667 and 3, respectively, but for the doctors it is 3.6 for the two barriers. These results indicate that, there is a need to observe these differences and consider them.

According to these results we have aimed to propose a model that enhances the knowledge sharing in the Jordanian hospitals.

#### **Proposed, Evaluating, Update and Validate Conceptual Model:**

According to the statistical results, we proposed a conceptual model; then we sent the model to five of experts, working in different universities and different countries. Their responses were positive, with some modifications. Consequently, we have amended the model, based on the guidance of experts and again had sent for expert validation. Most of the experts have accepted the changes on the model and they have adopted it. The model is shown in Figure (3)

**Proposed Research Model and Hypotheses:** The proposed research model uses the TPB and TAM as a theoretical framework for the analysis of the motivating factors that affect the behavior of knowledge sharing among stakeholders in Jordanian hospitals. Figure (3) presents the research model.

To examine the conceptual model, the following hypotheses are proposed.

**Antecedents of Knowledge Sharing Behavior:** The intention knowledge workers towards knowledge sharing and their perceived behavioral control, determine their knowledge sharing behavior. Knowledge sharing behavior indicates the level at which the knowledge workers basically share knowledge with other employees in their company.

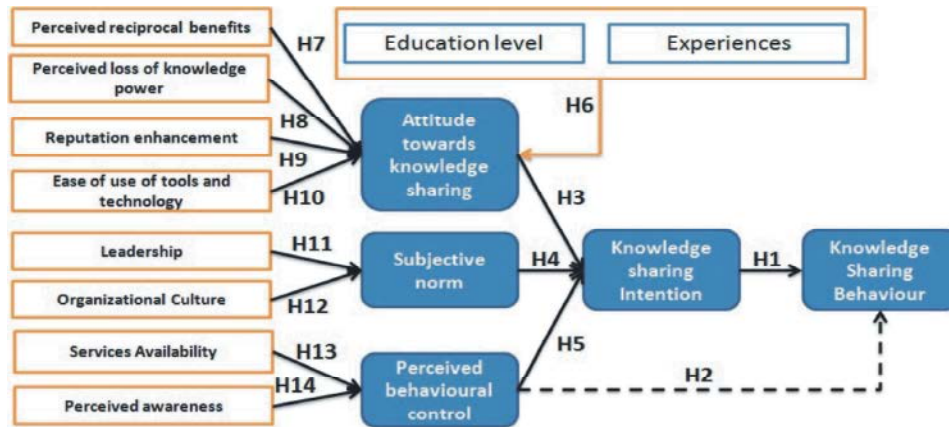


Fig. 3: Conceptual research model

Furthermore, intention gauges the willingness of knowledge workers in terms of indulge in knowledge sharing. In accordance with TPB, it is predicted that, positive intention to share knowledge might result in higher sharing of knowledge.

**H1:** A higher level of intention towards knowledge sharing will lead to greater sharing of knowledge.

Perceived behavioral control aspects are pre-dispositional factors, which associate with the beliefs of knowledge worker in terms of anticipated existence or deficiency of essential sources and prospects, which might accomplish or prevent knowledge sharing. Furthermore, control of perceived behavioral is likely to impact the knowledge sharing behaviors, particularly, when there is an understanding among the perceptions of behavior control of individual and the actual control. The higher the knowledge workers belief in terms of the possession of sources and prospects, the much less barriers they might predict and might have higher perceived control over the behavior.

**H2:** A higher level of behavioral control towards knowledge sharing will lead to greater sharing of knowledge.

**Antecedents of Knowledge Sharing Intention:** TPB indicates that, perspective of individuals, subjective norm and perceived behavioral control facilitate in determining behavioral intention.

Attitude towards knowledge sharing is established from behavioral values and relates to the level of beneficial/adverse reactions of an individual

towards the objective of sharing knowledge with other employees of the organization. Increased behavioral predisposition to knowledge sharing, might improve the intention of knowledge sharing. Thus it is hypothesized that

**H3:** A more favorable attitude toward knowledge sharing will lead to greater intention to share knowledge.

**Subjective Norm:** The TPB indicates that, generally normative beliefs induce subjective norm, which pertains to the perception of individuals that, other associated and significant members anticipate them to indulge in behavior of attention. In the business point of view, these pertinent and significant members comprise top level managers, executives and the professional team. A number of studies have revealed that, senior managers initiate knowledge management endeavors. Furthermore, they have command over staff settlement guidelines, performance assessment and employment progression. Consequently, it is normal that, staff might prefer to abide with the anticipations of management in terms of participating in knowledge sharing behavior. Likewise, acceptance of professional team also has a crucial impact on the professional experience of an individual. Earlier studies have stated subjective norm as an essential precursory to behavioral intention [19]. Therefore, employees' normative beliefs regarding the expectations of management and professional team have a beneficial impact on their intention to share knowledge.

**H4:** A higher level of subjective norm supportive of knowledge sharing will lead to greater intention to share knowledge.

Perceived behavioral control is established by control beliefs and relates to the beliefs of individual about the recognized existence or deficiency of necessary sources and possibilities, which might accomplish or hinder knowledge sharing. The assisting circumstances for knowledge sharing consist of, technological and non-technological aspects, for instance, the accessibility and convenience of resources and technologies, time, resources and etc. TPB indicates that, perceived behavioral control enhances intention, due to the fact that, individuals are only encouraged to carry out responsibilities, at which they can be successful. According to Taylor and Todd (1995) [37] perceived behavioral control is the substantial forecaster of the intentions of using technology.

**H5:** A higher level of behavioral control towards knowledge sharing will lead to greater intention to share knowledge.

**Antecedents of Knowledge Sharing Attitude:** Even though, perspective of knowledge sharing is depicted as having strong impact on the intention of knowledge sharing in the research model, in fact, perspective is created from a variety of behavioral beliefs. Self-determination theory has determined the inspirational impacts of these beliefs to be both, independent and managed. Independence indicates accepting the behavior of an individual with maximum spontaneity. Behavior is independent to the level that a person encounters preference and serves with a perception of genuine decision, due to the fact of the individual relevance of the behavior. An example of independent inspiration is implicit inspiration. On the other hand, behaviors are managed to the level, where individuals comprehend a sense of stress to accomplish them. An example of controlled motivation is external inspiration. Prior research in knowledge sharing has recognized extrinsic motivators to be objectives of mutuality, status and lack of knowledge power [38].

**Experiences and Education level Factors:** Experience and education are part of demographics characteristics, several studies have examined the impact of these characteristics on knowledge sharing and some of these studies have found that, there are positive attitude toward sharing [38]. In contrast, few other studies have examined the each experience separately and found that, there is no effect on the knowledge

sharing behavior [39]; and few others have examined the difference in education and also found no effect [15]. Additionally, Constant *et al.* (1994) [18] have found that the staff with a greater degree of knowledge and extended work expertise are more probable to share their knowledge and have optimistic behavior towards sharing; literature reviewed above and the preliminary survey done by us leads to H6:

**H6:** Higher level of education and longer work experience have a positive effect on the knowledge owners' attitude towards knowledge sharing

**Perceived Reciprocal Benefits:** Blau (1967) [40] has stated that, the importance of interpersonal exchange depends on the preservation of status, power and extended interactions for long term mutual advantages. Reciprocity serves as an advantage, since it leads to opinions of individual responsibility, appreciation and confidence. Earlier studies have revealed that, individuals indulge in knowledge sharing with the anticipations that, their future knowledge needs will be met by others [21]. Consequently, it is hypothesized that, knowledge workers perception that, their future knowledge demands will be fulfilled by others consequently for sharing knowledge, probably to have beneficial impact on behavior towards knowledge sharing [19]. This leads to H7:

**H7:** Perceived Reciprocal benefits have a positive effect on the knowledge worker's attitude towards knowledge sharing

**Perceived Loss of Knowledge Power:** Earlier studies have suggested that, by sharing precious knowledge, individuals surrender possession to that knowledge and therefore, they minimize positive aspects arising from it [41]. This might place them in a dangerous situation of dropping their value towards the organization, making them more disposable. As knowledge is regarded as a resource of power, individuals might concern sacrificing the power, in case that knowledge is shared with others [21]. This implies an adverse connection among lack of knowledge power and mind-set towards knowledge sharing, which leads to the 8<sup>th</sup> hypothesis.

**H8:** Perceived loss of knowledge power has a negative effect on the knowledge worker's attitude towards knowledge sharing

**Perceived Reputation Enhancement:** Social exchange theory indicates that, social benefits such as, sensation of acceptance, reputation and value are caused by social exchange. In the present knowledge economic system, experience is hugely respected. Staff members can gain reputation and admiration, by exhibiting their skills to others, which will result in enhanced self-concept [42]. Kollock (1999) [43] has identified that, employees with substantial technological know-how have greater reputation in the office. Therefore, it is theorized that, employee's perception that, sharing knowledge will increase their status and in the occupation, is probably to be a crucial inspiration for providing beneficial guidance to others.

**H9:** Perceived reputation enhancement has a positive effect on the knowledge worker's attitude towards knowledge sharing.

Ease of use of tools and technology refers to "the level to which an individual considers that, using a particular program would be totally without any hard work" [44]. Ramayah *et al.* (2009) [45] have argued that, when the organizations provide the system with ease of use it will motivate the individuals to use it. Lu, Huang and Lo (2010) [46] have found that, perceived ease of use has a significant positive effect on perceived behavioral control. This leads to the H10:

**H10:** Perceived ease of use will be positively impact on perceived behavioral control.

#### **Antecedents of Subjective Norm**

**Leadership:** Knowledge sharing does not happen automatically in a team and the team's leader has a pivotal role to play in making it happen [42]. Also Lee *et al.* (2010) [47] have suggested that, leadership plays a key role in promoting and cultivating knowledge sharing behaviour. Additionally, the leadership has a strong impact on the knowledge sharing when the leadership has connected team cohesion [24]. Literature reviewed above and our preliminary survey leads to H11:

**H11:** Leadership support will have a significant positive effect on subjective norm to share knowledge.

Organizational Culture is one of the main factors that contribute to the success of the sharing knowledge in organizations [48] and its values,

behaviors and beliefs for the people in the organization [49]. McDermott and O'Dell (2001) [50] have discussed that, culture be in a deep level, as it relates with how people act and what they expect from other party and therefore people often behave in ways that are consistent with the core values. Here we conclude that, in the organization with the culture of sharing knowledge, people would share their knowledge and experience better, than they are forced to share knowledge, because they naturally deal together.

**H12:** Organizational cultures have a significant relationship with knowledge sharing behavior.

#### **Antecedents of Perceived Behavioral Control**

**Service Availability:** ICT concerning knowledge management systems, assist in collective work and allow knowledge sharing, however if they are basically used in only in any time and at anywhere. Several studies have investigated the impacts of availability on the knowledge sharing, some of these studies have found the impact [51] and on the other hand few others have found that there is no effect [22]. Therefore, the hypotheses can be derived as follows:

**H13:** Higher service available, positively influence knowledge workers perceived behavioral control towards knowledge sharing.

**Perceived Awareness:** In some organizations, there is a low awareness or realization of the value and benefit of possessed knowledge to others [15]. Awareness is a mechanism of enhancing knowledge sharing and creating knowledge has been the utmost challenge [52]. Organization at unawareness phase [53] does not realize the contribution of knowledge against their competitors [29].

**H14:** Awareness will positively impact the perceived behavioral control towards knowledge sharing.

## **CONCLUSIONS**

This study had proposed a conceptual model for knowledge sharing based on TPB and TAM and this result comes from several steps. To sum up, based on interview survey, this work had determined 18 from 36 universal barriers that impact the stakeholders from knowledge sharing in Jordanian hospitals. Based on these results and expert guidance, we had developed a conceptual model to reduce the barriers faced by the



stakeholders in the Jordanian hospitals and to enhance the knowledge sharing behavior, to motivate them to share their knowledge with their coworkers. The conceptual model is convenient to other studies with different bands because the measurement of these factors in different countries may possibly lead to diverse findings. Future research should assess the impact of these factors on the knowledge sharing behaviour and should combine both quantitative and qualitative approaches.

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