

A Conceptual Model of Motivational Factors of Knowledge Transfer for Hospitals

Ahmad Aabed Al-Hayy Al-Dalaien, Sulfeeza Mohd Drus, Hairoladenan Kasim

Abstract: Knowledge transfer is vital for the successful organization. Majority of previous studies focused on business and educational organization. Few in the field dealt with knowledge transfer in hospitals. This study aims to develop a conceptual model for knowledge transfer in hospitals. Based on the literature review, this study proposes a conceptual framework for knowledge transfer motivation in hospitals based on three motivational aspects; (i) the extrinsic motivational factors such as the promotions and appraisals, (ii) the intrinsic motivational factors such as the altruism, and absorptive capacity, and (iii) the ideal distribution of extrinsic and intrinsic based on the quality and quantity of knowledge transfer that conducted by the knowledge sources and recipients. The conceptual model was tested using a data collected for a pilot study.

Keywords: Knowledge Transfer, Hospitals, Extrinsic, Intrinsic, Motivation

I. INTRODUCTION

Health institutions like hospitals are seen as "knowledge-intensive" organizations [1, 2], where the value of services in the hospitals is created by utilizing the skills, knowledge and experience of the health staff [3]. In hospitals, knowledge transfer between the health staff is one of the most important knowledge management implementations to improve the employees' tacit knowledge [4, 5, 6]. Knowledge transfer is the process of sending knowledge from the knowledge source to the knowledge recipients, and acceptance of the transferred knowledge by the recipients [7, 8, 9]. The quality of health services provided by the health staff could be enhanced through effective and efficient knowledge transfer activities [3, 4]. The behavior toward knowledge transfer is one of the most important aspects of knowledge transfer in the hospitals [1, 5, 9, 10, 11, 12, and 13].

Knowledge transfer behavior can be defined as the employees' norms or attitudes in sharing, accepting, and applying knowledge in the working environment. Without positive behaviors towards knowledge transfer among the health staff in hospitals, the opportunity to develop and enhance the health staff's knowledge will not be successful. Mainly, the behaviors of knowledge source and recipients' effect on the knowledge transfer processes [5, 9, 10].

Revised Manuscript Received on September 22, 2019.

Ahmad Aabed Al-Hayy Al-Dalaien, College of Graduate Studies, Universiti Tenaga Nasional Jalan Ikram-UNITEN, Kajang, Selangor Darul Ehsan, Malaysia

Sulfeeza Mohd Drus, Department of Information Systems, Universiti Tenaga Nasional Jalan Ikram-UNITEN, Kajang, Selangor Darul Ehsan, Malaysia

Hairoladenan Kasim, College of Graduate Studies, Universiti Tenaga Nasional Jalan Ikram-UNITEN, Kajang, Selangor Darul Ehsan, Malaysia

The successes of knowledge transfer in any organization depend on the motivation of employees for knowledge transfer [5, 14, 15, 16, 17]. The motivation for knowledge transfer among individuals aims to improve the person's attitudes or ability to share, accept, and apply the transferred knowledge in the working environment [18, 19, 20].

The knowledge transfer motivation is based upon two main theories; namely economic exchange theory, and social exchange theory [5, 6, 14, 16, 17, 18, 21, 22]. The economic exchange theory states that the motivation for knowledge transfers are due to extrinsic benefits (i.e. financial benefits) such as monetary rewards, promotion, and salaries [5, 6, 14, 16, 17, 18, 21]. Hence, extrinsic benefits imply that, if employees believe that they will receive financial benefits from their knowledge transferring activities, they would develop a more positive attitude toward knowledge transfer. On the other hand, the social exchange theory focuses on the intrinsic motivation of knowledge transfer [5, 6, 14, 16, 18, 34, 35]. The intrinsic motivation tends to focus on knowledge transfer as the act of personal obligation, gratitude, and trust.

Examples of extrinsic factors are the rewards, promotions, fair salaries, and selection of workers positions [5, 6, 14, 16, 17, 18, 22]. Examples of intrinsic factors are the altruism (i.e. good relationship between the employees in working environment), trust the knowledge sources, availability and ease of use knowledge transfer technology, and awareness of knowledge sharing benefits [5, 6, 14, 16, 18, 22, 36, 37]. Based on the above, this study aims to develop a conceptual model for knowledge transfer in hospitals.

II. RELATED WORKS

This section presents the motivational models of knowledge transfer, with the intent to achieve the purpose of this study. Szulanski [23] model identified four aspects of knowledge transfer which are characteristics of transferred knowledge, context, knowledge sources; and knowledge recipients. Szulanski [23] argued that one of the unsuccessful knowledge transfers is due to many lack of motivation of knowledge sources and recipients. The model of Jensen and Szulanski [24] was proposed by improving the earlier knowledge transfer model of Szulanski [23] by incorporating the usefulness of motivates the recipients' behaviors of knowledge transfer. This model suggested that there are many factors should be assured to motivate the recipients' behaviors in the context of knowledge transfer. The main motivational factor is the avoiding of causal ambiguity of the transferred knowledge.



A Conceptual Model of Motivational Factors of Knowledge Transfer for Hospitals

The recipients would be motivated to accept/apply the shared knowledge by the knowledge source when this knowledge is clear and structured effectively. Thus, the adapted knowledge by various sources for sharing purpose must be edited effectively before transfers it to the recipients. Although, Jensen and Szulanski [24] model clarifies the effect of causal ambiguity of transferred knowledge on the behavior motivation of knowledge recipients, the model does not cover the various behaviors aspects (i.e. knowledge source), and the various extrinsic and intrinsic motivational factors.

Ko et al. [25] model focused on two aspects of knowledge transfer behaviors; knowledge sources and recipients. The knowledge transfer behaviors of sources and recipients can be motivated based on the extrinsic and intrinsic motivational types. Motivational factors such as shared understanding and encoding competence are important to motivate the behaviors of knowledge sources. On the other hand, motivational factors such as source credibility (trust of source), decoding competence, and absorptive capacity are important to motivate the behaviors of knowledge recipients. Moreover, the good relationship is important to motivate the behaviors of both knowledge source and recipient. Although, Ko et al. [25] tried to connect between the transferring aspects, motivational types, and motivational factors, the motivational factors that belong to each motivation type are not clarified.

The model that proposed by Lin [26] explained the role of extrinsic and intrinsic motivational type on one aspect on knowledge transfer (shared knowledge by sources). Two motivational types are included which are extrinsic and intrinsic. The motivational factors (such as rewards, and reciprocal benefits) of extrinsic type are aiming to motivate the knowledge sharing based on the gained benefits from sharing activities. On the other hand, the motivational variables (like knowledge self-efficiency and enjoyment in helping other people) of intrinsic type are aiming to motivate the knowledge sharing based on workers' commitments towards the organization. The main strengths of Lin [26] model is the classification of motivational factors according to motivational type, and the clearness of motivational factors that belong to each type. However, the main drawback is that only one knowledge transferring aspect (knowledge sources) was included in the model. The knowledge transfer motivation of knowledge recipients are not discussed in the model.

Similar to Lin [26], Hung et al. [14] proposed a model to motivate the knowledge sharing behaviors in the organizations. This model explained that the extrinsic motivational factors such as rewards, reputation feedback, and reciprocity could be applied to motivate the transfer behaviors of knowledge sources. On the other hand, the behaviors of knowledge sources can be motivated using intrinsic motivational factors such as altruism variable. These motivational factors could play important roles in increase the number of shared idea, assure the usefulness of shared ideas, improve the creativity of shared knowledge, and address the satisfaction of knowledge sources. One of the main advantages of Hung et al. [14] is the explanations of the benefits that could gained from the source's behaviors motivation of knowledge transfer. However, this model was

not covered other aspects of knowledge transfer behavior such as knowledge recipients.

The model of Duan et al. [27] classified the knowledge transfer aspects as four categories; knowledge actors (source and recipient), knowledge context, knowledge content, and transferring media. There are many factors could be applied to motivate the knowledge transfer behaviors of knowledge actors. Also, the transferring behaviors of knowledge actors can be motivated through factors that related to knowledge context (i.e. flexibility, and selection of appropriate partners), factors that related to knowledge contents (i.e. timeliness of topics, and knowledge objectives), and factors that related to media of knowledge transfer (i.e. language and use of ICT). The model of Duan et al. [27] conducted effective classification of several motivational factors based on various knowledge transfer aspects. However, there are many drawbacks of this model such as not classify the knowledge actors as source and recipients, and not classify the motivational factors according to extrinsic and intrinsic types. This could cause ambiguity of model implementations due to ambiguity of identify the specific factors that could motivate the behaviors of sources and recipients.

The proposed model of Chang et al. [28] focused on integrative competences of knowledge transfer. The model explained that the knowledge transfer behavior of recipients in subsidiary (such as organization branches) is important to be motivated. The recipients could able to receive/apply the shared knowledge, when the absorptive capacity of the recipients is matched with the shared knowledge. The recipients may refuse the shared knowledge if it is over their absorptive capacity. Chang et al. [28] model focuses on important motivational factor which is the absorptive capacity in order to motivate the recipients' behaviors of knowledge transfer. The main model drawbacks are: (1) the knowledge sources aspect of transfer behavior was not clarified, (2) the model focused on total absorptive capacity of knowledge recipients' in the subsidiary rather than the individual absorptive capacity, and (3) explain just one intrinsic motivational factor that related to knowledge recipients and no extrinsic factors are explained.

Yan and Davison [16] proposed a model that focused on knowledge transfer behavior (knowledge seeking to knowledge contributing). The model explained that the knowledge source could acquire valuable knowledge from web pages. Thus, their behaviors should be motivated to transfer the acquired knowledge for another employee. Many intrinsic motivation factors are proposed in this context such as train the employee to enjoy helping other, strengths the self-worth of the knowledge sources, and assure the effective flow of shared knowledge. Although, Yan and Davison [16] model explained many factors to motivate the knowledge transfer behaviors of knowledge sources, the proposed model omitted the behaviors of knowledge recipients. Also, the proposed model focused only on the intrinsic motivation factors and omitted the extrinsic factors.

Song [29] model focused on the transferring behaviors of knowledge recipients in Multinational corporations. The model explained that the absorptive capacity is one of the most important motivation factors of knowledge recipients' in the context of knowledge transfer. The organization should understand the levels of absorptive capacity of individuals or teams as knowledge recipients in order to share knowledge that match the absorptive capacity of each level. Hence, the employees (knowledge recipients) would be able to receive or apply the shared knowledge. The main advantage of this model is the clearness of the role of absorptive capacity factor in motivating the knowledge transfer behaviors of recipients. On the other side, the model did not include the other aspects of knowledge transfer behavior (such as the knowledge source), and it focused on only intrinsic motivation factor which is the absorptive capacity. There are no extrinsic factors that are proposed in Song [29] model.

Alhalhouli et al. [6] is the only model that proposed for knowledge transfer in hospitals, specifically the Jordanian hospitals. The model focuses on the factors that effect on the knowledge sharing behavior among stakeholders in hospitals. Significantly, the model explains that the perceived reciprocal benefits are important motivational factor to motivate the knowledge sharing among the health staff in the hospitals. On the other hand, the knowledge transfer technology such as ease of use and availability of technology services is important factor to motivate the knowledge sharing. There are a number of drawbacks in Alhalhouli et al. [6] model such as: (1) the model does not discuss the motivational factors based upon the main behavioral knowledge transfer elements such as knowledge source, knowledge recipients; (2) the motivational factors either extrinsic or intrinsic is not well explained in the model; and (3) the model focuses on the knowledge sharing rather than knowledge transfer behavior.

Table 1 summarizes the directions of the related models to knowledge transfer behaviors. Some models focus on the aspects of knowledge transfer (i.e. knowledge sources and recipients) without explanation about the extrinsic and intrinsic motivational factors [23, 24]. Other models focus on the knowledge transfer motivation of knowledge sources using extrinsic or/and intrinsic motivational factors [6, 14, 16, 26]. Models such as [28, 29] focus on the knowledge transfer motivation of knowledge recipients using intrinsic motivational factors. Both aspects of knowledge transfer (knowledge source and recipients) are motivated using extrinsic factors in model [25], and using intrinsic factors in model [27]. It can be noticed that there is lack in construct motivational model of knowledge transfer in hospitals to motivate the knowledge sources and recipients through integration between the extrinsic and intrinsic factors. On the other hand, the previous models not focus on the distribution of motivational benefits based on ideal criteria like the quality and quantity of knowledge transfer. Hence, this study tries to cover some gaps in the knowledge transfer motivation in hospitals.

III. RESEARCH METHOD

The quantitative method based on questionnaire was constructed to conduct the pilot study of the knowledge transfer motivation in the hospitals. The scope of this study is the Jordanian hospitals due to knowledge intensively in the hospitals. A pilot study was conducted with 53 doctors and nurses from three Jordanian hospitals; Albashir hospital; Al-Issra hospital, and Jordan University hospital. The questionnaire data was collected in august-September 2018.

The questionnaire of the pilot study was adapted from many sources [23,30, 31,32]. The questionnaire items were scaled based on 5-likert scale; 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. 5-likert scale is more focused than lower scales and produce relative responses means more than high scales [33]. There are several analysis techniques were conducted on the questionnaire data like the factor analysis, reliability test, frequency analysis, and descriptive analysis. These analyses were conducted to assure the questionnaire validity and confirm the factors that would motivate the knowledge transfer in the hospitals among the knowledge sources and recipients.

IV. RESULTS & DISCUSSION

The descriptive information of the respondents showed that the majority are males (75%) with ages are between 25-54 years (96%). The respondents are doctors (51%), Nurses (32%), assistance nurses (9%), and other supportive health staff (8%) with the majority having experience more than 10 years (45%). The exploratory factor analysis (EFA) using SPSS was conducted. Items with factor loading (FL) less than 0.50 or loaded on other variables were deleted. As a result, and based on the KMO and factor loading, a total of 20 items were deleted and KMO for all variables is greater than 0.60. After that, the reliability analysis was conducted and result in Table 1 shows that all the variables achieved the required level of above 0.70 for Cronbach's Alpha (CA).

Table. 1 Reliability of Pilot Study

| Questionnaire Part | # Before FL | # after FL | CA | KMO |
|--|-------------|------------|------|-------|
| Knowledge Transfer | 5 | 3 | 0.75 | 0.67 |
| Behaviors of Knowledge Transfer | 8 | 5 | 0.83 | 0.82 |
| Motivational Extrinsic Factors of Knowledge Source | 13 | 9 | 0.95 | 0.882 |
| Motivational Intrinsic Factors of Knowledge Source | 16 | 10 | 0.86 | 0.75 |



A Conceptual Model of Motivational Factors of Knowledge Transfer for Hospitals

| | | | | |
|---|----|----|------|-------|
| Motivational Extrinsic Factors of Knowledge Recipient | 10 | 9 | 0.93 | 0.738 |
| Motivational Intrinsic Factors of Knowledge Recipient | 18 | 14 | 0.92 | 0.788 |
| Ideal Knowledge Motivation | 8 | 8 | 0.96 | 0.865 |
| All Factors | 78 | 58 | 0.97 | 0.689 |

Furthermore, the descriptive analysis was conducted to assess the level of the motivational factors of knowledge transfer in the hospitals among the knowledge sources and recipients. With regards to the first questionnaire factor (knowledge transfer), the respondents are agreed with all item in this variable as shown in Table 2.

Table. 2 Descriptive Analysis of Knowledge Transfer Factor

| No. | Item | Mean |
|-----|--|------|
| 1. | I believe that knowledge transfer contributes significantly to the competitive advantage of the hospital that I am currently attached to | 3.74 |
| 3. | Knowledge transfer processes disrupt my normal operations in performing my daily working activities. | 4.21 |
| 4. | I develop new knowledge when I am involved in the knowledge transfer process | 3.95 |

Based on the descriptive analysis of the second questionnaire factor (motivation of knowledge transfer) in Table 3, the respondents are agreed with items # 4, 5, 6, 7. However, the respondents slightly disagree with item #8.

Table. 3 Descriptive Analysis of Motivation of Knowledge Transfer

| No. | Item | Mean |
|-----|---|------|
| 4 | Knowledge transfer with colleagues is important to develop my skills and expertise. | 4.1 |
| 5 | Knowledge transfer with colleagues is valuable for my job role | 3.75 |
| 6 | Knowledge transfer with colleagues is beneficial for me. | 3.55 |
| 7 | I will always make an effort to transfer knowledge with my colleagues | 4.2 |
| 8 | I intend to share my knowledge with colleagues who ask me | 2.41 |

The fourth questionnaire part (motivational factors of knowledge transfer) explores the extrinsic and intrinsic factors that would motivate the knowledge sources and recipients to involve the knowledge transfer. Table 4 shows the deceptive analysis of motivational extrinsic factors of knowledge source. The respondents are agreed with all items in this part.

Table. 4 Deceptive Analysis of Motivational Extrinsic Factors of Knowledge Source

| No. | Item | Mean |
|-----|---|------|
| 9. | I expect to receive higher promotional opportunities in return for sharing my knowledge with my colleagues | 4.41 |
| 10. | The hospital that I am currently attached to, offers me the possibility of promotion based on my knowledge sharing performance. | 3.95 |
| 11. | The hospital that I am currently attached to assign me in the appropriate position based on my knowledge sharing activities | 4.2 |
| 12. | I expect to get a better working position in return for my knowledge sharing performance | 3.7 |
| 13. | I expect to get good job contract based on the performance of my knowledge sharing. | 3.67 |
| 14. | My knowledge sharing activities play important role in the continuity of my good job contract. | 4.33 |
| 15. | I share knowledge because it reflects my own experiences. | 3.83 |
| 16. | Sharing my knowledge with colleagues helps to measure my knowledge performance | 3.85 |
| 17. | Sharing my knowledge with colleagues helps to evaluate the feasibility of my ideas | 4.33 |

Table 5 shows the descriptive analysis of motivational intrinsic factors of knowledge source. The respondents are agreed with items# 17, 18, 19, 20, 21, 22, 26. On the other hand, the respondents are neutral and not agreed with items 23, 24, and 25.

Table. 5 Deceptive Analysis of Motivational Intrinsic Factors of Knowledge Sources

| No. | Item | Mean |
|-----|---|------|
| 18. | I have an easy and open communication with the colleagues who receive the knowledge that I share. | 3.57 |
| 19. | I have an active collaboration with the colleagues who receive the knowledge that I share. | 3.80 |
| 20. | I expand the scope of my association with the colleagues who receive the knowledge that I share. | 4.21 |
| 21. | I expect to receive new knowledge in return when necessary from my colleagues. | 4.7 |
| 22. | I believe that my future requests for knowledge will be answered by my colleagues. | 4.33 |
| 23. | I have the expertise required to provide valuable knowledge for the hospital that I am currently attached to. | 4.58 |



| No. | Item | Mean |
|-----|---|------|
| 24. | It does not really make any difference whether I share my knowledge with colleagues or not. | 2.15 |
| 25. | Most of my colleagues can provide more valuable knowledge than me. | 2.6 |
| 26. | Hospital that I am attached to announces the best employees who share knowledge. | 2.11 |
| 27. | I enjoy sharing my knowledge with my colleagues. | 3.94 |

Table 6 shows the descriptive analysis of motivational extrinsic factors of knowledge recipients. The respondents are agreed with all items in this part.

Table. 6 Deceptive Analysis of motivational Extrinsic factors of Knowledge Recipients

| No. | Item | Mean |
|-----|--|------|
| 28. | I expect to receive a higher bonus in return when I apply the new knowledge that I receive in the working environment | 4.55 |
| 29. | There are I expect to receive extra rewards when I apply the new knowledge in the working environment. | 4.6 |
| 30. | I expect to receive a higher salary in return when I apply the new knowledge in the working environment | 3.97 |
| 31. | I expect to receive a fixed salary regardless of the performance of my knowledge implementations. | 4.32 |
| 32. | I expect to receive higher promotional opportunities in return for applying the new knowledge in the working environment. | 4.6 |
| 33. | The hospital that I am currently attached to assign me the appropriate position based on the new knowledge that I apply. | 3.75 |
| 34. | I expect to get a better working position due to the performance of the new knowledge that I apply | 4.60 |
| 35. | The performance of my new knowledge application does not affect on my job stability. | 3.67 |
| 36. | The hospital that I am currently attached to offers stability and continuity in my job due to my performance of my new knowledge applications. | 3.8 |

Table 7 shows the deceptive analysis of motivational intrinsic factors of knowledge recipients. The respondents are agreed with all items in this part.

Table. 7 Deceptive Analysis of Motivational Intrinsic Factors of Knowledge sources

| No | Item | Mean |
|-----|---|------|
| 37. | I have an easy and open communication with the colleagues who share the knowledge with me | 3.67 |
| 38. | I have an active collaboration with the colleagues who share the knowledge with me | 4.2 |
| 39. | I expand the scope of my association with the colleagues who share the knowledge with me | 4.67 |
| 40. | I will return knowledge in the future with colleagues who share knowledge with me. | 3.91 |
| 41. | In most times, the knowledge that I received are unreliable | 4.5 |
| 42. | The colleagues who share knowledge in the hospital that I attached to have a trusted knowledge history. | 3.66 |
| 43. | The hospital that I am currently attached to evaluates the knowledge shared among its employees by comparing it with the knowledge originated by other hospitals. | 3.5 |
| 44. | The shared knowledge helps to answers my questions related to the context of my job tasks. | 3.80 |
| 45. | The practice of sharing knowledge is making sense to me. | 4.42 |
| 46. | I can deal with different languages (i.e. Arabic and English) of the received knowledge. | 3.67 |
| 47. | I understand what I need to achieve through the shared knowledge that I receive | 3.82 |
| 48. | I have the competence to absorb the revived knowledge. | 3.63 |
| 49. | It is clear for me how to apply the knowledge that received. | 3.77 |
| 50. | There is a precise list of the skills, resources and prerequisites necessary for successfully applying the received knowledge | 3.58 |

With regard to ideal knowledge motivation, the respondents are agreed with all items in this part as shown in Table 8.

Table. 8 Deceptive Analysis of Ideal Knowledge Motivation

| No. | Item | Mean |
|-----|--|------|
| 71. | The extrinsic benefits are provided based on the basis of the quantity of the knowledge that I share in working environment. | 3.8 |

A Conceptual Model of Motivational Factors of Knowledge Transfer for Hospitals

| | | |
|-----|--|------|
| 72. | The intrinsic benefits are provided based on the basis of the quantity of the knowledge that I share in working environment. | 4.3 |
| 73. | The extrinsic benefits are provided based on the basis of the quantity of the knowledge that I apply in working environment. | 3.67 |
| 74. | The intrinsic benefits are provided based on the basis of the quantity of the knowledge that I apply in working environment. | 4.45 |
| 75. | The extrinsic benefits are provided based on the basis of the value of the knowledge that I share in working environment. | 3.91 |
| 76. | The intrinsic benefits are provided based on the basis of the value of the knowledge that I share in working environment. | 4.15 |
| 77. | The extrinsic benefits are provided based on the basis of the value of the knowledge that I apply in working environment. | 4.21 |
| 78. | The intrinsic benefits are provided based on the basis of the value of the knowledge that I apply in working environment. | 3.7 |

Based on the data analysis, the conceptual model could be formulated as illustrated in Figure 1. The knowledge transfer is important for hospitals. The hospitals should motivate the health staff to involve the knowledge transfer processes through the extrinsic and intrinsic factors. The motivational factors should be provided based on ideal criteria such as the quantity and quality of knowledge transfer. The most important extrinsic factors of knowledge sources are satisfaction of work position, promotions, reputation feedback and stability of labor. On the other hand, the most important intrinsic factors of knowledge sources are shared understanding, champion, arduous relationship, altruism, and enjoyment of helping other. The most important extrinsic factors of knowledge recipients are rewards and appraisals, ideal salaries, satisfaction of work position, promotions, and stability of labor. On the other hand, the most important intrinsic factors of knowledge recipients are arduous relationship, altruism, knowledge trust, evaluate the knowledge, knowledge interest, knowledge clearness, and absorptive capacity.

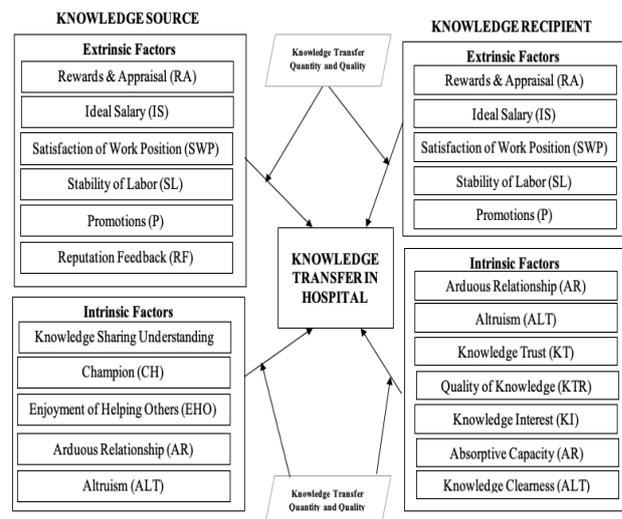


Fig. 1 Conceptual Framework of Knowledge Transfer Motivation in Hospitals

V. CONCLUSION AND FUTURE WORKS

The hospitals are knowledge intensive organizations, whereby the knowledge and skills or the health staff play important role in the provided services. Thus, the knowledge transfer is important to be enabled in the hospitals to assure the knowledge growth. The knowledge sources and recipients are the main elements of knowledge transfer in the hospitals. There are many reasons could discourage the knowledge sources and recipients in involve the knowledge transfer process such as the low trust level, the weakness of evaluate the transferred knowledge, and the ego personality. To address these challenges, it is necessary to apply motivational factors in order to motivate the knowledge sources and recipients to involve the knowledge transfer process based on the returned benefits from this process. The extrinsic (such as promotions and ideal salaries) and intrinsic (such as altruism and knowledge trust) factors could play important roles in knowledge transfer motivations. The ideal distribution of extrinsic and intrinsic factors based on the quantity and quality of the shared knowledge could increase the motivation level of knowledge transfer. Depend on these assumptions, this study proposes a conceptual model of knowledge transfer motivations. In the future, a questionnaire survey will be conducted with large number of health staff to tests the many research hypotheses through study the correlation/regression between the output factors in the current study.

REFERENCES

1. Y. Tsai, "Learning organizations, internal marketing, and organizational commitment in hospitals," *BMC Health Services Research*, vol. 14, pp. 152, 2014.
2. Y. M. Kim, D. Newby-Bennett, and H. J. Song, "Knowledge sharing and institutionalism in the healthcare industry," *Journal of Knowledge Management*, vol. 16, pp. 480-494, 2012.
3. Yacoub, M. I., Demeh, W. M., Darawad, M. W., Barr, J. L., Saleh, A. M., and Saleh, M. Y., "An assessment of diabetes-related knowledge among registered nurses working in hospitals in Jordan," *International Nursing Review*, vol. 61, pp. 255-262, 2014



4. A. Prestmo, G. Hagen, O. Sletvold, J. L. Helbostad, P. Thingstad, K. Taraldsen, S. Lydersen, V. Halsteinli, T. Saltnes, S. E. Lamb, L. G. Johnsen, and I. Saltvedt, "Comprehensive geriatric care for patients with hip fractures: a prospective, randomised, controlled trial," *The Lancet*, vol. 385, pp. 1623-1633, 2015.
5. V. Feet, and A. F. Næss, "A Qualitative Study of Improvement and Knowledge Transfer in Norwegian Public Hospitals," (*Master's thesis, NTNU*), 2015.
6. Z. T. Alhalhouli, Z. Hassan, and C. S. Der, "Factors affecting knowledge sharing behavior among stakeholders in Jordanian hospitals using social networks," *International Journal of Computer and Information Technology*, vol. 3, pp. 919-928, 2014.
7. S. M. Li, J. Jasimuddin, and N. Perdakis, "The relationships of knowledge recipients and knowledge transfer at Japanese MNCs based in China," *Social Intelligence, Leadership, and Problem Solving*, vol. 16, pp. 181-194, 2017.
8. D. Paulin, and k. Suneson, "Knowledge transfer, knowledge sharing and knowledge barriers—three blurry terms in KM," *Leading Issues in Knowledge Management*, vol. 2, pp. 73, 2014.
9. M. L. Sheng, S. Y. Chang, T. Teo, and Y. F. Lin, "Knowledge barriers, knowledge transfer, and innovation competitive advantage in healthcare settings," *Management Decision*, vol. 51, pp. 461-478, 2013.
10. M. T. Tsai, and N. C. Cheng, "Understanding knowledge sharing between it professionals—an integration of social cognitive and social exchange -theory," *Behaviour and Information Technology*, vol. 31, pp. 1069-1080, 2012.
11. G. Radaelli, E. Lettieri, M. Mura, and N. Spiller, "Knowledge sharing and innovative work behaviour in healthcare: A micro-level investigation of direct and indirect effects," *Creativity and Innovation Management*, vol. 23, pp. 400-414, 2014.
12. Y. Wu, and W. Zhu, "An integrated theoretical model for determinants of knowledge sharing behaviours," *Kybernetes*, vol. 41, pp. 1462-1482, 2012.
13. V. Svård, "Assessing children at risk: Organizational and professional conditions within children's hospitals," *Child & Family Social Work*, vol. 22, pp. 81-91, 2017.
14. S. Y. Hung, A. Durcikova, H. M. Lai, and W. M. Lin, "The influence of intrinsic and extrinsic motivation on individuals' knowledge sharing behavior," *International Journal of Human-Computer Studies*, vol. 69, pp. 415-427, 2011.
15. T. K. Yu, L. C. Lu, and T. F. Liu, "Exploring factors that influence knowledge sharing behavior via weblogs," *Computers in Human Behavior*, vol. 26, pp. 32-41, 2010.
16. Y. Yan, and R. M. Davison, "Exploring behavioral transfer from knowledge seeking to knowledge contributing: The mediating role of intrinsic motivation," *Journal of the Association for Information Science and Technology*, vol. 64, pp. 1144-1157, 2013.
17. P. Caligiuri, "Many moving parts: Factors influencing the effectiveness of HRM practices designed to improve knowledge transfer within MNCs," *Journal of International Business Studies*, vol. 45, pp. 63-72, 2014.
18. W. T. Wang, and Y. P. Hou, "Motivations of employees' knowledge sharing behaviors: A self-determination perspective. *Information and Organization*," vol. 25, pp. 1-26, 2015.
19. X. Zhang, "Factors that Motivate Academic Staff to Conduct Research and Influence Research Productivity in Chinese Project 211 Universities," (*Doctoral dissertation, University of Canberra*), 2014.
20. G. Tangaraja, R. Mohd Rasdi, M. Ismail, and B. Abu Samah, "Fostering knowledge sharing behaviour among public sector managers: A proposed model for the Malaysian public service," *Journal of Knowledge Management*, vol. 19, pp. 121-140, 2015.
21. Y. S. Hau, B. Kim, H. Lee, and Y. G. Kim, "The effects of individual motivations and social capital on employees' tacit and explicit knowledge sharing intentions," *International Journal of Information Management*, vol. 33, pp. 356-366, 2013.
22. N. Baporikar, "Innovation Implementation: The Critical Facet," *Driving Innovation and Business Success in the Digital Economy*, pp. 41-54, 2017.
23. G. Szulanski, "Exploring internal stickiness: Impediments to the transfer of best practice within the firm," *Strategic Management Journal*, vol. 17, pp. 27-43, 1996.
24. R. Jensen, and G. Szulanski, "Stickiness and the adaptation of organizational practices in cross-border knowledge transfers," *Journal of International Business Studies*, vol. 35, pp. 508-523, 2004.
25. D. G. Ko, L. J. Kirsch, and W. R. King, "Antecedents of knowledge transfer from consultants to clients in enterprise system implementations," *MIS Quarterly*, pp. 59-85, 2005.
26. H. F. Lin, "Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of information science*," vol. 33, pp. 135-149, 2007.
27. Y. Duan, W. Nie, and E. Coakes, "Identifying key factors affecting transnational knowledge transfer," *Information & management*, vol. 47, pp. 356-363, 2010.
28. Y. Y. Chang, Y. Gong, and M. W. Peng, "Expatriate knowledge transfer, subsidiary absorptive capacity, and subsidiary performance," *Academy of Management Journal*, vol. 55, pp. 927-948, 2012.
29. J. Song, "Subsidiary absorptive capacity and knowledge transfer within multinational corporations," *Journal of International Business Studies*, vol. 45, pp. 73-84, 2014.
30. H. F. Lin, "Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions," *Journal of Information Science*, vol. 33, pp. 135-149, 2007.
31. D. Minbaeva, T. Pedersen, I. Björkman, C. F. Fey, and H. J. Park, "MNC knowledge transfer, subsidiary absorptive capacity and HRM," *Journal of International Business Studies*, vol. 34, pp. 586-599, 2003.
32. N. Martín Cruz, V. Martín Pérez, and C. Trevilla Cantero, "The influence of employee motivation on knowledge transfer," *Journal of Knowledge Management*, vol. 13, pp. 478-490, 2009.
33. J. G. Dawes, "Do data characteristics change according to the number of scale points used? An experiment using 5 point, 7 point and 10 point scales," *International Journal of Market Research*, vol. 51, 2008.
34. S. Alaaraj, Z. A. Mohamed, and U. S. Ahmad Bustamam, "External growth strategies and organizational performance in emerging markets: The mediating role of inter-organizational trust," *Review of International Business and Strategy*, vol. 28, pp. 206-222, 2018.
35. S. Alaarj, Z. Abidin-Mohamed, and U. S. B. A. Bustamam, "Mediating role of trust on the effects of knowledge management capabilities on organizational performance," *Procedia-Social and Behavioral Sciences*, vol. 235, pp. 729-738, 2016.
36. S. Alaarj, Z. Abidin-Mohamed, and U. S. B. A. Bustamam, "The effect of knowledge management capabilities on the performance of Malaysian large-scale organizations: an empirical study," *Advances in Global Business Research*, vol. 12, pp. 1024-1038, 2015.
37. S. Alaarj, Z. Abidin-Mohamed, and U. S. B. A. Bustamam, "The effect of knowledge management capabilities on performance of companies: A study of service sector," *Int. J. Econ. Res.*, vol. 14, pp. 457-470, 2017.
38. S. Alaarj, Z. Abidin-Mohamed, and U. S. B. A. Bustamam, "Do knowledge management capabilities reduce the negative effect of environment uncertainties on organizational performance? A study of public listed companies in Malaysia," *Int. J. Econ. Res.*, vol. 14, pp. 443-456, 2017.