Knowledge Management and Sharing in Hospitals: A Systematic Review

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Abstract

Healthcare faces many challenges. Among these challenges is the difficulty of making appropriate and timely clinical decisions, the increasing complexity of medication interactions and the occurrence of errors in the interpretation of laboratory results because of the reliance on individual knowledge. The main focus of hospital organizations is on a highly knowledgeable property and hospital professionals provide patients with high-quality care. The main concern of senior management is the performance of knowledge management enabled hospital professionals. This requires hospital organizations to share technology, information, and knowledge quickly, accurately, systematically and over the long term. In addition, these systems require immediate feedback mechanisms. Hospitals can - not only through the direct incorporation of knowledge into their corporate strategy but also by changing employee behaviors - promote knowledge sharing by promoting consistent knowledge sharing. This study aimed to assess to what extent the knowledge management and knowledge sharing domains have been mentioned in the hospitals' settings. The search was performed in PubMed, ScienceDirect, and Scopus databases. The research question that guided this review was posted as: "How knowledge management and knowledge sharing are considered in hospitals". Sixteen articles were included in the final evaluation phase. Diverse hospital settings were represented in the studies. A framework for open information and communication, factors affecting employees' knowledge sharing intention, knowledge sharing behavior, and innovation behavior, the effects of knowledge management enablers, knowledge management implementations, knowledge management tools, and knowledge management-oriented innovation that enriches the hospital management system theory were of the main outcomes of interest. Hospital organizations are knowledge-intensive environment involving rapidly changing medical technologies, and requiring tools, skills, and methods with more knowledge resources. There is a greater awareness of knowledge management importance in hospital organizations. Knowledge management is still a multifaceted and much more exportable field of knowledge understanding.

Keywords: Knowledge management • knowledge sharing • Hospitals

Running head: Knowledge Management and Hospitals

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Introduction

Organizations in our society regard knowledge as a fundamental resource for identifying its competitiveness. Furthermore, organizations try to create added value by sharing and innovation in a sustainable way. Recently, medical market opening, health technology development and information development, and the introduction of new high-tech medical devices have stepped up competition in medical markets [1].

Organizational and management theorists believe that a company's investment in knowledge is better than its components [2]. Investing in knowledge Organizations require KM to survive in competitions, to respond to changing creative environments, to respond to market needs, to strengthen people and their capabilities, and to maintain good relations with suppliers, customers and partners [3]. In fact, management of knowledge is one of the contemporary management approaches which has become the key to organizational success.

Only recently, due to the increasing quantity of information and data, KM was received in healthcare, so the concept of KM is beginning to emerge [4]. The prevention of possible loss of knowledge as a consequence of retirement and staff turnover, competitive advantage, ongoing learning, prevention and/or insulation of organization or department or person and the need to meet the needs of the use of KM in the healthcare sector include some of the reasons [4]. Implementation, transfer and translation of knowledge is essential to the implementation of KM. Knowledge use is the process of converting knowledge into practice, such as evidence-based guidelines, whereas knowledge translation shifts scientific knowledge from basic discovery to technical efficiency testing and acceptability into practice that shows that KM has two phases in this aspect [5]. The third important aspect of KM, the transfer of knowledge, is the spread of knowledge which is controlled and managed by different strategies [6-7]

Hospital organizations realize in particular that KM can help them use their current skills or create ideas, services, products, processes and solutions that are new and innovative. In order to enhance knowledge creation, knowledge sharing and application, hospital organizations should take the KM. This will turn hospitals into fast-training organizations with sustainable and competitive advantages [8]. In order to better implement its knowledge, hospital organizations are trying to establish KM. In particular, the sharing of knowledge among hospital organizations, through new ideas, tools, services and processes, is used to manage intellectual resources and to manage employees working styles in hospital and leads to innovative conduct within an organization [1].

One reason is that hospital organizations comprise professionals from various roles and skills, such as medical experts, health care specialists, clinicians and administrative staff. Thus, new knowledge and various techniques are to be developed in the various departments within a hospital organization to encourage employees in many ways [1]. Overall, hospital organizations must understand organizational factors like systems, organizational structure and organizational culture, in order to have successful knowledge sharing. Individual factors such as the features of the intention and behavior to share knowledge of the employee must also be identified [1].

As employees view their expertise, skills and knowledge, and new thinking as power sources, employees are unwilling to share and build their knowledge, according to Kashif et al. [9]. This may prevent the sharing of knowledge and innovation behaviour. Hospitals must therefore set objectives, and workers should be instructed and encouraged to share their expertise and innovation with their colleagues in order to achieve knowledge sharing and innovation behaviour. Von Krogh et al [10] indicated that certain other barriers include structural organizational barriers, such as the hierarchies of power and status. Factors such as lack of time to share knowledge and innovation in organizations, the concern over job security, a lack of sensitivity, an inadequate assessment and communication of previous mistakes, which can enhance individual and organizational education influences, affect knowledge sharing and innovation, differing levels of experience, lack of relationships, social networking, lack of communication and communication skills, sociodemographic features (age, gender, cultural and educational differences) and low confidence in knowledge accuracy and credibility [1].

The hospitals can maintain their original customers (patients) through the operation of KM activities, increase patients' numbers, maintain a good relation and improve competitive advantages. Operational strategies, corporate learning, market orientation and organizational culture in KM activities were rarely included in international and domestic studies to examine their effects on operational performance [11].

Materials and Methods

This systematic review was designed and conducted in line with the published guidelines for reporting systematic reviews, peer-review and research articles. Systematic review of the existing literature on KM and knowledge sharing of hospitals was performed. The main review question was:

"How KM and sharing is considered in hospitals". A systematic, comprehensive bibliographic search was carried out in the PubMed, Science-Direct and Scopus databases for all articles. Search terms "KM"; and "knowledge sharing" or "Hospitals".

Four major inclusion criteria were adopted (Figure 1):

- Published papers as peer-reviewed or research articles
- Papers with full access possibility
- Papers written in the English language

Studies that did not meet the above criteria were excluded, while those that complied with the inclusion criteria were listed and further reviewed. Studies were evaluated and critically appraised. Literature screening (a three-stage approach-exclusion by reading the title, the abstract, and the full text) and extraction of the main findings from each retrieved study. The following information was extracted from each one of the included studies [Table 1]: Title, authors and year of conduction, country, study design, subjects, research purpose, and main findings.

Table [1] An overview of studies' characteristics and main findings

Author et al. (year)	Main Study Characteristics	Aim of the Study	Main Findings
Tringali et al. (2003)	Italy, Large community hospital A clinically rooted approach	A clinically rooted general approach model is impractical for large organizations with established clinical cultures and complex operative systems.	• The gradual and integrated implementation of information and communication technology tools, social interaction opportunities and educational events resulted in a quick identification of "early adopters" and "early majority" populations. • Team building helped to diffuse positive attitudes and was used mostly as a change predisposing factor.

Author et al. (year)	Main Study Characteristics	Aim of the Study	Main Findings
Kanoui et al. (1995)	France, Diverse hospitals A semantic model	To build a framework for open information and communication systems for health care in Europe and to demonstrate the feasibility of this evolutionary approach.	• Typical implementations of health information system use a central patient database with a common interface for the integration of various applications. • It is necessary to conceptualize open health information system from both the computer science and the application perspectives.
Lea H. (2017)	Korea, 4 Korean tertiary hospitals 779 self-administered questionnaires	To investigate the effects of KM enablers, such as organizational structure, leadership, learning, information technology systems, trust, and collaboration, on the KM process of creation, storage, sharing, and application.	• Major knowledge resides in individual brains, groupware, and personal computers. • Barriers to KM were the lack of enthusiasm for learning, the absence of collaborative culture, and lack of time. • The most important way to inspire KM involved clear vision and consistent impulse. • Each hospital displayed very different patterns of KM and organizational features.
Lee & Hong (2014)	Korea, Three university hospitals in Seoul and one university hospital in Gyeonggi-Do. 779 employees nurses, medical technicians, and administrative staff Questionnaire	To investigate the factors affecting employees' knowledge sharing intention, knowledge sharing behavior, and innovation behavior.	• The efficient KM is based on understanding sociodemographic characteristics, in particular age, sex, and cultural and educational differences. • Three individual factors (reciprocity, subjective norms, and behavioral control) and one organizational factor (trust) significantly influenced knowledge sharing intention. • Two individual factors (reciprocity, and behavioral control) and three organizational factors (chief executive officer support, information technology system, and trust) had a significant influence on knowledge sharing behavior.
Lau A. (2011)	China, Private and public hospitals 388 nurses	To investigate how Web 2.0 tools can be applied for knowledge sharing, learning, social interaction, and the production of collective intelligence in the nursing domain. To investigate what behavioral perceptions are involved in the adoption of Web 2.0 tools.	• The perceived usefulness, relative advantage, and compatibility are positively correlated with attitude. • The peer participation and hospital support with policy and regulation on the use of Web 2.0 tools are the primary factors influencing their adoption by nurses. • The perceived behavioral control of human beings is positively correlated with resource and technological conditions. • Usage behavior is positively correlated with behavioral intention. Behavioral intention is positively correlated with attitude, subjective norm, and perceived behavioral control.
Shahmoradi et al. (2017)	Iran, Three databases, two journals websites and Google Scholar Systematic review	To investigate KM implementation and KM tools used in healthcare for informed decision making.	• The implementation of KM in healthcare, KM tools in healthcare and the available opportunities and also the barriers were identified as the main theme and providing the right knowledge at the right time. • Using an appropriate tool to manage knowledge and user-friendly system is a requirement.
Ghasemi et al. (2017)	Turkey, A qualitative research, Delphi technique	To investigate the validation of a new set of measures in terms of providing a procedure for KM-oriented innovation that enriches the hospital management system.	• Delivers a new measurement tool by emphasizing the importance of all the ten KM areas in hospital management and introducing them as the main categories in the innovation process. • It enables the managers to evaluate hospitals' situation to be aware of whether the organization follows the KM standards in innovation process or not.
D'Alessandro et al. (2005)	USA, Virtual Naval hospital Creation of digital library (partnership between academia and government)	To meet the information needs of isolated primary care providers and their patients.	• To succeed in the design and implementation of a digital library that serves as a knowledge-management tool. • Focus initially and then consistently on the population served and their mission and tailor the digital library to their needs.

Author et al. (year)	Main Study Characteristics	Aim of the Study	Main Findings
Ravandi et al. (2014)	Iran, 50 hospital portals small size samples	To assess and analyze the three dimensions; knowledge creation, knowledge transfer and knowledge accessibility	• A significant difference among the three mechanisms of knowledge creation, knowledge accessibility, and knowledge transfer in the different portals on the continents. • The reasons behind these differences in the KM mechanisms are most probably due to structural and infrastructural
Khajouei R. & Khajouei H. (2017)	Iran, Hospitals and university (curative affairs) Descriptive Researcher-made questionnaire Middle and senior managers and directors of vice-chancellor	To identify and prioritize the KM tools/techniques that apply to the hospital setting.	• 12 out of 26 tools in the model are appropriate for hospitals of which 11 are significantly applicable, and "storytelling" is marginally applicable. • The preferred tools/ techniques for implementation of each of the five KM steps in hospitals are introduced.
Kim M. (2013)	Korea, University hospitals 20 participants (associate professor or higher) Qualitative methodology	Based on empirical data and the application of knowledge sharing theory, a theoretical framework for a comprehensive approach to knowledge sharing in the long term is developed.	• The significance and process of knowledge sharing as experienced by medical doctors. • Utilizes grounded theory, to understand the substance or meaning the doctors experienced whilst sharing their knowledge. • How to improve the quality of the knowledge concerned, organize and/or advance its utilization and sharing.
Chen et al. (2011)	Taiwan, 90 hospitals 227 questionnaires Infection Control Professionals (ICPs) Discriminant analysis method	To propose a research framework that explores the factors that affect the ICPs' willingness to adopt KM into their tasks and to validate the usefulness of this research framework.	• Hospital resource support, colleagues attitude, and users' participation are the three factors that significantly impact the professionals' willingness for adopting KM in infection control departments. • The importance of the use of actual data in the study of research framework for introduction of KM in healthcare industry.
Juarez et al. (2009)	Spain, Hospital departments Design mechanism	To define computational models and to design mechanisms for the effective acquisition and management of medical knowledge. Analyze the representation of medical knowledge (based on deep-causal models) and the development of KM tools (based on ontologies).	• Focuses on modelling knowledge by using an explicit specification of the domain knowledge (considered static knowledge) and the model-based reasoning (MBR) approach to implement a problem-solving method or PSM (dynamic knowledge).
Chung et al. (2013)	Taiwan, 466 supervisors Questionnaire	Treated the hospitals as subjects and probed into the correlation among market orientation, organizational learning, types of operational strategies, organizational culture, executive degree of KM activities and operational performance.	• The higher executive degree of KM was, the more significant and positive effect it would be on operational performance. • The higher the executive degrees of cost leadership, marketing differentiation and innovation differentiation strategy were, the more significant it would be on KM. • The higher the executive degrees of organizational learning and market orientation were the more significant it would be on KM. • The higher the executive degrees of rational culture, hierarchical culture, group culture and developmental culture were the more the effect it would be on KM.

Author et al. (year)	Main Study Characteristics	Aim of the Study	Main Findings
Ryu et al. (2013)	Korea, 13 tertiary hospitals 28 subunits 286 physicians Questionnaire	Investigates the factors affecting physician's knowledge sharing behavior within a hospital department by employing existing theories.	• The theory of planned behavior (TPB) model exhibited good fit with the data and appeared to be superior to the theory of reasoned action (TRA) in explaining physicians' intention to share knowledge. • In the modified TPB model, subjective norms were found to have the strongest total effects on behavioral intentions to share knowledge of physicians through direct and indirect path by attitude. The attitude was found to be the second important factor influencing physicians' intentions.
MohebbiFar et al. (2014)	Iran, Tehran Universities of Medical Sciences 502 persons Random sampling Probst's KM questionnaire	To investigate the status of KM in education and treatment centers.	• The status of KM and its dimensions (Goals, identification, acquisition, development, distribution, use, preservation, and knowledge measurement) was at an average level.

Results

A total of 532 records were retrieved through our searches in Scopus, PubMed and ScienceDirect databases. Following reading the titles and abstracts of the retrieved records, 16 articles remained for further evaluation. Figure 1 shows the exact sequence and process of study identification, selection and exclusion in each step of the search. Finally, 16 studies were considered to be appropriate for answering our primary research question.

Among 16 included studies, four were conducted in both Iran and Korea, two in Taiwan and one in Italy, France, Turkey, USA, China and Spain. Among the relevant studies; 8 were quantitative studies, 2 were qualitative, 1 systematic review, 1 conventional approach, 1 library design, 1 design mechanism, 1 clinically rooted approach and 1 was semantic model.

Diverse hospital settings were represented in the studies. Identified hospitals included: public hospitals, private, university, tertiary, community and Virtual naval. In addition, study samples consisted exclusively of combination of healthcare workers included; physicians, associate professor

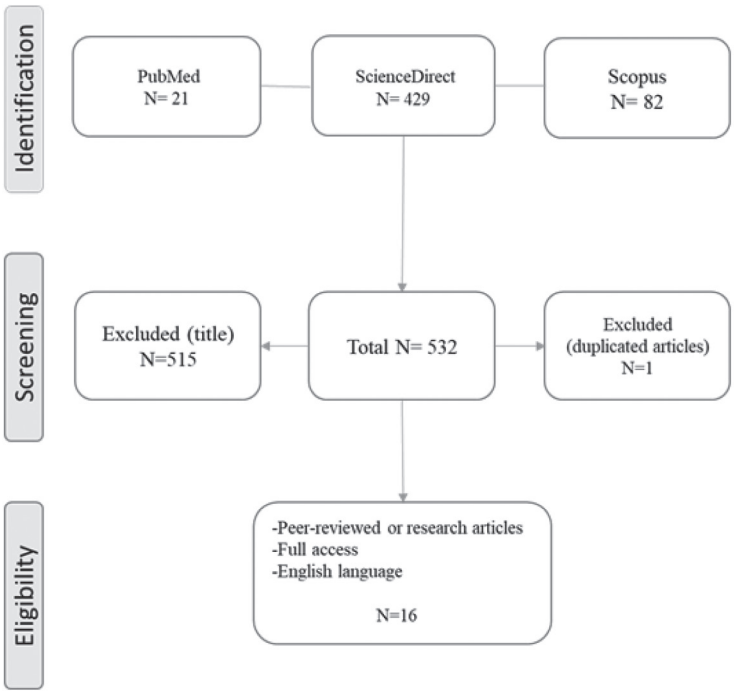

Figure 1. Prisma Flow Chart of the Literature Review Search Hospital Culture and Scale

or higher, supervisors, middle and senior managers, directors of vice-chancellor, nurses, medical technicians and administrative staff.

A framework for open information and communication, factors affecting employees' knowledge sharing intention, knowledge sharing behavior, and innovation behavior, the effects of KM enablers, KM implementation and KM tools, KM-oriented innovation that enriches the hospital management system, the information needs of isolated primary care providers, assess and analyze the KM three dimensions, a research framework that explores the factors that affect the ICPs' willingness to adopt KM into their tasks, computational models and mechanisms for the effective management of medical knowledge, the status of KM in education and treatment centers and application of knowledge sharing theory were the main outcomes of interest.

The healthcare industry has many intangible assets and intellectual assets. It has many different aspects from other industries besides it is knowledge-intensive. Based on the literary review and expert opinions, we say that the factors affecting the KM may be the hospital characteristics, the outside world and organizational planning [12]. Many studies have indicated that the larger the scale (size) of the organization the more resources and capital will be used to introduce new technology of information [13]. Hospitals with different scales have a different attitude towards investing in the information system and its use in the healthcare industry. For example, Furukawa et al. [14] have pointed out that the hospital scale is an important health IT adoption factor for treatment safety. The introduction of IT is, in Raymond's view [15], affected by the scale of the organization. Grover and Goslar [16] also believes that larger organizations, having more resources and greater capacity to address risks, are founded on a stronger basis. An organization will be able to adopt innovative technology after growing to a certain scale. The scale of a hospital is the number of beds the most used indicator.

The organizational culture is a summary of all members' specific values and organizational rules that affect the way external parties and organizational members interact. According to Davenport et al. [17], knowledge-oriented culture is one of the most important factors for effectively enforcing KM. The corporate culture is one of the key elements determining the KM implementation procedures. In general, the way in which an organization handles knowledge influences organizational culture [18].

Tolfo and Wazlawick [19] have proposed that the values, beliefs and regulations of the organizing culture are shared among the members. The organizational culture consists of the members of the organization's common values, beliefs and social regulations. Wallach [20] divided organizational culture into bureaucratic culture, innovative culture and supporting culture as regards types of organizational culture. Quinn [21] proposed four types of competing values: rational culture, hierarchical culture, group culture and development culture. Quinn [21] proposed a framework of competing values including rational culture, group culture, hierarchical culture and a culture of development. Deshpandé and Farley [22] suggested that the characteristics of rational culture, hierarchical culture, group culture and development culture are more or less demonstrated as employees describe workplace culture. However, they usually show one of the types in general [11].

Liebowitz [23] suggested different kinds of KM in various organizational cultures. Martin [24] suggested that the key factor to success in KM is organizational culture. De Long and Fahey [25] suggested that organizations could influence the behavior of employees through culture and encourage employee knowledge sharing, creation and use. The effective management of knowledge, according to Gold et al. [26], will be improved by proper organizational culture.

Knowledge Management

Healthcare depends heavily on knowledge in its everyday activities, and the main task of delivering care is to collaborate with different partners to share knowledge so that patients receive quality care [27]. For this purpose, knowledge about health care has to be available and readily reached for everyone who needs it. Thus, KM is a key factor for collaboration and sharing knowledge so that the healthcare system achieves optimal results [27].

Many definitions have been proposed for KM, including the following: KM is a scientific discipline that encourages, reinforces and promotes the method of mutual support for the development, collection, organization and use of information [28]; KM is defined as a set of organizational activities organized and systematic to reach a more important aim using available knowledge, and knowledge available encompasses all the experiences and lessons of the staff and all internal documents, reports and documents of the organization [29]. The use and development of the organization's knowledge assets for the purpose of achieving the objectives is defined as the KM. Carlucci et al. [30] stated that KM means long-term information organization, updating, generalization, analysis and sharing. Desouza [31] defined KM as a combination of organizational knowledge creation, knowledge saving, expansion of knowledge and knowledge activities. The study divided KM activity in acquiring and creating knowledge, enhancing knowledge, saving information and sharing information on the basis of a current literature review [11].

In general, the implementation of KM in the health care industry offers numerous advantages. Another important aspect of the KM implementation in health care needs to be taken into account is so-called evidence-based practices (EBP), i.e. the integration of scientific evidence, clinical expertise and preferences for patients and values in clinical decision-making [32]. In this regard, the great challenge remains how tacit knowledge of patients can be incorporated in this practice. EBP is justified by the need for care providers to make their patients more responsible [33]. Consequently, the success of EBP is very important for the management of both tacit and explicit knowledge [34].

In order to develop advanced information systems in healthcare, there is an increasing need for information-based decision making systems. Due to the key role of KM in health decision-making, use of KM strategies to ensure user-

friendly access and effective distribution and sharing of information is essential [35-36] For healthcare organizations, access to adequate knowledge, accurate information and relevant data are vital. These can be achieved through proper KM tools, techniques, tactics and technologies. The use of information technology enables a large amount of data and information to be stored and accessed through advanced health care decision-making systems [37]. However, not all this information is manageable, these information amounts can be handled via KM techniques [38].

Moreover, one of the key problems in many organizations and institutions is that the knowledge and skills of individuals are not adequately understood [5]. Even efficient KM is one of the most important ways to resolve this problem by focusing on the solutions covering the entire system, i.e. organization, human resources and technology [39]. The better we know about an area, the better we are able to perform well [40]. A number of studies have proven to be essential for the KM process as it enables organizations to improve the performance of innovation and decrease redundant learning efforts [41]. In addition, it is essential for organizations to increase significant organizational resources and decrease time spent on trial and error when individual members share their knowledge or expertise [42]. One of the major barriers to effective KM has been the absence of a KM process [43]. Ultimately, the success of an organization depends on the KM process that creates long term benefits, learns new techniques, solves problems, builds core skills and adjusts to new situations [44].

In order to transfer and generate knowledge in them, hospital organizations have taken an interest in communities of practice [45]. Unlike other organizations, however, one of the most complex structures in our society is found by hospital organizations. They require highly divergent activities, such as healthcare, testing, diagnosis and treatment, and hospitalization, surgery and other procedures, as well as complicated decision-making and networking, to be carried out. It was not easy to establish successful KM because of the organizational culture and systems of hospital organizations [46]. In order to share new knowledge and techniques among employees in different ways, various departments within the hospitals should take the KM process [47].

Knowledge Sharing

The sharing of knowledge is one of the key steps in KM processes. Inter-agency knowledge-sharing system may be a strategic system for sectors such as healthcare, which intensify knowledge. The knowledge sharing is an important part of the process of KM in which documented official data are combined with implicit individual knowledge [48]. According to Kim, M. S. [49], studies of knowledge sharing included the study on the interactions between knowledge sharing and the organizational context; study on knowledge sharing, reliability and compensation system; study on the relations between knowledge sharing and organizational structure; study on information technology and Community of Practice (CoP); study on knowledge sharing focused on general organization members; study on the relationship between the chief executive officer and knowledge sharing; study on organizational cultural factors; study on intention and motivation for knowledge sharing; study on attitude of knowledge initiator and receiver; and study on success and impediment factors.

Knowledge database and document / content management systems can be used for conversion of tacit knowledge into explicit knowledge. Data warehousing and data system is a technology that may be used. Tools such as support systems for decision-making can be employed [50] to translate explicit knowledge into tacit knowledge. Knowledge transfer and sharing has three components; people, process and technology. However, proper attention should be given to the right balance of the efforts of these three components for successful KM implementation [51]

Wisdom sharing is the behavior of disseminating the knowledge acquired within the organization with other members. KM is concerned with the way in which knowledge is shared in order to create added value for the organization [48]. One of the tangible manifestations of KM is the process of identification, sharing and use of knowledge and practice within one's own organization [52-53]. The knowledge sharing is a single process and is one of the KM processes. The way individual knowledge is converted to corporate knowledge is an important management issue in the KM process [54-55]. Academics and practitioners should examine behavior in sharing knowledge and propose more practical methods of knowledge sharing in hospitals to achieve a high quality of care and performance [56].

With a hospital in many different jobs, there are conflicts between different groups and professional, administrative and non-professional groups all mix together. In addition, the sharing of knowledge by the medical practitioners can be made difficult by values such as service, autonomy, sincerity, justice and confidentiality [49]. It is not simply a matter of sharing one's knowledge [17]. People will probably not share their knowledge if they don't think it is important and valuable. A previous study showed that "changing people's behavior" [57] is the biggest issue facing organizations in KM. In his comparison of two knowledge sharing systems, Robertson [58] has also demonstrated that knowledge sharing is human activity and the first the step towards the success of such systems is understanding the human who will do it. In general, several contextual factors, such as team structure attention and workflow problems, collaboration practices and the nature of documents to be shared are influencing the success of knowledge sharing systems or knowledge sharing behavior [58].

The advantages of inter-organizational know-how sharing have been huge. Of these, the top 20 advantages have been linked to individual benefits, knowledge sharing, customer advantages, organizational benefits and sector benefits [59]. Specific benefits include enhanced learning, decision-making, problem solving, productivity and job satisfaction. While the advantages of knowledge sharing include improved employee collaboration, rapid flow of information, access / accessibility of information, quality of information, new knowledge creation and networking in

society. The advantages for customers include faster services and reduced problems of error / quality and corporate advantages include saving time, improved organizational learning, reduced duplication and staff saving. In addition, industry advantages such as improving standardization are also available [59-60].

A lot of scientific work on knowledge sharing has recently been carried out [48]. The main purpose of such studies was however to study the problems of knowledge sharing between individuals or organizations members [61]. Most of this research focuses on relations or communication between the members of the organization to understand the factors that affect the exchange or learning of knowledge [62]. Some of the technologies used by KM during transformation of knowledge, i.e. the transformation of one form of knowledge into another form of knowledge in the model involves electronic conference systems, the Internet and a system of group collaboration [34].

Discussion

This systematic review can draw management and technological implications. In the managerial perspective, hospital management and head of knowledge should pay more attention to creating an environment in which employees can develop positive subjective standards and a position towards the management and sharing of knowledge. Achieving this will require the promotion of a variety of cultural factors-professional autonomy [63], the structure of communication and association [64] and previous study proposals [17-53]. This will require support from previous studies. From a technological standpoint, based on all these factors, the KM systems should be established to work more effectively [56].

The revolution in hospital management calls for new procedures and a paradigm shift in today's highly competitive world. In hospitals, any systemic and well-organized procedure will be more successful by documenting it [65]. For hospital management worldwide, this concern is essential regardless of nationality [66]. Improving the hospital management system is considered by emphasizing more on the hospital system [67] and consequently successful hospital management and competitive strategies [68].

Many scholars have emphasized the importance of KM in hospitals. For example, human resource management [69]; stakeholder management [70]; procurement management [71]; cost management [72] and communication management [73]. In hospital management studies, the importance of hospital management such as human resources management and stakeholder management was examined only in some fields of knowledge administration [70]. Different studies focused on the relationship between KM facilitators and processes [74]. However, studies in the field of healthcare and hospitals on how KM enablers affect the KM process remain rare. The KM process lies in the brain of the person with specific knowledge. Therefore, the organizational structure, culture and systems must be understood by hospital organizations to achieve successful KM [34].

Conclusion

Hospital organizations are knowledge-intensive environment involving rapidly changing medical technologies, and requiring tools, skills, and methods with more knowledge resources. There is greater awareness of the importance of KM in hospital organizations. KM is still a multifaceted and much more exportable field of knowledge understanding.

The crucial goal of KM and knowledge sharing is that hospitals must be diverse and autonomous, decentralized and leadership-driven for quick responses. This will enable the hospital to have patient care accuracy and support for clinical decision-making in accordance with the requirements high-performance target. Moreover, hospitals' managers should actively promote a knowledge environment and reward people, such as knowledge brokers. Our study proposes plausible KM approvals with important theory and practice implications. Internal and external knowledge-sharing networks, free communication for information exchange creates a corporate culture that shares knowledge among medical staff within hospitals.

However, as the KM is not in its true role as a scientific area, there are problems and ambiguities about the KM but the experiences of the developed and industrialized countries show that in future the subject of KM will remain an integrated part of organizations.

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Authors declare no conflict of interest

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