

# Analysis of Barriers to Knowledge Distribution in Educational Hospital Managers Using Layer Analysis of Cause Methodology a Study in Hospitals in South East Iran

Moslem Heydari Pur <sup>1</sup>, Amin Torabipur <sup>2\*</sup>, Abbas Yazdanpanah <sup>3</sup>

<sup>1</sup> Department of Health Care Management, faculty Economy and management, Shiraz Branch, Islamic Azad University, Shiraz, Iran.<sup>2</sup> Assistant Professor, Department of Health Services Management, School of Public Health, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran. <sup>3</sup> Department of Health Care Management, Marvdasht Branch, Islamic Azad University, Marvdasht, Iran.

## Abstract

Hospital managers make complex and important decisions for the public health on a daily basis. The quality of these decisions depends on the level of information, experiences, and knowledge of managers. This research was conducted with the aim of identifying the barriers against knowledge dissemination among the hospital managers in the southeast of Iran. The research is a qualitative study with a sample population consisting of all the managers of the educational hospitals affiliated to the medical science universities in the southeast of the country. To collect the data, semi-structured interviews were performed with 26 managers. The results were analyzed by Colaizzi seven-stage method. In the next step, to identify the barriers against the knowledge dissemination of the managers, layer analysis of causes was done. As the results indicated, the main barriers against knowledge dissemination among the hospital managers can be categorized into seven classes including barriers to culture, educational development and promotion, financial facilities, policies, rules and regulations, relations, human resources, and managerial policies. It is finally concluded that knowledge dissemination among managers is essential to enhance their level of knowledge and competence for better decision-making. Also, to enhance the productivity and the quality of services and the satisfaction of customers, the barriers to knowledge dissemination among managers should be removed.

**Keywords:** Knowledge dissemination, Barriers, Layer analysis of causes, Educational hospitals

## INTRODUCTION

One of the most important assets of organizations is knowledge, without which one cannot effectively benefit from other assets such as equipment, buildings, capital, and human workforce <sup>[1]</sup>. Knowledge is a set of experience, values, and new information. It is considered as an asset. Knowledge management involves discovering, developing, sharing, repairing and maintaining, evaluating, and proper utilizing of knowledge to achieve effective productivity through human resources as well as information and communication technology <sup>[2]</sup>. Knowledge management refers to the process of obtaining, distributing, and effectively using knowledge <sup>[3]</sup>. Furthermore, according to another definition, knowledge management is the process of developing, recording, refining, disseminating, and applying knowledge. These five factors in the area of knowledge management provide the ground for education, feedback, and re-education in an organization, which are often used to develop, record, refine, disseminate, and restore the potentials of that organization <sup>[4]</sup>.

Typically, industrial and technology-oriented organizations strive to enhance the rate of innovation in their products. Knowledge management is one of the ways of enhancing the rate of innovation, and world organizational decisions in this regard are directed toward preparing and operationalizing a system for knowledge management <sup>[5]</sup>.

**Address for correspondence:** Mr. Amin Torabipur, Assistant Professor, Department of Health Services Management, School of Public Health, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.  
Email: a@ajums.ac.ir

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Nowadays, the knowledge and the intellectual capitals of organizations are considered among the main competitive advantages. It can be stated that knowledge is the heart of the global economy, which necessitates identifying the key factors of success and practical measures based on influential factors at different stages of designing and deploying a knowledge management system [6]. In order to acquire a competitive advantage, organizations should look for experienced workforce or teach the required skills to them. However, these measures alone are not sufficient; the importance of transferring knowledge and experience from experts to newcomers should also be taken into account [7]. Thus, organizations should exploit their knowledge for desirable decision-making. The quality of decisions is more tangible in the health care area. This brings a need for a different management approach. In general, knowledge management helps to develop the capitals of an organization and to raise its scores [8].

Healthcare services in a society set the ground for the psychological and physical health of individuals and serve as a prerequisite to sustainable development. The healthcare sector, as an organization requiring skilled and knowledgeable staff, is known as a professional service organization. This sector needs to use efficient methods for providing services. Because of its relationship with the public health, attempts are made to improve the service quality, decrease health costs, and meet the needs of clients on time. This is only possible through employing novel methods of information management and allocating suitable time to knowledge management [9]. The issue of enhancing the quality of education in medical science has always been of interest and increasing importance. With regard to rapid and unpredictable changes, healthcare organizations should move toward development along with these changes. Managers and decision-makers in hospitals should also plan to develop knowledge, disseminate it, transfer it, and develop the culture of team learning [10].

## METHOD

The present research is a qualitative study conducted through the phenomenology method. The research population consisted of all the managers of the educational hospitals affiliated to the medical science universities of the southeast of Iran. The data collection instrument was a semi-structured interview. In order for the interviewees to have a greater freedom of action and for the researcher to gain a deeper view and more accurate understanding of the attitudes, open questions were used.

The first section of the interview included questions about the demographic characteristics of the individuals (i.e. their age, gender, level of education, and work experience), while the second group of the questions regarded the barriers of knowledge dissemination among the hospital managers. The questions asked about organizational culture, development and education, organizational processes, participation,

problems and challenges facing the managers, and the factors that created those problems.

In this study, the research sample was chosen through the non-probabilistic sampling method from among managers who had somehow been involved in knowledge dissemination. Sampling was continued until the data obtained from 26 interviewees reached saturation.

The number of interviewees ranged from two to three selected in different hospitals. There were three subjects selected from Afzalipour hospital, two from Shahid Bahonar hospital, three from Shafa hospital, and two from Shahid Beheshti hospital of Kerman city as well as three subjects from Shahid Dastgheyb hospital, three from Namazi hospital, three from Khalili hospital, two from Ibne Sina Hospital, two from Hazrate Zynab hospital, and three from Chamran hospital in Shiraz city. The duration of each interview was at least 15 and at most 50 minutes (with the total mean of 30 minutes).

For data analysis, Colaizzi seven-stage method was used. For this purpose, in the first stage, the recorded conversations were transcribed, and then attempts were made to deeply understand the concepts and the meaning of the transcripts through reading them several times. Each interview was reviewed in the second stage, out of which the statements or sentences directly related to the phenomenon of interest were extracted. In the third stage, a special concept was considered for each of the important extracted sentences. Then, by integrating the codes of the interrelated first level, the second-level codes or sub concepts and the main themes were obtained. In the fifth stage of the analysis, all the results were collected for a comprehensive description of the studied subjects, whereby larger categories were developed. In the sixth stage, a comprehensive description was presented of the studied phenomenon as a clear statement, and then the obtained results were integrated [11].

To comply with ethical considerations in this research, permission and introduction letters were received from the research deputy of the university. Also, permission was obtained from the authorities and managers of the educational hospitals. Then, sufficient and necessary explanations were presented to the interviewees about the importance and the objectives of the research, ensuring them about the absolute confidentiality of information. Also, consent was acquired from them for their optional participation in the research and for recording the interviews.

In order to identify the barriers against the knowledge dissemination of the managers, layer analysis of causes was performed. This analysis is one of the future studies methods devised and elaborated by Dr Soheil Enayatollah. The aim of doing the analysis is to deconstruct social phenomena and achieve a profound understanding about the underlying layers of problems. After unveiling different layers of a phenomenon and setting a text in its context, alternative scenarios that may occur in the future should be developed

and presented. In other words, layer analysis of causes includes four levels: Litany, social causes, discourse/worldview, and metaphor/myth. The first level, Litany, refers to unquestioned and typical view of the reality. The second level involves the level of social causes and a systematic perspective. The Litany data are explained at the second level and then questioned. The third level is discourse or world view. At this level, one can explore how different beneficiaries create Litany and system. Finally, the fourth level, i.e. metaphor/myth, states the emotional dimensions of the unconscious. The linear analysis of causes is a very favorable method with which to classify views and different concentrations about future. Employing this method to recognize the thoughts of different groups is far more effective than individual layers as used in most theories and methods. However, since the theoretical framework of the linear analysis of causes is based on post structuralism, the approach takes up a layered format. In other words, it is a kind of analytical method of explaining different causal currents which are integrated on a subject (i.e. the subject that is analyzed). Such currents involve four main layers as follows:

1. Litany –clamor, media voice, or images: It is experimental, clear, and visible.

2. Social and systematic causes: They are facilitated through academic research and offer a logical understanding of the subject.
3. Worldview and knowledge: These are civilization-based assumptions that are not reminded of by people unless they get familiar with other societies and cultures or countries, research centers, villages, and overseas companies.
4. Metaphor/myth: It is the basis of existence. It is a structure which eventually plays its role in developing intersubjective meaning and understanding self or the other; it is the unconscious order of the world.

Layer analysis of causes is not a statement about future itself; rather, it is a method to analyze the statements about images in the future (layer analysis book).

## RESULTS

The analysis of the research data was performed in seven major layers including culture, financial facilities, development and promotion of education, policies, laws and regulations, relations, human resources, and management process. Table 1 presents the classes and subclasses as well as their descriptions.

**Table 1.** The themes extracted from the experience of participants

Classes subclasses	
<p style="text-align: center;"><b>1) Culture</b></p> <p>1-1) Inadequate care for training managers</p> <p>1-2) No adequate care for the effect of transferring knowledge and experience</p> <p>1-3) Absence of a system for recording and maintaining information and knowledge</p> <p>1-4) Allowing subjective opinions to interfere in information exchange</p> <p style="text-align: center;"><b>2) Financial facilities</b></p> <p>2-1) financial incentives</p> <p>2-1-1) lack of financial support to increase motivation</p> <p>2-1-2) absence of a suitable financial structure and process in the university</p> <p>2-1-3) delayed payment of perquisites</p> <p>2-1-4) not paying the wage to transfer knowledge by managers</p> <p style="text-align: center;"><b>3) Development and promotion of education</b></p> <p>3-1) empowering managers</p> <p>3-2) educational system of managers</p> <p>3-3) educational content</p> <p>3-4) motivation of education in managers</p> <p>3-5) internalizing education</p> <p>3-6) evaluating educational activities</p> <p>3-7) necessity of orienting education based on needs</p> <p style="text-align: center;"><b>4) Policies, laws, and regulations</b></p> <p>4-1) not supporting managers</p> <p>4-2) mismatch between workload and job</p> <p>4-3) absence of proper structure for policymaking and laws</p> <p>4-4) introducing inexperienced individuals into the system</p> <p style="text-align: center;"><b>5) Communications</b></p> <p>5-1) benefiting from suitable communicative methods</p> <p>5-2) intradepartmental communications</p> <p>5-3) extra departmental communications</p> <p>5-4) use of information technology in facilitating communications</p> <p style="text-align: center;"><b>6) Human resources</b></p> <p>6-1) responsibility</p> <p>6-2) moral characteristics</p> <p>6-3) psychological status</p> <p>6-4) preoccupation outside the workplace</p>	<p>1-5) Existence of some competitive characteristics</p> <p>1-6) Lack of planning to enhance personal awareness</p> <p>1-7) Internalizing the culture of training</p> <p>1-8) No care for the position of hospital management</p> <p>2-1-5) economic conditions of individuals</p> <p>2-1-6) strengthening and absorbing financial resources</p> <p>2-2) facilities and equipment</p> <p>2-2-1) using educational facilities</p> <p>2-2-2) shortage of facilities</p> <p>3-8) employing experienced professors</p> <p>3-9) organizational development</p> <p>3-10) new approach to educating managers</p> <p>3-11) managers caring for education</p> <p>3-12) introducing managers into the area of education</p> <p>3-13) absence of local education education based on needs</p> <p>4-5) existence of wrong educational policies</p> <p>4-6) going through logical processes of policymaking</p> <p>4-7) impractical education of managers by the university</p> <p>4-8) absence of occupational independence</p> <p>4-9) occupational instability of managers</p> <p>5-5) knowledge of managers about communication skills</p> <p>5-6) face-to-face communication and meetings</p> <p>5-7) interaction among managers</p> <p>5-8) discontinuous communication among managers</p> <p>6-5) motivation of managers</p> <p>6-6) toughness of senior employees</p> <p>6-7) educating the human resources</p> <p>6-8) participation of the human resources</p> <p>6-9) occupational mistakes of the human resources</p>

**7) Managerial policies**

- 7-1) adequate attention to competence of individuals
- 7-2) inadequate attention to criticisms and suggestions
- 7-3) time-consuming classes
- 7-4) adequate attention to occupational errors

**7-5) employing competent individuals**

- 7-6) improper planning**
- 7-7) proper notification for holding classes**
- 7-8) proper educational needs assessment**
- 7-9) participation and teamwork**
- 7-10) shortage of time for managers**

## Culture

According to the managers, culture problems were found as barriers against knowledge dissemination. The culture problems found included insufficient care for training managers, inadequate care for the effect of transferring experience and knowledge, absence of a system for recording and maintaining information and knowledge, allowing subjective opinions to interfere in information exchange, presence of some competitive characteristics, lack of planning for enhancing personal awareness, internalizing the culture of education, lack of care for the status of hospital management, and caring about past experiences. These items are explained in the following.

### 1. Inadequate care for training managers:

According to the managers' opinion, inadequate care for training managers on the part of managers themselves, top-ranking authorities, and the educational system along with ignoring the promotion of managers is a cultural problem. Participant manager 2 believed that "some of the top-ranking authorities do not care very much across the country, and superordinate managers do not give the necessary support to managers under them". Participant manager 3 stated that "some people think that managers do not need training, but special courses have been devised for managers".

### 2. Inadequate care for the effect of transferring knowledge and experience:

According to the managers, the effects of transferring knowledge and experience are not sufficiently taken care of, and individuals are not aware of the subsequent effect or outcome of transferring knowledge. In this regard, manager 14 stated that "individuals are not aware of the effect of knowledge dissemination in the organization and in their personal life". Manager 17 believed that "if managers transfer knowledge, patients, personnel, and even the relatives of the managers themselves as patients will benefit". Also, participant 13 stated that "the system does not care about transferring the experience of personnel and managers".

### 3. Absence of a system for recording and maintaining information and knowledge:

One of the cultural factors that lead to a lack of knowledge dissemination is avoidance of recording and maintaining the experiences of personnel in written or documented forms which can be later provided to others. In this regard, participant 13 stated that "managers should provide their experiences in a written format to others". Similarly, participant 14 stated that "to record and maintain the experiences of managers, a person can be employed to write down their activities".

### 4. Allowing subjective opinions to interfere with information exchange:

According to some managers, some individuals let their subjective opinions interfere with information exchange, which can have both positive and negative effects, but causing no transferring of the main information and knowledge. In this regard, manager 9 believed that "subjective opinions in knowledge dissemination can be positive and negative, but it generally alters the knowledge". Similarly, participant 10 believed that "some decisions have become arbitrary and are made based on personal opinions and knowledge, which can be effective in critical decision-making".

### 5. Existence of some competitive characteristics:

The managers believe that some negative competitive characteristics such as jealousy and creation of a competitor alongside oneself cause no dissemination of knowledge. They also believe that their superiority is due to their knowledge and experience. In this regard, manager 8 stated that "some hospital managers do not share information with other hospitals". Likewise, as participant 14 said, "if I teach a person my skills and guide him or her, I will create a competitor for myself".

### 6. Lack of a plan to enhance personal awareness:

According to the managers, one of the barriers to knowledge dissemination is the absence of increased personal awareness, whose existence would help managers have a better or deeper understanding of the environment. In this regard, participant 5 stated that "some of the information that managers have is contingent upon them, and they can be up to date through studying". Also participant 9 stated that "humans should be interested in studying from a cultural point of view".

### 7. Internalizing the culture of training:

According to the managers, internalizing personal and organizational culture of training leads to increased knowledge dissemination. In this regard, participant 11 believed that "to internalize the culture of education, individuals should consider the outcome of education". Also, manager 14 stated that "people do not know what the effects of knowledge dissemination would be in the society".

### 8. No care for the position of hospital management:

According to the managers, the management position of hospitals has remained undefined. Furthermore, as put by participant 2, "hospital managers are not known to others unlike heads and physicians". Also, participant 18 stated that "the position of hospital managers is still undefined".

### 9. Caring about past experiences:

As the managers held, another barrier to knowledge dissemination is the lack of care for past experiences, which could help to update knowledge. In this regard, participant 21 stated that “although science has progressed so far, past experiences are still effective”. Also, manager 22 believed that “some old and retired professors provide their experiences to corresponding individuals, which is helpful”.

## Financial facilities

According to the managers, the problems associated with financial facilities are known as barriers to knowledge dissemination. These problems include those related to financial incentives as well as equipment and facilities. Such types of problems are explained below.

### 1. Financial incentives

#### *1-1): Lack of financial support to increase motivation:*

The managers believed that, if there exists financial motivation, it contributes to knowledge and information dissemination of the company. Furthermore, if there is any motivation in an organization for knowledge transfer, it is personal and individual motivation. Participant 20 expressed that “most people think what they give in exchange for time should be spent for them”. Also, participant 18 believed that “in the present state of affairs, knowledge dissemination without financial support is not performed either organizationally or personally”.

*1-2): Absence of a suitable financial structure or process in the university:* According to the managers, absence of a proper structure to meet the financial needs of managers causes diminished knowledge dissemination in them. In this regard, participant 13 believed that “managers’ needs are not met, and they have financial needs”. Also, manager 23 stated that “educational hospitals have residents, while they do not need a resident doctor. The medical science university has spent too much money”.

#### *1-3) Delayed payment of perquisites:*

According to the managers, their salary and perquisites are not paid on time. As they said, the payments have become irregular, causing diminished anxiety and unfavorable information sharing among managers.

In this regard, manager 24 stated that “payment regularity is far better than the amount of payment. If the payment is regular, the personnel have a greater motivation for knowledge dissemination”.

#### *1-4) Paying nothing to managers for transferring knowledge:*

Managers receive nothing for disseminating knowledge and experience, and hospitals do not have any budget for transferring knowledge and education. In this regard, manager 18 stated that “disseminating knowledge and experience or not doing that has no effect on the payment of managers”.

#### *1-5): The economic status of individuals:*

According to the managers, individuals disseminate or promote their knowledge on the basis of their economic conditions. Participant 21 believed that “actually, financial motivation should not be considered in transferring knowledge and experience. However, considering the economic and financial conditions of individuals, a percentage of motivations have become financial motivations”. Similarly, participant 15 stated that “financial motivation is important because all people want to be promoted, and having a degree leads to responsibility, which, in turn, brings more perquisites”.

#### *1-6): strengthening and absorbing financial resources:*

As the managers believed, strengthening and absorbing financial resources can be of effect on knowledge dissemination. In this regard, manager 23 stated that “the major support insurance is the health system transformation plan, but it does not continue its support”.

### 2. Facilities and equipment

#### *2-1) Deficiency of equipment:*

The managers believed that the deficiency of equipment including medical and educational equipment can impede knowledge transfer. In this regard, manager 5 stated that “shortage of equipment causes diminished knowledge and experience dissemination”.

#### *2-2) Use of educational facilities:*

The managers believe that some educational facilities cause better participation and information exchange. In this regard, participant 22 stated that “facilities, such as hall, audio play and communication systems, and interesting discussions cause greater participation”. Also, participant 24 stated that “use of educational facilities is contingent upon the competence of the manager. This means that a manager interested in information dissemination cites credible references based on facts and figures”.

#### *2-3) deficiency of facilities:*

According to the managers, deficiency of facilities such as the Internet and free telephone lines causes diminished knowledge dissemination. Manager 20 stated that “limited Internet, low Internet speed, and absence of free telephone lines in some places are deterrent to dissemination of knowledge”. Also, manager 16 believed that “the expensiveness of some facilities impedes knowledge and experience transfer”.

## Educational development and promotion

According to the managers, educational development and promotion of managers are found as the factors underlying knowledge dissemination. The issues associated with educational development and promotion include empowerment of managers, educational system of managers, educational content, motivation for education in managers, internalization of education, evaluation of educational activities, the necessity of orienting the education based on needs, use of experienced professors, organizational development, devising new approaches to educating managers, the extent to which managers care about education,

involvement of managers in the area of education, and absence of local education.

**1) Empowerment of managers:**

It is believed that educational courses and exposure of managers to large workplaces cause enhanced competence of managers and, thus, knowledge dissemination. In this regard, manager 8 stated that “if a manager enters a large environment, over time, his or her knowledge and information will grow”. Also, manager 9 stated that “educational courses in crisis management are helpful for dramatic changes in the hospital”.

**2) The educational system of managers:**

In the opinion of the managers, one of the barriers against knowledge dissemination is lack of up-to-date knowledge. Managers should be able to transfer their up-to-date experience and knowledge to others. In this regard, participant 24 stated that “managers should be up-to-date and able to educate, and their education should continue”.

**3) The contents of education:**

The managers believed that suitable educational contents and proper selection of instructors help to enhance motivation for class participation, for example as manager 2 put it. Also, participant 20 stated that “if contents are practical, they would be more welcomed by the personnel”.

**4) Motivation for education in managers:**

In the opinion of the managers, some factors have positive and negative effects on the educational activities of managers. For example, bureaucracy causes diminished educational motivation, while retraining and reviews increase their motivation. Participant 21 stated that “if there are scores given in retraining classes, class participation will grow”. Also, manager 22 believed that the reviews that the managers of other hospitals had done of his hospital gladdened him and increased his self-confidence”.

**5) Internalization of education:**

From the viewpoint of the managers, one of the factors that account for the lack of knowledge dissemination is failure to internalize education among managers. In this regard, manager 18 stated that “knowledge and science are internalized when the student is also exposed to real settings with a proper context”. Also, manager 23 believed that “for constant transference of experiences and information, the persistence of managers themselves has a role in compliance and implementation by the opposite party”.

**6) Evaluation of educational activities:**

In the opinion of the managers, evaluating educational activities leads to increased knowledge dissemination. They stated that educational evaluation causes increased quality as well. Participant 12 believed that “the education of our managers is very good in theory, but it should also be evaluated in practice”. Similarly, participant 23 stated that “education has lost its quality;

they suffered a lot for us to be well-educated when we were students, but now the students have an easy time”.

**7) The necessity of orienting education based on needs:**

The managers believed that some educational systems are not responsive to the needs of managers, and they do not assess educational needs. This is what was expressed by manager 6. Also, participant 12 stated that “the totality of educational needs assessment is defective”.

**8) Use of skilled professors:**

Some managers believe that skilled professors are not used in educational classes, and they mostly teach theoretical points. It is also believed, as stated by participant 23, that, in classes, managers provide more information than professors do. The participant further said, “in educational classes that are run for the managers, many professors have unfortunately not been managers already and do not have executive experience”.

**9) Organizational development:**

According to the managers, the only organizations that can disseminate knowledge are those that are close to the learner’s organization. Indeed, an organization should be knowledge-oriented. In this regard, participant 19 stated that “we should see how close our organization is to the learner’s organization”. Also, manager 15 said that “if an organization is not knowledge-oriented, knowledge, experience, and education are meaningless”.

**10) New approach to educating managers:**

As the managers put it, new approaches have been effective in their education. Participant 21 stated that “in new classes and methods, I could recognize my needs and strengths”. Also, manager 14 expressed that “management students should be alongside managers longer; that is to say, the final education should be performed in a real context”.

**11) Managers’ care for education:**

According to what the managers expressed, one of the barriers against knowledge dissemination is lack of care for education. They believed that managers should be interested in education. In this regard, manager 19 stated that “in our organization, the care fore and interest in education depends on the taste and mood of managers”. Also, participant 13 stated that “managers do not have the time for training and education, and their conditions in this regard are not good”.

**12) Lack of local education:**

As the managers put it, certain new instructions that are not local and adapted to the conditions of the organization have deterred knowledge dissemination. This is what participants 20 and 23 clearly referred to.

**Policies, laws, and regulations**

According to the managers, the problems associated with policies, laws, and regulations are viewed as barriers against knowledge dissemination. These problems include lack of support for managers, mismatch between the workload and the job, absence of a proper structure for policymaking and laws, recruitment of inexperienced individuals into the system, presence of wrong educational policies, lack of

logical processes of policymaking, impractical education of managers by the university, lack of occupational independence, and occupational instability of managers.

**1) Lack of support for managers:**

According to one of the managers, an important barrier against knowledge dissemination by managers is lack of support for them. It is believed that medical dominance and absence of a reference or a guild is one of the causes of lack of support. In this regard, manager 17 stated that “physicians’ dominance in some places has inhibited the management knowledge from manifesting itself”. Also, participant 7 stated that “managers do not have a guide or a system like nurses or physicians do, and they are not supported. In the view of many people, they are executors”.

**2) Mismatch between the workload and the job:**

The managers believed that those who have a huge workload do not have enough time to study and transfer knowledge and experience. In this regard, participant 20 believed that “those with a huge workload do not have enough time to gather their personnel to explain some tasks to them”. Also, participant 18 stated that “decisions have to be made about so many issues by hospital managers, and, thus, many of them do not find any opportunity to transfer knowledge and experience”.

**3) Lack of a suitable structure for policymaking and laws:**

One of the barriers against knowledge dissemination by managers is the lack of a suitable structure for policymaking and laws. According to them, some of the instructions that are designed by the ministry are rarely in line with the demands of the environment. Participant 22 stated that “Rating and validation are good provided that they do not impede some people but promote some others”. Also, manager 24 held that “the instructions are dictated from top down, i.e. from the ministry, and they are mostly based on the requirements of the ministry”.

**4) Recruitment of inexperienced individuals into the system:**

According to the managers, one of the barriers against knowledge dissemination is introduction of experienced individuals to the system. When these persons enter the system, they drain the opportunities, energy and power of the system instead of paving the way real education. In this regard, manager 24 stated that “New untrained personnel cause damage to the patients, create dissatisfaction, and form a vicious cycle”. Also, participant 23 stated that “the students who have not experienced quality education enter the system and drain the opportunities, energy, and power of the system instead of getting real education.

**5) Wrong educational policies:**

As the managers believed, the existence of certain wrong educational policies is one of the barriers against knowledge dissemination. The classes are boring, and students participate in them only to get a certificate. In this regard, participant 16 stated that “in some classes

and courses, educational pamphlets are taught, but the personnel dislike the classes”. Also, manager 18 stated that “in the hospital complex, unfortunately, the education has changed into a system only for issuing certificates”.

**6) Need for logical processes of policymaking:**

The managers believed that there is a system for recording experiences, but the important point is to promote and follow up these experiences. Manager 7 believed that “when we implement our policies and record our working procedures on paper, we can have knowledge transfer. Also, manager 16 believed that “the authorities at high levels of the organizational hierarchy can remove the barriers against transferring knowledge and experience”.

**7) Absence of practical education for managers by the university:**

Based on what the managers said, one of the barriers against knowledge dissemination is unfamiliarity with hardware and software that can be helpful in transferring knowledge and experience. In this regard, participant 17 stated that “familiarity with the available software and hardware can be helpful in transferring knowledge and experience”. Also, participant 14 stated that “the middle-level authorities of the hospital have not passed any management courses”.

**8) Lack of occupational independence:**

According to the managers, one of the barriers against knowledge dissemination is the lack of occupational independence for the managers. As they observe, mistrust in managers has diminished knowledge dissemination. In this regard, participant 14 believed that “we have not been able to trust managers yet; we prefer to have a head for the hospital even if he is not physically available”.

**9) Occupational instability of managers:**

According to the managers, occupational instability of managers causes failure in knowledge dissemination. Manager 23 stated that “to record information and experiences, the managers first consider their maintenance in that position”.

## Communication

The problems associated with communication have been found as barriers against knowledge dissemination. These problems concern benefiting from suitable communication methods, intra-departmental relations, extra-departmental relations, use of information technology to facilitate the relations, managers’ awareness of communication skills, face-to-face communication, and meetings.

**1) Benefiting from suitable communication methods:**

According to the managers, benefiting from suitable, efficient methods such as telephone, the Internet, articles, and social networks can contribute to transference and dissemination of knowledge and experience. In this regard, participant 16 believed that “some facilities such as the Internet and telegram groups can result in

transference and dissemination of knowledge and experience”. Also, participant 12 believed that “articles can be more shared on telegram and other social networks”.

**2) Intra-departmental communication:**

As the managers observed, one of the barriers against dissemination of knowledge and experience is the lack of suitable intradepartmental communication. If executive processes are beset by any problem, it can be solved by holding meetings with the corresponding teams and making the required coordination. In this regard, participant 20 stated that “if letters and circulars are clarified enough to convey the subject, referrals become less frequent”. Also, manager 21 believed that “to visit the wards, there are different rounds to take”.

**3) Extra-departmental communication:**

As viewed by the managers, one of the barriers against transferring knowledge is the lack of extra-departmental communication. Basically, organizations can acquire the knowledge and experience of other organizations. In this regard, manager 15 stated that organizations can send their managers to other areas for knowledge transference”. Also, manager 19 believed that “good and close communication between the faculties and the hospital can lead to knowledge transference”.

**4) Use of information technology to facilitate communication:**

The managers believed that use of information technology in the education can cause knowledge and experience dissemination. In this regard, participant 1 stated that “information technology in virtual classes can help to transfer knowledge and experience”. Also, manager 22 stated that “ HIS system offers a lot of information as about budget, service, and human resources within the shortest possible time”.

**5) The managers’ awareness of communication skills:**

According to the managers, awareness of communication skills can cause increased knowledge and experience dissemination. Participant 17 believed that “if anyone has motivation for work and knows communication skills, he or she will definitely be successful in transferring knowledge”. Also, participant 14 stated that “possibly, motivation and communication skills are the two principal wings of knowledge transfer”.

**6) Face-to-face communication and meetings:**

As granted by the managers, and specifically worded by manager 15 “knowledge and experience transfer occurs in consultations, dialogues, meetings, committees, and visits”. Also, as manager 18 stated, “participation of individuals in scientific discussions results in transference of experiences”.

**7) Interaction between managers:**

According to the managers, mutual communication among the personnel leads to interaction among managers. Also, when managers interact with officials and employees, knowledge transfer happens. Manager 6 believed that “the closer the communication, the better mutual interaction among the personnel, thereby

improving knowledge transfer”. Also, manager 1 stated that “when managers interact with officials and employees, it causes increased knowledge and information transfer by them”.

**8) Discontinuous communication between managers:**

As the managers put it, discontinuous relations of managers are one of the barriers against knowledge and experience transfer. They believed that the most important means of knowledge and experience transfer is communication. This was clearly postulated by manager 14. In this regard, participant 2 also stated that “discontinuous communication between managers themselves andand with the personnel leads to diminished knowledge and experience transfer”.

### Human resources

As viewed by the managers, the problems associated with human resources are barriers against knowledge dissemination. These problems regard responsibility, moral characteristics, psychological status, occupation outside the workplace, motivation of managers, toughness of senior employees, education of the human resources, participation of human resources, and vocational mistakes of the human resources.

**1) Responsibility:**

The managers believed that some of them do not feel responsible enough to care about the organization, and some managers even abuse the system. Manager 12 believed that “instead of caring about the organization, some managers only think about themselves”. Also, participant 20 believed that “some managers do not care for the feedback of meetings, and the only important thing is just holding the meetings. Some policies are wrong”.

**2) Moral characteristics:**

According to the managers, some people easily share their experiences with others. Manager 14 stated that “knowledge transfer and dissemination is conscience-dependent”. Also, manager 16 believed that “personality is very important; jealousy and narrowmindedness cause some people not to share their knowledge and experience with others”.

**3) Psychological status:**

The managers believed that stress inhibits knowledge dissemination. Manager 14 believed that “if a person gets stressed, he cannot use his knowledge properly or transfer it. This is the negative dimension of stress”. Also, manager 1 believed that “stress has a negative impact on transferring knowledge and experience”.

**4) Occupation outside the workplace:**

According to managers, occupation outside the workplace is another barrier against transferring and disseminating knowledge. Manager 16 said that “if I find one of my subordinates with a problem, I care more about the way I treat him or her and try to behave gently”.

**5) Motivation of managers:**

As granted by the managers and clearly worded by manager 17 and participant 19, knowledge transfer needs a high level of motivation, and, in some cases, managers do not have any motivation to promote their own knowledge.

**6) The toughness of senior employees:**

The managers believed that the toughness and resistance of individuals to change would result in no dissemination of knowledge. Manager 20 stated that “employees show some resistance to certain circulars”. Also, manager 24 believed that “when a manager wants to change a wrong process, the others say it has been traditionally in this way”.

**7) Educating the human workforce:**

According to the managers, the people who are educated and have adequate knowledge can successfully transfer their knowledge. Manager 17 believed that “if dissemination has been already done, the decision will be more coordinated and better”. Also, manager 12 stated that “I believe that a person who wants to disseminate knowledge should have the necessary knowledge and be free from any fear”.

**8) Participation of the human workforce:**

As expressed by the managers, participation of individuals is of effect on knowledge transfer, and individualism is one of the harms to the system. Manager 17 stated that “participation has a good and positive effect on transferring experiences”. Also, manager 19 stated that “educational hospitals are not individual-oriented because different scientific groups are involved and share their knowledge and experience”.

**9) The vocational mistakes of the human workforce:**

The managers believed that transferring knowledge and experience would diminish vocational mistakes and prevent rework. This was stated by participant 13. Also, manager 1 stated that “in administrative areas, knowledge transfer leads to reduction of errors; anyone who does not follow specific frameworks contributes to errors”.

### Managerial policies

According to the managers, the issues associated with managerial policies pose certain barriers against knowledge dissemination. These issues include inadequate attention paid to the competence of individuals, inadequate attention paid to criticisms and suggestions, time-consuming classes, inadequate care for vocational errors, use of competent individuals, improper planning, improper notification for holding classes, improper educational needs assessment, lack of teamwork and participation, and shortage of time for managers.

**1) Inadequate attention to the competence of individuals:**

According to the managers, officials should support experienced individuals because those who are more competent can better disseminate their knowledge. Manager 7 stated that “the managers should support the

personnel who have knowledge and experience”. Also, manager 12 believed that “when individuals are competent and organization cares about them, they disseminate their knowledge. This is because they can feel confident about their position”.

**2) Inadequate attention to criticisms and suggestions:**

As seen by the managers, another barrier against knowledge dissemination is ignoring criticisms and suggestions. In this regard, participant 23 stated that “I have made some suggestions to the university in a written form, but it is not very welcomed”. Also, manager 15 believed that “managers can be influential in educational planning through giving suggestions”.

**3) Time-consuming classes:**

The managers believed that some of the classes that are time-consuming cause diminished knowledge dissemination. As manager 8 said, “some classes are time-consuming, and managers do not have time to participate in them”. Also, participant 3 stated that “some classes should be held as virtual courses”.

**4) Use of competent individuals:**

The managers believed that use of competent individuals causes enhanced knowledge and information transfer. Participant 13 believed that “when managers are competent, they choose competent individuals as their subordinates and do not fear them”.

**5) Improper planning:**

Some believe that that improper planning during working hours causes diminished knowledge dissemination. Manager 16 stated that “as observed in some departments, an official may give an order to employees to only perform administrative tasks at a specific hour and not to respond to anyone”.

**6) Proper notification for holding classes:**

The managers believed that improper notification for holding some classes is one of the barriers against knowledge dissemination. Manager 8 believed that “the procedure of notification is good, and the personnel are notified of the classes through educational IDs”. Also, manager 9 believed that “no one in the hospital becomes aware of the classes due to communication problems”.

**7) Improper educational needs assessment:**

According to the managers, improper educational needs assessment deters knowledge dissemination. Manager 22 stated that “educational needs assessment is performed at the beginning of every year”. Also, participant 21 announced that “in our hospital, educational classes are performed based on the needs assessment of each unit such as services, equipment, and human workforce”.

**8) Teamwork and participation:**

According to the managers, teamwork and participation of managers cause increased knowledge dissemination. Manager 13 stated that “a manager should help others to reach a consensus through meetings with participation of others”. Also, manager 17 believed that “if knowledge dissemination is purposeful, it will be effective in promoting teamwork”.

**9) Managers' shortage of time:**

As the managers admitted, one of the barriers against knowledge dissemination is shortage of time. In this regard, participant 12 stated that “time is precious and we are not supposed to experience everything and see whether it is good or bad”. Also, manager 1 stated that “given the workload and preoccupations that managers have, they should receive virtual training”.

To analyze the findings obtained from the research, layer analysis of causes is performed as follows. *Litany factors*:

Based on the investigations and the analysis of the data obtained from the managers, the major causes that are effective as Litany factors for knowledge dissemination are mostly related to the areas of preferring rest and repose to education, the sheer number of clients and crowd, familial and educational problems, boredom, huge workload, having to do numerous activities, and lack of time. Furthermore, the total score that the managers gave to superficial and Litany factors affecting the lack of knowledge dissemination is evaluated as good. This suggests that, in the managers’ opinion, superficial and Litany factors are of effect on knowledge dissemination.

**Social factors:** They refer to problems associated with the factors of culture, communication, and human resources.

#### Discourse/worldview:

Spread of knowledge among managers for suitable and critical decision-making, developing culture among managers to internalize the culture of education and knowledge, caring about past experiences and planning to develop occupational and educational laws and policies for managers, and use of information technology, communication, and education to disseminate and generate knowledge in the future.

#### Metaphor/myth:

Knowledge dissemination for personal empowerment, organizational development through knowledge dissemination, knowledge dissemination to create power and competition, rational knowledge-oriented policymaking, education-based knowledge development, transformation based on knowledge, knowledge as a key to knowledge creation, knowledge-induced participation, knowledge dissemination for organizational supports, and knowledge dissemination for transparency in organizational communications.

## DISCUSSION

The findings of the present research indicated that the main barriers against knowledge dissemination among managers can be discussed in terms of culture and financial facilities. The latter is classified into two subclasses including financial incentives and equipment. Development and promotion of education, policies, laws and regulations, communications, human resources, and managerial policies were found as

issues related to other barriers. In a study, the factors affecting knowledge management were mentioned as storing, refining, evaluating, and developing the culture of knowledge. It is congruent with the factor of caring about the effect of transferring knowledge and experience as well as the presence of a system for recording and maintaining information and knowledge (culture) <sup>[12]</sup>. To enhance knowledge dissemination, concentration should be placed on developing new skills, new services, and better opinions and processes. Having an intra-organizational network and facilitating the communication among the individuals inside the organization are the key points of this process <sup>[13]</sup>. In a study, indicated that there is a positive correlation between the components of knowledge management and the extent of employees’ trust in information technology, which is in line with the factor of information technology (communications) <sup>[14]</sup>. Also, Akhavan Harazian and Qodsi reported that strong organizational culture in effective implementation of knowledge management is dependent on rapid and trouble-free interaction and communication in the organization, supporting innovations and personal opinions of employees, and delegating authority and decision-making power, which is congruent with the findings of the present study <sup>[15]</sup>. According to the results obtained in a piece of research conducted in small and medium-sized health technology companies, these companies have not accepted the concepts of knowledge management. Also, they do not have the necessary resources to obtain these concepts. Use of knowledge management for these companies occurs just informally, suggesting that the information is transferred informally through human interactions, not through information systems. In such companies, knowledge management is not important, though it seems that their financial performance can be profitable through the potential of knowledge development.

The findings of a study indicated that there is a negative and significant correlation between submissive and defensive voices and sharing knowledge among faculty members. However, there is a significant positive correlation between altruistic voices and knowledge sharing among faculty members <sup>[16]</sup>. In another study, in addition to the matching and coordinating of information, the effective elements in knowledge dissemination were stated to be source, message content, context, and user media <sup>[17]</sup>. In a study, Heydaripour *et al.* stated that extensive use of information technology in the health sector can enhance the quality of services and improve management performance, risk management, and productivity of healthcare services. In their paper, use of information technology was recommended to reduce costs, accelerate and facilitate medical diagnoses, reduce the risks, and enhance the attention of managers to use and develop information technology. These findings are in line with the results of the present study <sup>[18]</sup>. Rasouli and Rezainik stated that the major barriers in cooperation and knowledge sharing include personal barriers (crowded turn, fatigue, and ineffective communication), structural barriers (poor educational planning), and management barriers (complaints

by the patient and their companions). The other barriers were found to be related to such factors as facilitating cooperation and knowledge sharing, enjoying adequate knowledge and skill, providing a supportive environment, making proper educational plans, specifying the duties, and determining the responsive persons. These findings are congruent with those of the present research<sup>[19]</sup>. Skandari and Valavi stated that the main barriers to knowledge sharing include technological factors, personal factors, structural factors, and cultural factors. However, the order of importance of these barriers is different from organization to organization<sup>[20]</sup>. In a study conducted in the field of health-care, it was found that the process of knowledge creation has a positive and significant structural effect on organizational innovation. This effect has been confirmed through organizational training. That study also indicated that organizational training has a positive and significant effect on organizational innovation. It is expected that organizations will be able to enhance innovation and knowledge creation by benefiting from knowledge creation processes and developing work teams, and social networks<sup>[21]</sup>.

## CONCLUSION

Nowadays, with respect to the current competitive and variable conditions, hospitals should eliminate barriers against knowledge dissemination to provide desirable quality services at low costs. The results of this study indicated that knowledge dissemination among the hospital managers in the southeast of Iran is beset by some problems. One of these problems is cultural barriers. It is, therefore, suggested that educational culture and participatory work be internalized by caring about proper education, developing the culture of studying, and transferring knowledge and experience in hospitals and universities.

Financial facilities are another factor that account for the failure of knowledge dissemination. It is suggested that the Ministry of Public Health along with universities predict suitable structures in their financial processes and dedicate enough resources in this case. Also, promotion of education can be effective in knowledge dissemination. In this regard, it is suggested that, by reviewing and evaluating the educational system and programs, personal development occur in line with the enhancement of educational contents, managers' motivation for education be increased and the organization become knowledge-oriented.

With regard to policies, laws, and regulations, it is suggested that the authorities and stakeholders of healthcare consider reviewing some laws and policies to support managers and their occupational stability and educational policies. They can enhance the quality of education at universities and evaluate processes at universities and hospitals for gaining a proper outcome. Also, caring about intra-departmental and extra-departmental communications and using information technology have a constructive role in knowledge dissemination among managers. It is suggested that managers benefit from suitable methods and communication skills and

have personal and organizational interactions with one another.

In the area of human resources, irresponsibility and lack of care for the entire organization, certain moral traits and personal characteristics, lack of participation, occupational errors, boredom, and toughness of senior employees are among the barriers against knowledge dissemination. It is suggested that the barriers against knowledge dissemination be eliminated through proper planning, caring about suggestions and criticisms of managers, meritocracy, caring about empowerment of managers, proper notification, and movement of managers towards participatory and team processes.

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