Original Article

Barriers to Knowledge Management Implementation at Fasa Health Center: A Qualitative Content Analysis Study

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Abstract

Background & Objective: Knowledge growth has been very rapid in recent years. Health centers can implement knowledge management in their organization to improve service quality, reduce costs and time, strengthen relationships among colleagues, and produce knowledge faster by reviewing barriers to knowledge management implementation at fasa health center.

Material & Methodes: In this qualitative study, some managers of Fasa Health Center were selected based on purposive sampling and the study continued until data saturation. Finally, 5 people were interviewed. Information gathering tools were MAXQDA software and data obtained from the semi-structured interview. Content analysis was used to analyze the data.

Results: The findings lead to the extraction of a core theme as barriers to knowledge management implementation that consist of 5 categories: 1- Barrier of organizational structure (with 5 subcategories), 2- Barrier of individual factor (with 3 subcategories) 3- Barrier of Organizational culture (with 4 subcategories) 4- Barrier of information technology (with 6 subcategories) 5-Barrier of management agent (with 4 subcategories)

Conclusion: The results showed that university authorities can provide appropriate culture, motivational factors to accelerate more case finding, expedite electronic health records, disease eradication, better cost management, disaster management, electronic submission of monthly data, eliminating the paper, and increasing staff productivity faster.

Keywords: knowledge management, qualitative research, Iran, barrier

Introduction

The basic economic resource-the means of production -is no longer capital, nor natural resource, nor labor. It is and will be knowledge."(1)Knowledge has become the most important factor that is associated with the ability of organizations to gain competitive advantage (2) and is becoming a driving force for organizational change and wealth creation(3). The growth of knowledge has been so fast in recent years that in the 20th century, 80% of all technological and scientific discoveries, as well as 90% of all technical knowledge and information in the world, has given rise to a new management approach called "knowledge management".

The focus of knowledge management is on improving organizational capability. Success in knowledge management requires the creation of a new work environment where knowledge and experience can be easily shared(4).

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The importance of knowledge management is doubling because of the growing challenges facing the health system. The increasing prevalence of non-communicable diseases and the recurrence of communicable diseases, severe environmental problems and large-scale natural disasters all emphasize the importance of utilizing the knowledge and experiences gained in the health system(5).

Organizations are stepping into the field of knowledge management to improve and maintain their competitive power. There is also competition in health-centric organizations linked to community health systems. In organizations and health systems, there is a gap between knowledge management and their performance which must be removed (6).

Since in organizations, the view of knowledge management is not a comprehensive one, so the formulation of a system that can synchronize all the knowledge processes of the organization with the goals of management and specify the responsibilities and duties of each body is one of the intellectual concerns of organizations, especially in organizations that are concerned with community health. This set of conditions has created a system gap that can synchronize activities from the highest level to the lowest level involved in the problem.(7)

Factors that influence knowledge management implementation include information technology, organizational structure, organizational culture, motivation, and managerial factors (8)

Anjum Razzaque (Ahlia University, Bahrain) emphasizes the barriers in adopting and inter-operating of electronic health records as an important gap. (9) On the other hand, the health care systems receive large amounts of data, driven by record keeping, compliance and regulatory requirements, and patient care. New techniques for analyzing large size of data are part of what is known as big data. (10)

To avoid repeating mistakes and making all the decisions based on knowledge, given the traditional viewpoints of doing things and not analyzing the many statistics that are provided monthly to the health center and considering today's world and technological advancement, the researcher decided to conduct this research to examine the barriers to the implementation of knowledge management in Fasa Health Center, thereby facilitating more case finding, accelerating electronic health records, disease eradication, better cost management, and faster disaster management to be achieved.

Materials & Methods

This study was conducted with a qualitative approach in Fasa Health Center and Data analysis using qualitative content analysis in winter 2020. In this study, based on purposeful sampling to reach saturation, some of the managers of the health center were interviewed face to face. The researcher facilitated communication by creating an intimate environment before starting the interview. The interview took place in the room of each manager. Before the study, the interviewees thoroughly studied the proposal. Interview questions included 5 open questions:

What is the barrier to information technology in implementing knowledge management?

What is the barrier to organizational structure in the implementation of knowledge management?

What is the barrier to organizational culture in implementing knowledge management?

What is the barrier to the individual factor in implementing knowledge management?

What is the managerial barrier to implementing knowledge management?

Given that the information from the interview was repetitive in some interviewees, five were considered saturated. The interview questions were open-ended and focused on the barriers to knowledge management implementation and lasted an average of 30 to 45 minutes. After collecting data, all recording interviews were written on paper and reviewed. MAXQDA software was also used, and the themes were extracted and a list of themes was prepared and the similarities in their meanings were examined. Before the participants took part in the study, the aims of the study were explained to them, secrecy was assured, and their consensus was earned. You can observe participants information in table 1.

Rigor: Lincoln and Guba (1985) proposed measures to enhance the accuracy of the qualitative research which include: Credibility, transferability, dependability, and conformability(11)

To verify the accuracy of the collected data, all statistical populations were used in the interview. In this interview, health care officials, Head of the fight against disease unit , IT expert , staff

manager, and men and women were used.

All participants had more than 10 years of experience and were well-intentioned to participate in the interview, and comments were accurately recorded, and interviews were conducted in a calm environment and with the

All details were carefully recorded at all stages . (conformability) (12)

The following steps were taken to validate this study:

From the beginning to the end of the research, thorough and accurate communication with the

Table 1. Participants Information

participant	age	degree	Marital status	gender
1	52	physician	married	Female
2	36	bachelors ‘degree	married	Male
3	34	bachelors ‘degree	Single	Male
4	49	master's degree	married	Male
5	37	master's degree	married	male

Table2. Barrier to organizational culture

Quotation	Subcategory	Category
The organization actually needs to be pre-planned for the transfer of knowledge, As the saying goes, known as sensitization and culture, for that to happen. When there is no culture, yet in the organization, people are certainly not very keen on doing this knowledge transfer (M1).	Lack of a consistent knowledge management program	Barriers to organizational culture
In discussing the organizational culture that is at stake here, you might say that there is a lack of specialist workforce, for example, we hire an Occupational Health Expert, fight against disease expert, environmental health expert, and use them in unrelated locations. The appointments are such that they have become practically a culture and we appoint them without management courses (M2).	Lack of expert	
There is a culture that develops over time with a gentle slope. What happens is that knowledge is being transferred and many people are resisting change. This is the personality of some people and some people are less and some more resistant (M4).	Taking time to create a knowledge culture	
In my opinion, it depends on the subject of education, that is, if it is an issue that people feel is applicable, they will participate, but if they do not feel it is practical and they do not like it, they would prefer not to participate (M5).	Education is not applicable	

interviewee's own time and place. This was done based on the criteria of validity in qualitative research including activities that are most likely to obtain valid findings.

The methods of getting validity include:

Long-term engagement and continuous observation, peer review, controlling by the participant. (credibility)

Transferability was done by providing direct quotes and examples, rich explanation, and scientific consultation with professors.

Through writing a copy as soon as possible, the use of peer review and re-reading of all data was provided. (consistency or dependability)

participants was made. After each interview, the notes were read out to the interviewees and again after a few days, the interviewer came back to the interviewees. The recordings were re-read so that, if anything else was considered, the interviewees were welcomed, and the participants were allowed to verify and correct what they said.

Results

In this study, a total of 5 participants were included, 1 female and 4 males, all from the statistical population. Two of them had a master's degree, one was a physician and two

were bachelors. Of the 5, 4 were officially employed and one had a short-term contraction. And all had the experience of working in different departments in service provision and service monitoring and with over 10 years of experience in the study environment. The analysis of the interviews is as follows: (each barrier is listed in separated table from table 2 to 6).

Table 3. Barrier to information technology

Quotation	Subcategory	Category
That is, if we do not have a skilled IT expert, we cannot easily transfer knowledge to the health department or health center (M1). There is a good expert in IT who has complete control over the issues Unfortunately, we are weak in this regard. (M2) Health technology experts have been deploying in the system for the past 2 years but are being used as admissions to health centers(M2).	Lack of health technologist expertise	Barriers to information technology
But we still have a lot of definite internet access, or you see, for example, how many social health workers have to work with a computer in a health center. We have a problem with this. There needs to be more effort. (M1) The switches that are used are unfortunately very weak switches. With the switches it is possible to get looped into the network (m3) For example, we have one of our villages that has 5 social health workers, but we have two computers. And everybody needs to have one computer. (M4)	Lack of hardware facilities	
I think office automation works really well. Unfortunately the feedback box is one of the problems. But there are no suggestions for improving automation and so on. (M3).	Offer system inactive	
The internet speed of the university and the health center is very good. Frequencies are very good frequencies. But unfortunately, internet companies are operating in the village. Internet platforms are not provided by our university, so the internet speed is poor. (m3) In some health home, such as Saleh Abad and Dolatabad, we do not have internet coverage at all .(m4)	Definite internet in the villages	
Some of our social health workers, as you know, we used the sixth-grade elementary education in the previous years, having spent 2 years in the field and still some of them are still working in our system and unfortunately, their knowledge of the electronic system is small (M4). Many centers now do not know how to work with some software (M5).	Low computer knowledge	
We want to fix the problem within a maximum of one hour as soon as one of the health centers in the WhatsApp group declares that the internet speed is low. But unfortunately, due to the credit problem, we were unable to act and encountered the problem (M4).	The problem with credits	

Table 4. Barrier to individual factor

Quotation	Subcategory	Category
It then identifies the person and character of that person and refers to problems that (pauses) that person may not be justified. In fact, a person must share his knowledge before retirement (M1). I think people have different opinions the individual characteristics of some people are such that they do not want to transfer their knowledge to others. I think a number of motivational issues are causing this (M4). One more thing, there are fears some people say that my position may be weakened. Some cannot communicate with others.	Personality traits of individuals	Barriers to individual factor
That is, if there is an incentive and most importantly, it can be a financial incentive, of course people tend to spend more time and share this knowledge with both colleagues and people, but It needs time, energy and incentives If a person does not have a good incentive, he or she will not pursue it and do not spend enough energy (M1). Salary is not commensurate with inflation, so people may not have enough incentive to transfer knowledge (M2).	Not enough incentives to transfer knowledge	
There are also a series of instructions come from the ministry that we have been forced to do, and staff with relevant education hold workshops, but not as a team in their own right spontaneously.	Not spontaneous knowledge transfer	

Table 5. Barriers to organizational structure

Quotation	Subcategory	Category
And if the health center is separated from the health department, we may have less complexity. The structure is clearer. The health affairs deputy is also the head of the health center, and this can play a role in the implementation of KM (M2).	The problem of integrating the health network and the health center	Barriers to organizational structure
On the structure and development of our network, there is no room for the thinking room or any form of thought production, knowledge production (M4).	Lack of knowledge management unit in organizational chart	
Sometimes the knowledge he possesses or the science that a health worker possesses may not be relevant to the goals of the organization for transporting (M5).	Not targeting research projects to advance knowledge management implementation	
No, unfortunately, not seen. For example, an MPH course is going through trouble. We see, no use or financial incentive to help you, it is practically not commensurate with the effort. (m1)	Salaries not going up with education	
Auditoriums, rooms, tables, and chairs can have an impact.	Lack of educational facilities	

Table 6. Barriers to Management factor

Quotation	Subcategory	Category
There is a need for funding in the discussion of finance, Experienced experts who have knowledge management in their field should be consulted and paid for (M2). That is, they are looking for something that works best with the lowest cost but it is impossible. (M3)	Organization financial problems	Barriers to Management Factor
I think one of the most important points in the production of knowledge and research is the groups that do the scientific work and the research work defines the path for us. Unfortunately, in the health system they are less convinced and think that there is a research unit dedicated to the research unit (M4).	Lack of sufficient culture to recognize the benefits of knowledge	
Managers are constantly changing. Any manager comes up with a set of interests. Normally a new manager goes out of his way to express himself and his goals and doesn't come to a conclusion (M5).	Early transfer of managers	
The discussion of these appointments is such that it has practically become a culture and we are appointing them without management courses (M2).	Do not pass management courses	

Discussion

The findings of this study explain the barriers to knowledge management implementation at Fasa Health Center through interviewing health center managers. The barriers to knowledge management implementation are organizational culture, individual factors, and organizational structure. The barriers to information technology and management were identified as the next barriers.

The barrier to organizational culture was identified as the most important barrier to implementing knowledge management in Fasa Health Center due to interviews and its repetition of managers' statements. The barriers to organizational culture identified in this study include lack of a coherent knowledge management program, lack of expert staff, lack of time to create a culture of knowledge, and a lack of practical training.

Organizational culture: According to a study by Mohammad Reza Amir Ismaili et al at Kerman University of Medical Sciences, the organization must first focus on organizational culture to effectively improve the knowledge system and disseminate it throughout the organization. The stronger organizational culture, the more successful the implementation of knowledge management(13)

It was concluded that organizational culture is one of the main barriers in implementing knowledge management in Fasa Health Center.

In a study entitled “Assessment of the health centers readiness in Iran to establish knowledge management in December 2016”, the organizational culture index was not in a good position(5) and matched well with the results obtained here.

Organizational culture has an important role in productivity of any culture. It contains observational and non-observational factors that shape how individuals work and perform their duties.

In another study, the dominant culture at Kerman University of Medical Sciences was introduced as an "adaptability culture". Therefore, internal integration and external

adaptability can be considered as an advantage of this organization. Compatible organizations are driven by customers, they take risks, admit their mistake and have the capacity and experience to make a difference. They are continually improving the organization's ability to value customers. (14)

Information technology

Lack of health technologist expertise and lack of hardware facilities, offer system inactive, definite internet in the villages, low computer knowledge, problems with credits are subcategories in identifying information technology barriers to implementing knowledge management at Fasa Health Center.

Information technology is a facilitating factor in the transfer, distribution, and storage of knowledge. Given the advances in computer systems and Internet connectivity in all health centers and the transfer of information through the Integrated Health systems in recent years, despite the difficulties encountered. Information technology is the next barrier to management implementation and solving the above problems will help accelerate the implementation of KM.

In this regard, the findings of the article by Amir Ismaili et al, reviewing the preparedness of health centers for the establishment of knowledge management, information technology agent is not considered as a barrier (5).

Also, in another article by Roknijoo et al, studying the barriers to successful knowledge management implementation in universities, information technology infrastructure is not considered as a barrier to knowledge management(15).

However, in recent years significant progress has been made in expanding internet platforms, office automation and the creation of Health Research Unit at Fasa Health Center. It can be used for sending office letters, transferring information to the integrated health system, portal system, and virtual training.

Individual Factor

Three subcategories: Personality traits of individuals, insufficient incentives to transfer knowledge, and lack of spontaneous knowledge transfer were identified as barriers to individual factor in this study.

Individual personality traits appear to be a serious obstacle to implementing knowledge management at Fasa Health Center.

Confirming this in the implementation of knowledge management, it is stated in a paper that: Poor organizational culture prevents individuals from sharing and disseminating their knowledge in an effort to maintain their personal power base and efficiency (13).

Some interviewees pointed out that the person sharing their knowledge and experience with others had no incentive to do so. To solve this problem, it should be considered financial, spiritual incentives in job evaluation of staff.

Hoof et al, have stated about encouraging employees that organizations should implement mechanisms to encourage employees to share their knowledge with non-compulsory and interest with other employees to maximize the productivity of latent knowledge in the minds of the employees.(16)

Payroll matter in an article entitled Knowledge Management Relationship with Job Motivation of Nurses in Hamadan Medical Education Centers in 2015, all dimensions of Job Motivation and Knowledge Management had a positive and significant relationship except for Payroll Dimensions with creating Knowledge that showed no significant relationship (17).

This seems to be inconsistent with the information from the interviews of this research that stated Financial incentives are one of the most important incentives for knowledge transfer among colleagues.

A study states that Knowledge hiding is negatively related to the creativity of employee, especially for employees with high social status(18).

In a study of the barriers to knowledge sharing in the field of individual barriers, lack of trust, ignorance, not being aware of other people's knowledge, lack of social networks, time and language differences were stated.(19)

As the structural barriers identified in this study are the problem of integrating the health network and the health center, lack of knowledge management unit in organizational chart, not targeting research projects to advance knowledge management implementation, salaries not increasing with education, and lack of educational facilities.

Organizational structure

Given that some staff are thoughtful and creative but sometimes none of these thoughts actualize. It is suggested that a knowledge management unit be created on the organizational chart of the health center. Participant 2 describe the barrier:

"In the structure of our network, there is no room as a thinking room or any form of thought production or knowledge production (M4)."

Some people in the organization write research projects that are not aligned with the goals of the organization. Or managers disregard them. Combining individual efforts with the goals of the organization can be a suggestion for knowledge management.

In an article titled Removing Barriers to Knowledge Management Implementation, it is stated that: Top-down structures exist in many of the interviewed companies. At every level, managers at every rank are responsible for implementing knowledge management in all parts of the company that were not usually aware of this fact. (20)

We look at the current state of knowledge management in organizations, knowledge sharing dimensions proposed are elementary and need further refinement and development. (21)

On the other hand, health center must develop national communicable disease surveillance system, we need coordinator center, appropriate policy, effective infrastructure for data exchange.(22) altogether. There is no particular structural problem for knowledge management implementation. However, the separation of the health network from the health center can be described as an effective measure to implement knowledge management.

Because organizational structure has a positive impact on the security of KM implementation, there seems to be no particular structural problem for the implementation of KM. However, the separation of the health network from the health center can be cited as an effective action to implement KM.

Managerial factor

The barriers of managerial factor identified in this study are organizational-financial problems, lack of sufficient culture to recognize the benefits of knowledge, early transfer of managers, managers not passing management courses.

As mentioned in the article by Amir Esmaili et al, given the enormous amount of useful information and experiences of health care workers in managing people's health, the need to convert this information into knowledge is inevitable(5).

That seems to match well with the results obtained here, and attention to research can be helpful in this regard.

In a study, Pauleen and Mason examined the barriers and factors of knowledge management and concluded that barriers to knowledge management include organizational culture, leadership, and management performance.(23)

An article by Andrzej Mikloski and Stephen Zack found that the main reasons for the lack of knowledge transfer, the lack of commitment of managers and the persuasion of their employees can be cited. The executive manager typically produces a lot of knowledge and information, but they do not share information in any way. That seems to match well with the results obtained here.

The most important strength of this study was to apply a qualitative method through firsthand experiences of managers.

One of the limitations of the study was the limited number of samples, so it is advisable to be cautious in generalizing the finding to other organizations.

Conclusion

Barriers to the implementation of knowledge management at Fasa Health Center included 5 barriers: organizational culture, information technology, individual factor, organizational structure, managerial factor from the perspective of health center managers.

The two factors of organizational culture and individual factors as the main barriers after these two factors were the organizational structure barrier and then the two barriers to information technology and managerial factor.

Therefore, it is necessary to prepare the health center for the implementation of knowledge management, appropriate culture and motivational factors in this field.

On the other hand, it is recommended to use these results to implement knowledge management given the barrier identified in this study. Thus, there is a need to accelerate more case finding, organization to expedite electronic health records, disease eradication, better cost management, disaster management, electronic submission of monthly data and eliminating the paper, increasing personnel productivity faster. Therefore, the following steps to remove knowledge management implementation barriers can be described as follows:

1. Cultivating and sensitizing the organization to the benefits of knowledge management by employing experienced professors in the field and holding workshops,
2. Using up-to-date hardware and software features in the organization,
3. Creating motivational factors such as overtime pay, impact on job evaluation and encouraging staff to create a work environment to share knowledge and experience from one person to another
4. Applying staff in their specialty and justifying managers about the benefits of implementing knowledge management and emphasizing passing management courses
5. Encouraging the participation of all staff in reporting Integrated Health systems problems and office automation to address their deficiencies more quickly with the help of the Feedback Box
6. Boosting the educational infrastructure by equipping the training hall and increasing its capacity
7. Creating a knowledge management unit in the organization
8. Emphasizing the matching and applicability of research carried out by health center personnel with the goals of the organization
9. Strengthening computer skills of personnel to better transfer information through electronic systems such as Integrated Health systems, office automation, Ministry of Health Portal.

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Conflicts of Interest

There is no conflict of interests in this study.

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