

Organizational Health and Knowledge Management: A Questionnaire Study of an Iranian Medical University

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Abstract: Knowledge management is the process of creation, exploration and organization, absorption, storage, translate and utilization of knowledge. The objective of this research was the examination of the relationship between organizational health and knowledge management. In an analytical and cross-sectional study we used 2 valid questionnaires including organizational health questionnaire and knowledge management questionnaire in Shahid Sadoughi university of medical sciences, Yazd, Iran. The research population was comprised from the employees of this university. A total of 116 employees from different faculties contributed in the study. We used stratified-random sampling method. Data analysis was done through SPSS 16. We used descriptive statistics, ANOVA and Pearson's correlation coefficient for data analyzing. The results of study showed a positive relationship between organizational health and knowledge creation, exploration and organization, absorption, storage, transfer and utilization ($R= 0.341, 0.442, 0.362, 0.435, 0.537, 0.481$ respectively). Also, the positive relationship between organizational health and knowledge management was confirmed ($R= 0.521$). Based on the results of this study, In order to better managing of knowledge we should improve the organizational health of universities.

Key words: Organizational health • Knowledge management • Medical university

INTRODUCTION

In the era of globalization, information, complexity, dynamism and competition, knowledge is assumed as the societies' power and the most important resource for self-preservation and sustainable competitive advantages of each organization [1-3]. Nevertheless, there is not a unique definition from the term "knowledge". Various authors from different areas such as cognitive science, management, philosophy, theology and knowledge engineering have defined the term in different ways, which the most of them is specific for those areas [4, 5]. Peter F. Drucker defines knowledge as the information that changes somebody or something [3]. In the other definition, Knowledge is the capacity for effective action or decision making in the context of organized activity [6].

In the other hand, Knowledge is considered the capacity to take effective action in varied and uncertain situations. It consists of understanding, insight, meaning, creativity, judgment and the ability to anticipate the outcome of actions. So, knowledge is neither true, nor false, neither good, nor bad and its value to an individual or organization can only be measured in terms of the outcomes of its application [7]. Davenport and Prusak (2000) defines Knowledge as a fluid mix of framed experiences, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information. Also, from the viewpoint of Schreiber *et al.* (1999), Knowledge is the whole body of data and information that people bring to bear to practical use in action in order to carry out tasks and create new information [5]. In addition to

different interpretations from the term knowledge, there are different classifications of knowledge in literatures. In one classification knowledge is categorized to 4 types including human knowledge, social knowledge, cultural knowledge and structured knowledge [6]. In the other classification, knowledge is categorized to non-representational (anti-representational) or representational [4]. Also, some authors propose a classification of knowledge into two types, tacit and explicit, which is dominant in most of literature. Explicit knowledge is defined as those kinds of knowledge that can be seen, shared, communicated with others and easy to manage. In contrast, tacit knowledge is embedded in a person's memory and is difficult to extract and share with others [4,5]. Other researchers define some additional kinds of knowledge such as self-transcending knowledge which typically associated with artists. In the other literatures, knowledge has been defined as interpretation or as relationship [4], or it is considered as comprised of two parts including knowledge (informing) and knowledge (proceeding). In this view, Knowledge (informing) is the information (or content) part of Knowledge and Knowledge (proceeding) represents the process and action part of knowledge. Finally, some literatures suggest that knowledge can be classified into surface, shallow and deep knowledge. Surface knowledge which answers the questions of what, when, where and who, is primarily explicit. Surface knowledge is the information form of knowledge. Shallow knowledge is information plus some understanding, meaning and sense-making while deep knowledge adds insight, creativity, intuition and judgment and the ability to anticipate the outcomes of one's action to later [7]. Although different definitions or interpretations of knowledge provide different meanings for that, but, in principle all of them argue that knowledge is an important resource that needs to be managed effectively and efficiently [5]. Therefore, from this perspective, in recent decades the term "knowledge management" or "KM" has been entered to knowledge literature. In these decades, in attention to above-mentioned importance of KM many governments, organizations and departments have engaged with KM projects, strategies and practices [5, 8]. This engagement has happened in order to improve profits, to be competitively innovative, performance enhancement, problem-solving or simply to survive [1, 5]. So, the need to KM that can be result in effectiveness and productivity and has been mentioned as a necessity for poverty reduction in Millennium Development Goals (Goal1) increasingly become the key factor for success in the

knowledge economy [5, 9-11]. Nevertheless, the term knowledge management as same as knowledge still suffers from a high degree of 'terminological ambiguity and there are many definitions from that. In a broadly used definition, KM defines as a systematic method for managing individual, group and organizational knowledge using the appropriate means and technology [5]. Also, knowledge management is often explained as organizational learning, organizational memory and expertise management [12]. In other definitions KM is referred to a set of techniques and practices, as a process or systematic approach of managing knowledge [1, 2]. In the process perspective, knowledge management process is broken to some interrelated phases by different authors; some of them are as following:

- Knowledge construction, embodiment, dissemination and application [8].
- Knowledge acquisition, store, transfer, application and protection.
- Knowledge construction, embodiment, dissemination and use, retention and refinement.
- Knowledge creating, acquiring, capturing, sharing and using.
- Knowledge construction, dissemination, embodiment and use [2].
- Knowledge generation, capturing, sharing and utilization [13].
- Knowledge acquisition, codification, storage, retrieval, diffusion and presentation, application and creation.
- Knowledge acquiring, establishing, dissemination, developing and application.
- Acquisition, creation, storage, distribution, usage and maintaining [2].

The review of these processes shows that the core practices of a knowledge management system consist from knowledge creation, knowledge acquisition, knowledge storage, knowledge transformation and knowledge application. It is notable that the knowledge management capacity of an organization is affected with multiple causes such as goals and strategies, size, technology, culture and environment [1]. In this research we studied the relationship between organizational health and knowledge management practice whit the assumption that organizational health as an organization's feature can affect its potential to KM. Organizational health (OH) is a continuous, dynamic process which links the management practices to overall organizational

performance. These practices include employees' motivation and engagement, Work/life balance (helping employees to manage their personal life and work life responsibilities contemporary, employee growth, enrichment and development, addressing the health and safety of employees in work environment and employees recognition [14]. Organizational health is a concept that has been developed to reflect the effectiveness of an organization in change circumstances [15]. In the other words organizational health is the holistic conceptualization of workforce practices and organizational climate and culture factors that directly impact service delivery, the achievement of goals and objectives [16]. Organizational Health reflects to an organization's ability to achieve its goals in a changing environment that seeks to improve organizational performance and support employee well-being. So, it reflects two perspectives including organizational performance and employees' well-being [17]. The concept of organizational health expands in three dimensions of individual factors, unit factors and organizational factors [16]. The Canadian National Quality Institute proposes these criteria for measuring of organizational health:

- Commitment to the value of people in the organization.
- Planning goals and objectives, allocating financial resources, conducting formal employee needs assessments and creating a process for plan design.
- Implementation and documentation of processes for demonstrated management commitment, for employee input and assessment and for programming and measurement.
- Sustainability of initiatives and effective communication of the results [18].

In the other measurement scale the health of an organization is assessed in 10 dimensions which are named goal focus, communication adequacy, power equalization, resource utilization, cohesiveness, morale, innovativeness, autonomy, adaptation ability and problem-solving adequacy [19]. Also, the process of achieving a healthy organization includes 4 steps which are identifying of risk factors, targeting the desired outcomes, building an organizational health strategy and executing of organizational action plan. Organizational health has many benefits for the owners and stakeholders. It enhances the well-being of employees in line with organizational productivity and performance. Therefore, in today's world healthy organizations have more chance

for long term success. It's important to recognize that there is no "cookie-cutter" approach when addressing an organization's health and well-being and what may be successful in one organization may not be in another [14]. In this study, we attempted to examine the relationship between organizational health and knowledge management potential in an Iranian medical university.

MATERIALS AND METHODS

This analytical study was done through cross-sectional method in Shahid Sadoughi university of medical sciences in 2011. Shahid Sadoughi university of medical sciences is a governmental medical university located in Yazd province (the center of Islamic Republic of Iran). This university has 6 faculties including medicine, public health, paramedical, dentistry, pharmacology, nursing & midwifery and a campus of international branch. The purpose of study was the examination of the relationship between organizational health and knowledge management in this university. A total of 116 employees from different faculties contributed in the study. We used stratified-random sampling method. Required data was gathered by a 2 valid questionnaires including:

Organizational Health Questionnaire: For this purpose we used a 20 items organizational health questionnaire. The respondents of this questionnaire are questioned to assign a score between 0-10 to their hospital in any statement of the questionnaire. For analysis of scores, the scores 1-2, 3-4,5-6,7-8,9-10 were considered as strongly disagree, disagree, neutral, agree and strongly agree. We calculated the percent of positive scores with adding up the percent of agree and strongly agree responses. Finally, the positive scores' percent of below 50%, 50-75% and above 75% were considered as healthy, moderate healthy and non-healthy organization, respectively. Prior to study, the reliability of this questionnaire was obtained through Cronbach's alpha as 0.87.

Knowledge Management Questionnaire: For this purpose we used a 60-items questionnaire. These items are divided to 6 sections in regarding to 6 dimensions of knowledge management (knowledge creation, knowledge exploration and organization, knowledge transfer, knowledge acquisition, knowledge usage/application and knowledge storage). Therefore, each dimension of knowledge management had 10 questions in questionnaire. The respondents of this questionnaire are questioned to assign a score between 0-10 to

their hospital in any statement of the questionnaire. For analysis of scores, the scores 1-2, 3-4,5-6,7-8,9-10 were considered as strongly disagree, disagree, neutral, agree and strongly agree. We calculated the percent of positive scores with adding up the percent of agree and strongly agree responses. Finally, the positive scores' percent of below 50%, 50-75% and above 75% were considered as weakness, moderate and strength knowledge management capacity. Prior to the study, the reliability of this questionnaire was obtained through Cronbach's alpha as 0.85.

In this study, data analysis was done through SPSS software English version 16. We used descriptive statistics, ANOVA and Pearson's correlation coefficient for data analyzing. It is notable that all samples were informed from study objectives and their personal data were kept confidentially.

RESULTS

A total of 116 employees contributed in the study. From which 19 employees (16%) had Ph.D. degree, 28 (24%) MS degree, 45 (39%) BS_c degree and 8 employees (6%) had below the BS_c degree and 16 did not respond the question about their education.

The frequency of respondents' responses in relates to knowledge management, it' dimensions and organizational health are shown in Table 1:

Also, Table 2 shows the Spearman's correlation coefficient of knowledge management and its dimensions with organizational health:

DISCUSSION

The positive scores' percent of knowledge creation, knowledge exploration and organization, knowledge transfer, knowledge acquisition, knowledge usage/application and knowledge storage were 48.2%, 31%, 19.8%, 22.4%, 44%, 24.1%, respectively. Also, the positive scores' percent of knowledge management was 25%. These scores indicate that we are in weakness situation of knowledge management based on the employees' viewpoint. The worst weaknesses of knowledge management capacity in the studied university are in following dimensions:

Knowledge Transfer: In this dimension the studied hospital had the lowest positive scores' percent. Sharing knowledge is very essential task [10]. Knowledge needs to be distributed and sharing throughout the organization and beyond it. Knowledge transfer or distribution is not an easy task [21]. Knowledge transfer (KT) can provide the right vehicle for transferring needed information through different means suitable to each category of receivers. Traditionally, KT has been considered a challenge for many individuals and organizations, private or public, industrial or service. In recent years, there has been an increasing interest in investigating KT. There are three main reasons behind the growing importance of KT. First, knowledge appears to be the main asset, particularly as it relates to practicing professions. Second, as a result of globalization and the disappearance of the geographic boundaries through networking, organizations have

Table 1: The frequency of respondents' responses in relates to knowledge management, it' dimensions and organizational health

Response scale Variable	Strongly disagree N(%)	Disagree N(%)	Neutral N(%)	Agree N(%)	Strongly agree N(%)
Knowledge creation	2 (1.70)	21 (18.1)	37 (31.9)	49 (42.2)	7 (6.00)
Knowledge exploration and organization	22 (19.00)	15 (12.90)	43 (37.10)	36 (31.00)	0.00 (0.00)
Knowledge transfer	27 (23.30)	14 (12.10)	52 (44.80)	23 (19.80)	0.00 (0.00)
Knowledge absorption	34 (29.30)	16 (13.80)	40 (34.50)	19 (16.40)	7 (6.00)
Knowledge usage/application	28 (24.10)	6 (5.20)	31 (26.70)	46 (39.70)	5 (4.30)
Knowledge storage	22 (19.00)	9 (7.80)	57 (49.10)	28 (24.10)	0.00 (0.00)
Knowledge management	30 (25.90)	8 (6.90)	49 (42.20)	28 (24.10)	1 (0.90)
Organizational health	30 (25.90)	8 (6.90)	49 (42.20)	28 (24.10)	1 (0.90)

Table 2: The coefficient of knowledge management and its dimensions with organizational health

Knowledge management dimensions	Organizational health	
	P value	Spearman's correlation coefficient
Knowledge creation	0.00	0.341
Knowledge exploration and organization	0.00	0.442
Knowledge transfer	0.00	0.362
Knowledge absorption	0.00	0.435
Knowledge usage/application	0.00	0.537
Knowledge storage	0.00	0.481
Knowledge management	0.00	0.521

started to move away from hierarchical methods to decentralized structures for best performance and creativity. Finally, development in information technologies, such as the internet and intranet have created more advanced means of KT and knowledge sharing (KS) [13]. In any organization, structures, processes, human dynamics and culture often inhibit the sharing of knowledge across the organization [1, 21]. Also, Jaber (2007), in his study, noted that some barriers of knowledge transfer with physicians in healthcare are lack of time available for physicians due to the intensity of demand for their services as lack of time, poor communicational skills and lack of trust between physicians and knowledge recipients [13].

Our literature review showed that some suggestions as below have been proposed for improving the knowledge transfer (or knowledge distribution or knowledge share as named in some publications):

- Improving the knowledge sharing behavior of individuals: Knowledge-sharing behavior is an individual's social psychological process, in which one's attitude affects intention and intention subsequently influences the individual's behavior. For improvement of this behavior we can consider the effects of social psychological motivational factors on knowledge sharing attitudes, subject norms and perceived behavioral control that have been shown to affect the development of intentions toward knowledge sharing [22].
- Assignment of people to facilitate and drive the process of knowledge transfer.
- Addressing the characteristics of the knowledge recipient, the characteristics of the knowledge source and the context in which the transfer occurs.
- Development of a system that supports and rewards sharing and transferring.
- Development of training and skills, rewards and organizational design in relates to knowledge transfer.
- Assignment of team leader as a mean of fostering knowledge transfer in each department [12].
- Expanding the technical infrastructures such as a robust IT infrastructure that are required for knowledge transfer and improving of organizational and individual ability to use them [10, 12].
- The establishment of a communication means such as conference for encouraging of organization employees to knowledge transferring and sharing [10, 23].

- Encouraging tacit-to-tacit knowledge transfer by grouping people with the same interest together [10].
- Establishment of clear KM goals and strategies and their successful implementation through effective leadership [8].

It is notable that the process of KT is not valuable by itself unless it is integrated into well stated policies and guidelines that facilitate the generation, capturing, sharing and utilization of knowledge [13].

Knowledge Absorption: In this dimension the studied university had the 2nd lowest score. Knowledge absorption defines as the organization's ability to capturing of knowledge from environment for using them. Napir (2005), In his paper stated that willingness to receive knowledge, absorptive capacity, ability to understand knowledge and ability to value and use knowledge are all can affect the knowledge absorption willingness and ability [24]. We think that some barriers noted in KT section such as poor infrastructures, also, reduce the ability of knowledge absorption.

Knowledge Storage: Storage represents the processes and facilities used to keep knowledge and information until it is needed. Storage entities include individuals, groups, culture, work processes, tools and systems, such as a database [6]. Therefore, if we want to promote the knowledge storage ability we should address all issues related to these factors that reduces the capacity of knowledge storage.

Also, our findings showed that the knowledge management capacity of studied hospitals is in weakness situation. KM is performing the activities involved in discovering, capturing, sharing and applying knowledge so as to enhance, in a cost-effective fashion, the impact of knowledge on the unit's goal achievement. Jafari *et al* (2008) noted that five main components of KM infrastructure are Organizational Culture, Organizational Structure, Communities of Practice, Information Technology Infrastructure and Common Knowledge. Their findings indicate seven critical success factors for prosperous KM implementation, which respectively are collaboration and knowledge workers, technology deployment, learning culture, flat structures, supply chain integration, comprehensive strategies and flexible organizations [1]. Other literatures suggest the following practices for improving the KM ability which can be relevant to our situation:

- Development and routine measurement of a KM system and framework [1],
- Setting up the key performance indicators for systematic assessment of knowledge management in university [10],
- The focus put on organizational learning and the support of continuous employee learning [1],
- The expanding of information systems and knowledge bases [5, 25],
- Creation of KM department in the ministry of university [10].

Although, our findings indicated that KM in the studied university is in weakness situation but we found that in 2 dimensions including knowledge creation and knowledge usage the studied university has the best scores. Recent reports show that our country has the highest rate in scientific growth. This reports confirmed our results which indicated that the university has the highest score in knowledge creation. Also, no amount of accumulated knowledge has practical value until it is applied to human needs and concerns [26]. So, the higher score of knowledge usage shows that the created knowledge is successfully translated to action programs for solving our problems.

Our results about organizational health indicated that studied university is in weakness situation according to organizational health measures. Unhealthy organizations can reflect, for example, lack of direction and accountability; misalignment of priorities; and poor coordination in and between systems and processes causing both costly inefficiencies and ineffectiveness. Unhealthy organizations can also demonstrate low employee commitment and disengagement as reflected in the costs of dissatisfaction, damaging conflicts, suppressed resentment, unnecessary absence and turnover [17]. Also, the research findings about the relationship between organizational health and knowledge management showed that knowledge management and it's all dimensions have positive correlation with organizational health. This means that unhealthy organizations have a reduced ability to knowledge management. Therefore we can conclude that in attempting to improve knowledge management ability, the organizations have to improve their organizational health.

CONCLUSION

This study explores knowledge management within an Iranian university. Also, we examined the novel relationship between organizational health and knowledge

management ability. Nevertheless, the results which presented in this study are cross-sectional. Therefore, they fail to capture the effects of ongoing efforts and investments for increasing the knowledge management ability and improving organizational health in the studied university.

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