The Relationship Between Knowledge Management and Productivity in Teaching Hospitals of Hamedan, Iran

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Abstract
The teaching hospitals which are interested in change and improvement to reach their goals require up to date and productive knowledge. In order to manage the hospital well and to keep the competitive advantage over their rivals and to gain access to the highest technologies, they have been using knowledge management and productivity methods and techniques in their organizations.

The current study is descriptive in nature and has been conducted in a cross-sectional fashion. The objective of this study is to be applied in reality. In order to analyze the data, the Spearman's correlation test was used. It was found that the mean utilization of policies and approaches, management systems, promotion and encouragement systems and the system for the training of the knowledge management in the chosen hospitals are less than the mean score. The mean productivity was found to less than average in the studied hospitals. There were no meaningful statistical difference in the policies and approaches, management and promotion systems and knowledge acquisition and productivity. However, there was a meaningful difference between the Training knowledge management system and productivity in the studied hospitals (p= 0.007).
Keywords: Knowledge Management, Productivity, Teaching Hospital

Introduction
One of the highest priorities mentioned in the Fourth Cultural, Social and Economical Development Document of the Islamic Republic of Iran is development and improvement of the management indexes in the healthcare sector.
From among those centers which area at the center of attention, one can see the presence of healthcare improvement and especially the hospitals (Mosadeghrad, 2001). In these

hospitals which are mentioned as training centers there some problems such as employees' dissatisfaction, lack of continuous and up to date training, and the high running cost (Rading, 2004). The employee dissatisfaction in the healthcare sector is more than 40% and the cost of the healthcare, which is also fell very much on the shoulder of the families who have pay high expenses, is considered a great challenge for the health care sector (Davoodi, 2007). Knowledge management means the activity of creating, acquiring, capturing, dividing and applying the knowledge wherever one can find it in order to increase the level of learning and performance in the organizations. I other words, it is a process during which an organization starts producing wealth and value from its mental and knowledge capitals (Akhavan, 2005). Knowledge acquisition is considered as one of the main factors of competitive advantage in the small and big industrial of service organizations (Macdoland, 2002). Knowledge management and its related dimensions are emphasizing the fact that accomplishment of the competitive advantage in the modern and new economical environment of today's world is depended upon the capacity and the ability of the organizations in the development and better utilization of the resources which are based on the knowledge of the organization (Konecklin2002). One of the most important goals of each organization is to achieve productivity. Nowadays, the importance of productivity and improving the quality of the healthcare services in order to meet the ever increasing healthcare demands of the people has increased and it is among the highest priorities of all the healthcare sector managers. Some of the important steps for the productivity improvement are knowledge creation, knowledge utilization and knowledge publication and application. These are all called knowledge management. On the other hand, Hospital is a dynamic and ever changing organization which needs to keep itself quite up to date using the newest technologies and knowledge. Ability in the management and keeping the competitive advantage and movement toward application of the new technologies in complex organizations like hospitals which are a combination of great human and equipment resources requires knowledge and knowledge management. In order to improve the defined objectives for the research and Teaching hospitals, one can measure the current value and the continuity of the knowledge management and their relationship with the productivity (which is the most important factor of the development I the organizations) and based on this value he can design and plan the future activities of the organization. Then, these activities could be a point of departure in the way of improving the level of knowledge between the employees, performance improvement, better services in all the levels of the healthcare sector increasing the satisfaction of the patients and increasing the income of these centers and finally the development of the society. The goal of this study was to analyze the research and Teaching hospitals in Hamedan province, Iran from this point of view.

Research Methods
The population of the study was the employee of the Hamadan's Teaching hospitals. The data collection method was multi stage random method. From among the hospitals of Hamedan, five were chosen randomly and a questionnaire was distributed among their employees quite randomly.

In the field of knowledge management, the required data was collected using Pastor's standard questionnaire and in the field of productivity Goldsmith's questionnaire was utilized to collect data.

Results

The findings of the current study showed that most of the employees who filled the questionnaires have been formally employed their respective hospitals. Females included most of the employees and most of the subjects were married, held BA degree and were between 25 to 50 years old. The means of policy utilization and the approaches to knowledge management (1.94), the knowledge management leading systems (1.97) , promotion and bonus system(2.2). Acquisition and learning system (1.99) and the knowledge management training system (1.7) in the studied hospital was less than standard average. From among these means, promotion and bonus has the highest mean and the knowledge management training system had the lowest mean of all (Table 1).

Table 1:

Distribution And Percentage Of The Employee's Answers In The Different Dimensions Of Knowledge Management

Knowledge management	high		average		Low	
	Frequency	percentile	Frequency	percentile	Frequency	percentile
policies	3	1.5	180	91.8	13	6.6
Leading system	0	0	192	98	4	2
Promotion and bonus systems	57	29.1	139	70.9	0	0
Knowledge learning and acquisition	3	1.5	189	96.4	4	2
Training system	0	0	154	78.6	42	21.4

The productivity mean in the studied hospitals was less than the standard average (2.8). Table 2 shows this aspect clearly.

Table 2:

Distribution And The Percentage of Productivity

Rates	high		average		low		Mean	SD'
	Frequency	precentile	Frequency	precentile	Frequency	precentile		
productivity	1	1.5	195	91.8	0	0	2.8	.20

The correlation coefficient between policies and the approaches to knowledge management and productivity variables were -0.107 and p-value was 0.135. The correlation coefficient between leadership of knowledge management system and productivity was 0.002 and p-

value was 0.973. The correlation coefficient between promotion and bonus and knowledge management and productivity was 0.048 and p- value was 0.504. The correlation coefficient between knowledge acquisition and knowledge management and productivity was 0.124 and p-value was 0.082. All the aforementioned correlations in the 99% statistical showed that there are not 95% meaningful. The correlation coefficient training system for knowledge management and productivity was 0.191 and p-value was 0.007 proved to meaningful. So there was a good correlation between them. Therefore, there is a meaningful relationship between knowledge management and productivity in the investigated hospitals (see table 3).

Table 3:
Relationship Between Knowledge Management And Productivity

knowledge management dimensions	productivity	
	Correlation coefficient	P value
Policies and approaches	-.107	.135
Leadership system	.002	.973
bonus and promotion systems	.048	.504
Knowledge acquisition	.124	.082
Training system	.191	.007

Discussion and Conclusions

The findings of the current study show that there is no meaningful relationship between knowledge management and productivity. The degree of utilization of policies and approaches, leadership system, promotion and bonus system, knowledge acquisition system and knowledge training system in the Hamedan's Teaching hospitals is less that standard average. The findings of the current study agree with the findings of KermaniAlqorashi in his study the feasibility of establishment of knowledge management factors in the industries (Kermanialghoraishi 2004) .the findings of this study also agrees with Deebon2003 and Valden 2008 . Deebon 2003 found out that from among the main factors of knowledge management, leadership is the factor which increases the benefit and the performance of an organization, but it is not utilized properly in the organizations. Valden 2008 came to the conclusion that cause of the lack of success in the current century's organizations is lack of utilization of knowledge oriented managers and leaders. The findings of this study also agree with the findings of the Lito and Chen 2005 called the knowledge management in the public organizations. This study investigated the approaches to make knowledge management possible and investigated the nature of knowledge distribution and sharing. They found that promotion and bonus was met less than expected in the organizations studied. The finding of the current study also agrees with the finding of Bose 2003 called knowledge management – enabled health care management system , capabilities, infrastructure and decision – support . expert systems with applications. This study showed that success of the healthcare organizations depends on the collection of proper information and finally utilization of knowledge management. He found out that in his studied organization the mean acquisition of knowledge was acceptable in comparison with the standard average. However, the findings

of the current study disagrees with the findings of Rafati et al 2008 called investigating the model of knowledge management in a military research center , because from the point of view of the knowledge centeredness and knowledge capitals this organization was below standard averages and was not in a favorable state. The findings of the current study about the dimensions of knowledge management agree with Taghizadeh 2009 investigation. The goal of His research called investigating the level of knowledge in a service organization was to analyze the extent to which this organization employs knowledge management process and also the application of knowledge in the organizations. His findings showed that in the studied organization, the extent of the utilization of the five main stages of the knowledge management (process dimensions) is about average. The findings of the current study agree with the study of Yaghubi et al 2010 in their study called investigating the relationship between the learning organization and knowledge management in the chosen hospitals of the Isfahan medical Sciences University. The objective of the mentioned study was to investigate the extent of knowledge utilization and the role of the learning organization in its employee's activities. The study found out that the level of organizational learning and knowledge management among the employees of the Medical Sciences University of Isfahan are less than the standard average.

The findings of the current study also do not agree with Islamifar 2009 called investigating the role of knowledge management in the productivity of the human resource in the organizations. The goal of the mentioned study was investigation and transformation of the opportunities, functions and the patterns of the knowledge management in the productivity of the human resources. The findings of the current study agree with the findings of Kiessling et all 2009 called Exploring knowledge management to organizational performance outcomes in a transitional economy . They found that the direct effect of knowledge management is on the outcome, creativity and products and services improvement and employees development of the organizations. In the current, however, only the dimension of training the knowledge management was found to have a direct relationship with productivity of the organization.

Suggestions
Since, the mean utilization of policies and the approaches to knowledge management were estimated to be less than the standard average, we suggested that managers must be careful about the clear strategies, approaches and instruction of knowledge management in the research and Teaching hospitals. They must take proper actions in this regard. They must devise clear and firmly established plans and programs to help and encourage employee to acquire organizational knowledge.

In order to Increase the level of leadership utilization in the research and Teaching hospitals and better performance and quicker problem solving, managers must use the expertise and experience of the competent employees.

In order to increase the bonus and promotion level, they must be an established appraisal system with predefined and clear items. The managers must also pay enough attention to the programs of knowledge management improvement.

In order to increase knowledge acquisition and preventing the deterioration of the employees knowledge, some special programs must be designed to train them based on their field of expertise.

Since there is a meaningful relationship between knowledge management training and the productivity of the training course, it is necessary to hold some training courses basic notions of knowledge management, approaches, theories, objectives and the importance of knowledge management and also special bonus and promotions must be considered for all those people who participate these courses in order to preserve their participation in these training courses.

Although there were found no meaningful relationship between other dimensions of knowledge management and productivity. It does not suggest that the other models and features cannot be proper explanation for the relationship between the other dimension of the knowledge management and the productivity. Knowledge management in the healthcare organizations and especially in the hospitals can have a main role the guidance and allocation of the human resources, information, equipments and proper decision making along with conditions and needs of the organizations. It can be very useful in accomplishment of the mission and the objectives of the organization. It definitely plays a great role for the future of the organization. Therefore, getting familiar with the advantages of knowledge management and its establishment in correlation with the organizational needs leads to better performance and impact and is of high concern for the organizations.

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