A Study of Relationship between the Organization Learning Capacity and Knowledge Management among Nurses in Medical University of Isfahan–Iran

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Abstract

Introduction: Old methods of administrating cannot cover the rapid changes today. These changes redounded new organizations such as learning organizations to be formed. The purpose of this research is to study of relationship between the Organization Learning Capacity (OLC) and Knowledge Management (KM) among nurses.

Methods: This is a descriptive analytic survey. The study population was nurses of selected hospitals. Data collection was done via OLC and KM questionnaires. Reliability of questionnaire conducted by experts. Cronbach's alpha coefficient was 0.85 for OLC questionnaire and 0.93 for KM questionnaire. Data analysis was done in SPSS(16) software.

Results: The mean score of OLC has been 45.5 24.5 among nurses and the mean score of KM has been 44.5 20.1. In general there was a significant relationship between OLC and KM.

Conclusion: In the areas of science and technology and the increasing complexity and dynamics of environmental hospital managers should have planning for creating, disseminate and transmission knowledge in the organization.

Keywords: Organization Learning Capacity, Knowledge Management, Hospital, Iran.

Introduction

Hospital is a dynamic organization which needs to keep itself quite up to date using the newest technologies and knowledge (1). Within the health care organizations rapid evolution of new techniques leads to the need for organizational changes. The expectation from the health care sector is increasing both from the outside, e.g. political push for cost reduction and improved service and quality, and from within such as adopting new medical technologies. These requirements entail health care organizations to adapt to new conditions by attaining higher flexibility and creativity (2). For hospitals to be able to keep their competitive advantages and move toward adoption of new therapeutic technologies high performance knowledge management is an essential requirement (1). Nursing, as one of the oldest professions, is undergoing these changes. On the other hand these transformations have had significant impact on nurses and administrators in health care organizations. As nurses, as the largest human resource element of health care systems, have a major role in providing ongoing, high-quality care for patients (3). In fact, regarding the role of nurses and administrators, especially in hospitals, there is a strong need to move towards the learning organization (4). Organizational learning is a process which the organization will learn more items (5). Also, it can be defined as an intrinsic ability of an organization for creates, enriches, and utilizes knowledge (6). Today, there is an increasing trend in movement of production-oriented organizations to be knowledge-based organizations. Knowledge is considered as key factor in the organization and the updated information is an inevitable necessity for the survival of organizations (7). Knowledge management is related to intellectual capital of an organization (8), to survive for a long term, organizations need knowledge not only as a revolution of information technology but also as the organizational change and development (9). Thus achieving competitive advantage in the modern and new economic environment is depended upon the capacity and the ability of the organizations in utilizing their resources which are based on the knowledge and learning of the organization (10). Several studies have shown that organizational learning is associated with organizational performance measures, including profit, business strategy, job satisfaction, organizational innovation, and organizational commitment (4,6,11-15). Also there are different studies on organizational learning and knowledge management in organizations (16-22). Howard's suggest that the combined review of knowledge management and organizational learning lead to and enhanced organizational productivity (23). The strategic importance of OLC and the role of knowledge sharing in developing OLC have been well documented (14). Studies show that innovation principles must be acquired through constant learning and learning principles, in turn are realized through knowledge and wisdom sharing with colleagues, clients, and others (24). Research has established that knowledge management is a prerequisite to development of a learning organization (25). Martin (2000) emphasized the importance of learning, create processes that support organizational learning and creation organiza-

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tional knowledge (27). Aghdasi et al. studied the organizational learning levels at different hospitals (22). Other research suggests that Disseminate Knowledge and Knowledge-based environment are the most important factors affecting organizational performance (28-30). While organizational learning and knowledge management theories have been extensively developed over the past several years, identifying the nature of relationship between these two constructs, particularly in healthcare settings remain as an open research area. Hospitals due to specialized medical services and close relationship with the patient, and continuously interact with their environment have a special place in terms of learning and are learning organizations (32). Hence the objective of the recent article is to determine the relationship between the OLC and KM among nurses.

Methods
Study Design
This study is a cross-sectional descriptive-analytical study. This study was conducted during 2010 in five educational hospitals (3 public and 2 private hospitals) in Isfahan city.

Population and Sample
The study population was nurses working in hospitals affiliated to Isfahan University of Medical Sciences. A pilot study was carried out to determine the approximate standard deviation of the population. Based on the estimated standard deviation the number of samples for 95% confidence and power test of 90% was calculated to be 157. Questionnaires were randomly distributed among 154 nurses.

Measurement Instruments
Data on organizational learning were collected using standard questionnaire developed by Jerez-Gomez et al. (2004). This inventory accounts for OLC dimensions including Managerial Commitment, Systems Perspective, Openness and Experimentation, Knowledge Transfer, and Integration Capability. To measure knowledge management, a specific questionnaire was developed assessing five dimensions of KM, including Creation of Knowledge, Application of Knowledge, Refinement of Knowledge, Knowledge Dissemination, and Knowledge Capture. Content validity of questionnaire was carried out using expert opinion method by inviting 10 professors in the fields of nursing and management to examine the questionnaire content. Reliability of the questionnaires was calculated using Cronbach's alpha. An alpha coefficient of 0.85 for OLC survey and 0.93 for KM survey was calculated. Data were analyzed using SPSS Software (16). P< 0.05 was considered as significant.

Results
Of total distributed questionnaire, 130 valid questionnaire was returned. Of all respondents85% were female, 76% held a bachelor degree, and 18.6% had a work experience of 1 to 5 years. A mean score of 45.5 (24.5) was obtained for organizational learning capability. Knowledge transfer and integration received the highest score 47.8 (27.8), and the lowest score was gained by openness and experimentation (43.1).

A mean score of 44.5 (20.1) was obtained for KM. While application of knowledge received the highest score(49.7) in KM construct, refinement of knowledge earned the lowest score(40.6) (Table 1). There was a significant correlation between organizational learning and knowledge management and it’s all dimensions (Table 2).

Discussion
-Mean score OLC(45.5±24.5) is indicative of middle scores of hospitals from the perspective of a learning environment and the hospitals need to move the cursor to the learner is. Between dimension of OLC, the highest mean belongs to knowledge transfer and integration.

Table 1. Means of Organization learning, Knowledge Management in nurses of Isfahan hospitals

<table>
<thead>
<tr>
<th>Variable</th>
<th>Managerial Commitment</th>
<th>Systems Perspective</th>
<th>Openness &amp; Experimentation</th>
<th>Knowledge Transfer &amp; Integration</th>
<th>Organization Learning Capacity</th>
<th>Create Knowledge</th>
<th>Capture Knowledge</th>
<th>Refine Knowledge</th>
<th>Disseminate Knowledge</th>
<th>Application Knowledge</th>
<th>Knowledge Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>45.3</td>
<td>43.1</td>
<td>47.8</td>
<td>45.5</td>
<td>45</td>
<td>49.3</td>
<td>40.6</td>
<td>42.1</td>
<td>49.7</td>
<td>49.7</td>
<td>44.5</td>
</tr>
<tr>
<td>Standard Division</td>
<td>18.3</td>
<td>27.7</td>
<td>27.8</td>
<td>24.5</td>
<td>20.3</td>
<td>12.3</td>
<td>23.7</td>
<td>21.6</td>
<td>22.3</td>
<td>20.1</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Relationship between OL and KM

<table>
<thead>
<tr>
<th>Variable</th>
<th>Managerial Commitment</th>
<th>Systems Perspective</th>
<th>Openness &amp; Experimentation</th>
<th>Knowledge Transfer &amp; Integration</th>
<th>Organization Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Management</td>
<td>r = 0.567</td>
<td>r = 0.859</td>
<td>r = 0.457</td>
<td>r = 0.569</td>
<td>r = 0.484</td>
</tr>
<tr>
<td>Create Knowledge</td>
<td>r = 0.762</td>
<td>r = 0.725</td>
<td>p = 0.000</td>
<td>r = 0.815</td>
<td>r = 0.689</td>
</tr>
<tr>
<td>Capture Knowledge</td>
<td>r = 0.737</td>
<td>r = 0.703</td>
<td>p = 0.000</td>
<td>r = 0.765</td>
<td>r = 0.683</td>
</tr>
<tr>
<td>Refine Knowledge</td>
<td>r = 0.786</td>
<td>r = 0.757</td>
<td>p = 0.000</td>
<td>r = 0.795</td>
<td>r = 0.727</td>
</tr>
<tr>
<td>Disseminate Knowledge</td>
<td>r = 0.786</td>
<td>r = 0.757</td>
<td>p = 0.000</td>
<td>r = 0.795</td>
<td>r = 0.727</td>
</tr>
<tr>
<td>Application Knowledge</td>
<td>r = 0.337</td>
<td>r = 0.359</td>
<td>p = 0.000</td>
<td>r = 0.67</td>
<td>r = 0.169</td>
</tr>
<tr>
<td>p = 0.00</td>
<td>p = 0.00</td>
<td>p = 0.00</td>
<td>p = 0.000</td>
<td>p = 0.00</td>
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</tr>
</tbody>
</table>
It means that research hospitals can removes internal barriers of knowledge transfer. And the lowest score belonged to Openness and Experimentation. In fact, these hospitals is not given importance to new ideas and viewpoints inside or outside the organization. The mean score of KM was (49.7±22.3). This indicates that KM has a good situation in hospitals. The findings of the current study show that the hospitals have the ability to store knowledge in data bases, but in a practical scheduled of knowledge to be poorly. Between dimension of KM, the highest mean belongs to application knowledge and the lowest score belonged to refine knowledge. The hospitals in this study are well used knowledge in work processes. However, in applying the new knowledge they have not done well. According to Howard (18), integrating knowledge management and learning needs for improving organizational efficiency. Consistently, this study shows the relationship and the need to integrate these two components. In addition, our results on relationship between KM and OLC is supported by previous studies (14, 26). Huang Chao showed that learning principles are realized through knowledge sharing among employees and clients (24). One of the aspects of knowledge management is knowledge sharing. Congruently, knowledge management is a prerequisite to creating a learning organization (21). Concepts such as knowledge management, organizational learning capacity, and learning organization should be regarded as a chain of rings that are linked together. But in the current study organizational learning capacity is defined as an independent variable. In another study (25) OLC is consisted of three dimensions, including individual, team, and organization learning, that it is different with OLC dimension of current study. Martin (27) emphasized the importance of learning create processes that support organizational learning and creating organizational knowledge, also in present research, we identified a relationship between Create Knowledge and OLC. Bryant in his research identified a clear relationship between transformational leadership and knowledge management in organizations. Also found that leadership impacts the creation and dissemination of knowledge (28). Similarly, this study also found that managerial commitment has a significant relationship with knowledge management. In Aghdasi and Khakzar Baftei’s, knowledge transfer and integration capability gained the highest relative score as compared with the other KM dimensions, followed by systems perspective, openness and experimentation and managerial obligation capabilities located (22). Sinkula, Baker, and Noordewier (1997) suggested that the core components of organizational learning is commitment to learning, open-mindedness, and share division(33). Finally, today, organization need effective and efficient employees in order to achieve their goals for growth and development in all aspects, and The diffusion of knowledge and create the learning environment is an important component that affect employee performance.

Conclusions
Between OLC dimension, Openness & Experimentation has the lowest score. With regard to this topic, it is necessary for hospitals to establish suggestion system, Using the experiences gained, innovative new methods and promote creativity. As noted above, today’s organizations to maintain their competitive advantage, they need to move quickly toward sources of knowledge (28-30). As results of this study are outlined hospitals must attention particularly on the refine Knowledge and Disseminate Knowledge, Thus that knowledge should be available to everyone in the organization at any time and place that requires it to be used. However, new technologies such as teamwork, internet, intranet and other technologies can help to disseminate Knowledge (34).

Reference
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