

## Original Research

# Evaluating The Effect of Knowledge-Based Human Resource Management on Organizational Learning by Considering the Mediating Variables of Human, Relational and Structural Capitals

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### Abstract

**Introduction:** Hospitals, as one of the important institutions providing health services in the health sector, have a high percentage of key resources in this sector to meet the needs of consumers. Continuous maintenance of organizational learning is one of the basic prerequisites for sustainable productivity of leading organizations. In this regard, the present research evaluates the effect of knowledge-based human resource management on organizational learning by considering the mediating variables of human, relational and structural capitals.

**Method:** This research is a descriptive-correlational study. The employees of Tamin Ejtemaei Hospitals in Lorestan province were considered as the statistical population of this research. Out of them, 212 employees were studied by stratified-random sampling method. The required data were collected using a questionnaire and analyzed using the structural equation modeling method and partial least squares approach by smart pls2 software.

**Findings:** Based on the research results, there is a positive and significant relationship between knowledge-based human resource management and organizational learning. There is also a positive and significant relationship between knowledge-based human resource management and human capital, communication and structure. There is also a positive and significant relationship between human, relational and structural capitals and organizational learning.

**Conclusion:** Using knowledge-based human resource management method in Tamin Ejtemaei Hospitals can increase human, structural, and relational dimensions and indirectly promote organizational learning.

**Keywords:** Knowledge-Based Human Resource Management, Organizational Learning, Human Capital, Relational and Structural Capitals, Tamin Ejtemaei Hospitals

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## Introduction

Health care is of great importance in individual and social lives of people in society and is also considered by international organizations. Many thinkers believe that the development and knowledge of health and medical services are part of social and individual rights and part of the wants and needs of people society. [1]. By passing through the age of industry and entering the age of information, knowledge has been introduced as the main source of competitive advantage of organizations, and their competitive advantage stems from the ability to use knowledge resources [2]. However, current knowledge and skills cannot have a sustainable advantage for organizations in the long run; because rapid environmental changes reduce the efficiency and even obsolete existing knowledge and skills, and this will lead to a decline in employee competence [3,31-33], on the other hand, since providing effective health care requires committed employees with sufficient knowledge and skills [4] and the employees of medical centers as the largest part of the health and medical human resources, have an effective role in the quality of service delivery [5]. Due to the importance of timely performance of staff duties, any sufficient skills and knowledge will not only incur heavy financial costs it will also waste time. Therefore, the issue of learning and updating existing knowledge and skills and acquiring or creating new knowledge and skills plays an important role in the success of organizations. Without learning, individuals and organizations only repeat their past experiences, and if they cannot learn how to learn, they will be marginalized [6]. In the field of organization and management, learning tools including organizational learning and learning organization have been used extensively. Scholars have distinguished between these two concepts and have proposed the concept of organizational learning capability for the relationship between them [7]. Organizational learning capability refers to positive managerial and organizational factors that focus on facilitating and empowering the organizational learning process [8]. Since organizational capabilities are embedded in everyday actions and activities, it is difficult and complicated to imitate and model them [9].

Therefore, paying attention to and focusing on organizational capabilities, especially organizational learning capability, can bring a sustainable competitive advantage to organizations.

Considering that employees play the most important role in organizational learning [10], human resource management activities can be considered as a factor affecting organizational learning capability. Because it plays an important role in the tendency of individual behaviors of employees in organizations and can promote positive attitudes toward learning [11]. Strategic human resource management researchers have used a knowledge-based approach to emphasize the importance of the relationship between human resource management and various knowledge processes [12]. Knowledge-based human resource management is a new approach in human resource management that purposefully designs and implements its activities to promote knowledge processes within the organization, including knowledge acquisition and learning [3], hence, applying this approach in organizations is expected to have a significant effect on organizational learning capability. Human, relational and structural capitals are among the factors that have been highly considered by researchers in the field of organizational learning capability. As some thinkers have named human capital, relational and structural capitals as the most important vital factors in organizational learning [13] and have considered organizational learning capability to require various investments in the field of human, relational and structural capitals [14]. Accordingly, in the present research, human, relational and structural capitals are studied as mediating variables affecting organizational learning capability. According to the results of studies, a significant part of the variables observed in knowledge-based performances can be attributed to human resource management activities [12], especially when knowledge-based human resource management activities are planned and implemented, they have a significant positive effect on knowledge assets such as human, relational and structural capitals [3]. However, comprehensive research has not been conducted on the role of human, relational and

structural capitals in the relationship between human resource management methods and organizational learning capability. In a few studies in this field [11,15], only human capital has been taken into account. Considering the importance of the issue and the existing gap, the need to evaluate the role of the three dimensions of human, relational and structural capitals in the relationship between knowledge-based human resource management and organizational learning capability is felt, which is addressed in this research. It is worth mentioning that the only knowledge-based human resource management approach is considered in this research. The use of human, relational and structural capitals of the organization can contribute to creativity and innovation in organizational methods. Therefore, in the present research, an attempt has been made to evaluate the effect of knowledge-based human resource management on organizational learning by considering the mediating variables of human, relational and structural capitals.

### **Theoretical literature**

#### **Organizational learning**

The concept of organizational learning capability includes some managerial and organizational features that facilitate the learning process in the organization and allow organizations to learn continuously [7]. There are various definitions of organizational learning capability, most of which focus on the positive factors of empowerment of the organizational learning process (Camps et al.). According to these definitions, organizational learning capability is known as tangible and intangible resources of the organization as skills that help to promote the competitive advantage of the organization and facilitate the organizational learning process [16]. The importance of organizational learning facilitating factors has given rise to a wide range of factors that are traditionally rooted in the learning organization literature and often focus on developing normative models for creating a learning organization [17,30]. Chiva et al. (2007) based on a comprehensive review of the existing literature on organizational learning capabilities have proposed five factors that facilitate learning including experimentation, risk taking, interaction with

the external environment, dialogue, and participative decision-making as components of organizational learning capability, which have been used in several studies. Experimentation is the extent to which each of the new suggestions and ideas is considered. Risk taking refers to tolerating ambiguity, uncertainty and mistakes. In other words, risk taking means accepting the possibility of a mistake or failure. Interaction with the external environment refers to the expansion of relations with the external environment. Dialogue refers to the strengthening of collective inquiry into the processes, assumptions, and certainties that are experienced every day. Finally, participative decision-making also means the influence of employees in the decision-making process [17].

#### **Knowledge-based human resource management**

Knowledge-based human resource management is a new approach in human resource management that designs and implements the main activities of human resource management based on improving and developing the knowledge of the organization. In other words, knowledge-based human resource management includes those activities that are purposefully designed to promote knowledge processes within the organization. [3] According to this approach, each human resource management activity focuses on the development and promotion of the organization's knowledge. For example, in the recruitment process, in addition to paying attention to current social knowledge and skills, potential abilities to learn new knowledge and skills, communication and social skills and the ability to work in a team, the ability to tolerate ambiguity and adapt to changes and environmental dynamics of applicants are also considered, which causes organizations to have access to informed and knowledgeable human resources in order to improve the efficiency and effectiveness of performance in knowledge tasks [11,18]. Knowledge-based recruitment has been defined as a deep and explicit focus on selection of applicants with related knowledge and communication and learning capabilities [3]. Training and development is another

human resource management activity that greatly affects the knowledge base of the organization [18]. Knowledge-based training and development means regular development of the depth and breadth of knowledge and expertise, specialization of training for special needs, and ultimately ensuring the continued development of employees [3]. By designing and implementing training activities, organizations can strike a balance between the existing employees and the required knowledge and skills and thus help create knowledge [19]. Training can also promote creative thinking and expand the range of expertise of employees [20]. Expertise increases the ability of employees to evaluate and use new knowledge. Because the ability to evaluate and use external knowledge is often based on prior knowledge. The high level of knowledge and awareness of employees creates the ability to recognize the value of new knowledge, absorb and apply it for business purposes [10]. Organizations that actively plan and implement courses, seminars, and other training to their employees keep their knowledge base up-to-date and competitive to a desirable extent. Traditionally, employees are evaluated on the basis of economic performance. But the knowledge-based evaluation system considers knowledge activities such as creation, sharing and use of knowledge [18]. Knowledge-based service compensation based on employee participation in key knowledge processes such as knowledge sharing, creation, and application considers rewards and depicts advancement in the career path based on knowledge and expertise [3,18].

### **Intellectual capital**

In recent decades, management literature has used the concept of intellectual capital to understand how knowledge acts as a key asset in creating value for the organization. [3] Intellectual capital represents the intangible assets related to knowledge that are hidden in the organization [21]. There are different classifications of intellectual capital, each using different terms. Meanwhile, there is a certain consensus about the threefold nature of intellectual capital, and in most of them, human capital, relational capital and structural capital are considered as common elements of intellectual capital [22]. Human capital refers

to managers and employees of the organization and their characteristics such as knowledge, skills, experience, commitment, attitude, motivation and competencies. Because when employees leave, it leaves the doors of the organization. However, thinkers consider human capital as one of the elements of intellectual capital; because organizations cannot do anything without it [22] [3]. Relational capital, sometimes called social capital, refers to the latent, existing and used knowledge in interactions with customers, suppliers, government and other institutions [22]. Structural capital, sometimes called organizational capital, refers to all the non-human resources of knowledge within the organization that are distributed and accumulated in organizational structures, processes, systems, and procedures. In fact, structural capital is the knowledge that remains in the organization when employees leave [3].

### **Development of hypotheses and conceptual model of the research**

Learning at group and organization level will not be possible without individual learning [15]. Therefore, employees play the most important role in organizational learning. Therefore, human resource management activities play an important role in improving and promoting organizational learning capability. Numerous studies have confirmed the effect of various methods of human resource management on organizational learning capability [15] [23] [11]. Considering the growing importance of knowledge in today's business environment, a new approach to human resource management plans knowledge-based human resource management activities. Considering the characteristics of knowledge-based human resource management approach and the great importance it attaches to improving the knowledge processes of the organization, including the acquisition, creation and application of new knowledge and skills in the organization, it seems that the use of knowledge-based human resource management method has a significant effect on improvement and promotion of organizational learning capability.

Researchers acknowledge that a significant proportion of the variables observed in



knowledge-based performances can be attributed to human resource management activities [12]. Therefore, it can be expected that human resource management activities that are planned based on knowledge will greatly improve and increase the level of knowledge assets such as intellectual capital. Numerous studies have revealed the positive effect of human resource management activities on improving the quality of employees or, in other words, the human capital of the organization. For example, knowledge-based recruitment affects human capital and knowledge resources that enter the organization [3]. Knowledge-based training and development continuously reviews the training needs of the organization and strikes a balance between the existing employees and the required knowledge [19]. Also, performance appraisal and service compensation systems that consider new knowledge and skills in performance appraisal of employees can increase learning motivation in them. In addition, by considering group rewards, interactions between employees can be increased, which in turn leads to knowledge sharing [24]. Kat and Zander (1992) argue that organizational learning depends on the exchange and integration of information, knowledge, and ideas created by employees of the organization [10]. Therefore, employees with a high level of quality, knowledge and motivation in learning are expected to have a significant effect on improving organizational learning capability. In this regard, the role of human resource management in promoting human capital of the organization is of great importance.

Also, some human resource management activities can improve and promote relational capital. For example, recruiting and attracting individuals with good communication skills and extensive communication networks can promote the organization's relational capital [3]. In addition, extensive training can increase interpersonal relationships, frequency of interactions, trust, knowledge and other capabilities of employees and play a significant role in the exchange and sharing of knowledge [26], [25]. According to Hsu and Fang (2009), the high level of social and relational skills of employees will lead to good interactive

relations of the organization with shareholders, customers and suppliers, which in turn will promote the organization's relational capital and will increase the possibility of acquiring new knowledge from customers and business partners, and as a result, organizational learning capability will be improved [10]. Tsai (2001) believes that good relational skills and extensive communication with people outside the organization provide more opportunities to absorb various resources, including new knowledge and skills (Tsai, 2001). Accordingly, it seems that if human resource activities are planned on the basis of knowledge, it will have a significant effect on relational capital and organizational learning capability.

Considering the concept of structural capital, all systems and processes of problem solving and value creation in the organization belong to the structural capital of the organization. These systems and processes include all processes and procedures, organizational structure design and usability of information technology, intellectual property management and information system structures. Human resource management activities can affect organizational factors such as systems, processes, databases and organizational culture to promote organizational learning capability [10]. For example, human resource management can create a learning culture in the organization and provide an open learning environment for employees to encourage their employees to learn informally. As a result, employees may be more willing to share knowledge. Furthermore, the creation of information systems can accelerate the acquisition and sharing of knowledge, which in turn enhances organizational learning capability. Persaud et al. consider information technology as a tool for acquiring external knowledge [27]. Accordingly, it is expected that when human resource management activities are planned based on knowledge, it will have a significant effect on promoting structural capital and organizational learning capability. Based on the reviewed background, the conceptual model of the research is developed as Figure (1).

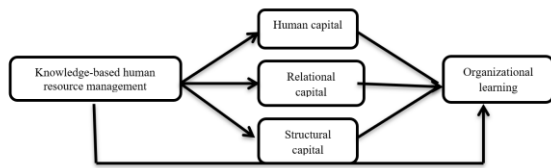


Figure (1): Conceptual model of the research

As shown in Figure (1), this research aims to study the effect of human resource management based on knowledge management on organizational learning capability both directly and through the three components of intellectual capital. Based on this, the research hypotheses are developed as follows:

1. Knowledge-based human resource management affects organizational learning.
2. Knowledge-based human resource management affects organizational learning through human capital.
3. Knowledge-based human resource management affects organizational learning through structural capital.
4. Knowledge-based human resource management affects organizational learning through relational capital.

#### Research methodology

The present research is applied in terms of purpose and descriptive-survey in terms of method and nature. The field method and a questionnaire were used to collect data. Library resources were used to review the theoretical and experimental background of the research. The employees of Tamin Ejtemaei Hospitals in Lorestan province were considered as the

statistical population of this research. The sample size was calculated using the Cochran's formula and 212 employees were estimated as the appropriate sample size. Sampling was done by stratified-random method. Knowledge-based human resource management activities, human, structural and relational capitals, and organizational learning capability were investigated as variables of this research. Kianto et al. (2017) questionnaire was used to assess knowledge-based human resource management. This questionnaire measures the four main activities of knowledge-based human resource management. Human, structural and relational capitals were measured using the Bontis (1998) questionnaire [28], and Chiva et al. (2007) questionnaire was used to assess organizational learning capability. The research hypotheses were analyzed using structural equation modeling with partial least squares approach and smart pls2 software.

#### Findings

In order to investigate the fit of the structural model of the research, several criteria were used, the first and most basic of which is the significance coefficients of Z or t-value. Values of t above 1.96 indicate the accuracy of the relationship between research constructs as well as the confirmation of research hypotheses. The research hypotheses were tested using the path analysis method in Table (1).

Table 1: Path analysis results

Path	t-value	Path coefficient	Standard error	Result
Knowledge-based human resource management and organizational learning	0.732	-0.083	0.0653	Rejected
Knowledge-based human resource management and human capital	3.117	0.418	0.0912	Confirmed
Knowledge-based human resource management and structural capital	4.486	0.612	0.0887	Confirmed
Knowledge-based human resource management and relational capital	4.221	0.482	0.0965	Confirmed
Human capital and organizational learning	5.325	0.523	0.0831	Confirmed
Structural capital and organizational learning	2.835	0.345	0.108	Confirmed
Relational capital and organizational learning	3.365	0.391	0.0724	Confirmed

The Sobel method was used to evaluate the indirect effect of knowledge-based human resource management on organizational

learning through each of the components of intellectual capital. The results are presented in Table (2).

**Table 2: Hypothesis test results**

Path	Path coefficient	t-value	Result
Knowledge-based human resource management based on organizational learning	-0.083	0.732	Rejected
Knowledge-based human resource management through human capital on organizational learning	0.384	4.003	Confirmed
Knowledge-based human resource management through structural capital on organizational learning	0.231	2.212	Confirmed
Knowledge-based human resource management through relational capital on organizational learning	0.248	3.114	Confirmed

## Discussion and Conclusion

Among the organizations providing hospital care, Tamin Ejtemaei Organization is the largest organization after the Ministry of Health and is the second active institution in this field. In today's knowledge-based economy, knowledge is accepted by public as one of the most important factors in organizational management and plays a major role in gaining a competitive advantage for organizations. Today, the importance of physical and tangible resources has diminished and it is the ability to utilize the knowledge assets that determines the success or failure of organizations. Despite drastic environmental changes, current knowledge and skills cannot be relied upon as a sustainable advantage; because environmental changes and rapid developments in the fields of technology and information reduce the efficiency of existing knowledge assets.

Therefore, the necessity for continuous updating of knowledge and skills of the organization is strongly felt. Organizations that fail to keep up with these rapid developments will inevitably rush to destruction. Therefore, the issue of learning is one of the challenges that organizations face today. In this chaos and turmoil, those organizations can survive that are constantly learning new knowledge and skills. In the current situation, organizational learning capability can help the organization to achieve its goals as a kind of sustainable competitive advantage. It should be noted that the human resources of organizations play a fundamental role in learning of the organization. Few studies have been conducted on the effect of human resource management methods on organizational learning capability. Due to the existing gap, the present research

was conducted to evaluate the effect of knowledge-based human resource management on organizational learning and the role of human capital, relational capital, and structural capital as the variables mediating and facilitating the organizational learning process was evaluated.

The results of the first research hypothesis do not confirm the direct effect of knowledge-based human resource management activities on organizational learning capability. Given the results of the studies by Cabrales et al. (2011) [11] and Akbari Borang and Pour (2016) [15] that confirm the direct and positive effect of human resource management methods (methods of selection, improvement and growth and competency-based appraisal) on organizational learning capability and the contradictory results of the present study, the need for further investigation of this issue is felt. It seems that various factors are effective in this regard that have not been considered in this research and previous research that should be taken into consideration in future research.

The results of investigating the second hypothesis showed that knowledge-based activities of human resource management promote organizational learning capability by increasing human capital. Therefore, human capital plays a role as a complete mediating variable in the relationship between knowledge-based human resource management and organizational learning capability. This result is consistent with the findings of studies by Kianto et al. (2017) [3], Akbari Borang and Pour (2015) [15], Cabrales et al. (2011) [11] and Hsu and Fang (2009) [10]. According to the findings of the second research hypothesis, human resource managers in Tamin Ejtemaei Hospitals can have a

significant effect on organizational learning capability by emphasizing knowledge in carrying out their activities. For example, recruitment activities have a great effect on the human capital that enters the organization. Paying attention to the potential capacity to learn the knowledge and skills required by the organization in addition to the current knowledge and skills of applicants in the recruitment process can attract talented people who help Tamin Ejtemaei Organization to acquire new knowledge and skills and create new ideas. Also, training and development activities increase the current level of human capital.

Development programs based on the future needs of Tamin Ejtemaei Organization and special training have a great effect on promoting organizational learning capability, because it specializes employees and facilitates the learning of new knowledge and skills. Furthermore, performance appraisal and knowledge-based service compensation provide the motivation required by the employees of Tamin Ejtemaei to improve their knowledge and skills, which in turn increases human capital and organizational learning capability. Also, knowledge-based performance appraisal motivates employees to make more use of knowledge and engage in knowledge activities such as acquiring and sharing knowledge.

Service compensation system policies can have a positive effect on employee involvement in knowledge activities by considering material and spiritual incentives. This in turn will promote organizational learning capabilities. Findings from previous studies have shown that incentive systems are important mechanisms for motivating employees to spend more time on sharing knowledge and creating new ideas.

Findings from testing the third research hypothesis confirm the mediating role of structural capital in the relationship between knowledge-based human resource management activities and organizational learning capability. These results are consistent with the findings of studies by Kianto et al. (2017) [3] and Hsu and Fang (2009) [10]. Structure, culture, systems, processes, procedures, and the usability of technology are

elements of structural capital that can affect organizational learning capability. Organizational managers and leaders can design organizational structures, systems, processes, and procedures in a way that facilitates organizational learning.

For example, the information technology system can be used as a tool to acquire and share external knowledge. Organizational culture is another element of structural capital that can be useful for developing organizational learning capabilities. For example, an organization can provide an open learning environment for employees to encourage their employees to learn informally. As a result, employees may be more willing to share and acquire knowledge. Also, creating a database can develop organizational learning capabilities and, in addition, reduce the cost of making wrong decisions and judgments due to insufficient information.

The results of testing the fourth hypothesis of the research confirm the mediating role of relational capital in the relationship between knowledge-based human resource management and organizational learning capability. This result is consistent with the findings of studies by Kianto et al. (2017) [3], Cabrales et al. (2011) [11], Hsu and Fang (2009) [10]. Knowledge-based activities of human resource management promote organizational learning capability through relational capital. Attracting and recruiting applicants with desirable communication and social skills will affect the organization's communication with customers, shareholders and other stakeholders. Extensive communication increases the likelihood of acquiring knowledge from a variety of sources. Extensive training courses also increase the likelihood of acquiring knowledge from a variety of sources.

Also, extensive training courses with the aim of increasing relational and social skills can lead to more communication and improved communication skills of employees. Experts believe that employees with good communication skills and more communication with people outside the organization have more opportunities to acquire various resources, including new knowledge and information. Also, information



technology as a tool to communicate with external resources can facilitate the organization's relationship with the environment and the acquisition of external knowledge, and in turn increase organizational learning capability.

The present research, like other studies, has some limitations. Given that the statistical population of the present research is limited to Tamin Ejtemaei Hospitals in Lorestan province, caution should be exercised in generalizing the findings and results to other organizations. Therefore, it is suggested that a variety of organizations be considered in future research. Also, in this research, only the questionnaire tool was used in order to collect data, which inherent limitations of the questionnaire are also included in this research. Therefore, it is suggested that other methods of data collection, such as interviews or a combination of these methods, be used in future research.

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