

## Relationship between organizational structure and knowledge management among staff managers of physical education organization

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**Abstract:** In order to gain and sustain a competitive advantage in the global economy, today's organizations need to effectively mobilize their knowledge resources. Knowledge management is the organizational optimization of knowledge to achieve enhanced performance through the use of various methods and techniques. The purpose of this study was to determine the relationship between organizational structure and knowledge management among staff managers of physical education organization. The method of this research was descriptive-survey and correlation. First data gathered by field method via censuses of staff managers of physical education organization by two questionnaires. The content validity of these questionnaires was confirmed by officers of management faculty of university of Tehran and their reliabilities were returned and analyzed (Kronbach Alpha again (KM=0.87 and organizational structure=0.82). Finally 38 questionnaires were returned and analyzed (n=38). Results were optioned by SPSS in two levels of descriptive (internal tendency, variability) and inferential (Spearman and Pearson correlation) Statistics. The significant relationship was showed between formalization with knowledge creation and transfer (p=0.011) (p=0.006) and high level of formalization with down levels of creation and transfer of knowledge were correlated (r=-0.381)(r=-0.241). The relationships between centralization and creation and transfer of knowledge were significant (p=0.012)(p=0.001) and high level of centralization with down levels of creation and transfer of knowledge were correlated (r=-0.421)(r=-0.525). There was no significant relationship between complexity and knowledge creation (p=0.063) but the relationship between complexity and knowledge transfer was significant (p=0.032) that high level of complexity correlated with high level of knowledge transfer (r=-0.229). The relationship between creation and transfer of knowledge was significant (p=0.00) which high levels of those were correlated (r=0.677). With corrective of organizational structure can provide field for application of knowledge management.

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### 1. Introduction

Universalism and competition led to knowledge as a valuable source of strategic and the ability to apply knowledge for marketing opportunities and solve the problem would be its main ability [1]. Management knowledge can be used as a way to improve performance, productivity and competitiveness, improve the efficient acquisition and use of information sharing within the organization, a tool for improved decision making, a way to gain a better method, a way to reduce costs and a late performed research and method for the innovation [2]. Management knowledge is effective in improving quality, increasing efficiency, being up-to-date about information, increasing effectiveness, customer satisfaction and improving decision making [3]. Wiige (2002) believed management knowledge enables any organization improves its usual performance to conscious performance with creativity. Knowledge management aims to discover

new perspectives on learning, knowledge creation and development of inland and offshore competition in the world with a contemporary approach to deliberation staffs, [4]. In early 2000 management knowledges' motto have been raised creation and dissemination and use of knowledge and information of high quality in order to achieve the goals and information with high quality and individual organizational learning. Seely (2003) expressed cycle of knowledge management in the form of four parts: 1. Create, acquire and develop of knowledge, 2. Transfer and apply knowledge 3. Share knowledge 4. Evaluation and store knowledge [3].

Implementing knowledge management in organizations requires the organizational factors, including the structure and culture and technology, human resources and political orientation and with specific characteristics and coherence and necessary coordination. Knowledge creation and knowledge transfer have been considered two main activities in

knowledge management. Creation and knowledge transfer requires a specific structure in Organization. Organizational structure reflects the style and method of individuals and businesses that are arranged in an organization to provide the organizational affairs. Structure is an incentive or barrier of knowledge management. The high recognition in the process, centralizing on decision making, complex relationships are the barriers of generating the knowledge and new ideas. While the distribution of power and sharing in activities increase knowledge creation and facilitates knowledge transfer in the organization [3].

Asgari (2005) studied the structure and culture, and technology with knowledge management strategy of Labor Ministry and Social Affairs, and concluded although it is a bureaucratic Ministry, reduction of formality and centralization on the organization and increase flexibility and freedom in procedures and decision-making, it can increase and facilitate the creation and transfer of knowledge. Reduction of rules and written procedures of the organization, increasing of non-official relationships and interactions, empowerment of employees about their work, reducing the emphasis on the observance of approved guidelines and procedures, facilitating regular meetings to exchange information between managers and employees, increasing access to information and documents needed for staff can facilitate the creation and transfer of knowledge [3]. Physical education and sport has been considered as the crucial factor of the health and vitality. It has a positive impact on national productivity and prosperity of the country. Investment on products and sport services, on the one hand provides employment and on the other hand, adds to national impure products [5]. With increasing the government emphasis on developing the knowledgeable society and priority to knowledge-based economies in the fifth development plan and the positive effects of this research on improving knowledge management and improving its background, particularly in the areas of sports organization, we intend to study and test relationship between organizational structure (formalization, centralization and complexity) and knowledge management (knowledge creation and knowledge transfer).

## 2. Material and Methods

This research is a descriptive method-correlation. In terms of classified research, this research also takes place in the category of applied research [6]. The study population consisted of 42 physical education managers organization (physical education coaches and all the managers of the organization in the years 2007-2008, which included

all management positions as directors of the organization were taking the organization had approved the new organization [6]. Data were collected by demographic, Robbins Stephen organizational structure and Asgari knowledge management questionnaires. Demographic questionnaire included questions about demographic and occupational characteristics of individuals such as sex, age, experience, education and employment status. Organizational structure questionnaire, included 24 questions with combination of three separate questionnaires of Stephen. Robbins in central, formality and complexity that was set in a scale of 5, each option "A" 1 point for each question and option "C" is awarded 5 points for each question. Questions 1 to 7 of "A" questionnaire measures the complexity of the physical structure and 8 to 14 questions related to the formalization of organizational structure and organization of physical education and finally, questions 14 and 24 which measure the amount of central on organizational structure of physical education organization.

Knowledge management questionnaire [3], which included 21 questions, was formed of two components of creation and transfer of knowledge. Cronbach's alpha was used to determine the reliability of the questionnaires. Knowledge management and organizational structure questionnaires were calculated 0.82 and 0.87 in order. 94 percent of questionnaires were collected by coordination of national center for research management and sports development. Data were analyzed Pearson correlation. All statistical operations were performed using SPSS software and EXCEL

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## 3. Results

**Table 1.** Type of education, mean and standard deviation of age and experience of managers

| N                       |               | Female          | Male             |
|-------------------------|---------------|-----------------|------------------|
|                         |               | 12              | 26               |
| Experience (SD $\pm$ M) |               | 11.5 $\pm$ 5.45 | 22.07 $\pm$ 5.30 |
| Age (SD $\pm$ M)        |               | 33.5 $\pm$ 3    | 47.69 $\pm$ 5.49 |
| Education degree        | BA            | 9               | 14               |
|                         | MA and higher | 3               | 12               |

38 (12 female, 26 male) directors of physical education organization participated in this study, which demographic variables are shown in Table 1. Results showed that females were with a mean age of 33.5  $\pm$  3 years and experience of 11.5  $\pm$  5.451 years and males were with a mean age of 47.69  $\pm$  5.49 years and experience of 22.07  $\pm$  5.30 years. Also, the

results showed that 75 percent of females had BA degree and 25 percent had MA and higher degree, while 8.53 percent of males had BA degree and 2.46 percent had MA and higher degree.

**Table 2.** Relationship between formalization, central and complexity of organization knowledge creation and knowledge transfer

| Predictable index  |                    | Correlation coefficient | P     |
|--------------------|--------------------|-------------------------|-------|
| formalization      | knowledge creation | -0.241                  | 0.11  |
|                    | knowledge transfer | -0.381                  | 0.006 |
| central            | knowledge creation | -0.421                  | 0.12  |
|                    | knowledge transfer | 0.525                   | 0.001 |
| complexity         | knowledge creation | -0.119                  | 0.063 |
|                    | knowledge transfer | -0.229                  | 0.032 |
| knowledge creation | knowledge transfer | 0.677                   | 0.000 |

There is a significant inverse correlation between formalization and knowledge creation ( $p = 0.11$ ,  $r = -0.241$ ), that is, high level of formalization is correlated with low levels of knowledge creation and vice versa.

The correlation of  $-0.381$  indicates a significant inverse between formalization and transfer of knowledge ( $p = 0.006$ ). It means that the high level of formalization is correlated with low levels of knowledge transfer and vice versa. There is a significant relationship between centralizing on creating and transferring knowledge in physical education organization. So the correlation value ( $p = 0.012$  and  $r = -0.421$ ) indicates an inverse relationship between concentration and knowledge creation and correlation value ( $p = 0.001$  and  $r = 0.525$ ) indicates an inverse relationship between concentration and transfer of knowledge. That means high level of concentration is correlated with low levels of knowledge creation and transfer, and vice versa.

There was not significant relationship between complexity and knowledge creation of physical education staff managers ( $p = 0.063$ ,  $r = -0.119$ ). There was an inverse relationship between complexity and knowledge creation of physical education staff managers ( $p = 0.032$ , and  $r = -0.229$ ). That means high level of complexity is correlated with low levels of knowledge transfer and vice versa. As Table 2 shows, there was a positive and significant relationship between creation and knowledge transfer of physical education staff managers ( $p = 0.000$  and  $r = 0.677$ ).

#### 4. Discussions

Descriptive results showed 68.4 percent of the total sample was males and 31.6 percent was women in physical education organization. According to the results, In order to achieve a more balanced position in this regard, physical education organization should consider necessary arrangements to the growth and promotion of exercise among women in society.

It was also found that the mean and standard deviation of age among staff managers was  $40.59 \pm 2.4$  years old. Managers of organizations should be experienced enough and it appears in physical education organization status is relatively favorable. But in order to increase new information and attention to knowledge management and environmental changes, they can use younger consultants in this field. According to the data, job experiences among men were more than men. The result of education status showed 23 individuals (64.4 percent) had BA degree and 15 (35.6 percent) had MA and higher degree. According to the results, managers' education in educational status was relatively favorable. Results showed that 29 percent of managers graduated in physical education, 34.2 percent graduated in management and 36.8 percent graduated in other fields. The status of education among managers was not desirable, so the highest frequency was related to other fields, which shows there was not good balance between work and field of education.

There was an inverse and significant relationship between formalization and knowledge transfer in physical education managers. It can be said by increasing instructions, circulars, laws and regulations in physical education organization, elements of knowledge management were placed in the lower level and reduce instructions, circulars, laws and regulations in the organization to create knowledge creation and knowledge transfer (until organization is not out of its goal and its mission would not be ruined) and provided the background for the successful implementation of management knowledge. Some research have also confirmed these findings. Davoodi (2001) and Nazari (2005) concluded there is a significant relationship between formalization and cooperative management, speed decision making and creativity [7, 8]. Omid (2006) and Khalifa (2007) found that there is an inverse significant correlation between formalization and physical education organization managers' creativity [9, 10]. Lipotz and colleagues (2000) found public organizations are hierarchical and bureaucratic organizations typically make difficult knowledge sharing [6].

They say that most people have no desire to share this knowledge with others. They hold knowledge in their hearts to gain the power that it can raise to their rank [11]. Hunter (2002) concluded that less organizational hierarchy and more vertical and horizontal communication between the staffs of an organization, provide more adequate space for planning of an entrepreneurship [12]. This orientation can be due to the implementation of knowledge management. Specific structure and later formal structure of guidelines, circulars, rules and regulations become less (until organization is not out of its goal and its mission would not be ruined) and managers can easily share information together from cumbersome rules in an informal atmosphere, and provide context for the successful implementation of knowledge management. There was an inverse relationship between concentration and knowledge creation, it means that high level of concentration is correlated with low levels of knowledge creation and vice versa. It can be said with the increasing adoption of decisions on a particular point in the physical education organization, knowledge management components are placed in a low-level and to create staff managers knowledge and knowledge transfer between organizations can reduce the focus on single decision making (until organization is not out of its goal and its mission would not be ruined) and provided the background for the successful implementation of knowledge management. Davoodi (2001), Nazari (2005), Omid (2006) and Khalifa (2007) concluded there is a significant relationship between lack of centralization and cooperative management, speed decision making and information flow, entrepreneurship, creativity and productivity of staff managers [7, 8]. Bozbura (2007) has diagnosed suitable decentralized structure in creating an environment where employees can create a spontaneous process of knowledge [13]. Group decision-making is the participants elements of organizational knowledge and knowledge compatible activities which Kamimada and colleagues (2007) have referred to it [15].

This orientation can be due to the implementation of knowledge management requires a specific structure. Structure and centralization in which decisions have not been prevented as possible as at a certain point (until organization is not out of its goal and its mission would not be ruined) and managers in a full of confidence atmosphere, shared with knowledge and information and with participation in decision-making provide the background for the successful implementation of knowledge management. However, this partnership would guarantee the further organizational goals and strategic management of knowledge.

There was no significant relationship between complexity and organization of physical education staff managers, it can be said that separate organizational units, organizational segmentation, increasing the number of management levels and staff managers of geographical knowledge do not create any relationship with knowledge creation of staff managers.

This finding is parallel with Khalifa (2007), who could not find a significant relationship between complexity and entrepreneurship, could be due to use of equal tools to measure complexity, and sample of two studies [10]. The finding was inconsistent with the results of complexity of organizational knowledge management. This inconsistency would be due to low volume of samples compared to other studies. Hemmati Nejad (1996) found the average point of organizational complexity structure in physical education organization is in middle level, this can be one of the reasons for the lack of effect of these variables on the staff managers' knowledge creation of that organization [16].

There was an inverse and meaningful relationship between complexity and knowledge transfer of staff managers in physical education organization. It can be said that separate organizational units, organizational segmentation, increasing the number of management levels and staff managers of geographical knowledge keep knowledge transfer in low level and for the successful implementation of knowledge management can decrease separate organizational units, organizational segmentation, the number of management levels and geographic distribution.

Khalifa (2007) and Salavati (1999) concluded that there is negative and strong relationship between organizational complexity, creativity and entrepreneurship, [10, 17]. Hunter (2002) showed organizations with low complicated have more cooperation between organizational units and significantly increased the percentage of corporate entrepreneurship [12]. Ruikar and colleagues (2005) expressed that the horizontal organizations are more suitable for knowledge and information ages, and have more flexibility in environments with rapidly changing and competitive business [19]. This orientation can be due to the particular structure of knowledge management implementation demands. Structure and complexity in which there are separate organizational units, segmentation organization, increasing the number of management levels and geographic distribution should be prevented as possible as (until organization is not out of its goal and its mission would not be ruined) and managers share the knowledge in environment by facilitating relationships (low



complexity) and close communication and provide background for the implementation process of knowledge management (creation and transfer and sharing) and to successful implementation of this concept.

There was a positive and significant relationship between creation and knowledge transfer of staff managers in physical education organization, so that the two were correlated with each other in high level. So with the help of each component, can provide the successful implementation field for the other components of knowledge management. In other words, according to the correlation of knowledge management process to each other, It can be considered as a system (knowledge management process) that components levels interconnected to each other.

Adli (2007) by providing a model of creating and sharing knowledge in organizations stated that the organization ability for knowledge creation and sharing of knowledge includes the ability to gain information and knowledge, foundation of knowledge, absorptive capacity, learning, learning relaxation, care, cooperation, networking, coalition, combination, innovation, design and problem solving (the process of knowledge management) [1].

Giesler (2007) identified four stages of knowledge management typology: transmission, absorption and deployment (knowledge management) and three types of knowledge transfer i.e. manufacturers, transferes and users [19]. Heirnrichs and Lim (2005), Xiogiannis and colleagues (2004) offered the production knowledge, including: implementation of knowledge production, visible and showing them, treatment and follow up the encoded contents to the audience found it out of the state code, transle and understand [20, 21]. This step (knowledge production) is a model similar to the Holsapple and John (2005), and Kankahalli (2004) presented in which knowledge is translated into a form that can be transfered to others. Knowledge transfer is a partial step which users translate knowledge, share and distribute [22, 23]. This orientation can be consistent with the stated problem Ehsan and Rowland (2004) have stated this case involves the implementation of knowledge management in organizations, that the organizational factors (structure, culture, technology, human resources, political orientation, etc.) Own the specific characteristics and coherence and coordination [3]. These factors and organizational components have been expressed necessary and interdependent in most of the time that can be looked at it as a whole in the organization

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