

## Investigating the relationship between knowledge absorptive capacity and talent management with organizational performance

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### ABSTRACT

**Background:** The capacity to absorb knowledge and manage organizational talent and performance is important to the survival of organizations. The aim of this study was to investigate the relationship between knowledge absorptive capacity and talent management with the performance of the organization.

**Methods:** This applied research used the causal design. The statistical population and sample size were 500 and 217 nurses, respectively. Three standard questionnaires were used to collect data. The knowledge absorption capacity questionnaire had Cronbach's alpha 0.705 and included 19 items. Moreover, the organizational innovation variable of the Atlay and Akif questionnaire with Cronbach's alpha 0.795 and 18 items, Hersi and Goldsmith with Cronbach's alpha of 0.762 with 42 items, and Phillips and Rapper with 28 items were used for the talent management component. Data were imported to SPSS20 and analyzed using PLS Descriptive and inferential statistics.

**Results:** The mean age of participants was 24.3±4.5.3 years, 52.54% of nurses were male and 42.46% were female. Also, 61.75% of nurses had a bachelor's degree and 38.15% had an MSc degree. Mean±SD of knowledge acquisition capacity was 17.56±4.63, that of talent management was 17397±4.87, that of organizational innovation was 18.22±4.65. and that of organizational performance was 18.39±4.95. Knowledge acquisition capacity, and talent management had a significant relationship with innovation and organizational performance (1.96<2.57, 3.8, 5.41 and 2.63), and organizational innovation was also correlated with organizational performance (1.96<2.94). According to the results of the Sobel test, the capacity to absorb knowledge and talent management was related to organizational performance with the mediating role of organizational innovation (1.96<2.45 and 3.21).

**Conclusion:** Given the relationship between knowledge absorptive capacity and talent management with organizational performance, managers should be able to effectively improve the capacity to absorb knowledge and spread it throughout the organization.

**Key Words:** Capacity, Talent, Organizational innovation, Administration.

## Introduction

Absorption capacity indicates the company's ability to recognize the value of new topics and external information, and attract and use them for organizational purposes (Seye Ameri et al., 2020). Absorption capacity is considered an intangible asset that improves the performance of the organization over time and is closely related to innovation. (Liu et al., 2018).

Ability to attract capacity enables companies to respond to changes in the business environment. Absorption capacity is a key dynamic capability in knowledge-based competition. Innovation is the practical realization of a new thought. Innovation means the application of new ideas resulting from creativity, which can serve as a new product or a new solution to do things in an organization (Dehghan Najm et al., 2013).

Talent management is considered as a system for identifying, hiring, nurturing, promoting and retaining talented people with the aim of optimizing the organization's capacity to achieve the desired results of organizational goals. (Ahmadi et al., 2012). Third millennium organizations refer to a concept called human capital. (Roze et al., 2018). Organizations try to create added value for their capital to benefit more and reduce costs by using the approach of talent management, staff diversity, and training (Salau et al., 2018).

Today, the most important concern of human resource development managers is the preservation and development of organizational talent, and talent management has had an astonishing effect on the reputation of organizations (Glaster et al., 2018). Therefore, human resources should be considered as the most important asset of an organization, which has a key and important role in achieving its goals. Innovation is considered as one of the main advantages for the life of organizations (Samiei et al., 2017). All organizations need new and innovative ideas to survive. New and innovative ideas are blown into the body of the organization like a soul and save it from nothingness and annihilation (Hong et al., 2019).

Today, financial and technological resources are not the only advantages of organizations. It is important to have talented and capable people who can compensate for the lack of other resources (Sehat et al., 2015). In an environment where continuous change and continuous innovation is the main feature, only successful organizations that understand the strategic role of their human resources and have skilled, knowledge-based, competent, expert, elite, and capable human resources will be successful (Sayadi et al., 2011).

Today's organizations need strategic, creative, innovative, flexible, responsible, and accountable human resources (McDonnell et al., 2017). Due to rapid environmental changes, organizations need people who can change structures according to existing needs, as well as self-control and self-management (Allameh et al., 2015). These people are always looking for opportunities around them and by examining their strengths and weaknesses, they convert the limitations and threats in the environment into opportunities (Farid Fathi et al., 2017). They are extremely talented people to do work, so that their work creates value (Medase et al., 2019).

The purpose of this study was to investigate the effect of talent absorption capacity and talent management on organizational performance with the mediating role of nurses' innovation in Ayatollah Kashani Hospital in Isfahan in 2020. The conceptual model of the present study is shown in Figure 1

## Methods

This research was an applied correlational study conducted in 2021 in Isfahan. The statistical population of this research were 500 nurses of Ayatollah Kashani Hospital in Isfahan. Convenient random sampling was used to select the sample. The sample size was determined as 217 nurses using Morgan table. With the possibility of subject attrition, it was decided to distribute 240 questionnaires among nurses. Due to the outbreak of the Covid-19 pandemic, questionnaires were

given to nurses virtually (by e-mail, WhatsApp, and telephone) or in person (by the researcher). Finally, after collecting the questionnaires, 217 questionnaires that were completed correctly were used as the sample size. Field method and questionnaire tools were used to collect data.

### Research tools

1: The Commission and Force questionnaire (2010) with Cronbach's alpha 0.705 with 19 items was used for the knowledge absorption capacity variable, (Moradi et al. 2014).

2: Atlay and Akif questionnaire (2013) with Cronbach's alpha 0.795 and 18 items was used for the organizational innovation variable (Asadi et al. 2018)

3: The Phillips and Rapper questionnaire (2009) with 28 items (Alizadeh et al. 2017) was used for the talent management variable.

Although the questionnaires were standard, but to ensure validity as well as local psychometric validation, these questionnaires were provided to professors, finalized, and distributed after minor changes.

Data were imported into SPSS20 and analyzed using descriptive statistics. The structural equation modeling (SEM) was used to test the sub-hypotheses of the study. The Sobel test was used to test the main hypotheses of the research.

The inclusion criteria were as follows:

- 1: Willingness to participate in the study.
- 2: More than 3 years of work experience.

Exclusion criteria were as follows:

- 1: Reluctance to participate in the study.
- 2: Failure to complete the questionnaires.

The present paper was distilled from a Master's thesis registered with the ethics code: IR.YUMS.REC.1399.054 in the Azad University of Shahrekord.

### Results

The demographic information of the research sample is given in the table below.

According to Table 1, the highest frequency is related to people aged 30 to 40 years. Most of the

participants are male. Besides, most of the respondents have a bachelor's degree.

Kolmogorov-Smirnov test was performed to check the normality of score distribution. It was found that all components of the questionnaire and also the total score of the questionnaire have a normal distribution ( $P < 0.001$ )

The results of SPSS20 on mean and standard deviation and minimum and maximum of research variables including knowledge acquisition capacity, talent management, organizational innovation, and organizational performance are shown in Table 2.

In all three diagrams in this section,  $s$  represent the research questions. These diagrams are output of LISREL and indicate the confirmation or rejection of the research hypotheses.

The results of the research sub-hypotheses are presented in the Table 3.

According to the data in the Table 5, talent absorption and management capacity affects organizational innovation as well as organizational innovation and talent absorption and management capacity affect the performance of the nurses' organization in Ayatollah Kashani Hospital in Isfahan.

The results of the Sobel test to investigate the role of the mediator variable in the effect of the independent variable on the dependent are given in the table below. In the following formula,  $a$  represents the regression coefficient of the relationship between independent and mediator variables=0.33,  $b$  regression coefficient of the relationship between mediator and dependent variables=0.56,  $S_a$  standard error of the relationship between independent and mediator variables=0.09, and  $S_b$  standard error of the relationship between variables mediator and dependent=0.19.

$$Z - \text{Value} = \frac{a * b}{\sqrt{(b^2 * s_a^2) + (a^2 * s_b^2) + (s_a^2 * s_b^2)}}$$

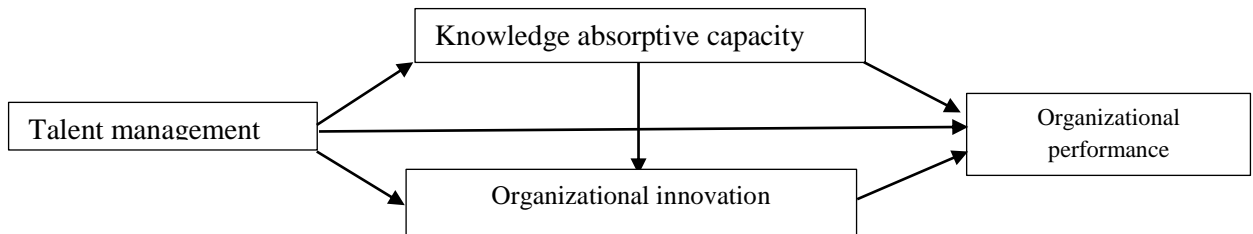
$\alpha=0.33$  Regression coefficient of the relationship between the independent variable and the mediator variable.

$\beta=0.56$  Regression coefficient of the relationship between mediator and dependent variables.

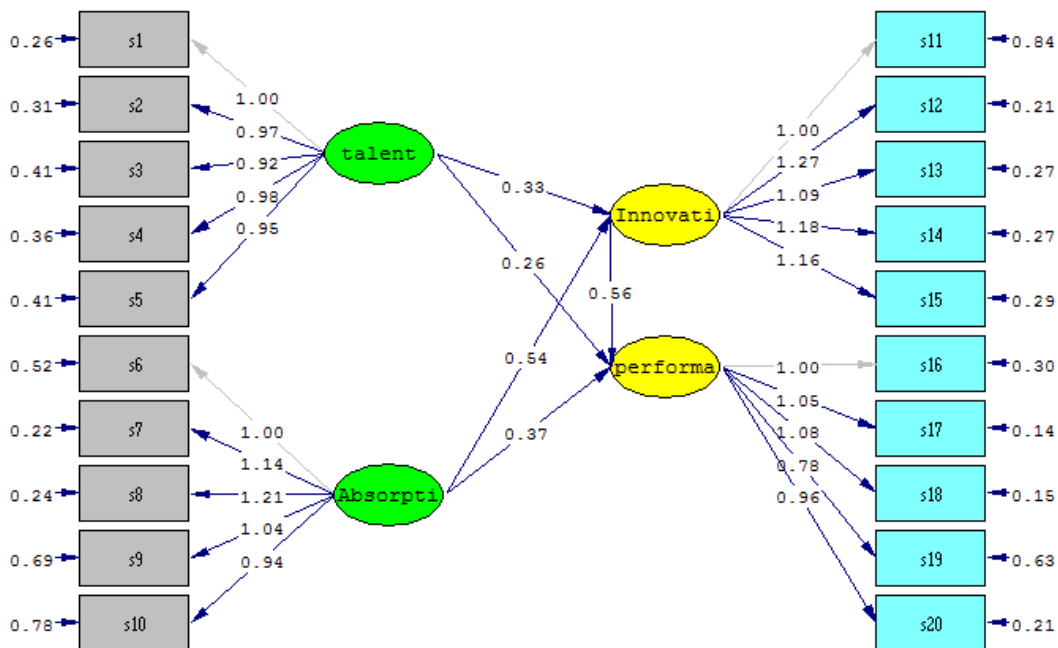
$S_a=0.09$  Standard error of the relationship between the independent variable and the mediator.

$S_a=0.19$  Standard error of the relationship between mediator and dependent variables.

The results of the research main hypotheses are presented in the Table 4.

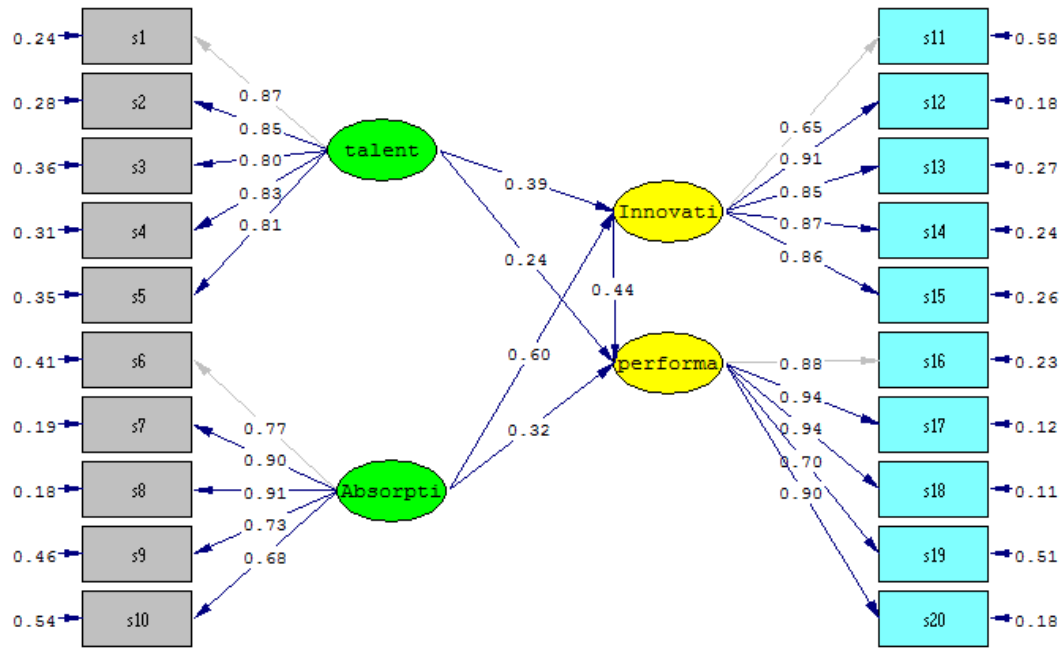


**Figure 1.** Conceptual Model of relationship between talent management with knowledge absorptive capacity and organizational performance and organizational innovation



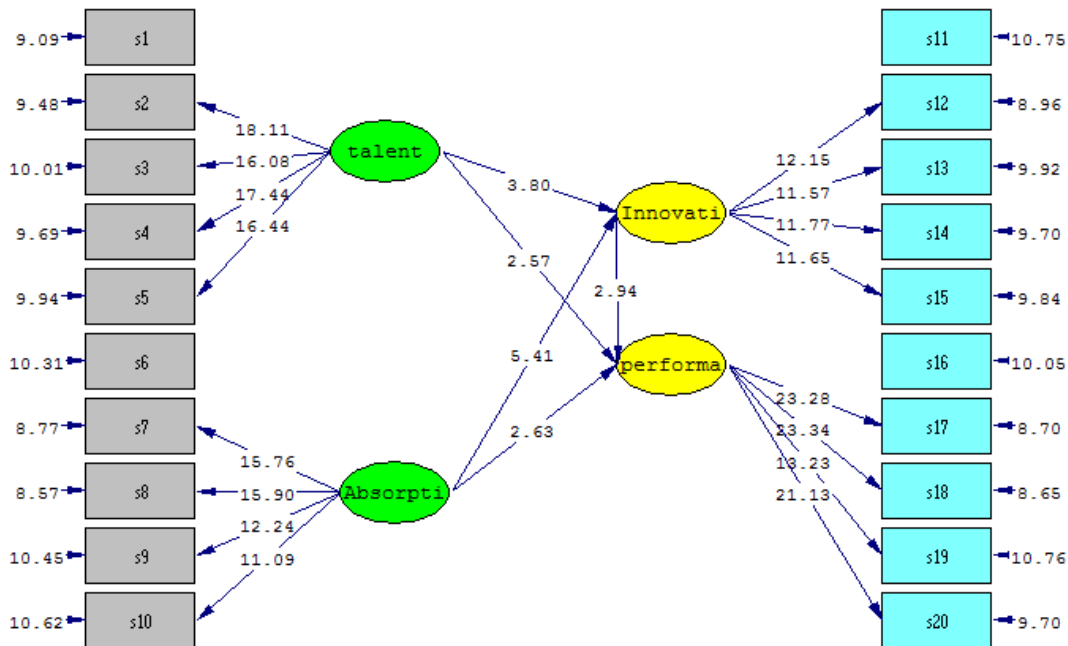
Chi-Square=470.83, df=164, P-value=0.00000, RMSEA=0.093

**Figure 2.** Diagram of structural equations based on estimated values



Chi-Square=470.83, df=164, P-value=0.00000, RMSEA=0.093

Figure 3. Diagram of structural equations based on standard values



Chi-Square=470.83, df=164, P-value=0.00000, RMSEA=0.093

Figure 4. Diagram of the calculation of t-statistics

**Table 1.** Frequency and percentage of respondents' demographic variables

Variable	Frequency	Percentage	
Age	Up to 30 years	45	20.74
	31 to 40 years	68	31.33
	41 to 50 years	56	25.8
	More than 50 years	48	22.12
Gender	Female	103	47.46
	Male	114	52.54
Degree	Bachelor degree	134	61.75
	Higher than a bachelor's degree	83	38.25

**Table 2.** Results of scoring the components of knowledge absorption capacity, talent management, innovation, and organizational performance

Variables	Standard deviation± mean	Standard Deviation	Mean	Maximum	Minimum	Number
Knowledge acquisition capacity	17.56±4.63	4.63	17.56	25	5	217
Talent Management	4.87±17.97	4.78	17.97	25	5	217
Organizational innovation	18.22±4.65	4.65	18.22	25	5	217
Organizational performance	18.39±4.95	4.95	18.39	25	5	217
Total	72.15±18.23	18.23	72.15	100	20	217

**Table 3.** Results of the research hypotheses

Result	Compared to standard statistics	T	Path coefficient	Dependent variable	Independent variable	Variables
Confirmation of the hypothesis	3.8>1.96	3.8	0.39	Organizational innovation	Knowledge acquisition capacity	Sub-hypothesis 1
Confirmation of the hypothesis	5.41>1.96	5.41	0.6	Organizational innovation	Talent management	Sub-hypothesis 2
Confirmation of the hypothesis	2.94>1.96	2.94	0.44	Organizational performance	Organizational innovation	Sub-hypothesis 3
Confirmation of the hypothesis	2.57>1.96	2.57	0.24	Organizational performance	Knowledge acquisition capacity	Sub-hypothesis 4
Confirmation of the hypothesis	2.63>1.96	2.63	0.32	Organizational performance	Talent management	Sub-hypothesis 5

**Table 4.** The results of the research main hypotheses

Result	Compared to standard statistics	Mediator variable	Dependent variable	Independent variable	Main hypotheses
Confirmation of the relationship	1.96<3.21	Organizational innovation	Organizational performance	Knowledge acquisition capacity	The first main hypotheses
Confirmation of the relationship	1.96<2.45	Organizational innovation	Organizational performance	Talent management	The second main hypotheses

## Discussion

The results of the present study showed that the absorption capacity is effective on nurses' organizational innovation in Ayatollah Kashani Hospital in Isfahan. The results of this research are consistent with the researches by Moradi et al. (Moradi et al., 2013), Midas et al. (Milas et al., 2019), Liu et al. (Liu et al., 2018), Rose et al. (Rose et al., 2018), Sanchez et al. (Sanchez et al., 2018), Jarz et al (Jarz al., 2017) and Rahomer et al (Rahomer et al., 2013). Research results show that the capacity to absorb is one of the basic learning capabilities that hospital nurses can use to identify useful knowledge and information outside the hospital and then internalize and adapt this information to develop their own needs and use it for their own purposes; therefore, innovation in work can be improved and promoted by increasing new knowledge among hospital nurses.

The results of the present study showed that talent management is effective on nurses' organizational innovation in Ayatollah Kashani Hospital in Isfahan. The results of this study are in line with the results of researches by Muslimi (Muslimi et al., 2019), Mirza Hakim et al. (Mirza Hakimi et al., 2019), Farid Fathi et al. (Farid Fathi et al., 2018), Lotfi Yamchi et al. (Lotfi Yamchi et al., 2017), Sala et al. (Sala et al., 2018), Olaka et al. (Olaka et al., 2018), Khaki et al. (Khaki et al., 2017), Miguel et al. (Miguel et al., 2014), Rahomer et al. (Rahomer et al., 2013) and Wisniowska (Wisniowska et al., 2013) Research results showed that talent management can predict the human capital needed by a hospital to achieve its goals and planning to respond to this need. When talent management is well used in a hospital, we can see the overall success of the hospital as a result of efforts to innovate, improve, and apply various aspects of innovation in the hospital. By managing talent and using capable nurses, we can witness innovative behaviors and innovative strategic orientation. Therefore, by improving talent management, we can strengthen innovation in the organization.

The results of the present study showed that nurses' organizational innovation affects the performance of the organization in Ayatollah Kashani Hospital in Isfahan. The results of this study are in line with the research by Liu et al. (Liu et al., 2018), Rose et al. (Rose et al., 2018) and Sanchez et al. (Sanchez et al., 2018). The results showed that the hospital is more innovative in responding to changing environments and creating new capabilities allowing them to perform better and thus, making them more successful. In fact, the element of innovation is considered as a key element in the development of the hospital. Innovation can advance hospital operations and address new needs.

The results of the present study showed that the absorption capacity affects the performance of the organization in Ayatollah Kashani Hospital in Isfahan. The results of this study are in line with the research by Liu et al. (Liu et al., 2018), Rose (Rose et al., 2018) and Sanchez et al. (Sanchez et al., 2018). It gives the hospital staff the ability to perform better than in the past and thus improve the performance of the hospital.

The results of the present study showed that talent management has an effect on the performance of the organization in Ayatollah Kashani Hospital in Isfahan. The results of this study are in line with the research by Gloucester et al. (Gloucester et al., 2017). The results showed that when the hospital searches and selects the best graduates, scientific efforts are made to select talented and capable nurses and a match is made between the position of nurses and ability and their talent, in which case the performance in the hospital should be upgraded. When the organization can identify and attract the most talented people, due to the use of the best talented and capable people, it can better start work processes to improve the performance of the hospital.

The results of the present study showed that the absorption capacity is effective on organizational performance with the mediating role of nurses' organizational innovation in Ayatollah Kashani

Hospital in Isfahan. The results of this study are in line with the research by Liu et al. (Liu et al., 2018). The results show that the absorption capacity with its capability enables hospital nurses to be able to create value and promote innovation in the hospital through external knowledge management. Innovation can be improved by the ability to recognize the value of new knowledge and adapt and apply it in the hospital; by increasing innovation in the hospital, a new process can be used to provide services that reduce costs or create new services that improve performance.

The results of the present study showed that talent management has an effect on organizational performance with the mediating role of nurses' organizational innovation in Ayatollah Kashani Hospital in Isfahan. The results of this study are not in line with the research by Gloucester et al. (Gloucester et al., 2017). Eager to be supported for better performance, this can keep talented nurses in the organization and will help these nurses engage in innovative behaviors. When the hospital is able to retain talented nurses and take steps to keep nurses in the hospital, it can prevent people from leaving the hospital, and these people have the ability to perform innovative behaviors and innovative strategic orientations that can improve hospital performance. When the hospital tries to improve the ability of nurses and their talent to flourish better, people will be more innovative in their activities. Further development of individuals' talents and capabilities can help increase innovation and ultimately improve organizational performance.

The nurses' high workload and the prevalence of COVID-19 were among the limitations of the study, and the cooperation of the director of the hospital with the researcher was an advantage of the study.

### Conclusion

Knowledge absorption capacity is one of the basic learning capabilities that hospital nurses can

develop to identify useful knowledge and information outside the hospital and then internalize and adapt this information to their specific needs and use it for their own purposes.

By managing talent and using capable nurses, we can witness innovative behaviors and innovative strategic orientation.

When the organization can identify and attract the most talented people, due to the use of the best talented and capable people, it can better start work processes to improve the performance of the hospital. Absorption capacity with its capability enables hospital nurses to be able to create value and promote innovation in the hospital through external knowledge management.

When the hospital is able to retain talented nurses and take steps to keep nurses in the hospital, it can prevent people from leaving the hospital, and these people have the ability to perform innovative behaviors and gain innovative strategic orientations that can improve hospital performance.

According to the data in the table, talent absorption and management capacity with the mediating role of organizational innovation is effective on the organizational performance of nurses in Ayatollah Kashani Hospital in Isfahan.

### Conflict of interest

Authors declare no conflict of interest.

### Acknowledgments

This study is distilled from a Master's thesis on Health Services Management at Shahrekord Azad University. The researchers would like to thank all the participants who contributed to the study.

### Authors' Contribution

Conceptualization, M.M.; Methodology, M.M and L.GH.; Data collection, A.A.H.; writing original draft, M.M.; data analysis, M. M and A.A.H.; supervision, L.Gh.

All authors read and approved the final manuscript and are responsible about any question related to the article.



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