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Designing a Retention Model of Human Capital with an Organizational Support Approach in Mashhad University of Medical Sciences (Qualitative Approach)

Background: Designing a model based on human capital retention with an organizational support approach is one strategic issue for university staff. Therefore, the aim of this study is to identify the effective components to design a model for human capital retention with an organizational support approach in Mashhad University of Medical Sciences.

Methods: The present study is in the category of developmental-applied research and was conducted by Delphi method in 2018-2019. A total of 32 experts, including specialists and faculty members of Mashhad University of Medical Sciences were selected by purposive sampling method. At first, the dimensions and components related to the retention of human capital and organizational support were obtained through extensive review of databases and research background. Then through several sessions, the dimensions and components were codified in three rounds based on the consensus of the members.

Results: The suitable model for the human capital retention with an organizational support approach was finalized with 8 dimensions and 53 components. These factors included personal, organizational, job-motivational, environmental, organizational activities, job properties, organizational justice, and job stress dimensions. Results of Cohen's Kappa Coefficient for identified factors was 0.78 for the second phase of Delphi technique and 0.86 for the third phase of Delphi, which indicates a strong and acceptable agreement of panel members in relation to the factors of the conceptual model of research.

Conclusion: According to the findings of the implementation of three stages of Delphi technique, the effective factors identified for the human capital retention with an organizational support approach in Mashhad University of Medical Sciences are eight factors which were mentioned above, and through explaining their current status, an effective step can be considered in this prominent university in Iran, and also its results can be used for other medical universities in the country.

Keywords: Organizational Support, Delphi Technique, University, Qualitative Research, Human Capital

تصميم نموذج استبقاء لرأس المال البشري مع نهج دعم تنظيمي في جامعة مشهد للعلوم الطبية (نهج نوعي)

الخلفية: يعد تصميم نموذج يعتمد على الاحتفاظ برأس المال البشري مع نهج الدعم التنظيمي أحد القضايا الاستراتيجية للعاملين في مجال المعرفة. لذلك، فإن الهدف من هذه الدراسة هو تحديد المكونات الفعالة وتصميم نموذج للاحتفاظ برأس المال البشري مع نهج الدعم التنظيمي في جامعة مشهد للعلوم الطبية.

الطريقة: تندرج الدراسة الحالية في فئة البحوث التطبيقية التطورية من حيث الغرض وأجريت بطريقة دلفي في 1398-1397 هجرياً شمسياً. تم اختيار مجموعه 32 خبيراً من المتخصصين وأعضاء هيئة التدريس من جامعة مشهد للعلوم الطبية عن طريق أخذ العينات المقصود. في البداية؛ تم استخراج الأبعاد والمكونات المتعلقة باستدامة رأس المال البشري والدعم التنظيمي من خلال مراجعة شاملة لقواعد البيانات والخلفية البحثية. بعد ذلك؛ من خلال تشكيل عدة جلسات في ثلاث جولات تم تجميع الأبعاد والمكونات على أساس التوافق.

النتائج: تم الانتهاء من النموذج المناسب للاحتفاظ برأس المال البشري مع نهج الدعم التنظيمي بثمانية أبعاد و 53 مكوناً. تشمل هذه: العوامل الشخصية، التنظيمية، التحفيزية الوظيفية، البيئية، الأنشطة التنظيمية، الخصائص الوظيفية، العدالة التنظيمية والإجهاذ الوظيفي. كانت الإحصائيات المحصلة من معال الاتفاق للعوامل المحددة 0.78، للمرحلة الثانية من تقنية دلفي و 0.86 للمرحلة الثالثة من دلفي، مما يشير إلى اتفاق قوي ومقبول من أعضاء الفريق فيما يتعلق بعوامل نموذج البحث المفاهيمي.

الخلاصة: وفقاً لنتائج تنفيذ المراحل الثلاث لتقنية دلفي، فإن العوامل الفعالة المحددة للاحتفاظ برأس المال البشري مع نهج الدعم التنظيمي في جامعة مشهد للعلوم الطبية هي العوامل الثمانية المذكورة التي يمكن اتخاذ خطوة فعالة خلال شرح وضعها الحالي في هذه الجامعة من الجامعات العظيمة في البلد، كما يمكن استخدام نتائجها في الجامعات الطبية الأخرى في الدولة.

الكلمات المفتاحية: الدعم التنظيمي، تقنية دلفي، الجامعة، البحث النوعي، رأس المال البشري

طراحی مدل ماندگاری سرمایه انسانی با رویکرد حمایت سازمانی در دانشگاه علوم پزشکی مشهد (رویکرد کیفی)

زمینه و هدف: طراحی مدلی مبتنی بر ماندگاری سرمایه انسانی با رویکرد حمایت سازمانی، یکی از مسائل راهبردی کارکنان دانشگاه است. لذا هدف پژوهش حاضر شناسایی عوامل موثر و طراحی مدل جهت ماندگاری سرمایه انسانی با رویکرد حمایت سازمانی در دانشگاه علوم پزشکی مشهد می باشد.

روش: پژوهش حاضر از بعد هدف، در دسته تحقیقات توسعه ای – کاربردی قرار دارد و به روش دلفی در سال 1398 – 1397 انجام شد. تعداد 32 نفر صاحب نظر، شامل متخصصان و اعضای هیئت علمی از دانشگاه علوم پزشکی مشهد با روش نمونه گیری هدفمند انتخاب شدند. در ابتدا ابعاد و مؤلفه های مرتبط با ماندگاری سرمایه انسانی و حمایت سازمانی از طریق مرور گسترده پایگاه های اطلاعاتی و پیشینه تحقیق، استخراج گردید. سپس با تشکیل چند جلسه در سه دور، ابعاد و مؤلفه ها بر اساس اتفاق نظر تدوین شد.

یافته ها: مدل مناسب برای ماندگاری سرمایه انسانی با رویکرد حمایت سازمانی، با 8 بعد و 53 مؤلفه نهایی شد. این عوامل شامل فردی، سازمانی، انگیزشی- شغلی، محیطی، فعالیت های سازمانی، ویژگی های شغلی، عدالت سازمانی و تنش های شغلی هستند. آمار حاصل از ضریب توافق برای عوامل شناسایی شده، برای مرحله دوم تکنیک دلفی 0.78 و مرحله سوم دلفی 0.86 بدست آمد که حاکی از اتفاق قوی و قابل قبول اعضای پانل در رابطه با عوامل مدل مفهومی تحقیق می باشد.

نتیجه گیری: با توجه به یافته های حاصل از اجرای سه مرحله تکنیک دلفی، عوامل مؤثر شناسایی شده برای ماندگاری سرمایه انسانی با رویکرد حمایت سازمانی در دانشگاه علوم پزشکی مشهد، عوامل هشت گانه مذکور می باشد که با تبیین وضعیت موجود آنها می توان گام مؤثری در این دانشگاه عظیم کشور برداشت و از نتایج آن برای سایر دانشگاه های علوم پزشکی کشور نیز بهره مند شد.

واژه های کلیدی: حمایت سازمانی، تکنیک دلفی، دانشگاه، تحقیقات کیفی، سرمایه انسانی

حکومتی امدادی پکیج کے ذریعے افرادی قوت کو برقرار رکھنے کے لئے ماڈل کی ڈیولپمنٹ

بیک گراؤنڈ: حکومتی امدادی پکیج کے ذریعے افرادی قوت کو برقرار رکھنا ہر تعلیمی مرکز کا بنیادی هدف ہوتا ہے۔ اس تحقیق کا مقصد حکومتی امدادی پکیج کے ذریعے افرادی قوت کو برقرار رکھنے کے لئے ایک ماڈل بنانا ہے۔ یہ تحقیق مشہد یونیورسٹی آف میڈیکل سائنس میں انجام پائی ہے۔

روش: اس تحقیق کا مقصد یونیورسٹی کو ترقی بخشنا ہے۔ یہ تحقیق ڈلفی متھڈ کے ذریعے دوہزار اٹھارہ، دوہزار انیس میں انجام پائی تھی۔ اس تحقیق میں مشہد میڈیکل یونیورسٹی کے تیس اساتذہ، اصحاب نظر اور اکیڈمیک کونسل کے ارکان نے شرکت کی۔ سب سے پہلے حکومتی امدادی پکیج کے ذریعے افرادی قوت کو برقرار رکھنے کے طریقوں کو جاننے کے لئے متعدد ویب سائٹوں کی سرفنگ کی گئی۔ اس کے بعد تین مرحلوں میں کئی میٹنگوں کے بعد افراد قوت کو برقرار رکھنے کے طریقوں اور عناصر پر اتفاق کیا گیا۔

نتیجے: اس تحقیق سے معلوم ہوتا ہے کہ حکومتی امدادی پکیج کے ذریعے افراد قوت کو برقرار رکھنے کے لئے آٹھ اصولوں اور تین ذیلی اصولوں کی ضرورت ہے۔ یہ آٹھ بنیادی اصول، فردی خصوصیات، ادارے کی خصوصیات، محرکات، ملازمت کی خصوصیات، ادارے میں عدل و انصاف اور ملازمت سے پیدا ہونے والے ذہنی تناؤ سے عبارت ہیں۔

نتیجے: ڈلفی کے سکیڈ اور تھریڈ مرحلے سے حاصل ہونے والے نتیجے سے پتہ چلتا ہے کہ تحقیق میں شرکت کرنے والے ماہرین مندرجہ بالا حاصل شدہ ماڈل پر بھرپور اتفاق رکھتے ہیں۔

سفارش: مندرجہ بالا نتیجے کے پیش نظر یہ سفارش کی جاتی ہے کہ آٹھ بنیادی اصولوں پر عمل کر کے مشہد یونیورسٹی آف میڈیکل سائنس میں استفادہ کیا جائے اور دوسروں کو بھی ان نتائج سے استفادہ کرنے کی پیش کش کی جائے۔

کلیدی الفاظ: حکومتی امدادی پکیج، ڈلفی، افرادی قوت

INTRODUCTION

Job retention was first proposed by Mitchell et al. in 2001 and has since been considered by organizational management and organizational behavior (1). One of the first steps in recognizing employee retention problems for both policymakers and organizations is understanding the factors that employees expect. Some research has shown that one of the issues that has received less attention in the policies of educational organizations is the importance of maintaining and paying attention to employees' tendency to stay or leave the service (2). Desire for retention refers to the behavioral desire of employees to continue membership in their job and be motivated to work harder (2:2). If their behavioral tendencies are not focused on the positive aspects, it will lead to job search and achievement of multiple jobs, which indicates that they remain unmotivated (3).

Higher education operates in a competitive environment nowadays. In this competitive environment, many higher education institutions do not offer popular student programs and do not have new programs to fill their classrooms; however, some important and reputable universities have changed their orientation from the education system to focus on the market and entrepreneurship. In other words, higher education competes not only to attract students, but also to attract and retain high-quality faculty members in popular fields (4). Job retention theory is a new theory in the field of employee attachment to the organization compared to organizational commitment. However, over the past 15 years, a considerable amount of research has been published about this issue (1), which has attracted the attention of researchers and those involved in management organizations (5). The theories that form the theoretical basis of this research are the theory of job retention by Mitchell et al. (2001) (6) as well as the theory of Eisenberger et al., (1986) (7). Job retention based on the model of Mitchell et al. (2001) has three dimensions, which are: communication, adaptation, and sacrifice.

Organizational support refers to employees' beliefs about the value of the organization for their efforts and job contributions and the extent to which the organization strives for their welfare (8: 101); Perception of organizational support is: the individual general belief through which the organization values his efforts and cares about his welfare and well-being (9: 162). The most important factors affecting the human capital retention are generally divided into seven categories which are: value and culture of the university, reputation and position of the university, conditions of employment, personal and professional growth, educational atmosphere, researching atmosphere, and working environment (10).

Sleiderink (2012) (11) in a study entitled "Talent Management: Identification, Maintaining and Retention of Talents in Medicine" stated that the factors of talent retention are divided into two categories of internal and external factors. Internal factors include job independence, development opportunity, job satisfaction and gratitude, and external factors include good relationships with colleagues, working conditions, job security, promotion opportunities, and decent pay.

Liu et al. (2015) (12) in a study entitled "The relationships among perceived organizational support, intention to remain, career success and self-esteem in Chinese male nurses" with a sample of 405 male nurses, examined the relationship between the intended variables using structural equation modeling. Their results showed that self-esteem has a mediating role in the relationship between perceived organizational support and job success, and job success has a mediating role in the relationship between self-esteem and the desire to retention. This study also shows that there is a positive and significant relationship between perceived organizational support and retention.

In a study entitled "Perceived Organizational Support, Organizational Identification, and Employee Outcomes", Edwards and Peccei (2010) (13) examined the relationship between variables with a sample of 736 employees from the United Kingdom National Health Service using a structural equation model. They concluded that organizational support has a negative and significant relationship with leaving the job; however, organizational identity also plays a mediating role in this regard.

Retention of human capital is a process in which managers try to increase the employees' desire to continue and serve in the organization by using factors such as payment system, training and improvement, competency-based promotion, giving appropriate welfare facilities, etc. (14). The results of many studies have shown that organizational support affects employees' ethic and their loyalty to the organization and also reduce their leaving. The consequences of organizational support are organizational commitment, job satisfaction, organizational identity and, ideally, organizational citizenship behaviors (15).

International research shows that 51% of reputable universities have difficulty replacing full-time faculty members; however, lack of faculty members has created a challenging problem for the administrators of these institutions. Faculty members' leaving is very costly in any university considering the quality of education, student learning, skill development, financial overhead in replacing, recruiting, and retraining new members; however, this has a negative effect on the reputation of medical universities which are a key element of the higher education and health system.

One of the most important issues in managing human capital in organizations is the motivated retention of human capital. One of the main intellectual concerns of management is to reduce the leaving rate of educated employees, so that the organization can significantly reduce this amount, or maintain it at an acceptable level (16).

Faculty members are the main body of any university, and as the main elements of education they need to be effective in educating students and promoting the health care system which plays an important role in the health of any society (17). Given that the main purpose of retention of faculty members of medical universities is considered to be the desire to stay while motivated, factors and problems such as postponed payment of salaries, arrears of clinical and basic sciences faculty, the obligation to attend certain hours at the university, the necessity for research activities and

submission of articles by faculty members of the university of medical sciences to promote academic rank, disagreement with private sector employment in full-time projects, and other cumbersome rules are among the problems of educated employees in medical universities (18).

The present study aims to examine the factors affecting the desire of faculty members to stay while motivated. Reviewing the research literature shows that no research has been conducted with the current research title in the medical universities of the country so far. Also, studies which are about the retention of human capital are sporadic and a comprehensive model has not been presented in them.

This issue is important because in the field of education and health the supply and training of committed, specialized, and efficient human capital and maintaining educated employees according to the problems and laws in the medical universities of the country such as the labor market and economic efficiency, arrears created in the payment system, cumbersome rules, the obligation to attend certain hours, gaining research points for promotion which reduces the retention of the pillars of health and education system (18)

can be taken in this regard in order to respond to the existing conditions by better identifying the effective factors in retention while educated employees are motivated.

The general purpose of this study is to achieve an appropriate model for the retention of human capital with an organizational support approach in Mashhad University of Medical Sciences.

METHODS

The present study is a developmental-applied research that was conducted in Mashhad University of Medical Sciences in 2018-2019 by Delphi method. Considering that the Delphi technique is used to measure the group judgment of experts in order to predict and make decisions, the sampling method was purposeful. Thus, individuals were selected based on background and experience. Participants in every stage were 32 specialists with inclusion criteria. The mentioned experts were chosen based on some characteristics including: having at least 5 years of management experience, having a master's degree, and MD with managerial positions (senior managers), from which 15 men and 17 women were selected.

Table 1. Experts' Properties participating in each stage

Number	Sex	Job	Specialty	Educational Level	Number	Sex	Job	Specialty	Educational Level
1	Female	EDO Manager	Nursing Education	PhD	17	Male	Faculty Affairs Manager	Cardiology	PhD
2	Male	Human Capital manager	Public administration	Master	18	Female	Head of Educational Department	Educational Management	Master
3	Male	Human Capital management	Educational Management	Master	19	Female	Head of Human Capital Department	Public administration	Master
4	Male	Group Manager	Medical Physics	PhD	20	Female	Faculty Affairs Expert	Organizational Change Management	Master
5	Male	Deputy of the Center for the Study and Development of Medical Education	Medicine	PhD	21	Female	EDO Manager	Pediatric Dentistry	PhD
6	Male	Group Manager	Medicine	PhD	22	Male	Deputy of Education	Health Services Management	PhD
7	Female	Education Expert	Educational Management	Master	23	Male	Deputy of Human Capital	Human Capital Management	Master
8	Female	Faculty Affairs Expert	Educational Management	PhD	24	Female	Teacher	Pharmacology	PhD
9	Female	Education Expert	Educational Technology	PhD	26	Female	EDO Manager	Clinical Pharmacology	PhD
10	Male	Human Capital Manager	Educational Management	Master	27	Male	Human Capital Manager	Human Capital Management	PhD
12	Female	Educational Deputy of Health Management and Economics Department	Health Service Management	PhD	28	Female	Head of Manpower Supply and Distribution Department	Human Capital Management	Master
13	Female	Nursing Manager	Nursing Education	Master	29	Male	Nursing Manager	Nursing Management	Master

Table 1. Continued

Number	Sex	Job	Specialty	Educational Level	Number	Sex	Job	Specialty	Educational Level
14	Female	EDO Manager	Social Medicine	PhD	30	Female	Study and Development Unit Expert	Educational Management	PhD
15	Female	Faculty Affairs Manager	Traditional Medicine	PhD	31	Male	Faculty Affairs Manager of Mashhad University of Medical Sciences	Cardiology	PhD
16	Male	Educational Deputy of General Medicine	Pharmacology	PhD	32	Female	Education Expert	Educational Management	Master

Inclusion criteria were all members who had educational and research activities in the fields of management, faculty management, and human capital. They were explained about the aims of the research. Initially, the extracted titles were reviewed by the researcher and thus the initial checklist with 8 dimensions and 61 components was created to design a model of human capital retention with an organizational support approach in Mashhad University of Medical Sciences. Delphi sessions were conducted in three stages. In these meetings, the experts presented their views on the importance of every components of checklist, both orally and in writing (for and against as well as presenting written suggestions). Participants were also asked to write if they were considering another factor or component that was not mentioned in the checklist. At the end of the sessions, all participants' responses and comments were reviewed and analyzed. Any variable on which more than 70% of Delphi panel members agreed was retained in the model and considered significant at this stage; otherwise it was excluded from the model (19). Thus, in this step, 5 components were removed and 13 new components were added. The modified Delphi checklist was reviewed in the second round with 8 dimensions and 69 components. Then the second round of Delphi took place. At this stage, the respondent participants were asked to express their opinions and views on each of the indicators accepted in the first stage through a Likert

scale, with five options from "strongly agree" to "strongly disagree" and submit their comments and suggestions. After collecting and analyzing the opinions and views of Delphi panel members regarding each of the variables from the first stage of Delphi, the factors and components whose average score was more than 4, were preserved and variables that were equal to or less than 4, were removed from the resulting variables and excluded from the research model. Finally at the end of this stage, 8 dimensions and 53 components were accepted by Delphi panel members to design a model of human capital retention with an organizational support approach.

In order to assess the validity of the research questionnaire, face validity was confirmed by the doctoral advisor, consultant and some other expert professors in the Department of Educational Sciences. Following the proposed corrections, the questionnaires were distributed among the experts. Also, in order to assess the reliability, the final questions of a prototype included 30 pre-test in questionnaires. The reliability coefficient using Cronbach's alpha for the research questionnaire was 0.87, which indicates the optimal reliability of the research tool.

RESULTS

Initially, demographic characteristics of experts are presented based on frequency and percentage. This information can be seen in Table 2.

Table 2. Demographic characteristics of experts

Descriptive dimensions of the sample	Sex		Work Experience(Year)							
	Female	Male	1-5	6-10	11-15	16-20	21-25	26-30	31 & More	
Frequency	17	15	0	0	7	15	3	5	2	
Percentage	54.5	45.5	0	0	22	48	10	14	6	
Descriptive dimensions of the sample	Educational Level			Age						
	Bachelor	Master	PhD	20-24	25-29	30-34	35-39	40-49	50-64	65 & More
Frequency	0	5	27	0	0	0	6	17	4	5
Percentage	0	14	86	0	0	0	19	53	12	16

Table 2 shows that among the experts, 45.5% are men (15) and 54.5% are women (17) and the experts have more than 10 years of service in Mashhad University of Medical Sciences, so that 48% (15 people) of the experts have 16 to 20 years of service and 86% have a PhD degree and 14% have a master one. Also, 53% of the experts participating in this study were in the range of 40-49 years old.

After reviewing the answers and the results of the opinions of experts in the first stage of the Delphi technique, duplicated topics were removed, similar opinions were merged, 5 components were removed, and 13 components were added. From a total 61 components and 8 factors, the modified checklist of human capital retention with an organizational support approach was developed for the second phase with 8 factors and 69 components.

After reviewing and analyzing the answers in the second stage, out of a total of 8 factors and 69 components, 16 components were removed, one new component was added, and the rest remained unchanged. Finally, due to the lack of consensus among the responses of Delphi panel members, the third stage of the Delphi technique was performed. After obtaining the views and opinions of Delphi panel members on the importance of each of the components to design a model of human capital retention with an organizational support approach in Mashhad University of Medical Sciences, the researcher implemented the third stage of Delphi technique to reach a consensus.

The results of this stage showed that all the factors and components studied (8 factors and 54 components) were removed from the modified checklist of the second stage and finally 8 factors and 53 components obtained an average score higher than 4. Therefore, the appropriate model of human capital retention with an organizational support approach in Mashhad University of Medical Sciences was finalized with 8 factors and 53 components.

In this study, in order to determine the degree of consensus among experts while using the Delphi method, Kendall rank

correlation coefficient has been used. Kendall rank correlation coefficient is a scale to determine the degree of coordination and agreement between several rank categories for N individuals (19). The criterion to decide whether to stop or continue Delphi stages is strong consensus among panel members (19).

The value of Kendall rank correlation coefficient for different stages of the Delphi process related to this research is shown in Table 4. It should be noted that the Kendall rank correlation coefficient test for the present study was performed in SPSS software 24.

The results of Kendall rank correlation coefficient was 0.316 in the first stage, 0.78 in the second stage, and 0.86 in the third stage. The Kendall coefficient in the third stage showed that there was a strong consensus among experts. The model was designed as Figure 1. In addition, in order to reinforce the results of the present study, the significance of all dimensions and components identified from the third stage of the Delphi technique was evaluated using the Student T-test and compared the mean with a constant value. In this test, the scores of experts' opinions about each of the dimensions and components were calculated and then their average score was compared with a constant value of 4. This test showed which of the identified dimensions and components are higher or lower than 4. According to the above explanations, also collecting the required parameters, and the calculation of t-test statistics as well as the P-value, the results showed that all the factors and components obtained from the third stage of Delphi technique were significant; Therefore, all the assumed variables of the conceptual model of the research including 8 factors and 53 components, that make up the design of the model of human capital retention with an organizational support approach in Mashhad University of Medical Sciences, were identified and finalized. Table 6 presents only the findings related to the factors of this model and does not mention the findings related to the components and indicators due to the prolongation of the article.

Table 3. Interpretation of Kendall Rank Correlation Coefficient Values

Kendall Coefficient W	0.1	0.3	0.5	0.7	0.9
Consensus Degree	Very weak	Weak	Moderate	Strong	Very Strong
Confidence in the Arrangement of Factors	None	Low	Moderate	High	Very High

Table 4. Results of Kendall Rank Correlation Coefficient Test

Panel Number	First Round		Second Round		Third Round		Fourth Round	
	Kendall coefficient	Consensus	Kendall coefficient	Consensus	Kendall coefficient	Consensus	Kendall coefficient	Consensus
1	0.316	Weak	0.78	Strong	0.86	Very Strong	Consensus in the Third Round	

Table 5. Primary checklist of factors and components of human capital retention model with an organizational support approach in Mashhad University of Medical Sciences

Variable	Dimensions	Agree		Disagree		Components of the first round	Agreement Percentage	Disagreement Percentage
Human Capital Retention	Personal Dimension	Frequency	Percentage	Frequency	Percentage	Personality & Interests	97	3
						Individual Values	91	9
						Age	69	31
						Bing Professional	54	46
						Person's Fitting with the Organization	96	4
						Professional Development	62	38
						Interest in Teaching	72	28
						Communication with Students	87	13
		32	97	1	3	Feeling Worthiness & Appreciated	84	16
						Meeting Primary Needs	55	45
						Training & Gaining Experience	63	37
						Participation in Organizational Decisions	97	3
						Professional Learning & Development	90	10
						Communication with Students	87	13
	Organizational Dimension					Managers Respectful Attitude & Behavior	94	6
						Evaluation & Control System	79	21
						Payment & Reward System	91	9
						Job Promotion System	91	9
						Organizational Commitment	97	3
						Job Satisfaction	88	12
						Organizational Culture	90	10
						Educational Atmosphere	70	30
		32	97	1	3	Researching Atmosphere	26	74
						Managers Attitude	78	22
						Relationships with Colleagues	88	12
						Quality of Working Life	85	15
						Supportive Organizational Culture	82	18
						Terms & Conditions	70	30
						Colleagues Attitude	80	20
						Empowerment	74??	16??
						Managers Worthiness in Organizational Decision Making	82	18
	Job-motivational dimension	32	100	0	0	Working Hours	70	30
						Job Experience	76	24
						Job Security	89	11
						Responsibility Type	82	18
		32	90	10	5	Intellectual Effort Amount	85	15
						Awareness of the Results	91	9
						Job Expectations	73	27
						Job Complexity	80	20

Table 5. Continued.

Variable	Dimensions	Agree	Disagree	Components of the first round	Agreement Percentage	Disagreement Percentage		
Human Capital Retention	Environmental Dimension	0	100	Technological Environment	76	24		
				Socio-Cultural Environment	91	9		
				Political-Legal Environment	70	30		
				Economic Environment	70	30		
	Job Properties Dimension			Percentage Agree	Percentage Disagree	Job Feedback	94	6
				Job Independence	88	12		
				Occupational Identity	91	9		
				Job Importance	88	12		
				Tasks Variety	70	30		
				Challenging	85	15		
				Perceived Workload	82	18		
	Organizational Justice Dimension			100	Procedural Justice	91	9	
					Distributive Justice	85	15	
					Interactive Justice	88	12	
	Organizational Activities Dimension			91	9	Financial Rewards	88	12
						Non-Financial Rewards	91	9
						Performance-Based Payment	85	15
						Psychological Counseling	70	30
						Career Counseling	70	30
						Manager Support	91	9
	Job Tensions Dimension			94	6	Job Exhaustion	91	9
						Role Ambiguity	88	12
						Role Conflict	85	15

DISCUSSION

By examining the models of human capital retention, it can be understood that a group of researchers such as Ghamari and Zainabadi (2018), Mohseni (2015), Ghazizadeh et al. (2008), and Haverdink (2018) emphasized that human capital sustainability is a process that the manager tries to increase the desire to continue the service of employees in the organization by using factors such as payment system, training and improvement, promotion based on worthiness, providing appropriate welfare facilities, and so on (14). Although numerous studies have been conducted on the retention of human capital and its dimensions and components in various organizations, studies that examine the retention of faculty members in universities are rarely found and so far, only Mohseni (2015) has studied the retention of faculty members in Yazd University; however, no research has been done on the retention of faculty members in the Iran's medical universities. It should be noted that the retention of faculty members of medical universities has a great importance due to the training of specialists in the field of health and increasing public health. On the other hand,

the findings of the present study are consistent with the results of many researchers referenced in (16), (20), (17), (18), (21) and (22).

The present study, with the Delphi approach and all the effective factors in designing the retention of human capital with an organizational support approach, has identified the main factors and components of human capital retention. So it has developed and presented a model of human capital retention with an organizational support approach. Based on the opinions of academic experts in this study, it can be concluded that the effective factors in the retention of human capital with an organizational support approach included personal, organizational, job-motivational, environmental, job properties, organizational justice, organizational activities, and job tensions.

Paying more attention to human capital retention while motivated requires simultaneous attention to the identified dimensions and components. Although the overall purpose of this study was to develop a model of human capital retention while motivated, it can be said that introducing the importance and necessity of paying attention to organizational support which employees believe in their attitudes, is the ultimate goal.

Designing a Retention Model of Human Capital

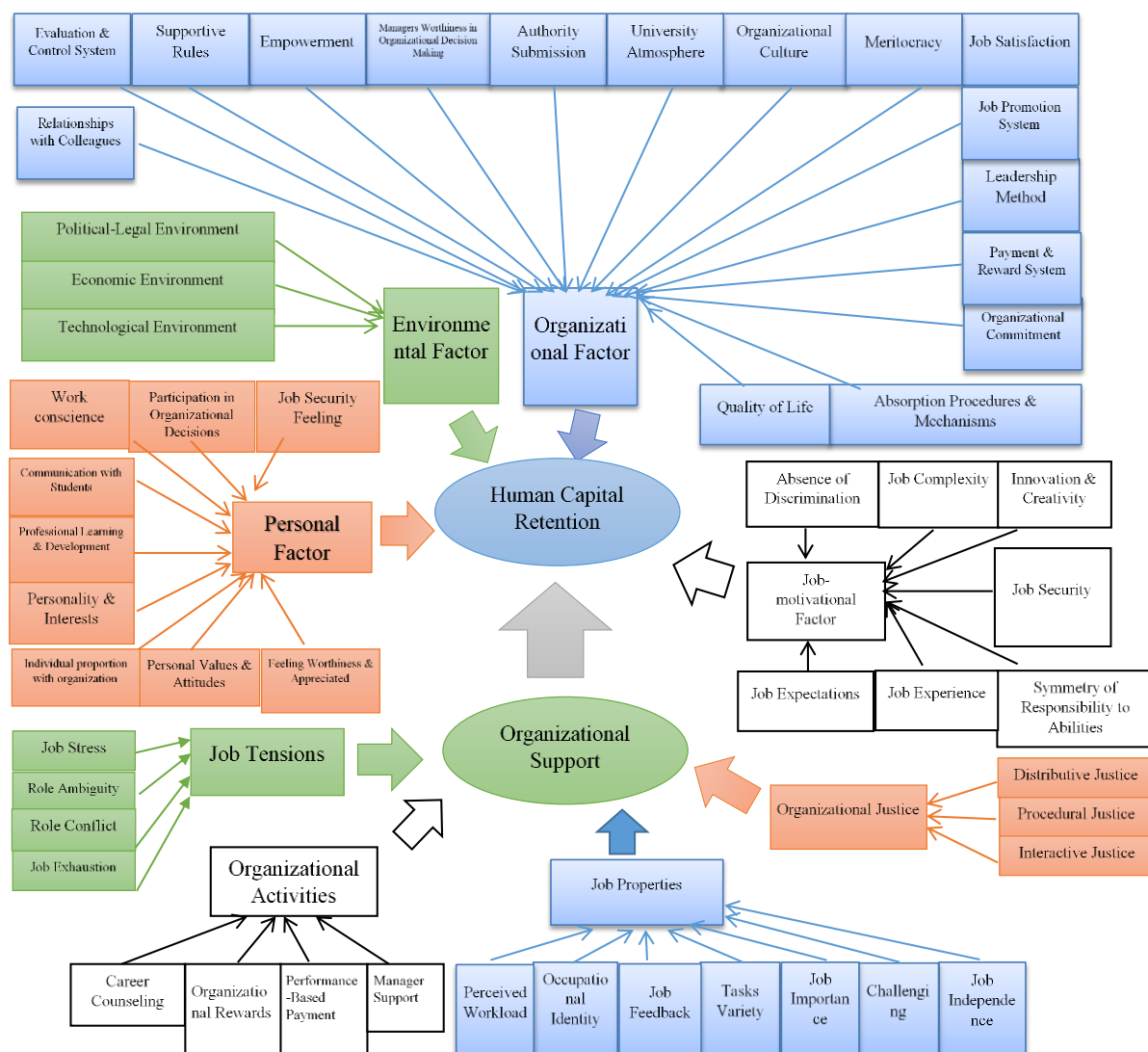


Figure 1. Final Conceptual Model Extracted from the Third Stage Questionnaire

Table 6. Student-t-test about the identified dimensions of the human capital retention model with an organizational support approach in Mashhad University of Medical Sciences

Identified Dimensions	Relative Frequency Distribution of Expert Responses Percentage					Descriptive Statistics		Test Results			
	Strongly Disagree	Disagree	Somewhat Agree	Agree	Strongly Agree	Average	Standard Deviation	Student T	Degrees of freedom	P Value	Result
Personal	0%	0%	0%	15%	85%	4.50	0.75	3.33	22	0.000	Confirmed
Organizational	0%	0%	0%	30%	70%	4.45	0.80	2.81	22	0.000	Confirmed
job-motivational	0%	0%	0%	4%	96%	4.75	0.60	6.25	22	0.000	Confirmed
Environmental	0%	0%	0%	22%	78%	4.30	0.80	2.81	22	0.000	Confirmed
Job Properties	0%	0%	0%	9%	91%	4.41	0.76	2.73	22	0.000	Confirmed
Organizational Justice	0%	0%	0%	17%	83%	4.44	0.73	3.14	22	0.000	Confirmed
Organizational Activities	0%	0%	0%	30%	70%	4.39	0.79	2.43	22	0.000	Confirmed
Job Tensions	0%	0%	0%	0%	0%	4.60	0.63	5		0.000	Confirmed

It is very clear that the growth and development of this goal requires the efforts of superior managers in paying special attention to the necessity and role of organizational support in the country's universities. The ultimate goal of this research has been achieved. It is noteworthy that plan makers and managers of medical universities pay special attention to creating a supportive atmosphere in universities.

The most important limitation of the Delphi method is the use of non-random sampling method; therefore, the results of this study cannot be generalized to other medical universities.

According to the findings of the present study, it can be concluded that the eight dimensions that seemed to be effective in the retention of faculty members Mashhad University of Medical Sciences were: personal, organizational, job-motivational, environmental, organizational activities, organizational justice, job properties, and job stress dimensions. Also, job-motivational and job tension factors were the most effective dimensions of the retention of educated employees in mentioned university.

Based on the results of this research, the following suggestions and solutions are presented:

Considering the role and position of faculty members in educating and training specialist human capital in the health segment, experts and managers of universities, especially in Mashhad University of Medical Sciences, all dimensions and components of the human capital retention model with an organizational support approach should be considered. In other words, specialists and managers of medical universities should pay special attention to personal, organizational, job-motivational, environmental, job properties, organizational justice, organizational activities, and job tensions. They should plan to develop the necessary organizations based on the effective dimensions and components of human capital retention while motivated, in order to avoid future problems that cause financial expenses and excessive costs for leaving and relocating faculty members.

Based on the findings of the present study, it is suggested that managers of Mashhad University of Medical Sciences should pay special attention to job-motivational and job tension factors; because these factors showed the highest mean score among the studied factors and also had the lowest rate of standard deviation.

Based on the components of job-motivational dimension:

- Paying attention to the absence of discrimination in

offering organizational positions, organizational rewards, and providing university rank is effective in the retention of faculty members of Mashhad University of Medical Sciences.

- Encouraging faculty members to use new ideas in creative work, and informing and holding educational courses to familiarize faculty members with new technologies in the relevant field is effective for their retention.

- Selection of capable faculty members according to their assigned responsibility and the symmetry between the educational-research performance of faculty members with the improvement of educational quality and research fields is effective for their retention.

Based on the most important components of job tensions, the following should be considered:

- Job Exhaustion (Enthusiasm to return to work, cumbersome rules about work hours, faculty lack of interest to their jobs)
- Role Ambiguity (transparency of authority, transparency of goals, transparency of time management, transparency of responsibilities, transparency of expectations)
- Role Conflict (disagreement between law and function, inconsistency of requests, lack of public acceptance, lack of facilities)
- Job Stress (lack of resources, lack of support from managers, related field and specialty)

Ethical considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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