



Ranking the Factors Affecting the Retention of Human Capital with Organizational Support Approach (Case study: Mashhad University of Medical Sciences)

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Background: In our country, one of the first steps to recognize the problems of employee retention, both for policy makers and organizations is to understand the factors expected by employees. The purpose of this study was to rank the factors affecting the retention of human capital with organizational support approach.

Method: The present study was applied in terms of purpose and the mixed method (qualitative-quantitative) has been used. The statistical population in the quantitative part included the faculty members of Mashhad University of Medical Sciences in the academic year of 2018-2019 that 272 people were selected by stratified sampling method, appropriate to the size of each group, and in the qualitative section, the ideas of 32 experts were used by Delphi technique. The research material was a researcher-made questionnaire extracted from the qualitative section which validity was confirmed by experts and its reliability was calculated higher than 0.7, using Cronbach's alpha coefficient in all Delphi stages. The final questionnaire with 8 dimensions and 53 components was administered among the sample and the data were analyzed using SPSS24 software.

Results: The results showed that both organizational factor (coefficient = 0.94) and personal factor (coefficient = 0.83) had the most impact among the factors and environmental factor (coefficient = 0.59) had the least impact among the factors, with emphasis on organizational support.

Conclusion: Managers of medical universities should expand the supportive environment and create promotion opportunities in the university, which requires planning and simultaneous attention to all factors of human capital retention, especially through the perceived organizational support by creating trust, confidence and communication in the university environment.

Keywords: Organizational Support, Delphi Technique, Human Capital, Medical Sciences

ترتیب عوامل التي تؤثر على الاحتفاظ برأس المال البشري من خلال نهج الدعم التنظيمي (دراسة حالة: جامعة مشهد للعلوم الطبية)

الخلفية: في بلدنا، تتمثل إحدى الخطوات الأولى للتعرف على مشاكل الاحتفاظ بالموظفين، سواء بالنسبة لصانعي السياسات أو المنظمات، في فهم العوامل التي يتوقعها الموظفون. كان الغرض من هذه الدراسة هو تصنيف العوامل التي تؤثر على الاحتفاظ برأس المال البشري من خلال نهج الدعم التنظيمي.

الطريقة: تم تطبيق الدراسة الحالية من حيث الغرض واستخدمت الطريقة المختلطة (النوعية - الكمية). شمل المجتمع الإحصائي في الشق الكمي أعضاء هيئة التدريس بجامعة مشهد للعلوم الطبية في العام الدراسي ٢٠١٨-٢٠١٩، حيث تم اختيار ٢٧٢ شخصاً بطريقة أخذ العينات الطبقية، بما يتناسب مع حجم كل مجموعة، وفي القسم النوعي، تم استخدام أفكار ٣٢ خبيراً بواسطة تقنية دلفي. كانت المادة البحثية عبارة عن استبيان من إعداد الباحث تم استخراجها من القسم النوعي تم تأكيد صحتها من قبل الخبراء وتم حساب موثوقيتها أعلى من ٠,٧، باستخدام معامل ألفا كرونباخ في جميع مراحل دلفي. تم استخدام الاستبيان النهائي المكون من ٨ أبعاد و ٥٣ مكوناً بين العينة وتم تحليل البيانات باستخدام برنامج SPSS24.

النتائج: أظهرت النتائج أن كلا من العامل التنظيمي (المعامل = ٠,٩٤) والعامل الشخصي (المعامل = ٠,٨٣) كان لهما الأثر الأكبر بين العوامل وأن العامل البيئي (المعامل = ٥٩) كان لهما أقل تأثير بين العوامل، مع التركيز على الدعم التنظيمي. **الخلاصة:** يجب على مديري الجامعات الطبية توسيع البيئة الداعمة وخلق فرص الترقية في الجامعة، الأمر الذي يتطلب التخطيط والاهتمام المتزامن بجميع عوامل الاحتفاظ برأس المال البشري، خاصة من خلال الدعم التنظيمي المتصور من خلال خلق الثقة والثقة والتواصل في بيئة الجامعة. **الكلمات المفتاحية:** الدعم التنظيمي، تقنية دلفي، رأس المال البشري، العلوم الطبية

رتبه بندی عوامل مؤثر بر ماندگاری سرمایه انسانی با رویکرد حمایت سازمانی (مطالعه موردی: دانشگاه علوم پزشکی مشهد)

زمینه و هدف: در کشور ما یکی از اولین گام های شناخت مشکلات حفظ و نگهداری کارکنان، درک عوامل مورد انتظار کارکنان است. هدف مطالعه حاضر رتبه بندی عوامل مؤثر بر ماندگاری سرمایه انسانی با رویکرد حمایت سازمانی است.

روش: پژوهش حاضر از نظر هدف کاربردی است و از روش آمیخته (کیفی - کمی) استفاده گردیده است. جامعه آماری در بخش کمی شامل اعضای هیئت علمی دانشکده های دانشگاه علوم پزشکی مشهد در سال تحصیلی ٩٨-٩٧ می باشد که تعداد ٢٧٢ نفر با نمونه گیری طبقه ای متناسب با حجم هر طبقه انتخاب شدند و در بخش کیفی با تکنیک دلفی از پیشنهادات ٣٢ نفر از خبرگان استفاده گردید. ابزار تحقیق پرسشنامه محقق ساخته ای مستخرج از بخش کیفی بود که روایی آن به تأیید خبرگان رسید و پایایی آن با استفاده از ضریب آلفای کرونباخ در تمام مراحل دلفی بالاتر از ٠/٧ محاسبه شد و پرسشنامه نهایی با ٨ بعد و ٥٣ مؤلفه در میان نمونه مورد نظر اجرا شد و داده ها با نرم افزار SPSS24 مورد تحلیل قرار گرفت.

یافته ها: دو عامل سازمانی با ضریب (٠/٩٤) و فردی با ضریب (٠/٨٣) با تأکید بر حمایت سازمانی بیشترین تاثیر و عامل محیطی با ضریب (٥٩٪) کمترین تاثیر را در بین عوامل به خود اختصاص داده است.

نتیجه گیری: مدیران دانشگاه های علوم پزشکی باید نسبت به گسترش جو حمایتی و خلق فرصت های رشد در دانشگاه مبادرت ورزند، که نیاز به برنامه ریزی و توجه همزمان به تمامی عوامل ماندگاری سرمایه انسانی به ویژه در زمینه تمرکز مسئولین به حمایت سازمانی ادراک شده از طریق ایجاد جو و بستر اعتماد، اطمینان و ارتباط در فضای دانشگاه داشته باشند.

واژه های کلیدی: حمایت سازمانی، تکنیک دلفی، سرمایه انسانی، علوم پزشکی

تنظیمی سپورت پروچ کے ساتھ انسانی سرمایے کی برقراری کو متاثر کرنے والے عوامل کی درجہ بندی (کیس اسٹڈی: مشهد یونیورسٹی آف میڈیکل سائنسز)

پس منظر: ہمارے ملک میں، پالیسی سازوں اور تنظیموں دونوں کے لیے، ملازمین کو برقرار رکھنے کے مسائل کو پہچاننے کے لیے پہلا قدم ملازمین سے متوقع عوامل کو سمجھنا ہے۔ اس مطالعے کا مقصد تنظیمی معاونت کے نقطہ نظر کے ساتھ انسانی سرمایے کی برقراری کو متاثر کرنے والے عوامل کی درجہ بندی کرنا تھا۔

طریقہ: موجودہ مطالعہ مقصد کے لحاظ سے لاگو کیا گیا تھا اور مخلوط طریقہ (معیاری-مقدار) استعمال کیا گیا ہے۔ مقداری حصے میں شماریاتی آبادی میں مشهد یونیورسٹی آف میڈیکل سائنسز کے فیکلٹی ممبران کو ٢٠١٨-٢٠١٩ کے تعلیمی سال میں شامل کیا گیا تھا کہ ٢٧٢ افراد کو درجہ بندی کے نمونے لینے کے طریقہ کار سے منتخب کیا گیا تھا، جو ہر گروپ کے سائز کے مطابق تھا، اور کوالٹیٹیو سیکشن میں، ڈیلٹی تکنیک کے ذریعے ٣٢ ماہرین کے خیالات کا استعمال کیا گیا۔ تحقیقی مواد ایک محقق کا بنایا ہوا سوالنامہ تھا جو کوالٹیٹیو سیکشن سے نکالا گیا تھا، تمام Delphi مراحل میں Cronbach کے الفا کوفیشینٹ کا استعمال کرتے ہوئے

نتائج: نتائج سے ظاہر ہوا کہ تنظیمی عنصر (گٹانک = ٠,٩٤) اور ذاتی عنصر (گٹانک = ٠,٨٣) دونوں عوامل میں سب سے زیادہ اثر رکھتے تھے اور ماحولیاتی عنصر (گٹانک = ٥٩) عوامل میں سب سے کم اثر رکھتے تھے، تنظیمی تعاون پر زور دیتے ہوئے **نتیجہ:** میڈیکل یونیورسٹیوں کے مینیجرز کو معاون ماحول کو بڑھانا چاہیے اور یونیورسٹی میں فروغ کے مواقع پیدا کرنے چاہئیں، جس کے لیے انسانی سرمایے کو برقرار رکھنے کے تمام عوامل پر منصوبہ بندی اور بیک وقت توجہ دینے کی ضرورت ہے، خاص طور پر یونیورسٹی کے ماحول میں اعتماد، اعتماد اور بات چیت کے ذریعے سمجھی جانے والی تنظیمی مدد کے ذریعے۔

مطلوبہ الفاظ: تنظیمی معاونت، ڈیلٹی تکنیک، انسانی سرمایہ، طبی سائنس

INTRODUCTION

Today's post-industrial society is an information society in which "energizing" technologies are gradually being replaced by "knowledge-making" technologies. Obviously, in a time where "knowledge" is the most important factor in creating value and competitive advantage, human capital management as the creators, maintainers and publishers is one of the most important management basics. The key to the sustainability of organizations is the proper management of scholars as the human capital of the organization; therefore, the process of maintaining the human capital is of particular importance in maintaining and promoting the administrative ethics and retention of employees (1).

The tendency to stay is a psychological process (2) and refers to the probability that an employee intends to stay in the organization (3). The theories forming the theoretical basis of this study are Mitchell's job retention theory (2001) and the theory of Emsberger et al. (1986). Job retention based on the model of Mitchell et al. (2001) has three dimensions: communication, adaptation and sacrifice. Job retention theory is a new theory in the field of employee dependence on the organization and represents a wide range of effects on employee retention (4). Job retention is described as a network or web in which a person is trapped. A person who has a high job retention has many relationships and many connections (4).

One of the important and effective factors on the retention of human capital is organizational support (5). Perceived organizational support reinforces employees' belief to the organization that recognizes them and eventually, enhances job performance. On the other hand, organizational support will have positive results for the organization and can affect the goals of the organization (6). A high level of organizational support increases the organizational commitment of employees. In fact, organizational support is one of the most important primary variables for the development of organizational citizenship behaviors (6).

The idea of perceived organizational support was first proposed by Emsberger et al. (1986) based on Blau's social exchange theory (1964) and Goldner's theory (1960) based on the principle of "reciprocity." Perceived organizational support refers to "employees' belief in the extent to which the organization values their participation, health, and well-being." Emsberger et al. believed that perceived organizational support is influenced by policies that promote health and well-being, sensation of accomplishment, sensation of positive participation, and achievement of organizational goals (7).

Ghosh and Gurnathan (2010) presented a comprehensive conceptual model of job retention in which organizational support is one of the factors affecting job retention. Retention of human capital is a process in which management tries to increase the employees' desire to continue and serve in the organization by using factors such as payment system, training and improvement, ability-based promotion, provision of appropriate welfare facilities and so on (8). Faculty members form the main body of any university and, as the main foundation of education, they

need to be effective in educating students and promoting the healthcare system that play an important role in the health of any community (9).

Studies show that a significant percentage of government organizations in the country are not successful in maintaining their human capital, and currently the main problem of organizations is the lack of human capital retention (10). In etiology performed by service and educational organizations in Iran, one of the strategic issues is employees and their problems, and the lack of principled policies to maintain and lack of employee support system is one of the most important harms in this area (11).

International research shows that 51% of prestigious universities face problems in replacing faculty members, and the issue of non-retention of faculty members has created a challenging problem for the managers of these institutions. Dismissal of faculty members in any university is very costly considering the quality of education, student learning, skills development, financial issues in replacing, recruiting and retraining new members, and this also has a negative effect on the university's reputation (12).

In this regard, Mashhad University of Medical Sciences should seek to define mechanisms for the development and retention of its valuable human capital, because relocation and leaving the organization in healthcare organizations is recognized as a worrying issue and this occurrence has adverse effects on the organization and patients, which include reducing the quality of service to patients and reducing organizational efficiency and effectiveness (13). Due to the many interactions among the University of Medical Sciences' staffs with patients as well as faculty members with students in the field of medical education and the nature of services provided by them in critical situations, as one of the main platforms for retention of knowledge-based staff, and considering that the university is a center for the production of human capital and faculty members at the University of Medical Sciences, by training graduates in the field of healthcare and in terms of the importance of providing their services for the health promotion, community treatment and education and training of students in the field of medical education are very significant, therefore, the retention of human capital in medical universities, including Mashhad University of Medical Sciences, as the largest center for providing medical services, has not happened well and despite the research, the reason has not been properly explained.

The fact that faculty members at the University of Medical Sciences are directly and indirectly related to health and are known as the founders of the healthcare system has been considered by researchers. Therefore, designing a model to identify and rank the factors affecting the retention of human capital with organizational support approach in Mashhad University of Medical Sciences is necessary. The purpose of this study was to respond to the existing conditions and take an effective step for motivational retention of the informed employees with organizational support approach, by better identifying the effective factors and ranking the mentioned factors. Therefore, in order to successfully establish the retention of the human capital and perceived organizational

support, their specific dimensions and conditions must be identified and based on that, optimal planning must be made.

METHODS

The present study was in the field of applied research in terms of purpose. Also, data collection was done by a mixed method (qualitative-quantitative). In the qualitative part, the Delphi technique method is used in three stages and in the quantitative part, the descriptive-survey research method is used. The statistical population of the study in the quantitative part was 922 faculty members of clinical and basic sciences of the faculties (medicine, dentistry, pharmacy, traditional medicine, paramedical, midwifery, nursing and health education) of Mashhad University of Medical Sciences in 2018-2019. Cochran's formula was used to estimate the sample size, based on which 272 people were selected using stratified sampling method appropriate to the volume (12). The data collection tool was a researcher-made questionnaire extracted from the qualitative section with 8 dimensions and 53 components, in which the items of the questionnaire were scored on a five-point Likert scale from completely desirable to completely undesirable. In the present study, after approving the subject and approval in the ethics committee of Mashhad University of Medical Sciences and obtaining the ethics code, dimensions and components affecting the retention of human capital with organizational support approach according to library and internet studies and theoretical foundations and research background and models of other researchers were extracted and it was reviewed using the opinions of experts of Mashhad University of Medical Sciences and using the Delphi three-stage technique.

The members of Delphi panel for the present study were 32 people who were selected by non-probabilistic sampling and purposeful method, all of whom had educational and research activities in the field of education. The questionnaire used in the first stage of the Delphi technique included the dimensions and components of human capital retention and organizational support in which the experts expressed their views on the importance of each of the dimensions and components as agree or disagree and as written descriptive comments.

In the second and third stages, the respondent experts were asked to express their opinions and views on each of the factors and components accepted in the first stage, in the form of a Likert scale with five options from completely agree to completely disagree. In all three Delphi stages, participants were asked to indicate if another dimension or component was suggested and not listed in the checklist. Finally, considering the consensus among the members of the expert group, the Delphi process was stopped and the obtained dimensions and components were identified with 8 dimensions and 53 components and inserted to the final research questionnaire for evaluation in quantitative sample (14).

The questionnaire had two parts. The first part of the questionnaire assessed the personal characteristics of process owners (clinical and basic sciences faculty members of Mashhad University of Medical Sciences) such as age, gender, level of education, organizational position and the second part of the questionnaire included 175 items related

to research variables, which assessed the impact of each of these variables in relation to the retention of human capital from the perspective of faculty members. The items in this part of the questionnaire were scored on a five-point Likert scale from completely desirable = 1 to completely undesirable = 5.

In this study, face and content validity methods were used to confirm the validity of the data collection tool and the validity of the questionnaire was confirmed by experts and Cronbach's alpha coefficient was used to assess the reliability of the research tool. For this purpose, using the data obtained from the pretest in a sample of 30 members of the statistical population who responded to the research questionnaire, Cronbach's alpha coefficient was calculated, which was 0.912 for the studied questionnaire, which indicated the high reliability of the research tool or questionnaire. After distributing, collecting and reviewing the questionnaires in a sample of 272 faculty members of Mashhad University of Medical Sciences, questions were coded and SPSS24 software was used for data preparation and analysis of data and statistical inferences. Structural equation modeling and factor analysis were used to analyze the data. Factor analysis tries to identify the basic variables and plays a very important role in identifying the factors through the observed variables. To analyze the data more accurately and achieve more scientific results, researchers are looking to reduce the volume of variables. Thus, factor analysis method has been used (15).

RESULTS

According to the results, in terms of demographic characteristics, 165 (60%) females and 107 (39%) males constituted the study sample. The majority of respondents (92%) had a doctorate degree and (8%) had a master's degree. The average age of the sample was 50.7 years with a standard deviation of 8.6 which was between 45 and 65 years. Due to the fact that the sample was only faculty members, they have the highest frequency. Also, the average work experience of the sample was 15.5 years with a standard deviation of 7.3 years.

Table 1. Demographic Information of the Study Sample (Respondents)

| Sex | Number (Percent) |
|-------------------------|------------------|
| Male | 107 (39) |
| Female | 165 (60) |
| Education | Number (Percent) |
| Master | 22 (8) |
| Doctorate | 250 (92) |
| Organizational Position | Number (Percent) |
| Faculty Member | 272 (100) |
| Work Experience | Average (SD) |
| | 15.5 (7.3) |
| Age | Average (SD) |
| | 50.7 (8.6) |

The research model obtained from the Delphi design was evaluated and analyzed by a confirmatory factor, and the effectiveness of each of the factors and components of human capital retention was examined. A significant test should be performed when the correlation of variables is identified. Self-governance methods (Bootstrap) were used to evaluate the significance of the observed correlation. In this research, the self-governance method was used, which gives the t-statistic. At the 5% error level, if the t-value is greater than 1.96, the observed correlations are significant.

Evaluation of The First and Second Measurement Model:

First, the measurement model of the first order of research was examined. According to the results, the t-value for all components was greater than 1.96 and all coefficients were significant and all components had a significant presence in explaining their dimensions. The average variance extracted (AVE) was less than 9%, which was confirmed for the first measurement model.

The second order measurement model included explicit

variables, first order hidden variables, and second order hidden variables. The second order hidden variables were measured based on the first order hidden variables. The second order measurement model included its dimensions as hidden first order variables and the components of each of them as explicit variables.

In this model, for all dimension and components coefficients, t-value was greater than 1.96, so all dimensions and components had a significant presence. Also, the mean variance extracted was higher than 0.5 and the convergence validity of the measured index model was confirmed. Structural equation model with its coefficients is shown.

In the mentioned model, 8 factors of organizational, personal, job-motivational, environmental, job properties, organizational justice, organizational activities and job tensions are well explained by their components. Based on the obtained results, the fit indices confirmed the good fit of the measurement model to the collected data. In this model, all 8 effective dimensions had significant coefficients.

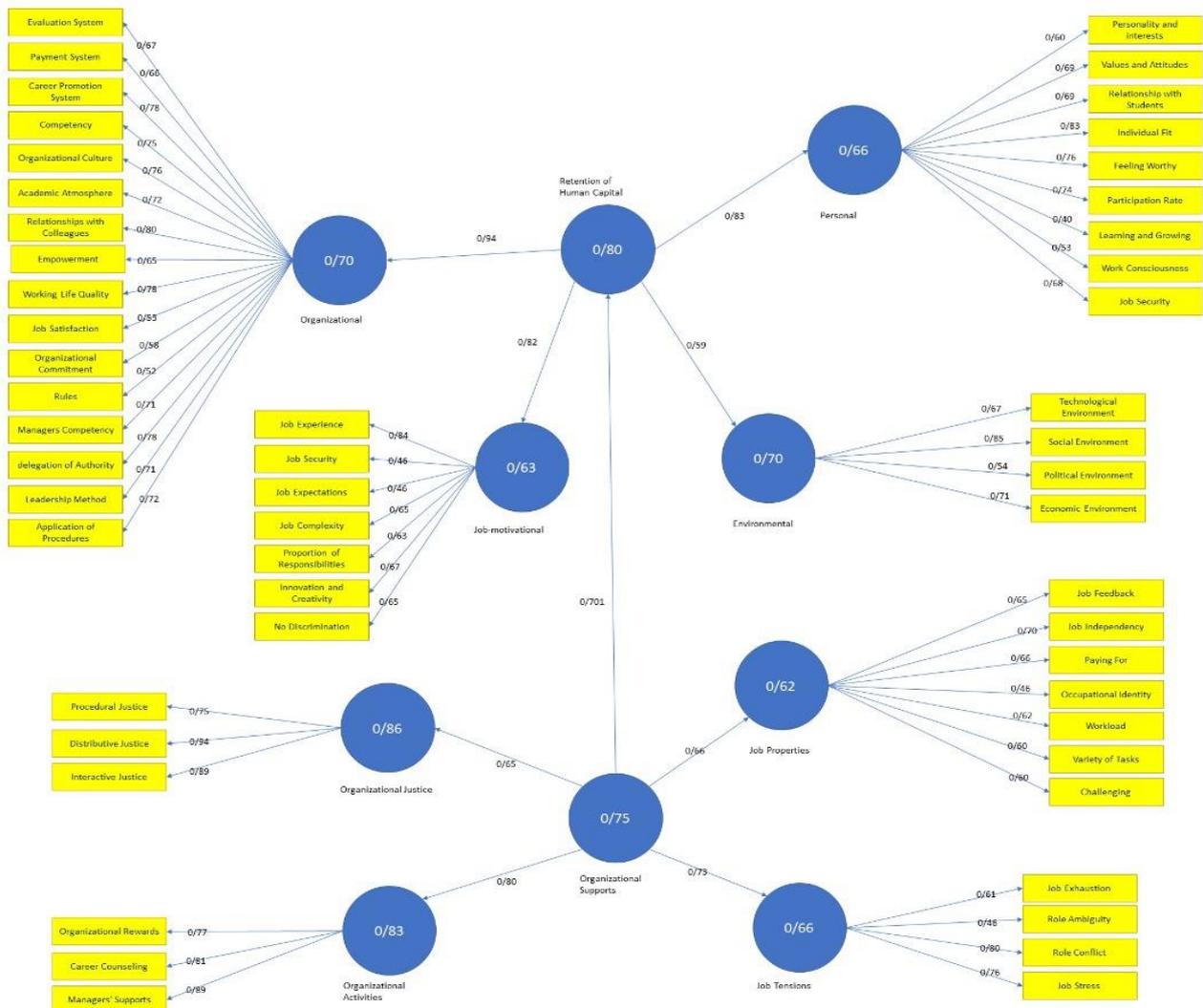


Figure 1. Fit Model and Coefficients of Structural Equations of Dimensions and Components

Table 2. Dimensions Affecting the Retention of Human Capital and Organizational Support

| Factors Affecting the Human Capital retention | Factor Load Rate | T Value | Significance Level |
|--|------------------|---------|--------------------|
| The personal dimension is one of the variables of the human capital retention. | 0.83 | 8.08 | P<0.01 |
| The organizational dimension is one of the variables of the human capital retention. | 0.94 | 17.25 | P<0.01 |
| The job-motivational dimension is one of the variables of the human capital retention. | 0.82 | 14.17 | P<0.01 |
| The environmental dimension is one of the variables of the human capital retention. | 0.59 | 9.04 | P<0.01 |
| The job properties dimension is one of the variables of organizational support. | 0.66 | 6.58 | P<0.01 |
| The organizational justice dimension is one of the variables of organizational support. | 0.65 | 8.06 | P<0.01 |
| The organizational activities dimension is one of the variables of organizational support. | 0.80 | 9.51 | P<0.01 |
| The job tensions dimension is one of the variables of organizational support. | 0.73 | 8.89 | P<0.01 |

Thus, ranking and comparing the importance of dimensions and components of human capital retention and organizational support was conducted based on the results of the structural equation model and it can be acknowledged that the distribution of the importance of human capital retention and organizational support dimensions in Mashhad University of Medical Sciences was greater than 1.96. The results showed that both organizational factor (coefficient = 0.94) and personal factor (coefficient = 0.83) had the most impact among the factors and environmental factor (coefficient = 59) had the least impact among the factors, with emphasis on organizational support. Table (3) shows the importance of each of the eight dimensions affecting the retention of human capital and organizational support.

Table 3. Ranking the Factors of Human Capital Retention with Organizational Support Approach in Mashhad University of Medical Sciences

| Dimensions | Factor Load | Priority | T Value |
|---------------------------|-------------|----------|---------|
| Personal | 0.83 | 2 | 8.08 |
| Organizational | 0.94 | 1 | 17.25 |
| Job-motivational | 0.82 | 3 | 14.17 |
| Environmental | 0.59 | 8 | 9.04 |
| Job Properties | 0.66 | 6 | 6.58 |
| Organizational Justice | 0.65 | 7 | 8.06 |
| Organizational Activities | 0.80 | 4 | 9.51 |
| Job Tensions | 0.73 | 5 | 8.89 |

DISCUSSION

Based on the opinions of faculty members, it was found that the factors affecting the retention of human capital with organizational support approach include 8 dimensions (organizational, personal, job-motivational, environmental, organizational activities, job properties, job tensions and organizational justice) and the results showed that among the dimensions of human capital retention and organizational support, organizational and individual

dimensions with emphasis on organizational support have the greatest impact and importance in retention of human capital. The results of the present study in the organizational dimension are consistent with the results of (1) study entitled "Presenting a model of factors affecting the retention of faculty members of Yazd University with a combined approach of multi-criteria decision-making and interpretive structural modeling". It is concluded that the organizational factor (policy factor and rules in the university) is the first priority in the retention of the faculty members of Yazd University.

Also, the results of the present study are consistent with the findings (8) in the personal dimension, which examined personal factors (personal proportion with the organization), feelings of value and appreciation. In a study entitled "Qualitative approach to the factors affecting the desire to stay motivated by teachers", it was found that the quality of teachers' work life, personal characteristics and organizational characteristics are the factors affecting the motivation of teachers (16). In a study entitled "Designing and explaining the model of knowledge workers' retention with emphasis on HRM practices", it was found that human capital activities such as skills, compensation, participation opportunities, organizational support predict the retention of faculty members and among them, organizational support has a direct effect on the strongest indirect effect on the intention of knowledge workers' retention (17).

One of the important characteristics of the organizational and individual factor in the retention of human capital is the relationship with colleagues and the proportion of the individual with the organization. In order to improve the stable and continuous relations between the colleagues, organization managers should act with a suitable platform so that the university becomes a place of cooperation between researchers and professors, by creating spaces based on maturity, evaluation and appreciation of educational and research activities of human capital and creating an environment for active participation for knowledge-based employees and their relationship with higher levels and peer universities to cooperate in knowledge-based companies, research centers and offices created to strengthen the university's relationship with the planning and implementation industry (18).

Given that organizational support has a significant impact on behavioral and personal attitudes and acts as an exchange commitment, university managers support knowledge workers by providing opportunities for empowerment courses to enhance knowledge and educational and research skills, continuous investments (study opportunities inside and outside of the country) and the creation of opportunities to face new challenges in strategic plans (7). There should be spaces based on learning organization in the university and special attention should be paid to the participation of members in relevant decisions. It refers to the increase indices of individual difference by creating equal research opportunities (perception of justice).

Therefore, in line with these two factors, it is suggested that:

- Managers of Mashhad University of Medical Sciences should pay attention to the university educational environment (ratio of faculty members to the number of students, facilities and equipment and resources available in the university and educational culture and structure) as well as university research environment (research activities to write articles, research projects and reference books...)
- University managers should pay attention to constructive feedback, job independence (lack of restrictive rules to perform independently, complex rules to attend specific check-in and check-out times) justice in payments, the volume of occupational therapy appropriate to the relevant specialty, job identity and the importance of the job according to the field and specialization among members of the faculty community.
- Special attention should be paid to the evaluation system and principled control based on organizational support and the use of student evaluation in the educational and research functions of faculty members.
- Attention to skills and competencies, holding high quality in-service courses, providing opportunities to express new thoughts and ideas and encouraging the spirit of responsibility should be included in strategic plans.

This research has been done in relation to Mashhad

University of Medical Sciences and cannot be generalized to other universities.

Because a questionnaire was used to assess the opinions of experts and the quantitative statistical population in the present study, the limitations of the questionnaire should be considered.

Lack of control and identification of the role of other factors affected the model of human capital retention with organizational support approach of Mashhad University of Medical Sciences with other medical universities of Mashhad. Although the overall purpose of this study was to identify and rank the factors affecting the retention of human capital and organizational support, however, it can be acknowledged that attention to understanding the expected factors of employees and principled policies for organizational support for knowledge workers' retention is the ultimate goal. It is clear that the development of this goal depends on more scientific efforts and more extensive studies and research in the field of relevant variables.

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. This article is approved by the Ethics Committee of Mashhad University of Medical Sciences with IR .MUMS.REC.1398.102 ID.

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