



Factors Affecting Job Motivation Among Faculty Members of Tabriz School of Dentistry Based on the Herzberg's 2-Factor Theory

Farzaneh Pakdel¹, Kazem Khodadoust², Sina Pakdel³, Sajjad Nosrati⁴, Fatemeh Azari Amaghani⁵, Hasti Farokhnia⁴, Parisa Falsafi^{1*}, Milad Ghanizadeh⁶

Abstract

Background: One of the main concerns of managers of different centers and institutions is the issue of employee motivation and increase of job satisfaction. Universities of medical sciences need motivated professors as educational elements to play an effective role in educating students and promoting community health and preventing the emergence of a sick and non-productive society in the future. The study aimed at investigating the motivation factors of faculty members of the School of Dentistry in Tabriz based on Herzberg's 2-factor theory.

Methods: This cross-sectional study was conducted in Tabriz University of Medical Sciences in 2018 on 110 official and unofficial faculty members of the School of Dentistry in Tabriz that were selected according to the census. The Herzberg Job Motivation Questionnaire with 40 questions was used to collect data. Out of 110 distributed questionnaires, 87 questionnaires were returned. Data were analyzed by descriptive statistics and chi-square and Fisher exact test. $P < 0.05$ was considered statistically significant.

Results: 48.3% of the individuals were female and the rest were male. Among the internal factors, the nature of the work with an average of 3.31 ± 0.42 and among external factors, occupational security with a mean of 3.47 ± 0.52 were reported as the most important factors. In sum, external factors, in comparison with internal factors, had a greater impact on employees' motivation. By obtaining an average of 71.56 ± 17.6 out of 160, job motivation was moderate in research units. Chi-square and Fisher exact test showed that the motivating level of the studied individuals did not show a significant correlation with faculty members' gender, marital status, academic degree and age ($P > 0.05$).

Conclusions: The job motivation of research units was at a moderate level. Occupational security (external factor) and the nature of the work (internal factor) had more importance.

*Correspondence to

Parisa Falsafi, Department of Oral Medicine, Faculty of Dentistry, Tabriz University of Medical Sciences, Tabriz, Iran.
Tel: 00984133355921
Fax: 00984133355921
Email: drpfalsafi@gmail.com

Keywords: Herzberg's theory, Job motivation, Faculty members, School of Dentistry

Received April 17, 2018
Accepted June 1, 2018
Published June 15 2018



Citation: Pakdel F, Khodadoust K, Pakdel S, Nosrati S, Azari Amaghani F, Farokhnia H, et al. Factors affecting job motivation among faculty members of Tabriz School of Dentistry based on the Herzberg's 2-factor theory. Avicenna J Dent Res. 2018;10(2):57-62. doi: 10.34172/ajdr.2018.13.

Background

One of the main concerns of managers of different centers and institutions is the issue of employee motivation and job satisfaction. In this regard, universities are more important as a center of educating powerful expert human resource. The faculty members constitute the main body of each university and certainly their importance in organizations is more than programs, activities and equipment (1,2) However, despite the cost and investment in developing countries to raise these resources, these countries encounter "emigrant elites" or "human capital flight" that cause irrevocable social, cultural, economic and political damages in the countries and practically reduce the use of this investment in the developing countries (3). On the other hand, the presence of tension and job dissatisfaction among faculty members can threaten physical and mental

Highlights

- ▶ The job motivation among the faculty members of the School of Dentistry was at a moderate level.
- ▶ The level of job motivation was not different based on gender, marital status, academic degree and age.
- ▶ Occupational security as an external factor and the nature of the work as an internal factor had more importance.

health and quality of life and prevent the achievement of the individual and social development goals (4,5). One of the most common and most practical theories of job motivation is the Herzberg's 2-factor theory. He believes that motivation is influenced by motivational factors (internal or subjective factors of the individual) and hygiene factors (external factors). Motivational or subjective factors arise from doing work and they result in

¹Department of Oral Medicine, Faculty of Dentistry, Tabriz University of Medical Sciences, Tabriz, Iran. ²Tabriz University of Medical Sciences, Tabriz, Iran. ³Legal medicine organization, Tabriz, Iran. ⁴Faculty of Dentistry, Tabriz University of Medical Sciences, Tabriz, Iran. ⁵Clinic of Imam Reza Hospital, Tabriz University of Medical Sciences, Tabriz, Iran. ⁶Department of Oral and Maxillofacial surgery, Faculty of Dentistry, Tabriz University of Medical Sciences, Tabriz, Iran.

individual satisfaction and they are considered as internal or subjective rewards that are necessary to increase work done such as success, progress and appreciation and the nature of work. The hygiene or external factors are factors that make employees stay in the organization and include policies, working environment conditions, salary, personal relationships with their counterparts and occupational security (6). Many studies have been conducted on the impact of internal and external factors on job satisfaction and employee motivation. Some studies have identified external factors as factors influencing job motivations (7-9) but others have described the role of internal factors more than external factors (10,11). In some studies, the nature of work, job progression, occupational security and relationship with others and in other studies, university policies, relationships with superior colleagues and salaries had the greatest impact on employees' motivation (7-10). Some studies have considered the job satisfaction of university professors related to demographic factors such as age, gender and work experience and some others have denied the effect of these factors (8,12). Successful managers at universities are individuals that can create a situation to satisfy the faculty members' motivations by identifying effective factors. However, due to the lack of similar research in Tabriz University of Medical Sciences and the necessity of exploring each society individually and the existence of contradictory results in past studies, this study was conducted with the aim of determining the factors affecting the job motivation of faculty members of the School of Dentistry at this university.

Methods

This cross-sectional study was carried out from March 2018 to July 2018 in Tabriz University of Medical Sciences, Tabriz, Iran. The statistical population included all faculty members working at the School of Dentistry in Tabriz. Census method was used. Therefore, all the faculty members (110 cases) were evaluated. Faculty members who did not want to participate in the study and questionnaires that were incompletely filled out were excluded from the study.

To collect data, the Herzberg Job Motivation Questionnaire with 40 items prepared by Bakhshi et al was used (11, 13).

Validity and Reliability of the Questionnaire

In order to evaluate the validity of the questionnaire, it was reviewed by 6 professors at the Faculty of Dentistry and the essential changes were made. In order to determine the reliability of the questions, it was distributed among 20 faculty members in a pilot study and then its reliability was calculated using Cronbach alpha coefficient which was 0.91. After the questionnaire was accepted, it was distributed among the research units.

Of total 110 distributed questionnaires, 87 questionnaires were returned. In the first part of the

questionnaire, the information about the faculty members' personal specifications and in the second part of the questionnaire, 40 questions related to the 11 factors of the Herzberg theory were collected. The category of internal factors consisted of 5 statements related to the factors of recognition and acknowledgment, four statements were related to factors of career development and progression, three statements were related to factors of the nature of work, three statements were associated with occupational responsibility and 2 statements were related to the factor of success and job promotion. Regarding external factors, three statements were related to salary, three statements were associated with the policies in the workplace environment, 5 statements were related to the factors of communication, four statements were associated with occupational security, three statements were related to workplace environment and 5 were related to the authors' supervision. Each question had 5 options (very important, important, insignificant and not important) which were assigned according to the order of 4 to 0 for options "very important" to "not included". Given that the questionnaire had a total of 40 questions, each question received a minimum score of 0 and a maximum score of 4; thus, the scores ranged from 0 to 160. A score between 0 and 67 indicated poor job motivation and a score between 67 and 100 showed moderate job motivation and a score of over 100 depicted good job motivation. Data were analyzed using descriptive statistics (mean \pm SD and frequency). To compare the dimensions of motivational factors among independent variables, chi-square and Fisher exact test were used. Statistical analysis was performed using SPSS software version 17.0 and $P < 0.05$ was considered statistically significant.

Results

Out of 87 faculty members, 48.3% were men (42 persons) and 51.7% were females (45 persons). The mean age of male and female participants was 43.16 ± 8.72 and 38.24 ± 7.17 years old respectively. Moreover, 8% (7 persons) were single and 92% (80 persons) were married, 98.9% (86 persons) were specialist, 70.1% (61 persons) had assistant degree, 16.1% (14 persons) had associate degree, 2.2% (2 persons) had instructor degree and 11.6% (10 persons) had master's degree (Table 1).

In Table 2, the mean \pm standard deviation of each question of the questionnaire is shown. Among the internal factors, the nature of the work with an average of 3.31 ± 0.42 and among external factors, occupational security with an average of 3.47 ± 0.52 were recognized as the most important factors. In sum, external factors in comparison with internal factors had a greater impact on employees' motivation.

According to the total mean score of 71.56 ± 17.6 , it is concluded that job motivation in the studied individuals was moderate. Forty individuals (46%) had poor job motivation, 41 individuals (41%) had moderate job

Table 1. Demographic Characteristics of the Samples

		No (%) or Mean±SD
Gender	Male	42 (48.3)
	Female	45 (51.7)
Age	Male	43.16±8.72
	Female	38.24±7.17
Marital status	Single	7 (8)
	Married	80 (92)
Education	General	1 (1.1)
	Specialist	86 (98.9)
Academic degree	Instructor	2 (2.2)
	Assistant	61 (70.1)
	Associate	14 (16.1)
	Master's	10 (11.6)

motivation and 6 individuals (6.9%) had good job motivation.

The level of job motivation has been compared between men and women (Table 3). It is observed that the rate of job motivation in women was weaker compared to men and the percentage of individuals with good motivation in men was 9.5% versus 6.7% in the women. This difference between women and men was not statistically significant ($P = 0.794$).

The level of job motivation among single and married individuals was also compared (Table 3). It is observed that the level of job motivation in single individuals was weaker than married persons and no single person with good motivation has been reported; while 8.8% of the married people had good motivation. This difference between the single and married people was not statistically significant ($P = 0.692$).

In addition, the level of job motivation has been compared among individuals with academic degree of instructor, associate professor, assistant professor and master's (Table 3). There were 2 people with the academic degree of instructor in the study, both of whom had poor job motivation. The people with the academic degree of associate professor including 6 individuals (9.8%) had the highest job motivation, followed by people with the academic degree of assistant professor with one person (7%). None of the individuals with the academic degree of master's had good job motivation. This difference was not statistically significant among people with different academic degrees ($P = 0.065$).

Job motivation was compared among different age groups (Table 3). In the age group of 20 to 29 years old, there was only one person who had poor job motivation. In the age group of 30-39, 22 people (46.8%) had poor job motivation, 22 individuals (46.8%) had moderate job motivation and only 3 people (6.4%) had good job motivation. This difference among different age groups was not statistically significant ($P = 0.712$).

Discussion

Higher education plays a fundamental role in establishing a country's socio-economic development (14,15). A faculty member is one of the elements of the education system and also one of the key components of the university structure and his performance in the organization is a function of his ability and motivation (11).

In general, individuals in this study reported a moderate level of job motivation and their level of motivation was not significantly different based on gender, marital status, academic degree and age. In contrast, the results of a study in Vietnam showed that gender, field of study and national graduation had a significant effect on job satisfaction (12). Hoseyni et al at Yazd University of Medical Sciences found that job motivation of faculty members was related to gender and work experience. Female faculty members considered internal factors more important than external factors. In justifying this difference, they explained that since it is common for men to be responsible for providing family expenses, men pay more attention to external factors such as occupational security and salary (8).

The results of this study showed that external factors were more effective on employees' motivation than internal factors. What seems to be important in this regard is that faculty members have introduced those issues beyond their capability as good motivational factors and they expect them from their organization.

This is in agreement with Herzberg's theory which asserts that the existence of external factors in work is essential, and their absence creates problems but does not encourage people to work. In contrast, internal factors may encourage them to work (6). These findings are consistent with the results of research by Hoseyni et al (8), Tan et al (9) and Ghazi et al (7). However, in the study of Ziar et al (11) and Taherpour et al (10), the effect of internal factors was greater.

In addition, in the present study, among the external factors, occupational security and among the internal factors, the nature of work were identified as the most effective factors in employee's job motivation. The most important statement in occupational security was respect for justice and non-discrimination among faculty members.

In the study of Ziar et al conducted at Shahid Beheshti University in 2015, occupational security was the most important external factor affecting job motivation and the nature of the work was the most effective internal factor (11). In the study of Hoseyni et al in 2013 in Yazd, occupational security was also identified as the most important external motivational factor, but the main factor of internal motivation in their study was job position (8). Contrary to the results of this study, in a study done by Taherpour et al (2), occupational security was ranked fourth while it was first in the current study. However, in their study, the nature of work among

Table 2. Mean and Standard Deviation of Each Statement

Statements		Mean±SD
Internal Factors		
Identification and acknowledgment	Appreciate by the colleagues in the case of doing valuable work	2.85±0.92
	Appreciate by the students in the case of doing educational work	2.82±1
	Appreciate by the authorities and receive spiritual rewards in the case of doing valuable work	3.05±0.84
	Taking responsibility of university officials regarding professional problems	3.25±0.71
	Support of the managers, head of the faculty and hospital in legal procedures	3.31±0.78
Total	3.05±0.69	
Occupational progress and development	Existence of possibility of job progress in the career	3.29±0.77
	Existence of continuation of study	2.95±0.95
	Existence of possibility of participation in seminars and conferences	3.01±0.69
	Existence of proper research possibilities	3.19±0.72
Total	3.11±0.47	
The nature of work	Capability of serving the society by the profession (teaching)	3.36±0.55
	Being valuable for the profession (teaching) from the society viewpoint	3.21±0.75
	Interest in teaching and satisfaction of teaching	3.34±0.69
	Total	3.31±0.42
Job responsibility	Freedom of expression and responsibility taking	3.09±0.81
	Acceptance of your propositions in making decisions	3.06±0.75
	Independence in providing the educational and research services	3.11±0.75
	Total	3.09±0.7
Career position	The ability of Promotion to higher academic degree	3.24±0.76
	Direct interference in education, treatment and care of patients	3.1±0.73
	Total	3.17±0.66
External Factors		
Salary	Proportionality of the salary to the needs of life	3.52±0.56
	Proportionality of the salary received with the amount and type of work	3.42±0.64
	Proportionality of the benefits received (the right to absent from the office) with the level of activity	3.36±0.87
	Total	3.44±0.61
Environment policies	Clear rules and regulations	3.35±0.77
	Proportionality of expectations of the authorities from you	3.37±0.71
	Proportionality and clarity the status of encouragement and punishment	3.27±0.78
	Total	3.33±0.7
Communication (personal relationship with colleagues)	Manner of contact of the authorities with you	3.2±0.76
	Manner of communication with other faculty members?	3.22±0.69
	Manner of contact of the group manager with you	3.41±0.67
	Manner of your contact with other employees	3.2±0.67
	Manner of the contact of your colleagues with each other	3.08±0.81
Total	3.22±0.57	
Occupational security	Observance of justice and non-discrimination between faculty members on the part of the authorities	3.67±0.58
	Presence of facilities for prevention of occupational accidents	3.25±0.87
	Proper facilities for using insurance, retirement	3.42±0.7
	Occupational sustainability (occupational security)	3.54±0.69
Total	3.47±0.52	
Working place condition	Physical conditions at work (light, sound, pollution, etc.)	3.21±0.73
	The availability of equipment and facilities	3.28±0.68
	The availability of welfare services	2.97±0.73
	Total	3.16±0.58
Access to supervisory and supervision	Easy access to the authorities when needed	3.21±0.63
	Direct supervision of authorities in your work	2.86±0.71
	Indirect supervision of authorities in your work	2.74±0.75
	Manner of evaluation of the authority of your work	2.98±0.86
	The manner of supervision and guidance of the authorities	2.96±0.87
Total	2.95±0.46	

Table 3. Comparison of Job Motivation Based on Gender, Marital Status, Academic Degree, Different Age Groups

		Poor No. (%)	Moderate No. (%)	Good No. (%)	P Value
Gender	Female	21 (46.7)	21 (46.7)	3 (6.7)	0.794
	Male	17 (40.5)	21 (50)	4 (9.5)	
Marital status	Single	3 (42.9)	4 (57.1)	0 (0)	0.692
	Married	35 (43.8)	38 (47.5)	7 (8.8)	
Academic degree	Instructor	2 (100)	0 (0)	0 (0)	0.065
	Assistant	31 (50.8)	24 (39.3)	6 (9.8)	
	Associate	3 (21.4)	10 (71.4)	1 (7.1)	
	Master	2 (20)	8 (80)	0 (0)	
Different age groups	20-29 years	1 (100)	0 (0)	0 (0)	0.712
	30-39 years	22 (46.8)	22 (46.8)	3 (6.4)	
	>40 years	15 (38.5)	20 (51.3)	4 (10.3)	

internal factors was the most important factor in creating job motivation. In the study of Lashgarara and Moharami (16), the most important external factor affecting job motivation was salary. In the study of Aliabadi et al (13), salary and occupational security were the most important external factors. In the study of Jafari et al (17) in Ahvaz University of Medical Sciences, occupational security was mentioned as the third factor.

The existence of such scattered and contradictory results is due to the fact that these studies have been carried out in different places, times and societies. This reveals the necessity to repeat such studies separately in each statistical population.

It also seems that the change in motivational factors is affected by the promotion of faculty members and the departure and arrival of new members in the system. Therefore, it is no longer possible to upgrade the university system based on previous approaches, and changes in motivational factors should be considered.

Considering the importance of occupational security in various studies, it seems that the faculty members are suffering from non-compliance with justice and discrimination and it necessitates a precise examination of this problem and the determination of its exact dimensions in order to increase the faculty members' job motivation. Moreover, it seems that the importance of the nature of the work is due to the interest in teaching and learning by the faculty members. Strengthening this will also increase job motivations.

Limitations and Recommendations

This study tried for the first time to evaluate job motivation factors among faculty members of the School of Dentistry, Tabriz University of Medical Sciences. However, there were some limitations. One of the limitations of this study was that it was conducted at one university and only among the faculty members of the School of Dentistry. Therefore, the generalizability of the

results to the entire Tabriz University of Medical Sciences or other universities was impossible. Another limitation of this study was performing a descriptive cross-sectional study. Therefore, it is suggested that longitudinal studies be conducted in the future at several universities of the country concurrently in order to provide the chance for a more accurate conclusion for better planning.

Conclusions

The results of this study showed that all factors in the theory of Herzberg were somehow effective in investigating job motivation of the faculty members; however, among them, occupational security as an external factor and the nature of work as an internal factor were more important. It seems that considering the results of this study in legislating rules regarding faculty members will increase their job motivation and as a result, increase their accountability and commitment.

Authors' Contribution

FP and PF were responsible for the design and concept of the study as well as revision of the prepared manuscript. FP, KK, SP and HF Participated in distributing questionnaires and collecting data. MG, PF, SN and FAA analyzed the data, carried out the literature search and drafted the manuscript. All the authors have read and approved the final manuscript.

Conflict of Interest Disclosures

The authors declare that there is no conflict of interest.

Ethical Statement

This study was conducted in agreement with the Helsinki Declaration of 1975, which was revised in 2002. The procedure of the study was accepted by the Ethics Committee of Tabriz University of Medical Sciences (No. IR.TBZMED.REC.1396.1153). The purpose of the study was described to all the participants before the study was started and the subjects' information was kept private. A detailed informed consent form was obtained from all the members.

Acknowledgments

The authors would like to thank all the staff of Tabriz University of

Medical Sciences who contributed to this study.

References

1. Radafshar Z, Hosseini Teshnizi S, Solati SM, Naderi N, Mahboobi AA. Affective motivation factors on retention of faculty members at Hormozgan University of Medical Sciences - 1986. *Hormozgan Medical Journal*. 2010;14(3):164-6.
2. Taherpour M, Sefidi F, Javadi A. Identifying Job Motivation from Qazvin University of Medical Sciences Faculty Members' Viewpoints. *Res Med Educ*. 2010;2(2):33-9.
3. Sohbatiha F, Riahi A, Zare A. Study of brain drain of Iranian researchers and professionals to developing and industrial countries universities in the field of medical science in Scopus database. *Journal of Modern Medical Information Sciences*. 2015;1(2):42-51.
4. Hayati K, Caniagi I. Islamic work ethic: The role of intrinsic motivation, job satisfaction, organizational commitment and job performance. *Procedia Soc Behav Sci*. 2012;65:272-7. doi: 10.1016/j.sbspro.2012.11.122.
5. Lambrou P, Kontodimopoulos N, Niakas D. Motivation and job satisfaction among medical and nursing staff in a Cyprus public general hospital. *Hum Resour Health*. 2010;8(1):26. doi: 10.1186/1478-4491-8-26.
6. Alshmemri M, Shahwan-Akl L, Maude P. Herzberg's two-factor theory. *Life Sci J*. 2017;14(5):12-6. doi: 10.7537/marslsj140517.03.
7. Ghazi SR, Shahzada G, Khan MS. Resurrecting Herzberg's two factor theory: An implication to the university teachers. *J Educ Soc Res*. 2013;3(2):445-51.
8. Hoseyni SN, Mirzaei M, Faryabi R, Mokhtari Ardekan AM, Shaker Ardekani M, Mirzaei Alavijeh M. Effective Factors in Job Motivation of Faculty Members in Shahid Sadoughi University of Medical Sciences: an Application of Herzberg's Motivation Theory. *Iran J Med Educ*. 2014;13(12):1040-50.
9. Tan TH, Waheed A. Herzberg's motivation-hygiene theory and job satisfaction in the Malaysian retail sector: The mediating effect of love of money. *Asian Academy of Management Journal*. 2011;16(1):73-94.
10. Taherpour M, Sefidi F, Javadi A. Factors affecting the motivation of the members of the Board of Qazvin University of Medical Sciences. *Dena Quarterly*. 2015;6:21-2. [Persian].
11. Ziar S, Montazmanesh N, Ahmadi S, Abadi AR, Ahmadi F. Effective Factors in Job Motivation of Faculty Members of Shaheed Beheshti University of Medical Sciences Based on Herzberg's Two-Factor Theory of Motivation in 1394. *J Med Educ Dev*. 2016;9(23):20-30.
12. Duong MQ. The effects of demographic and institutional characteristics on job satisfaction of university faculty in Vietnam. *International Journal of Academic Research in Progressive Education and Development*. 2013;2(4):78-92. doi: 10.6007/IJARPEd/v2-i4/366.
13. Bakhshi Ali Abadi H, Norouzi D, Hosseini ZS. Effective factors on job motivation in academic members of Rafsanjan Medical University. *Iran J Med Educ*. 2004;4(2):33-41.
14. Mehboob F, Sarwar MA, Bhutto NA. Factors affecting job satisfaction among faculty member. *Asian Journal of Business and Management Sciences*. 2012;1(12):1-9.
15. Ghavimi MA, Rahbar M, Faraji Kalvanag AR, Ghoreishzadeh A, Ghanizadeh M. Evaluation of the quality of educational services of tabriz university of medical sciences based on SERVQUAL model. *World J Dent*. 2017;8(2):114-8. doi: 10.5005/jp-journals-10015-1423.
16. Lashgarara F, Moharami R. Job satisfaction among agricultural extension specialists in Qazvin based on two factors Herzberg theory. *J Agr Educ Ext R*. 2010;3(3):11-23. [Persian].
17. Jafary H, Aghayee Z, Jafary L, Nematy E. The Survey of Faculty Members' Attitude in Ahwaz Jundishapur University of Medical Sciences about Effective Motivational Factors on Educational Performance: 2011. *Educ Dev Jundishapur*. 2013;3(2):21-8.

© 2018 The Author(s); Published by Hamadan University of Medical Sciences. This is an open-access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.