

Employees' Job Expectations of Health Information Technology

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Abstract: Given the important role of health information technology in providing, sustaining and improving the health services for patients, it seems necessary to pay more attention and made more efforts to identify the expectations of staff. This study was performed in affiliated hospitals of Semnan University of Medical Sciences in Semnan, Iran, in 2015. In this study, a census method was used. The data collection tool was a researcher made questionnaire. The results showed that 32.5% agreed with the selection of staff through qualifying conditions of job, 3328.9% of employees disagreed with preventing of discriminating in the organization. The results showed that the expectations of the health information technology staffs in the field of process had been met better than in the field of content. According to the views of the staffs, their main expectations were related to the process dimension.

Key words: Job expectations, employees, health information technology, Semnan, Iran

INTRODUCTION

Job expectations include a category of jobs which a person would like to achieve in the future in fact, job expectations are based on the wishes and desires (Meng *et al.*, 2014; Safavi *et al.*, 2012). People working in hospitals have several expectations and tendencies (Marchand and Russell, 2013; Mehdi *et al.*, 2011) when such expectations are realized, the staff will achieve job satisfaction and they will be encouraged to work more and better. If such expectations are ignored, the staff will be dissatisfied with their jobs (Chen *et al.*, 2011; Mehdi *et al.*, 2012).

Information and communication technology has had a significant impact on all economic and social dimensions in the world (Buabeng-Andoh, 2012; Kahouei *et al.*, 2015a, b). With the development of this technology in the medical sector, the countries sought to start a significant reform in the health care system (Lustria *et al.*, 2011; Kahouei *et al.*, 2015a, b). The field of health care is one of the most important areas for the utilization of information technology (Schoen *et al.*, 2012; Mozhgan *et al.*, 2012). The health care services have a special place among the different types of services because these services are requested by a large number of populations in every community (Basinga *et al.*, 2011; Mahboobe *et al.*, 2012; Kahouei *et al.*, 2016). Among the health care services, the health information technology service is one of the

indicators used for the health sciences and allied health services (Buntin *et al.*, 2011; Kahouei *et al.*, 2014a, b). It is used to demonstrate the efficiency and quality of health care services, hence, it is a valuable benchmark (Haghani *et al.*, 2009). Due to the critical role of the hospital staff in every community (Landman *et al.*, 2013; Kahouei *et al.*, 2013a, b), it is of paramount importance to identify and review and analyze the expectations of employees. In addition, today manpower is considered as the most important and effective factor for the development in the world (Cher *et al.*, 2012; Farzaneh *et al.*, 2011), it is the most important competitive advantage for the survival of every organization. Job satisfaction and employees' expectations must be taken as a serious issue because without meeting some of the expectations, the staff may think of other career options (Hazavehei and Samadi, 2005). Given the important role of health information technology in providing, sustaining and improving the health services for patients, it seems necessary to pay more attention and made more efforts to identify the expectations of staff. Few studies have been conducted to assess the expectations of public health staff and no study has exclusively assessed the job expectations of the staff working in health information technology sector. Therefore, it seemed necessary to carry out a study on job expectations of the staff working in the health information technology sector so that to identify and meet their expectations and help them to operate efficiently for a long period.

MATERIALS AND METHODS

This study was performed in affiliated hospitals of Semnan University of Medical Sciences in Semnan, Iran in 2015. In this study, a census method was used. The data collection tool was a researcher made questionnaire. The questionnaire consisted of 22 questions in 3 sections. The first part contains 6 questions related to demographic information including gender, marital status, age, work experience and education. The second part contains 7 questions related to the process of job expectations such as physical factors and geographical location and the third part contains 15 questions about the content job expectations include education, security, job promotion, job identification, job commitment, discrimination and reconciling work and family. The attitudes were graded as completely disagree = 1, disagree = 2, neither disagree nor agree = 3, agree = 4 and completely agree = 5, respectively. Then, the primary questionnaire was reviewed for content validity through the content validity index. Next, the questionnaire was revised to be more focused as the experts suggested. Then, we piloted the questionnaire on 11 employees of health information technology department randomly selected from the two hospitals. Participants in the pilot study were excluded from the study. Next, further revisions were made and some statements were rephrased. Lastly, the researcher distributed the final version of the anonymous

questionnaire among the employees who were working in departments of the hospitals and asked them to complete it. The questionnaire was delivered to the researcher at most 72 h later. The mean and standard deviation for each item was reported. Mann-Whitney U and Kruskal-Wallis tests were used to investigate the difference among means of attitudes scores in the study subjects.

RESULTS

Demographic data: In this study 114 questionnaires were returned. The 43% of the participants aged 40-30. The 78.1% were women. In terms of work experience, 28.9% had 10-5 years work experiences. 82.5% of them were married. The 53.5% were graduated.

Expectations: The results showed that 49.1% completely agreed to standardize work environment. The 31.6% reported that there is no proper ventilation in the workplace, 28.1% of the IT employees agreed with colors and they reported that positive energy to be transmitted by the paints. The 41.2% of the staffs agreed with the regularity of their working environment (Table 1). The results showed that 32.5% agreed with the selection of staff through qualifying conditions of job, 60.5% had jobs commitment, 3328.9% of employees disagreed with preventing of discriminating in the organization (Table 2). Significant differences were observed in mean scores

Table 1: IT staffs' attitudes towards process dimensions of job

Factors (process dimensions)	Attitude (N (%))					Mean±SD
	Completely agree	Agree	No idea	Disagree	Completely disagree	
Physical environment						
The discipline in the workplace	13 (11.4)	47 (41.2)	9 (7.9)	40 (35.1)	5 (4.4)	1.16±2.20
The standardization of work environment	56 (49.1)	47 (41.2)	8 (7.0)	2 (1.8)	1 (0.9)	0.76±3.35
Sound proof	5 (4.4)	23 (20.2)	19 (16.7)	44 (38.6)	23 (20.2)	0.80±3.37
Positive energy is derived from colors	16 (14.0)	32 (28.1)	22 (19.3)	25 (21.0)	19 (16.7)	1.32±2.00
Lack of ventilation systems	26 (22.8)	36 (31.6)	13 (11.4)	26 (22.8)	13 (11.4)	1.35±2.31
Facilities						
Public parking	47 (41.2)	33 (28.9)	27 (23.7)	5 (4.4)	2 (1.8)	0.99±3.03
Urban transportation services	61 (53.5)	42 (36.8)	7 (6.1)	3 (2.6)	1 (0.9)	0.79±3.39

Table 2: IT staffs' attitudes towards content dimensions of job

Factors (content dimensions)	Attitude (N (%))					Mean±SD
	Completely agree	Agree	No idea	Disagree	Completely disagree	
Professional identity						
Job specification	19 (16.7)	37 (32.5)	15 (13.2)	34 (29.8)	9 (7.9)	1.25±2.20
Work commitment	69 (60.5)	34 (29.8)	3 (2.6)	6 (5.3)	2 (1.8)	0.90±3.42
Preventing of discrimination	10 (8.8)	31 (27.2)	17 (14.9)	33 (28.9)	23 (20.2)	1.29±1.75
Intimacy between me and my family	12 (10.5)	26 (22.8)	38 (33.5)	22 (19.3)	16 (14.0)	1.18±1.96
Education						
Continuing education	61 (53.5)	43 (37.7)	4 (3.5)	5 (4.4)	1 (0.9)	3.38±0.82
Reading books in the workplace	5 (4.4)	24 (21.1)	31 (27.2)	40 (35.1)	14 (12.3)	1.70±1.07
Training required	20 (17.5)	47 (41.2)	16 (14.0)	27 (23.7)	4 (3.5)	1.13±2.45
Works hops held	6 (5.3)	33 (28.9)	30 (26.3)	37 (32.5)	8 (7.0)	1.92±1.05
Being on time for work	12 (10.5)	45 (39.5)	18 (15.8)	24 (21.1)	15 (13.2)	1.24±2.13
Job promotion						
Facilities for promotion	34 (29.8)	48 (42.1)	10 (8.8)	15 (13.2)	7 (6.1)	1.19±2.76
Opportunities for knowledge and skill development	12 (10.5)	34 (29.8)	24 (21.1)	33 (28.9)	11 (9.6)	1.18±2.02

Table 3: Difference of mean scores of employees' attitudes towards process and content dimensions in age and sex

Characteristics	Groups	p-values	
		Process dimension	Content dimension
Age	>20	0.015	0.011
	30-20		
	40-30		
Sex	Female	0.040	0.021
	Male		

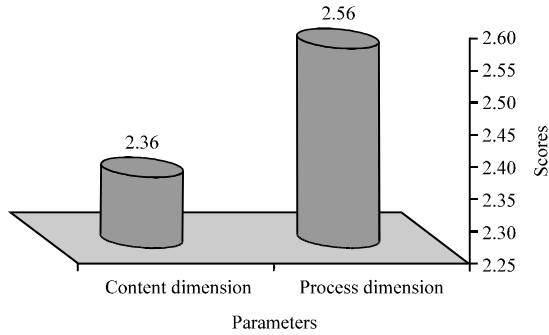


Fig. 1: Mean scores of employees' attitudes towards content and process dimensions of job

between employees' age and gender and their job expectations in the areas of job content and job process (Table 3). There were significant differences between the employees' mean scores of attitude in process and content dimensions (Fig. 1).

DISCUSSION

The studied staffs were unhappy because they believed the staffs were not selected based on job qualifications. To choose a skilled workforce, a job qualification form can be used to find the eligible people (Costa *et al.*, 2014; Kahouei *et al.*, 2011). Job expectations help people to collect experience in their career, provide people with more insights and empower the staff to improve working methods and procedures they also lead to innovations and worthwhile initiatives. Previous studies have shown that lack of opportunity for a progress leads to a failure in life and negatively impacts motivation and productivity of the staff (Gashmard *et al.*, 2013; Kahouei *et al.*, 2013a, b).

The findings of the study showed that the organization paid the necessary attention to education. Education is a key strategy to transform the company into a learning organization. Lack of training and education is one of the causes of people's failure in their jobs.

The people working in every organization would like to receive education courses that provide them with the new skills and help them to work efficiently everywhere. Previous studies have shown that one of the methods for

maintaining employees in a organization is to provide appropriate and high quality educational programs for the staffs. Implementation of such programs significantly prevents the loss of knowledge and skills stored in the organization (Hsieh *et al.*, 2013).

According to the findings of this study, the majority of the studied staff believed that providing facilities by the organization to promote their job position increased their efficiency. If the organization provides facilities for employees their performance will rise and consequently their effectiveness will increase as well. Job promotion and satisfaction with the position indicates that the necessary facilities to increase capacity and job position are available. If the staffs reach a higher career level and position they will participate in more activities and works (Addison *et al.*, 2014).

The results showed that more than half of the population had a commitment towards their work. A committed staff is incredibly valuable. Employees' commitment can be achieved through providing basic needs of employees, paying attention to employees at various levels of the organization, trusting them and tolerating the characteristics and preferences of individual employees without discrimination and stigmatization. Quality and style of leadership are among the most important factors affecting the confidence and commitment of employees. Previous studies have shown that high commitment is a mediator between job satisfaction and job characteristics. Job characteristics can help a person to be mentally in an excellent condition and such a condition and spirit could affect his or her performance.

The findings of the study showed that a large number of workers suffer from discrimination. This indicates that organizations are not fair to the employees and do not treat them equally. It seems that the studied organizations overlooked the behavioral and psychological consequences of the injustice in the workplace. When people feel they are treated unfairly, their commitment and working performance will reduce and they will be less likely to help their colleagues.

CONCLUSION

The results showed that the expectations of the health information technology staffs in the field of process had been met better than in the field of content. According to the views of the staffs, their main expectations were related to the process dimension. The results of this study are important for managers because they can help managers to be informed about job expectations of their staffs. It allows administrators to

better manage the expectations and resolve dissatisfactions. There is a need for further studies in this area to better understand the expectations of employees and use them to improve job processes.

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REFERENCES

- Addison, J.T., O.D. Ozturk and S. Wang, 2014. Job promotion in midcareer: Gender, recession and crowding. *Monthly Lab. Rev.*, Vol. 137.
- Basinga, P., P.J. Gertler, A. Binagwaho, A.L. Soucat, J. Sturdy and C.M. Vermeersch, 2011. Effect on maternal and child health services in Rwanda of payment to primary health-care providers for performance: An impact evaluation. *Lancet*, 377: 1421-1428.
- Buabeng-Andoh, C., 2012. Factors influencing teacher's adoption and integration of information and communication technology into teaching: A review of the literature. *Int. J. Educ. Dev. Inf. Commun. Technol.*, 8: 136-155.
- Buntin, M.B., M.F. Burke, M.C. Hoaglin and D. Blumenthal, 2011. The benefits of health information technology: A review of the recent literature shows predominantly positive results. *Health Affairs*, 30: 464-471.
- Chen, G., R.E. Ployhart, H.C. Thomas, N. Anderson and P.D. Bliese, 2011. The power of momentum: A new model of dynamic relationships between job satisfaction change and turnover intentions. *Acad. Manage. J.*, 54: 159-181.
- Cher, T.L., E.H.H. Lai, C.S. Huang and C.P. Lin, 2012. Field survey of dental manpower in Taiwan's hospitals. *J. Formosan Med. Assoc.*, 111: 305-314.
- Costa, A., F.A. Cappadonna and S. Fichera, 2014. Joint optimization of a flow-shop group scheduling with sequence dependent set-up times and skilled workforce assignment. *Int. J. Prod. Res.*, 52: 2696-2728.
- Farzaneh, K., A. Zahra, F. Mehri, P. Zeinab, S.R. Panoe, A. Safollah and K. Mehdi, 2011. The survey of job injuries and mental health disorders among clinical nurses from ergonomics aspect. *Res. J. Med. Sci.*, 5: 289-293.
- Gashmard, R., R. Bagherzadeh, S. Pouladi, S. Akaberian and F. Jahanpoor, 2013. Evaluating the factors influencing productivity of medical staff in hospitals affiliated Bushehr University of Medical Sciences 2012, Bushehr, Iran. *World Appl. Sci. J.*, 28: 2061-2068.
- Haghani, F., R. Mollabashi, S. Jamshidian and M. Memarzadeh, 2009. Physical environment status of educational clinics in Isfahan University of Medical Sciences: An inseparable part of teaching-learning process in clinic. *Iran. J. Med. Educ.*, 8: 239-245.
- Hazavehei, S. and A. Samadi, 2005. Factors affecting motivation executive staff hamedan. *Q. J. Fundam. Mental Health*, 7: 13-26.
- Hsieh, H.C., C.Y. Hsieh, C.H. Lin, P.S. Sung and C.Y. Li *et al.*, 2013. Development of an educational program for staffs of emergency medical service to improve their awareness of stroke within 3 hours of symptom onset: A pilot study. *Acta. Neurol. Taiwan*, 22: 4-12.
- Kahouei M., S. Alaei, S.S.G.S. Panahi and J.M. Zadeh, 2015a. Strategy of health information seeking among physicians, medical residents and students after introducing digital library and information technology in teaching hospitals of Iran. *J. Evidence-Based Med.*, 8: 91-97.
- Kahouei, M., J.M. Zadeh and P.S. Roghani, 2015b. The evaluation of the compatibility of Electronic Patient Record (EPR) system with nurses' management needs in a developing country. *Int. J. Med. Inform.*, 84: 263-270.
- Kahouei, M., F. Kazemzadeh, J.M. Zadeh and Z. Ahmadi, 2016. Hierarchy of Iranian parents' information needs and social seeking behavior of infants suffering blood disease. *Social Sci.*, 11: 336-342.
- Kahouei, M., R. Eskrootchi and F.E.F. Azar, 2011. Understanding of medical students' information needs in emergency cases: The implications for emergency management in teaching hospitals of Iran. *Iran. Red Crescent Med. J.*, 13: 60-61.
- Kahouei, M., S. Alaei, S.S.G.S. Panahi and J.M. Zadeh, 2014a. The assessment of strategic plans of a developing country for solving barriers to access evidence-based information sources. *J. Evidence-Based Med.*, 7: 45-51.
- Kahouei, M., Z. Ahmadi and F. Kazemzadeh, 2014b. Evaluation of organizational support for use of online information resources in nursing care. *J. Evidence-Based Med.*, 7: 252-257.

- Kahouei, M., Z. Parsania, P.S. Roghani, M. Firozeh and H.A.M. Abadi, 2013a. Iranian clinical staff's priorities towards the roles of health information technology and management in clinical governance. *J. Eng. Applied Sci.*, 8: 230-234 (In Persian).
- Kahouei, M., H. Babamohamadi, S.S.G.Sh. Panahi and J.M. Zadeh, 2013b. The impact of IT infrastructures on Iranian nurses' and students' health information-seeking strategies. *Program*, 47: 369-383.
- Landman, A.B., E.S. Spatz, E.J. Cherlin, H.M. Krumholz and E.H. Bradley *et al.*, 2013. Hospital collaboration with emergency medical services in the care of patients with acute myocardial infarction: Perspectives from key hospital staff. *Ann. Emerg. Med.*, 61: 185-195.
- Lustria, M.L.A., S.A. Smith and C.C. Hinnant, 2011. Exploring digital divides: an examination of e-Health technology use in health information seeking, communication and personal health information management in the USA. *Health Inf. J.*, 17: 224-243.
- Mahboobe, S., P. Zeinab, A. Zahra, K. Farzane, A. Safollah, S. Sekine and K. Mehdi, 2012. Mental health and coping styles in families of epileptic patients in Iran. *Soc. Sci.*, 7: 130-133.
- Marchand, G. and K.C. Russell, 2013. Examining the role of expectations and perceived job demand stressors for field instructors in outdoor behavioral healthcare. *Residential Treat. Children Youth*, 30: 55-71.
- Mehdi, K., F. Mehri, S.R. Panoee, P. Zeinab and A. Safollah *et al.*, 2011. Evidence-based information resources management skill among Iranian residents, internship and nursing students in urgent care. *Sci. Res. Essays*, 6: 4708-4713.
- Mehdi, K., H.A. Majdabadi, K. Mozghan, G.S.P.S. Sadat and A.A. Saedeh *et al.*, 2012. Nurses' perception about the effect of hospital information system in Iran. *Inform. Int. Interdiscip. J.*, 15: 1823-1832.
- Meng, F., J. Zhang and Z. Huang, 2014. Perceived organizational health as a mediator for job expectations a multidimensional integrated model. *Public Personnel Manage.*, 43: 355-370.
- Mozghan, K., G.S.P.S. Sadat, M. Malekeh and M. Kahouei, 2012. The survey of residents and radiologist's attitudes about access to patient information in teleradiology in Iran. *J. Eng. Appl. Sci.*, 7: 155-158.
- Safavi, M., Z. Parsania, Z. Ahmadi, F. Kazemzade and S. Alaei *et al.*, 2012. Mental health and coping styles in families of epileptic children in Iran. *Soc. Sci.*, 7: 130-133.
- Schoen, C., R. Osborn, D. Squires, M. Doty and P. Rasmussen *et al.*, 2012. A survey of primary care doctors in ten countries shows progress in use of health information technology, less in other areas. *Health Affairs*, 31: 2805-2816.