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CASE STUDY

Investigating the Effect of Cultural Intelligence and Emotional labor on Job Satisfaction
(Case of Study: Mashhad University of Medical Sciences)

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ABSTRACT

Job satisfaction is a major factor involved in job success and can increase efficiency and personal satisfaction. Besides, job satisfaction is influenced by cultural intelligence (CQ) and emotional labor. Thus, the present descriptive-analytical study was conducted to investigate the effect of cultural intelligence and emotional labor on job satisfaction among the employees of Mashhad University of Medical Sciences. The current study was applied in terms of purpose and a descriptive survey in terms of data collection. The research population was all the official administrative staff of Mashhad University of Medical Sciences. A total number of 1,200 people comprised the research population among whom a sample of 291 was selected using Morgan's table. The data collection instrument was a standard questionnaire developed by Lem et al. (2022). To check the validity, confirmatory factor analysis was run, and the estimated values substantiated the validity of the instrument. The reliability of the instrument was confirmed via Cronbach's alpha. Finally, the data were analyzed through structural equation modeling in PLS. The findings showed that cognitive intelligence, metacognitive intelligence, motivational intelligence and behavioral intelligence significantly and positively affected the employees' job satisfaction in Mashhad University of Medical Sciences. Moreover, expression of natural emotions and emotional labor showed to significantly and positively affect the employees' job satisfaction. However, emotive dissonance significantly and negatively affected job satisfaction in Mashhad University of Medical Sciences.

Keywords: cultural intelligence, emotional labor, job satisfaction, Mashhad University of Medical Sciences

Introduction

The first step to contribute to employees' success is to recognize factors that affect the quality of their work. A relevant factor is job satisfaction, which indicates the extent to which individuals are satisfied with their job and love it, enjoy their work and consider it as a priority in life¹. In fact, job satisfaction is a major factor accounting for job success, and can increase work efficiency and personal satisfaction². Satisfaction is a complex and multifaceted factor that influences how people feel about activities, things, and other people. Job satisfaction is a degree of affection or feeling for an individual's job and its primary components, and it is regarded as a positive notion that describes employee's working behaviors. The aspects of having demands and wishing to achieve goals and commitment to the organization exist concurrently in terms of job satisfaction³. As ratified by many experts, among all concepts explored by organizational behavior specialists, management and organizational and industrial psychologists in different organizational conditions, employee satisfaction has been a topic still ripe for research².

Employee satisfaction is a positive or negative value judgment that an individual attaches to his job. Employee satisfaction is an attitude representing how an individual feels about his/her job in general or about its different dimensions⁴. As a complex and multidimensional concept, employee satisfaction is related to psychological, physical and social factors. Employee satisfaction is far from a mono-dimensional construct. It is influenced by an array of factors that, together, make one feel satisfied with one's job at a certain time and let one enjoy the working hours and feel content with it⁵. How employees feel as well as their health in the organization is of an utmost importance in forming their attitude and satisfaction. That is why many organizations pay close attention to employees' mental and physical health, organizational strategies, emotions and behavior. They aim to care about employees' well-being, which is considered a priority in the organization. However, employee satisfaction is often associated with the fulfillment of needs and expectations, and employee satisfaction is a source of several interdependent attitudes⁶. Job satisfaction is determined by the employee's feelings, such as whether the job is comfortable, fun, and makes them feel important. Low job satisfaction can lead to low staff morale, disengagement from work, and reduced productivity and performance⁷. Therefore, knowing the factors that can affect the job satisfaction of employees will be a responsibility

of managers and organizational leaders. Research has shown that cultural intelligence is one of the factors influencing satisfaction (Coves-Martínez et al, 2022; Masrek et al, 2021)^{8 9}.

Cultural intelligence is an essential intelligence to survive in the 21st century and in unknown and various contexts. This type of intelligence can increase an individual's cross-cultural self-efficacy and flexibility, as the most important means of management. Cultural intelligence enables people to effectively deal with culturally diverse situations. It significantly affects their behavioral, motivational, cognitive and metacognitive measures¹⁰. In fact, cultural intelligence entails the ability to cooperatively use a set of skills to show certain qualities such as ambiguity tolerance and flexibility, which are appropriately based on values and attitudes. People's cultural values interact with others¹¹.

Cultural intelligence enables individuals to act effectively in situations distinguished by cultural differences. This crucial factor plays a significant role in employees' performance, and is necessary for employees' work achievements. In fact, cultural intelligence reveals individuals' cognitive and inner health as well as their ability to adapt to different organizational conditions¹². Thus, it increases the ability to interact effectively with new cultures. In a world where crossing borders has become incomparably prevalent, cultivating cultural intelligence is a must for all people. This intelligence type helps effectively cope with problems issues rising from cultural diversity. It helps develop a proper understanding of a wide range of cultures to act accordingly¹³. Therefore, the importance of CQ is reflected in the fact that it is a skill that enables individuals to adjust to situations and environments beyond their culture of origin as a result of their personal experience and learning⁹. Along with cultural intelligence, nowadays the role of emotional labor and its importance in organizations cannot be neglected as it is a major issue in organizational behavior and human resources. Research has confirmed the effect of emotional labor on job satisfaction and organizational performance (Hwang & Park E. H. (2022) (Wu et al, 2018)^{14 15}.

Within the past three decades, organizational researchers have paid increasing attention to emotions and the vital role they play in human resources and organizational behavior. Specifically, managing emotions in the workplace has become more important than ever before with the development of the service economics. According to Gross' emotion regulation theory (1998), emotional labor points to the regulation of emotions in the workplace. Therefore, the concept

of emotional labor is a set of regulatory behaviors and perceptions shown by employees in the work environment, in response to the differences between perceived feelings and expected emotional perceptions¹⁶. Emotional labor is defined as the process by which employees adjust their emotional perceptions, feelings, and expressions of appropriate emotions to accomplish organizational goals. Emotional labor is divided into two emotion regulation strategies: surface acting and deep acting. Surface acting involves the suppression of real emotions, or the simulation of spurious emotions to show a professional and reasonable response, such as the need for medical staff to smile and provide services despite excessive overtime during the COVID-19 pandemic. Deep acting involves self-induced "real" emotions changing perceptions to access and express a truly felt emotion¹⁷.

Emotional labor holds true when employees show emotions that are consistent with the expectations of their occupational role¹⁸. In general, employees try to express the emotions and feelings the organization expects when meeting clients in the organization¹⁹. Emotional labor is even more important when the communication and nature of and organization focus on constructing knowledge to guarantee society members' health. Organizations seeking to provide valuable services such as constructing knowledge, providing medical education and finding ways to promote people's health in society, prefer to have a staff capable of adapting their feelings and emotions to their job duties²⁰.

Employees in all organizations, including service-providing organizations such as universities, make a great contribution to the success and progress of their organization by going beyond their role. The effectiveness of the organization is questionable without competent and committed employees. The University of Medical Sciences is not unfamiliar with the concept of job satisfaction, but apparently it has failed to meet it. That may be due to the fact that job satisfaction has been only approached as an organizational goal. The present research is focused on university employees' job satisfaction due to the significance of the topic in the organizational structure of a university. Job satisfaction in an academic domain has a specialized nature and it can affect the performance of the entire university in different ways. Despite the abundance of research on the development of job satisfaction in employees and numerous trainings and special methods used, it is still problematic and many people are not adequately satisfied. One aspect of evaluating one's perceptions of job satisfaction in the work

environment is cultural and emotional intelligence, which influences one's overall perception. Testing the relationship between these two variables and providing practical suggestions is essential for research. Thus, the present study aimed to analyze job satisfaction influenced by cultural intelligence and emotional labor among the employees of Mashhad University of Medical Sciences.

Review of the Related Literature

Job satisfaction

It is defined as a pleasant emotional state that arises from one's evaluation, reaction and attitude towards the job. Job satisfaction is a positive feeling towards the job that results from one's evaluation of the characteristics of the job²¹. Farkhi et al.²² stated in their research that job satisfaction was a major factor that played an important role in job success. This factor is a process of improved efficiency and personal satisfaction. Job satisfaction involves a good feeling towards one's job conditions, influenced by the cultural intelligence of those affiliated with an organization. Job satisfaction implies a positive attitude and a good feeling towards one's job²³. This term expresses a pleasant emotional state concerning the job, which results from the assessment of the different aspects of the job. When people talk about employees' attitudes, they usually mean the level of job satisfaction²⁴. Abdullahi Nia²⁵, in a study entitled as "Investigation the effect of cultural intelligence on the job satisfaction of customs department employees" contended that job satisfaction was an important factor in the organization of interest and was influenced by cultural intelligence along all dimensions except cultural motivation.

Cultural intelligence

Cultural intelligence is a potential source for competitive advantage and strategic competence. Cultural intelligence is defined as the ability to recognize new patterns in cultural interactions and give correct behavioral responses to these patterns²⁶. Cultural intelligence is described as the ability to develop personally through continuous learning and a better understanding of cultural heritage, customs and various values and effective behavior with people of different cultural backgrounds and perceptions²⁷. Cultural intelligence is the ability to understand, interpret and act effectively in situations marked by cultural diversity. It is compatible with the regular conception of intelligence as more of a cognitive nature. Cultural intelligence is the ability to help people act effectively in different cultural encounters²⁸. Booker et al.²⁹ investigated the

effects of cultural intelligence on communication and job satisfaction. These researchers showed that cultural intelligence significantly affect job satisfaction of those affiliated with an organization. Cultural intelligence has been defined as a system of interactive skills and knowledge associated with cultural differences, which allows people to adapt themselves to the cultural idiosyncrasies of a given context. Cultural intelligence has several dimensions that are briefly described here.

Behavioral CQ:

This dimension of CQ refers to the behaviors, feelings and challenges that an individual experiences when faced with a new culture (known as the explicit actions/measures). Behavioral CQ refers to the ability to show a proper reaction³⁰. It represents the ability to give appropriate verbal and non-verbal responses when interacting with people of different cultures. This dimension of cultural intelligence focuses on how people act when they find themselves in a new culture. Behavioral cultural intelligence refers to the ability of reacting appropriately to specific conditions³¹.

Motivational CQ:

Motivational cultural intelligence is the ability to direct energy and attention towards learning how to act efficiently in culturally diverse contexts. Those with a high motivational CQ have a high self-confidence too and are confident about their capabilities of working in environments hosting different cultures³². Also, this dimension of CQ entails controlling energy and directing it to enrich intelligence and confidence and trust in adapting oneself to a new culture³³.

Cognitive CQ:

This dimension consists of individual knowledge and recognition of the similarities and differences of cultures and some general knowledge about them all³¹. Cognitive intelligence includes the ability to learn. No one gets smarter by learning new facts and acquiring more general knowledge. Cognitive intelligence or quotient is directly related to intellectual tasks such as the ability to learn, understand and apply information and a set of skills³⁴.

Metacognitive CQ:

Metacognitive CQ depends on culture, which results from knowledge and cognitive control. It involves the mechanism that an individual uses to study and understand knowledge²⁶. It is the way a person logically analyzes cross-cultural

experiences. This dimension of cultural intelligence focuses on what people use to acquire cultural knowledge³¹.

Emotional labor:

The management of personal emotions to share and reflect facial reactions among people represents emotional labor, which means how a person modifies or changes the emotions s/he actually experiences to turn them into something more appropriate to the communication goals³⁶. Emotional labor, the functional aspect of emotion regulation, can distinguish between experienced and expressed emotions. It is effective in the managers' mental, behavioral and physical regulation. Emotional labor, which is known as part of the work role, is the use of various strategies to express emotions while interacting with customers. Emotional labor is experienced when employees show emotions that are in line with the expectations of their work role³⁷. Generally, the employees' effort to express the emotions and feelings expected by the organization when meeting customers is known as emotional labor³⁸. In their research, Vaziri et al. concluded that different aspects of a job (i.e., importance, identity, independence, feedback, and variety of skills) affect job satisfaction and job stress mediated by emotional labor (superficial vs. deep actions). This can significantly and positively affect different features of job and consequently emotional labor and the effect of emotional labor on job satisfaction and the effect of emotional labor on job stress. In the current study, emotional labor was explored along the following dimensions.

Expression of naturally felt emotions

Expressing natural emotions means showing desired and organizational emotions that are spontaneously felt and expressed. As perceived by the organization, expressing natural feelings means showing emotions without thinking, conscious care and questioning. The emphasis of this dimension is on the spontaneous and unquestionable emergence of emotions and feelings in an organization¹⁹.

Emotional labor

It entails the employees' active and real efforts to develop the feelings and emotions desired by the organization. These emotions and feelings will be completely natural and real in a given context³⁹. Emotional labor refers to employees' efforts to change their internal feelings and behaviors to express appropriate emotions while interacting with customers. This would represent the concept of

deep actions because employees need more efforts to show the most appropriate and desirable emotions in the workplace³⁴.

Emotive dissonance:

Emotive dissonance indicates a person's internal incompatibility. This variable shows the use of a superficial action strategy³⁴. In a superficial action, an individual's real emotions remain unchanged; yet, the individual pretends to behave according to the necessary rules and regulations. Emotive dissonance shows that the individual lacks the ability and skill to adapt personal feelings and emotions to the circumstances. For example, feeling unhappy in happy moments is an expression of internal personal conflicts of¹⁹.

Conceptual model:

Khiabani Mofard⁴⁰ looked into the relationship between cultural intelligence and job satisfaction and found a significant positive relationship

between the two. It can be concluded that cultural intelligence is an important factor in employee job satisfaction. Also, Lem et al.¹⁹ conducted some research entitled as "The effect of cultural intelligence and emotional labor on the job satisfaction of luxury hotel employees", and reported that cultural intelligence and emotional labor, each with several dimensions, can affect the employees' job satisfaction. They also significantly affect one's positive attitude and feeling about one's job or position in an organization. Min et al.⁴¹ concluded that cultural intelligence affects three work-related attitudinal outcomes (i.e., job burnout, participation and satisfaction). Leakey and Walt⁴² in another study entitled as "The effect of perceived cultural intelligence of school principals on teachers' job satisfaction and confidence" showed that cultural intelligence is a main competency needed by school principals to promote confidence and job satisfaction, which in turn benefits the organization in many ways.

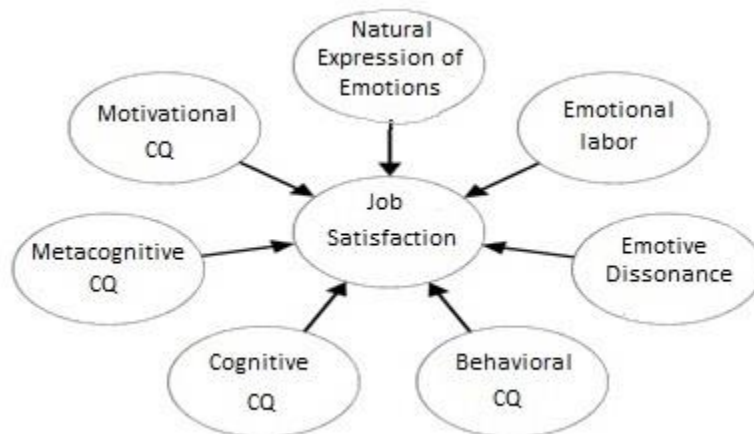


Figure 1: Conceptual model

Research Hypotheses

1. Cognitive CQ has a significant effect on employees' job satisfaction in Mashhad University of Medical Sciences.
2. Metacognitive CQ has a significant effect on employees' job satisfaction in Mashhad University of Medical Sciences.
3. Motivational CQ has a significant effect on employees' job satisfaction in Mashhad University of Medical Sciences.
4. Behavioral CQ has a significant effect on employees' job satisfaction in Mashhad University of Medical Sciences.
5. Expression of natural emotions has a significant effect on employees' job satisfaction in Mashhad University of Medical Sciences.
6. Emotional labor has a significant effect on employees' job satisfaction in Mashhad University of Medical Sciences.

7. Emotive dissonance has a significant effect on employees' job satisfaction in Mashhad University of Medical Sciences.

Methods:

The main purpose of any research is to explore, describe, explain and develop knowledge about a specific phenomenon. In any research, after the statement of problem and hypothesis formulation, the researcher should decide on the participants and the methodology. The present research method is based on practical purpose. The obtained results can be used immediately after its completion and the authorities of Mashhad University of Medical Sciences can benefit from the results of this study in pursuing their organizational goals. In other words, it has practical implications which dominate their

theoretical aspects. Also, the current research method is descriptive-survey because it seeks to collect real and detailed information about the phenomenon in question. In short, descriptive research can be said to describe what a phenomenon is and pays attention to the existing conditions. In this research, we described and studied what the phenomenon was as it really was, so the appropriate research method used was descriptive research. The research method in this study was a descriptive-survey research method. The research population included all official administrative staff of Mashhad University of Medical Sciences, 1200 totally. The sample size was estimated using Morgan's table and a convenient sampling method. It was estimated at 291.

The methods of collecting data in this research can be divided into two categories, library research and field research, as described here. 1. Library research: In this research, to collect information about the topic, a search was done in the existing literature and the background of research. To this aim, the content of the second chapters of theses, domestic and foreign articles, books and online sources were reviewed. 2. Field research: According to the objectives of study in order to obtain the required information and examine the variables of interest, the questionnaire distribution method was used to ensure that the questionnaires suited the criteria and objectives of this research. According to the objectives of study as well as the nature of the variables, the best way to collect data was questionnaire completion. For this purpose, the 31-question questionnaire developed by Lem et al. (2022) was used for data collection. Questions 1 to 3 measured metacognitive CQ, 4 to 6 cognitive CQ, 7 to 8 motivational CQ, 9 to 12 behavioral CQ, 13 to 20 emotive dissonance, 21 to 26 emotional labor, 27 to 29 the expression of natural emotions and 30 to 31 job satisfaction. In order to test the reliability of the questionnaire, Cronbach's alpha coefficient was calculated, and the estimated alpha values were 0.815 for the expression of natural emotion, 0.850 for emotional

labor, 0.885 for emotive dissonance, 0.838 for motivational CQ, 0.745 for behavioral CQ, 0.750 for cognitive CQ, 0.739 for metacognitive CQ, and 0.757 for job satisfaction. Thus, the reliability of the questionnaire was substantiated. Also, the validity of the questionnaire was tested using a confirmatory factor analysis, and the estimated values pointed to the validity of the questionnaire. In addition, divergent validity was also substantiated.

To analyze the data in this research, two methods of descriptive statistics and inferential statistics were used. In this research, to analyze the results, descriptive statistics were used, including mean, standard deviation, minimum value and maximum value as well as relevant charts and diagrams. Moreover, for inferential statistics, structural equation modeling was used using PLS version 3 software.

Results:

Among the 291 participants in this research, 271 were male (93.1%) and 20 were female (6.9%). About 118 of the respondents had the highest age group of 40.5. In terms of education, the highest frequency was 65.6% and the lowest was 4.5%. Also, the findings concerning the work experience showed that the most frequent range was between 16 and 20 years (equivalent to 37.8%).

Spearman's correlation coefficient test

Before the model analysis and structural equation modeling, it was necessary to determine the strength and direction of the relationship between the variables. For this purpose, as the data were not normally distributed, Spearman's correlation coefficient test was run. An absolute correlation coefficient can change between zero and one, and the closer it is to zero, the weaker the relationship between the two variables. The closer the absolute correlation coefficient to one, the stronger the relationship between the two variables. The table below summarizes the correlation matrix.

Table 1: Correlation coefficients between the main variables

Variables		Metacognitive CQ	Cognitive CQ	Motivational CQ	Behavioral CQ	Expression of naturally felt emotions	Emotional labor	Emotive dissonance	Job satisfaction
Metacognitive CQ	Correlation coefficient	1.00							
	p-value	0							
Cognitive CQ	Correlation coefficient	0.44	1.00						
	p-value	0.00	0						
Motivational CQ	Correlation coefficient	0.53	0.50	1.00					
	p-value	0.00	0.00	0					
Behavioral CQ	Correlation coefficient	0.20	0.15	0.30	1.00				
	p-value	0.00	0.10	0.00	0				
Expression of naturally felt emotions	Correlation coefficient	0.30	0.30	0.34	0.38	1.00			
	p-value	0.00	0.00	0.00	0.00	0			
Emotional labor	Correlation coefficient	0.19	0.09	0.19	0.33	0.38	1.00		
	p-value	0.001	0.11	0.00	0.00	0.00	0		
Emotive dissonance	Correlation coefficient	-0.37	-0.26	-0.33	-0.49	-0.48	-0.46	1.00	
	p-value	0.00	0.00	0.00	0.00	0.00	0.00	0	
Job satisfaction	Correlation coefficient	0.54	0.47	0.61	0.48	0.52	0.40	0.59	1.00
	p-value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0

The findings showed that the relationship between job satisfaction and all independent variables was statistically significant ($p < 0.05$). In fact, because the significance level of the correlation test was below 0.05, the relationship between these variables was statistically significant. The highest correlation was that of job satisfaction and motivational CQ (0.610).

Confirmatory factor analysis

Factor loadings are estimated as the correlation coefficient of the indicators of a construct with the

overall construct. If the estimated value is equal to or greater than 0.4 (Holland, 1999), it shows that the variance between the construct and the indicators is greater than the variance of the measurement error of that construct. Thus, the reliability of measurement model is acceptable. Some scholars including Rivard and Huff (1988) mentioned 0.5 as the threshold level of factor loadings. In the following tables, the values of factor loadings are presented along with the t-values in the questionnaire.

Table 2: Confirmatory factor analysis

Variable	Item#	loading	T-value	p-value	Result
Metacognitive CQ	Q1	0.846	31.14	0.00	significant
	Q2	0.711	19.92	0.00	significant
	Q3	0.873	37.73	0.00	significant
Cognitive CQ	Q4	0.762	21.33	0.00	significant
	Q5	0.859	39.82	0.00	significant
	Q6	0.825	32.56	0.00	significant
Motivational CQ	Q7	0.923	76.00	0.00	significant
	Q8	0.932	93.89	0.00	significant
Behavioral CQ	Q9	0.808	29.83	0.00	significant
	Q10	0.766	21.26	0.00	significant
	Q11	0.713	15.83	0.00	significant
	Q12	0.722	15.99	0.00	significant
Emotive dissonance	Q13	0.740	19.13	0.00	significant
	Q14	0.773	24.22	0.00	significant
	Q15	0.753	22.26	0.00	significant
	Q16	0.708	18.50	0.00	significant
	Q17	0.716	20.01	0.00	significant
	Q18	0.679	16.77	0.00	significant
	Q19	0.764	23.93	0.00	significant
Emotional labor	Q20	0.823	36.28	0.00	significant
	Q21	0.757	26.12	0.00	significant
	Q22	0.825	40.50	0.00	significant
	Q23	0.758	22.04	0.00	significant
	Q24	0.730	19.46	0.00	significant
	Q25	0.698	15.16	0.00	significant
Expression of naturally felt emotions	Q26	0.765	23.16	0.00	significant
	Q27	0.883	53.37	0.00	significant
	Q28	0.875	39.4	0.00	significant
Job satisfaction	Q29	0.804	24.15	0.00	significant
	Q30	0.896	73.20	0.00	significant
	Q31	0.898	71.77	0.00	significant

The above table shows the results of the factor analysis of the questionnaire items. Since the factor loading of all items is greater than 0.4, also the t-value is greater than 1.96, the questionnaire is of a high validity.

Discriminant validity:

Divergent or discriminant validity is a complementary concept, represented by two criteria in PLS path modeling. Fornell-Larcker criterion was used in the present study to check discriminant validity.

Fornell-Larcker criterion:

According to this criterion, a variable should have more divergence among its indicators than the indicators of other variables. For this test, the square root of AVE can be compared with the correlation between the latent variables, and the square root AVE for each latent variable must be greater than the correlation coefficient between the variable and other variables. The values on the main diameter represent the square root AVE for each structure.

Table 3: Fornell and Larcker criterion

Variable	Expression of naturally felt emotions	Emotional labor	Job satisfaction	Emotive dissonance	Motivational CQ	Behavioral CQ	Cognitive CQ	Metacognitive CQ
Expression of naturally felt emotions	0.85							
Emotional labor	0.39	0.75						
Job satisfaction	0.49	0.47	0.89					
Emotive dissonance	-0.48	-0.47	-0.62	0.74				
Motivational CQ	0.30	0.28	0.61	-0.37	0.92			
Behavioral CQ	0.37	0.36	0.47	-0.48	0.28	0.753		
Cognitive CQ	0.28	0.13	0.52	-0.28	0.53	0.146	0.816	
Metacognitive CQ	0.23	0.21	0.55	-0.34	0.53	0.199	0.511	0.81

As it can be seen in the table, for all variables, the square root AVE is greater than the correlation coefficient of each variable with other variables. It can be concluded that the discriminant validity of the measurement model is confirmed.

Outer model fit

After examining the model fit, the structural model fit had to be tested.

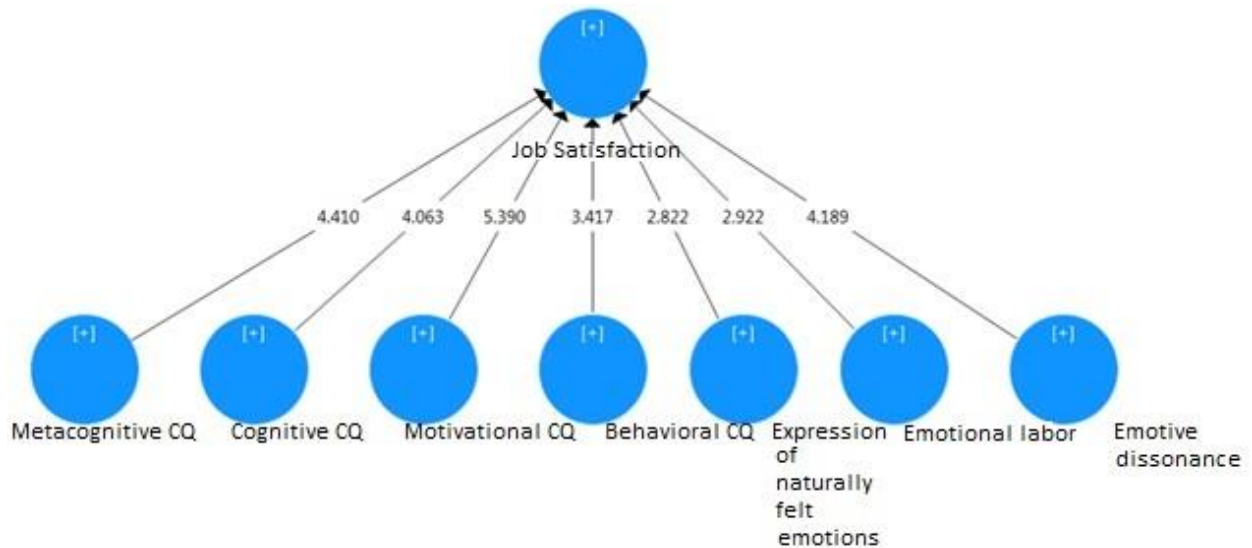


Figure 2: Significant t-values for hypotheses

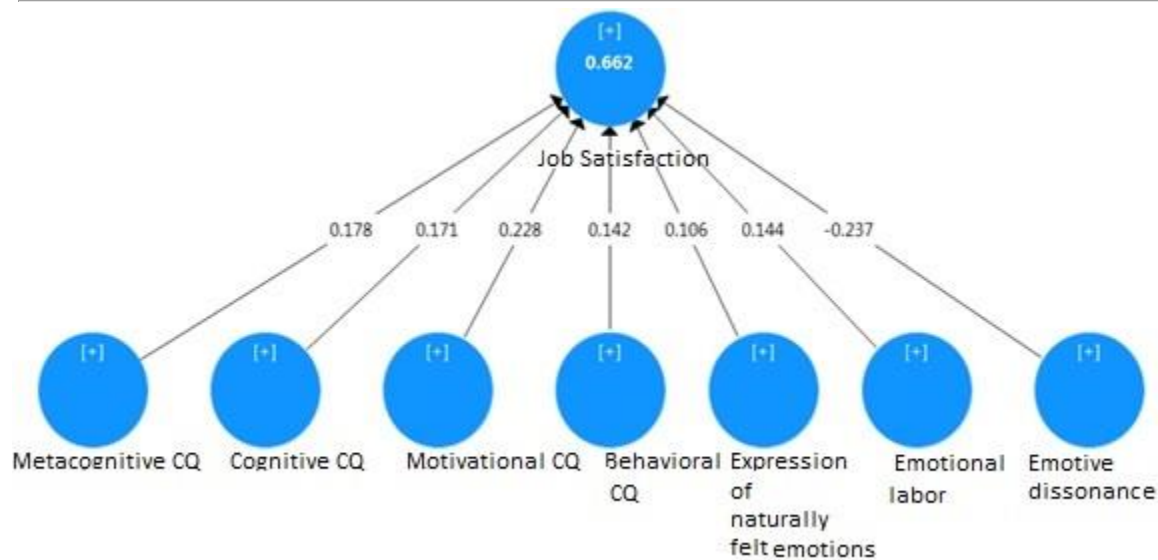


Figure 3: Path coefficients for hypotheses

R2 coefficient of determination (R-square):

The R2 value is calculated only for the dependent (endogenous) variable of the model, and for exogenous variables, R2 value is zero. The higher

the R2 of the endogenous variables, the better the fit of the model.

Table 4: Summary of hypothesis testing

path: independent variable → dependent variable	Path coefficient	Confidence interval for path coefficient		Standard deviation	T-value	p-value	result
		Lower limit	Upper limit				
Expression of naturally felt emotions → job satisfaction	0.106	0.034	0.185	0.038	2.822	0.005	significant
Emotional labor → job satisfaction	0.144	0.051	0.244	0.049	2.992	0.004	significant
Emotive dissonance → job satisfaction	-0.237	-0.347	-0.122	0.057	4.189	0.000	significant
Motivational CQ → job satisfaction	0.228	0.147	0.316	0.042	5.390	0.000	significant
Behavioral CQ → job satisfaction	0.142	0.060	0.231	0.041	3.417	0.001	significant
Cognitive CQ → job satisfaction	0.171	0.086	0.253	0.042	4.063	0.000	significant
Metacognitive CQ → job satisfaction	0.178	0.096	0.248	0.040	4.410	0.000	significant

Table 5: coefficient of determination

Dependent variable	R2	Adjusted R2	Result
Job satisfaction	0.662	0.654	good/satisfactory

The adjusted coefficient of job satisfaction was estimated at 0.654. Therefore, it can be concluded that the independent variables of the model could predict 65.4% of variation in job satisfaction.

Predictive quality (Q2)

This value represents the predictive power of a model. Models that enjoy a good structural fit should be able to predict the indicators related to

the endogenous variables of the model (Stone & Graves, 1975). Hensler et al. (2009) defined three values of 0.02, 0.15 and 0.35 to represent

the weak, medium and strong predictive power of a variable or related exogenous variables.

Table 5: Predictive quality (Q2)

Dependent variable	Q ²	Result
Job satisfaction	0.509	good/satisfactory

The present findings showed that the Q2 for job satisfaction was estimated at 0.509, which is a positive value. Therefore, it can be concluded that the power of the model in predicting job satisfaction is at an optimal level.

effect size criterion to determine the strength of a relationship between the latent variables of the model. The values of 0.02, 0.15 and 0.35, respectively, indicate a small-, medium- and large-size effect of one variable on another. This value can be estimated for dependent variables that are affected by more than one variable.

Cohen's effect size (f2)

The fourth criterion to test the structural model is the effect size (f2). Cohen (1988) introduced the

Table 6: Cohen's effect size results

path: independent variable → dependent variable	f ² Independent variable
Expression of naturally felt emotions → job satisfaction	0.023
Emotional labor → job satisfaction	0.044
Emotive dissonance → job satisfaction	0.094
Motivational CQ → job satisfaction	0.089
Behavioral CQ → job satisfaction	0.043
Cognitive CQ → job satisfaction	0.054
Metacognitive CQ → job satisfaction	0.059

As it can be seen in the table, the strength of the effect of emotive dissonance on job satisfaction (0.094) is higher than other independent variables.

Goodness of Fit (GOF):

An overall model includes both measurement and structural model parts, and by confirming its fit, the test of model fit is complete. Three values of 0.01, 0.25 and 0.36 are interpreted as weak, medium and strong values (Davari and Rezazadeh, 2012).

$$GOF = \sqrt{\text{Communalities} \times R^2} = \sqrt{0.384 \times 0.662} = 0.504$$

Discussion:

The current research aimed to analyze the effect of cultural intelligence and emotional labor on job satisfaction. The results showed that in general cultural intelligence and emotional labor have a significant effect on the job satisfaction of employees of Mashhad University of Medical Sciences. This conclusion resulted from a detailed and specialized hypothesis testing, which is described separately for each hypothesis.

The result of testing the first hypothesis showed that cognitive CQ had a statistically significant effect on the employees' job satisfaction in Mashhad University of Medical Sciences. These

results are consistent with the findings reported by Khiabani Mofard (2018), and Farrokhi et al. (2014). It can be argued that individuals' cognitive intelligence and their personal knowledge and learning ability play a significant role in increasing their job satisfaction. Employees with a higher cognitive CQ than peers had better information processing skills and cognitive understanding of their tasks and duties in Mashhad University of Medical Sciences. This is a significant factor involved in coping with the job and meeting personal expectations. It can ultimately lead to an adequately high job satisfaction among the

employees at Mashhad University of Medical Sciences.

The second hypothesis testing showed that metacognitive CQ had a statistically significant effect on employees' job satisfaction in Mashhad University of Medical Sciences. These results are in agreement with the research by Khiabani Mofard (2018), Farrokhi et al. (2015), Abdullahi Nia (2015), Lam et al. (2022), Min et al. (2021), Leakey and Walt (2021) and Booker et al. (2014). It can be argued that individuals with higher metacognitive intelligence understand and interpret cultural experiences and knowledge, and consequently perceive the cultural actions and programs in the university more meaningful and rewarding. The positive feeling they hold about their job is highly significant. Employees analyze knowledge and cultural programs through their metacognitive intelligence, and acquiring knowledge. Thus, a correct and positive interpretation of the conditions of Mashhad University of Medical Sciences is particularly important in its employees' job satisfaction.

Testing the third hypothesis showed that motivational CQ had a statistically significant effect on employees' job satisfaction in Mashhad University of Medical Sciences. This finding is in line with the results of the research by Khiabani Mofard (2018), Farrokhi et al. (2015), Abdullahi Nia (2015), Lam et al. (2022), Min et al. (2021), Leakey and Walt (2021) and Booker et al. (2014). Arguably, learning performance and showing confidence in capabilities can increase employees' motivational intelligence in Mashhad University of Medical Sciences and can, consequently, increase their jobs satisfaction. Thus, employees' motivational intelligence motivates them to increase their ability and performance and improve their job position in the organization and brings them a high cultural energy and motivation. The presence of this motivation is an important factor in increasing the job satisfaction of employees in Mashhad University of Medical Sciences.

Testing the fourth research hypothesis showed that behavioral intelligence had a statistically significant effect on employees' job satisfaction in Mashhad University of Medical Sciences. This finding is in line with the results of the research by Khiabani Mofard (2018), Farrokhi et al. (2015), Abdullahi Nia (2015), Lam et al. (2022), Min et al. (2021), Leakey and Walt (2021) and Booker et al. (2014). It can be argued that employees capable of performing appropriately in face of different cultures and can adapt their behavior accordingly can achieve a relatively higher satisfaction. Employees' ability and intelligence in

showing conscious behaviors suitable for different cultures in Mashhad University of Medical Sciences, increases their satisfaction and positive in their job. Testing the fifth hypothesis showed that the expression of natural feelings had a statistically significant effect on employees' job satisfaction in Mashhad University of Medical Sciences. This finding is in line with the results of the research by Lem et al. (2022) and Wang et al. (2021). Arguably, the natural expression of emotions can increase the employees' chances to express natural feelings and, consequently, increase their satisfaction with job. The employees of Mashhad University of Medical Sciences achieved a relative satisfaction with their job by honestly expressing the natural feelings and emotions they had at their workplace, which allowed the formation of a deep connection with the individual's job within the organization.

Testing the sixth research hypothesis showed that emotional labor had a statistically significant effect on employees' job satisfaction in Mashhad University of Medical Sciences. This finding is in line with a body of research by Lem et al. (2022) and Wang et al. (2021). It can be argued that the employees' ability to adapt their emotions and show feelings suitable for any specific situation in Mashhad University of Medical Sciences led to an increase in their job satisfaction. Through experiencing different job positions and trying to show their feelings about the organization and customers, employees pave the way for deeper communication and greater job satisfaction.

The results of testing the seventh research hypothesis showed that emotive dissonance had a significant negative effect on employees' job satisfaction in Mashhad University of Medical Sciences. These results are in line with the research findings reported by Lem et al. (2022) and Wang et al. (2021). Arguably, employees who lack the ability to match their feelings with different conditions in Mashhad University of Medical Sciences face some internal and emotional conflict in their job, which disturbs their inner peace and lowers their job satisfaction.

Conclusion:

The present study managed to show the effect of cultural intelligence and emotional labor and their components on the job satisfaction of employees at Mashhad University of Medical Sciences. The present study raised awareness of the importance of employees' cultural intelligence in accepting organizational culture and adapting individual culture. It is also important to recognize other cultural differences and adapt to it, which is expected to be considered by all managers in

organizations. In Mashhad University of Medical Sciences, these cultural differences require employees to have cultural intelligence due to serving internal and external customers. It should be noted that in crises like COVID-19, if emotions and feelings are not prioritized, it is definitely not possible to imagine a successful future according to the needs of the time, summarized as “*We will defeat the disease*”. Therefore, evoking emotions and feelings in different ways can be effective, especially in Iranian population, where people are

emotional. Finally, it can be acknowledged that paying attention to cultural and emotional intelligences in organizations, especially organizations that provide health services to society, can lead to job satisfaction in employees and increase their productivity and performance.

Conflict of interest:

None to declare.

References

1. Watkins, R. and Fusch, P. Employee Monetary Compensation and Employee Job Satisfaction. *Open Journal of Social Sciences*. 2022; 10: 321-339. doi: [10.4236/jss.2022.109021](https://doi.org/10.4236/jss.2022.109021).
2. Islam, T., Sharif, S., Ali, H.F. and Jamil, S. "Zooming into paternalistic leadership: evidence from high power distance culture", *European Journal of Management and Business Economics*. 2022; Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/EJMBE-05-2021-0149>
3. Chowdhury SR, Kabir H, Akter N, Iktidar MA, Roy AK, Chowdhury MR, Hossain A. Impact of workplace bullying and burnout on job satisfaction among Bangladeshi nurses: A cross-sectional study. *Heliyon*. 2023 Feb 1;9(2).
4. Binzafrah, F. and Taleedi, F. "The effect of business intelligence practices on job satisfaction in the Saudi Electricity Company in the Asir Region", *Journal of Money and Business*. 2022; 2(1): 107-131. <https://doi.org/10.1108/JMB-03-2022-0011>
5. Jahan Priyanka, T., Akter Mily, M., Asadujjaman, M., Arani, M. and Billal, M.M. "Impacts of work-family role conflict on job and life satisfaction: a comparative study among doctors, engineers and university teachers", *PSU Research Review*. 2022; Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/PRR-10-2021-0058>
6. Nyathi, M. and Kekwaletswe, R. "Electronic human resource management (e-HRM) configuration for organizational success: inclusion of employee outcomes as contextual variables", *Journal of Organizational Effectiveness: People and Performance*. 2023; Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JOEPP-08-2022-0237>
7. Cheah JS, Lim KH. Effects of internal and external corporate social responsibility on employee job satisfaction during a pandemic: A medical device industry perspective. *European Management Journal*. 2023 Apr 8.
8. Coves-Martínez ÁL, Sabiote-Ortiz CM, Frías-Jamilena DM. Cultural intelligence as an antecedent of satisfaction with the travel app and with the tourism experience. *Computers in Human Behavior*. 2022 Feb 1;127:107049.
9. Masrek MN, Yuwinanto HP, Atmi RT, Soesantari T, Mutia F. Cultural intelligence and job performance of academic librarians in Indonesia. *The Journal of Academic Librarianship*. 2021 Sep 1;47(5):102394.
10. Yazdanshenas, M. "Core self-evaluations and project managers' competencies: the moderating role of cultural intelligence", *Journal of Management Development*. 2021; Vol. 40 No. 6, pp. 542-573. <https://doi.org/10.1108/JMD-01-2021-0031>
11. Chen, Y., Yang, Z., Liu, B., Wang, D., Xiao, Y. and Wang, A. "How cultural intelligence affects expatriate effectiveness in international construction projects", *Engineering, Construction and Architectural Management*. 2023; Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/ECAM-03-2022-0247>
12. Rajasekar, J., Al-Asfour, A. and Kentiba, E. "Exploring the relationship between cultural intelligence and employees demographic profiles: insights gained from a cross-cultural study in Oman", *Review of International Business and Strategy*. 2021;31(4):556-575. <https://doi.org/10.1108/RIBS-09-2020-0107>
13. Yang, C. "Motivational cultural intelligence and well-being in cross-cultural workplaces: a study of migrant workers in Taiwan", *Employee Relations*. 2023;45(3): 743-761. <https://doi.org/10.1108/ER-01-2021-0026>
14. Hwang WJ, Park EH. Developing a structural equation model from Grandey's emotional regulation model to measure nurses' emotional labor, job satisfaction, and job performance. *Applied Nursing Research*. 2022 Apr 1;64:151557.
15. Wu X, Li J, Liu G, Liu Y, Cao J, Jia Z. The effects of emotional labor and competency on job satisfaction in nurses of China: A nationwide cross-sectional survey. *International journal of nursing sciences*. 2018 Oct 10;5(4):383-9.
16. Özdemir, M., Buyukgoze, H., Akman, Y., Topaloğlu, H. and Çiftçi, K. (2023), "Distributed leadership and teachers' emotional labour: the mediating role of teacher autonomy", *Journal of Educational Administration*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JEA-06-2022-0092>
17. Wen J, Zou L, Wang Y, Liu Y, Li W, Liu Z, Ma Q, Fei Y, Mao J, Fu W. The relationship between personal-job fit and physical and mental health among medical staff during the two years after COVID-19 pandemic: Emotional labor and burnout as mediators. *Journal of Affective Disorders*. 2023 Apr 14;327:416-24.
18. Forseth, U. "Take-off, turbulence and turnaround", *Equality, Diversity and Inclusion*. 2022; Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/EDI-09-2021-0249>
19. Erkutlu, H., Chafra, J., Ucak, H. and Kolutek, R. "Does emotional labor affect nurses suffering from workplace violence? A moderated mediation model", *Journal of Aggression, Conflict and Peace*

- Research.2023; Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JACPR-01-2023-0767>
20. Needham, C., Mastracci, S. and Mangan, C. "The emotional labour of boundary spanning", *Journal of Integrated Care*.2017; 25 (4):288-300. <https://doi.org/10.1108/JICA-04-2017-0008>
21. Han, J.W. "A review of antecedents of employee turnover in the hospitality industry on individual, team and organizational levels", *International Hospitality Review*.2022; 36 (1): 156-173. <https://doi.org/10.1108/IHR-09-2020-0050>
22. Farrokhi, M. Babajani Mohammadi, S. Khamarian, S. The effect of cultural intelligence on nurses' job satisfaction (case study: public hospitals of Mashhad), the first international conference on modern researches in management studies, Shiraz. (2015).
23. Kwak, H. Anderson, R. E. Leigh, T. W. Bonifield, S. D. Impact of Salesperson Macro-Adaptive Selling Strategy on Job Performance and Satisfaction. *Journal of Business Research*. 2019;.
24. Tarkar, P. "Attitude and post-retirement work intentions: a mediator-moderator effect of job satisfaction and education", *Working with Older People*.2023; Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/WWOP-04-2021-0021>
25. Abdullahi Nia, H. Investigating the effect of cultural intelligence on the job satisfaction of customs department employees. Master's Thesis, School of Management, Islamic Azad University, Central Tehran Branch. (2015).
26. Kang, H.-S.(T)., Kim, E.-J. and Park, S. "Multicultural teaching efficacy and cultural intelligence of teachers: The effects of learning goal orientation and training readiness", *International Journal of Educational Management*.2019; 33 (2): 265-275. <https://doi.org/10.1108/IJEM-11-2017-0318>
27. Shaik, F.F., Makhecha, U.P. and Gouda, S.K. "Work and non-work identities in global virtual teams: Role of cultural intelligence in employee engagement", *International Journal of Manpower*.2021; 42 (1): 51-78. <https://doi.org/10.1108/IJM-03-2019-0118>
28. Kang, H.-S.(T)., Kim, E.-J. and Park, S. "Multicultural teaching efficacy and cultural intelligence of teachers: The effects of learning goal orientation and training readiness", *International Journal of Educational Management*. 2019; 33 (2): 265-275. <https://doi.org/10.1108/IJEM-11-2017-0318>
29. Bückner, J.J.L.E. Furrer, O. Poutsma, E. Buyens, D. The impact of cultural intelligence on communication effectiveness, job satisfaction and anxiety for Chinese host country managers working for foreign multinationals, *The International Journal of Human Resource Management*. 2014; 25(14).
30. Zhang, Y., Shao, W. and Thaichon, P. "Investigating tourist post-travel evaluation and behavioural intention: a cultural intelligence perspective", *Asia Pacific Journal of Marketing and Logistics*.2021; 33 (10): 2037-2053. <https://doi.org/10.1108/APJML-08-2020-0584>
31. Iskhakova, M. and Ott, D.L. "Working in culturally diverse teams: Team-level cultural intelligence (CQ) development and team performance", *Journal of International Education in Business*.2020; 13 (1): 37-54. <https://doi.org/10.1108/JIEB-11-2019-0052>
32. Bhardwaj, B. "Short-term foreign trips correlates of the four factors model of cultural intelligence", *Rajagiri Management Journal*.2021; Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/RAMJ-01-2021-0008>
33. Coves Martínez, A.L., Sabiote-Ortiz, C.M. and Rey-Pino, J.M. "The influence of cultural intelligence on intention of internet use", *Spanish Journal of Marketing - ESIC*, (2018), Vol. 22 No. 2, pp. 231-248. <https://doi.org/10.1108/SJME-04-2018-0024>
34. Lam, R. Cheung, C. Lugosi, P. The impacts of cultural intelligence and emotional labor on the job satisfaction of luxury hotel employees. *International Journal of Hospitality Management*, (2022). Vol100.
35. Daniel S. Levine. *Neuroscience of Emotion, Cognition, and Decision Making: A Review*, *Medical Research Archives*. 2022; 10(7). <https://doi.org/10.18103/mra.v10i7.2869>.
36. Shi, Y., Zhang, R., Ma, C. and Wang, L. "Robot service failure: the double-edged sword effect of emotional labor in service recovery", *Journal of Service Theory and Practice*.2023; 33 (1): 72-88. <https://doi.org/10.1108/JSTP-03-2022-0048>
37. Yoo, J. Perceived customer participation and work engagement: the path through emotional labor. *International Journal of Bank Marketing*.2016; 34(7).
38. Biron, M. Van-Veldhoven, M. Emotional labor in service work: Psychological flexibility and emotion regulation. *Human Relations*.2012; 65(10).
39. Waziri, E. Zakari, M. Rajabipour Mobidi, A. Examining the effect of job characteristics on job satisfaction and job stress with the mediation of emotional labor in nurses of Shariati Hospital in Isfahan. *Occupational health and safety*, (2019); 10(1).

40. Mntande, K.A., Stiehler-Mulder, B. and Roberts-Lombard, M. "Securing delight and loyalty in a market with low switching costs", *European Business Review*. 2022; Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/EBR-03-2022-0043>
41. Mofard Khayani, T. Investigating the relationship between cultural intelligence and job satisfaction with the mediating role of job stress. Master's thesis of Khayyam Faculty of Literature and Human Sciences. (2018).
42. Min, H. Kim, H. Agrusa, J. Serving Diverse Customers: The Impact of Cultural Intelligence on Employee Burnout, Engagement, and Job Satisfaction. *Journal of Hospitality & Tourism Research*. 2021; <https://doi.org/10.1177/10963480211016031>.
43. Licki, M.M.P. Van der W, F. The influence of perceived cultural intelligence of school principals on teachers' job satisfaction and trust. *Management Dynamics: Journal of the Southern African Institute for Management Scientists*. 2021;3(2).