Validation Scale for Measuring Emotional Intelligence of the Managers of Higher Educational Institutes

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Background: The higher education system has caused a great deal of changes in social, economic and political fields. In addition, universities are social systems which have been known as the center of knowledge and information as well as the thinking base for leading societies. The very important issue in each system, especially higher education system, is nominating and appointing qualified leaders and managers who can efficiently manage the higher education institutes. One of the qualifications that the university managers should possess is high emotional intelligence. There is a strong relationship between emotional intelligence and the efficient leadership. Emotional intelligence is among the variables whose efficiency have been investigated and proved by various researchers. Therefore, in order to appoint university managers, first their emotional intelligence should be measured through using a valid instrument, and then those who enjoy high emotional intelligence can be appointed. Objective: The purpose of the present study is to validate a scale for measuring the emotional intelligence of the managers of higher educational institutions. The population of the study includes all the managers who work in all branches of Islamic Azad University in Iran (i.e., 420 branches and educational centers). The research sample consisted of 554 managers who were randomly selected from 96 branches and educational centers using stratified and cluster random sampling methods. Results: The research instrument was the Cybera-Shrink emotional intelligence questionnaire which consisted of 5 scales and the obtained Cronbach's Alpha value was 0.77. Results: Conclusion: The results of factor analysis and principal component analysis, using a varimax rotation, showed that building blocks of emotional intelligence includes self-awareness (Items 32, 27, 22, 21, and 6), self-control (Items 26, 20, 16, and 11), self-motivation (Items 15, 14, and 9), empathy (Items 25 and 19), and social skills (Items 23, and 1).

INTRODUCTION

Higher education system is one of the most important and complicated products of human achievements. In recent decades, the changes have revolutionized the social systems and organizations, hence scientific centers, in general, and universities in particular are more addressed to satisfy new expectations. Regarding the key role of higher education, Green [17], explains that higher education provides the technical knowledge and skill that industry requires it in future and the fact that governments depend on this knowledge to have an effective and strategic programming. In addition, higher education develops the people's attitudes and motivation in order to confidently work in a group and actively participate in the national development plans. Universities are included in those social systems which have been recognized as the society’s engine of raising awareness and the basic center of thought and reflection. Nowadays, no developed country is found that has reached its present status without relying on its active and equipped universities. Today, universities can be considered as the heart of the dominating and successful civilizations.

Godet [15], in his book entitled "From Prediction to Action” refers to ten factors relating to universities' functions and indicates the important role of the leaders who direct these informing centers (i.e., universities). According to Godet, these factors are as follows: 1) university as a social organization should become ready to logically analyze the present situation of the society and set goal for the future purposeful movement of the country. 2) University should be the pioneer of spreading liberal thoughts and national solidarity. 3) It should help in analyzing and solving the problems the society faces. 4) University has an important role in explaining the way through which the things become globalized; hence, the familiarity with this process is the university’s responsibility. 5) Universities will miss their unique role of knowledge development; therefore, they have to...
connect to other non-academic institutes and parallel institutes which are active in developing knowledge. 6) Universities are obliged to develop.

Knowledge through applying basic research. 7) Universities are in charge of publishing and spreading the written culture. 8) Universities are committed to continually publish the culture of theism, kindness, brotherhood, social discipline, work conscience, social sensitivity and commitment, and meritocracy. 9) As the source of thought and the place for bringing up the national resources, universities are responsible for leading and educating all members of the society. 10) As dynamic organizations and systems, universities have an important role in leading people to participate in running the society by providing the managers with their unique strategies and solutions.

Because of profound changes which have affected our today’s world, the universities, even more than ever, have been in the focus of prolonged international and social discussions which devote to the goals and ideals of universities as well as their roles in guidance and leadership [14]. The most important issue in each system, especially in higher education system, is the selection and appointment of the managers and leaders in a way that they can effectively administer the higher education institutes. Drucker [11], believes that the managers are the most valuable resources of the organizations. The qualified and knowledgeable managers are able to achieve the organization’s goal using their own abilities, specialized knowledge and vocational experiences while they apply less resource and increase the efficiency of the organization. One of the qualifications that the university managers should possess is high emotional intelligence.

In his study, Smith [38], found that there is a relationship between the emotional intelligence and leadership of change. The results of the study done by Cook [8], showed that emotional intelligence has a positive effect on the principles of performance leadership. In other words, he found that the efficient leadership requires a series of skills including emotional intelligence. In addition, Jones [24], found that emotional intelligence can be considered as a predictive factor of productivity and the fact that the managers who possess this skill perform more competitively. Regarding the relationship between emotional intelligence and the efficient leadership in organizations, various studies have been done. Some of them are as follows: Higley [23], Rego et al [34], Heiken [21], Chadnick [6], Downey et al. [10], Vartanian [39], Danehy [9], Kluemper [27], and Durham [12].

Emotional Intelligence is the ability to comprehend, describe, receive and control emotions. Each person having a degree of Emotional Intelligence faces positive or negative events in his life and tries to adapt himself to them. By applying emotional intelligence, people discipline and stabilize their lives in a way that the more a person enjoys a high quotient of emotional intelligence, the less he suffers from experiencing negative life events [16]. Bar-On and Parker [1], has also compiled a model of emotion which had some factors. He believes that emotional intelligence consists of a collection of abilities, capabilities and skills which equip a person in order to adapt him to environment and succeed in life. The word “emotional” is basic in this kind of intelligence which makes it different from cognitive emotional intelligence. From Bar-On’s point of view, emotional intelligence has 15 dimensions.

In his study, Murensky [31], has used the questionnaire of emotional intelligence which has the following dimensions: 1. self-awareness, 2. self-management, 3. social awareness, and 4. social skills. Weisinger [42], developed an instrument to measure emotional intelligence to be used in the work place. The dimensions of his questionnaire are as follows: 1. self-awareness, 2. managing emotions, 3. self-motivation, 4. relating well, and 5. emotional mentoring. Schutte et al. [36], have developed a questionnaire of emotional intelligence which represents 3 different categories: 13 items were related to the appraisal and expression of emotion, 10 items were related to the regulation of emotion, and 10 items were related to the utilization of emotion. Collins [7], has used the Mayer Salovey Caruso Emotional Intelligence Test in his study. This questionnaire consists of 18 scores and 4 scales to capture the main branches and constructs: 1. Emotional perception (faces and pictures subtests), 2. Using emotions to facilitate thought (synesthesia and facilitation subtests), 3. Emotional understanding (changes and blends subtests), and 4. Emotional management (emotional management and social management sub-scales). Byrne [5], have developed an instrument to measure emotional intelligence to be used in the work place. The dimensions of his questionnaire are as follows: self-awareness, self-management, social awareness, and social skills. Weinberger [41], has used the Bar-On’s (1995) questionnaire in his study which consists of 5 dimensions as follows: 1. interpersonal skills, 2. intrapersonal skills (to include emotional self-awareness, assertiveness, self-regard, self-actualization and independence [self-directed and self-controlled in one’s thinking and actions], 3. adaptability, 4. stress management, and general mood. The questionnaire of emotional intelligence capabilities, developed by O’Sullivan [33], has the following components: 1. emotion, 2. regulation of emotion, and 3. utilization of emotion. According to Goleman [16], four components of emotional intelligence are the following: self-awareness, self-regulation, motivation, and empathy. The questionnaire of emotional intelligence capabilities, developed by Boyatzis et al. [3], has the following components: 1. self-awareness, 2. self-management, 3. social awareness, and 4. social skills. Wong and Law (2002) questionnaire has the following dimensions: self-emotion appraisal, other’s emotion appraisal, use of emotion, and regulation of emotion.
Mayer and Salovey [29], consider emotional intelligence as a kind of social intelligence which consists of the ability to control one’s and others’ emotions as well as the difference between these two. They also refer to emotional intelligence as the ability to use the information for developing thought and action strategies which includes Gardner’s components consisting of the areas of self-awareness, self-regulation, motivation, empathy, and social skills.

1. Self-awareness: It means being aware of oneself, the ability to observe oneself and identifying one’s feeling as they are.
2. Self-regulation: It means managing or regulating emotions and feelings in a desired way and identifying the origin of these feelings and pinpointing the ways to manage and control fear, emotion, anger, etc.
3. Motivation: It means directing and guiding the feelings and emotions toward the goal, and emotional self-avoidance.
4. Empathy: It means being sensitive toward the others’ feelings and interests, tolerating their views, and valuing the differences among people in relation to one’s feelings about things and affairs.
5. Social skills: It means managing the others’ feelings and enjoying social skills qualifications.

The need for management and leadership is vital and sensible in all fields of social activities. Without effective leadership and guidance, material and human resources are doomed to decrease and destruction, while the managers of higher education as people who are in charge of organizations and university branches are considered as the main and determining factor in preparing and supplying the human resources required by other organizations which provide services or products in the society. The related background information shows that if universities have managers who enjoy a high degree of emotional intelligence, the universities will be able to achieve their goals while they spend fewer sources but with better quality. They can also increase the level of productivity of the higher education system, and undoubtedly the society will enjoy higher productivity.

Hayashi [19], found that the higher the emotional intelligence, the better and more effective the managers’ performance will be. Emotional intelligence is a necessary factor for the managers and leaders. Eicher [13], in his research entitled, “the relationship between the emotional intelligence and social skills necessary for staff” concluded that emotional intelligence is very suitable in developing the staff’s executive programs. Furthermore, regarding the effect of emotional intelligence and job progress, Watkin [40], found that the application of emotional intelligence leads to the development and improvement of the process of professional decision making and the fact that it has a direct effect on the level of product sale. The final remark of his study is that people with high level of emotional intelligence have higher efficiency in jobs which need technical expertise.

Regarding emotional intelligence factor as a skill and feature for managers of the higher education centers, the present research is going to design a valid instrument which identifies the factors which form the emotional intelligence, measure the variable of emotional intelligence in each of dimensions which form it, and find a way to strengthen the managers’ emotional intelligence.

**MATERIALS AND METHODS**

1. What are the indexes which construct the emotional intelligence of higher education managers’?
2. Which of these indexes has more contribution in forming emotional intelligence?

**Results:**

The population under investigation in this study consists of official managers who work in 420 branches and educational centers in 12 zones of Islamic Azad University. In order to estimate the least volume of sample, \( n = \frac{Z^2 \sigma^2}{d^2} \) formula was used. Regarding the minimum sample required for the managers’ group which was estimated as 554 people, the same number of questionnaires of emotional intelligence was administered to the managers in 96 branches and educational centers. In order to select the research sample, two methods of stratified and cluster random sampling were used.

To assess emotional intelligence, the questionnaire of Cyberia-Shrink was applied. This questionnaire consists of 33 items which are answered by choosing the alternatives of “always = 3”, “usually = 2”, “seldom = 1”, and “never = 0”. The questionnaire includes 5 subscales of self-awareness (Items 6, 10, 12, 14, 24, 27, 32, and 33), self-regulation (Items 2, 5, 11, 16, 18, 23, and 30), motivation (Items 1, 9, 15, 20, 21, 26, and 31), empathy (Items 3, 4, 17, 22, 25, and 29), and social skills (Items 7, 8, 13, 19, and 28). In order to measure the validity of the questionnaire, 39 managers were randomly selected from the Islamic Azad University, Roudehen Branch and the Corenbach’s Alpha method was applied to the data obtained from the administration of the questionnaire to the sample. The obtained Corenbach’s Alpha was 0.77.

The researcher has used extracted factors through varimax rotation and linear structure relationship software (LISREL) in order to obtain and entitle simple construction of emotional intelligence factors.
Discussion and Conclusions:

Discussion:

In the present research, 433 subjects were male, and 113 subjects were female. Regarding the academic degree, 58 subjects held Diploma or Associate Diploma, 262 subjects held Bachelor’s degree, and 229 subjects held Master’s or Ph. D. degrees. Regarding the marital status of the subjects, 51 people were single and 480 people were married. Regarding the subjects’ work experience, 106 people had less than 5 years, 167 people had between 6 to 10 years, and 220 people had more than 11 years of work experience.

Table 1: The summary of the statistical indexes related to the sample group in the emotional intelligence and its components (n=554).

<table>
<thead>
<tr>
<th>Indexes Variables</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>range</th>
</tr>
</thead>
<tbody>
<tr>
<td>self-awareness</td>
<td>2.215</td>
<td>2.250</td>
<td>0.398</td>
<td>-0.501</td>
<td>-0.035</td>
<td>2.13</td>
</tr>
<tr>
<td>self-regulation</td>
<td>1.718</td>
<td>1.714</td>
<td>0.366</td>
<td>-0.493</td>
<td>1.076</td>
<td>2.71</td>
</tr>
<tr>
<td>motivating oneself</td>
<td>1.840</td>
<td>1.85</td>
<td>0.322</td>
<td>-0.096</td>
<td>-0.703</td>
<td>2.57</td>
</tr>
<tr>
<td>empathy</td>
<td>1.75</td>
<td>1.83</td>
<td>0.412</td>
<td>-0.019</td>
<td>-0.065</td>
<td>2.33</td>
</tr>
<tr>
<td>social skills</td>
<td>1.841</td>
<td>1.800</td>
<td>0.446</td>
<td>-0.03</td>
<td>-0.084</td>
<td>2.80</td>
</tr>
<tr>
<td>emotional intelligence (total Score)</td>
<td>1.874</td>
<td>1.880</td>
<td>0.261</td>
<td>-0.184</td>
<td>-0.115</td>
<td>2.67</td>
</tr>
</tbody>
</table>

Based on the information given in Table 1, the different indexes of central tendency, variability and the distribution of the managers’ scores obtained from the questionnaire of emotional intelligence and its 5 components show that the distribution of the managers’ scores in the given variables have tendency toward normality. The first step in factor analysis process which is also its first assumption is Checking Missing Data. In this step subjects number 129, 34, and 247 including three persons altogether were eliminated from statistical analysis so that the factor analysis assumption under the heading of at least missing (0.02) could be observed in each subject. Hence, in this research no item has been eliminated except three subjects. And the given situation shows that there is no need to omit some of the items and it is possible to follow the process of Factor Analysis while having all the items. The second factor analysis assumption denotes enough sample size. In this research, Kaiser- Meyer- Olkin (KMO) equals 0.83; consequently, the sample size is sufficient. The third factor analysis assumption is normality of multi-variation distribution known as sphericity. As the Approximate Chi Square equalled 3473.657 with the 528 degrees of freedom, it can be stated that the amount of the Approximate Chi Square is statistically significant and the given statistics is significant at least at the 0.999 level of confidence ($\alpha = 0.001$).

According to component matrix of items we can determine both the specific factor of each item and its position in the related factor based on loading factor. After studying table of component matrix precisely, the researcher used Rotation Method so that loading factor of each item can be determined stressing at recognition of each item in one of the 5 factors. Reiterating that in this research, the researcher has followed Exploratory Factor Analysis and has used Principal Component Methods from Extraction of Factors, varimax Method was applied (table 2). According to varimax, the researcher was able to determine both the factor to which the item belongs after rotation and the position of each item in related factor with reference to loading factor. This table shows in which factor each item has been located after the rotation. For instance, Items 9, 14, and 15 have been located in the third factor.

Table 2: Rotated Component Matrix.
Eventually, 5 factors have been extracted from rotation of factor analysis; in fact, emotional intelligence consists of 5 factors respectively as follows: self-awareness, self-regulation, motivation, empathy, and social skills.

Hence, emphasizing at the five-fold factors of emotional intelligence, items related to each factor have been summarized in table 3 respectively.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Index</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Factor</td>
<td>self-awareness</td>
<td>32-27-22-21-6</td>
</tr>
<tr>
<td>Second Factor</td>
<td>self-regulation</td>
<td>26-20-16-11</td>
</tr>
<tr>
<td>Third Factor</td>
<td>motivation</td>
<td>15-14-9</td>
</tr>
<tr>
<td>Fourth Factor</td>
<td>empathy</td>
<td>25-19</td>
</tr>
<tr>
<td>Fifth Factor</td>
<td>social skills</td>
<td>23-1</td>
</tr>
</tbody>
</table>

Conclusions:

In this study, in order to assess the managers’ emotional intelligence, the Cyberia-Shrink’s questionnaire was applied which contains 5 scales of self-awareness, self-regulation, motivation, sympathy, and social skills. The 5 factors which were used to assess the emotional intelligence in this study are in agreement with the theories and studies carried out in and out of Iran. Some of the similar studies done in the same field are as follows: Hajrahmani [18], Karbalaei Mohammad Meighouni [25], Mansouri [28], Mortazavi [30], Mayer & Salovey [29], Bar-On and Parker [1], and Goleman [16], Boyatzi, [3].

Higher education system is the one in every society whose main role is to develop and present science to the society. It is considered a basic system which affects the other systems such as production, technical, economic, social and administrative systems. Therefore, it can be stated that the dynamism of the systems of every society, to a great extent, depends on the dynamism of the higher education system. At the present time, the degree of contribution of higher education in economic development has been widely identified both in the economies which rely on advanced technology and those of newly industrialized or developing countries. Higher education is also considered as the most important organization which focuses on “thoughts” and has a profound effect on culture, political and religious affairs.

The very important issue in each system, especially in the system of higher education, is to select and appoint qualified managers and leaders in a way that they can effectively administer the higher education institutes. Because of the technological development in the field of information, higher education institutes are considered as one of the members of information society; therefore, they need to have skills and appropriate capabilities in order to transfer, share and apply knowledge [20]. One of the required qualifications of the university managers is high emotional intelligence. Emotional intelligence and efficient leadership have a strong relationship and are included among the variables whose efficiency have been investigated and proved by the following researchers: Goleman [16], Bar-On and Parker [1], Mayer & Salovey [29], Noonan and Staff [32], Singh [37], Bohrer [2], Higley [23], Yocum [44], Rice [35], and Wong and Law [43], Weinberger [41].

Bohrer [2], believes that the organizations should search for the leaders who create an environment which positively affect the job satisfaction and the staff’s performance. The managers who enjoy high emotional intelligence can create this desired environment. Chadick [6], also found that emotional intelligence is considered as a criterion for the success of organizations. Bradberry and Grieves [4], believe that emotional intelligence is so necessary for success that 60% of performance in any kind of job depends on it. The emotional intelligence, by itself, is the greatest factor for predicting the person’s performance in the work place and the strongest power for leadership and success.

Regarding the research background and the related theories, the five factors involved in emotional intelligence show that the emotional intelligence scale almost generally covers the factors which make it. Hence, it can be concluded that the results obtained from the administration of the tool and the level of managers’ emotional intelligence determined by the application of the tool as well as its validity are generally acceptable. The increasing need of organizations for determining the managers’ attitude toward the work environment from the one side and the lack of valid definitions about emotional intelligence and the existence of this feature in the managers of higher education from the other side were the main causes of doing the present study. In addition, the research was done to identify the precise and complete dimensions, aspects and factors which make emotional intelligence through measuring the validity of the emotional intelligence scale which was designed and administered to the managers of higher education. In this way, it is possible to locate the theoretical position of emotional intelligence and identify the importance of the variables which have been introduced by different theories as the factors which form emotional intelligence. The ultimate purpose of the study, then, is to design and administer a valid tool which can determine the extent of emotional intelligence of managers in higher education.
ACKNOWLEDGEMENTS

The results of the present paper recommend that afore-said questionnaire be used in the coming researches of emotional intelligence analysis specifically for high-rank officials of Islamic Azad University. The reasons behind it is: the great number of studies carried out in relation to the existence of relationship between emotional intelligence and efficient leadership: the fact that universities are included in the social systems which have been recognized as the engine of spreading knowledge and awareness as well as the center of directing the societies, and the emotional intelligence questionnaire, as the results of this study suggest, enjoys some psychoanalytic features specifically construct validity. Furthermore, regarding the role of universities as the basic center of thought and reflection, the study is better to be carried out in all other universities and its findings, in turn, be taken into consideration whenever the managers are supposed to be appointed. In that case, the management with high emotional intelligence and appropriate trainings which strengthen the factors of emotional intelligence provide a better context in which the universities and higher education systems in the whole world achieve their goals while backed by their governments.

REFERENCES


