DETERMINING THE VALIDATION OF EMOTIONAL LEADERSHIP QUESTIONNAIRE (CASE STUDY: UNIVERSITY MANAGERS)

DETERMINAÇÃO DA VALIDAÇÃO DO QUESTIONÁRIO DE LIDERANÇA EMOCIONAL (ESTUDO DE CASO: GESTORES UNIVERSITÁRIOS)

DETERMINACIÓN DE LA VALIDACIÓN DEL CUESTIONARIO DE LIDERAZGO EMOCIONAL (CASO DE ESTUDIO: DIRECTIVOS UNIVERSITARIOS)

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ABSTRACT: The purpose of this study was to evaluate and confirm the components of the Chris Triand Petri No Kleinen Emotional Leadership Questionnaire. The method of this research was descriptive-survey and its statistical population was all university administrators in Mazandaran province. The sample size was 214 people who were selected by random sampling method based on Morgan table. To evaluate the reliability of the questionnaire, a model was provided to 30 management specialists. The results of confirmatory factor analysis confirmed the fit of the model and the structure of the internal relations of the items. Cronbach's alpha coefficient for the questionnaire was 88%. The results of confirmatory factor analysis indices showed that model 5 is a suitable factor. Fitness can be used as a valid tool in emotional leadership studies. The questionnaire also has good validity and reliability.

KEYWORDS: Emotional leadership questionnaire. Confirmative factor analysis. University managers.

RESUMO: O objetivo deste estudo foi avaliar e confirmar os componentes do Questionário de Liderança Emocional Chris Triand Petri No Kleinen. O método desta pesquisa foi survey descritivo e sua população estatística foi composta por todos os administradores universitários na província de Mazandaran. O tamanho da amostra foi de 214 pessoas que foram selecionadas pelo método de amostragem aleatória com base na tabela de Morgan. Para avaliar a confiabilidade do questionário, um modelo foi fornecido a 30 especialistas em gestão. Os resultados da análise fatorial confirmatória atestam o ajuste do modelo e a estrutura das relações internas dos itens. O coeficiente alfa de Cronbach para o questionário foi de 88%. Os resultados dos índices de análise fatorial confirmatória mostraram que o modelo 5 é um fator adequado. A aptidão pode ser usada como uma ferramenta válida em estudos de liderança emocional. O questionário também tem boa validade e confiabilidade.

PALAVRAS-CHAVE: Questionário de liderança emocional. Análise fatorial confirmatória. Gestores universitários.

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RESUMEN: *El propósito de este estudio fue evaluar y confirmar los componentes del Cuestionario de Liderazgo Emocional Chris Triand Petri No Kleinen. El método de esta investigación fue descriptivo-encuesta y su población estadística fueron todos los administradores universitarios de la provincia de Mazandaran. El tamaño de la muestra fue de 214 personas que fueron seleccionadas mediante el método de muestreo aleatorio basado en la tabla de Morgan. Para evaluar la confiabilidad del cuestionario, se proporcionó un modelo a 30 especialistas en gestión. Los resultados del análisis factorial confirmatorio confirmaron el ajuste del modelo y la estructura de las relaciones internas de los ítems. El coeficiente alfa de Cronbach para el cuestionario fue del 88%. Los resultados de los índices del análisis factorial confirmatorio mostraron que el modelo 5 es un factor adecuado. El fitness se puede utilizar como una herramienta válida en los estudios de liderazgo emocional. El cuestionario también tiene buena validez y confiabilidad.*

PALABRAS CLAVE: *Cuestionario de liderazgo emocional. Análisis factorial confirmatorio. Directivos universitarios.*

Introduction

In the third millennium, many successful organizations have great leaders and managers who can have positive effects on the functions of their staff by supervising their behavior. Leadership is a basic process in every organization and success and failure of any organization is attributed to its leadership. The ability of leadership in adjusting and adapting organization with new situations should make new situations in favor of the organization (HUNTER; BEDELL-AVERS; MUMFORD, 2018).

It should be noted that leadership is a process, by which an individual influence a group of people to reach a goal (SLATER; NARVER, 2018). An excellent leader encourages the staff to do their routine duties. Nowadays, the leaders don't use their legal powers to compel their staff to do their orders in order to reach governmental goals, but rather they are interested in cooperating with their subordinates and make efforts to improve the benefits of their staff (NIELSEN, 2018).

Now, organizations must try to create broad organizational changes. Leaders should recognize the needs of their organization with paying attention to the special objectives of the organization and facilitate adequate progress towards their goals (KERR *et al.*, 2018).

Globalization has accelerated changes. These changes have penetrated organizations which make them to adapt themselves in order to survive. Changes in organizational processes have become more outstanding. Fast changes in the new era and knowledge explosion have changed the roles of leaders and the success of any organization is now related

to the leadership style. Leaders should be able to use a collection of leadership style in appropriate times (LUSSIER, 2019).

Also, in order to survive and play their dynamic roles, universities should accept changes and adjust with social conditions. Managers have a significant role in universities because leaders can guide employees towards accepting changes and accessing common goals. They can create appropriate perception of changes in employees and provide a desirable environment, prepare them to accept changes and explain the necessity of making those changes (MAZLOUMI; SHAHTALEBI, 2016).

Ander and Carnes (2019) assert that the ability to recognize efficient leaders and appropriate style of leadership are among the most significant factors of success. Choosing appropriate leaders and leadership style can assure that employees are satisfied with their organization for long periods and this improves the functions of employees and ultimately will advance the functions of organization. But there are some questions: do serious leaders damage their organizations and organizational values which have been made before them?

Can leaders with friendly behavior make their staff work better? Leaders with good leadership style should be chosen and leaders must be aware of the image of their leadership style among the team members (BUSH, 2019).

Leaders should also pay attention to the motivation role of their job and should be able to mobilize their inferior sections by integrating organizational goals and prospects with the needs of their subordinates. A good leader is aware of goals and efforts in the organization and knows how to mobilize and lead people. Also, a leader determines the direction, coordinates people and inspires others (CHIGUDU *et al.*, 2019). In this study we have used Daniel Gelman's classification of leadership styles because it is the newest one. These styles are as follows: 1-Hershey and Blanchard leadership style (1969), 2-Levin's leadership styles (1930), 3-Blake –Moton's management network (1964), 4-Emotional leadership style, which was introduced by Daniel Gelman, Boyatzis and, McKee (2002) in their book "Primal Leadership". They defined emotional leadership as: evaluation of leadership competency by the subordinates. According to them, leader is a person who is aware of his-her subordinates 'sentiments and emotions, understands them and by coordinating his-her emotions with others can manage his-her behavior in every situation (NOKELAINEN; TIRRI ,2011).

In their research: emotional leadership questionnaire, Chris Tirre and Petri Nokelainen (2011) noted four components of Gelman *et al*. emotional leadership (2002):

Self-awareness, self-management, social awareness, relationship management. They have used emotional leadership questionnaire for measuring leadership intelligence which is

understood by their inferiors. In the conceptual level, (E.L.Q) measures leader's competence rather than his-her intelligence or abilities.

In their emotional leadership questionnaire, Tirre and Nokelainen (2011) have described components of emotional leadership. According to them, self-awareness means obtaining an accurate and correct knowledge of oneself and is a skill which helps us to have a clear, lucid and correct of ourselves. To obtain this knowledge, we should first recognize various parts and types of self-awareness, Self-awareness means knowing oneself with all its specifications. By obtaining self-awareness, we will have a lucid and correct understanding of our personalities, advantages, drawbacks, thoughts, beliefs, motives, emotions and relations style (NOKELAINEN; RUOHOTIE, 2009).

Self-management refers to controlling and directing emotional reactions and feelings by individuals in various situations in which they could show positive and effective reactions. Self-management means accepting one's drawbacks and continuous management of tendencies and is not mere resistance against problem making behaviors. Self-management does not mean trying to change perceptions and personalities, rather it is controlling behaviors and only when it is necessary, trying to change them. Self-management skill is necessary for strengthening success bases (whether personal or organizational) (NOKELAINEN; RUOHOTIE, 2008). Self-management refers to the ability to accurate recognizing other people's emotions and understanding what is actually happening. It means that you can understand people's thoughts and feelings, even when you do not have the same thoughts and feelings which is the basis of sympathy. Self-managing persons have high emotional intelligence (NOKELAINEN; RUOHOTIE; TIRRI, 2010).

Social awareness refers to the ability to accurately guess other emotions and their real feelings. A community should be able to transfer its needs from subconscious to conscious level in order to adopt correct positions towards its inputs and outputs. If a community is not affected by rumors, it is a sign of maturity and social awareness (RUOHOTIE, 2011).

Relationship management is a product of the mentioned emotional skills. Relationship management is the ability to utilize one's emotions and others' emotions for managing interactions. This makes the exchange of information transparent and the person who has this skill can cope with conflicts. This ability includes clear connection with different situations and effective controlling difficult conflicts (NOKELAINEN; RUOHOTIE, 2011).

Garnder and Tirre (2009) performed research on the issue of components of emotional leadership on 682 workers in various areas (industry, public services) in Finland. The results

showed that the level of supervising emotional understanding had a high connection with the perception of efficiency and effectiveness of supervisors among workers.

Chris Tire and Petri Nokelainen (2011) performed a study on the issue of components of emotional leadership on 124 teachers in six districts of Helsinki. The results showed that leaders in that study: 1-had high self-confidence, 2-could adjust with serious challenges, 3-were efficient and could notice subsequent results of events.

In the first study, the questionnaire consisted of 18 questions and the second one which was given to the Finnish teachers, consisted of 51 questions. The respondents were asked to evaluate the leadership intelligence in four areas of E.L.Q (self-awareness with 8 components), (self-management with 20 components), (social awareness with 7 components) and (relationship management with 16 components).The first two dimensions (self-awareness, self-management) evaluate the manner of ranking various features of the superior person by subordinates.

Two other dimensions (social awareness, relationship management) evaluate social skills of leadership (how they manage interpersonal relations). 51 items of the E.L.Q items were evaluated by a Lickert five points scale (from strongly disagree to strongly agree). In spite of the significance of choosing an appropriate leadership style in the organizations and its effects on the functions of the staff, little attention has been paid to it. This may have various reasons, but one of them which is related to this study is the inadequacy of tools for measuring validity and reliability. By designing a questionnaire that has measurable features of emotional leadership, we can examine emotional leadership of managers in organizations and through this, advantages and disadvantages of organizations may be recognized, and thus negative consequences of weak leadership could be prevented. A full understanding of emotional leadership by managers may help researchers to comprehend complicated causes of success of leadership and have a comprehensive understanding of reasons for not adopting emotional leadership (NOKELAINEN; TIRRI, 2011). Findings of this study may be used by managers in educational and non-educational organizations. Researchers can design this type of questionnaires to study the methods of applying emotional leadership. Thus, providing appropriate tools for examining the variable of emotional leadership and demonstrating its vital role. The aim of this study is to examine reliability and validity of Daniel Gelman's questionnaire on the issue of emotional leadership. In this study we try to answer the following questions:

1.Does emotional leadership questionnaire have adequate reliability for university managers?

2.Does emotional leadership questionnaire have adequate validity for university managers?

Method of Research

From the viewpoint of aims, this study is an applied research and is a descriptive survey from the standpoint of method of data collection and because it validates the tool of emotional leadership, it is a type of factor analysis plan for testing relations. The population includes administrators (director general, deans, group managers, educational administrators) of universities (Islamic Azad, general, medical science) in Mazandaran province which, according to education department, were 460 persons. In this study, three phases of sampling, were utilized.

First, the questionnaire was translated to Farsi and then, it was translated back to English. After that, two versions were reviewed, and differences were decreased to the minimum level. Then, the final questionnaire was reviewed by 20 experts in educational management, commercial management and public management and its content validity was established. In the next phase, the original questionnaire, with a sample consisting of 30 university administrators, was used for measuring reliability. After amendment and revision, appropriate items were chosen, and the final questionnaire was performed on the paper and through email for 210 Mazandaran universities administrators who were chosen by Kerjsi and Morgan formula and with the random sampling method. In this study, Daniel Gelman's emotional leadership questionnaire was used which was collected in (2011) by Chris tire and Petri Nokelainen. The questionnaire had 51 questions and was designed based on four components (self-awareness, self-management, social awareness, relationship management) that differentiate the views of managers in an organization. This questionnaire is made on the basis of Lickert scale and its questions were designed as complete sentences. There were five choices for every question. Each choice was given a grade, based on the gravity of every component (from strongly disagree to strongly agree). Some questions were expressed negatively and some of them are positive sentences. High grades show high emotional leadership and low grades (lower than the average) demonstrate low emotional leadership among managers. Cronbach's alpha coefficient of the mentioned questionnaire was 88 percent. Cronbach's alpha of self-awareness, self-management, social awareness and relationship management were respectively 98, 99/7, 99/4 and 88 percent. Structural validity

of the questionnaire was reviewed and confirmed through first step confirmatory factor analysis.

Table 1 – Questions and dimensions of emotional leadership

Variable	Dimensions	Questions
Emotional leadership	Self-awareness (emotional self-awareness, self-assessment, self-confidence)	1-8
	Self-management (emotional self-control, transparency, adaptability, achievement of initiative, optimism)	9-28
	Social awareness (empathy, organizational awareness, services)	29-35
	Relationship management (inspirational leadership, influence, development of others, change as a facilitator, conflict management, collaboration and teamwork)	36-51

Source: Devised by the authors

Table 2 – Cronbach's alpha coefficient of emotional leadership questionnaire components

Self-awareness	%98
Self- management	%99/7
Social Awareness	%99/4
relations management	%88

Source: Devised by the authors

Findings

Content confirmation method was used to determine content validity. The questionnaire was given to a number of researchers in order to examine validity of all items. This index has been designed by Lavshe. In order to compute this index, the views of 20 professionals in the area of test content were utilized. They were asked to classify each item, based on Likert's three parts scale "the item is necessary", "the item is useful but not necessary ", "the item is not necessary".

Based on the number of professionals who have evaluated the items, minimum CVR must be 0/7. If the average CVR for any variable is less than the mentioned amount, it should be deleted. As it can be observed in table 3, all variables had desirable validity.

Table 3 – Content validity of hidden variables of emotional leadership

Variable name	Average CVR value	Number of specialists
Self-awareness	%79	20
Self- management	%88	20
Social Awareness	%76	20
relations management	%92	20

Source: Devised by the authors

Factor analysis model of the study: In this section, the deducted findings of question test of the study are provided. For this purpose, structure equations modeling with the method of first step confirmatory factor analysis has been used. Figures 1 and 2 shows conceptual model of the study, in which circles demonstrate emotional leadership variables and rectangles show the items of the questionnaires. The numbers on the arrows are factor loadings or regression coefficient resulted from regression equations in the variables. Acronyms are shown in the table 4.

Table 4 – Abbreviations used in the confirmation model

Variable name	Symbol	Items
Self-awareness	Selfaware	Aware (1:8)
Self- management	Selfmana	Manage (1:20)
Social Awareness	Socialaware	Social (1:7)
relations management	Realat	Realat (1:16)

Source: Devised by the authors

Fit indices of structure equations and their results are shown in table 5. Figure 1 is about coefficients with standard factor loading, in which relations with higher factor loading shows higher gravity of relation. Figure 2 shows the amount of significance of T which should not be between 1/96 and -1/96 so that with the probability of 95 percent, significance would be accepted (KARSHKI, 2018).

**Table 5** – Results of the goodness of fit study of the structural model of the research

Fit index	Acceptable domain	Amount	Result
(Kai-Do Index) x^2	Depends on the number of samples	7450/65	Appropriate
CFI (Adaptive Fit Index)	More than %90	0/91	Appropriate

| CFI (Fitness index)	More than %90	0/98	Appropriate
ACFI (Fitness adjustment index)	More than %90	0/93	Appropriate
NFI (Normalized fit index)	More than %90	0/91	Appropriate
NNFI (Adjusted normalized fit index)	More than %90	0/94	Appropriate
RMR (Root of standard average squares left)	Less than %10	0/045	Appropriate
RMSEA (Mean root of estimation error squares)	Less than %10	0/073	Appropriate

Source: Devised by the authors

Important indices in the fitness of structure equations model includes several indices of fitness resulted from structure equations model designed by Lisrel. To examine the correctness of a model, variables were used and the amount of desirability of them and results are demonstrated in table 5. The most significant index of fitness is the root mean square error approximation (RMSEA), and if it is less than 0/1, structure and relations of the model is confirmed. The results of structure equations model with factor coefficients (loadings) are demonstrated in figure 2 and significance of relations with calculation of t and brief findings of structure equations model are shown in table 5. As you can observe, all relations of the variables (components) of emotional leadership have significant amounts, but their factor loadings of them may be less than 0/3. This may has been caused by some heterogeneous answers, which were not deleted because those were considered necessary by the surveyor. Because of the significance of relations with t amount, the significances that were not between 1/96 and -1/96 and their factor loadings were less than 0/3 could be accepted. Because the indices of the model were accepted according to table 5. Also, we may use the gravity of the standard factor loading for grading the gravity of emotional leadership variables (components).

Figure 1 – Standardized coefficients of confirmatory factor analysis of emotional leadership variables
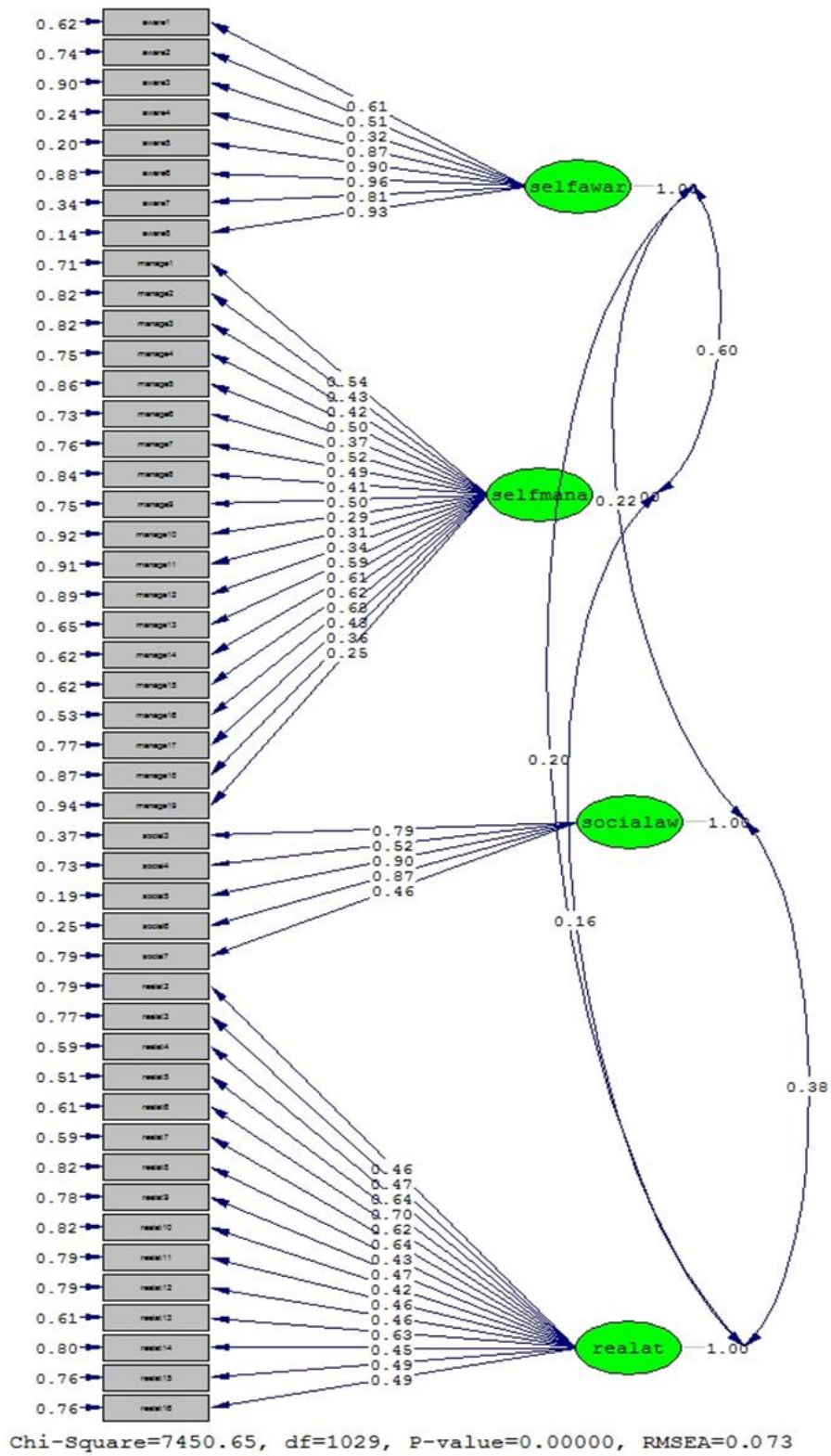
Source: Devised by the authors

Figure 2 – Confirmatory factor analysis of T significance of emotional leadership variables

Chi-Square=7450.65, df=1029, P-value=0.00000, RMSEA=0.073
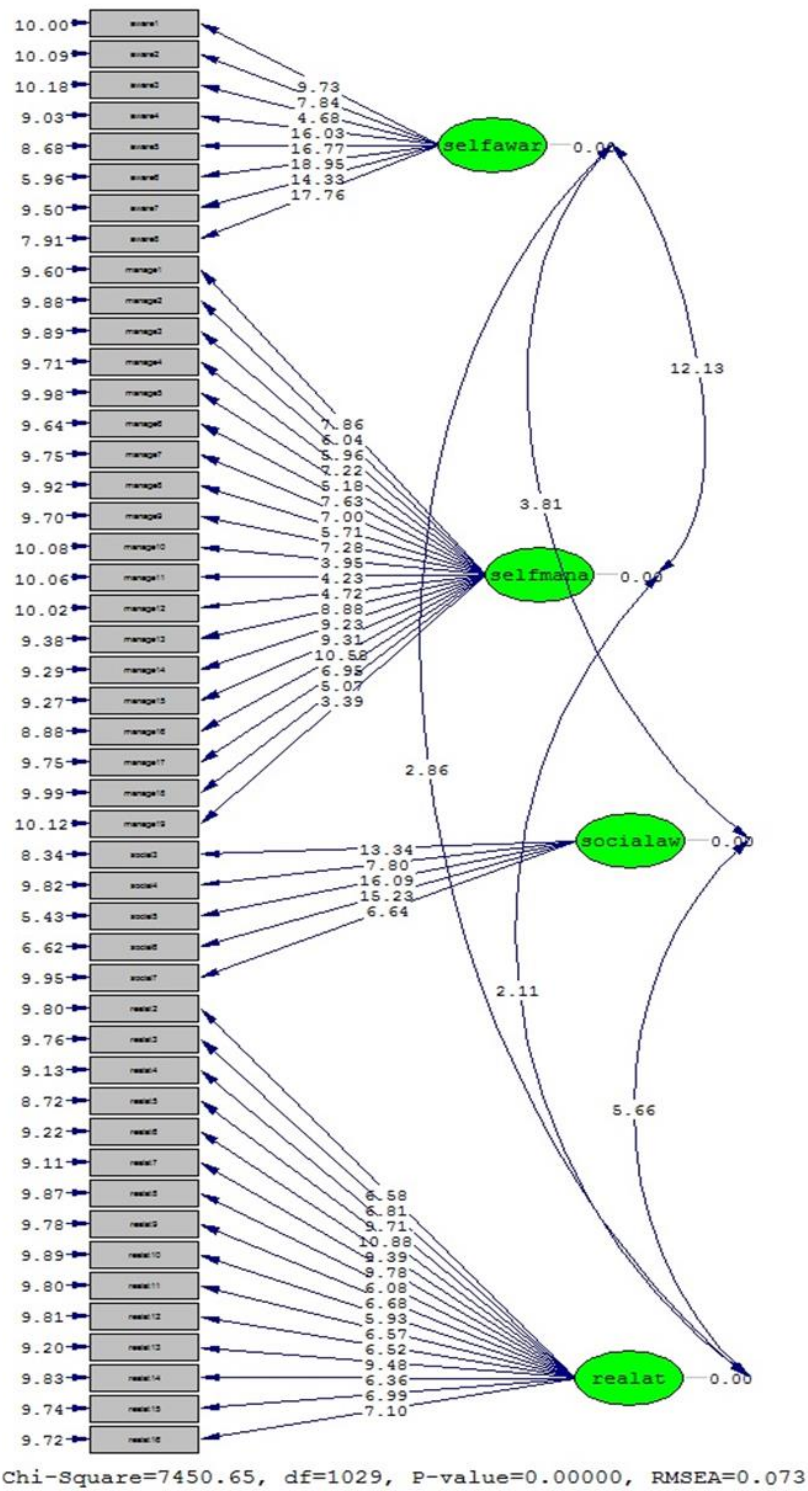
Source: Devised by the authors

Table 6 – The type of relationships between emotional leadership variables and factor
and significance loads in the structural model of research

Relation	Standardized factor load	Significant amount of T	Result
Self-awareness ----------> Self-management	0/60	12/13	Appropriate
Social Awareness ------> Relationship Management	0/38	5/66	Appropriate
Self-awareness ----------> Social awareness	0/22	3/81	Appropriate
Self-awareness ----------> Relationship Management	0/20	2/86	Appropriate
Self-Management ---------> Relationship Management	0/16	2/11	Appropriate

Source: Devised by the authors

As you may see in figures 1 and 2, because of non-significance of items 1 and 2 of social awareness, item 20 of self-management and item 1 of relationship management, these four items were deleted from the model, in order to obtain a questionnaire with a correct structure. Thus, the reliability of a questionnaire should be measured to establish its reliance. In the process of modeling, we found that the relation of self-management with social awareness had low factor loading and inadequate t amount, which caused the amount of RMSEA to be higher than 0/1. So, by deleting that, the relations of all indices reached a desirable point. The higher, the factor loading, the higher the gravity of relation between two variables. In the table 6, the results of factor loading are provided which show that interactions of self-awareness and self-management have higher desirability.

Questionnaire reliability

Heterogeneous items for every variable were deleted and the results of reliability coefficient, obtained by Cronbach's alpha can be observed in table 7. The amount of correlation items 1 and 2 social awareness and item 20 self-management and item 1 of relationship management have been examined in the questionnaire.

Table 7 – Results of reliability coefficients by removing items from the measurement of emotional leadership questionnaire variables

Variable	Emotional Leadership Questionnaire Items	Correlation of items in the questionnaire	Alpha coefficient (delete item)
Self-management	Instead of threatening in a weak position, my boss sees it as an opportunity.	0/158	0/835
Social Awareness	My boss listens carefully and can understand the views of others.	0/021	0/722
	My boss can get along with people from diverse backgrounds or cultures.	0/067	0/696
Relations management	Beyond day-to-day work, my boss conveys a sense of shared purpose among her employees and makes things exciting.	0/029	0/851

Source: Devised by the authors

We can delete those items of the questionnaire. It is possible that this questionnaire has different results without deleting these questions in other populations. The amounts of Cronbach's alpha for every variable of emotional leadership are provided in table 8.

Table 8 – Results of reliability coefficients by removing items from the measurement of emotional leadership questionnaire variables

Variable	Cronbach's alpha coefficients	Standardized alpha coefficient (delete item)
Self-awareness	0/898	0/914
Self- management	0/831	0/896
Social Awareness	0/634	0/70
relations management	0/833	0/838

Source: Devised by the authors

In the component of social awareness, if items (1-My boss listens to me carefully and can understand other persons' views and 2-my boss is able to get along with individuals with different backgrounds and cultures) and in the component of relationship management, itens (my boss, strengthens the feeling of having a common goal among his-her employees and makes jobs exciting) are deleted, reliability will increase among university administrators. Cronbach's alpha coefficients, lower than0/50 show low reliability, between 0/50 and 0/70

good reliability and higher than 0/70 very good reliability. Cronbach's alpha coefficient of our questionnaire is higher than 0/70and thus it has very good reliability.

Discussion and Conclusion

The aim of this study was examining the relation and correlation of components and questions of emotional leadership questionnaire and measuring the amount of relation of items and questions in Chris Tire and Petri Nokelainen's emotional leadership questionnaire (2011). This research was performed on the basis of studies performed by Gelman and his colleagues (2002), in order to measure the correlation of various components. According to Gelman *et al.* (2002), if factor loadings of a model are positive it shows a direct effect and if factor loadings are negative, it shows a reverse effect and a higher factor loading shows higher gravity of the relation.

The style of management should be suited to the environment and conditions of various organizations. Because of the lack of an appropriate leadership style, we often do not notice effective leadership in organizations. Emotional leadership has not been taken seriously, so most managers do not know how their staff feel about them and what expectations they have. Considering the fact that leadership is an important activity, a questionnaire for studying it and measuring various features of emotional leadership is an undeniable necessity. Thus, this questionnaire which is designed in two sections, including industry workers and teachers of Finland, has been chosen for examining emotional leadership among university administrators in Iran. The questionnaire designed by Chris Tire and Petri Nokelainen (2011) is based on (GELMAN *et al.,* 2002) components of emotional leadership and fully considers feelings of subordinates. It has 51 items consisting of 4 components and deleting four questions, increased its reliability. Findings of our study showed that the questionnaire is a good tool for measuring validity and reliability. Validity of the questionnaire was examined by confirmatory factor analysis method. The results showed that model 5 factor analysis has good fitness. The results were concordant with findings of Garnder, Tirre (2009), Chris Tirre and Petri Nokelainen (2011).

Explaining the findings of our study, it may be said that: 1- variables of self-awareness and self-management have the strongest relation, meaning that self-management may be the most significant variable for explaining emotional leadership, if managers give the motive for self-awareness to their staff. A manager who is successful in coping with new challenges, gives more adequate answer to his-her new goals and his-her staff and colleagues are more

satisfied with his-her functions. Leaders should improve confidence of their staff, so they can manage their staff in new challenges. 2- the relation of social awareness with relationship management has sufficient significance. Managers can create and follow common goals by relying on valuation, direct contact with their staff, students and other managers. 3- Self-awareness and social awareness have significant relation in the structure equations of this study. All subcomponents of self-awareness, including self-confidence, self-evaluation are entwined with subjects like sympathy and serving, and any deficiency of self-awareness decreases sympathy and serving. The amount of factor loading in that relation was lower than 0/3 which is a desirable amount, but it was not deleted because of its significance. 4- Interactions of self-awareness and relationship management are very weak. But we can note the effects of self-confidence on influence, group working and cooperation of staff with managers, which are low but nonetheless effective and significant. 5- The relation of self-management and relationship management is weak but still significant. The effects of innovation, optimism and on relationship management which results in cooperation, group working, influence and inspiring leadership are low but direct and significant. Managers can motivate their staff for self-management and improve it. According to the results of our study, managers and administrators in various parts of studied universities reported two significant characteristics in their leaders: high capacity for finding important social networks and understanding key power relations and having the ability to satisfy customers. The latter is particularly indicative and distinctive, because satisfying customers is one of the most important components. Administrators in different parts of studied universities reported that their superiors had been successful in controlling disruptive feelings.

Following abilities were reported as the most significant ones by managers: 1- to control one's feelings, 2- to accept one's mistakes, publicly and encounter others'wrongdoings, 3- To understand a broad range of signals of evident and latent feelings,4- To organize and regulating common missions in a manner that encourages others to obey and assist, 5- To foster the abilities of other individuals, 6- To settle disputes, 7- To create a friendly atmosphere. It should be noted that our questionnaire examined characteristics of emotional leadership in the administrators of universities (Islamic Azad, General, Medical Science) only in four dimensions. Thus, to examine emotional leadership in other populations, it is necessary to perform other studies. This questionnaire has been designed and performed for the first time in Iran. It has been tested on the administrators of universities in Mazandaran province, thus we believe that it should be tested on non-educational managers too. The results of this study show that emotional leadership questionnaire is an adequate tool for

measuring feelings and perceptions of various individuals in academic environments about their superiors.

A limitation of this study was the difficulty of accessing all administrators and managers because the questionnaire was only sent to university administrators in Mazandaran. So, it is recommended to use more general samples in the future studies.

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