Effects of emotional intelligence education on interpersonal conflict and work-family facilitation in an industrial company’s staff

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Abstract
The main question of the current study is to consider how much education of emotional intelligence is effective in reducing interpersonal conflicts and increasing job-family facilitation. In this test experiment, a sample of 40 people of District 5 Gas Transmission Operations staff that were selected by the simple random method, were randomly divided into two groups of test (20 people) and control (20 people). To measure variables, Jex and Spector’s Interpersonal Conflict Scale and Holbrook’s work-family facilitation scale have been used. The study is a variant of field experiment with pretest and control post-test. Participants were put under emotional intelligence education for ten 120-minute sessions. After applying interference, once again the amount of interpersonal conflict and work-family facilitation of subject and control groups was measured. To analyze data, SPSS 18 and multivariable covariance analysis was employed. Findings showed that a significant difference is dominant between interpersonal conflicts of groups, which means that education of emotional intelligence resulted in reduced interpersonal conflict. However, no significant relationship was observed for the variable of work-family facilitation. This study showed that a high level of interpersonal conflict, and effectiveness of emotional intelligence criteria and the information related to emotional intelligence in work-place can have a considerable effect on criterion.

Keywords: emotional intelligence education, interpersonal conflict, work-family facilitation, emotional intelligence

Introduction
Emotions can be traced in all moments of people’s lives either directly or indirectly. In previous years emotion was looked at as a negative and deranging factor. However, psychological studies as of middle decades of the twentieth century, especially 1980 afterwards, have had major advances, and emotion is considered as an effective and important tool in adaptive behavior and social interactions of recognizing oneself and others and social eligibilities (Mohseni, 2004). As a scientific topic in psychology, emotional intelligence has been discussed for about two decades in the world and a little later in Iran, and its importance with advent of social evolutions related to the industrial and post-industrial age, specifically in range of interpersonal relationships in education environment, work, and family has increasingly more visibility so that many believe that, in order to gain relative prosperity in life, an individual needs to have appropriate emotional quotient (EQ) besides conventional intelligence quotient (IQ). Therefore, the role of emotional intelligence and its development in an individual’s progress is a very important one that cannot be ignored. Individual’s understanding from his/her and others’ emotions and excitement, and using emotions to create ease in thought and access to factors causing excitement, and suitable control and management of emotions can prevent development of many problems in people’s relations.
With advent of emotional intelligence in early 1990s, positive thinking was developed concerning emotions and scholars working in the field, defined the concept in different methods (Petrides and Furnham, 2001, 2003).

The term emotional intelligence was first suggested in 1985 by Vian Pin and later popularized by Daniel Goleman in 1995. Most studies in this field have been done by Peter Salovey and John Mayer in 1990s. The Salovey-Mayer Model defines emotional intelligence as the capacity for comprehending emotional information and reasoning upon upon excitement. They divided emotional intelligence abilities into the following four fields: 1- ability to comprehend and discern accurately excitement of oneself and those of others, 2- ability for using excitements to facilitate thinking, 3- ability to comprehend meanings of excitements, 4- ability to manage and operate excitements (Mayer and Salovey, 1997). In contrast to Mayer and Salovey (1990), other models define emotional intelligence in terms of behavior, self-management, and social skills (Herbst and Maree, 2008). According to Riggio and Reichard (2008), emotional intelligence (EI) is a multidimensional structure made up of different abilities and which is, to some extent, better than intelligence quotient (IQ).

As regards whether emotional intelligence can be increased, there are different views. However, what can be emphasized explicitly is that even if emotional intelligence of individuals cannot be changed, maybe emotional skills education can be offered to individuals, thus adding to their information in this regard. Mayer believes that emotional intelligence is a kind of mental capacity for creating meaning and practicing emotional information. People are of different capacities in terms of emotional intelligence, some being average and some powerful. Part of this capacity is intrinsic and another part is something acquired from experience, and this is the part that can be improved though endeavor, drill and experience. Salovey believes that many of the skills that make up emotional intelligence can be learnt (Baradbari and Garivaz, quoted by Ebrahimi, 2008). In this regard, different studies have been performed concerning emotional intelligence education with many variables. This studies show that there are significant relationships between such structures as anger control (Yousefi Far, Sahebozzamani and Majd, 2010), anger levels (Yilmaz, 2009), healthcare (Ray, 2012), communication skills (Zijlmans, Embregts, Gerits, Bosman, and Derksen, 2011). The mentioned researches offer increasing witnesses that emotional intelligence can reliably be measured and it can be employed in predicting important results in work and life including quality of relationship with others and management efficiency.

One variable that was selected in current study as dependent variable so that the effect of teaching emotional intelligence skills on them is considered, involves interpersonal conflict in work environment. Interpersonal conflict involves quarrels, and arguments with others and inappropriate behavior from coworkers and custodians which is among the most widespread job pressures existent in organization (Newton and Keenan, 1990). Interpersonal conflict, as an occupational pressure generator, is expected to be in connection with negative emotions and immature behaviors. In the meta-analysis done by Jex and Spector (1998), average of total correlations of interpersonal conflict with stress, depression, and emotional frustration was reported to be 0.3. According to Einersen (2000), harm enforcement in connection with conflict is created as a result of increasing conflict levels (Spector and Fox, 2002).

Findings show that a significant statistical relationship connects low emotional intelligence and high excitability to conflict in uncivil behaviors (Krik, Schutte, and Hine), interpersonal conflict (Fitness and Curtis, 2005), negotiation strategy (Kim, 2010), conflict management styles (Abas, 2010), and conflict handling (Imran, 2013). In addition, Westerlaken, Jordan, Ramsay, and Woods (2009) believe that political skill, emotional intelligence, and self-monitoring are consequences of retaliating behaviors. Considering the role of emotional intelligence, spiritual intelligence, self-
efficiency, and creativity in predicting behavioral conflicts, Animasahun (2008) found that emotional intelligence is one of the most important and distinguished predictors of solving behavioral conflicts among personnel of load transfer in Nigeria. Further, conflict researchers (Rahim and Minors, 2003) found that emotional intelligence significantly influences high stress and problem solving in organization. In this regard, Kisamore, Jawahar, Liguori, Mharapara, and Stone (2010) found in their study the negative relationship between emotional intelligence and conflict in behaviors coupled with abuse in work environment. Also, Byron (2008) suggests that accurate understanding of individuals’ emotion can direct their behavioral responses, and people with high emotional intelligence have the art of interaction and skill for control and management of others’ feelings. These skills reinforce popularity, leadership power, and personal influence, and makes the individual successful in each type of social activity as well as sincere relationship with others. Such persons show the best performance in different life situations with their inner recognition and eyesight regarding emotional tendencies of themselves and others (Eivazi, 2006).

On the other hand, studies reveal that not only emotional intelligence is one of man’s main requirements to resist problems and remove pressures caused by them, but also it considerably influences memory health and wisdom strength, comprehension, interpretation of experiences, correct judgment, suitable decision making and individual’s mental-social evolution (Goleman, 1995; Tahami Monfared et al, 2002). Given importance of work and family and mutual relationships these two areas have with each other, recognizing positive and negative traits and factors affecting those leads to facilitation of relationships and reduction of conflict between these two areas. Work and family are considered among important areas for that group of organizational researchers (Whitely and England, 1977) who have paid attention to social roles of them both (Greenhous and Butell, 1985; Marks, 1977; Siber, 1974).

Given the fact that organizations and groups ever-increasingly consider their personnel as basis and capital, it can be concluded that to preserve their values in organization and for coordination in work, personnel need skill, which is an invaluable factor. That a group succeeds in achieving their goal depends on collective intelligence, which is a product of the talents and skills that individuals employ within groups. The most important factor in collective intelligence is emotional intelligence of the group, which distinguishes them from other groups with similar circumstances (Aghayar and Sharifi Daramadi, 2006).

In this regard, one of the variables that is thought it can be increased with EI education is work-family facilitation. In its inner meaning, work-family facilitation is a perspective in which work and family complement each other besides being inter-correlated (Werbel and Walter, 2002). Stated differently, being active in one area (family) can in a positive effective way lead to change in performance level of the other area (work). Wayne, Grzywacz, Carlson, and Kacmar (2007) defined work-family facilitation this way: the amount based on which the individual’s engagement in work leads to increased performance level in other dimension of the individual’s life, i.e. family. Work-family facilitation in fact involves increasing the individual’s performance in his/her family through participation in his/her vocational role. Work-family facilitation can occur in a multifaceted way. This means that it can create desirable conditions that leads to enhanced performance of family area or conversely, it can offer facilities that lead to improved individual performance in work (Frone, 2003).

There are three essential parts in definition of work-family: 1) professional enthusiasm, 2) artifacts, and 3) improved performance. Profession enthusiasm is the amount one engages in relevant activities. Therefore, profession enthusiasm has a great importance because individual’s activity is the basis of facilitation. By the
way, individual’s active enthusiasm in one area of life creates advantages, superiorities, and artifacts that lead to improved performance level in other area.

Researchers of several other territories (e.g. Krouter, 1984; Sieber, 1974; Stephens, Franks, and Atienza, 1997) mentioned a large number of advantages that work and family can cause for the individual in work or family. Carlson, Kacmar, Wayne, and Grzywacz (2006) divided these artifacts into four sections, which included developmental advantages-acquisition of skills, knowledge, values, and perspectives, emotional advantages-variation in mood, perspectives, self-confidence, or other emotional aspects, capital advantages-acquisition of economic, social, and health capitals, and productivity advantages- increased focus due to fulfilling multifaceted roles.

All that was mentioned above is a good witness that emotional intelligence can be considered as one of staff’s success prerequisites in lack of rise of conflicting behaviors and success in having constructive relationships in work environment as well as in family. Given provided explanations, main problem of the current study is to consider how much emotional intelligence is effective in reducing interpersonal conflict and increasing work-family facilitation.

Research hypotheses
1- Education of emotional intelligence leads to reduced interpersonal conflict among staff.
2- Education of emotional intelligence leads to increased work-family facilitation among staff.

Methodology
The design used in this study was experimental and pretest-posttest type with control group.

Statistical society, sample, and statistical approach
This experimental study was performed in 2014 in Iranian Gas Transmission Operation, District 5. Subject society consisted of all staff working in Shiraz Gas Transmission Operation, from whom intended samples were selected. This study involved two types of sampling:

1) Validity and reliability sampling: to determine reliability and validity of Jex and Spector’s interpersonal conflict questionnaires (1998) and Hobrook’s work-family facilitation questionnaire (2005), a sample of 80 people was taken via simple random sampling from among the staff with B.Sc. degree and above.

2) Experimental sampling: to this purpose, 40 people were selected as sample from among the staff with B.Sc. degree and above via sampling random sampling. Members of the sample group were divided randomly into the two groups of experiment and control. Mean age of participants in experiment group was 32.72 and in control group it was 32.23. Interference group consisted of 20 men and the control group also consisted of this number of men. In terms of education in control group, there were 18 B.Sc. graduates and 2 postgraduates and within the control group, there were 3 B.Sc. graduates. These findings reveal that in terms of demographic specifications, the two groups were unique and no significant difference existed.

Instruments of the study
Interpersonal conflict scale: to measure interpersonal conflict in work, Spector and Jex’s 4-part scale was exploited. In this scale, the subject must specify the amount of his/her conflict with colleagues on a five-degree scale from less than once in a month or never to several times in a day. High score in this scale signifies high conflict with colleagues, with range of all marks that subjects can gain in this scale changing between 4 and 20. In Hashemi’s study (2007), the amount of reliability for this scale was obtained using Cronbach’s alpha and bissection respectively as 0.8 and 0.72, and mean correlation coefficient of this scale had been obtained with Brayfield-Ross’ Job Satisfaction Scale (1951) as -0.25 that was significant in the level of P<0.001 (Hashemi, 2007).
Work-family facilitation scale: to measure work-family facilitation, Holbrook’s 8-part scale (2005) was used. This questionnaire was first translated by Adelinasab (2013) into Persian. Answers are on a 5-item Likert of 1 (strongly disagree) to 5 (strongly agree). In this scale, each micro-scale includes 3 parts concerning role of experience, 3 parts concerning role of skill, and 2 parts concerning role of perspective. Holbrook (2005) reported Cronbach’s alpha of work-family facilitation micro-scale as 0.94. In current work, this scale’s reliability was calculated using Cronbach’s alpha for work-family facilitation as 0.93 and validity coefficient of the questionnaire was calculated by correlating with a general realized question as 0.77.

Research treatment

Emotional intelligence education program in this study consisted of ten 120-min education sessions, performed for the subject group. In this study, techniques aimed at increasing quadruple emotional intelligence components (emotional understanding, emotional usage, emotional discerning, management of one’s and others’ emotions) have been exploited based on Mayer and Salovey’s Ability Perspective. Interference sessions are in short as follows: session one: introduction of group members to one another, expressing expectations and goals, performing pretest; session two: defining and elucidating emotional self-awareness and emotional understanding and increasing emotional self-awareness in oneself and teaching two techniques of (a) action/reaction and (b) what do I expect from you?; session three: increasing self-awareness in others and understanding emotions and emotional recognition in others and teaching the “destroying the help spirit” technique; session four: teaching sympathy skills and social skills and also teaching the technique of “openness and kindness regarding friendly relationships”; session six: teaching skill of managing others’ emotions and teaching the technique of “more awareness regarding staff”; session seven: teaching skills of active listening; subsequently, two techniques of “honest listening” and “habit of listening” were taught to the subjects with purpose of increasing sympathy skills; session eight: education of preventing popular mistakes in acknowledgement, and teaching the two techniques of “appreciative note” and “popular acknowledgement mistakes”; session nine: defining self-motivation and emotional exploitation and how to create self-motivation in oneself and others, and teaching the techniques of “your leadership sign” and “control and authority”; session ten: conclusion, and responding to questions and performing posttest. It is necessary to note that following provided educations, subjects were given topic-related work-papers as homework and were asked to carefully apply techniques outside of the class and bring them back along to class in subsequent sessions.

Findings of the study

Table 1 shows mean and standard deviation of total scores of work-family facilitation and interpersonal conflict in subject and control groups in pretest and posttest stages.

As observed in table 1, mean and standard deviation of total scores for the subject group in dependent variables (interpersonal conflict and work-family facilitation) show variations in posttest stage compared to pretest stage.

To verify this hypothesis, first the condition of lack of interaction between independent variable and covariate and dependent variable has to be considered, with results thereof reported in table 2.

As observed in table 2, interaction of auxiliary (pretest) and dependent (posttest) variables does not have significant operating levels (subject and control groups). Therefore, the presumption of regression homogeneity has been incorporated.
Table 1. Mean and standard deviation of emotional intelligence and interpersonal conflict scores for subject and control groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Statistical criterion</th>
<th>Subject group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>Work-family facilitation</td>
<td>Mean</td>
<td>24.94</td>
<td>26.17</td>
</tr>
<tr>
<td></td>
<td>Standard deviation</td>
<td>8.21</td>
<td>6.11</td>
</tr>
<tr>
<td>Interpersonal conflict</td>
<td>Mean</td>
<td>6.94</td>
<td>7.35</td>
</tr>
<tr>
<td></td>
<td>Standard deviation</td>
<td>1.51</td>
<td>2.28</td>
</tr>
</tbody>
</table>

Table 2. Results of homogeneity of regression slopes between auxiliary (pretest) and dependent variable (posttest) in agent levels (subject and control)

<table>
<thead>
<tr>
<th>Source</th>
<th>Dependent variable</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean of squares</th>
<th>F</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group’s interaction and covariate</td>
<td>Interpersonal conflict</td>
<td>0.441</td>
<td>1</td>
<td>0.441</td>
<td>0.291</td>
<td>0.59</td>
</tr>
<tr>
<td></td>
<td>Work-family facilitation</td>
<td>41.92</td>
<td>1</td>
<td>41.92</td>
<td>5.13</td>
<td>0.071</td>
</tr>
</tbody>
</table>

According to the contents of table 3, it is observed in the column for significance that difference between subject and control groups is significant in terms of interpersonal conflict in the P<0.001 level. Accordingly, it could be stated that one of the study hypotheses was confirmed. Therefore, it can be concluded that after removal of pretest effect, a significant difference exists between the two groups of control and subject in terms of interpersonal conflict. Alternatively, education of emotional intelligence has had a significant effect on men’s interpersonal conflict. However, results of table 3’s contents suggest that F values for work-family facilitation is 1.72 that is not statistically significant in the P<0.001 level. Thus, no significant difference exists between the two groups of control and subject in the variable of work-family facilitation. In other words, results reveal non-efficiency of emotional intelligence education in terms of increasing work-family facilitation.

Table 3. Results of ANOCOVA analysis in MANCOVA context on mean of posttest scores for interpersonal conflict and work-family facilitation

<table>
<thead>
<tr>
<th>Stage</th>
<th>Sum of squares</th>
<th>Degree of freedom</th>
<th>Mean of squares</th>
<th>F</th>
<th>Level of significance of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal conflict</td>
<td>19.82</td>
<td>1</td>
<td>19.82</td>
<td>13.11</td>
<td>0.001</td>
</tr>
<tr>
<td>Work-family conflict</td>
<td>16.29</td>
<td>1</td>
<td>16.29</td>
<td>1.72</td>
<td>0.19</td>
</tr>
</tbody>
</table>

Discussion and conclusion
The aim of this study was to consider effectiveness of emotional intelligence education on interpersonal conflict and work-family facilitation. Results of the current research reveal positive effect of emotional intelligence on reducing interpersonal conflict among personnel. In other words, a significant relationship was observed after the experiment between the two groups of control and
subject in terms of interpersonal conflict. This finding is in agreement with results of Kisamore et al (2010), and Westerlaken et al (2009). Since emotional intelligence has been defined as ability of recognition, processing, and managing one’s emotions as well as those of others, it must be considered that individuals with high emotional intelligence are less often exposed to uncivil behaviors. People with emotional intelligence are able to overcome one’s anger and subsequently adjust it for applying constructive behavior (Westerlaken et al, 2009). Therefore, they will experience less uncivil behaviors in work environment. They can comprehend others’ emotions, understand them and behave accordingly. Therefore, they are less often subject to uncivil behaviors. As propounded by Kisamore et al (2010), people with emotional intelligence view beyond events and appearances; they embark on reducing tensions and they less often engage in abuse-coupled behaviors. On the other hand, they suggested that this behavior is an average form of destructive professional behaviors that are placed in some point between uncivil behavior in work environment and excessive forms of work-environment coarseness.

In addition, control and adjustment of emotions has the result that the individual has more positive relationships and less conflict with others. On the other hand, showing desirable emotions leads to provocation of agreeing reactions from others’ side, whereas advent of negative emotions usually keeps people away from one another (Lopes et al). Also, correct comprehension of emotions in oneself and others besides sympathy, as essential criteria of emotional intelligence, lead to generalized interpersonal conflict, reinforced supportive aspect, feelings expression, and receiving help from others, thus leading to improved psychological health.

Next, results of the study show that there was no significant relationship between the two groups of subject and control in terms of work-family facilitation after offering emotional intelligence education. In terms of findings for the current study, it must be stated that the results showed no group difference in work-family facilitation. This can be caused by various reasons. One possible explanation is that presumably applications interference leads to lack of differentiation in the two groups. By the way, it could be discussed that the control group has become informed of education process due to interaction with subject group’s members, especially because teaching time was not outside the personnel’s work hours, and thus educational transmission has occurred. Alternative explanation is that considering holding of educational classes in work environment and personnel’s being operative participants, they were not ready for attending the operating environment even upon holding the class, with impediments of not having free time and further investigation of family-related issues.

Therefore, despite the hypothesis that was devised in this study, it now appears that obtained results reflect the fact that emotional intelligence education as a complex psychological multi-criteria structure that consists, by itself, of several skills. Also, the effectiveness of its education depends on exploiting all interfering factors in such skills and complete establishment of them on real-life situations.

References


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