



Research Paper

Stress and Emotional Bases, investigating the Effectiveness of Emotional Intelligence Training on job Stress Dimensions: A Controlled Trial

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ABSTRACT

Introduction: Specific occupational environments such as mining activities are the source of various stressors. This study aimed to investigate the effectiveness of emotional intelligence training on job stress of the employees of GolGohar Mining and Industrial Company in Sirjan, Kerman.

Method: A quasi-experimental design with pretest and posttest was used and 86 employees of GolGohar Mining and Industrial Company in Sirjan were selected using the stratified random sampling method and were divided into two groups of treatment and control. Experimental group received training protocol of ten sessions of 90 minutes and the control group was inserted in the waiting list. Structured clinical interview, demographic questionnaire, Bar-On emotional intelligence questionnaire and job stress questionnaire were used for data collection. Chi-square test and analysis of covariance were used for data analysis.

Results: Data analysis showed that emotional intelligence training intervention on the components of workload, perceived incompetence, duplicity, restrictions and responsibilities has played a significant effectiveness ($p < 0.01$). On the other hand, there was no significant effect on the components of the physical environment. The greatest impact was on the workload. In addition to this, emotional intelligence training could play a significant role in reducing job stress ($p < 0.01$).

Conclusion: The findings of this study suggest the effectiveness of emotional intelligence training on occupational stress index. This finding can be taken into consideration in planning of the preventive and therapeutic interventions.

Keywords: Emotional Intelligence Training, Job Stress, of GolGohar Mining and Industrial Company in Sirjan, Intelligence

I. INTRODUCTION

One of the significant issues in today's hectic life is psychological stresses. According to doctors, psychologists and behavioral and management scientists, stresses are the most important factor causing mental, physical and behavioral disorders. It should be mentioned that stress plays an important role in making physical and mental problems in people. Concerns people have regarding work, family and children, increasing social problems, adverse economic conditions and diverse needs, technological advancements, concerns and fears due to the obsolescence of knowledge, management problems, employees' expectations and other problems in people's life and work makes them to always have different emotions, tensions, worries, fears and hopes which is sometimes accordant with the person's mental, physical or nervous capacity or sometimes it is not (Khosravi, 2003).

In this regard, in careers which are in mining and industrial environments, due to stressful features such as excessive noise, environmental pollution, long working hours, long distance of workplace and road risks, dangers due to explosions, and etc., the way corporate executives communicate with employees, macro-organizational policies and its sudden changes in social, political, economic and cultural changes of society and

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their effects on the organization, lack of moral and material support of staff in the face of problems, financial problems, especially in regard with salary and other financial benefits, the ungrateful feelings of organization in the face of the efforts of staff in different situations and the implementation of various projects and their constructive and creative suggestions, lack of specific organizational law in staffs' job promotion and etc. are all exposed to stress. In today's business environment, there are a lot of changes in organizations and any changes need employees and managers who are adaptive and adapt to changes; so that decent and productive social interaction for most managers and leaders, as a key element in the management of organizational changes, is increasingly important. Studies have shown that future competitions would be overtaken by managers who are able to effectively communicate with their human resources. Now stress in workplace is a new event of modern life style. In the lives of all the people who work in one of the jobs available in the community, there is stress, and this stress affects their quality and performance in various forms. In this regard, emotional intelligence is one of the elements that can greatly play an important role in the relations of staff with each other. According to StieveHeen (2005), emotional intelligence is the ability to control emotions and make a balance between feeling and logic so that we can achieve maximum happiness. Simply, emotional intelligence is an intelligence which evaluates one's ability to establish and maintain communications with others, to recognize others' feelings and emotions and how to use these emotions in order to achieve individual and organizational objectives. According to Goleman, emotional intelligence is an imminent and inevitable condition considered in organizations. Recently, some scientists found that emotional intelligence is more significant than intelligence quotient (IQ) for people (Mokhtaripour and Siadat, 2008). Emotional intelligence is one of the new ideas in business which has a significant impact on organizations (Mokhtari and Siadat, 2005). Since the emergence of emotional intelligence in psychology, this issue has been studied in various fields; especially in works and workplaces, researchers have always tried to recognize the relationship between emotional intelligence and important and effective factors in achieving career success (Dehshiri, 2003).

Emotional intelligence includes such abilities as keeping motivation, endurance in the face of problems, controlling one in critical conditions and tensions and staying calm, delaying prosperity, compassionate with others and being hopeful (Daniel Gileman, 2003).

Job stress can be gained by accumulation of stressful factors and conditions related to job which most people are like-minded in this regard. Lack of enough light, noise and vibration are stressful reasons in workplace which causes employees to show non-violent behavior such as vandalism and sabotage in the workplace to discharge their anger. When people are given an inappropriate job without having requirements, they become inefficient. This leads them to frustration and increased stress. When people do not have enough information about their job and their business objectives are not clear, an ambiguity occur in their role (Tavalayi, 2008).

In recent years, the effect of mental stress on people's health has been significantly important and a lot of researches have been done in this regard. High blood pressure and high level of cholesterol may cause a lot of mental stress and this stress can cause heart diseases, arthritis and stomach ulcers. There may also be a relationship between mental stress and cancer (Khosravi, 2003). Mental stress arises due to job, causes job dissatisfaction. In fact, the simplest and the most obvious mental effects of stress is job dissatisfaction; however, stress appears in other mental disorders. Anxiety, fatigue and shirking are such examples (Robines, 1997). Therefore, doing some researches in this field, evaluation and workplace reduction leads managers towards better understanding, decision-making and their justification on considering emotional intelligence as an important factor in improving workplace stress and performance of employees in Golegohar Company and applying correct measures in the field of human resources based on scientific research.

II. METHODOLOGY

This study is a quasi-experimental research by pre-test, posttest with control group. The statistical population of the study is composed of 780 employees working in Golegohar industrial and mining Complex in Sirjan. For sampling, 448 people were selected who have Bachelor's degree or above. The population of sample includes 86 people. The reason for selection from semi-experimental samples is that because it was group training and the intervention was educational not treatment; and for justifying Golgohar senior officials and managers, the statistical sample was selected more than the usual quantity of quasi-experimental researches which was between 20 to 40 people. This population was selected randomly and was divided into experimental and control groups. For data collection, emotional intelligence (Bar-an, 1980) and workplace stress (Esipo, 1987) questionnaires were used. The subjects were randomly assigned into experimental and control group by Microsoft Excel. Before emotional intelligence training sessions, emotional intelligence and workplace stress questionnaires had been completed by experimental and control groups. After a week, training sessions started for experimental group and the control group waited. After 10 training sessions, which were been holding once a week in a 90-minutes session, emotional intelligence and workplace stress questionnaires were completed by both experimental and control groups. A summary of 10 emotional intelligence training sessions are as follows:

First session: introduction and justification of subjects

The subjects were asked to introduce themselves. After introduction, the researcher justified subjects about training session objectives. Then a few explanations were given about training method, number of sessions and duration of each session. Abdominal breathing and mental imagery was taught.

Second session: emotional intelligence training and its components

Making subjects to become familiar with emotional intelligence and its components (self-awareness, self-regulation, self-control, self-motivation and self-expressiveness), the benefits of emotional intelligence and its improvement. Abdominal breathing was done at the beginning and at the end of the session.

Third session:

Making negative thoughts into positive ones. In this session, the subjects were asked to talk about their pleasant and unpleasant emotions in life by cognitive-behavioral theory. The subjects learned that it is not the situation or event that causes response but the meaning given to people or events makes them to appear good or bad.

Fourth session: social interaction, effective communication, expression of feelings and emotions training. In this session, the way how to start, continue and finish a communication, different ways of making relationships with others and social interaction were taught. The subjects were trained about basic principles of effective communication and listening skills.

Fifth session: interpersonal coping skills, self-expression and assertiveness were taught. In this session, interpersonal coping skills were taught to be replaced with current dysfunctional patterns in social interactions. Subjects also became familiar with assertive behavior as a proper behavior and different ways to say no.

Sixth session: emotional self-motivation and ways of increasing self-confidence, optimism and positive thinking were trained. The participants learned about the ways to increase self-confidence, self-esteem and the differences between them. They were also taught that positive thinking and optimism are important aspects of happiness.

Seventh session: emotional self-control and proper expression of emotions Subjects became familiar with proper ways to express emotions. Ways of regulating emotional relationships with others were also taught.

Eighth session: anger management this session was about anger management, its cons and pros; physiological causes of anger and the way how to control ourselves in face of angry people. Subjects were taught anger management ways.

Ninth session: empathy and stress control in this session, the ways how to get rid of emotional attachments and develop empathy were taught. The subjects learned how to control their behavior and thoughts. They become also familiar with stress, its causes and symptoms and coping skills.

Tenth session: problem-solving and decision-making skills, closing sessions In this session, the role and importance of predicting solutions selected were mentioned. Problem solving was trained practically. At the end of session, posttest was taken from both experimental and control groups. Both groups answered emotional intelligence and workplace questionnaires.

For analyzing data, descriptive statistics, analysis of variance and Levene's test were used.

III. METHODOLOGY FOR COLLECTING DATA

In this study, demographic questionnaire, structured clinical interview for disorders, demographic questionnaire designed by the researcher, Bar-AN emotional intelligence and workplace questionnaires were used.

1- Structured Clinical Interview for DSM Disorders (SCID) is a clinical interview used for diagnosing Axis I disorders based on DSM-IV. Inter-rater reliability for SCID is 0.60. Its diagnostic agreement in Farsi is 0.60 for overall specific diagnosis with higher reliability which is suitable. Kappa reliability for total current diagnosis and detection of life is 0.55 and 0.52 respectively (Sharifi et al, 2009).

2- Demographic questionnaire is used by the researcher to gather personal information such as age, education, social-economy status, medical history, duration of treatment and drug usage.

3- Bar-on emotional intelligence questionnaire is composed of 90 questions, 15 subscales of emotional self-awareness, self-expression, self-esteem, self-actualization, independence, empathy, social responsibility, interpersonal relations, realism, flexibility, problem solving, stress tolerance, impulse control, optimism, happiness. In reviewing internal consistency using Cronbach's Alpha in seven samples of different populations (Bar-on, 2000), the average Cronbach's alpha coefficients for all subscales is between 0.69 (social responsibility) and 0.86 (self-esteem) and the average is 0.76. Checking reliability by retesting average coefficient reliability is 0.66. Dehshiri (2003) reported the reliability of this test by retesting within a month for 35 people by 0.74. For subscales of stress tolerance, impulse control and flexibility, the retest coefficients were 90%, 84% and 82% respectively and for subscales of self-expression, social responsibility, independency retest coefficients were 0.58, 0.62 and 0.65. In Cronbach's alpha reliability coefficients, average Alpha coefficients

were 0.73. The highest Alpha coefficient belongs to self-esteem subscale by 0.85 and the lowest belongs to social responsibility by 0.50. And the reliability of workplace stress was measured by test-retest at a satisfactory level (Cronbach' Alpha is 0.89). For determining technical validity of this questionnaire, after translation of the questionnaire, it was given to a translator to translate it again into English. It was done to ensure the transfer of concepts in Farsi.

4- Esipo (1987) has rated different aspects of job stress. This test was introduced in 1981 and it was revised several times and many researchers have used it in their studies.

Findings

In this study, descriptive and inferential statistics in the form of parametric covariance analysis (average, variance, standard deviation) are used. Before statistical analysis, assumptions of parametric tests were checked and verified. The sameness of variances was verified and evaluated by Levene's test. The regression slopes of pretest and posttest were not significantly different between the two groups and the assumptions of homogeneity of regression slopes were established.

The demographic distribution

The demographic distribution of subjects shows that 35 people have Bachelor degree, 45 people have Master's degree and 6 people have Phd. In terms of marital status, 16 people were single in experimental group (37/2 percent) and 27 people were married (62/7 percent) and in control group 14 people (32/5) were single and 29 people (67/3) were married.

The mean and standard deviation of workplace stress scores

In experimental group, the mean and standard deviation of workplace stress scores in pretest was (202/12±20/52) and in post-test was (189/34±18/32). In control group it was (201/24±19/55) in pretest and (198/07±19/44) in posttest. The results show that the intervention is effective. In total stress table, for every single people evaluated, the sample in pretest was 63 people (73.3 percent) with natural stress, 20 people (23.2) with medium stress, and 3 people (3.5 percent) with severe stress were reported and after IQ test, 63 people (73.3 percent) were without stress, 20 people (23.2 %) with natural stress and 3 people (3.5 %) with medium stress and no people without severe stress were reported.

The results of One-way analysis of variance

The results show that the intervention in load factor was significant. The amount of the effectiveness of load factor was (0.092). And the intervention in perceived incompetence was significant. By considering ITA square, the effectiveness of role incompetence was (0.055). And intervention in role ambiguity was significant. Effectiveness on role ambiguity factor was (0.047) and intervention in group role factor was significant. The effectiveness on load factor was (0.052) according to ITA square and intervention in responsibility factor was significant. According to ITA square, effectiveness was (0.042) in responsibility factor and the intervention was insignificant in physical environment factor. Effectiveness on physical environmental factor was (0.01) according to ITA square.

According to the results, intervention in load factor, perceived incompetence, ambiguity, restrictions and responsibility was significant. But in physical environmental factor it was insignificant. According to ITA square, the most effectiveness was in load factor (0.092).

Covariance analysis

For examining the effectiveness of emotional intelligence education on total work stress, a multivariate analysis of covariance (ANOVA) was used. According to results, the effect of intervention (group) with statistical amount (17/83) was (0.01) was significant. And EQ education had significant effect in reducing work stress in intervention group and the size of intervention effect according to ITA square was (0.52).

Conclusion and discussion

As mentioned, people working in mining and industrial jobs, are facing with stress due to stressful environments in these jobs. So that, because of the inevitable situations and costs of some stressful factors in mining and industrial environments and the importance of prevention from mental and behavioral effects of stress on employees, the adoption of measures for improving workplace conditions and education of coping methods such as EQ is one of the responsibilities of senior managers in Golegohar Company which is both economical and practical in empowerment of employees in all living conditions. High prevalence of job stress disorder in the individual performance needs special attention and special interventions such as organizational interventions including team working, participation of employees in decision making, job support, reduction of conflicts and job ambiguities, increasing control over career events, psychological interventions in reducing

work stress and increasing compatibility in the workplace. Many researchers believe that these interventions not only have to be applied in the workplace, they also need to be trained as employees' training curriculum. The group which has serious disorders in work stress and severe work depression, individual intervention as well as EQ education and group empowerment is necessary. Therefore, increasing employees' endurance facing with job tensions cause saving time, individual and organizational productivity. In training sessions presented, the emphasis was on recognition of emotions, their interaction with other inner and outer individual areas. Both questionnaires used are self-measurements which are mostly under the influence of the individual from the situation. However, the current findings are consistent with findings of Babayi and Momeni (2005), Mokhtaripour, Siadat (2007), Ramezani (2004), Abdollahi (2006) and Aghamiri (2005), Aghayad (2006) and Falahati (2007), Ghamrani and Jafari (2004) and Goleman and Bar-on (2000) and Jahanian (2011) and Mayer et al (2000). As the analysis show, the research hypothesis is confirmed. The results show that EQ training reduces work stress as the individual gets a better score in personal reports from inner conditions and empowerment feeling in dealing with problems. What is done in this educational program is mental expansion about inner and outer reality along with the practice of brave acceptance and constructive confront with it. In this program, instead of dealing with specific problems, facilities dealing with the problem are considered. Such method, by expansion of the field and reducing the importance of the problem, is an opportunity to let the individual use all their potentials in confronting with the situation and make use of it. So that, it is logical that, after training sessions, the individual gets better scores in personal reports from inner situations and gets the power to deal with problems.

Because of the new concept of EQ in treatment, the limit of research history in promoting EQ, inaccessible treatment programs in promoting EQ, the lack of reviewing the personality of the therapist in performing the program and moral excuses in keeping control group waiting in the waiting list are restrictions of this study. Also, the repetition of the research based on inner absorption and conformity with groups having personal, moral disorders, behavioral fears like aggression and marital problems and the repetition of the research in other age groups are some suggestions that can be given in relation with the current research. About practical suggestions proper with facilities in mining and industrial Golegohar Company, it is suggested to hold EQ training program for managers to help them to cope better with workplace problems and conflicts by means of these skills. In fact, managers would have the opportunity to think and solve problems and have better relationship with employees. Mental health offices also become established for employees and mental health services should be provided in a workplace.

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