The relationship between job stress and anxiety level of the employees of Tehran municipality and determining the effectiveness of life skills training in reducing them

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Abstract—The objectives of the present research is to examine the relationship between job stress and anxiety level of the employees of Tehran municipality and to determine the effectiveness of life skills to reduce them.

261 employees of Tehran municipality were selected randomly as a sample. Vardorf job stress questionnaire and Zung Self Assessment Scale For Anxiety were used for collecting data and among people who had achieved scores higher than median in each questionnaire, 40 people were randomly selected and were divided into "sample" and "control" groups. The sample group was trained the life skills during 8 three-hour sessions and at the end of the course the job stress test and anxiety test was applied to both sample and control groups.

Data was analyzed by Pearson statistical correlation test and Students’s T-test for two independent groups and single-factor (one-way) analysis of variance (ANOVA) and independent analysis via differential scores. Results of the analysis indicates:

-There is a significant relationship between the job stress and anxiety level of employees (male and female) in Tehran municipality.

-There is a significant difference between employees’(male and female) job stress in Tehran municipality.

-There is no significant relationship between anxiety level of the employees in Tehran municipality.

-There is no significant difference between employees’ job stress, in terms of education level.

-There is a significant difference between employees of Tehran municipality’s anxiety level in terms of education level.

-Life skills training courses are effective on reducing job stress of the employees.

-Life skills training courses are effective on reducing the anxiety level of the employees.

Keywords- job stress; anxiety; life skills training

I. INTRODUCTION

One of the characteristics of a healthy organization is that the physical and emotional health of its employees are of the interest and attention of its management Saatchi (1370). Stress is an inevitable...
part of the professional life which is derived from the experiences of the job (Abbaspour, 1384). Job stress is the harmful physical and emotional response that occurs when there’s a poor match between job demands and the capabilities, resources or needs of the worker (Baker & Karazek, 2004). The relationship between stress and job application is like the wires of the violin. When it’s played too soft or too strong, the desirable rhythm will not be met. The same happens to human beings. When stress is too high or too low, the employee’s function will decrease. This condition can be called as the individuals’ stimulation in order to increase and improve their performance. But if the stimulus level is high, there will be negative consequences on the individual. Most of the researchers believe that burnout (Maslach & Jackson, 1981), job dissatisfaction (Cooper & Cartwright, 1997; Ross & Altmaier, 1385), depression (Wood & Wood, 1993; Ross & Altmaier, 1385) and anxiety (Wood & Wood, 1993; Barlow, 1988; Falsetti & Ballenger, 1998; Li, 1994) are of the most common results of job stress. In the Diagnostic and Statistical Manual of Mental Disorders (DSM IV) published by the American Psychiatric Association, anxiety is defined as prior worrying towards danger or future misery along with dysphoria and physical symptoms of tension and the predicted source of danger might be internal or external (Khailabari, 1383). It seems that the training courses of life skills can increase the ability of individuals for facing the challenges of life successfully and improve self-esteem and teach them how to deal with the stresses and anxiety in life and analyzes their problems using the problem-solving abilities and make important decisions in life.

It’s obvious that life skills means having reasonable and effective interpersonal relationships, fulfilling the social responsibilities, making correct decisions, solving conflicts and disagreements without harming others. The life skills courses are based on the fact that children, teens and juveniles have the right to be prepared for life and they need to be able to defend themselves and their interests in difficult situations (Shafiq-poor, 1384). Different life skills are as follows: decision making, ability to solve a problem, active thinking, critical thinking, ability to communicate effectively, maintaining interpersonal relationships, self-awareness and sympathy skill, coping with emotions, confronting stress (Fati et al., 1385).

Result of some researches (Wood & Wood, 1993; Barlow, 1988, Falsetti and Ballenger, 1998; Li, 1994) show the scientific role of stress in anxiety disorders and explains that the stress factors have causal impact on anxiety disorders. (Ross & Altmaier, 1385; from Khaajepour, 1385) Anxiety is also known as one of emotional and psychological problems which may appear because of job stress uneasiness. Piutulainen, S., Mauno, S. & Kinnunen, U. (2002) found out a significant relationship between gender and structure with job stressful factors and level of health. Men often figured their job stressful and women were more affected by job stressful factors. In their research on London high school principal’s assistants, Kutt and Mycroft (1986) explained that 25% of all subjects (154 school principal’s assistants) evaluated their job as a high school principal’s assistant very stressful or super stressful and women were more stressed than men.

In a research on patients suffering from heart diseases, Maeland and Havik (1989) showed that female patients were more stressed than men while admitting into a hospital and also stated that there is no significant relationship between stress and depression with level of education. In a research regarding an examination of job stress in six different groups in three cities of Kerman, Rafsanjan and Zarand, Islamian and Fatehi-chener (1384) found out that doctors have the highest score of stress which was statistically significant. Stress is related to age, gender, marital status and job experience, and has no significant relationship with number of children, education, income and activity location.

In a research, Cremlin and biosir (2009) concluded that there is a significant relationship between job stress and job satisfaction. Pliezer et al. (2007) mentioned the unpleasant work conditions as a job stress source which leads the employees to anxiety disorders and depression. Chang-Gin Lu, Ling Su and Cooper (2006) did a research on the effective stressful and management factors and job stresses. Findings show that there is a significant relationship between the variables of age, level of education and level of job stress as elderly managers expressed more job satisfaction. Mangers who were more experienced or more educated had experienced less job stress. Lin & Standly (1962), Verghese (1973) stated that the degree of mental disorders in illiterate or low-educated people are more than educated ones. According to some studies, Pope and Susan (1988; from Ghasemi, 1375) concluded that in stressful conditions people with Internal Locus of Control will react better than people with external locus of control.
An individual with external locus of control believes that he/she has a
trifling impact on situations and the results of those situations are
determined by chance or destiny. On the other hand, people having
the internal locus of control believe that they have control on what is
about to happen and it’s their decision that has the main effect on the
situations . In his research on the effect of life skills training on teen
students, Belot(2005) states that students suffer from stress and
anxiety and lack of ability to overcome the stress at home and school
which in this case the life skills training can be effective in reducing
them. Errecart and Ross(2002)’s studies which were performed experimentally, put 2530 male and female students equally and randomly in 2 groups of experimental and control.

Experimental group was taught the communication skills, decision making and problem solving abilities. The training course took 3 months which was held every week in two 90 minutes-sessions. The results showed a dramatic reduction of depression and anxiety and improvement of overall health conditions in experimental group .

This research is trying to answer 2 questions :Is there a significant relationship between job stress and anxiety of employees of Tehran municipality?Is the life skills training effective in reducing the anxiety and job stress?

In this regard the following hypotheses are examined:
-There is a relationship between the degree of job stress and anxiety of employees of Tehran municipality .
-There is a difference between the degree of job stress and anxiety of employees of Tehran municipality .
-There is a difference between the level of anxiety of employees of Tehran municipality .
-There is a difference between the degree of job stress of employees in terms of education level.
-There is a difference between the level of anxiety of the employees in terms of education level.
-The life skills training is effective in reducing the job stress of employees .
-The life skills training is effective in reducing the anxiety of employees.

II. RESEARCH METHOD
This is an experimental research and the pretest-posttest design with a control group was used. In the second section also the examination method is used which studies the effect of independent variable (living skill training ) on dependant variable (job stress and anxiety ).

In this research sampling was performed via stratified random sampling. First district 2 and 10 were chosen randomly among all districts and afterwards a list of all employees in these districts was provided and then they were separated according to gender and education level.

In order to collect data, Vandorf job stress questionnaire and Zung Self Assessment Scale for anxiety(SAS). Vandorf job stress questionnaire contains 53 questions. In order to answer the questions, lykert4-grade spectrum (completely disagree , disagree , agree , completely agree ) was used which respectively has the value of 1, 2, 3, 4, and sometimes vice versa. Initially this questionnaire was provided by Vandorf and his colleagues in Netherlands and is extracted from the reputed theory of Karazek and Michigan’s theory. The components of this questionnaire are as follows: attitude to skill , decision making ability, task control , job and time stress, role ambiguity, physical endeavor, facing dangerous things , lack of job security , lack of value , social support from supervisor, and social support from colleagues. Using Cronbach’s α(alpha), Vandorf and his colleagues(1988) reported the reliability of this test as 76%

Zung Self Assessment Scale for anxiety(SAS) contains 20 questions which assess the intensity of anxiety symptoms. 16 questions emphasize on positive symptoms and 4 questions on negative ones. In scoring the answers of this scale, each question has 4 levels of rating. Regarding questions which evaluate positive symptoms the rating is as follows: never =1, often =2, sometimes =3 and always =4 , and for questions evaluating negative symptoms it’s vice versa.

This scale was created by William Zung (1970) and diagnostic criteria (S.A.A) consist of 5 emotional symptoms and 15 physical symptoms . Emotional symptoms are : anger and uneasiness, dread, fear and panic, lack of mental solidarity, fear of an upcoming and unpleasant event . Physical symptoms of this scale are: shivering, somatic pain and discomfort, nausea and vomiting, dyspnea, numbness and creeping, precocious weakness and fatigue,
restlessness and inquietude, palpititation, giddiness, urine frequency, sweating, red heat, insomnia.

The internal correlation coefficient of the congruency of questions are 84% which represents high reliability of this scale (Ironi Kotash et al., 1987 from Rashid).

III. FINDINGS

As the frequency table shows, in this research the sample consists of 261 individuals and more information about them is in the table below:

**TABLE I.**

<table>
<thead>
<tr>
<th>Education</th>
<th>diploma</th>
<th>post diploma</th>
<th>B.A</th>
<th>M.A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Table Head</strong></td>
<td>NO. PERCENTAGE</td>
<td>NO. PERCENTAGE</td>
<td>NO. PERCENTAGE</td>
<td>NO. PERCENTAGE</td>
</tr>
<tr>
<td>M</td>
<td>71</td>
<td>27.7</td>
<td>23</td>
<td>8.8</td>
</tr>
<tr>
<td>W</td>
<td>24</td>
<td>9.2</td>
<td>14</td>
<td>5.4</td>
</tr>
</tbody>
</table>

A. FIRST HYPOTHESIS

There is a relationship between job stress and anxiety of employees of Tehran municipality.

**TABLE II.** RESULTS OF PEARSON CORRELATION TEST

<table>
<thead>
<tr>
<th></th>
<th>No.</th>
<th>level of meaningfulness</th>
<th>co efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>172</td>
<td>0.01%</td>
<td>53%</td>
</tr>
<tr>
<td>W</td>
<td>89</td>
<td>0.01%</td>
<td>43%</td>
</tr>
</tbody>
</table>

According to the above table, the correlation coefficient between job stress and anxiety among men is 53% and among women is 43% which is significant at 0.01 level. And by 99% confidence level, we can conclude that there is a relationship between the level of anxiety and job stress of employees in Tehran municipality.

B. SECOND HYPOTHESIS

There is a difference between the level of job stress of the employees of Tehran municipality.

**TABLE III.** RESULTS OF THE T TEST

<table>
<thead>
<tr>
<th>Group s meaningfulness</th>
<th>No</th>
<th>Medium</th>
<th>Standard deviation</th>
<th>T</th>
<th>DF</th>
<th>Degree of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>17</td>
<td>119.31</td>
<td>16.5</td>
<td>2.38</td>
<td>2.59</td>
<td>0.05</td>
</tr>
<tr>
<td>Women</td>
<td>89</td>
<td>114.29</td>
<td>15.27</td>
<td>2.38</td>
<td>2.59</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Based on the results shown in table 3, with degree of freedom of 259 and at a significance level of 0.05, since the calculated t-value (2.38) is bigger than critical t(1.96), the null hypothesis is rejected and by 95% confidence level, we can conclude that there is a difference between the degree of job stress of the employees of Tehran municipality.

C. THIRD HYPOTHESIS

There is a difference between the level of anxiety of the employees of Tehran municipality.

**TABLE IV.** RESULTS OF THE T TEST

<table>
<thead>
<tr>
<th>Group s</th>
<th>No</th>
<th>Medium</th>
<th>s.d</th>
<th>T</th>
<th>DF</th>
<th>Lm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>17</td>
<td>43.12</td>
<td>10.97</td>
<td>1.05</td>
<td>259</td>
<td>0.05</td>
</tr>
<tr>
<td>Women</td>
<td>89</td>
<td>41.72</td>
<td>8.04</td>
<td>1.05</td>
<td>259</td>
<td>0.05</td>
</tr>
</tbody>
</table>

With 259 degrees of freedom and at a significance level of 0.05, since the calculated t (1.05) is smaller than critical t(1.96), the null hypothesis is accepted and by 95% confidence level, we can conclude that there is no difference between the level of anxiety of the employees of Tehran municipality.

D. FOURTH HYPOTHESIS

There is a difference between the level of job stress of employees of Tehran municipality in terms of education level.

**TABLE V.** RESULTS OF THE TEST, SINGLE PATH VARIANCE ANALYSIS

<table>
<thead>
<tr>
<th></th>
<th>Total minuses of ss</th>
<th>DF</th>
<th>Ms</th>
<th>F</th>
<th>Lm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inter groups</td>
<td>1696.12</td>
<td>3</td>
<td>565.37</td>
<td>2.271</td>
<td>0.05</td>
</tr>
<tr>
<td>Inter group</td>
<td>66890.43</td>
<td>257</td>
<td>260.27</td>
<td>2.271</td>
<td>0.05</td>
</tr>
<tr>
<td>Total</td>
<td>68586.55</td>
<td>260</td>
<td>22.71</td>
<td>0.05</td>
<td></td>
</tr>
</tbody>
</table>

With regard to the above table, with 257 and 3 degrees of freedom and at a significance level of 0.01, since calculated F-value (2.271) is smaller than critical F-value (3.88), the null hypothesis is accepted and by 99% confidence level, we can conclude that there is no difference between the level of job stress of the employees of Tehran municipality in terms of education level.

E. FIFTH HYPOTHESIS

There is a difference between the degree of anxiety of the employees of Tehran municipality based on the level of education.

**TABLE VI.** RESULTS OF THE SINGLE-FACTOR (ONE-WAY) ANALYSIS OF VARIANCE

<table>
<thead>
<tr>
<th></th>
<th>Total minuses of ss</th>
<th>DF</th>
<th>Ms</th>
<th>F</th>
<th>Lm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inter group</td>
<td>1496.41</td>
<td>3</td>
<td>498.80</td>
<td>5.14</td>
<td>0.05</td>
</tr>
<tr>
<td>Inter group</td>
<td>24914.55</td>
<td>257</td>
<td>96.94</td>
<td>5.14</td>
<td>0.05</td>
</tr>
<tr>
<td>Total</td>
<td>24410.96</td>
<td>260</td>
<td>5.14</td>
<td>0.05</td>
<td></td>
</tr>
</tbody>
</table>

With regard to the above table, with 257 and 3 degrees of freedom and at a significance level of 0.01, since the calculated F-value (5.14) is bigger than critical F-value (3.88), the null hypothesis is accepted and by 99% confidence level, we can conclude that there is a difference between the anxiety level of the employees of Tehran municipality in terms of education.
F. SIXTH HYPOTHESIS

Life skills training is effective in reducing stress of the employees of Tehran municipality.

<table>
<thead>
<tr>
<th>TABLE VII. RESULTS OF INDEPENDENT ANALYSIS VIA DIFFERENTIAL SCORES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Test</td>
</tr>
<tr>
<td>Control</td>
</tr>
</tbody>
</table>

With 38 degrees of freedom and at a significance level of 0.01, since the calculated t (-2.81) is smaller than critical t(1.96), the null hypothesis is accepted and by 95% confidence level, we can conclude that living skill training reduces the job stress of employees of Tehran municipality.

G. SEVENTH HYPOTHESIS

Life skills training is effective in reducing anxiety on employees of Tehran municipality.

<table>
<thead>
<tr>
<th>TABLE VIII. RESULTS OF THE TEST, INDEPENDENT T WITH ....SCORES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Test</td>
</tr>
<tr>
<td>Control</td>
</tr>
</tbody>
</table>

Based on the table above, with degree of freedom of 38 and at a significance level of 0.01, since the calculated t(-4.98) is smaller than critical t(-2.42), the null hypothesis is rejected and by 99% confidence level, we can conclude that life skills training reduces the anxiety of employees of Tehran municipality.

IV. DISCUSSION

The results obtained from the hypotheses in this research are in accordance with the results of the previous researches. Results of the present research show that there is a relationship between the level of job stress and anxiety of the employees of Tehran municipality, and is in accordance with the researches performed by Wood & Wood(1983), Barlow(1998), Falsetti & Ballenger(1998) and Li(1994) which remind the role of stress on anxiety disorders and state that stress factors have causal impact on anxiety disorders. Ross & Altmairer(1385; from Khajeh-pour 1385) also believed anxiety as one of the psycho-emotional difficulties which may occur because of the job stress impact. According to the results, we can conclude that the physical pressure of job environment causes stress both for men and women and there is no difference between the two genders.

Another finding of this research showed that there is a difference between the level of job stress of the employees of the Tehran municipality. Comparing the means of the groups it shows that the level of job stress in men is higher than women. This research is in accordance with the results of the research performed by Piitulainen, Mauno & Kinnuen(2002) but is not incongruence with the results of the research done by Kutton & Mycroft(1986) which noticed no significant difference between job stress in men and women. In regard to the community of the present research, the reason which states that the impact of pressures arising from outside the organization factors and difficult responsibility of providing a family and also more interaction with clients because of the job position, intensifies the pressures for men in their jobs, is accepted. In other words, because of the responsibility of providing a family, society expectations from male employees is higher than female employees.

Another hypothesis in this research states that there is a difference between the degree of anxiety of employees of Tehran municipality. According to the findings of the research, regarding the calculated t(1.05) which is not significant in more than 99% confidence level, it can be concluded that there is no difference between the level of anxiety of employees of Tehran municipality. The result of this research is not in accordance with the results of the research done by Havik & Maeland (1989). The reason for this incongruency can be men’s high job sensitivity in municipality. They experience more anxiety, especially when they need to interact with many clients and since women have more official positions and less direct contact with clients, they feel less tensed. So this caused our conclusion not to show gender bias related to anxiety.

The other finding of the research shows that there is no difference between job stress level of the employees of Tehran municipality in terms of education level. However at first glance at the means, it seems that the higher the education, the less the job stress will be. Having a statistical test done, it became clear that this relationship is not statistically significant and the level of education of employees has no significant impact on increasing or decreasing job stress. The results of this research is congruent with the research performed by Islamian and Fatehi(1384) and is not in accordance with the research done by Chang-Gin lu, Ling su and Cooper(2006). According to the above results and in comparison to other researches, there’s a probability that in more sensitive jobs like medical, level of education can have an impact on the level of stress but in other insensitive jobs like a clerk, the difference in education doesn’t have any effect on the level of stress.

Another finding of this research is the existence of a difference between anxiety level of employees of Tehran municipality in terms
of the level of education. In regard to the means and calculated f-value (5.14) which is significant in more than 99% confidence level, it can be stated that it is in accordance with results of research done by Lin and Standley (1962) and Vergheese (1973) and is incongruent with the researches done by Havik and Maeland (1989).

According to the results mentioned above, it can be deduced that by improving level of education, coping skills also improves and this enables individuals to control their anxiety when facing stress factors. Also an increase in education level causes a change in the individuals’ job title, and it is a reason for above findings. As we mentioned before, titles which need more attention or response to clients increase the level of stress and anxiety in employees.

According to this research, we found out that life skills training is effective in reducing the degree of job stress of the employees of Tehran municipality. As a result, it can be concluded that since life skills training causes self confidence or self awareness, cognitive distortions modification, internalization of locus of control, an increase in assertive behavior, an increase in problem solving skills, an improvement in interpersonal relationships, muscular relaxation and stress management can significantly reduce the anxiety of the employees.

I. SUGGESTIONS

Since the results of the research confirms that life skills training is effective in reducing job stress and anxiety and also considering the fact that this therapeutic approach has not been applied in industrial centers and organizations in order to reduce job stress and anxiety, researcher’s efforts in order to find a research regarding the effectiveness of life skills training in reducing job stress didn’t come to any conclusion. Broad usage of this approach in industrial centers and organizations as an effective therapeutic approach for reducing job stress and psychological disorders arising from it and as a result, increasing organization productivity is suggested.

REFERENCES