Comparison of Job Stress and Psychological Health in Male Athlete and Non-Athlete Teachers in the Schools of the City of Euclid

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Abstract

The purpose of this study was comparison of job stress and psychological health in male athlete and non athlete teachers in schools of the city of Euclid. This research was descriptive and survey study. Statistical population included all male employees of schools in the city of Euclid. Statistical sample size was estimated using the Morgan Table to be 267 individuals who were selected using multi stage cluster sampling. 138 individuals of this group were athletes with activity in team and individual fields and 129 individuals were non athlete who according to their report had no participation in any sport field. For collection of data, the Steinmeyer (1977) job stress questionnaire and Goldberg’s (1979) general health questionnaire were used. The reliability of the job stress and general health questionnaires was calculated using the Cronbach’s alpha coefficient in this research which were 0/862 and 0/78 respectively. For data analysis SPSS software and statistical methods of independent t-test and Spearman’s correlation coefficient were used. The results of the research showed that significant (P>0/05) difference exists between scores of job stress for athlete and non athlete teachers. In other words, job stress was less among athlete compared to non athlete teachers. Additionally significant difference existed in mean scores of psychological health and its subscales except the component of social dysfunction (P>0/433), between athlete and non athlete teachers (P>0/05) and athlete teachers enjoyed higher psychological health. Yet, in the subscale of social dysfunction, this difference was not statistically significant. On the one hand this research showed a positive and meaningful correlation between psychological health and its subscales with job stress (P>0/01). In other words, the higher job stress is among athlete and non athlete teachers, the lower is the level of psychological health and this correlation is stronger among athlete compared to non athlete teachers.

Keywords: Job Stress, Psychological Health, Teachers, Athlete and Non- Athlete.
Introduction

Humans all along their life should persistently adapt themselves with changes in their surrounding world and cope with them; while their physiological and nonphysiological needs should be provided for to enable them to maintain their health in a world that is constantly changing (Goodwini et al, 2012). If in previous centuries humans were threatened by communicative diseases, now a day because of changes in health conditions of most locations in the world, people face such dangers less commonly. What is significant now a day is more and more presence of psychological disorders with various kinds and severities (Yaghoubi, 1995, cited in Asadi & Ahmadi, 2000). Psychological health is balanced and coordinated behavior within society, understanding and accepting social realities and ability to cope with them and blossoming of intrinsic talents (Sadeghian & Heydarianpour, 2009). In defining «psychological health» various models, theories and outlooks have been proposed. In the viewpoint of Freud, «psychological health» means a person’s coping with him or herself and demands and pressures of society. According to the behaviorist model, psychological health means having a coping behavior and lacking unadaptive behavior. Based on the framework of this viewpoint, a healthy individual is one who behaves in society in such a way that he or she can reach his or her goals. In «humanitarian» psychology emphasis is placed on the nature and positive aspects of humans and their activeness. According to this model, «psychological health» means growth, blossoming and realization of talents and internal human forces (cited in Mirdrikondi, 2012).

On the one hand, difficult social and environmental conditions are among important factors in creation of psychological pressure (tension) that endanger psychological health. In other words, health of a person can be changed due to stress and lack of balance in physical and psychological state can occur (Powell & Enrith, 1991).

Stress is a general and global phenomenon that involves psychological, physical, family and social dimensions of humans (Hassanzadeh et al, 2005). The expression of stress goes back to the fifteenth century and means tension or physical pressure. In 1706, this expression was used to describe hardship, difficulty or misfortune and in mid 19th century its meaning was extended to include pressure and a force exerted on the body and psyche (Pouladi Reyshahri, 1995).

Now a day, a large number of workers (teachers) undergo stress (cited in Bagherzadeh et al, 2004). Job evolutions such as organizational changes change in income and wage, job promotion, decreased or increased human resources and social changes are topics that in a way exert pressure on the individual and lead him or her to disturbance, worry, concern and anxiety (Robbins, 2005, cited in Hashemzadeh et al, 2000). Job induced stress is one that inflicts particular individuals. In this definition, both personal traits and job factors are involved. Since the person and environment have mutual effect on each other, in fact, it can be stated that job stress in such a weave is induced by interaction. Therefore, mutual interaction between work conditions and personal traits of the occupied person are such that demands of the work place are more than the person can handle (Harneleh, 2000, cited in Goodwini et al, 2012). On this basis, job stress is one of the components influential on health, security and comfort of individuals. The more a person is exposed to a tensionful and stress inducing environment, his or her psychological health is more at risk (Goodwini et al, 2012).
In this line, Abedi (2010) in a research with participation of students at Azad Islamic University titled “Comparison of level of tension among athletes and non athletes” showed that non athlete students experience higher tension compared to athlete groups. Shabani and colleagues (2010) in evaluation of determination of the relationship between source of control and general health of athlete and non athlete students of the University of Tehran with participation of 206 boy students (103 athletes and 103 non athletes) 18-25 years of age at the University of Tehran showed that boy athlete students with regards to source of control internalize more and with regards to general health are in better condition compared to boy non athlete students. Mousavi and Mozafari (2007) in a research titled “Comparison of psychological pressure of athlete and non athlete employees of units at the Azad Islamic University of the country” with participation of 905 employees of units of Azad Islamic University in region 3 of the country showed that meaningful difference exists between psychological pressure of athlete and non athlete workers. Bagherzadeh and colleagues (2004) with comparison of stress in athlete and non athlete staff of the central organization of the University of Tehran in a sample of 139 individuals found that significant difference exists between stress of athlete and non athlete employees. In other words, less stress exists among athlete compared to non athlete workers. Assadi and Ahmadi (2000) in a research titled “Comparison of psychological health of boy athlete and non athlete students in high schools of the county of Sanandaj” with participation of 406 boy students from high schools of the county of Sanandaj in the 1999-2000 academic year showed that meaningful difference exists between athlete and non athlete students in factors related to psychological health including «physical signs, anxiety, sleep disorder, social functioning and depression». In all these cases, students who were athletes had advantage. These students had better conditions compared to non athlete students.

Additionally, Peluso and colleagues (2005) in their study reached the conclusion that regular physical exercise increases psychological health. Bailey and McLaren (2005) in a research did not find meaningful correlation between sports activity and physical preparedness with psychological health. Results of the research by Goodwin (2003) with participation of 8098 athletic and non athletic individuals 15 to 45 years of age showed that in more than half of individuals physical activity led to decreased depression and anxiety.

With consideration of the research background and finding of contradictory results, the purpose of this research was comparison of job stress and psychological health in athlete and non athlete teachers in schools of the city of Euclid in the frame of the following hypotheses:

1- Difference exists in job stress between athlete and non athlete teachers.

2- Difference exists in psychological health between athlete and non athlete employees.

3- Correlation exists between job stress and psychological health in both two groups.

**Method**

This research was descriptive and survey study. Statistical population included all male employees of schools in the city of Euclid. Statistical sample size was estimated using the Morgan Table to be 267 individuals who were selected using multi stage cluster sampling. 138 individuals of this group were athletes with activity in team and individual fields and 129
individuals were non-athlete who according to their report had no participation in any sport field.

Measurement Instruments

**The Steinmeyer Job Stress Questionnaire (1977).** Steinmeyer prepared this questionnaire for evaluation of job stress of employees and it includes 36 items with 3 degrees (completely correct, to some extent correct and incorrect) regarding tension causing situations in the work environment. The translation of this questionnaire has been brought in the book of psychological stress (Gharachedaghi, 1991) and Yaghoubi (1995) has reported reliability coefficient for it using halving the questionnaire and re-testing of 0/69 and 0/72 respectively. Hassanzadeh and colleagues (2005) has estimated its reliability coefficient using the Cronbach’s alpha coefficient to be 0/85. In this research, the questionnaire reliability using the Cronbach’s alpha method was equal to 0/78.

**The Goldberg General Health Questionnaire (GHQ).** In this research the 28 item form of the Goldberg general health questionnaire introduced by Goldberg and Hillier (1979) was used. This questionnaire has four minor scales each of which consists of 7 items. The main purpose of this questionnaire is not to obtain a specific diagnosis in the hierarchy of psychological disorders, but to create distinction between psychological disease and health. In fact, the 28 item form of this questionnaire has the advantage of being designed for all members of society and can as a screening instrument determine the possibility of psychological illness in an individual. The four subscales of the GHQ are physical signs, signs of anxiety and sleeplessness, signs of social dysfunction and depression and these four subscales have been determined based on factor analysis of responses. This questionnaire is scored based on a Likert scale (0-1-2-3) and total score for each individual can be between zero and 84. Furthermore, it should be explained that low score in this questionnaire shows high psychological health and high score shows low psychological health (Stura, 1991).

Goldberg and Williams (1988, cited in Taghva, 2001) found a halving reliability of 0/95 and John (1985, cited in Taghva, 2001) found an internal consistency for the general health questionnaire using the Cronbach’s alpha to be 0/90. Keyes (1984, cited in Taghva, 2001) has obtained a Cronbach alpha for this questionnaire of 0/93 and Shack (1984, cited in Taghva, 2001) has reported a Cronbach’s alpha of 0/88 for 2150 students. Taghva (2001) reported re-test reliability coefficient for GHQ-28 in a time interval of 3 to 4 weeks of 0/72 in total, 0/60 for physical signs, 0/58 for depression, 0/58 for social dysfunction and 0/68 for signs of anxiety. In this research, the Cronbach’s alpha coefficient for the general health questionnaire was obtained to be equal to 0/862.

Data analysis was performed using SPSS software and statistical methods of student t-test, independent t-test, Spearman’s correlation coefficient and regression analysis.
Results

Table 1. Distribution of number of participants

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athlete</td>
<td>138</td>
<td>51/7</td>
</tr>
<tr>
<td>Non athlete</td>
<td>129</td>
<td>48/3</td>
</tr>
<tr>
<td>Total</td>
<td>267</td>
<td>100/0</td>
</tr>
</tbody>
</table>

As shown in Table 1, from a number of 267 male teachers participating in the study, 138 were athletes and 129 non athletes.

Considering the results of the Klomogorov-Smirnov test, it is noted that distribution of traits among the sample is similar to their distribution in a normal population. Therefore, the independent t-test was used for testing the first and second hypotheses. Considering Table 2, results of tests showed that significant difference exists between score of job stress for athlete and non athlete teachers (P>0/05) and mean job stress among athlete teachers is less than non athlete teachers.

Table 2. Results of independent test for comparison of job stress in each of the two groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Teachers</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>t</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job stress</td>
<td>Non athlete</td>
<td>47/1304</td>
<td>21/93282</td>
<td>4/524</td>
<td>265</td>
<td>0/000</td>
</tr>
<tr>
<td>Job stress</td>
<td>Athlete</td>
<td>60/0775</td>
<td>24/8163</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additionally, for evaluation of the second hypothesis and comparison of psychological health and its subscales in athlete and non athlete teachers, the independent t-test was used. Considering Table 3, results of tests showed that significant difference existed in mean scores of psychological health and its subscales except the component of social dysfunction (P>0/433), between athlete and non athlete teachers (P>0/05) such that athlete teachers enjoyed higher psychological health compared to non athlete teachers.

Table 3. Results of independent t-test for comparison of psychological health and its components in both two groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Teachers</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>t</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical signs</td>
<td>Athlete</td>
<td>16/3116</td>
<td>4/44069</td>
<td>10/111</td>
<td>265</td>
<td>0/000</td>
</tr>
<tr>
<td>Physical signs</td>
<td>Non athlete</td>
<td>10/9457</td>
<td>4/21550</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>Athlete</td>
<td>15/0072</td>
<td>6/20748</td>
<td>4/238</td>
<td>265</td>
<td>0/000</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Non athlete</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
For evaluation of the relationship between job stress and psychological health (third hypothesis) in both two groups, the Spearman correlation test was used. Results of the test showed a positive and meaningful correlation between psychological health and its subscales with job stress (Table 4). In other words, the higher job stress is in athlete and non athlete teachers, the lower is psychological health level and this correlation is stronger in athlete compared to non athlete teachers.

Table 4. Results of Spearman correlation test between psychological health and its components with job stress

<table>
<thead>
<tr>
<th>Variable</th>
<th>Non athlete</th>
<th>athlete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical signs</td>
<td>Correlation</td>
<td>0/981**</td>
</tr>
<tr>
<td></td>
<td>Significance level</td>
<td>0/081**</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Correlation</td>
<td>0/504**</td>
</tr>
<tr>
<td></td>
<td>Significance level</td>
<td>0/000</td>
</tr>
<tr>
<td>Social dysfunction</td>
<td>Correlation</td>
<td>0/290**</td>
</tr>
<tr>
<td></td>
<td>Significance level</td>
<td>0/000</td>
</tr>
<tr>
<td>Major depression</td>
<td>Correlation</td>
<td>0/386**</td>
</tr>
<tr>
<td></td>
<td>Significance level</td>
<td>0/000</td>
</tr>
<tr>
<td>Psychological health</td>
<td>Correlation</td>
<td>0/533**</td>
</tr>
<tr>
<td></td>
<td>Significance level</td>
<td>0/000</td>
</tr>
<tr>
<td>Correlation is</td>
<td>Sample size</td>
<td>129</td>
</tr>
<tr>
<td>meaningful at a 0/01</td>
<td>level</td>
<td></td>
</tr>
</tbody>
</table>
Discussion and Conclusion

This research showed that difference exists in job stress among athlete and non athlete teachers and mean job stress among athlete teachers in lower than non athlete teachers. In agreement with this finding, Abedi (2010) in a research showed that non athlete students experience higher tension compared to athletes. Additionally, Mousavi and Mozafari (2007) and Bagherzadeh and colleagues (2004) in comparison of psychological pressure in athlete and non athlete employees showed that psychological pressure of athlete workers is less than non athlete employees. Results of research by Goodwin (2003) are also in agreement with these findings that regular physical activity leads to decreased depression and anxiety. In explanation of this finding, it can be stated that as Nieman and colleagues (1990) have found in their research that time allocated to exercise by participants is accompanied with a good feeling, they sleep better and cope better with psychological pressures. In other words, engaging in appropriate sports leads to decreased psychological pressure and reaching organizational objectives (Mousavi & Mozafari, 2007).

Another finding of this study shows that difference exists between psychological health of athlete and non athlete employees. In other words, athlete teachers have higher psychological health compared to non athlete teachers. Yet, in the subscale of social dysfunction, this difference was not statistically significant. Findings of the research by Shabanibahar and colleagues (2010), in accord with results of this study, in evaluation of determination of relationship between source of control and general health showed that boy athlete students regarding source of control are more internalizing and regarding general health have better condition compared to non athlete boy students. Asadi and Ahmadi (2000) also in a research showed that significant difference exits between athlete and non athlete students in the factors of psychological health. In all these cases, athlete students had an advantage.

Additionally, Peluso and colleagues (2005) in their study reached the conclusion that regular physical activity enhances psychological health. Cooper and colleagues (1991) also in agreement with these findings in a research show increased psychological health following physical exercise.

On the one hand, Bailey and McLaren (2005) in a research did not find meaningful correlation between sport activity and physical preparedness with psychological health. King and colleagues (1989) in another research did not witness meaningful difference in psychological variables after an exercise period between experimental and control group which disagrees with findings of this study.

In this line, it can be stated just like in human psychology, psychological health is equivalent to growth, blossoming and realization of talents and internal human forces (cited in Mirdrikondi, 2012).Sports as a beneficial activity that keeps the spirit happy and joyful and gives the individual the opportunity to expand his or her social relations in sport arenas and to empty his or her excitement, on this basis, can provide a context for expression and growth of people’s talents. Therefore, it is considered as an effective factor in increasing psychological health of individuals.
Additionally, this research shows that meaningful correlation exists between job stress and low psychological health in both groups. In other words, the higher job stress is among athlete and non athlete teachers, the lower is psychological health. This correlation is stronger in athlete compared to non athlete teachers. In agreement with this research, Tenant and colleagues (1987) and Attar (1995) showed that meaningful correlation exists between job stress and psychological health among occupied groups. Additionally, Margolis (1974) showed that stress due to high level of work is correlated with signs of stress and psychoneuroses.

In explanation of this finding, it can be stated that Cooper (1994) believes that the level of responsibility of individuals and their method of communication with colleagues and supervisors, noise, level of light and job shift are among factors that influence individual’s psychological health and job satisfaction. Additionally, Brown (cited in Bagherzadeh and colleagues, 2004) states that sports and physical exercise is importantly and sensitively helpful in creation of a sense of health in patients and has important psychological benefits for them and improves their well-being. On this basis, it can be stated that meaningful correlation exists between job stress and psychological health and with decreased job stress psychological health is promoted in individuals and in this context sports as intermediary variable has effective and key role in decreasing stress and increasing psychological health level.

**Research Limitations**
Among limitations of this study is little background research related to the study in the community under discussion and single gender of the statistical population.
References

[In Persian]


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[In Latin]


