ICSPEK 2013

Optimizing the Quality of Life Through Professional Physical Education

Marius Stoicescu

National University of Physical Education and Sport, 140 Constantin Noica St., 060057, Bucharest, Romania

Abstract

The purpose of the present study is to analyze the relationship between occupational stress and physical exercise in the case of 86 individuals working for a retail company. The study aims at highlighting the role of professional physical education in improving the individuals’ availability to become involved in solving work-related tasks, in improving the quality of professional performance and communication at the workplace and, all in all, in enhancing quality of life. The physical education program used in this study can be described as follows: it involved indoor exercise of moderate intensity, during at least 30 minutes, 3 times a week. Given the positive results practicing physical exercise can have on various components of human psychology, we think that the concept of professional physical education should be redefined, by extending its applicability from professions involving various forms of physical activity to all domains of activity that require the achievement of professional performance.

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Selection and peer-review under responsibility of ICPESK 2013.

Keywords: professional physical education, quality of life, stress;

1. Introduction

Studies conducted in various European countries reveal a generally low level of physical exercise practice in the population. Physical activity seems to be disappearing from human life. People are driving around in their cars more and more, their working conditions are becoming increasingly sedentary and they do not do too much exercise during their leisure time either (Cavill et al., 2006). It is estimated that physical inactivity leads to nearly 600 thousand deaths in Europe every year, and weight gain and obesity are responsible for about 1 million deaths (Sjöström, 2006). One of the most dangerous aspects associated with sedentary working conditions is occupational stress. A survey on working conditions conducted in 2005 in the European Union found that 22.3% of European employees stated they were stressed because of their occupation, and more than a quarter of them

* Corresponding author. Tel.: 0040749279335
E-mail address: marius_stoicescu@yahoo.com
(28.6%) believed that their health and personal safety were at high risk because of their work. In the same context, 82.3% of Europeans declared that they were very satisfied with their working conditions, the lowest level of satisfaction (58.8%) being recorded among the Romanian respondents (Parent-Thirion et al., 2007). In another study, 28% of the 147 million EU employees complained about stress (Servant, 2008).

In addition to the direct economic losses that can be induced by occupational stress, there are often also hidden costs resulting from reduced productivity and reduced quality of customer service, due to "employees [being] tired or depressed, and being characterized by a] lack of energy, precision and innovativeness at work". Spielberger and Vagg (2010) identified correlations between stress and poor performance at work as a result of factors such as health problems, employee turnover, absenteeism, spreading rumours, etc.

In 2010, the European Commission initiated a Eurobarometer survey regarding the practice of physical exercise in various forms, whose results are summarized below (Special Eurobarometer 2010):

- 40% of Europeans say that they practice sports at least once a week;
- men are more active than women in terms of the practice of physical exercise;
- physical exercise decreases uniformly with age;
- 75% of the respondents stated that the opportunities offered by the local communities make them active.

In order for physical exercise to deliver maximum benefits, it has to be performed in a regular manner at least three times a week, with an emphasis on endurance exercises and avoiding as much as possible static force exercises which can be dangerous for the heart (Bota, 2006).

In the United States, many companies focus on the physical condition of their employees, and they demonstrate their commitment by making sport facilities available for their staff. Thus, employees can acquire membership in sports facilities based on an agreement concluded between their employer and a sports services provider. Employers finance their employees’ sports practice because they are aware of the important material benefits they may obtain in exchange in terms of professional performance, due to the fitness level acquired by individual employees. Studies have shown that benefits have been observed in the following areas (Reilly, 2010):

- increasing satisfaction with the workplace;
- improving company image;
- promoting employment opportunities;
- increasing productivity;
- reducing absenteeism;
- reducing the risk of accidents;
- reducing the risk of burnout;
- reducing health insurance expenses.

2. Purpose of our study

This research was conducted in order to establish the relationship between occupational stress and physical exercise for a group of individuals working for a retail company. In that context, we planned to collect clear evidence concerning the effects of applying a physical exercise program for dealing with occupational stress, an important factor in defining an adult’s quality of life.

The paper also aims at emphasizing the role of professional physical education in improving the individuals’ availability to become involved in solving work-related tasks, in improving the quality of professional performance and communication at the workplace and, all in all, in enhancing quality of life.

In our research we pursued the following objectives:
• assessing the level of various components of occupational stress;
• reducing occupational stress through specific professional physical education methods;
• applying the professional physical education program;
• formulating conclusions and defining future strategies.

3. Methods

3.1. Research design

The experimental study we initiated took place in Bucharest and started with the acquisition of an assessment tool for testing the level of occupational stress, the Occupational Stress Questionnaire (JSS) (Spielberger and Vagg, 2010). This tool was applied to a group of 86 subjects in 2 stages, at the beginning of October 2010 and at the end of March 2011.

Besides applying the Occupational Stress Questionnaire, we conceived physical education programs for 43 subjects, that they implemented in the gyms of the World Class fitness network.

We designed the programs taking into account the facilities available in the fitness centres: aerobics hall, spinning bike room, fitness suite, indoor swimming pool, and sauna.

It is important to mention that we chose the World Class fitness network for implementing our professional physical education programs due to the fact that the retail company whose employees were the subjects of our research had concluded a partnership contract with that fitness centre network.

3.2. Hypothesis

The systematic practice of physical exercise can lead to a decrease in the professional stress index, improved communication and professional performance, which are all elements of a good quality of life.

3.3. Subjects

The sample group investigated included 86 subjects from Bucharest, with ages between 21 and 41, sharing the same occupational environment, that of the retail company Mic.ro. Among them, there were 41 men and 45 women. The subjects were divided into 2 subgroups, an experimental group and a control group.

The work performed by the subjects in our sample group requires low energy consumption, as most activities involve various office tasks. Thus, the employees spend most of their time in front of the computer screen or on the phone for the call centre.

This low-intensity effort is concentrated at the level of the upper limbs, the visual analyzer and the attention processes being especially involved in the workplace tasks. For the employees in the operational department, the activities mentioned above, performed in a sitting position, are complemented by some activities performed standing or walking about.

3.4. The professional physical education program

The physical education program we developed was scheduled over 26 weeks (6 months) and it was built ergonomically and physiologically according to the characteristics of the professional effort type performed by the employees. The program was meant to be stimulatory and compensatory in nature, and it included the following elements:
• indoor activities - walking, running, swimming, gymnastics, aqua gym, spinning, cycling, ergometric bike;
• relaxation and tension release exercises;
• each activity was coordinated by a specialist;
• the program was also meant to achieve social integration, group cohesion, developing positive relationships among colleagues, relieving workplace pressure;
• the sessions involved aerobic exercise of moderate intensity, performed during at least 30 minutes, 3 times a week.

4. Results and discussion

The results obtained in the Job Stress Survey for both the experimental and the control group can be observed in Table 1.

Table 1. Job Stress Survey Results

<table>
<thead>
<tr>
<th>Job Stress Survey</th>
<th>Experimental group/initial testing</th>
<th>Experimental group/final testing</th>
<th>Control group/initial testing</th>
<th>Control group/final testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Stress Index, JS-X</td>
<td>26.46</td>
<td>25.12</td>
<td>26.03</td>
<td>27.28</td>
</tr>
<tr>
<td>Job Stress Severity, JS-S</td>
<td>5.26</td>
<td>5.09</td>
<td>5.22</td>
<td>5.26</td>
</tr>
<tr>
<td>Job Stress Frequency, JS-F</td>
<td>5.06</td>
<td>4.91</td>
<td>5.00</td>
<td>5.16</td>
</tr>
<tr>
<td>Job Pressure, JP-X</td>
<td>25.10</td>
<td>24.03</td>
<td>26.20</td>
<td>27.20</td>
</tr>
<tr>
<td>Job Pressure Severity, JP-S</td>
<td>4.94</td>
<td>4.87</td>
<td>5.12</td>
<td>5.18</td>
</tr>
<tr>
<td>Job Pressure Frequency, JP-F</td>
<td>5.16</td>
<td>4.98</td>
<td>5.19</td>
<td>5.28</td>
</tr>
<tr>
<td>Lack of Organizational Support Index, LS-X</td>
<td>25.97</td>
<td>23.90</td>
<td>25.80</td>
<td>26.41</td>
</tr>
<tr>
<td>Lack of Organizational Support Severity, LS-S</td>
<td>5.43</td>
<td>5.11</td>
<td>5.30</td>
<td>5.27</td>
</tr>
</tbody>
</table>

![JSX Results](image1)
![JPX Results](image2)

Fig. 1. (a) JSX Results; (b) JPX Results

In order to be able to draw our conclusions we converted all the data into percentages according to the JSS Manual (Table 2).
Table 2. Job Stress Survey results converted into percentages

<table>
<thead>
<tr>
<th>Job Stress Survey</th>
<th>JSX</th>
<th>JSS</th>
<th>JSF</th>
<th>JPX</th>
<th>JPS</th>
<th>JPF</th>
<th>LSX</th>
<th>LSS</th>
<th>LSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group/ initial testing</td>
<td>74.53</td>
<td>48.72</td>
<td>78.84</td>
<td>61.74</td>
<td>49.30</td>
<td>61.98</td>
<td>71.40</td>
<td>45.93</td>
<td>76.40</td>
</tr>
<tr>
<td>Experimental group/ final testing</td>
<td>70.58</td>
<td>41.16</td>
<td>76.63</td>
<td>58.72</td>
<td>47.09</td>
<td>59.30</td>
<td>67.67</td>
<td>35.93</td>
<td>75.00</td>
</tr>
<tr>
<td>Control group/ initial testing</td>
<td>73.14</td>
<td>44.77</td>
<td>77.33</td>
<td>62.44</td>
<td>53.26</td>
<td>59.88</td>
<td>70.35</td>
<td>40.81</td>
<td>77.09</td>
</tr>
<tr>
<td>Control group/ final testing</td>
<td>75.47</td>
<td>46.86</td>
<td>80.00</td>
<td>65.12</td>
<td>55.70</td>
<td>61.51</td>
<td>71.74</td>
<td>39.53</td>
<td>78.60</td>
</tr>
</tbody>
</table>

Comparing the two sets of test results obtained by the experimental group, we can state that the physical exercises they practiced led to a reduction of their stress levels on all the scales and sub-scales. Despite this reduction, continuing to apply the professional physical education program is still necessary due to the high percentages obtained for components such as stress frequency (76.63%) and lack of organizational support (75%).

In the control group results, we notice an obvious increase of the values of the stress severity component in the final test as compared to the initial test. Concerning the lack of organizational support, we find that the values obtained in the two tests overlap. The stress index (JSX) records higher values in the final test (75.47%) than in the initial test (73.14%).

![Fig. 2. Final test values – experimental/control group](image)

Seeing that the level of occupational stress had actually increased in the control group during the 6 months that passed since the initial test, we came to the conclusion that, under the circumstances, employees in various compartments of the company were in danger of reaching a state of exhaustion, which could have negative consequences on the company’s results, but also on the employees’ health and, implicitly, on their quality of life.

Moreover, the growing levels of occupational stress found among control group members have revealed the need for developing recreational-compensatory activities in the form of professional physical education programs.
The implementation of our professional physical education programs has demonstrated that there is a clear interdependency between the systematic practice of physical exercise, the capacity for effort and the level of occupational stress, seen as an indicator of the quality of life.

Creating healthy athletic behaviours and getting in good shape are aims that can be achieved by practicing physical exercise as part of professional physical education programs. The high spirits felt during and after participating in physical exercises programs can be a key motivating factor for promoting professional physical education as a constitutive part of a healthy adult lifestyle.

Physical activity is not only a health-related issue, but also a possibility to promote an appropriate society and to protect the environment, an investment in the future generations. Through the systematic performance of physical exercises, one can achieve professional fitness, which means that employees can cope more easily with the requirements of the workplace, especially with those that are physical in nature.

5. Conclusions

The statistical processing, data analysis and interpretation of results has led us to a set of specific conclusions. Thus, we found statistically significant differences between the 2 assessments and the 2 groups, which disprove the null hypothesis and confirm the hypothesis of our research.

According to our hypothesis, physical exercise practiced systematically by the adult population leads to a reduction of the professional stress index as well as to improved communication and professional performance, which are all elements of a good quality of life.

On the other hand, from a biological perspective, these programs allow the development of different functional adaptive responses to the changes caused by stressful professional environments, while also helping to shape favourable attitudes and behaviours regarding the practice of physical exercises. This is a new perspective that can usefully complement already existing practices.

Given the positive results practicing physical exercise can have on various components of human psychology, we think that the concept of professional physical education should be redefined, by extending its applicability from professions involving various forms of physical activity to all domains of activity that require the achievement of professional performance.

References