The Comparison of General Health in Athletic and Nonathletic Elderly

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Article history:
Received 15 January 2014
Received in revised form 19 April 2014
Accepted 24 April 2014
Available online 5 May 2014

Keywords:
Elderly, General Health, Exercise, Anxiety, Depression.

ABSTRACT

Background: Elderly is a sensitive age in society. General health which include some of the psychological factors may affect their style of living. Thus, providing these components according to the priority importance may save time and costs in improving their general health. This article aimed to compare the general health of athletic and nonathletic elderly over 60 years old. Objective: The present study was a survey in which 176 elderly over 60 year-old consist of 90 athletic and 86 nonathletic were surveyed. The GHQ questionnaire was used to collect the data. All statistical analysis were done by SPSS software (version 16) with significant level of p<0.05. Results: As observed, there was a significant difference between athletic and non-athletic general health and its components. Athletic group had more desirable situation than non-athletic one (p<0.001). Conclusion: Athletic elderly had a better and more desirable situation in components like physical signs, anxiety and sleep disorders, social performance, depression and the total general health in comparison to non-athletic elderly. Thus, in order to improve elderly general health, having regular physical activity may be an effective way.

INTRODUCTION

Many of the nations believe that the growth of the elderly population is the phenomenon of the 21th century. There are more than 605 million of elderly in the world and it may increase to 2 billion till 2050. Furthermore, it is estimated that the elderly population became double till two decades later in Asia [1]. Thus, according to their population growth, paying attention to this stratum of society becomes more important day by day.

On the world health organization's view, the first indicator of health in public is its physical activity rate [2]. Public health can be improved through exercise. This is as the same in elderly. Thus, exercise and physical activity can be sued as a tool for maintaining and enhancing community health, especially seniors and elderly.

The mental health is an important issue to prevent mental illness [3]. Symptoms such as anxiety, sleep disorder, and depressive symptoms are of the important factors in the overall health of individuals. However, in the past it was thought that exercise has a positive effect only on the physical health of individuals, nowadays researchers have confirmed the positive effects of exercise on mental health [3]. Hossaini et al (2006) conducted a study on college students and showed that physical activity can reduce depression [4]. The positive effects of exercise on mental health in people with diabetes type 2 with a mean age of 45 years has also been confirmed [5]. Furthermore, it has been concluded that aerobic and anaerobic exercise, in male students may reduce the anxiety which is one of the indicators of mental health. As it is observed that aging (over 65 years old) may decrease the body physiological reserves and balance, it may confirm that elderly differ from younger ages. Accordingly, the present study aimed to compare the general and mental health in athletic and nonathletic elderly.

Method:

The present study was an applied and descriptive – survey study. 176 elderly consist of 90 athletic and 86 nonathletic elderly were selected by convenience sampling method. Those who exercise 3 times a week and 20 minutes each session at least were in athletic group[6] and those with no physical activity and exercise were in nonathletic group. General health questionnaire (GHQ) of Goldenberg (1972) was used to collect the data. The
reliability of the questionnaire was calculated 0.87 by Cronbach's Alpha. The grading scale of the questionnaire is the Likert scale method. Mann–Whitney U test at significant level of p< 0.05 was used to compare the groups. All the statistical analysis was done by SPSS software (Version 16).

Results:
The mean age of 176 elderly was 65.8 ± 3.34 year-old. As observed, there was a significant difference between athletic and non-athletic general health and its components and athletic group had more desirable situation than the non-athletic one (p=0.001). Table 1.

<table>
<thead>
<tr>
<th>Physical signs</th>
<th>Group</th>
<th>N</th>
<th>Mean Rank</th>
<th>Z</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-athletic</td>
<td>86</td>
<td>58.51</td>
<td>-7.715</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Athletic</td>
<td>90</td>
<td>117.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety and sleep disorders</td>
<td>Non-athletic</td>
<td>86</td>
<td>57.80</td>
<td>-7.835</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Athletic</td>
<td>90</td>
<td>117.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social performance</td>
<td>Non-athletic</td>
<td>86</td>
<td>71.41</td>
<td>-4.426</td>
<td>0.001</td>
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<tr>
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<td>Athletic</td>
<td>90</td>
<td>104.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>Non-athletic</td>
<td>86</td>
<td>60.94</td>
<td>-7.036</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
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<td>90</td>
<td>114.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Health</td>
<td>Non-athletic</td>
<td>86</td>
<td>57.66</td>
<td>-7.853</td>
<td>0.001</td>
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<tr>
<td></td>
<td>Athletic</td>
<td>90</td>
<td>117.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>176</td>
<td></td>
<td>-7.715</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Discussion:
The present study aimed to compare the general health and its components in athletic and non-athletic elderly. As observed, athletic elderly had a better and more desirable situation in components like physical signs, anxiety and sleep disorders, social performance, depression and the total general health in comparison to non-athletic elderly. Athletic elderly may have lower anxiety and sleep disorders signs due to their regular physical activity. This finding was consistence with previews studies [7, 8]. Physical activity is one of the most useful ways of anxiety without drugs [7]. Physical activity can have an anti-anxiety effect on distress situation by affecting nerve receptors and stress hormones to reduce muscle tension and deviating people’s attention from the distress situation [9]. Furthermore, it has been observed that physical activity has a positive effect on the quality of sleep in elderly [10]. Thus, according to the results of this research and other studies, physical activities can be an important factor in improving anxiety and sleep disorders in elderly. Furthermore, there was a significant difference between two group’s depression and the athletic group was livelier. Lampinen (2000) mentioned that reduced intensity and level of physical activity may increase the risk of depression signs in elderly [11]. Additionally, Ströhle (2009) proved the positive effect of physical activity on the improvement of depression signs [12]. Accordingly, depression may be affected by physical activity and those elderly who engage depression can improve their depression by having regular physical activity. The results of the present study were positively associated with social functioning in athletic elderly and they had better working relationships and social performance. Associated with improved social and work relationships, it is better to refer to the psychological model of San Strom (1978). Physical capacity resulting from physical activity may be effective in improving self-esteem. Furthermore, it is obvious that positive changes in self-esteem improve interpersonal relationships and social networks. Thus, it can improve social functioning in elderly. In conclusion, the present study regarding the topics discussed, confirmed the positive effect of physical activity on general health of the elderly. In addition, It was observed that having regular physical activity may be effective in improving general health in the elderly. Thus, Elderly may be able to reach an improved sense of mental and physical performance, anxiety, working and social life by having regular physical activity.

REFERENCE


