The comparison between athlete females and non-athlete females regarding to general health, mental health, and quality of life

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Abstract

Objective: The purpose of the present study was to compare general health, mental health and quality of life of women in the city of Ahvaz. Method: Two groups of athletes and non-athletes females (simple size was 50 participants for each group) were selected randomly and GHQ, SCL-25 and QLQ questionnaires completed by them. Results: Multivariate analysis of variance (MANOVA) revealed that there were significant differences between athlete and non-athlete females regarding dependent variables. In other words, the scores means of general health, mental health and quality of life were higher in athlete females than non-athlete females. Conclusion: In general, it could be state that the sport has advantages such as increasing physical and mental health and quality of life. The findings regarding to sport utilities were discussed.

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Keywords: general health, mental health, quality of life;

1. Introduction

Regular physical activity is one of the most important things offers numerous health benefits. Research has demonstrated that virtually all individuals can benefit from regular physical activity, whether they participate in vigorous exercise or some type of moderate health-enhancing physical activity (Lawler and Hopker, 2001; Department of Health, 2004; Jason, 2008). Being physically active can help individuals maintain a healthy weight and therefore reduce the risk for obesity. Physical activity is also associated with a lowered risk for developing heart disease, type 2 diabetes, certain cancers, high blood pressure, and osteoporosis. Exercise generally improves sleep for most people, and helps sleep disorders such as insomnia. The optimum time to exercise may be 4 to 8 hours before bedtime, though exercise at any time of day is beneficial, with the possible exception of heavy exercise taken shortly before bedtime, which may disturb sleep. There is, in any case, insufficient evidence to draw detailed conclusions about the relationship between exercise and sleep (Buman, 2010). It has also been suggested that
physical activity may improve mental health benefits mental health benefits of participation in physical activity include:

- Improved self esteem and confidence;
- Reduction in stress, anxiety and depression;
- Improved mood and sense of wellbeing;
- Improved concentration, enhanced memory and learning, and better performance.
- Reduced feelings of fatigue and depression; and improved psychological wellbeing and mental awareness (Lawlor and Hopker, 2001, Department of Health, 2004, Jason, 2008).

And Social benefits of participation in physical activity include:

- Increased community cohesion;
- Improved social/community networks and social capital;
- Improved family and community connectedness;
- Safer communities; and Reduction in sense of isolation and loneliness (Department of Health, 2004).

Physical activity has also been used as a treatment for people with psychiatric diseases and as treatment to improve quality of life in both people with and without mental health disorders (Monteiro-Peluso and Guerra 2005; cited in Christine, 2009). Many studies suggested Regular physical activity is seen as one of the most effective procedures for promoting quality of life in any population (Faulkner and Taylor 2005; Guilherme et. al., 2006; Mizsko & Cress, 2000; Peluso & Andrade, 2005). Regular physical activity is seen as one of the most effective procedures for promoting quality of life in any population (Miszko & Cress 2000; Peluso & Andrade, 2005).

The relationship between physical activity and depression in the elderly population presents controversial aspects, with epidemiological studies suggesting a diverse relationship between the amount of activity and the depressive symptoms, in which these symptoms increase in individuals who report both low and high levels of physical activity (Camacho, et. al., 1991). Guilherme and his colleagues (2006) demonstrated that the experimental group (athletes) and the control group (sedentary women) were shown to be homogeneous, with no significant differences in terms of age, physical characteristics and social characteristics. There were significant differences in functional capacity, pain, general health condition, vitality, emotional characteristics, and mental health and Geriatric Depression Scale scores. From this preliminary study, they concluded that regular physical activity and high performance sports were related to better quality of life and fewer depressive symptoms among elderly women and that this could be a tool for promoting physical and mental health.

Epidemiologic studies have demonstrated associations between physical activity and mental health but these studies included only certain subpopulations (DeMoor & Dorret, 2008; cited in Christine, 2009). Population-based studies that look at both sexes and include a wide age range are scarce (DeMoor & Beem, 2006; cited in Christine, 2009). The aim of the present research is to compare between athlete females and non-athlete females regarding to general health, mental health, and quality of life.

2. Method

2.1. Participants

Statistical population of this study is comprised of all athlete and non athlete women of Ahvaz city. Athletes and non-athletes females (simple size was 50 participants for each group) were selected randomly and GHQ, SCL-25 and QLQ questionnaires completed by them.
2.2. Measures

General health questionnaire: The General Health Questionnaire (GHQ) is a measure of current mental health and since its development by Goldberg in the 1970s it has been extensively used in different settings and different cultures (Donath, 2001). The questionnaire was originally developed as a 60-item instrument but at present a range of shortened versions of the questionnaire including the GHQ-30, the GHQ-28, the GHQ-20, and the GHQ-12 is available. The scale asks whether the respondent has experienced a particular symptom or behaviour recently. Each item is rated on a four-point scale (less than usual, no more than usual, rather more than usual, or much more than usual); and for example when using the GHQ-12 it gives a total score of 36 or 12 based on the selected scoring methods. The most common scoring methods are bi-modal (0-0-1-1) and Likert scoring styles (0-1-2-3). Since the GHQ-12 is a brief, simple, easy to complete, and its application in research settings as a screening tool is well documented; it was decided to translate the GHQ-12 into Persian (the Iranian language) and to examine the psychometric properties of the questionnaire in a sample of young Iranian adolescents. This was to develop the Iranian version of the GHQ-12 to meet the increasing demand for the questionnaire. There is evidence that the GHQ-12 is a consistent and reliable instrument when used in general population samples [Pevalin, 2000].

Symptom Checklist-25 (SCL-25): This checklist consists of 25 items that ask examinees to rate their level of distress regarding a wide range of symptoms including depression, anxiety, social isolation, and somatic complaints. Najrian and Davoodi (2001) provided a short form of SCL-90-R with 25 items. They reported that this scale consisted of one factor and measure general mental diseases and had a high positive correlation with SCL-90-R. Reliability and validity investigations revealed that this scale is a reliable and valid instrument. In this study we used this checklist to measure mental health of participants.

Quality of life questionnaire: The Quality of Life Questionnaire (QLQ) was developed to measure performance of mental health programs state-wide. Quality of life is a descriptive term that refers to people’s emotional, social and physical wellbeing, and their ability to function in the ordinary tasks of living. To study athlete and non-athlete quality of life, 15 life components were studied on them. These components were material well being, physical well being, personal growth, marital relation, parent-child relation, extended family relation, extramarital relation, altruistic behaviour, political behaviour, job characteristics, occupational relation, job satisfiers, creative aesthetic be behaviour, sport activity, and vacation behaviour. Taken together, these make and integrated, valid, and reliable tool to reflect quality of life (Quality of life questionnaire, QLQ), which its Farsi translation was used in the present study (Vaez Mousavi, 2002).

3. Results

Multivariate analysis of variance (MANOVA) revealed that there were significant differences between athlete and non-athlete females regarding to dependent variables. In other words, the scores means of general health, mental health and quality of life were higher in athlete females than non-athlete females.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Athletes Mean</th>
<th>Athletes SD</th>
<th>Non-athletes Mean</th>
<th>Non-athletes SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Health</td>
<td>32.12</td>
<td>4.12</td>
<td>25.05</td>
<td>3.89</td>
</tr>
<tr>
<td>Mental Health</td>
<td>28.75</td>
<td>3.28</td>
<td>37.13</td>
<td>4.51</td>
</tr>
<tr>
<td>Quality of Life</td>
<td>88.95</td>
<td>6.12</td>
<td>73.27</td>
<td>4.78</td>
</tr>
</tbody>
</table>

In order to compare two groups of athlete and non-athlete samples regarding to three dependent variables, multivariate analysis of variance (MANOVA) was conducted. The results are presented in table 2. Analysis revealed
that there were significant differences between athlete and non–athlete females regarding to dependent variables. In other words, the scores means of general health, mental health and quality of life were higher in athlete females than non-athlete females.

Table 2. MANOVA for difference between two groups regarding to 3 dependent variables

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>F</th>
<th>Hypothesis df</th>
<th>Error df</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillai's Trace</td>
<td>.203</td>
<td>3.906</td>
<td>3</td>
<td>46</td>
<td>.000</td>
</tr>
<tr>
<td>Wilks' Lambda</td>
<td>.797</td>
<td>3.906</td>
<td>3</td>
<td>46</td>
<td>.000</td>
</tr>
<tr>
<td>Hotelling's Trace</td>
<td>.255</td>
<td>3.906</td>
<td>3</td>
<td>46</td>
<td>.000</td>
</tr>
<tr>
<td>Roy's Largest Root</td>
<td>.255</td>
<td>3.906</td>
<td>3</td>
<td>46</td>
<td>.000</td>
</tr>
</tbody>
</table>

Results of MANOVA show that all F values are significant at p< .0001. This means that there is significant difference between two groups of study at least regarding to one of dependent variables. Separated ANOVAs was done and are presented at table 3.

Table 3. Separated ANOVAs

<table>
<thead>
<tr>
<th>Source</th>
<th>Variable</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>General Health</td>
<td>382.87</td>
<td>1</td>
<td>382.87</td>
<td>5.92</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Mental Health</td>
<td>1406.58</td>
<td>1</td>
<td>1406.58</td>
<td>10.92</td>
<td>.0001</td>
</tr>
<tr>
<td></td>
<td>Quality of Life</td>
<td>4792.94</td>
<td>1</td>
<td>4792.94</td>
<td>22.70</td>
<td>.0001</td>
</tr>
<tr>
<td></td>
<td>Error</td>
<td>6341.45</td>
<td>98</td>
<td>64.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>General Health</td>
<td>12626.70</td>
<td>98</td>
<td>128.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mental Health</td>
<td>20691.062</td>
<td>98</td>
<td>211.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quality of Life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Separated ANOVAs show that regarding to three dependent variables, general health, mental health and quality of life, athlete sample are higher than non-athlete sample. This research is like many other researches, emphasis on positive consequences of exercise.

Discussion

The purpose of this study was to compare athlete females and non-athlete females regarding to general health, mental health, and quality of life. The results demonstrate that there were significant differences between athlete and non–athlete females regarding dependent variables. In other words, the means of general health, mental health and quality of life were higher in athlete females than non-athlete females. This findings regarding to sport utilities were discussed.

Public health programs should include physical activity in their promotion strategies not only to improve physical health but also because it may improve mental health and quality of life as well.

Snyder and his colleagues (2010) showed that athletes are higher scores on the physical function, general health, social functioning, and mental health subscales and the mental composite score and lower scores on the bodily pain subscale than nonathletic. On the PODCI, athletes reported higher scores on the sport and physical function and happiness subscales and lower scores on the pain/comfort subscale.

Biddle and his colleagues (2000) describe several reasons for why physical activity should be used to promote mental health. Physical activity is less expensive and has minimal side effects when compared to using pharmacological drugs as mental health treatment. Physical activity can be sustained long-term whereas drugs or
therapy may only be short-term. Those who have challenges with access to care for receiving therapy, whether it’s due to, lack of insurance coverage or geographical constraints, would also benefit from incorporating physical activity (Christine, 2009).

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