Effect of Aerobics Exercises on Quality of Life in Elderly Women

Seddigheh Ghasemtalebi¹*, Zeynab Hossain Nataj Omran², Farzaneh Ghrohi³

1-Department of physical Education, Islamic Azad University, Islamshahr Branch, Tehran, Iran
2-Sama Technical and Vocational training College, Islamic Azad University, Islamshahr Branch, Islamshahr, Iran
3-MA student of Kharazmi University Tehran Branch

*Corresponding Author, Email: Seddigheghasemtalebi@yahoo.com

Abstract

The purpose of this study was to investigate the effect of aerobics exercise on the quality of life in elderly women. In so doing, 23 elderly women with the average age range 63.41±5.97 who were members of Jahandidegan Association in Eastern Tehran were randomly and voluntarily selected as participants of the study. As the first phase of the study, the purpose and specifications of the study were elaborated to the participants. Then, they were asked to fill out personal information form, demographic questionnaire, and Quality of Life Questionnaire proposed by World Health Organization. Participants did aerobics exercises (rhythmic movements) for 8 weeks – 3 sessions of 1 hour per week. Finally, the same questionnaires were filled out by them again after doing the 8-week exercise. Comparison of pre-test and post-test revealed a significant difference between the averages of the values of life quality (p<0.0001). The difference in the averages of the values is indicative of an increase in the quality of elderly women’s life. The study yielded the result that aerobics exercises improve the quality of life in elderly women. According to the theoretical principles of the study, applying a regular and constant sport program and physical activities can improve different aspects of quality of life, especially physical performance and role taking and leads to individual’s independence in doing their daily activities. Moreover, such activities improve the elderly’s life, which is followed by their satisfactory with life.

Key Words: Aerobic exercise, quality of life.

Introduction

Advances in health, especially preventive healthcare and control of contagious diseases dramatically increased human’s lifetime and the number of the elderly in both developed and developing countries. According to the latest statistics, 7% of the total population of Iran incorporated the elderly in 2011 and over the next twenty years, this number will encompass most of the population of Iran. Thus, it seems necessary to identify the elderly’s problems to improve their health condition (Sadeghi and Ali-Rezie, 2007). It is taken for granted that aging triggers acute and chronic diseases as a result of which people’s performance and sense perception weaken; such biological, mental, and social changes are so life-threatening that impact on the elderly’s quality of life and prevents them from doing their daily activities (Spirduso, 1982). Therefore, given that most of the elderly are economically non-productive and consumers, they are lonely people from social point of view and susceptible to chronic diseases and the subsequent disabilities. Also, population of the elderly, afflicted with chronic diseases and dependent on other people’s help for doing any activities is dramatically increasing. Moreover, regarding the growing population of the elderly, quality of life turned to be one of the main concerns of politicians, scientists, and public health professionals; it is also considered as a criterion for evaluating health condition in the recognized public health and medical researches (Bazrafshan et al., 2007). Rowe et al stated that successful aging or enjoying an older age of high quality is influenced by three factors, i.
Doing physical activities and sport are effective ways to prevent, postpone, or overcome the problems arising from aging process; the positive effects of such activities on the quality of the elderly’s life have been proved (Stephenson, 1991). Hopkins et al (1990) conducted a research on the effect of light-intensity and rhythmic aerobic exercise on functional fitness in elderly women. The results of their studies showed that cardiovascular endur ance, flexibility, balance, and agility variables significantly improved (Hopkins et al., 1990).

Macaulay et al (2006) undertook a study on the elderly in Massachusetts, the US, which aimed at investigating the effect of physical activities on health condition, quality of life, and sense of self-esteem in white and black elderly women. The results indicated that physical activities impacts on both physical and mental health; that is to say, more active women enjoyed a higher quality of life and sense of self-esteem. They also had a more favorable condition regarding physical and mental health (Macauly et al., 2002). Quality of life is a comprehensive concept incorporating implications of a good, satisfactory, and happy life. The concepts of satisfactory and happiness are often merged with the concepts of welfare or joy which include satisfactory with life and positive and negative emotions (Great et al., 2004). The results of the previous researches indicate that all the difficulties existing in the studies on the elderly, especially on their physical performance and sport activities, emphasize the need for various studies in order to come to a general conclusion in this age range. Therefore, given the importance of old age, the present study seeks to examine the effect of aerobics exercises (rhythmic movements) on the quality of elderly women’s life; in so doing, it aims at recognizing different aspects of quality of life and making changes in quality of their life as well. From scientific point of view, aerobics is an aerobic exercise – physical exercise of more than 2 minutes with relatively low intensity which is done in extended periods of time, such as running, jogging, and swimming.

In the present study, aerobics refers to a set of complex and coordinated movements accompanied with joyful and rhythmic music. Given that the exercises are supported by aerobic metabolism, the efficiency of this system for meeting energy demand of muscles and other body organs increases through repetitive strength training; consequently, the performance of cardiovascular and respiratory systems will improve (MASOUDI, 2001). Furthermore, aerobic exercises develop factors of physical fitness including endurance, flexibility, coordination, agility, equilibrium, balance, and humans’ reaction time. As aerobic exercise increases the aforementioned factors, it can be claimed that individuals will enjoy a more favorable physical fitness (Keshhtidar and Vaysi, 2008). In comparison to other trainings, aerobic exercises are safe, light and also joyful as they are performed in group with music being played. Elderly women are more willing to do aerobic exercises. It is also economically affordable since it can be simply done at home without any special equipment. The goal of this study was to increase elderly women’s motivation for doing sport activities so that they can both physically and mentally take advantage of the subsequent positive effects in terms of emotional and social performance and spent their old age with a sense of joy and satisfaction.

Materials and Methods

This is a quasi-experimental research scrutinizing the effect of aerobics exercises on elderly women’s quality of life, life expectancy, and self-concept. The population of the study incorporated healthy elderly women above 55, who were members of Jahandidegan Association. 23 people were voluntarily selected and asked to fill out 26-item Quality of Life Questionnaire proposed by World Health Organization.

Results

Volunteer’s characteristics including height, weight, and age were calculated using descriptive statistics. The data is shown in Table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Average</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>63.41</td>
<td>5.79</td>
</tr>
<tr>
<td>Height (cm)</td>
<td>155.24</td>
<td>8.14</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>70.03</td>
<td>8.94</td>
</tr>
</tbody>
</table>

The results of dependent T-Test were presented in Table 2. By comparing the averages, it was revealed that there is a significant difference between the averages (a-0.05) and the P value of quality of life is 0.0001. As it was mentioned, based on the existing evidences, the differences between the averages were found to be significant (P<0.05). Aerobics exercises increase, or it is better to say improve quality of life in elderly women.
Table 2: Comparison of Quality of Life Before and After Aerobics Exercises

<table>
<thead>
<tr>
<th>Type of Test</th>
<th>Average</th>
<th>Standard Deviation</th>
<th>Degree of Freedom</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>85.64</td>
<td>10.30</td>
<td></td>
<td>6.965</td>
<td>0.0001</td>
</tr>
<tr>
<td>Post-test</td>
<td>90.47</td>
<td>9.87</td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discussion and Conclusion

The main goal of the present study was to investigate the effect of aerobics exercises on the quality of elderly women’s life. Quality of life is considered as a basic index. It is also of high importance as it entails different aspects of humans’ life, i.e. their physiological features, performance, and even their whole being. As Table 2, Show, there is a significant difference (a-0.05) between the averages of the values obtained through quality of life questionnaire, and the P value equals 0.0001. Therefore, based on the findings of the study, there is a significant difference (p-0.0001) between participants’ quality of life before aerobics exercises and after that, which confirms that quality of their life significantly increased.

Pourdehkordi et al (2007) conducted a study on the effect of exercise programs on quality of life of the elderly in Shahrekord, Iran. They came to the result that regular and constant sport programs which are really welcomed by people of old age can improve their quality of life and show them how to pave the way for enjoying health and getting old healthily. In a quasi-experimental study done by Hamidizadah et al (2008) on the effect of group exercise programs on the quality of the elderly’s life, it was revealed that a regular and constant sport program can improve the elderly’s quality of life from different aspects. Doyer et al (2004) proved that doing sport activities is a way to achieve a favorable physical and mental condition. Increasing people’s self-confidence, self-concept, self-efficacy, and competence, sport activities have a great effect on optimum social performance. Such activities also increase life expectancy and impacts on individual and social well-being and mental health as well. Maria Jose Fraga (2010) investigating the effect of aerobic exercise on elderly women’s practical autonomy and quality of life, came to the conclusion that aerobics exercise increased their practical autonomy and quality of life. Aerobics exercise has a positive effect on elderly women’s practical independence and quality of life.

The present research expands upon the studies conducted by Pourdehkordi (2007) Hamidzadeh et al (2008). Doyer et al (2004), Maria Jose Fraga (2010). However, Barrett et al (2004) came to the result that there is no significant relationship between anaerobic exercises and quality of life. Although improving quality of life is one of the main goals of development in the elderly’s health, there are still uncertainties whether improvement of physical ability and increase in muscular strength leads to the improvement of the other aspects of quality of life; the issue which has been investigated in the present study. As a matter of fact, this research showed that rhythmic aerobic activities (aerobics) increase people’s ability to do their daily activities by themselves, i.e. without other people’s help. The present study also proved that aerobics has so deep positive effect on the other aspects of quality of life that people’s physical performance and their independence to do their daily activities increased. The other positive consequence of doing aerobic exercises is related to the development of different aspects of quality of life, e.g. taking role, alleviating physical pain, emotional performance, and mental health, which leads to development of quality of life.

Sticking to a regular sport program and physical activities can improve different aspects of quality of life, especially individual’s role taking, and subsequently leads to the elderly’s independence in doing their daily activities. Furthermore, such programs improve the elderly’s quality of life. Sport and movement post pones the old age and those elderly who do exercise enjoy a joyful and healthier life; they can also choose a better life style. Therefore, it seems necessary to consider sport activities, especially musical aerobics for elderly women. Applying a regular and constant sport program will increase different aspects of quality of life, especially elderly women’s role taking, which causes them to be more independent in doing their daily activities. In so doing, the process of successful aging will occur and the way to improve quality of life will be paved.

Conflict of interest

The authors declare no conflict of interest
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