The Effect of Selected Training Program on the Non-athlete Menopause Women's Quality of Life

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Abstract: The purpose of the study was to investigate the effect of selected physical training program on non-athlete menopause women’s quality of life. For this purpose 60 menopause women from 6th area (mean=52) were selected randomly. Subjects were categorized into two groups, control and training. For training group a regular aerobic training program was designed that consists of 12 weeks training per week 3 sessions. MENQOL questionnaires were completed twice (before and after) by both groups. The questionnaire measures menopauses’ quality of life in four domains, physical, psychosocial, vasomotor and, sexual. The result of T test showed that there are significant effects on physical and psychosocial domains, but these differences were not significant in vasomotor and sexual domains. Also, in total, subjects’ quality of life became better significantly.

Key words: Physical activity %Health %Menopause

INTRODUCTION

Today the subject of health has caught many attentions. In fact, since the world health organization has announces healthness as physical, psychological and social well-being, this subject caused many discussion regarding health assessment and measurement. The world health organization’s definition of the term "healthiness" and also the existing description, in some way, put emphasis on the multi-lateral well-being of human [1].

Quality of life is one of the indications that have been brought forth for health measurement. Indeed, specialist's attention was caught to the importance of quality of life in that world health organization announced that healthiness is not just the non-existence of disease but it is a condition of physical, psychological and social welfare since 1984 [2].

There are many definitions given for the term "Quality of life". The theoretical term that is presented for this term consists of: an amalgamation of physical, psychological and social welfare that is perceived an individual or a group. For example, happiness satisfaction such as job limitations, social life, routine physical activities, as well as family relations [1]. Menopause is the discontinuance of ovary activities and internal secretion relating to it that is an end to the woman's fertility periods [6].

However, this matter is worthy of mention that there is not a prefer agreement on quality of life definition. Some researchers consider it as an inevitable and explicit concept but others suggest that it is a very complex term to be defined in one ore several sentences. Quality of life used in medical issues is recognized as health related quality of life [3].

The term "Health related Quality of life" stresses on physical, psychological, as well as social dimensions of health. The Quality of life Group in WHO also defines the health related quality of life as the person's thought of his or her living conditions with consideration to the culture and values system that he or she is living an and in relationship of these thought with the purpose, expectation, standards, as well as preferences viewed by the person [4].

The subject of quality of life existing among different classes is of utmost importance, specially those individuals who possess certain physical, psychological conditions confronting with the problems caused by such conditions [5]. One of the vulnerable classes of society is women's class who reach the period of menopause. Since the menopause classes of women are considered in such certain conditions as well, paying attention to their quality of life is of utmost importance. Because menopause can have considerable effects on the routine quality of life such as job limitations, social life, routine physical activities, as well as family relations [1]. Menopause is the discontinuance of ovary activities and internal secretion relating to it that is an end to the woman's fertility periods [6].

Menopause is not a disease; however, it comes along with many physical and psychological problems. These
problems can be pointed out as fever, mental and psychological changes, osteoporosis, cardiovascular and the atrophy of reproductive organs disease. The outbreak rate of these symptoms differs among dissimilar women. In addition to physical problems that are specified in these periods, the neuro-psychic problems such as anxiety, psychological pressure, irritability, fatigue, anger and depression are distinguished as well.

Different factors can modulate the menopause symptoms such as instruction, hormone therapy, physical activities as well as training that can influence on reducing the menopause symptoms [1]. Training and physical activities can influence on the recovery of fever, overnight sweating, feeling fatigued, anxiety, depression, improving the sexual desire, amnesia, as well as physical ability [7].

In addition to the influence of physical activity on menopause symptoms, regular physical activity also has positive effect on the therapy and prevention of disease such as arthritis, osteoporosis, cardiovascular disease that are appeared by estrogen reduction [7]. Also the weight-lifting exercises prevent osteoporosis germinated with menopause [8]. A revision of previous studies also shows that many scholars have spent their time on finding the influence of physical activity on improving and controlling menopause symptoms. Astrand et al., for example, in a research considers the training or secretion therapy effect on the quality of life in those menopause women who were completely motionless before. The results showed that the feverish intensity was improves between the two groups of training as well as secretion, however, the feverish reduction in the training therapy group was beyond the secretion therapy.

The research showed that not only regular training exercises reduce vasomotor symptoms, but also they increase the menopause women's quality of life [9]. In a study, Nursen Teoman et al. (2004), considered the training influence on physical fitness and the menopause quality of life, too. The results showed that a sub-maximal six week physical exercise can increase the physical fitness parameters in menopause women and improve their quality of life as well [10]. Other researchers also pointed out the influence of training on the reduction and improvement of menopause symptoms such as the following instances : the training effect on the skeletal mass immunization in the menopause women [11], amnesia reduction, aggression, headache and sexual stressor symptoms such as ovary dryness as well as sexual desire increase [12], reduction of sexual mass exhaustion [13], stress reduction [14], reduction of menopause psychological symptoms [15], protection and increase in mineral material congestion of bones [16], finally improvement in cardiovascular processing and psychological healthiness, lesser anxiety, self-esteem, improvement in one's body image and self image [17]. Therefore, according to the aforementioned instances, the main question of the study was: do regular training exercise influence on the non-athlete menopause women's quality of life or not?

MATERIALS AND METHODS

Type of Research: This research was semi-experimental research that researcher have studied the effect of physical training on quality of life by use of independent variable( training program) and also considering a control group. To this purpose to groups (training and control) was selected and questionnaire to time (before and after training program) were completed by both of groups.

Population and Subjects: population consists of menopause women from 6th area of Tehran city. Also, subjects were selected from that population by using "random simple clustered sampling". Subjects were categorized randomly into two groups, control and training.

Training Program: subjects did one training program that consisted of 12 week jogging and walking. Also, the training program consisted of 3 sessions in week that the exercise time began from 20 minutes in first week to 45 minutes in 12th week. In first week, all subjects do exercise in 50% vo2max that this increased gradually to 80% vo2max in 12th week of training.

Questionnaire: The Menopause Quality of life Questionnaire (MENQOL) was used for evaluation of quality of life in subjects. This questionnaire is designed by department of medicine in Toronto University (1996). For reliability analyses a pilot study was performed on 30 subjects and finally the test-retest reliability was calculated (r=0.79). The Menopause Quality of life Questionnaire consists of 32 questions and determines the Quality of life in four domains including: physical, psycho-social, sexual and vasomotor.

Statistical Analysis: In order to description of data the central and distributional parameters were used. Also for
inferential analysis of data the Independent T Test was performed between differential scores of control and exercise groups.

RESULTS

Table 1 demonstrates the mean and standard deviation of age and menopause age of subjects. As demonstrated, the mean and standard deviation of age in training group were 52.7 and 3.06 respectively. Also in control group mean and standard deviation was 53.4 and 3.86 respectively. The menopause age mean in control group was 48.8 and in training group was 48.5.

Table 2 explained the mean and standard deviation of quality of life's scores and also its domains (physical, psycho-social, sexual and vasomotor). These parameters were showed into two groups (control and training) and also in pre-test and post-test scores. In quality of life column in Table 2 demonstrated that the difference between pretest and post test scores in control group was less than training group. The similar situations exist in physical and psycho-social domains, but in sexual and vasomotor domains are not notable.

Table 3 demonstrates the differential scores of pretest and post test in both groups (control and training).

Also, the p-value of hypothesis testing is showed in Table 3. The significant differences in differential scores state the significant effect of training program on subjects in related domain. As considered, the training program had the significant effect on subjects’ quality of life (p=0.019). Also, in four domain of quality of life consider that the training program have not had the significant effect in vasomotor domain (p= 0.003) and psycho-social domain (p= 0.010) were significant. (p= 0.088) and sexual domain (p= 0.113), whereas this effect in physical domain (p=0.003) and psycho-social domain (p=0.010) was significant.

DISCUSSION AND CONCLUSION

According to what have been covered, the training program of the current study has not influenced significantly on reducing vasomotor symptoms of participants (p= 0.088). The results of this part of the study is consistent with the result obtained by Iverson (1998) [18], Gathrie et al. (1994) [19]; however, it is inconsistent with the result obtained by Astrand et al. (2004) [9]. In his survey, Astrand concluded that physical exercises are significant in reducing the vasomotor symptoms of menopause women. He also suggested that

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*Significant at 0.05 level, **Significant at 0.01 level
the reduction of vasomotor symptoms and feverishness caused by doing more exercise are significant in reducing the feverish intensities of menopause women. While the repeated number of feverishness by menopause women do not change as a result of doing exercises. Other researchers such as Nedstrand et al. (2005) [20] also noted that hormone therapy and relaxing exercises as well can reduce the vasomotor symptoms. In this respect, Astrand (2004) [9] suggested a solution to menopause women that will be rather alternative physical exercise for hormone therapy when they do not tend to make use the methods of hormone therapy.

However, one can search out the possible reason of inconsistency of the current study results with other similar studies in the type of the given exercise program and their training intensities. In this respect, Lee et al. (1999) [12] also suggested that the subject of training intensity should be put into consideration. Lee et al. [12] believed that the physical activity along with more intensity is influential in reducing vasomotor symptoms. In fact, physical activity with adequate and regular intensity has a significant role on the influential regular neuro-transmitters for central body temperature [18]. It seems that the subject of finding an adequate rate of training intensity for reducing the vasomotor of menopause women can be put into consideration scholars and specialists of training sciences.

The research finding in, menopause physical symptoms also revealed that the training program of current study had a significant influence on reducing the physical symptoms of menopause women (p=0.003). Regarding to this, the current study results are consistent with many other studies. For instance, Bidle and Motry (2001) [17] note that the regular physical exercises including aerobic and resistance ones may prevent menopause physical problems such as muscle weakness and osteoporosis or reduce them. In their studies, Lee et al. (1999) [12] also concluded that the average physical activity can have a protective role against menopause physical symptoms such as headache and flatulence. Wilber et al. (1990) [21] also obtained a high correlation between physical activities and the reduction of menopause physical symptoms such as headache, physical fatigue, insomnia, arthralgia, backache, uncontrollable urine and castrodynia. In conclusion, one can suggest the physical activity as an influential solution beside the other existing ones (such as instruction, adequate nutrition, hormone therapy and etc.) to menopause women by considering the current study results on the grounds of the positive influence of physical training on reducing the menopause physical symptoms and also by supporting this matter by many researchers.

Within the scope of menopause physical symptoms, this has also put into consideration that the training program of current study couldn't have a significant influence on improving the physical symptoms of menopause women (p=0.113). The current study results is inconsistent with Lee et al. (1999) [12], Collins and Landgren (1995) [22] and Holm and Chamberlin (1994) [23]. Lee et al. found out a negative and significant correlation between physical activity and sexual symptoms. Collins and Landgren also recognized that there is a high correlation between the sexual desire reduction of menopause women and their non-participation in physical activities. However, this issue has not been clarified explicitly that how physical activity influences on the physical health of menopause women: despite, such studies which support the existence of this correlation. Lee (1999) [12] noted that the physical health of menopause women who participate in physical activity probably was due to the increase in muscular tone that the matter itself was obtained by participating in training activities. But Holm and Chamberlin (1994) have justified this issue in another way. They noted that the physical activity increases the physical attraction perceived by menopause women that causes the improvement in their physical health.

However, one may be able to find out the possible cause of the inconsistency of the current study results along with the aforementioned studies in the cultural as well as social issues which are influential on menopause women's view regarding sexual symptoms. In his study on Iranian menopause women, Rostami (2001) [1], has also proves this issue. In his conclusion, he pointed out the influential; issue of cultural as well as social factors on the sexual intercourse of menopause women. He noted that reduction of sexual tendencies and stimuli in menopause women is a multi-dimensional issue which is influences by physiologic, cultural and social factors.

The training program of the current study also had a significant influence on improving the psych-social symptoms of the study's subjects.

As was noted in the survey founding (p=0.10) a revision on the relative studies which were carried by scholars show that many of the studies result are consistent with the current obtained results. in his survey which considered the training influence on the psychological factor of stress in menopause women, Rechanee (2002) [14] concluded that a considerable
reduction is appeared in menopause women's stress by making use of training. He noted that regular physical training can delay the changes regarding age, psychological consequences, increase of quality of life, and improvement of the psychological condition on the menopause women. On the other hand, Blumel et al. (2004) [24] considered the increase of vasomotor symptoms in menopause women. They believed that vasomotor symptoms germinate with the increase of psychological symptoms such as anxiety, stress and depression.

Lee et al. (1999) [12] also carried apart of their study on considering the training influence on the psychological symptoms of menopause and noted that physical activity has a significant role on improving the menopause psychological symptoms, the influence of physical exercises and training activities on improving the menopause psychological symptoms were justified by Lee and his colleagues in a way that physical activity can increase the endorphin's in one's body; while, endorphin's have an utmost influence on human psychological moods. It is necessary to carry more significant surveys to clarify that to what extent physical activity suffices for reducing the psychological symptoms of menopause; although, physical activity causes improvement of the menopause psychological symptoms [12].

In conclusion, results of study show that the training program of current study has achieved the total score promotion of non-athlete menopause women's quality of life. Within two scopes (psychological and physical symptoms) out of four scopes of quality of life, the training influence was also completely significant (Table 3). In other words, the training has achieved a considerable influence on reducing physical and psychological problems of non-athlete menopause women and it has caused the improvement of their quality of life, according to the issue that many of menopause due to different reasons such as unawareness of physical activity advantage effect, pay less attention to physical activities. Therefore, the increase in their public awareness's regarding this certain issue should be put in consideration by health sciences and physical education specialist. On the other hand, it is inevitable that women's quality of life in the menopause periods not only is influenced by physical activity, but also by other physical psychological-social as well as economic factors and physical activity is not sufficient by itself in order to make an outstanding change and improvement in the menopause multi-dimensional lives.

REFERENCES


