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A Survey on the Effects of Hatha Yoga Training (Asana and Relaxation) on Reduction of Anxiety among the Woman of 20-49 Years Old

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Abstract: Aim: This study designed and conducted with the aim of specifying the Hatha Yoga effects on anxiety reduction among the women of age 20-49 years. As mental health is an inevitable part of public health, attention to it is one of the World Health Organization (WHO) plans. The organization has been considered anxiety as the most prevalent mental disorder around the world. Since women face more anxiety than men, concentrating on the women mental health is an ever-increasing social concern. Method: This is a quasi-experimental study conducted before and after intervention. The place has been Eqlbal sport complex in Tehran-district 12. Samples were selected using random method among the patients with different anxiety levels. The samples were thought Hatha Yoga including one hour Asana and half an hour relaxation at each session by an experienced trainer. The intervention was done for 3 months and three 90-min sessions each week. Data collection instruments were demographic and anxiety questionnaires distributed before and three months after the intervention. The mean score of anxiety was calculated and then the collected data were analyzed using SPSS-16 software, descriptive statistical test, pair t-test and chi square test. Results: There was a significant difference between the mean score of anxiety among the samples, before and after the intervention ($p < 0.05$) Conclusion: Conducting cheap, simple and fun exercises of Hatha Yoga reduces anxiety among women and as a result leads to increase society mental health and perhaps population quality of life. Therefore, it seems applying such exercises can reduce anxiety, efficiently.

Keywords: Anxiety, hatha yoga (asana and relaxation), women

INTRODUCTION

Mental health is an inevitable part of public health and one of its essential branches.

Attention to mental health is among the basic programs of the WHO (Nurbala and Bagheri, 2001). This organization assumes anxiety as the top disorder among the mental disorders with about 400 millions patients around the world (Hoseini, 1999). Mental health is efficient in life quality, significantly. Promotion of life quality and feeling valuable are among crucial factors in keeping individuals' mental health in each society. Human has been usually faced anxiety. According to the recent studies, 80% of modern diseases are rooted in anxiety.

Anxiety is a diffuse and inconvenient feeling which is often vague with one or more physical symptoms such as muscular tension, palpitation feeling empty and immunity system weakness (Sadock and Sadock, 2000).

Anxiety disorders are the most prevalent among the mental disorders and according to the WHO estimates, it is highly pervasive both in developing and developed countries (Kaplan and Sadock, 1998).

The reason may be rooted in ever increasing population of the world and rapid social changes including urbanization, family break down and economic problems (Noyes and Hoehn, 1990). Studies revealed that anxiety is the main reason of many physical and mental diseases which provide the society with many social and economic problems as follows:

- High costs of medication
- Absenteeism due to physical and mental disorders
- Family collide
- Lack of healthy society (Kaplan and Sadock, 1998, Noyes and Hoehn, 1990)

Attention to women mental health and their role in maintaining family and having a healthy society are among the WHO goals (Kaplan and Sadock, 1998). Nowadays, there are various treatments for anxiety:

Traditional treatment: Different drugs are prescribed to reduce anxiety and enhance patients' endurance and toleration.

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Non-drug treatments: In this regard, methods such as Hatha Yoga have been considered by researchers because of being cheap, simple, funny, easily trainable and having no side effects. Many studies confirmed the efficacy of Hatha Yoga in reduction of anxiety (Sims, 1995) and that Hatha Yoga creates counter-anxiety physiological symptoms (Paul, 1998) which lead to mirthfulness.

MATERIALS AND METHODS

This research is a quasi-empirical study conducted on 30 individuals, before and after intervention. The samples were selected randomly ($\beta = 0.1$, $\alpha = 0.05$). The values were calculated based on the studies of Ali Tayebi et al. on the effect of Hatha Yoga on women's anxiety and depression; and those of Everett Curran *et al.* (2007) (Yurtkuran, 2007). Hatha Yoga consists of positioning exercises (Asana) and relaxation (SHAVAsana), along with breathing exercises (Paranayama). An experienced trainer instructed one hour Asana and half an hour relaxation each session.

The subject conducted exercises during a 90-min session, three times a week and for 3 month.

Data collection instrument was a questionnaire consisted of demographic questions (three items) and anxiety questions (21 items) which was prepared based on Beck's standard questionnaire (In Kaviani and Musavi studies 2008). The questionnaire's validity and reliability was assessed and revealed that it is of acceptable validity ($r = 0.72$) and reliability ($r = 0.83$) as well as internal consistency ($\alpha = 0.92$). Anxiety level has been classified at mild (scores 0-21) moderate (scores 22-35) and severe (scores over 36) levels. The data were measured before and three month after intervention. Then the collected data analyzed using SPSS-16, descriptive statistical tests, pair tests and Chi square.

RESULTS

According to the results of this study, most of samples (43.3%) had diploma degree and were single (53.3%) (Table 1). Also, it was revealed that all under-study individuals experienced some level of anxiety: 53.3% moderate and 46.7% severe before intervention; and 66.7% moderate and 33.3% severe after intervention (Table 1).

The changes in measurements results revealed that the anxiety mean score before intervention (33.96) reduced to 20.50 after intervention which is a significant difference statistically ($P = 0.001$) (Table 2).

DISCUSSION

According to the present study's findings, most of the under-study women had diploma degree and were single who suffer anxiety at different levels. As you see

Table 1: Frequency and relative frequency of the subjects, based on their educations and marital status

Demographic characteristic	%	Frequency
Diploma	43.3	13
College diploma	26.7	8
Graduated	20.0	6
Post-graduated	10.0	3
Total	100.0	30
Single	53.3	16
Married	46.7	14
Total	100.0	30

Table 2: Comparison of the mean and standard deviation (SD) of the anxiety before and after intervention

Statistical index/Group	Mean score	S.D	T	D.F	P
Before intervention	33.96	4.50	16.16	29	0.001
After intervention	20.50	3.02			

in the Table 2, there is a meaningful relationship between anxiety scores before and after intervention. The reason is resorting to Hatha Yoga exercise (Asana and Relaxation) along with breathing exercises (Paranayama). It is known that Hatha Yoga harmonizes and coordinates endocrinous glands and nerve system. This coordination affects directly the internal systems and limbs and reduces cortisol harmony which is closely related to anxiety. Moreover, Hatha Yoga prevents neurotransmitter of Gamma-aminobutyric acid (West *et al.*, 2004 and Travis, 2001).

Many studies have considered Hatha Yoga as a complementary medicine and reducer of anxiety and stress among women and patients. Vahabi (1998) conducted a comparative study on the effect of music-therapy and relaxation on reduction of anxiety and muscular stress among the patients hospitalized in ICU section. He suggested relaxation and music to relief the patients' anxiety. The sample population consisted of 90 individuals who were divided in three relaxation, music-therapy and control groups. In this study, the music and relaxation groups were provided with instrumental music and relaxation compact disk, respectively, which were played for twelve 30-min sessions. The Spiel Berger's anxiety questionnaire was distributed among the samples before and after the intervention. The post intervention scores were recalculated. The results revealed that both methods have reduced anxiety and muscular stress among the patients (Vahabi, 1998).

Podell and Rubz (2010) found that relaxation is an efficient strategy in reduction of anxiety among the relaxation therapy. As you know, anxiety is accompanied by some physical symptoms including rapid breathing, palpitation and muscular stress which may be overcome using relaxation techniques. Relaxation training helps the patients diagnose physical reactions to anxiety and change the situation. According to the reports of those who experienced palpitation along with anxiety, deep breathing as a relaxation technique may reduce the heart beat rate (Powell and Trevor, 1990, Roub, 2002).

Hadi and Hadi (2006) showed that Yoga as a mental, spiritual and physical exercise improves the

individuals' health feeling. Therefore, Yoga exercises are considered efficient in improvement of the balance and cognitive functions (Brown and Gerbarg, 2005).

QasemZade and Nurbakhsh (2008) found that Yoga exercises reduce women depression significantly. Concerning the endurance role in women health and life quality, researchers have concentrated on the ways of promoting the endurance and life quality (Hadi and Hadi, 2006). Our findings are in conformity with those of Paluska (2000) and Jeg Lane (2000) as well as with our primary goal (Ghaseminezhad and Noorbakhsh, 2008 Paluska and Schwenk, 2000).

Taylor-Piliae and Chair (2002) studied the women who had hysterectomy and heart surgery in Long England Center. They suffered anxiety and muscle stress. The subjects were educated relaxation two month before surgery (two 30-min weekly session). The results confirmed that relaxation and muscle stress before hysterectomy. This study emphasize on the effect of relaxations on treatment of muscles stress resulted from anxiety (Russo-Neustadt *et al.*, 2000).

Given the conformity of the result of the present study with those of the above mentioned studies, one may conclude that Hatha Yoga considerably promotes the mental health among women and even others.

CONCLUSION

Generally, the effects of Hatha Yoga exercises on reduction of anxiety and depression have been clearly explained; and many literatures introduced the relaxations-as a crucial part of Hatha Yoga exercise-efficient in control of anxiety, stress and depression. Relaxation has various forms in Yoga, all of which are based on muscles release and liberation.

Apparently, Hatha Yoga exercises are capable of reducing plasma catecholamine and sympathetic system; therefore, with regard to the present study's findings and those of the recent studies which emphasized on positive effects of Hatha Yoga on psychological disorders, application of cheap, simple and funny exercises of Hatha Yoga may reduce anxiety among women, chronic patients as well as those who work in stressful environments.

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