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THE IMPACT OF RELAXATION TRAINING AND VALERIAN ON HOT FLUSH AND NIGHT SWEATS OF MENOPAUSE WOMEN

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ABSTRACT

Introduction: With the onset of menopause, women experience many symptoms, which may affect the quality of life and endanger health. This study aimed to compare the effect of non-hormonal method on some features of this period such as the hot flushes and night sweat in menopausal women
Methods: This study is a clinical trial conducted on 129 postmenopausal women (2014) selected randomly. They were then divided into three groups (two experimental groups and one control). All demographic questionnaires were filled out and informed consent forms taken. In the first group, Benson relaxation technique was used. For the second group valerian capsules and third group placebo capsules containing starch were administered for one month. Then, the data were analyzed in the software SPSS, 20 at a significance level of 0.05.
Finding: The results showed that there was a significant difference in the level of education on hot flushes and night sweats (p=0/042). Also, the groups were not significantly different before the intervention on hot flushing and night sweating, but after the intervention these decreased in valerian and relaxation groups; in the valerian group, there was more improvement (p<0/05). The results did not show a significant difference about night sweats before and after the intervention
Conclusion: In comparison of the two non-hormonal methods, a better response was observed with the use of valerian. The use of non-pharmacological approaches for women who cannot use hormonal methods may be appropriate.

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Introduction

Many women experience menopause symptoms and complications, which may affect the quality of life and threaten women's health [1-3]. It starts with vasomotor symptoms (such as flushing, night sweating...), changes in menstrual cycle, vaginal dryness, itching, and intercourse pain. It continues with mood swing, memory loss, sleep disturbance, decreased sexual arousal, stress urinary incontinence, and musculoskeletal pain. Among the above symptoms, flashing and sweating are the most uncomfortable signs regarding that, patients refer to health centers. The first four symptoms are sorted in terms of prevalence as follows; Flushing (75%), night sweating (68%), mood disorders (55%), and sleep disorders (44%) [4]. According to studies, about 50% of cases with flushing and night sweating reported the contributing role of environmental factors such as temperature, stress, diet, etc., while other factors are due to menopause that remains several months to 5 years [5]. In terms of symptoms occurrence, it has been reported that about 14-51% experience it within the last menstrual period, 58% before menopause, 35-50% during menopause and 30-80% experience it post menopause. However, research has shown that only

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10-20% of women receive medical care [6, 7, 8], and it can be combined with a pharmaceutical, hormonal, non-hormonal treatment depends on the individuals choice. According to studies, women tend to have non-hormonal treatments at this age that is why about 50% of aged people use herbal supplements to control some of symptoms [9]. According to a study, about 80% of menopausal women tend to consume herbal treatment in American society, also, about 60-70% of them believe that it is problem solver, natural without adverse effects [10]. In this regard, Valerian has been used in traditional medicine [11] and its effective application has been proved in the study done by Jokar (2016), Kazemeian (2001) and Vesan (2003) in terms of reduced frequency, severity and duration of flashing, night sweating and other menopausal symptoms [12, 13, 14]. Relaxation is the other non-pharmacological method, which is effective on labor pain, anxiety, menopause, etc. [15]. According to Supavita [2013], Friedman and Woodward (1992), its efficiency was proved on flushing and sweating [16, 17]. The aim of this study was to eliminate or decrease the common mentioned symptoms of menopause, including flashing and night sweating that can affect healthy life style [18]. We studied the effect of both relaxation and valerian herbal capsule on mentioned symptoms due to its public approval, low cost and no side effects.

Materials and methods

This clinical trial was done on postmenopausal women referred to health centers in Shiraz, 2016. The sample size of 129 was calculated regarding to the previous studies [20, 21, 23], with two experimental and one control groups (43 in each arm) by random sampling. Inclusion criteria were menopausal women with physical health and no background disease. Exclusion criteria were disease occurrence (cancer, etc.), history of medication or drugs causing symptom flushing, history of alcohol, tobacco, sedatives, hormone (within last 3 months), and valerian (for seven successive days), history of relaxation practice and lack of willingness to cooperate. Firstly, they fill out the informed consent, demographic forum and the feature of flushing and night sweating (frequency, intensity, and duration). Then, Benson relaxation strategy was performed for the experiment group. In the first week, the education was done through two theoretical and practical sessions of 2-hours held twice a week besides pamphlet and educational CD. All participants practiced the educated exercises at home within 30 minutes for thirty days. In the second group, valerian capsule (containing 530 mg produced by Gol Daroo Company) was prescribed. The third group was control, received placebo capsules (containing 50 mg starch produced by Shiraz Pharmacy University of Medical Science), which was prescribed two tablets before bedtime for a month. Necessary education was done to all three groups regarding to the consumption time, route, and relaxation practices. After the intervention, they were followed up through telephone contacts weekly. A month after the intervention, all the questionnaires were refilled by all three groups. Finally, the data was analyzed by SPSS $_{20}$, STATA software. The applied descriptive statistics included t-test, ANOVA and post hoc test, and Pearson correlation test or Spearman at significance level of 5%.

Findings:

The results showed that the studied age range was 46-73 years with average age of 58.89 ± 5.3. ANOVA and Chi-square test (Fisher's exact test) was used for the distribution of demographic variables between groups such as age, marital status , job and body mass index, which were not statistically significant (P>0/05). However, there was a significant difference in education between groups. Third grade of elementary was the dominant education in the valerian and control groups, and diploma in the relaxation group. However, university degree had the lowest frequency in the valerian and control groups along with high school degree in the relaxation group (p= 0.042) (Table 1).

Table 1: Distribution of educational variables in terms of study groups

education	Valerian (n=44)	relaxation (n=43)	control (n=42)	P value
illiteracy	7(15.9)	4(9.3)	8(19)	0.042
Elementary school	16(36.4)	9(20.9)	22(52.4)	
High school	6(13.6)	7(16.3)	5(11.9)	
diploma	10(22.7)	17(39.5)	5(11.9)	
University degree	5(11.4)	6(14)	2 (4.8)	

Before the intervention, chi-square test was used to compare the night sweating and flushing (intensity, duration, and frequency) in three groups. It showed no significant difference (P> 0.05). However, after the intervention, we found a significant decreased flashing in valerian and relaxation groups, which was more significant by valerian. Night sweating did not show any significant improve in groups before and after the intervention (Table 2).

Table 2: Distribution of flushing and night sweating before and after the intervention among three groups

variable		Valerian n(44)	relaxation n(43)	control n(42)	total n(128)	P value
Flushing (severity, duration, frequency)	**before**	26(59.1)	22(51.2)	22(51.2)	72(55.8)	0.741
	after	10(22.7)	12(27.9)	12(27.9)	42(32.6)	0.035
Night sweating	**before**	19(43.5)	18(41.9)	18(41.9)	51 (39.5)	0.601
	after	6(13.6)	8(18.6)	8(18.6)	27 (20.9)	0.128

McNemar test was applied to study the effect of intervention on all three groups in terms of flushing (severity, duration, and frequency) and night sweating. The results showed a significant reduction for the mentioned variables in the valerian and relaxation groups. This reduction was more pronounced in the valerian group (Table 3).

Table 3: The influence of intervention on flashing and night sweating among three groups (before and after intervention)

variable	p-value		
	valerian	**relaxation**	**placebo**
flushing	<0.001	0.006	0.289
Night sweating	<0.001	0.002	~ 1

Discuss

The results showed that the age of menopause was 46-73 in the study population with an average age of 58.89 ± 5.3 years, which was consistent with the study done by Mortazavi (2003) and Dyana (2009) with an average age of 47.19 and 50-80 years, respectively [22,23]. Moreover, among demographic variables, there was a significant difference in the level of education with flashing and night sweating in the valerian and relaxation groups ($p < 0.001$). The decrease of variables such as socio-economic status, income and low education is along with increased flushing, which is consistent with the results of Taavoni (2012) and Hanter veman (2010) [5,21]. Before the intervention, there was no difference in flushing and night sweating among groups ($p > 0.5$). After the intervention, flushing significantly decreased for 36.4% and 23.3% in the valerian and relaxation groups, respectively ($p < 0.05$) **[Table 2]**. Thus, it implies the effect of valerian and relaxation strategies on the mentioned symptoms. Here we point out to some studies with consistent or inconsistent results: Kazemiyan (2001) did a study on 48 women aged 45-65 years with flushing by prescribing valerian for 700 mg daily in two months. Finally, flushing (severity, duration, frequency) was decreased a months after the intervention even less after two months ($p < 0.05$) [13], which was consistent in study population, age range, the effect of medication on flushing while it was not so in terms of participants, medication dose, and intervention course. Son (2001) did a study on 48 women aged 45-65 years with flushing by prescribing valerian blend with other herbs for two months. The frequency of flushing was decreased after 2 weeks for 47% in the intervention group [24]. Mirabi and Mojab (2013) did a study on 34 post-partum women with flushing by prescribing valerian for 255 mg, three times a day. Finally, flushing (severity and frequency) was significantly decreased 8 weeks after the intervention rather than the placebo group (34 subjects) ($p < 0.001$). It was consistent with this study due to the effect of valerian on flushing and presence of control group, while the duration, dose and the frequency of prescription was different. Supravita and colleagues (2013) did a study on 71 post-partum women with flushing, night sweating and sleep disturbance by training two approach of relaxation in two groups. All three symptoms was significantly decreased 12 weeks after the intervention in both groups ($p < 0.05$) [16]. It was consistent with this study due to the effect of valerian on flushing and presence of control group, while the duration, dose and the frequency of prescription was different. According to the review study conducted by Lotta and Elizabet (2012), relaxation is effective on reducing the vasomotor signs such as flushing and night sweating to improve the quality of life in woman [25-27]. It was consistent with the result of current study. The advantage of this study is the presence of two interventional and a control group simultaneously to compare both strategies for a month, while in other studies, one strategy was compared with a control group or valerian would be blend with other herbal drugs. Study limitations including lack of cooperation by some specialists in Gynecology and Obstetrics besides sample distribution (in centers) [28].

Conclusion:

The present study indicates a positive indication of non-hormonal methods on vasomotor symptoms (flushing and night sweating). Since this two strategies length less with better results, it is suggested to apply herbal and non-pharmacological (non-hormonal) methods due to its consumer approval and cost beneficence to improve quality of life in woman.

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