

RESEARCH ARTICLE

The effect of meditation on depression, anxiety, and stress in university students

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Abstract: Purpose: The aim of this study is to determine the effect of meditation on depression, anxiety, and stress levels of university students. Methods: In the study, the data were collected using personal information form and Depression, anxiety, and stress scale. The meditation group performed a 20-minute attention and awareness meditation once a week for 8 weeks. Findings: As a result of the statistical analysis, it was observed that there was no significant difference in the comparison of the anxiety, stress, and depression levels between two groups at the end of 8 weeks. Implications: Consequently, it was determined that meditation was an ineffective approach for reducing the anxiety, stress, and depression levels.

Keywords: meditation, anxiety, stress, depression, university student

1 Introduction

Stress experienced by university students is not a new issue and numerous studies have been conducted on the management of this stress. Low-level stress may be useful by motivating students to show a good performance and protect their mental and physical wellbeing.

As the stress level increases, psychological, social, and academic effects such as self-dissatisfaction, feeling of failure, anxiety, disappointment and depression may be observed [1–3]. In a previous study, it was reported that 53.5% of the university students had a stress level above average [1–3]. In another study, it was reported that only 16.5% of the students did not have depression symptoms, 30.6% had moderate depression, and 23.2% had moderate or severe depression. In another study conducted in 2007, it was observed that 50.7% of 5689 American university students had major depression, panic disorder, and/or general anxiety [4]. In a study conducted with 1166 university students in Turkey, it was determined that 27.1% of the students had moderate depression, 47.1% had anxiety, and 27.1% had stress [5].

Numerous studies have been conducted on reducing stress and preventing the stress-related problems in university students and these studies are also ongoing. They have examined keeping a diary, exercise, music therapy and, finally, meditation to struggle with stress [6]. Studies have been conducted on the effect of meditation in various groups such as university students, society and clinical population for more than forty years [7, 8].

Meditation has been used as a method relieving and calming down body in many cultures since ancient times [9]. Meditation, which have been applied since the 1960s in the West, is a method used in the clinical and non-clinical areas, without interfering spirituality to improve adaptation to life-related stressors and emotional well-being [10, 11].

There are hundreds of different meditation types included in the scientific literature [12]. In order to understand the mechanism of meditation, it is required to know its philosophy including its spiritual and cultural roots. Considering the variety of the meditation applications, the applications under the 3 most common main titles in the literature may be used as a base [12, 13].

There are various studies conducted on these three applications. The studies on meditation has provided evidence indicating that meditation helps to reduce stress [14, 15], improve cognitive function [16, 17] and heal chronic pain [18–20]. The studies conducted to determine whether or not the awareness-based meditation reduces stress have revealed that such meditation improves the physical and emotional well-being of the patients with the medical diseases including a wide range in the short and long terms and enhances the stress management skill in the non-clinical population [16].

Despite all this information, stress continues to be a weakening problem for university students [6]. Therefore, this study was conducted to determine the effect of meditation on depression, anxiety, and stress levels of university students.

2 Materials and methods

2.1 Setting and participants

This randomized controlled trial was conducted with the participation of the 4th-year nursing students between October 2018 and January 2019.

The meditation group was composed of 40 students who were voluntary to participate in the study, among 46 students taking the course “The complementary and alternative therapies in health”. The control group was composed of 53 students, among 60 students, who agreed to participate in the study and did not take the course “The complementary and alternative therapies in health”. There was no statistical difference between the meditation group (n = 40) and control group (n = 53) (Table 1).

Table 1 Personal characteristics

	Meditation		Control		p
	n	%	n	%	
Gender					
Female	27	67.5	33	62.3	0.601
Male	13	32.5	20	37.7	
Working Status					
Yes	2	5.0	4	7.5	0.696
No	38	95.0	49	92.5	
Occupation of the mothers					
Housewife	35	87.5	47	88.7	0.964
Worker	4	10.0	4	7.5	
Officer	0	0.0	1	1.9	
Retired	1	2.5	1	1.9	
Occupation of the fathers					
Officer	8	20.0	7	13.2	0.761
Worker	7	17.5	8	15.1	
Self-employment	17	42.5	24	45.3	
Retired	8	20.0	14	26.4	
Accommodation					
With my family	2	5.0	0	0.0	0.792
the residence	21	52.5	32	60.4	
In a separate house with my friends	16	40.0	20	37.7	
Next to relatives	1	2.5	0	0.0	
Alone in a separate house	0	0.0	1	1.9	
Economical situation					
I need support	11	27.5	13	24.5	0.893
But I can get along	7	17.5	13	24.5	
Moderately good	19	47.5	21	39.6	
Good	3	7.5	6	11.3	
Presence of a health problem					
Yes	7	17.5	7	13.2	0.568
No	33	82.5	46	86.8	
Is your sleep regular?					
Yes	18	45.0	22	41.5	0.736
No	22	55.0	31	58.5	
Do you have a stressed personality trait?					
Yes	28	70.0	35	66.0	0.685
No	12	30.0	18	34.0	

2.2 Intervention

The ability of controlling attention is considered as a basis in many meditation methods. Therefore, the focused-attention meditation forms a basis to pass to the other meditation types. As can be understood from its name, practitioner focuses on their own breath or a specific object by ignoring other stimuli. The practitioners learn to focus their attention on the intended points by focusing their attention for a long time [12, 13]. The centre of awareness meditation is composed of the efforts of directing attention to internal and external stimuli from moment to moment. In general, the practitioners start with focusing attention and they gradually direct their attention to monitor [12, 13]. During the awareness study, emotions and thoughts appear and they are observed but practitioner does not react to them and they do not engage in them. The individual accepts that his/her negative emotions and thoughts increase and bore him/her

but they quickly pass by from the minds of people and they do not settle permanently. So, the individual gets relaxed and enjoys life more [21]. Also in this study, focused-attention meditation was performed in the first 10 minutes together with forest sounds and the students focused on their breath. In the second 10 minutes, the participants were asked to focus on the sounds they heard and the environment and to recognise them one by one. The participants stated that they got relaxed after each meditation session.

A meditation of minimum 8 weeks was proposed in the meta-analysis performed [22]. For this reason, meditation was applied once a week for 8 weeks in the present study.

2.3 Measures and instruments

The anxiety, depression, and stress status of the students were assessed one day before starting the first meditation session for both meditation and control groups. The meditation and control groups were evaluated again after the 8-session meditation application. The meditation group performed meditation for 20 minutes once in a week for 8 weeks. No intervention was applied to the control group for 8 weeks.

In the study, the data were collected using personal information form and Depression, anxiety, and stress scale (DASS).

Individual information form was prepared by the researchers and contains 10 questions addressing personal information of both groups.

Depression, Anxiety, and Stress Scale (DASS-21): It is a self-report scale with three subscales designed to measure the emotional status of depression, anxiety, and stress. Each subscale of DASS-21 scale is composed of 7 items which have similar content. Turkish reliability and validity study of the scale was conducted by 32 Yılmaz *et al.*, in 2017 and the depression, anxiety, and stress scores are calculated by adding the scores of the related items [23].

2.4 Ethical considerations

Ethics committee approval was obtained from Gümüşhane University Scientific Research and Publication Ethics Committee in order to conduct the study. All participants were informed about the study and their verbal consent was obtained.

2.5 Statistical analysis

Descriptive statistics, means, median, frequencies, and percentage were used to show the socio-demographic characteristics of the student. Chi-Square Tests were used to evaluate the similarity between the meditation and control groups. Comparisons were made using t test for all statistical analyses, a two-sided p value of less than 0.05 was considered as statistically significant.

3 Results

It was found that the age average of the meditation group was 21.65 ± 0.86 and the age average of the control group was 22.27 ± 1.35 . 67.5% of the meditation group and 62.3% of the control group were female. 95.0% of the meditation group were unemployed and 92.5% of the control group were unemployed. While the mothers of 87.5% of the students in the meditation group were housewives, the mothers of 88.7% of the students in the control group were housewives. When the occupation of the fathers was evaluated, it was observed that the fathers of 42.5% of the students in the meditation group were self-employed and the fathers of 45.3% of the students in the control group were self-employed. 52.5% of the meditation group were staying at dorm; whereas, 60.4% of the control group were staying at dorm. When evaluating income status of the students, it was determined that 47.5% of the meditation group stated that they had a middle-income level and 39.6% of the control group stated that they had a middle-income level. In both groups, a great majority of the students stated that they did not have a health problem (meditation 82.5%; control 86.8%). 55% of the meditation group stated that they had an irregular sleep pattern and 58.5% of the control group stated that they had an irregular sleep pattern. In both groups, a great majority of the students stated that they had a stressful personality trait (meditation 70.0%; control 66.0%) (Table 1).

It was determined that there was no statistically difference between the meditation and control groups in terms of gender, employment status, occupation of mothers, occupation of fathers, residence place, income status, presence of health problem, sleep pattern, and stressful personality trait and both groups were similar ($p > 0.05$) (Table 1).

As a result of the statistical analysis, it was observed that there was no significant difference between the meditation and control groups in terms of anxiety, stress, and depression levels after 8 meditation sessions ($p > 0.05$).

4 Discussion

Mind body interventions are used increasingly more to help to reduce stress in the general population. It has been demonstrated that mental silence-oriented meditation is a safe and effective strategy for full-time employees for coping with job stress and depressive feelings [24]. There are studies indicating that the meditation-based stress management applications reduce stress in university students [25–29].

It was reported in a meta-analysis that cognitive, behaviourist, and awareness-based approaches were effective in reducing stress, anxiety, depression, and cortisol response levels in university students [30]. As a result of another meta-analysis, it was observed that mindfulness meditation was effective in reducing stress [22].

It was reported in the previous studies that an 8-week stress-coping program based on awareness meditation reduced stress levels significantly [2, 31]. However, it was reported in a study it was not effective in reducing stress [32]. Also similar to this study in the present study, it was found that attention and awareness meditation did not have a significant effect in reducing stress, anxiety, and depression levels in university students.

Although the meta-analysis results reported that meditation was effective in reducing stress and anxiety levels in particular, the reason behind why it was ineffective in the present study was considered to be due to the fact that it was conducted with the 4th-year students. It was considered that meditation was not effective due to socio-cultural characteristics of the 4th-year students and due to the fact that they were about to finish their schools, they prepared for the kpss exam to work in Turkey, and they had anxiety about finding a job. For further studies, it is recommended to study with the 2nd or 3rd year students, extend the meditation period, and perform meditation more than once a week.

5 Implications for psychiatric nursing practice

University students try to cope with many stressors throughout their education life. Evidence-based studies are a necessity to determine what can be done to prevent anxiety, stress and depression of university students. In this study, the effect of meditation on the anxiety, stress and depression of university students was examined and a result was tried to be reached.

Conflict of interest

The authors report no actual or potential conflicts of interest.

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