

## Short Communication

# The Effect of Laughter Therapy on Anxiety and Stress in University Students

Melike Demir Dogan\*

Department of Nursing, Gümüşhane University, Turkey

## \*Corresponding author

Melike Demir Dogan, Department of Nursing,  
Gümüşhane Üniversitesi Sağlık Bilimleri Fakültesi  
Bağlarbaşı Mahallesi 29100 / Gümüşhane, Turkey,  
Email:melekdm@mynet.com

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**Abstract**

This semi-experimental study was conducted to determine the effect of laughter therapy on stress and anxiety of the students.

65 fourth-year nursing students, who agreed to participate in the study, were included in the sample of the study. In the study, the data were collected using pretest and posttest technique. In the pretest, stress and anxiety score and information were obtained from the students using the personal information form. After 20-minute laughing therapy, posttest was administered and stress and anxiety scores were evaluated again.

The mean age of 65 students participating in the study was  $22.05 \pm 1.29$  [min: 20- max: 29] and 24.6% were male students. The statistical analysis revealed that laughter therapy significantly reduced anxiety [ $t = 7.509$ ,  $p < 0.001$ ] and stress = 7.422,  $p < 0.001$ ].

As a result of the study, it was seen that laughter therapy was an effective approach to reduce stress and anxiety in university students.

**Keywords**

- Laughter therapy
- Nursing Student
- Anxiety
- Stress

**INTRODUCTION**

Laughter is a human behavior which is executed by the brain, helps the social interactions of people, and adds an emotional context to conversations [1,2]. It alleviates fear and anger at least for a moment and evokes the senses of both control and hope [3,4]. Laughter is usually contagious and a person who laughs will start a positive feedback for other people to laugh [2].

Laughter therapy has been accepted as a complementary and alternative treatment approach since 1970. Because it is a noninvasive complementary and alternative treatment approach, its usage has rapidly become widespread [5,6]. Laughter therapy which was developed in India back in 1995 is a combination of imitating laughter and yoga breathing exercises implemented in a group environment. Laughter therapy includes applauses, arm and leg movements, deep breathing exercises and smiling exercises [7,8].

Studies aiming to determine the effects of laughter therapy on human health have continued actively. When examining these studies, it is seen that they have been generally conducted with dialysis patients [9], elderly [5], organ transplant patients [10], postpartum women [11] and patients with breast cancer [6].

Laughter therapy reduces heart rate and blood pressure and increases oxygen uptake. Thus, it is useful for both mental and

physical health [12,13]. The studies have shown that laughter therapy has positive effects on anxiety, depression, blood pressure, general health, insomnia, and pain experience. In addition, it improves pulmonary functions and strengthens the immune system [5,9,14-16].

Individuals experience stress at various levels in diverse stages of their lives. Similarly, nursing students experience stress at various levels due to a number of reasons such as a new life environment, life style, health, academic performance, competition, choice of career, relations with peer group, and expectations of parents [17]. In the literature, one of the most important positive physiological effects of laughter therapy is stated to help individuals to cope with stress and decrease their anxiety [18]. Thus, this study was conducted to determine the effect of laughter therapy on anxiety and stress of the students.

**MATERIALS AND METHODS**

This quasi-experimental study was conducted to determine the effect of laughter therapy on anxiety and stress of the students.

The population of the study consisted of 77 students receiving education at department of nursing of Gümüşhane University and taking the course of complementary and alternative therapies in health. The sample consisted of 65 students who were voluntary to participate in the study among the aforementioned students.

In the study, the data were collected using pretest and posttest technique. In the pretest, stress and anxiety score and information were obtained from the students using the personal information form. After the 20-minute laughter therapy, the pretest was applied and the stress and anxiety scores were evaluated again.

Personal information form involved 10 questions including socio-demographic characteristics of the students. Stress score was evaluated with a mean score obtained by assessing the students' stress and making a scoring of 0-10 points. Similarly, anxiety score was also evaluated with a mean score obtained by assessing the students' anxiety and making a scoring of 0-10 points

In the literature, it is indicated that a 20-minute laughter therapy is enough for improvement of all physiological benefits [2,19]. As stated in the literature, the therapy started with warm-up exercises and then breathing exercises were applied to prepare the body to laughter. Then, the group activities including laughter were realized to increase the interaction of the group with each other. Following the laughter therapy, the students were asked to evaluate their stress and anxiety with a scale of 0-10 points.

Necessary permissions were obtained for the study. The students were informed and their verbal consent was obtained. The data were assessed statistically using percentage, mean value, t test and one-way ANOVA.

The present study has some limitations. The first limitation is that the present study is not a randomized controlled trial and it has a pretest and posttest design. In the present study, the instant effect of only laughter therapy was evaluated and it is recommended for future studies to evaluate after a total of 8 applications to be applied twice a week.

## RESULTS AND DISCUSSION

Age average of 65 students who participated in the study was  $22.05 \pm 1.29$  years [min: 20- max: 29] and 24.6% of the group were male students. 92.3% [n=60] of the participants were unemployed and 13.8% stated that they had a health problem [arthritis, epilepsy, fibroadenoma, gastritis]. While 56.9% [n=37] of the students indicated that they did not have a regular sleeping pattern, 61.5% [n=40] stated that they had a stressful personality trait. Average duration of sleep of the students who participated in the study was  $6.74 \pm 1.21$  hours (Table).

Anxiety is a natural response and a necessary warning adaptation in human beings [20]. Anxiety is defined as senses of fear, worry, and uneasiness in the presence or absence of psychological stress and may cause physical or bodily symptoms [like tachycardia, sleep disorder] [21].

It was determined that the anxiety mean score of the students who participated in the study was  $3.45 \pm 2.07$  and their stress mean score was  $4.07 \pm 2.53$  before the laughter therapy. It was observed that the anxiety mean score decreased to  $2.03 \pm 2.16$  and also the stress mean score decreased to  $2.13 \pm 2.10$  after the laughter therapy. As a result of the statistical analysis, it was determined that the laughter therapy reduced significantly both anxiety [ $t=7.509$ ,  $p < 0.001$ ] and stress [ $t=7.422$ ,  $p < 0.001$ ].

**Table:** Socio-demographic characteristics of the students.

	n	%
<b>Gender</b>		
Female	49	75.4
Male	16	24.6
<b>Marital Status</b>		
Single	61	92.3
Married	4	7.7
<b>Residence Place</b>		
With family	6	9.2
Dormitory	50	76.9
Home with friends	9	13.8
<b>Economic Condition</b>		
I need support / scholarship	15	23.1
I can barely make a living	20	30.8
Moderately good	15	23.1
Good	15	23.1

In the literature, it is stated that laughter therapy helps individuals to cope with stress and decrease their anxiety [18,22]. In some studies, it has been reported that laughter therapy is an effective approach to reduce anxiety [5,6,23-25].

In this study, it was observed that gender was not statistically effective on stress and anxiety. In the literature, it is reported that men use humor and laughter more while discussing their sensitive health problems; whereas, women use laughter mostly as a means of social support and coping with stress in their relations [19].

In a randomized controlled trial conducted with university students in Iran; it was observed that the depression levels of female students after 8 laughter therapies declined [26]. In another randomized controlled study conducted with forty two first-year nursing students; a laughter therapy was applied to the experimental group for 15-20 minutes per day for 10 days and the stress levels of the students were evaluated before the first laughter therapy and after the last therapy. As a result of the study, it was stated that laughter therapy reduced the stress level in a statistically significant way [17]. In another randomized controlled study, a one-hour laughter therapy was applied to nursing students for a total of 8 times twice a week. As a result of the study, it was determined that laughter therapy had a positive effect on the general health of students, enhanced the symptoms of physical and sleep disorders, reduced anxiety and depression and helped to improve social functions [8]. As in these studies, in the present quasi-experimental study, it was observed that laughter therapy significantly reduced stress and anxiety levels of students.

## CONCLUSION

As a result of this study, it was observed that laughter therapy was an effective approach to reduce stress and anxiety levels of university students. It is recommended to plan randomized controlled trials with larger sample size in the future and evaluate the effect of laughter therapy on anxiety and stress.

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