



Effect of Mandala Art on Depression, Anxiety and Stress among Nursing Students

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Abstract

The aim of this study is to find the effect of Mandala colouring on Depression, Anxiety and Stress among nursing students. Sample consisted of 50 nursing students from Sushrutha school of Nursing in Bengaluru. The sample consisted of female students between the age group of 18-22 year. DASS- 21 is used to measure Depression, Anxiety and Stress among nursing students. First the DASS -21 is administered to 120 students. Among them 50 were selected for the study based on their score in Scale. Then the children were randomly grouped into experimental and control group. Each group consisted of 25 students. The mandala coloring as art therapy program was performed in 16 sessions for the intervention group. The scale was again administered to both the groups. Then the data was analyzed by calculating the mean and t-test. A significant difference in the mean score of Depression, Anxiety and Stress before and after the intervention was observed in the intervention group, thus showing decrease in Depression, Anxiety and Stress in this group, t test scores indicated significant difference before and after the intervention.

Keywords: Mandala Art Therapy, Depression, Stress, Anxiety.

Introduction

Stress is a usual response to the demands and pressures which could be situational, if they are professed as threatening or dangerous ^[1]. A stressor is something, which causes stress. This can be an event, a situation, or an individual. Personal and environmental events that cause stress are identified as stressors ^[2]. The individual's ability to efficiently cope with stressful situations is mediated by the impact of stressor experienced. Stress has become a usual part of life, it is very present and becoming more ubiquitous among college going students ^[3]. In India, where economic and social development is under immense pressure which is intensely felt by middle class who are under greater stress to hold their position, protect their social place and to move ahead ^[4].

A student is subjected to diverse kinds of stressors, such as pressure of academics with a commitment of success, undecided future and difficulties faced for incorporation into system. Social, emotional, physical inconveniences and family problems are faced by students which may influence learning ability and academic performance ^[4]. Insisting that children should achieve good academic performance is a very common observable fact among parents of middle-class families ^[4]. It is essential to comprehend other aspects of life which may be causing increase in depression, anxiety, and stress. Negative perceptions of body image have been shown to be correlated with increased possibility of depression and

anxiety in teenagers. Low satisfaction in life, low self-confidence and feelings of inferiority may result in major impairment of social, occupational and educational functioning ^[3].

Anxiety disorders are disorders with an 'abnormal' experience of fear, which gives rise to sustained distress and / or obstacles in social functioning ^[5]. Anxiety disorders rank high within the list of burden of diseases. According to the Global Burden of Disease study, anxiety disorders are sixth leading cause of disability, in terms of years lived with disability (YLDs), in low-, middle- and high-income countries in 2010. They lead to reduced quality of life and functional impairment, not only in personal life but also at work. They lead to reduced quality of life and functional impairment, not only in personal life but also at work and are associated with substantial personal and societal costs ^[5]. It can also be of assistance for universities to understand what aspects of life correlate with a decrease in depression, anxiety, and stress symptoms. Studies have shown that those college students who have satisfactory relationships with family and friends are more likely to have overall life ^[3].

Mandala art therapy is the method of art therapy, which has been successfully used in applied psychology ^[6]. Mandala, a composite word in Sanskrit (a language in ancient India) includes the words "Manda" (meaning centre) and "La" (meaning accomplishment). It refers to reaching individuals

about their Centre and essence, being sincere with themselves, and achieving a peaceful essence [7]. The author of this kind of psychotherapy, Carl Jung recorded his dreams and sketched them in a circle, seeing Mandala as a system that encodes experience of mankind and as a mechanism of synchronization, support, healing worries, correcting anxiety states. Carl Jung saw that Mandalas should be used in difficult life circumstances, emotional stress, or crisis. Picture in the Mandala holds power in the safe enclosed space, thereby stabilizing the emotional background, complex personal psychosomatic disorders [6].

Methodology

Problem

To study the effect of Mandala Art on Depression, Anxiety and Stress among nursing students.

Objectives

- i). There will be differences in Depression, Anxiety and Stress before and after the intervention.
- ii). There will be decrease in Depression, Anxiety and Stress after intervention.

Variables

Mandala colouring, Depression, Anxiety and Stress.

Sample

A sample of 50 nursing students were selected for the study from Sushrutha school of Nursing in Bengaluru. The sample consisted of female students between the age group of 18-22 year.

Selection criteria: Inclusion criteria:

- i). Nursing undergraduates of age 18-22 years.
- ii). Participants willing to participate.
- iii). Female students were included.

Exclusion Criteria:

- i). Nursing undergraduates of age other than 18-22 years.
- ii). Participants not willing to participate.
- iii). Male students were excluded.

Tools

DASS 21 is a set of 3 self-report scales designed to measure the emotional states of depression, anxiety and stress [8]. The reliability of DASS 21 has wonderful Cronbach's alpha values of 0.81, 0.89 and 0.78 for subscales of depression, anxiety and stress respectively. It absolutely was found to possess wonderful internal consistency, discriminative, concurrent and oblique validities [5]. Each item is scored on a 4-point Likert scale (ordinal) ranging from 0 ("did not apply to me at all") to 3 ("applied to me very much") [9]. Once finishing the DASS-21, the respondent is needed to possess the presence of an indication over the previous week. Every item is scored from zero (did not apply to American state) to three (applied to me significantly or most of the time) [5]. Consent form, Patient Information Broacher and Data collection sheet, Drawing paper, Colors, pencil, eraser.

Design

This study is pre/post-test quasi experimental research with a control group. For this study, the samples is selected through convenient sampling. First DASS- 21 scale is administered to measure the level of Depression, Anxiety and Stress to 120

students. A total of 50 students who scored above average in at least two areas were selected for the study. Then they were divided into experimental and control group each consisting of 25 students.

Procedures

The questionnaire was administered to the students for the study before the intervention. After coordinating with students mandala coloring sessions were held daily for the first three days later once a week for a total of 16 sessions each lasting for a duration of 35-45 minutes for the intervention group subjects (Choi, 2021, Cramm 2013 Duong 2018 Faraone 2021). For the purpose of holding sessions and maintaining attention and concentration, the intervention students were made to sit in circle divided into 5 groups of 5 students.

In the first session, the students got acquainted with the researcher and each other (Ghamari 2020). The reason for holding these sessions was explained to students clearly. In each session, they were instructed to use the provided crayons or colour pencils to color and complete a mandala design that was previously drawn on an A4 size sheet of paper. In mandala colouring sessions, the students had complete freedom to fill it with either choosing colors and the coloring style. Each design was aimed to be a bit more complex than the one in the previous session. After the intervention, DASS-21 questionnaire was again administered to students and the data is collected.

Analysis of Results

This study is conducted on 50 nursing students. The demographic data is collected by using a demographic information questionnaire. The data is subjected to chi square test based on the results of *Chi square* test, it was found that there is no significant difference in the frequency distribution of demographic characteristics including age, gender, grade, maternal and paternal education. The questionnaires were scored and recorded. The results were analyzed through t-test (Katzman 2017).

Table 1 is showing the scores of the students in Depression, Anxiety and Stress areas from the table it is observed that the scores of the students are high before intervention when compared to after intervention

The objective of this study is that the intervention will have an impact on all the variables of the study namely, Depression, Anxiety and stress. A comprehensive intervention program is developed and administered in 16 sessions spread over 6 weeks. Intervention is aimed at decreasing the depression, anxiety and stress through mandala drawings that worked as an exercise for understanding the causal factors by enhancing concentration and managing the variables.

While interacting with the students during the test and intervention period, it is found that some of the students are aware about the causes for their anxiety and stress but could not consciously control their anger or irritability. Even feeling sad or worrying for small things, though they know it is small they could not control but after intervention they are able to focus on important things.

Analysis of Results

According to the data displayed in the table the mean scores in all three variables the intervention group students is decreased compared to the pre-intervention phase.

Table 1: Showing Mean, SD and t - ratio of Depression, Anxiety and Stress tests in pre-post intervention of experimental group students.

Name of the Test	Condition	Mean	SD	T-ratio
Depression	Pre	19.55	6.20	5.29**
	Post	7.12	1.95	
Anxiety	Pre	17.36	4.19	4.59**
	Post	9.55	2.14	
Stress	Pre	20.08	5.86	5.45**
	Post	6.62	4.98	

For depression the obtained mean and SD is 19.55 $\pm$ 6.20 in pre intervention and 7.12 $\pm$ 1.95 in post intervention and the obtained T ratio is 5.29 which indicates significantly high differences between pre and post intervention. For Anxiety the obtained mean and SD is 17.36 $\pm$ 4.19 in pre intervention and 9.55 $\pm$ 2.14 in post intervention and the obtained T ratio is 4.59 which indicates significantly high differences between pre and post intervention. For Stress the obtained mean and SD is 20.08 $\pm$ 5.86 in pre intervention and 6.62 $\pm$ 4.98 in post intervention and the obtained T ratio is 5.45 which indicates significantly high differences between pre and post intervention. In the control group, where no intervention is performed, the scores did not show significant difference between pre and post intervention period.

Discussion

The results showed that this decline in mean scores in all three components proves that mandala coloring intervention helps in decreasing Depression, Anxiety and stress.

The psychoanalytic theory supports Jung's (1973) Mandala approach, which notes that drawing and/or painting a symmetrical Mandala induces beneficial cognitive and emotional benefits due to its ability to ease the "inner turmoil" of individuals' emotional states. Previous research has shown that coloring Mandalas decreases anxiety in people due to its therapeutic and meditative nature (Henderson, Rosen, & Mascaro; 2007; Sandmire *et al.*, 2012). Mandala art practices are useful because they enable people to convey their inner contradictory feelings and psychological distress through the use of symbols that are often difficult to express verbally supporting Jung's psychoanalytic theory (Henderson, Rosen, & Mascaro, 2007; Jung, 1973). Furthermore, some studies indicate that coloring Mandalas improves mindfulness, endorsing the mindfulness approach, which encourages people to pay attention and concentrate on the present moment, which is useful in cognitive-based activities and educational settings (Carsley, Heath, & Fajnerova, 2015; Chen *et al.*, 2019; Potash, Yun Chen, & Yan Tsang, 2016) (12). Mandala therapy helps you to find Cortical Balance. You will find peace and re-center yourself using the Mandala form. You can achieve a state of cerebral equilibrium by coloring it. We have two hemispheres in the neocortex, referred to as the Left Hemisphere and Right Hemisphere. These two hemispheres work in various ways, but neither is "better" than the other; rather, they complement one another. Since we are a part of nature, we, too, are constantly finding equilibrium. In a perfect world, our brain's two halves can work in tandem. Our Left Brain is mainly used in the worlds of school and work. We must be profitable, creative, effective, and logical, as well as knowledgeable and able to explain anything. There is no space for the Right Brain, which is responsible for intuition and creativity. To combat this, we rejuvenate ourselves by participating in hobbies and activities

that engage our Right Brain while allowing our Left Brain to relax. Mandalas help us achieve cerebral balance. You are using your Right Brain, which is the size of imagination and creativity, when you choose your drawing and colors. You are thinking about space and symmetry, applying logic and inference, and thus using your left brain. Connections form in the corpus callosum when both sides of the brain are functioning at the same time, and you can recover energy from the hemisphere you use less on a regular basis. This method helps you to achieve cerebral equilibrium, which is a source of psychological wellbeing^[13].

The results of this study clearly indicated that drawing or coloring a Mandala was effective in reducing depression, anxiety and stress below the level of which they reported.

Conclusion

The present study concludes that Mandala colouring effectively reduces Depression, Anxiety and Stress. It also suggests that Mandala art therapy can reduce the depression, stress and anxiety for short term as it does not alter or change the main stimuli for the source of Depression, Anxiety and Stress.

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