

Research Article

The Role of Mandala-Coloring as a Therapeutic Intervention for Anxiety Reduction

¹M Ali Qureshi, ²Farah Saleem,

³Nadir Hayat and ⁴Ussama Ashfaq,

¹Senior Medical Officer, RHC Haveli Koranga, 03363644442.
Email: m.ali.qureshi000@gmail.com

²Post Graduate Resident, General Surgery, Ward 5 Surgical Unit 4,
Nishtar Hospital Multan, 03332824050, Email: imthelight123@gmail.com

³Ex House Officer, Nishtar hospital Multan, 03319744105,
Email: nadirhayat488@gmail.com

⁴Post Graduate Resident Ophthalmology Lahore general Hospital, Lahore. Pakistan.

ABSTRACT

Objective: Current scholastic research paper studies the mandala-coloring effectiveness as a therapeutic intervention for anxiety reduction in the students of Universities.

Study Design: Current scholastic research paper's design is based on Quasi experimental study.

Material and Methods: For the conduct of scholastic research paper a total of one hundred students were short listed for the participation in the study. Students attending research study were in the educational process from last thirteen to eighteen years of their life. Equal sample was enrolled in the research paper as male and female constituted in same number that is fifty of each gender. Age of the participants was in the range of eighteen to thirty-four years. Sample of the research was selected through convenient sampling method. Pre, post-test design was selected for the administration of trait anxiety inventory was scaled after and before pre-drawn mandala-coloring.

Results: T-Test was used for the analysis of the results. Significant difference was noticed between both trait anxieties and state in both male and female during pre, post-test scaling and measurement.

Conclusion: Mandala-coloring was utilized as therapeutic intervention that potentially can reduce Trait and Anxiety State in the students of universities.

Keywords: Art therapy students and Anxiety.

INTRODUCTION

Social disturbances, family problems, academic pressure were the major reasons behind the elevated levels of anxiety of University students. An evident negative impact is caused by anxiety on students especially on their overall well-being is closely connected to anxiety. Improvement in academic aspects requires decreased level of anxiety[1]. Two different types of anxiety are focused in this research paper namely trait and state anxiety. An individual's immediate and quick response comes under the shade of state anxiety; whereas, the other is attributed to

personality[2]. State anxiety also demonstrates the factors of physical response such as tension and fear. Threatening as stimuli comes under the emotional attachment and also graded as trait anxiety[3]. Coloring mandalas can potentially reduce one's trait anxiety in comparison to state anxiety. Anxiety can best be reduced by color treatments[3]. Colors help in the homeostatic of the body as they bring the internal unbalance again to balanced state. It is indeed a mixture of art and meditation treatment. Visual meditation and spiritual relief is gained through circular

shaped mandalas. Negative thoughts and emotions can be diminished and removed through the meditation like essence of mandalas through repeating and symmetrical patterns[4].

Adults and children both can benefit in the state of anxiety through coloring mandalas as stated by a research of United States of America. University students are treated for their anxiety through coloring mandalas in numerous research studies[5]. Pakistan lacks in the use and research of coloring mandalas for the treatment of v in the University students. Our research aims at the social circle of University for therapeutic interaction and intervention. The useful and awareness will spread the use of coloring mandalas in the treatment of anxiety[6]. This therapy equally benefits children, adults and even disabled persons with an addition of all age groups. It can be used as performance improvement and anxiety reduction tool during work, clinical and academic setting for the individuals[7].

MATERIAL AND METHODS

Current scholastic research paper's design is based on Quasi experimental study. The current scholastic research paper was held at the venue of International Islamic University, Islamabad and it was completed in the time span of February – June, 2017. For the conduct of scholastic research paper, a total of one hundred students were short listed for the participation in the study. Informed consent of the participants and permission of institute's ethical committee was secured before the commencement of the research paper. According to the WHO standards the participation was purely based on one's will and desire no compulsion was made on the participants. They were also free to draw themselves out of the research as and when they desired so. No fines would be served to the participants leaving the research.

Tool used for the collection of data and measurement of trait and state anxiety 'State-Trait Anxiety Inventory for Adults' (STAI-AD) which was proposed by Gorsuch, Spielberger, Vagg, Jacobs and Lushene (1983)[8]. For research and intervention already, available mandala was

consulted. It can be obtained from Pages of Abstract Coloring & Printable Mandala for Stress Relief and Meditation. Participants were explained and instructed about the filling of the questionnaire about train and state anxiety, ten minutes was allowed time for the filling of form[9]. A break of five minutes was allocated after the Performa filling and interaction of the students was restricted during the break. Pre-framed calculator of mandala was given to the students after the break. Values of alpha, power, SD of population, mean difference, sample size and total size were respectively 0.05, 0.8, 9, 5,50 and 100. Gender proportion was equal as both male and female were 50 in number from the age of eighteen to thirty-four years with the help of convenient method of sampling. Three universities were focused for the sample collection. These Universities were International Islamic, Bahria and Riphah Universities of Islamabad. Anxiety was measured in the special set sessions with the students. Purpose, nature and significance of the research was explained to the participants. Privacy and confidentiality was assured to the participants. Everyone will be given twelve color pencils of different colors and given mandala was to filled with these colors in the given thirty minutes time. Break for five minutes was given and then filling of the set questionnaire was carried out for post-test analysis. SPSS-23 was used as data analysis instrument. Categorical variables of percentage and frequency were calculated for the computation of SD and Mean. Before intervention and after intervention the difference about anxiety was compared, for this particular purpose T-test and sample paired tests were used with 0.05 as the alpha value.

RESULTS

For the conduct of scholastic research paper, a total of one hundred students were short listed for the participation in the study. Males and females were equally included in the research as 50 male and 50 females. Students attending research paper were in the educational process from last thirteen to eighteen years of their life. Equal sample was enrolled in the research paper as male and female

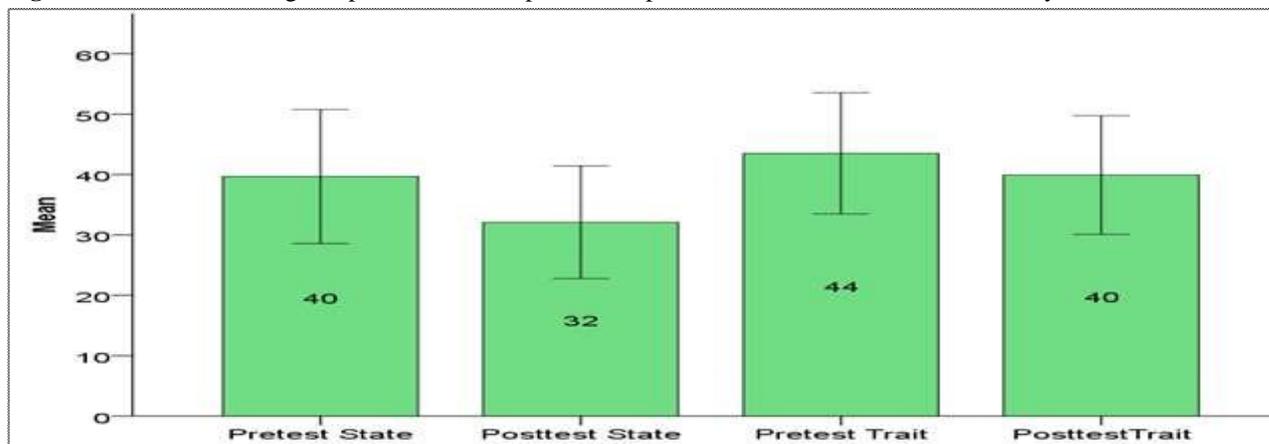
constituted in same number that is fifty of each gender. Age of the participants was in the range of eighteen to thirty-four years with a mean age of 26 ± 11.3 . Sample of the research was selected through convenient sampling method. Pre, post-test design was selected for the administration of trait anxiety inventory was scaled after and before pre-drawn mandala-coloring.

T-Test was used for the analysis of the results. Significant difference was noticed between both train anxieties and state in both male and female during pre, post-test scaling and measurement. Before test Cronbach's Alpha coefficients for trait and state anxiety measurement were respectively 0.87 & 0.89. On the other hand, after test Cronbach's Alpha coefficients of trait and state anxiety were respectively 0.88 & 0.89. P-value and comparison of after and before test analysis is reflected in the given table. Mean value was decreased in each type of anxiety as p-value < 0.001 , however the effect was almost double for state anxiety as compared to trait anxiety (t-value 8.91 against 5.41).

Pre and posttests comparison is reflected in the bar shape of the graphs both both trait and state anxiety analysis. One SD is also indicated in the error bars of the figure. In pretest Alpha Reliability of Cronbach for the measurement of state and trait anxiety were observed respectively as $\alpha=0.89$ and $\alpha=0.87$; whereas for the posttest measurement was respectively $\alpha=0.89$ and $\alpha=0.88$. It validates the findings of the present research paper.

Hypothesis for the current research was the presence of significant difference among after and before therapeutic interventions of mandala coloring testing on students. Before and after results were compares about mandala coloring with the help of at-test and paired tests. Limited work has been done in the field of research for the use of Mandala coloring in Pakistan. Concluded scales coincide with the results of the current research and according to Spielberger Trait-State Anxiety Inventory Form including other studies of the same nature favoring these findings.

Figure: Bar charts showing comparison between pretest and posttest values of state and trait anxiety.



DISCUSSION

Evidence of this therapy is in use even from the classical times. Disorders and illnesses were treated back in 1900 by the scholars and researchers. This was indeed an art in the treatment of the anxiety of the patients. Recent trends have revived the use of colors in treatment[8]. Mandala can be useful in the treatment of stress and emotional disorder in the

university students. After test results reflected that reduced anxiety was observed in the students after the conduct of test[10]. Train anxiety was also significantly reduced after mandala coloring test. Which speaks for the favor of mandala coloring as a clinical resolute for the treatment of patient's anxiety[7].

Pakistani society can take lots of benefit from the coloring test for the stress management. Working

outcomes and quality life style can be achieved through stress relief therapies like coloring mandalas[11]. Current research supports mandalas as this therapy equally benefits children, adults and even disabled persons with an addition of all age groups[12]. It can be used as performance improvement and anxiety reduction tool during work, clinical and academic setting for the individuals. Pakistan is also affected by all these factors and help can be taken from this therapy to address of these disorders[8].

CONCLUSION

Mandala-coloring was utilized as therapeutic intervention that potentially can reduce Trait and Anxiety State in the students of universities. It can be helpful as a therapeutic interactive tool for the University students.

REFERENCES

1. Trenin, D., Russia's New Military Doctrine: Should the West Be Worried? *The National Interest*, 2014. **31**.
2. Gilpin, R., *American scientists and nuclear weapons policy*. 2015: Princeton University Press.
3. Sagan, S.D. and K.N. Waltz, *The spread of nuclear weapons: an enduring debate*. 2013: WW Norton & Company.
4. Kristensen, H.M. and R.S. Norris, *Worldwide deployments of nuclear weapons*, 2014. *Bulletin of the Atomic Scientists*, 2014. **70**(5): p. 96-108.
5. Rashid, A., *The resurgence of Central Asia: Islam or nationalism?* 2017: New York Review of Books.
6. Change, I.P.o.C., *Climate Change 2014–Impacts, Adaptation and Vulnerability: Regional Aspects*. 2014: Cambridge University Press.
7. Khalid, A., *Islam after communism: religion and politics in Central Asia*. 2014: Univ of California Press.
8. Pomfret, R., *The economies of central Asia*. 2014: Princeton University Press.
9. Junk, W.J., et al., *Current state of knowledge regarding the world's wetlands and their future under global climate change: a synthesis*. *Aquatic sciences*, 2013. **75**(1): p. 151-167.
10. Kuchins, A.C., J. Mankoff, and O. Backes, *Central Asia in a Reconnecting Eurasia: Uzbekistan's Evolving Foreign Economic and Security Interests*. 2015: Rowman & Littlefield.
11. Omi, M. and H. Winant, *Racial formation in the United States*. 2014: Routledge.
12. Reeves, M., *Border work: spatial lives of the state in rural Central Asia*. 2014: Cornell University Press.