



Effect of 8 weeks meditation on test anxiety among school going boys

Madhulika Sharma¹, JP Verma²

¹ Research Scholar, Lakshmbai National Institute of Physical Education Gwalior, Madhya Pradesh, India

² Professor and Head, Department of Sport Psychology, Lakshmbai National Institute of Physical Education, Gwalior, Madhya Pradesh, India

Abstract

This study was undertaken to investigate the effect of eight weeks meditation on children's test anxiety level. A sample of 30 boys in the age range 14 to 16 years was selected for the study. They were divided into 2 groups having 15 subjects each, one group was given meditation whereas the second group served as control. The experimental group was given mindfulness meditation 20 minutes morning and evening for five days a week till eight weeks. Test Anxiety of the subjects was measured before and after the training by using the Test Anxiety Questionnaire developed by Nist and Diehl (1990) in experimental and control groups. The data so obtained was analysed by using the analysis of covariance technique. The result suggested that the subjects in the experimental group had significant reduction in their test anxiety level in comparison to that of control group.

Keywords: meditation, anxiety, analysis of covariance

Introduction

Albeit the efficacy of meditation interventions has been examined among adults, there is an expanding research base that propounds these are dynamic approaches which are helpful in promoting psychological salubrity, soundness and virtue. Interest of researcher has increased in looking at the effect of meditation based approaches on children and adolescents, yet meditation treatment outcomes among youth are relatively unacquainted. The relationship of meditation and emotions are described in a lot of studies. Here the objective of this article was to see the effect of meditation intervention on test anxiety on young boys in 14 to 16 years age category. Meditation is process of observing the inward and outward movement of thoughts that are coming and going out of the mind, with silence (maunam), stability (dhiram), and detachment (vairagyam) by (Jayaram V_year). Patanjali describes this state (meditation) as unbroken flow of the whole mind towards the object of concentration (pratyakatanata dhyanam). According to the Shrimad Bhagavatam this is a state in which the meditator becomes one with the object meditated upon. The state of meditation is reached by a process of gradual devotion or folding oneself back (meditation and preparation). Meditation can be classified into two types – one is mindfulness and the other is concentrative – depending on how the attentional processes are directed (B. Rael *et al.* 2006). Most meditative techniques lie somewhere on a continuum between the poles of these two general methods (Andresen, 2000; Shapiro & Walsh, 1984; B.A Wallace, 1999) ^[1]. Term used in this article is anxiety which is basically an emotional arousal. Anxiety is a general state of apprehension, or psychological fear (Wade & Tavis, 2012) ^[15]. Barlow (2002) ^[2] saw it as a displeasing feeling of uneasiness, nervousness, apprehension, fear, concern or worry. According to Corey (2015) ^[5] anxiety is a state of tension that motivates us to do something. Corey (2015) ^[5] asserted that anxiety is normal or objective and neurotic.

Normal anxiety is realistic response to perceived danger in the environment or an appropriate response to an event being faced, while neurotic anxiety which results from an unconscious conflict within the individual whereby the person is not aware of the reason for being anxious. Anxiety is good when it is optimum (normal). It motivates you to perform better for something which made you anxious but it is harmful when it is out of proportion to its provoking situation. The Bhagavad Gita tells us that even very little of the practice of Yoga saves a person from the great fears of life. In this article effect of mindfulness meditation intervention was investigated on test anxiety. Literature says major target of mindfulness practices is emotion (Richard J., 2010). Mindfulness techniques described as "Psychological and behavioural versions of meditation skills" (Linehan 1993, p. 114) ^[10].

Material and methods

The research question in this study was to investigate whether meditation intervention was effective in decreasing test anxiety in 8 weeks. A sample of 30 school boys in 14 to 16 years age category was selected from the RKVM Sharda Balgram school in Gwalior. These subjects were divided in two categories. One group served as experimental whereas another served as control. Before starting the experiment, due permission was taken from the authorities to conduct the experiment. Subjects in the experimental group were given mediation training for 20 minutes in the morning as well as in the evening for 5 days in a week. At the same time control group was given a placebo without mediation training. Before starting the experiment test anxiety of the subjects in experimental and control groups was tested by using the Test Anxiety Questionnaire developed by Nist and Diehl (1990). All the essential information regarding the questionnaire was given to participants and doubts were also cleared before administration of questionnaire by the research scholar. The questionnaire consisted of 10

statements which were scored on the basis of a 5-point ranking scale 1-5, with 1 scoring 1 and 5 scoring 5 points. The statements analysed on the basis of physical symptoms experienced by the children such as – visible signs of nervousness such as sweaty palms, shaky hands, etc. right before a test. The minimum and maximum score which one can get in the questionnaire were 10 and 50 respectively. A low score (10-19 points) indicates children do not suffer from test anxiety but if score is close to 10 then little more anxiety may be healthy to keep them focused and to get blood flowing during exams. Scores from 20 to 35 indicate that, although the child exhibits some of the characteristics of test anxiety, the level of stress and tension is probably healthy. Scores over 35 suggest that the children are experiencing an unhealthy level of test anxiety.

Results

To address the research question null hypothesis that the “test anxiety is same in the experimental and control groups” was tested against the research hypothesis that the “test anxiety in the experimental group will be lower than that of the control group”. Since no criterion was adopted to have the similarity of the control and experimental groups hence analysis of covariance (ANCOVA) technique was used to test the null hypothesis. The pre testing scores of the anxiety served as the covariate. The data obtained in experimental and control groups on anxiety before and after the experiment was analysed with ANCOVA technique using SPSS software. The results so obtained are shown in Table 1, Table2, Table 3 and Figure 1.

Table 1 suggests that the mean test anxiety of the meditation and control groups after the treatment were 23.20 and 27.33 respectively.

Table 1: Mean and standard deviation of Test Anxiety

Group	Mean	SD	N
Meditation	23.20	4.427	15
Control	27.33	5.740	15
Total	25.27	5.458	30

Table 2 is the result of ANCOVA test. It shows that the F-value for the group is significant (p< .05). Hence it can be inferred that the meditation of 8 weeks duration was significant to reduce test anxiety of the subjects in comparison to that of control group.

Table 2; Ancova table for the data of test anxiety in both groups of treatment

Source	SS	.11f	Mean square	F	(p-value) sig.
Pre-anxiety	98.	1	97.626	4.131	.052
Group	127.	1	126.984	5.373.	.028
Error	638.	27	23.634		
Corrected total	864.	29			

The adjusted mean and standard error of the anxiety in both the groups have been shown in Table 3. This adjusted mean of the anxiety was obtained in both the groups after adjusting for the covariate. In ANCOVA technique differences in the post-testing means are compensated for the initial differences in the scores. By eliminating covariate effect, we got the true effectiveness of treatment intervention on criterion variable. Looking to the Table 3 it

can be inferred that the anxiety of the meditation group was significantly reduced in comparison to that of control group at 5% level. Means scores of the anxiety of both the groups tested initially and post-test along with the adjusted means have been shown in Figure 1.

Table 3: Adjusted mean and standard error of test anxiety score in both the groups

Group	Adjusted Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Meditation	23.209	1.255	20.634	25.785
Control	27.324	1.255	24.749	29.900

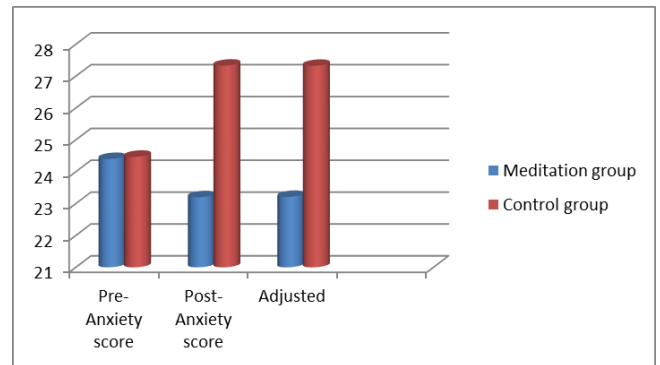


Fig 1: Showing mean anxiety of both the groups

Discussion

Test anxiety plays a significant role in academics of children. The F- value for comparing the adjusted means of the criterion variable in both the groups was significant at 5% level so we can say that the effect of meditation training was responsible for reducing level of test anxiety. Results of this study is important because anxiety is very common now-a-days in school children. Lot of other studies supports this. Pailoor and Shirley (2009) ^[11], shows in their study that cyclic meditation is effective in decreasing state anxiety. In another study of mindfulness-based cognitive therapy for patients, Andy, *et al.* (2006) found significant mean difference in reduction of anxiety in their 8-week course in this exploratory mixed method study. It may be concluded that the eight weeks of meditation training reduces test anxiety significantly in the boys of 14 to 16 years age category.

References

- Andresen J. Meditation meets behavioural medicine: The story of experiment research on meditation. *Journal of consciousness studies.* 2000; 7:17-73.
- Barlow DH. Unravelling the mysteries of anxiety and its disorders from the perspective of emotion theory. *American Psychologist.* 2002; 55:1247-1263.
- Bhagavad Gita 2.40.
- Cahn BR, Polich J. Meditation states and traits: EEG, ERP, and neuroimaging studies. *Psychological bulletin.* 2006; 132(2):180.
- Corey G. *Theory and practice of Counselling and Psychotherapy.* India: Cengage Learning, 2015, 140-141.
- Davidson RJ. *Empirical explorations of mindfulness: conceptual and methodological conundrums.* HHS Public Access, 2010.
- Denwigwe CP, Ajah M. Influence of academic test anxiety on the readinf comprehension of students of

- government secondary school gwarinpa, abuja, federal capital territory. Journal of the Nigerian Society of Educational Psychologists, 2017, ISSN 1597-2666.
8. Finucane A, Mercer SW. An exploratory mixed methods study of the acceptability and effectiveness of mindfulness-based cognitive therapy for patients with active depression and anxiety in primary care. BMC Psychiatry, 2006.
 9. Jayaram V. The awakened life-A collection of writing on spiritual life, 2010, ISBN: 978-1-935760-02-3.
 10. Linehan MM. Cognitive-behavioral treatment of borderline personality disorder. New York: Guilford Press, 1993.
 11. Pailoor S, Shirley T. Effect of two-yoga based relaxation techniques on memory scores and state anxiety. Bio Psycho Social Medicine, 2009.
 12. Tattwavidananada S. Meditation and ITS PREPARATION. Advaita Asharma publication department, Kolkata, 1999, ISBN 978-81-7505-195-9.
 13. The yoga Aphorisms of Patanjali, Swami Prabhavananda and Christopher Isherwood, trs, .73-73.
 14. Verma JP. Data Analysis in Management with SPSS software. Springer New Delhi Heidelberg New York Dordrecht London, 2013, ISBN 978-81-322-0785-6.
 15. Wade C. Introduction to psychology, 5th Edition. America: Prentice Hall, 2012.
 16. <http://www.hinduwebsite.com/hinduism/essays/meditation.asp>