

# The Impact of Mindfulness Training on Examination Anxiety among Female Students Attending 10+2 Board Examinations in Chennai

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## **Abstract**

*The study is aimed at understanding the effect of the use of mindfulness practices in reducing the examination anxiety in female students who were taking their board examination. The sample consisted of 80 females students who subjectively felt that they experienced high anxiety during the examinations, of which 47 underwent training in mindfulness practices and rest were included in the control group. The subjects in the experimental group were trained in mindful breathing, body scanning, mindful focus on external sensory stimuli and mindful awareness of activities. 6 sessions of training and 6 sessions of supervised practice session was given to the subjects. STAI was used to assess the anxiety levels. The data was collected at three stages pre-training, post training before the examinations started and immediately after the examination for both the groups. The data was analyzed using "T" Test. The results confirm that mindfulness practices used in the research reduced the state anxiety the students experienced during the examination, but these practices were not helpful in reducing the trait anxiety.*

**Key Words:** Mindfulness practices, Examination anxiety, Students, Anxiety reduction, STAI

## The Impact of Mindfulness Training on Examination Anxiety among Female Students Attending 10+2 Board Examinations in Chennai

### 1. Introduction

Anxiety related to exams is a common phenomenon among students of all age groups and the intensity of the anxiety increases with the level of importance, the exam has in the life of the person. In India the most crucial exam faced by any student in most of the states is the plus two board examination. Since the performance in the examination and the marks scored has a major role in deciding the course that a student can opt for in higher studies and in a way his whole career, there is high pressure on every student to perform to the best of his abilities. The added pressure imposed by parents and teachers on the students to achieve high marks throughout the year preceding the examination makes the student vulnerable to high stress which can also cause significant anxiety. The high pressure to perform and associated anxiety can also lead to sense of inadequacy, self-doubts, fear of failure, sense of lack of control, feelings of uncertainty about future, apprehensions about loss of social image, poor self-confidence and low self-esteem in most of the students which can further increase its intensity while taking the examination.

Test anxiety can be viewed as a form of emotion dysregulation that contributes to increased worries and negative self-criticism (Cassady & Johnson, 2002; Cunha & Paiva, 2012). Test anxiety is associated with lower academic performance at every educational level (Chapell et al., 2005). According to Ashcraft (2002) Negative cognitions, like worries and self-doubt, are thought to consume working memory resources needed for optimal test performance. Test anxiety is characterized by self-doubt and doubt about his/her abilities and often leads to negative cognitive assessment, distraction, adverse physiological reactions, and failure of individual in academic performance (Sarason and Sarason, 2009)..

Most of the parents or the institutions seem ignore this and do not seem to take adequate measures to help the students in this regard. But if the students are not effectively training in using anxiety reduction mechanism it cannot just affect their performance in the examination but can also cause permanent damage to their self-confidence. Test anxiety is not a disorder, but rather is a subjective emotional state (Zeidner M, 2007). It is more of situational state anxiety. While the students take a test those who show high levels of state anxiety do not necessarily have high levels of trait anxiety, but those with high levels of trait anxiety are more likely to view different situations as stressful and become anxious (Huberty & Dick 2006).. Hence more than a systematic therapeutic program like CBT which can be helpful for students with significant trait anxiety, all the students need for handling the test anxiety is to learn how to bring down physical and psychological arousal with the simplest possible measures which can be put into practice within a minimal possible time inside the examination hall, without the objection from the examiner or the hall supervisor.

One of the simple and effective methods which has been found to be effective in alleviating situational and state anxiety and the one which can be easily carried out in any situation is practicing mindfulness. According to Bishop et al mindfulness is a process of regulating attention in order to bring a quality of non-elaborative awareness to current experience and the quality of relating to one's experience with curiosity, experiential openness, and

acceptance (Bishop et al., 2004). It is paying attention in a particular way: on purpose, in the present moment, and non-judgmentally (Kabat-Zinn, 1994). Mindfulness is bringing one's complete attention to the experiences occurring in the present moment, in a nonjudgmental or accepting way" (Baer, 2006). Mindfulness indirectly facilitates emotion regulation by decreasing both maladaptive over engagement (e.g., worry, rumination) and under engagement (e.g., experiential avoidance) with emotions (Hayes, Follette, & Linehan, 2004). Mindfulness is the conscious non-judgmental state of being attentive and aware of what is taking place in the present (Brown & Ryan, 2003). In short mindfulness is the process of creating conscious awareness to where we are, what we are doing and what is happening around us, without getting carried away by thoughts or emotions which are irrelevant to the situation. It is also a process by which a person can develop the skill of observing all that happens within and around him or her in a nonjudgmental way.

Mindfulness practices are simple ones which can be comprehended and practiced easily by majority of the population with appropriate guidance and training. These practices can be performed in any situations without much preparation, efforts and without causing any discomfort to others. One more positive factor associated with mindfulness practices is that there are no specific standards to conclude that the effectiveness can be ensured only if it is practiced for a specific span of time longitudinally or cross-sectionally. One more advantage associated with mindfulness is that its training can be accomplished within a short period of time. All these factors make mindfulness practices one of the best approaches to handle situational anxiety like the one that is experienced during examination.

## **2. Review of literature**

Most of the students who have prepared well for the examination experience the peak of anxiety either just before or the initial phase of the examination. Once this phase of anxiety is handled effectively they get adapted to the situation and start feeling the comfort of going through the examination. On the contrary if the anxiety is not managed properly it tends to have a consistent impact on the performance of the students landing him in the vicious circle of anxiety affecting performance and vice versa. Vitasari et al. found that there is negative correlations between high anxiety and academic performance in engineering students, as evidenced by self-reported anxiety levels and score reports on official examinations (Vitasari et al. 2010). Many researches have also concluded that mindfulness practices are effective in managing various factors which can be impediments to performance in the examinations. Greater mindfulness is associated with less test anxiety (Napoli et al., 2005). Weger, Hooper, Meier, and Hoptrow (2012) found that a brief mindfulness intervention boosted women's math performance when a negative stereotype that "men are better at math" was activated. Since mindfulness helps in treating both physical and psychological afflictions, research on mindfulness has grown exponentially since 1996 (Black, 2014).

The absence of emotional distraction during mindfulness (Jha et al., 2010) helps in making the students focus on their performance by preventing them from getting carried away by negative feelings or emotions and worries and become they also become less susceptible to its impact of any such emotions that arise during the course of the examination. Reibel et al have concluded in their research that mindfulness training has been demonstrated to lessen the negative effects of anxiety on physical and psychological health, significantly reducing anxiety and depression (Reibel, Greeson, Brainard, & Rosenzweig, 2001). Research by Hafenbrack et al has found that single session 15-minute mindfulness meditations have been

effective in reducing negative affect ( Hafenbrack, Kinias, & Barsade, 2014) and negativity bias (Kiken & Shook, 2011).

In a correlational study in 233 students, mindfulness was negatively associated with a measure of experiential avoidance, showing about 25% shared variance (Moore, Brody, & Dierberger, 2009). According to Cho H et al both daily mindful breathing and cognitive reappraisal practices were effective in reducing test anxiety; however, mindful breathing increased positive automatic thoughts to a greater extent than cognitive reappraisal. (Cho H, Ryu S, Noh J, Lee J. 2016). Mrazek et al in his research has demonstrated that mindfulness reduces mind wandering, improving performance on reading comprehension tests such as those found on the Graduate Record Exam (Mrazek et al., 2013). Mindfulness may benefit cognitive or self-regulation abilities that support academic performance more generally, although research on the connection of these improvements to educational outcomes is limited (Shapiro et al., 2011). According to Zeiden et al Mindfulness meditation 20 minutes one day a week for four weeks, resulted in a significant reduction in anxiety (Zeiden, Johnson, Diamond, Goolkasian, 2010). Carsley et al in their research found that although both genders benefitted in terms of test anxiety reduction from the mandala condition, females in the free condition reported greater decreases in test anxiety compared to males . These findings differ from the first elementary study which found that males experienced greater reduction in test anxiety when they were in the free condition while females only benefitted from the mandala condition (Carsley et al., 2015).

### **3. Methodology**

#### **3.1 Sample**

80 female students from different schools in the Chennai, attending a private tuition center beyond their school hours, who have been consistently scoring more than 60% marks in the term examinations and who subjectively expressed feelings of high fear and anxiety were selected for the study. Informed consent was obtained from them counter signed by their parents.

#### **3.2 Material**

The State-Trait Anxiety Inventory (STAI) is comprised of separate self-reporting scales for measurement of two distinct anxiety concepts, the state anxiety and trait anxiety (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). It is one of most common measure widely used to assess anxiety level among normal population. The inventory can also be used in clinical setting to distinguish between anxiety and depressive symptoms. It has 20 items in Y-2 form for assessing trait anxiety and 20 in Y-1 form for state anxiety. All items are rated on a 4-point scale (e.g., from “Almost Never” to “Almost Always”) with higher scores indicating greater anxiety.

#### **3.3 Procedure**

The study was initiated in January 2019 after the half yearly examination and completed in March 2019 after the end of the final exam. Initially STAI was administered to all the subjects. Mild alteration was done in how the students should respond to the questionnaire. Instead of responding on how they “feel now” as given in the questionnaire, the students were instructed to respond to STAI Y-1 form by recalling their physical and emotional status when

they are in the examination hall before and while attending the examination. For Y-2 form the students were asked to respond as per the instructions given in the questionnaire. Later the 47 subjects willing to be trained in mindfulness practices were assigned to experimental group and who expressed reservations based on lack of interest, time etc. were assigned to control group. Six training sessions of 30 minutes each on different ways of mindfulness practice and six supervised practice sessions were over a period of 4 weeks was organized for the experimental group. The participants were also motivated to practice it daily in their homes.

The schedule of training sessions is as follows

Session 1: Orientation to mindfulness and how it can help in reducing anxiety

Session 2: Training in Mindful breathing

Session 3: Body scanning in sitting posture

Session 4: Mindful seeing and mindful listening

Session 5: Mindful practice of touch smell and taste

Session 6: Mindful awareness of activities

The first intermediate post assessment was done after the training and practice sessions were over and the students had practiced it at their homes one week before the exam started and the final post assessment was done in the last week of march after the students completed their board exams. The data was analyzed using two tailed unequal variance “T” test using the data analysis module of MS office Excel.

#### **4. Results**

The data collected was analyzed using “T” test two tailed with unequal variance test In the experimental group the “T” statistical value is of the difference of means between the pre state anxiety score and intermediate score is 17.02  $P < 0.01$ . The T score between the pre and post evaluation is 15.59  $P < 0.01$  and the T score between the intermediate and post score is 2.26  $P < 0.05$ . The results indicates that there is significant difference the state anxiety level experienced during the three different stages when the evaluation was done.

The T score between pre and intermediate scores on trait anxiety in the experimental group is 1.51  $P > 0.05$ . The T score between pre and post trait anxiety scores is 2.41  $P > 0.05$  and the T score between intermediate and post scores of trait anxiety is 1.6  $P > 0.05$ . The scores suggest that there is no significant difference in the trait anxiety during all three stages of evaluation

**Table 1**

		N	STATE Anxiety			TRAIT Anxiety		
			Mean	T Stat	P	Mean	T Stat	P
Experimental group	Pre	47	63.49	17.02	<0.01	50.21	1.51	NS
	Inter		56.46			49.63		
	Pre	47	63.49	15.59	<0.01	50.21	2.41	NS
	Post		51.4			49.21		
	Inter	47	56.46	2.26	<0.05	49.63	1.6	NS
	post		51.4			49.21		
Control group	Pre	33	65	-3.45	<0.01	50.57	-0.62	NS
	Inter		66.9			50.75		
	Pre	33	65	-2.35	<0.05	50.57	1.63	NS
	Post		66.69			49.93		
	Inter	33	66.9	0.55	NS	50.75	2.54	<0.05
	post		66.69			49.93		

Table 1 shows result of the T test two tailed with unequal variance between the pre intervention scores, intermediate and post intervention scores of state and trait anxiety for both experimental and control group

In the control group the T statistics value between pre and intermediate state anxiety scores is -3.45  $P < 0.01$ . The T statistical value between pre and post is -2.35  $P < 0.05$ . These suggest that there is a significant difference in the pre and intermediate and pre and post test scores and negative T value suggest that there has been increase in the level of state anxiety between pre and intermediate stages and pre and post stages. T statistical value between intermediate and

post scores is 0.55  $P > 0.05$  which suggest that there is no significant difference in state anxiety between intermediate and posttest stages.

On the trait anxiety scores in the control group the T statistical value between pre scores and post scores is -0.62  $P > 0.05$ . The T statistical value between Pre and post scores is 1.63  $P > 0.05$ . These results suggest that there is no significant difference in the trait anxiety between pre and intermediate and pre and post stages. The T statistical value between Intermediate and post scores is 2.54  $P < 0.05$  suggesting that there is mild positive difference between the intermediate and post stages.

**Table 2**

	N	STATE Anxiety			TRAIT Anxiety		
		Mean	T stat	P	Mean	T stat	P
Pre Experi	47	63.48	-1.23	NS	50.21	-0.293	NS
Pre control	33	65			50.57		
Inter Experi	47	55.43	-12.38	<0.01	49.64	-0.968	NS
inter control	33	69.9			50.76		
Post Experi	47	51.4	-13.47	<0.01	49.91	-0.68	NS
Post Control	33	66.69			49.94		

Table 2 show shows result of the T test two tailed with unequal variance between the experimental and control groups both state and trait in all three stages of the research

The analysis of the data of responses between experimental and control group was also done using T Test two tailed with unequal variance. The T statistical value between experimental and control group pre scores on state anxiety is -1.23  $P > 0.05$ . The negative T value suggest that there may be higher state anxiety in the control group than the experimental group. The T statistical value of the responses between experimental and control group in the intermediate phase is -12.38  $P < 0.01$  and. The T statistical value between the post scores of Experimental and control group is -13.47  $P < 0.01$ . This suggest that which suggest that there is significant difference in the state anxiety levels between the groups with the control group having

significantly higher anxiety when compared to the control group both during the intermediate and post analysis stages.

The analysis of the data related to variation in trait anxiety at various stages between the subjects in the experimental group and control group shows that the T statistical value between pre intervention scores is  $-0.29 P > 0.05$ , T value between intermediate scores is  $-0.97 P > 0.05$  and T value between post scores is  $-.68 P > 0.05$ . These results suggest that there is no significant difference in trait anxiety between the samples in the experimental group and control group.

## 5. Discussion

The overall results show that there is a significant reduction in the state anxiety of the subjects in the experimental groups both before the examination started and during the examination, which clearly suggests that mindfulness practices have been very effective in bringing down the examination anxiety. All the subjects in the experimental group claimed that they practiced all the mindfulness practices at home and subjectively they felt the difference in the anxiety and stress levels. Nearly 82% of the subjects expressed that they found it easy to practice mindful breathing, body scanning and mindfulness to external sensory stimulation, but found it difficult to practice mindful awareness of activities. All the subjects stated that subjectively they did feel some anxiety while entering the examination hall. But it came down once they settled in their respective seats in the examination hall. They also accepted that they used one or more of the three practices Mindful breathing, body scanning and mindful awareness of external sensory stimuli in the examination hall before they started answering the questions. 54% of the population claimed that they used mindful breathing alone, 18% claimed that they practiced body scanning alone the rest of the 28 claimed that they used mindful breathing along with either body scanning or mindfulness towards external sensory stimulus. There is no significant change in scores of trait anxiety in the experimental group at all three stages. This may be because all the mindfulness practices used in the intervention were directed towards controlling the automatic negative thought processes and distraction by bringing the focus of the student on the present and bodily sensations and also bring down the physical arousal associated with anxiety. The intervention package did not focus on challenging or altering the thought process.

The results of the analysis of the scores of the control group suggest that there was an increase in the state anxiety levels as they got closer to the examination. The difference continued to persist even during the examination. However there was no significant difference in the anxiety levels just before the examination and during the examination. In fact there was a mild decrease probably that may be attributed to the difference in anxiety levels associated with anticipated events and real experience. While there is no significant difference in the trait anxiety level between pre and intermediate, pre and post there was a mild positive difference noticed in the trait anxiety before the examination and during the examination.

The analysis of the result of the pretest scores on state anxiety between the experimental and control group shows that compared to the subjects who opted out of mindfulness training because of which they were assigned to control group were already experiencing higher level of state the anxiety when compared to the experimental group even though it was statistically



not significant. . The reason that was given for opting out was that they felt that they had very limited time to prepare for the examination, the time that would be needed for getting trained in mindfulness practices and on practicing it at home could be spent on studying the subjects which would help them in getting better score. This is by itself suggestive of the reason for the state anxiety being higher in them... there is also a significant difference in the state anxiety levels of the subjects with the subjects in the control group experiencing significantly higher anxiety just before the examination and during the examination when compared to the experimental group again confirming that the regular use of mindfulness practices can be helpful in reducing examination anxiety. There no significant difference in the trait anxiety levels of both the control and experimental groups and any stage of assessment of the subjects which suggest that the mindfulness practices used in the experiment are not helping in altering the personality traits of individuals

## 6. Conclusion

The results of the research clearly show that using mindfulness practices such as mindful breathing, body scanning and mindful focus on external sensory stimuli can be helpful in reducing the state anxiety of the students who attend important examinations which are crucial to their career. Moreover these practices can be effectively used inside the controlled environments such as examination halls with ease. But these mindfulness practices does not have major impact on their trait anxiety and only more advanced techniques of mindfulness such as non-judgmental awareness of their thoughts and awareness or other model of therapies focused on altering the cognitive or emotional constructs can only be effective. So it is recommended that all the schools can adopt training in mindful practices to help the students manage their examinations related anxiety.

## 7. Limitations of the study

The sample consisted of only female subjects from limited geographical urban setting. Male subjects and subjects from rural areas were not included in the sample. The sample size was small and only self-motivated students were a part of the experimental group. The data was collected not the real situation but based on how the subjects recalled their subjective status inside the examination hall, after coming out of the examination hall even though efforts were taken to collect the data anywhere between 1 to 8 hours after they exited the examination hall.

## References

- Ashcraft, M. H. (2002). Math anxiety: Personal, educational, and cognitive consequences. *Current Directions in Psychological Science*, 11, 181–185.
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, 13, 27-45.
- Bishop, S. R., Lau, M. A., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., Segal, Z. V., Abbey, S., Speca, M., Velting, D., & Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice*, 11, 230-241.

- Black, D. S. (2014). Mindfulness-based interventions: An antidote to suffering in the context of substance use, misuse, and addiction. *Substance Use & Misuse*, 49(5), 487-491.
- Carsley, D., Heath, N. L., & Fajnerova, S. (2015). Effectiveness of a classroom mindfulness colouring activity for test anxiety in children. *Journal of Applied School Psychology*, 31(3), 239–255. doi: 10.1080/15377903.2015.1056925
- Cassady, J. C., & Johnson, R. E. (2002). Cognitive test anxiety and academic performance. *Contemporary Educational Psychology*, 27, 270–295.
- Chapell, M. S., Blanding, Z. B., Silverstein, M. E., Takahashi, M., Newman, B., Gubi, A., et al (2005). Test anxiety and academic performance in undergraduate and graduate students. *Journal of Educational Psychology*, 97(2), 268–274.
- Cho H, Ryu S, Noh J, Lee J (2016) The Effectiveness of Daily Mindful Breathing Practices n on Test Anxiety of Students. *PLoS ONE* 11(10): e0164822. doi:10.1371/journal.pone.0164822
- Cunha, M., & Paiva, M. J. (2012). Text anxiety in adolescents: The role of self-criticism and acceptance and mindfulness skills. *The Spanish Journal of Psychology*, 15(2), 533–543.
- Hafenbrack, A. C., Kinias, Z., & Barsade, S. G. (2014). Debiasing the mind through meditation: Mindfulness and the sunk-cost bias. *Psychological Science*, 25(2), 369–376. doi: 10.1177/0956797613503853.
- Hayes, S. C., Follette, V. M., & Linehan, M. M. (Eds.). (2004). *Mindfulness and acceptance: Expanding the cognitive-behavioral tradition*. New York, NY: Guilford.
- Huberty, T. J., & Dick, A. C., (2006). Performance and test anxiety. In G. G. Bear; K. M. Minke (Eds.), *Children's needs III: Development, prevention, and intervention* (pp. 459-472). Washington, DC: National Association of School Psychologists.
- Jha, A. P., Stanley, E. A., Kiyonaga, A., Wong, L., & Gelfand, L. (2010). Examining the protective effects of mindfulness training on working memory capacity and affective experience. *Emotion*, 10(1), 54–64.
- K. M. Minke (Eds.), *Children's needs III: Development, prevention, and intervention* (pp. 459-472). Washington, DC: National Association of School Psychologists.
- Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness meditation in everyday life*. New York: Hyperion.

- Kiken, L., & Shook, N. (2011). Looking up: Mindfulness increases positive judgments and reduces negativity bias. *Social Psychological & Personality Science*, 2, 425–431. doi:10.1177/1948550610396585.
- Kirk Warren Brown and Richard (2003) The Benefits of Being Present: Mindfulness and Its Role in Psychological Well-Being M. Ryan. *Journal of Personality and Social Psychology* Vol. 84, No. 4, 822–848
- Moore, S. D., Brody, L. R., & Dierberger, A. E. (2009). Mindfulness and experiential avoidance as predictors and outcomes of the narrative emotional disclosure task. *Journal of Clinical Psychology*, 65, 971-988.
- Mrazek, M. D., Franklin, M. S., Phillips, D. T., Baird, B., & Schooler, J. W. (2013). Mindfulness training improves working memory capacity and GRE performance while reducing mind wandering. *Psychological Science*, 24(5), 776–781.
- Napoli, M., Krech, P. R., & Holley, L. C. (2005). Mindfulness training for elementary school students: The attention academy. *Journal of Applied School Psychology*, 21, 99–125.
- Reibel, D. K., Greeson, J. M., Brainard, G. C., & Rosenzweig, S. (2001). Mindfulness-based stress reduction and health-related quality of life in a heterogeneous patient population. *General Hospital Psychiatry*, 23(4), 183-192.
- Sarason IG, Sarason BB(2009). Test anxiety. In leitenberg H. *Handbook of social and evaluative anxiety*. New York: Plenum Press.
- Shapiro, S. L., Brown, K. W., & Astin, J. (2011). Toward the integration of meditation into higher education: A review of research evidence. *Teachers College Record*, 113(3), 493–528.
- Spielberger, C. D., Gorsuch, R. L., Lushene, R., Vagg, P. R., & Jacobs, G. A. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Vitasari, P., Wahab, M., Othman, A., Herawan, T., Sinnadurai, S. (2010). The relationship between study anxiety and academic performance among engineering students. *Procedia-Social and Behavioral Sciences*, 8, 490–497.
- Weger, U. W., Hooper, N., Meier, B. P., & Hothrow, T. (2012). Mindful maths: Reducing the impact of stereotype threat through a mindfulness exercise. *Consciousness and Cognition*, 21, 471–475.
- Zeiden, F., Johnson, S., Diamond, B., David, Z., Goolkasian, P. (2010). Mindfulness meditation improves cognition: Evidence of brief mental training. *Consciousness and Cognition*, 19, 597-605.



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Zeidner M. Test Anxiety in Educational Contexts: Concepts, Findings. *Emotion in education*.  
2007;165.

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