



## Effect of mindfulness meditation on level of stress: A Pre experimental study

**Ms. Swapna.R**

Lecturer, Psychiatric Nursing Dept, KIMS College of Nursing, Trivandrum

**Prof. Susan Jose**

Principal, KIMS College of Nursing, Trivandrum

### ABSTRACT

*The present study aimed to assess the effect of mindfulness meditation on stress among adolescent girls, to evaluate the effect of mindfulness meditation on stress among adolescent girls and to find out the association between stress among adolescent girls and selected socio demographic variables. Quantitative approach with pre-experimental one group pretest post-test design was used. Sample consisted of 65 adolescent girls studying in VIII and IX standard of Muslim Higher Secondary School, Trivandrum. The participants were given perceived stress scale to assess the stress and mindfulness meditation was given for a period of 45 minutes on all working days for 4 weeks. In the pretest, 39.9% of adolescent girls had high stress, 35.4% had severe stress, 23.1% had average stress and 4.6% had low stress. The obtained t value showed statistically significant difference in the pretest and post-test (I and II) scores of stress after mindfulness meditation ( $p < 0.001$ ).*

**KEYWORDS :** Mindfulness meditation; stress; adolescent girls

### Introduction:

Life exists through the maintenance of a complex dynamic equilibrium, termed homeostasis. It is constantly challenged by internal and external adverse forces termed stressors which can be emotional or physical in nature. Stress is defined as a state of threatened or perceived by the individual as threatened homeostasis and it is re-established by a complex repertoire of behavioral and physiologic adaptive response of the organism<sup>1</sup>. Everyone is affected by stress and reacts to it in different ways. Stress is a way that our body responds to the demands made upon us by the environment, our relationships, perceptions and interpretations of those demands<sup>2</sup>. Stress is a normal part of life. In small quantities stress is good as it can motivate you and help to become more productive. However, too much stress, or a strong response to stress can be harmful. How we perceive a stress provoking event and how we react to it determines its impact on our health. We may be motivated and invigorated by the events in our lives, or we may see some as "stressful" and respond in a manner that may have a negative effect on our physical, mental, and social well-being<sup>3</sup>.

Adolescence is viewed as a transition period between childhood and adulthood, whose cultural purpose is preparation of the children for the adult roles. This is the period of multiple transition involving education, training, employment and unemployment as well as transitions from one living circumstances to another<sup>4</sup>. World Health Organization has defined adolescence as the time period between 11 and 18 years of life characterized by critical physical and psychological changes leading to adulthood. Adolescents may often experience distressing and disabling emotions that are sometimes part of their normal development<sup>5</sup>.

According to UNICEF 2011 statistics, the world population constitutes 1.2 billion adolescents aged 10-19 years. About one-quarter of India's population is in the adolescent age group of 10-19 years<sup>6</sup>. It is estimated that in 2010 there were almost 200 million adolescents in India and is expected that this age group will continue to grow reaching over 214 million by 2020<sup>7</sup>.

Mindfulness Based Stress Reduction brings together mindfulness meditation and yoga. MBSR has been described as a group program that focuses upon the progressive acquisition of mind-full awareness, of mindfulness. People enrolled in a MBSR program practice various meditation techniques, including those focused on breathing and body awareness. A meta-analysis of MBSR trials found it to be a useful method for improving mental health and reducing symptoms of stress, anxiety and depression and recommended it as means of improving the quality of life for patients managing disease<sup>8</sup>. The mind is known to be a factor in stress and stress-related disorders, and meditation has been shown to positively affect a range of autonomic physiological processes, such as lowering blood pressure and reducing overall arousal and emotional reactivity. Yoga helps to reverse the

prevalence of disuse atrophy from our culture's largely sedentary life-style, especially for those with pain and chronic illnesses. The program brings meditation and yoga together so that the virtues of both can be experienced simultaneously<sup>9</sup>.

In literature search, there are various studies conducted in India & western countries to assess the effect of Mindfulness meditation to relieve stress among adolescents in which the results elicited positive results<sup>10, 11, 12, 13, 14, 15</sup>.

### Materials & Methods:

Present study was conducted in Muslim Girls Higher Secondary School Kaniyapuram at Trivandrum District, Kerala. Sample consists of 65 adolescent girls of the age group 13-16 years recruited by purposive sampling technique. Tools used for this study were: a socio demographic profile for gathering samples data and a standardized Perceived Stress Scale put forwarded by Sheldom Cohen. Scoring is according to the questions in the scale about the thoughts and feelings during the last month. Each item is rated on a 5 – point scale ranging from never to very often. Rating is done as follows: 0 = Never, 1 = Almost never, 2 = Sometimes, 3 = Fairly Often, 4 = Very Often.

The mindfulness meditation intervention includes mindfulness breathing for 3 minutes and guided mindfulness meditation for 6 minutes following mindfulness breathing in sitting position, body scan meditation for 25 minutes in lying position, and mindful yoga which means maintenance of stable and comfortable postures with awareness and synchronized breathing for 10 minutes. The mindfulness yoga involves bringing awareness to your breath, movement, posture, thoughts and emotions as you practice.

The investigator obtained formal permission from the Institutional Review Board and the principal of the concerned school. Data collection was from 13-01-2014 to 21-02-2014. Pretest was conducted using perceived stress scale. After assessing the baseline stress the investigator selected 65 students who met the inclusion criteria and an informed consent was obtained from the students and their parents. After the pretest, the samples were divided into 3 groups. Each group was given mindfulness meditation for 45 minutes on all working days for 4 weeks. The techniques used in mindfulness meditation were mindfulness breathing, guided mindfulness meditation, body scan meditation, and mindfulness yoga. Post tests (I and II) were conducted immediately following and 2 weeks after the intervention respectively using the same tool.

### Results:

The data were analyzed in terms of objectives of the study using descriptive statistics and inferential statistics. Descriptive statistics was done to assess the frequency distribution and percentage of adolescent girls based on socio demographic variables. Inferential statistics

was done by means of paired t test to evaluate the effect of mindfulness meditation on stress among adolescent girls and 'chi' square test to find out the association between stress among adolescent girls and selected sociodemographic variables.

39.9% of adolescent girls had high stress, 35.4% had severe stress, 23.1% had average stress and 4.6% had low stress in the pretest.

**Table 1: Effect of Mindful meditation on level of stress (n=65)**

Variable		Mean Score	df	t value
Stress	Pre test	18.77±4.59	64	22.57
	Post-test I	10.86±4.57		

Table 1 shows the mean, standard deviation and t value of the pretest and the post-test I scores of stress among adolescent girls. The obtained t value shows statistically significant difference in the pretest and post-test I scores of stress after mindfulness meditation ( $p < 0.001$ ). Therefore mindfulness meditation was found to be effective in reducing stress among adolescent girls.

While comparing the pretest and post-test II scores ( $14.22 \pm 4.32$ ) of stress among adolescent girls, it was found that the obtained t value (18.21) shows statistically significant difference in the pretest and post-test II scores of stress after mindfulness meditation ( $p < 0.001$ ). While comparing the post-test I and post-test II scores of stress among adolescent girls, it was found that the obtained t value (13.39) shows statistically significant difference in the post test I and post-test II scores of stress after mindfulness meditation ( $p < 0.001$ ). There was an increase in mean post-test II scores of stress compared with post-test I score, which suggests an increase in stress among adolescent girls. Hence an ongoing mindfulness meditation has to be given to have sustained effect. There was no significant association between stress scores and socio demographic variables studied.

## Discussion:

In the present study the level of stress was assessed using structured questionnaire and perceived stress scale. Among 65 adolescent girls, 39.9% had high stress, 35.4% had severe stress, 23.1% had average stress and 4.6% had low stress in the pretest. The present study was supported by a school based study conducted to find out the prevalence of stress among 667 children of age group 4-17 years in Kerala. The results indicated that 96.3% of the children showed medium to moderate stress while 1.9% showed severe stress. Only 1.79% came under normal group. Also more than 97% of the children above 10 years showed above average stress. More number of children with severe stress was observed at the age of 14 whereas majority of the children between 13 to 15 showed moderate or severe level of stress

than any other age groups. This suggests that in every age more than 90% of the school children are facing above normal levels of stress and tension<sup>16</sup>.

The present study was done to evaluate the effect of mindfulness meditation on stress among adolescent girls. In the present study, there was a significant difference in the pretest and post test scores of stress among adolescent girls after the mindfulness meditation ( $p < 0.001$ ). Therefore it is inferred that mindfulness meditation was effective in reducing stress among adolescent girls. The present study findings were supported by another study on effect of mindfulness in reducing stress among 522 pupils aged between 12-16 years from 12 secondary schools. 256 pupils were given 9 week mindfulness program and the remaining acted as controls. The researchers found that those children who participated in the mindfulness program reported lower stress and fewer depressive symptoms than control group<sup>17</sup>. Comparison of the stress scores on pretest, post-test I and post-test II revealed statistically significant difference ( $p < 0.01$ ). Hence it is proved that mindfulness meditation is having significant effect in reducing stress among adolescent girls.

## REFERENCES

1. Liza V, Darviri C. Stress management techniques: evidence based procedures that reduce stress and promote health. Health Science Journal [Internet]. 2011; 5(2):74-89. Available from: <http://www.hsj.gr/volume5/issue2/21.pdf>.
2. Copeland EP. Stress in children and adolescents. National Association of School Psychologists. 2012 [Internet]. [cited 2014 Jun 16]. Available from: <http://www.nasponline.org/families/3/Klinik>
3. Community Health Centre. Stress And Stress Management [Internet]. Jan 2010. Available from: <http://hydesmith.com/de-stress/files/StressMgt.pdf>.
4. Adolescence. [cited 2013 June 13]. Available from: [http://www.adolescence\\_wikipedia, the free encyclopedia](http://www.adolescence_wikipedia, the free encyclopedia).
5. University of Athens. Adolescent Health Unit. Health problems in Adolescence [Cited 2013 June 12]. Available from: [http://www.youthhealth.gr/en/health\\_problems.php](http://www.youthhealth.gr/en/health_problems.php).
6. UNICEF India –Media Centre-Adolescence, An Age of Opportunity 2011. Available from [http://www.unicef.org/india/media\\_6785.htm](http://www.unicef.org/india/media_6785.htm).
7. Adolescent girls in India choose a better future an impact assessment, CEDPA, September 2001.
8. Mindfulness-based stress reduction- Wikipedia. [cited 2014 Jan]; [9:00am]. Available from: [http://en.wikipedia.org/wiki/Mindfulness\\_based\\_stress\\_reduction](http://en.wikipedia.org/wiki/Mindfulness_based_stress_reduction).
9. Mindfulness based stress reduction. Mindful living programs. Available from: <http://www.mindfullivingprograms.com/whatMBSR.php>.
10. Evaluate the effectiveness of mindfulness and meditation Psychology Essay. UK Essays.com. Available from: <http://www.ukessays.com/essays/psychology/evaluate-the-effectiveness-of-mindfulness-and-meditation.html>.
11. Patricia CB, Stacie M. Learning to breathe: a pilot trial of a mindfulness curriculum for adolescents. Advances in School Mental Health Promotion. 2009 Jan; 2(1): 35-46.
12. University of Oxford and Cambridge. Mindfulness reduces stress among School kids. [cited 2013 Jan 30]. Available from: <http://www.timesofindia.com>.
13. Biegel GM, Brown KW, Shapiro SL, Schubert CM. Mindfulness-based stress reduction for the treatment of adolescent psychiatric outpatients: A randomized clinical trial. Journal of Consulting and Clinical Psychology [Internet]. 2009 Oct; 77(5): 855-66.
14. Diane K. Leggett. Effectiveness of a brief stress reduction intervention for nursing students in reducing physiological stress indicators and improving wellbeing and mental health. 2010. 15. Dr. Anita N, Dr. Seema S. Effectiveness of Training Programme in Relaxation Techniques in reducing Academic and Social Stress among Adolescents. International Referred Research Journal [Internet]. 2011 Oct; 3(25): 3-4.
16. Sapna D. Prevalence Of Stress Among School Children In Kerala. Articlesbase. [cited 2010 Feb 17]; Available from: <http://www.articlesbase.com/mental-health-articles/prevalence-of-stress-among-school-children-in-kerala-1868702.html>.
17. University of Oxford and Cambridge. Mindfulness reduces stress among School kids. [cited 2013 Jan 30]. Available from: <http://www.timesofindia.com>