

Effect of Trataka on Anxiety among Adolescents

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Abstract—Anxiety is a common psychological problem and also implicated as a contributor to many chronic diseases which decreased quality of life even with pharmacological treatment. At the present time several yogic practices- meditation, pranayama, and mantra, etcetera are playing important role in treating physiological and psychological problems. Hence, the present investigation is aimed to see the effect of Trataka on the level of anxiety among adolescents. For the present study, a sample of 30 adolescents belonging to the age range 20-30 years was selected from Devsanskriti Vishwa Vidyalaya Haridwar through random sampling. In this investigation, Sinha's Comprehensive anxiety test has been used to measure the level of anxiety. Statistical analysis has been done by using t-test. Findings of this study reveal that Trataka significantly decreases the level of anxiety among adolescents.

Keywords—Adolescents, Anxiety, Trataka.

I. INTRODUCTION

ADOLESCENT is a developmental phase during which adolescents may suffer from tension, stress, and anxiety. Not only this, health is a valuable aspect of every human, but we can hardly find anyone around us whose mind remain balanced and always free from tension and anxiety. Moreover, anxiety has become a major problem in this developing world. Very often, people experience a general state of worry and fear before confronting something challenging such as a test, examination, recital, or interview. These fee lings are justified easily and considered appropriate. In contrary, anxiety happens when a reaction is out of proportion that might be normally expected in a situation. Anxiety has unfavorable effects on the body that may progress to the chronic conditions if untreated.

According to [3], anxiety can be considered a general term for several disorders (nervousness, fear, apprehension and worrying) that affect how a person feels and behaves. It can also manifest real physical symptoms. Mild anxiety is vague and disruptive, while severe anxiety can be extremely debilitating and having a serious impact on daily life. Ross [18] defines anxiety as a series of symptoms that arise from faulty adaptation to the stresses and strains of life.

Community studies suggest that anxiety disorders are the most common psychiatric conditions in young people and have a period prevalence between 9% and 32% during childhood and adolescence [2], [5]. These disorders have an adverse impact on educational achievement, family life, and leisure activities [2], [4]. Moreover, anxiety disorders in young people are associated with increased rates of anxiety and

depression in early childhood and resultant as a number of other unfavorable mental health and life course outcomes [2], [27].

According to [11], 19% of the male population and 30% of the female population are affected with anxiety disorders. A survey done by the office for National Statistics reported that anxiety disorders are the most prevalent mental problems in the community of the United Kingdom. Not only this, conditions such as mixed anxiety, depressive disorder, generalized anxiety disorder, phobias, obsessive-compulsive disorder, and panic disorder make up over 86% of neurotic disorders. It is also found that excessive anxiety is the main component or symptom in all of these conditions [23]. Current researches on anxiety disorder proven that anxiety disorders are persistent, unceasing and can even grow worse if not properly treated.

Being healthy and free from disease is the best achievement of life. Yogic techniques play a significant role in being healthy by reducing the physiological and psychological reactions to stress [19]. Trataka is a fundamental concentration method in both Yogic and Tantric regimes, as well as in the Upanishadic regimes. It is also known as Hatha-Yoga-Kriya's-Trataka. The word 'Trataka' means steady gazing. Looking intently with an unwavering gaze at a small point until tears are filled shed down is known as Trataka by the Acharyas [21].

Practice of Trataka falls into two groups: Pratyahara and Dharana. Pratyahara Trataka includes gazing at an external point. It is also called as called Bahir Trataka (outer gazing). This Trataka controls the dissipation that occurs when we become aware of the form. The aim of this Trataka is to control over the dissipation and developing awareness of the form. At the level of Dharana, the form is seen internally. This Tratak is known as Antak Trataka (inner gazing) [22]. During Trataka practice, the eyeballs should remain steady, and the eyelids should not flutter. No other object should be seen except the one on which Trataka is to be done. The mind should not wander here and there but merged in observation of the object [20], [21].

Physiologically during Trataka, the impression of the object falls on the optic nerves, and the sensory nerves connect the optic nerves of the retina with the brain. The brain has several centers that are associated with the optic nerves and receive information through the optic nerves and send out message to increase the function of perception. Through the perception, the centers of the brain that remain dormant for an ordinary person are awakened. Trataka relieves eye ailment and affects ajna chakra and brain [20]. Thus, Trataka unlocks the inherent energy of the mind and directs it in the dormant areas of consciousness. Further results of one-pointedness of mind are high will power, improved memory and concentration [22].

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Trataka eliminates all eye disorders, fatigue, and sloth and closes the doorway of creating these problems. Not only this, Trataka also benefits a whole range of physiological and mental functions [21]. The practice of Trataka balances the nervous system relieving nervous tension, depression and insomnia improves the memory, develops concentration and willpower and is an excellent preparation for meditation [16].

Since, anxiety is associated with poor mental health, so it should be considered a serious public health issue. Modern science has made enormous progress in recent years, as well as yoga has a scientific basis and universal views. It is giving pleasure that science has started studying the effects of yogic techniques. Scientific research has shown that yogic techniques as meditation, pranayama, yoga nidra, and mantra, etcetera produce consistent and beneficial physiological and psychological changes. Not only this, several psychiatrists and physicians have used meditation as a successful therapy and found a significant effect in treating physiological and psychological problems. So keeping in mind above facts, researcher has studied the effect of Trataka on level of anxiety among adolescents.

II. OBJECTIVE

The aim of this investigation is to see the effect of Trataka on level of anxiety among adolescents.

III. NULL HYPOTHESIS

There is no significant effect of Trataka on level of anxiety among adolescents.

IV. METHODOLOGY

A. Research Design

Single group pre-test post-test design has been used for the present study.

B. Participant

For the present study, a sample of 30 adolescents belonging to the age range 20-30 years was selected from Devsanskriti Vishwa Vidyalaya Haridwar through random sampling.

C. Data Collection Tools

Sinha's Comprehensive anxiety test has been used to measure the level of anxiety among adolescents [24].

D. Procedure

For this research work, first of all, permission of the Head of Vishwa Vidyalaya was taken. A sample of 30 adolescents was selected through random sampling. Before administer the test, informed consent was taken from subjects. This study consists of three steps: 1. Pre-test Intervention, 2. Jyoti Trataka (Intervention) and 3. Post-test Intervention

1. Pre-Test Intervention

Pre-test data was obtained by administering, Sinha's Comprehensive anxiety test on subjects [24].

2. Trataka Practice

For this study, Jyoti Trataka practice or intervention was given for one month 20 min/day. This Jyoti Trataka intervention includes four steps:

Step I- Effortless Gazing or Focusing At Flame

- Let us start with stage I- Effortless gazing.
- Smoothly, open your eyes with a few blinks and see the floor.
- Do not look at the flame directly.
- Slowly switch your vision to the base of the candle stand and bring to top of the stand. After that, slowly look at the flame of the candle. Now, start gazing at the flame without any effort.
- Do not blink your eyes.
- There may be some irritating sensations, ignore it. Use your willpower and gaze in a relaxed manner. If tears come, allow them to flow freely and learn to ignore the irritation and water of the eyes.
- Gaze at the flame for 30 seconds.
- Smoothly, close your eyes, rub palms against each other for a few seconds and cover eyeballs with palms.
- Press gently and release palming. Do this practice up to five rounds. Feel the fresh sensation around the eyeballs. Relax for a few seconds. Do not open eyes immediately.

Step II- Intensive Focusing at the Tip of the Wick of the Flame

- Move on to Stage II- Intensive Focusing.
- Smoothly, open your eyes with a few blinks and see the floor.
- Do not look at the flame directly.
- Firstly, open your eyes with a few blinks and see the floor.
- Slowly switch your vision to the base of the candle stand and bring to top of the stand. After that, slowly look at the flame of the candle. Now, start gazing at the flame without any effort.
- Gradually gaze at the tip of the wick of the candle, a small black cord. Focus the attention at one point and try to concentrate for a few seconds. Use your willpower and keep on gazing.
- If tears come, allow them to flow freely and try not to blink eyes. By this practice, the gaze becomes stable, and mind becomes one-pointed.
- Gaze at the flame for 30 seconds.
- Smoothly close your eyes, rub palms against each other for a few seconds and cover eyeballs with palms.
- Give constant pressure with palms. Do inhale deeply and exhale completely. Continue this for more rounds.
- Do not touch the eyeballs directly with palms, till eye muscles completely relaxed. Complete five rounds, gently drop hands down.
- Feel the fresh sensation around the eyeballs. Relax for a few seconds. Do not open eyes immediately.

Step III- De-Focusing

- Let us pass on to Stage III- De-Focusing

- Do not look at the flame directly. Smoothly open eyes with a few blinks and see the floor.
- Slowly switch your vision to the base of the candle stand and bring to top of the stand. After that, slowly look at the flame of the candle. Now, start gazing at the flame, focus and fix the attention in the flame, and then gradually widen your vision.
- Slowly de-focus your attention from the flame.
- With expansive vision and awareness, collect all the details such as, color and shape of the flame and the aura around the flame.
- Observe the wider aura and small particles of the light around the flame. Identify the subtle change achieved through de-focusing.
- After one minute of de-focusing on the flame, slowly close your eyes and hold the image in mind. Visualize the flame between eyebrows and accumulate all the details with closed eyes. When the image disappears, give constant pressure with palms. Do inhale deeply and exhale completely. Continue this for more rounds. Do not touch the eyeballs directly with palms, till eye muscles completely relaxed.
- Complete five rounds, gently drop hands down. Feel the fresh sensation around the eyeballs. Relax for a few seconds. Do not open eyes immediately.

Step IV- Silence

Go through silence and relax for a while. After relaxing, gently drop hands down. Sit quietly for some time and experience the deep comforting effect of Trataka practice.

3. Post-Test Intervention

After completion of one-month practice of Jyoti Trataka, Post-test data was obtained by again administering, Sinha's Comprehensive anxiety test on subjects.

E. Statistical Analysis

Data analysis has been done through t-test.

V. FINDINGS

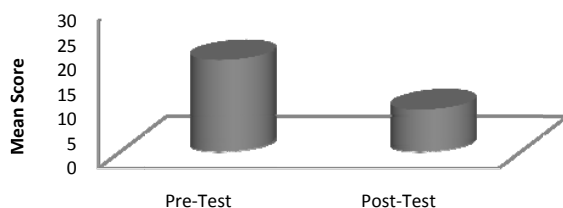


Fig. 1 Statistically significant decrease in Anxiety Score

Table I illustrates that before the intervention the mean score is 18.69 and standard deviation is 7.13 and after the intervention mean score is 8.59 and standard deviation is 4.10. These differences in pre and post intervention scores show that Trataka significantly reduces the level of anxiety.

TABLE I
RESULTS ON ANXIETY TEST WITH RESPECT TO PRE-TEST AND POST-TEST
INTERVENTION (TRATAKA)

	Pre	Post
N	30	30
Mean	18.69	8.59
SD	7.13	4.10
r	0.90	
t-Value	6.45	
Significance Level	0.01	

Table I elucidates that the t-score is 6.45, which is more than the value 2.75 at 0.01 significant level with df 29. Thus, the null hypothesis is rejected at 0.01 significant levels, and it concludes that there is an association between Trataka and the level of anxiety. Results indicate that there is a decrement in the level of anxiety among adolescents. So, it is clear that Trataka significantly affect the level of anxiety or reduce anxiety among adolescents.

VI. DISCUSSION

Fear and anxiety response are provided by the action of body's autonomic nervous system (ANS) expanded network of nerve fibers that associates the central nervous system (CNS) [25]. The ANS helps control the involuntary activities. When one faced with stressors, the ANS triggers the adrenal gland allocated on the top of the kidney into action, and these glands release a group of hormones called corticosteroids. These corticosteroids, in turn, stimulate various body organs and certain region of the brain setting in motion anxiety actions [1].

According to the findings of [6], [15], yogic practices balanced autonomic nervous system with a tendency towards parasympathetic nervous system dominance. Reference [15] findings indicate that yoga breathing exercises decrease arousal which calms and halts the mind. It also relaxes the body, oxygenates the blood, soothes anxiety, promotes clear thinking, and helps the mind to free from mental distractions, worries, and fatigue.

Yoga is appraised to be one of the most important, efficacious and valuable tools available to overcome various physical and psychological problems [8]. Trataka is a fundamental concentration technique in both Yogic and Tantric regime, as well as in the Upanishadic regime. During Trataka, the whole system is stimulated and awakened by concentration through the eye and this induces higher sensitivity of the pineal gland. It directly influences the pineal gland. Pineal gland stimulates the sympathetic nervous system to control the adrenal secretion (because ANS stimulates and controls the endocrine glands). When adrenal secretion reduces simultaneously, the anxiety level of a person is also reduced. The yoga practices stimulated and balance all systems of the body and increased mental clarity, emotional stability, and a greater sense of wellbeing [9]. According to the findings of [26], steady gaze reduces Central Nervous System and Autonomic Nervous system activity through

diminution in proprioceptive feedback to the reticular activating system. Findings of [7] show that Trataka increases the degree of relaxation, emotional balance and a feeling of pleasantness.

Reference [17] shows a significant reduction in the activity of parasympathetic nervous systems, anxiety and depression during four months yogic practices. Findings of [12] suggest that two months of yoga meditation practices can reduce performance anxiety and mood disturbance in young professional musicians. Reference [10] reported that participation in a two-month yoga program leads to a significant reduction in perceived levels of anxiety in women who suffered from anxiety disorders. Findings of [13] show a significant decrease in scores on anxiety, depression, and tension after one-month practice of yoga program. According to the findings of [28], 5-week yoga course significantly decrease self-reported symptoms of depression and trait anxiety. Results of [14] suggest that three-month Iyengar yoga program significantly improve perceived stress, state and trait anxiety emotional well-being in women suffering from mental distress. It also decreases salivary cortisol, fatigue, and depression. Similarly, findings of [6] also show that aregular practice of yoga reduces anxiety and improves subjective feeling of well-being among working women. Thus, on the basis of systematic analysis, interpretation of the data, results obtained during the course of the present investigation and reported by previous researchers it is concluded Trataka significantly reduces anxiety among adolescents.

VII. CONCLUSION

Anxiety is proven a persistent psychological problem among children and adolescents that may become chronic and may carry a risk of current or later functional impairment if not adequately treated. Therefore, this investigation was to study the effect of Trataka on anxiety among adolescents. The research findings of the study reveal a significant effect of Trataka on anxiety among adolescents. Hence, it is concluded that Trataka significantly decreases anxiety among adolescents. As a gazing or staring meditation, Trataka is the technique of spiritual aspirants that is supposed to develop psychic powers and the ability to terminate the restlessness of eyes seeking something. By gaze fixing, the restless mind also comes to a halt. So, regular Trataka practice should be done to improve the mental health and wellbeing.

REFERENCES

- [1] Carson, Butcher and Mineka (2000). *Abnormal Psychology & Modern Life*, (11thed.), Pearson Education Publishing.
- [2] Creswell, C., Waite, P., & Cooper, P. J. (2014). Assessment and management of anxiety disorders in children. *Arch Dis Child*, 99(7), p. 674–678. Retrieved from <http://adc.bmj.com/content/early/2014/03/17/archdischild-2013-303768.full>
- [3] Crosta, P. (28 Jan 2013). What is anxiety? A Guide to Anxiety. *Medical News Today*. Retrieved from <http://www.medicalnews today.com/info/anxiety/>
- [4] Essau, C.A. & Gabbidon, J. (2013). Epidemiology, Comorbidity and Mental health service utilization. In: Essau CA, Ollendick (TH, ed.). *The Wiley-Blackwell handbook of the treatment of childhood and adolescent anxiety*. (1sted.). p. 23-42. Chichester: Wiley-Blackwell.
- [5] Ezpeleta, L., Keeler, G., Erkanli, A. et. al. (2001). Epidemiology of psychiatric disability in childhood and adolescence. *J Child Psychol Psychiatry*, 42, p. 901-14.
- [6] Gawali, S. R. & Dhule, S. S. (2013). Effect of Yoga on anxiety levels in working women. *International Journal of Science and Research*, 2 (12), p. 2319-7064.
- [7] Gore, M.M., Bhogal, R.S. & Rajapurkar, M.V. (2008). Effect of Trataka on various psycho-physiological functions. *Yoga Mimamsa*, 40 (1-2), p. 53-66.
- [8] Jadhav, S.G. & Havalappanavar, N.B. (2009). Effect of yoga Intervention on anxiety and subjective well-being. *Journal of the Indian Academy of Applied Psychology*, Vol. 35, No.1, p. 27-31.
- [9] Jain, A.K. (2009). *Physiology of Yoga*. Textbook of Physiology (4thed.). Vol-1, p. 498-511. Avichal Publishing Company.
- [10] Javnbakht, M., Hejazi Kenari R., & Ghasemi M. (2009). Effects of yoga on depression ad anxiety of women. *Complement Ther Clin Pract.*, 15, p. 102-104.
- [11] Keesler, M. & Albee G.W. (2006). Primary prevention. *Annu. Rev. Psychology*.
- [12] Khalsa, S.B. et. al. (2009). Yoga ameliorates performance anxiety and mood disturbance in young professional musicians. *Appl Psychophysiol Biofeedback*, 6.
- [13] Kozasa, E.H., et. al. (2008). Evaluation of Siddha samadhi yoga for anxiety and depression symptoms: a preliminary study. *Psychol Rep.*, 103, p. 271-274.
- [14] Michalsen, A., et. al. (2005). Rapid stress reduction and anxiolytic among distressed women as the consequences of a three-month intensive yoga program. *Med Sci Monit.*, 11, p. 555-561.
- [15] Mullur, et. al. (2012). Influence of yoga practice on level of apparently healthy female subjects of Bijapur. *International Journal of Biomedical and Advance Research*, 03(08), p. 618-621.
- [16] Paramhans, S. M., "Hatha Yoga Kriyas- Tratak" Yoga in daily life - The System. Retrieved from <http://yogaindailylife.org.au/blog/2013/06/18/hatha-yoga-kriyas-tratak>
- [17] Ray, U.S., et. al. (2001). Effect of exercises on physical and mental health of young fellowship trainees. *Indian J Physiol Pharmacol*, 45, p. 37-53.
- [18] Ross, T.A. (1923). *The common neurosis: their treatment by psychotherapy*. London, Longmans, 27.
- [19] Sandlund, E.S. & Norlander, T. (2000). The effects of Thai Chi Chuan relaxation and exercise on stress responses and wellbeing: An overview of research. *Journal of Stress Management*, 7, p. 139–49.
- [20] Santaika, I. (2014, Feb18). What yoga can do for you? *Healing Art Community*. Retrieved from <http://www.healing-art-community.com/what-yoga-can-do-for-you/>
- [21] Saraswati, S.S. (1991). *Yoga Magazine: Trataka-Concentrated gazing*. Yoga Publications Trust Munger, Bihar, India. Retrieved from <http://www.yogamag.net/archives/1991cmay91/tratak>.
- [22] Shetty, G., Manjula, M.Y. & Gangadhara, V. (2012, Feb). Effect of Trataka on attention & concentration. Paper presented at the International Conference on Yoga and Naturopathy Expo-2012, Bengaluru, Karnataka, India. Retrieved from <http://www.researchgate.net>
- [23] Singleton, N. et. al. (2000). *Psychiatric morbidity among adults living in private households*. Office for National Statistics, London: The Stationary Office.
- [24] Sinha, A.K. & Sinha, L.N.K. (1995). *Manual for Comprehensive Anxiety Test (SCAT)*. National Psychological Corporation, Agra.
- [25] Susic, P. (2013, Sept 11). Stress and anxiety response: How do you cope? *St. Louis Psychologist and Counseling Information and Referral Network*. Retrieved From <http://www.psycptreatment.com/index.htm>
- [26] Trigant (1953). Effect of Trataka on various psycho-physiological functions. In Gore, M.M. Bhogal R.S. & Rajapurkar, M.V. (Eds.). *Yoga Mimamsa*, 40 (1), p. 53-66.
- [27] Woodward, L.J., & Fergusson, D.M. (2001). Life course outcomes of young people with anxiety disorders in adolescence. *J Am Acad Child Adolesc Psychiatry*, 40, p. 1086–93.
- [28] Woolery, A., et. al. (2004). A yoga intervention for young adults with elevated symptoms of depression. *Altern Ther Health Med*, 10, p. 60-63.