



**INFLUENCE OF PHYSICAL EXERCISES WITH MEDITATION ON PHYSIOLOGICAL AND PSYCHOLOGICAL PARAMETERS AMONG STUDENTS NURSE IN SPMVV, TIRUPATI**

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**Abstract**

Physical exercises are any bodily actively that enhance or maintains physical fitness and overall health and wellness physical conditioning protocol provides an opportunity for the development and maintenance of fitness. The purpose of the study was to find out the Influence of Physical Exercises with Meditation on Physiological and Psychological Parameters among Students Nurse in SPMVV, Tirupati. To facilitate the study, 40 female nursing students from SPMVV, Tirupati were randomly selected as subjects and their age ranged between 17-21 years. They were further divided into two groups namely physical exercises with meditation group (PEMG), and control group (CG), on random basis. In view of considerable feasibility and availability of apparatus the Physiological parameters, systolic and diastolic blood pressure and Anxiety were selected. The study was formulated as a true random group design consisting of a pre-test and posttest. Pretest was conducted for all the 40 subjects on selected physiological and Psychological parameters such as, systolic and diastolic blood pressure and Anxiety. The experimental group participated in physical exercises with meditation for eight weeks. The control group did not participate in any of the training protocol. The post test was conducted on the above said dependent variables after experimental period for both the groups. The difference between initial and final mean scores of the groups was the effect of respective experimental treatment on the subjects. The differences in the mean scores were subjected to statistical treatment using T test in all cases 0.05 level was fixed of testing the hypothesis of the study. It was concluded from the result of the study that there was a significant improvement ( $p \leq 0.05$ ) due to physical exercise with meditation protocol on physiological and Psychological parameters as compared to control group.

**Keywords:** Physical Exercises, Blood pressure and Anxiety.

**Introduction**

Physical exercises are very effective in balancing fitness of the body. The sufficient amounts of physical exercise are needed to maintain adequate health.

Physical exercise is capable of giving better living, exercise keeps muscular motions, joints and tendons and circulation in motion. Exercise can also be used to control blood pressure. Hypertension causes inordinate amount of pressure on the walls of the arteries in the brain which is called stroke. If hypertensive individual exercises regularly, it lowers the blood pressure, thereby helping to prevent stroke, one of the leading causes of death in the world.

Physical exercise is any bodily activity that enhances or maintains physical fitness and overall health and wellness. It is performed for various reasons including strengthening muscles and the cardiovascular system, honing athletic skills, weight loss or maintenance, as well as for the purpose of enjoyment. Frequent and regular physical exercise boosts the immune system, and helps prevent the "diseases of affluence" such as heart disease, cardiovascular disease, Type 2 diabetes and obesity. It also improves mental health, helps prevent depression, helps to promote or maintain positive self-esteem, and can even augment an individual's sex appeal or body image, which is also found to be linked with higher levels of self-esteem. Childhood obesity is a growing global concern and physical exercise may help decrease some of the effects of childhood and adult obesity. Health care providers often call exercise the "miracle" or "wonder" drug alluding to the wide variety of proven benefits that it provides

Meditation is training for the mind, to help it develop the strengths and skills it needs to solve its problems. Just as there are many different remedies for the various illnesses of the body, there are many different types of meditation for the various problems of the mind. Yoga and Meditation refers to the wide spectrum of techniques and psychotherapies aimed at controlling a person's levels of health and mental disorders, especially chronic stress, usually for the purpose of improving everyday functioning. Yogic practices can be appropriate as a effective method for managing health and Mental disorders.

Mindfulness, meditation, and yoga have been coined as a non-stigmatizing alternative to traditional mental health support. They are highly popular tools at tertiary education institutes and used for stress reduction, improve productivity and general mental health (Upchurch DM et.al 2018)



Statement Problem

The aim of the study is to find out the" Influence of Physical Exercises with Meditation on Physiological and Psychological Parameters among Students Nurse in SPMVV Tirupati."

Objectives

- 1. To make a status analysis of selected Physiological and Psychological Parameters of Students nursein SriPadmavatiMahila Visvavidyalayam Tirupati.
2. Physical, Physiological and Psychological Parameters affect the work efficiency of Students nurse
3. To promote Physical exercises with meditation of the female students nurse.

Hypotheses

- 1. Physical exercises with meditation will be improve the Physiological Parameters of students nurse as it has significant impact on the select Physical Parameters such as Blood pressure (Systolic and Diastolic)
2. Physical exercises with meditation will be improve the Psychological Parameters of students nurse as it has significant impact on the select Physiological Parameters such as Anxiety

Materials and Methods

The purpose of this study was to investigate the eight weeks of Physical exercises with meditation and its influence on blood pressure and Anxiety of Students nurse.forty (n = 40) female Students nurse from College of Nursing of Sri Padamvati Mahila Visvavidyalayam (Women's University) Tirupati, were selected as subjects and the age of students were between 17 and 21 years. The selected subjects were randomly divided into two equal groups of fifteen subjects each (n = 20). The groups were one experimental group (EG) and one control (CG). During the training period, the experimental groups underwent their respective training programme for eight weeks 3 days per week. Control group (CG), who did not participate in any specific training. Blood pressure and Anxiety was selected as dependent variable for this study. Blood pressure was measured by Sphygmomanometer and Anxiety was measured by Dr. V.P Sharma Anxiety Questionnaire. Experimental group performed the aerobic exercises as physical exercises, after proper warming up and cool down with meditation from Monday to Friday - three days in a week. These are the physical exercises with meditation used as a circuit -Warm Up, 1.Marching on the Spot, 2. Touch Out, 3. Side to Side, 4. Double Side to Side, Grapevine, 5. Cross Over Step, 6. Jump on the spot, 7. Knee Curl, 8. Front Kick, 9. 'V' Step, Diamond Step, 10. 90 Degree Turn with Single arms stretch and Cool Down with meditation. The collected data were statistically examined by t ratio. The confidence level was fixed at 0.05 levels, which is appropriate to the present study.

Results and Discussion

In order to find out the statistical difference between the initial and final data of experimental and control groups, 't' ratio was employed at 0.05 level of significance.

Results on Systolic blood pressure

The initial and final means on Physical exercises with meditation group and control group on Systolic blood pressure among students nurse and the obtained results on T ratio has been presented in Table I.

Table .1
Analysis of T-ratio on Pre and Post-test for Control and Experimental Group on Systolic Blood pressure

Table with 7 columns: Group, Mean (Pre, Post), SD (Pre, Post), SD Error, and 't' ratio. Rows include Control and Experimental groups.

\*Significance at .05 level of confidence

The Table -I shows that the mean values of pre-test and post-test of control group and experiential group on Systolic Blood pressure.

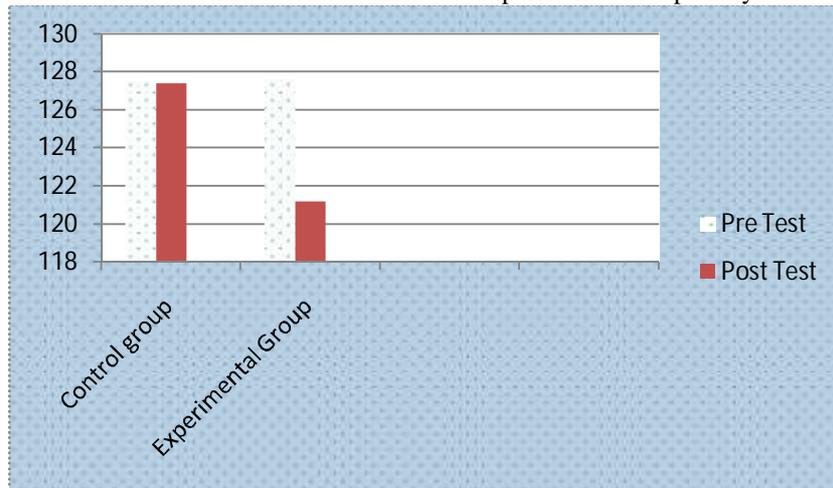
Control group: the mean values of pre-test and post-test of control group on Blood pressure (systolic) were 127.5 and 127.4 respectively. The obtained't' ratio was 0.34 since the obtained 't' ratio was less than the required table value of 2.08 for the significant at 0.05 level, it was found to be statistically insignificant.



**Experimental Group:** The mean values of pre-test and post-test of experimental groups on Blood pressure (systolic) were 127.6 and 121.2 respectively. The obtained 't' ratio was 10.15\* since the obtained 't' ratio was greater than the required table value of 2.08 for significance at 0.05 level, it was found to be statistically significant.

The result of the study showed that there was a significant difference between control group and experimental group in Blood pressure (systolic). It may be concluded from the result of the study that experimental group improved in Blood pressure (systolic) due to eight weeks of physical exercises with meditation.

Diagram-I  
Analysis of T-ratio on Pre and Post-test for Control and Experimental Group on Systolic blood pressure



**Results on Diastolic Blood pressure**

The initial and final means on Physical exercises with meditation group and control group on **Diastolic Blood pressure** among students nurse and the obtained results on T ratio has been presented in Table I .

Table .1  
Analysis of T-ratio on Pre and Post-test for Control and Experimental Group on **Diastolic Blood pressure**

Group	Mean		SD		SD error	't' ratio
	Pre	Post	Pre	Post		
Control	85.79	86.00	2.79	2.41	0.29	0.83
Experimental	85.85	80.65	3.15	1.04	0.71	7.25*

\*Significance at .05 level of confidence

The Table –II shows that the mean values of pre-test and post-test of control group and experiential group on Diastolic Blood pressure.

**Control group:** the mean values of pre-test and post-test of control group on Blood pressure (diastolic) were 85.79 and 86.00 respectively. The obtained 't' ratio was 0.83 since the obtained 't' ratio was less than the required table value of 2.08 for the significant at 0.05 level, it was found to be statistically insignificant.

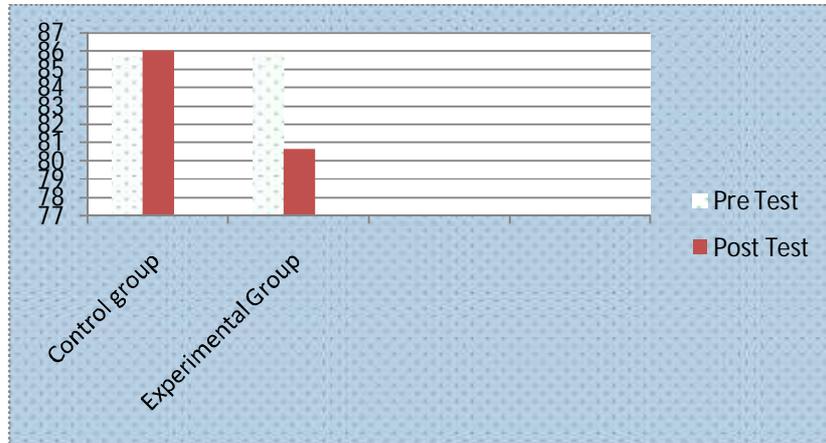
**Experimental Group:** The mean values of pre-test and post-test of experimental groups on Blood pressure (diastolic) were 85.85 and 80.65 respectively. The obtained 't' ratio was 7.25\* since the obtained 't' ratio was greater than the required table value of 2.08 for significance at 0.05 level, it was found to be statistically significant.

The result of the study showed that there was a significant difference between control group and experimental group in Blood pressure (diastolic). It may be concluded from the result of the study that experimental group improved in Blood pressure (diastolic) due to eight weeks of physical exercises with meditation.



Diagram-II

Analysis of T-ratio on Pre and Post-test for Control and Experimental Group on Diastolic Blood pressure



**Results on Anxiety**

The initial and final means on Physical exercises with meditation group and control group on Anxiety among students nurse and the obtained results on T ratio has been presented in Table I.

Table .1  
Analysis of T-ratio on Pre and Post-test for Control and Experimental Group on **Anxiety**

Group	Mean		SD		SD error	't' ratio
	Pre	Post	Pre	Post		
Control	127.20	127.40	5.18	4.28	0.911	0.21
Experimental	126.35	118.65	5.84	3.62	0.798	9.64*

\*Significance at .05 level of confidence

The Table-III shows that the mean values of pre-test and post-test of control group and experiential group on Anxiety.

**Control group:** the mean values of pre-test and post-test of control group on Anxiety were 127.20 and 127.40 respectively. The obtained 't' ratio was 0.21 since the obtained 't' ratio was less than the required table value of 2.08 for the significant at 0.05 level, it was found to be statistically insignificant.

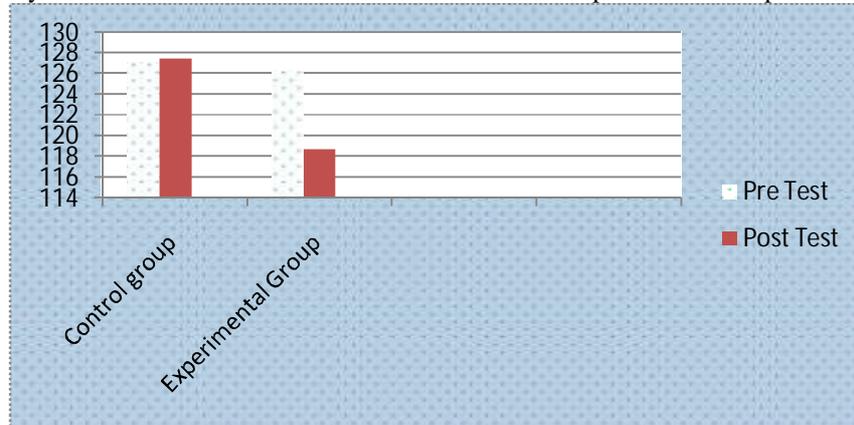
**Experimental Group:** The mean values of pre-test and post-test of experimental groups on Anxiety were 126.35 and 118.65 respectively. The obtained 't' ratio was **9.64\*** since the obtained 't' ratio was greater than the required table value of 2.08 for significance at 0.05 level, it was found to be statistically significant.

The result of the study showed that there was a significant difference between control group and experimental group in Anxiety. It may be concluded from the result of the study that experimental group improved in Anxiety due to eight weeks of physical exercises with meditation.



Diagram-III

Analysis of T-ratio on Pre and Post-test for Control and Experimental Group on Anxiety



Conclusion:

The result of the study revealed that the training group has significant improvement in physiological and psychological parameters among students' nurse after the physical exercises with meditation training protocol. It was also concluded that the physical exercises with meditation training is one of the best training methods for improving the Physiological and Psychological Parameters.

Hence the researcher found a statistically significant improvement for Blood Pressure and Anxiety when the physical exercises training was complemented with meditation training. In conclusion, the present study suggests that it is possible to develop and maintain Blood pressure (Systolic /Diastolic) through a short-term program in the Physical exercises setting. The control group students nurse did not show significant improvement in any of selected parameters.

References

1. Shivakumar, Dr. S. Suthakar, Dr. Sundar Raj (2016;) Effect of Selected Yogic Exercises on Cardiovascular Endurance and Lung Capacity of Secondary School Children, International Journal of Engineering Science and Computing, DOI 10.4010/2016.1729 ISSN 2321 3361
2. Ananda R. (1982), The Complete Book of Yoga Harmony of Body Mind, (Delhi: India)
3. Archer T, Josefsson T, Lindwall M (2014) Effects of physical exercise on depressive symptoms and biomarkers in depression. CNS Neurol Disord Drug Targets 13: 1640-1653. 16.
4. Archer T, Kostrzewa RM (2012) Physical exercise alleviates ADHD symptoms: regional deficits and development trajectory. Neurotox Res 21: 195-209. 14.
5. Archer T, Kostrzewa RM (2015) Physical Exercise Alleviates Health Defects, Symptoms, and Biomarkers in Schizophrenia Spectrum Disorder. Neurotox Res 28: 268-280. 15.
6. Arias AJ, Steinberg K, Banga A, Trestman RL. Systematic review of the efficacy of meditation techniques as treatments for medical illness. J Altern Complement Med. 2006; 12:817-32. [PubMed] [Google Scholar]
7. Arthur C. Guyton (1981). Edition, 6, illustrated. Publisher, Saunders, Chidananda, Sri Swami, (1984) The Philosophy, Psychology, and Practice of Yoga, DiVine Life Society, 1984
8. Blair SN, Kohl HW, 3rd, Paffenbarger RS, Jr, Clark DG, Cooper KH, Gibbons LW. Physical fitness and all-cause mortality. A prospective study of healthy men and women. JAMA. 1989; 262:2395-2401.
9. Burzynska AZ, Wong CN, Voss MW, Cooke GE, Gothe NP, et al. (2015) Physical Activity Is Linked to Greater Moment-To-Moment Variability in Spontaneous Brain Activity in Older Adults. 18.
10. Clarke, Harrison (1976). Physical Fitness digest I ed. New Delhi: Friends Publication
11. Durstine, J.L. and Haskell W.L. (1994). Effect of Exercise Training on Plasma Lipids and Lipoproteins. Journal on Exercise Sports Science, 22, p.447.
12. Fortney L, Taylor M. Meditation in medical practice: A review of the evidence and practice. Prim Care. 2010; 37:81-90. [PubMed] [Google Scholar]
13. Garcia D, Archer T (2014) Positive affect and age as predictors of exercise compliance. Peer J 2: 694. 17.
14. Gharote, M.L. (1982). Guidelines for Yogic Practices, Lonawala: Medha Publications, P.51.
15. Gharote, M.L., (1982) Guidelines for Yogic Practices Lonavla: Medha
16. Horowitz S. Health benefits of meditation. Altern Complement Ther. 2010; 16:223-8. [Google Scholar]



17. Iyengar, B. K. Sundara Raja (1995). *Light on Yoga* Corey, G. (March 2000). *Theory and practice of counseling and psychotherapy* (6th ed.). Belmont, CA: Wadsworth Publishing Co. pp. 550
18. Iyengar, B.K.S. (1999) *The Gift of Yoga*, (New Delhi: Harpers Collins Publications India Pvt Ltd., 1999), p.394.
19. J. Ohrnberger, E. Fichera, and M. Sutton, "The dynamics of physical and mental health in the older population," *The Journal of the Economics of Ageing*, vol. 9, pp. 52–62, 2017.
20. Kuppuswamy, Selvan, (1996). *The Influence of Physical Exercise and Yogic Practices on Health-Related Physical Fitness of School Children in Tamilnadu*. Unpublished Doctoral Thesis, Alagappa University, Karaikudi.
21. Lawrence E. Morehouse and Augustus T. Miller, *Physiology of Exercise* (5<sup>th</sup> Ed; St. Louis: The C.V. Mosby co., 1967), p. 42.
22. Loprinzi PD, Kane CJ (2015) Exercise and cognitive function: a randomized controlled trial examining acute exercise and free-living physical activity and sedentary effects. *Mayo Clin Proc* 90: 450-460.
23. MahadeV Desai (1972), *Introduction to the Gita and according to Gandhi*, New Delhi.
24. Moorthy, A.M. (August, 1982). Effects of Selected Physical Exercise on Minimum Muscular Fitness of the Elementary School Children's. *Vyayam* 15:2 and 3, p.22-27.
25. Physical activity over a decade modifies age-related decline in perfusion, gray matter volume, and functional connectivity of the posterior default-mode network-A multimodal approach. 20.
26. R. Ruscheweyh, C. Willemer, K. Krüger et al., "Physical activity and memory functions: an interventional study," *Neurobiology of Aging*, vol. 32, no. 7, pp. 1304–1319, 2011.
27. Rajkumar, J. (2010). The Impact of Yogic Practices and Physical Exercises on Selected Physiological Variables among the Inter-Collegiate Soccer Players. *Journal of Bloomers Research*, 2:2, p.160-165.
28. Santoshi (2015) effect of yoga training on physiological variables of working women An International Peer Reviewed E-Journal of Multidisciplinary Research Volume: 02, Issue: 06, Nov.-Dec. eISSN NO. 2394-5362
29. Satyanarayana M, et.al. (1992). "Effect of Santhi Kriya on certain Psychophysiological Parameters: A Preliminary Study." *Indian J Physiol Pharmacol*. 36(2): PP.88-92
30. Schantz, P.G. and Kalman, M. (1989). "Strength Training is Ineffective for Oxidative Metabolism", *Swimming Technique*, 5: 61-65.
31. Sharma, P.D. (1984), *Yogasana and Pranayama for Health* Bombay, India: NaVneet Publication, PP. 10-11.
32. Sharma, A.K. (1995) "Case Control Study on Effect of Yoga on Cardio Respiratory Performance of School Children to M.I.C. Gas in Bhopal Town", *NCSM - '95, Souvenir* (Tirunelveli: 23-25 August, 1995).
33. Stampfer, M. J. Hu, F. B. Manson, J. E. Rimm, E. B. & Willett, W. C. (2000). Primary Prevention of Coronary Heart Disease in Women through Diet and Lifestyle. *New England Journal of Medicine*, 343 (1): 16–22.
34. Thanissaro Bhikkhu, *With Each & Every Breath*, Metta Forest Monastery, USA 2013
35. Ukho, (1988). *Exercise Your Way to Physical Fitness, Health for All-All for Health, Exercise Be Fit, Be Healthy*. World Health Organization, 440:2, p.1-12.
36. Upchurch DM, Gill M, Jiang L, Prelep M, Slusser W. Use of mind-body therapies among young adults aged 18-24 years: findings from the 2012 national health interview survey. *J Adolescent Health*. (2018) 014:1–6. doi: 10.1016/j.jadohealth.2018.03.014
37. Voss MW, Weng TB, Burzynska AZ, Wong CN, Cooke GE, et al. (2015) Fitness, but not physical activity, is related to functional integrity of brain networks associated with aging. *Neuroimage*. 19. Boraxbekk CJ, Salami A, Wahlin A, Nyberg L (2015)
38. Vuori I. Exercise and physical health: Musculoskeletal health and functional capabilities. *Research Quarterly for Exercise and Sport*. 1995; 66:276-285.

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