

International Multidisciplinary Research Journal

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EFFECT OF MEDITATION AND AEROBIC EXERCISES ON SELECTED PHYSIOLOGICAL AND PSYCHOLOGICAL VARIABLES OF SECONDARY SCHOOL CHILDREN

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ABSTRACT

Meditation has been practiced for thousand of year .Meditation originally was meant to help deepen understanding of the sacred and mystical forces of life .These days, meditation is commonly used for relaxation and stress reduction .Meditation is considered a type of mind – body complementary medicine. Meditation produces a deep state of relaxation and a tranquil mind . During meditation, you focus your attention and eliminate the stream of jumbled thoughts that may be crowding your mind and causing stress.

KEYWORDS: Meditation And Aerobic Exercises , Selected Physiological , Psychological Variables.

INTRODUCTION

This process may result in enhanced physical



and emotional well-being. Meditation is an excellent way to unwind after an eventful day. Life can at times be stressful, triggered by various factors such as work, family and life in general. Our children are not immune to stress either, they also undergo quite considerable amount of stress on a daily basis. School-based assignments, feuds between their parents and other factors can contribute to stress .If your child is stressed and you don't know where to start, learn how to manage stress through meditation.

Aerobic exercises: Constant moderate

intensity work that uses up oxygen at a rate in which the cardio respiratory system can replenish oxygen in the working muscles. Examples of such activity are exercises like stationary bike riding or walking. It is a good activity for fat loss when done in the right amounts but highly catabolic if done in excess.

PHYSIOLOGICAL BENEFITS OF AEROBIC EXERCISE:

- 1.Strengthening the muscles involved in respiration, to facilitate the flow of air in and out of the lungs
- 2.Strengthening and enlarging the heart

muscle, to improve its pumping efficiency and reduce the resting heart rate, known aerobic conditioning

3.Improving circulation efficiency and reducing blood pressure

4.Increasing the total number of red blood cells in the body, facilitating transport of oxygen

5.Improved mental health, including reducing stress and lowering the incidence of depression, as well as increased cognitive capacity.

As a result, aerobic exercise can reduce the risk of death due to cardiovascular problems. In addition, high-impact aerobic activities (such as jogging or using a skipping rope) can stimulate bone growth, as well as reduce the risk of osteoporosis for both men and women.

PSYCHOLOGICAL BENEFITS OF AEROBICS

Reduced Anxiety : Depression and anxiety can lead to a feeling of isolation. By partaking in aerobic sports, one can choose to join a running club, swimming club, gym or any other sports club. Aerobic exercise offers a distraction. For an hour or so each day, you can put yourself in a position where you are too busy worrying about the prospect of having to run another two miles before you can stop. Burning excess fat and toning up can boost anyone's confidence. Clothes fit better, and you receive compliments from friends, which often is enough to begin to lift the heavy cloud of a mild depression.

Stress: Stress is defined as a response to a demand that is placed upon you. Stress is a normal reaction when your brain recognizes a threat. When the threat is perceived, your body releases hormones that activate your "fight or flight" response. This fight or flight response is not limited to perceiving a threat, but in less severe cases, is triggered when we encounter unexpected events. Psychologist Richard S. Lazarus best described stress as "a condition or feeling that a person experiences when they perceive that the demands exceed the personal and social resources the individual is able to mobilize." For most people, stress is a negative experience.

STRESS SYMPTOMS:

- Headaches, other aches and pains
- Sleep disturbance, insomnia
- Upset stomach, indigestion, diarrhoea
- Anxiety

METHODOLOGY:

The procedure adopted in this research study is related to the selection of subject's selection of variables, selection of test and experimental designed before the administration of the researcher given orientation of the test.

Selection of subjects: For the purpose of gathering the data 120 girls school children were selected in the age group of 14 to 16 years studying in Urdu high school Daulatkoti vijayapura district in Karnataka state, the selected subjects were divided into three groups such as meditation group. Aerobic exercise and control group.

Selection of variables:

- + Meditation: Concentration meditation, Reflective Meditation, Mindfulness Meditation.
- + Aerobic: V-step movement, L-step right side movement, Zig-zag forward movement, Right and left side knee up movement, Front forward and Back Jumping movement.
- + Physiological Variables, Pulse Rate, Vo2 max
- + Psychological Variables, Stress, Anxiety

Experimental Design: The subject for the presented study was divided randomly into three equal group called experimental group and control group for meditation and aerobic. each consisting of 120 girls student. 8 week meditation and aerobic training were given to the experimental group. The control group was not allowed to participate in any of the training program, except their routine physiological classes.

Collection of data: Data as selected variables such as physiological variables of pulse rate, vo2 max, and psychological variables stress, anxiety were collected as per the method before the experimental period (pre-test) and at the end of the 8 week (post-test).

Statistical Technique: The following statistical procedure will be followed to find out the effect of meditation and aerobic exercises on selected, physiological variables of secondary school children. The researcher used 't' value and mean standard deviation. ANOVA test F-ratio.

ANALYSIS AND INTERPRETATION OF DATA

The purpose of the study "Effect of Meditation and aerobic exercises on selected physiological psychological variables of secondary school children." The collected data on physiological and psychological variables of secondary school children has been analyzed and presented in this chapter.

Table No: 4.1 Results of paired t test between pre-test and post-test physiological variable pulse rate scores of secondary school children in control, meditation and aerobic group.

Groups	Time	Mean	SD	Mean Diff.	SD Diff.	% of change	Paired t	p-value
Control group	Pre-test	72.33	8.08	-0.05	6.30	-0.07	-0.0502	0.9602
	Post-test	72.38	7.52					
Meditation group	Pre-test	72.78	9.34	22.28	7.64	30.61	18.4415	0.0001*
	Post-test	50.50	5.52					
Aerobic group	Pre-test	73.20	3.46	3.65	8.78	4.99	2.6298	0.0122*
	Post-test	69.55	8.78					

From the results of the above table 4.1 indicate that

1. Non-significant difference is observed between pre-test and post-test physiological variable pulse rate scores of secondary school children in control group ($t=-0.0502, p>0.05$) at 5% level of significance. Hence, the null hypothesis is not rejected. Hence the pre-test (72.33 ± 8.08) and post-test (72.38 ± 7.52) physiological variable pulse rate scores of secondary school children are similar in control group.

2. A significant difference is observed between pre-test and post-test physiological variable of pulse rate scores of secondary school children in Meditation group ($t=18.4415, p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected. It means that, the post-test (50.50 ± 5.52) physiological variable pulse rate scores of secondary school children are significant as compared to pre-test (72.78 ± 9.34) in Meditation group.

• A significant difference is observed between pre-test and post-test physiological variable of pulse rate scores of secondary school children in Aerobic group ($t=2.6298, p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected. Hence the posttest (69.55 ± 8.78) physiological variable of pulse rate scores of secondary school children are significant as compared to pre-test (73.20 ± 3.46) in Aerobic group. The mean physiological variable of pulse rate scores of secondary school children are also presented in the figure:4.1(a)

Figure:4.1(a) Comparison of pre-test and post-test physiological variable pulse rate scores of secondary children in control ,meditation and aerobic group

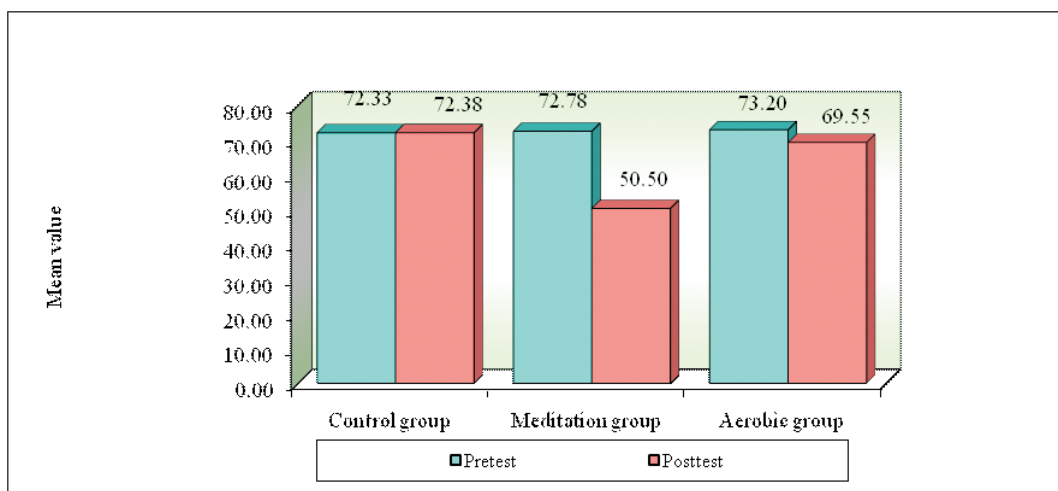


Table No: 4.3 Results of paired t test between pre-test and post-test psychological variable of stress scores of secondary school children in control, meditation and aerobic group

Groups	Time	Mean	SD	Mean Diff.	SD Diff.	% of change	Paired t	p-value
Control group	Pre-test	8.85	1.33	0.60	2.37	6.78	1.5992	0.1179
	Post-test	8.25	2.06					
Meditation group	Pre-test	8.89	1.46	4.15	1.33	46.89	19.7184	0.0001*
	Post-test	4.70	0.76					
Aerobic group	Pre-test	8.83	0.98	1.53	1.91	17.28	5.0551	0.0001*
	Post-test	7.30	1.96					

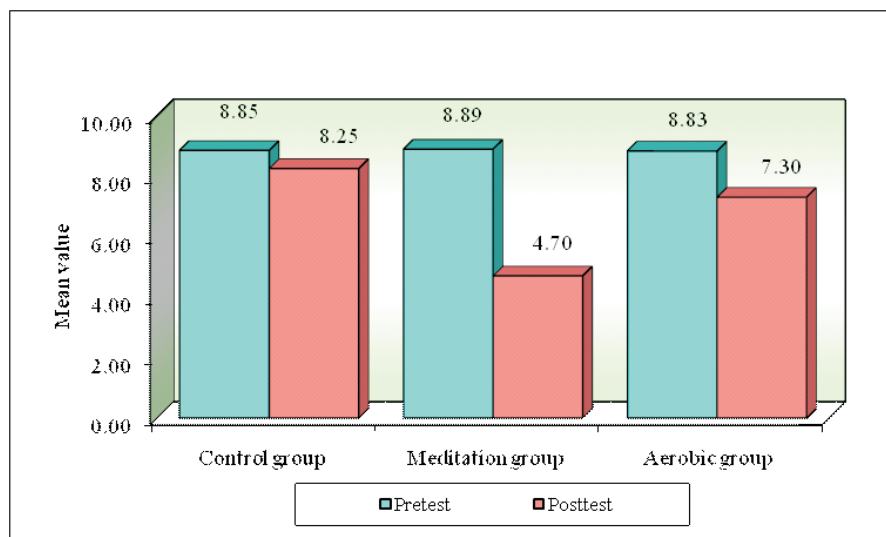
*p<0.05, Table value 1.96

From the results of the above table 4.3 indicate that

- Non-significant difference is observed between pre-test and post-test psychological variable of stress scores of secondary school children in control group (t=1.5992, p>0.05) at 5% level of significance. Hence, the null hypothesis is not rejected. Hence the pre-test (8.85±1.33) and post-test (8.25±2.06) psychological variable of stress scores of secondary school children are similar in control group.
- A significant difference is observed between pre-test and post-test psychological variable of stress scores of secondary school children in Meditation group (t=19.7184, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected. Hence the posttest (4.70±0.76) psychological variable of stress scores of secondary school children are significant as compared to pretest (8.89±1.46) in Meditation group.

A significant difference is observed between pre-test and post-test psychological variable of stress scores of secondary school children in Aerobic group (t=5.0551, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected. Hence the post-test (7.30±1.96) psychological variable of stress scores of secondary school children are significant as compared to pre-test (8.83±0.98) in Aerobic group. The mean psychological variable of stress scores of secondary school children are also presented in the figure 4.3©

• Figure:4.3(c) Comparison of pre-test and post-test psychological variable Stress scores of secondary school children in control, meditation and aerobic group



SUMMARY:

The purpose of the study was "Effect of meditation and aerobic exercises on selected physiological and psychological variables of secondary school children". To achieve this purpose, 8-week meditation and aerobic exercises training on physiological and psychological variables performance for pre-test and post-test of the subject, the results show 8 weeks meditation and aerobic training develops physiological and psychological variables.

CONCLUSION:

On the basis of result it was concluded that 8-week meditation and aerobic training improved the physiological and psychological variables.

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