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Original Research Paper

Physical Education

COMBINED EFFECT OF AEROBIC DANCE AND YOGIC PRACTICES ON SELECTED PSYCHOMOTOR VARIABLES OF SCHOOL BOYS

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ABSTRACT The purpose of this study was to find out the combined effect of aerobic dance and yogic practice on selected psychomotor variables of school boys. The investigator selected 60 school boys from sri ramakrishna mission vidyalaya high school and swami shivananda higher secondary school Coimbatore, their ages were ranged from 13 to 15 years. The subjects were divided into two equal groups. Group 1 consist 30 subjects called as experimental group and group 2 consist of 30 students called as control group .The group I was assigned aerobic dance and yogic practices for a period of 12 weeks training programme. The control group was not allowed to participate in any kind of treatment. The dependent variables namely reaction time and hand eye coordination was selected and measured by the reaction timer test and mirror tracing board test respectively for this study. The data was analysed by the use of paired 't' test. The obtained 't' ratio was tested for significance at 0.05 level of confidence. The analysis of the data revealed that there was a significant improvement on the selected variables namely reaction time and hand eye coordination by the application of aerobic dance and yogic practice training programme.

KEYWORDS : Reaction time, Hand eye coordination.

INTRODUCTION

AEROBIC DANCE

Aerobic dance exercise is currently one of the most commonly practiced adult fitness activities. The majority of the research pertaining to this form of exercise supports its application as a valid cardiovascular training alternative, especially for adult females if performed according to the American College of Sports Medicine (ACSM) guidelines. If however, the participant is interested in modifying body composition, training frequency, duration, or efforts toward caloric restriction may need to be increased or altered beyond those employed in the aerobic dance training investigations. The amount of energy expended during a bout of aerobic dance can vary dramatically according to the intensity of the exercise. 'Low intensity' dance exercise is usually characterized by less large muscle activity and/or less low extremity impact, and music of slower tempo. Dance exercise representative of this variety requires a cost of approximately 4 to 5 kcal/minute. Several trials, however, have shown that vigorous 'high intensity' aerobic dance which entails using the large muscle groups can require 10 to 11 kcal/minute. The associated training outcomes could be affected by such differences in dance exercise intensity and style. Group aerobic has grown in popularity and most of the facilities provide classes in high-impact and low-impact aerobics.

YOGA

Yoga means union of the individual soul or consciousness with the Universal Consciousness or sprit. It is a 5000 years plus old Indian technique of body culture. Indian seers and saints have been practicing Yoga since ancient times to bring flexibility to the spine and joints, to keep the muscles of the body pliable and youthful, increase circulation in arteries and strengthen internal organs. And yet, yoga is so much more than this. Yoga has been said to help strengthen the power of concentration, to banish constipation, to relieve stomach disorders, improve muscle coordination and reduce excess body fat. It was practised by Indian Sages to strengthen the mind-body connection, bring calmness and relaxation to mind, enhance self-confidence, strengthen self-discipline and self resolve, reduce stress / anxiety and increase vitality and energy throughout the body. The modern era is the era of competition. Competition in job, competition in education, competition in sports - competition lies in everywhere. To face these competition every individual has to be fit from body, mind and spirit. Yoga can be applied to enhance the sports performance of the professional athletes. Sound body, mind and spirit is very essential for ideal and peak performance in games and sports, practicing yoga is the best way for that.

METHODOLOGY

For this study 60 school boys selected from sri ramakrishna mission vidyalaya high school and swami shivananda higher secondary school Coimbatore and their ages were ranged from 13 to 15 years. The subjects were divided into two equal groups. Group 1 consist 30 subjects called as experimental group and group 2 consist of 30 students called as control group .The group I was assigned aerobic dance and yogic training programme for a period of 12 weeks. The control group was not allowed to participate in any kind of treatment. The subjects were tested in the selected variables namely reaction time was tested with reaction timer test and hand eye coordination was tested with mirror tracing board test, before and after the training period. The collected data was treated by using paired t-test. The level of confidence was fixed at 0.05 level.

RESULTS OF THE STUDY

TABLE-I

COMPUTATION OF 'T'-RATIO BETWEEN THE PRE AND POST TESTS ON REACTION TIMEOF EXPERIMENTAL AND CONTROL GROUPS

Group	Test	M	SD	σ DM	DM	t-ratio	'p' value
Experimental	Pre Test	1.99	0.38	0.07	0.85	12.49*	0.01
	Post Test	1.14	0.17				
Control	Pre Test	2.01	0.33	0.01	0.01	1.85	0.07
	Post Test	1.99	0.33				

* significance at 0.05 level.

The table I indicates that there was a significant improvement on the reaction time through the combined training of aerobic dance and yogic practices. It reveals that the obtained t-ratio 12.49 is significant because the 'p' value is lesser than the 0.05, level of confidence. So there was a significant improvement on the reaction time between the pre and post tests of experimental group, whereas control group showed no significant improvement. Hence the result indicates that the significant improvement on the reaction time was due to the combined training of aerobic dance and yogic practice alone.

FIGURE – I

THE FIGURE SHOWING THE MEAN DIFFERENCE OF PRE AND POST-TESTS SCORES ON REACTION TIME OF EXPERIMENTAL AND CONTROL GROUPS

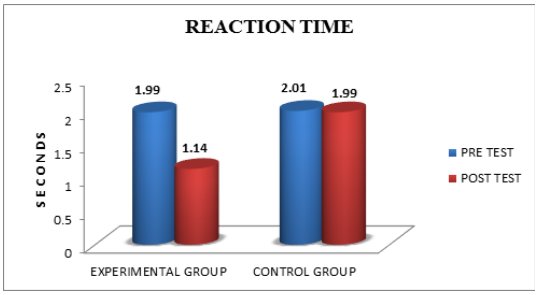


TABLE-II

COMPUTATION OF 'T'-RATIO BETWEEN THE PRE AND POST TESTS ON HAND EYE COORDINATION OF EXPERIMENTAL AND CONTROL GROUPS

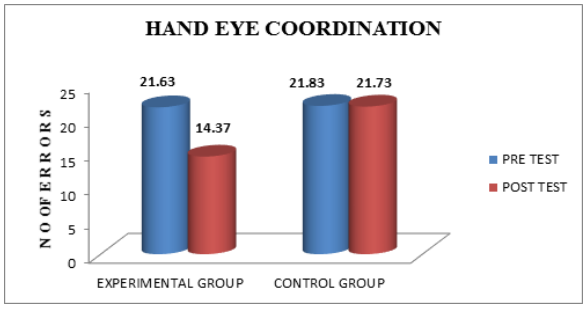
Group	Test	M	SD	σ DM	DM	t-ratio	P
Experimental	Pre Test	21.63	5.80	0.60	7.27	12.10*	0.01
	Post Test	14.37	5.01				
Control	Pre Test	21.83	5.34	0.06	0.10	1.79	0.08
	Post Test	21.73	5.25				

* significance at 0.05 level.

The table II indicates that there was a significant improvement on the hand eye coordination through the combined training of aerobic dance and yogic practice. It reveals that the obtained t-ratio 12.10 is significant because the 'p' value is lesser than the 0.05, level of confidence. So there was a significant improvement on the hand eye coordination between the pre and post tests of experimental group, whereas control group showed no significant improvement. Hence the result indicates that the significant improvement on the hand eye coordination was due to the combined training of aerobic dance and yogic practice alone.

FIGURE – II

THE FIGURE SHOWING THE MEAN DIFFERENCE OF PRE AND POST-TESTS SCORES OF HAND EYE COORDINATION OF EXPERIMENTAL AND CONTROL GROUPS



DISCUSSION ON FINDINGS

The result of the study reveals that the twelve weeks of combined training programme of aerobic dance and yogic practice on the selected dependent variable there was a significant improvement on the reaction time. It reveals that the obtained t-ratio 12.49 is significant because the 'p' value is lesser than the 0.05, level of confidence. So there was a significant improvement on the reaction time between pre and post tests of the experimental group, whereas the control group showed no significant improvement. Hence the results indicate that the significant improvement on the reaction time was due to the combined training alone. The result of the study is in consonance with the research done by Alagesan.S (2016).

The result of the study reveals that the twelve weeks of combined training programme of aerobic dance and yogic practice on the selected dependent variable there was a significant improvement on the hand eye coordination. It reveals that the obtained t-ratio 12.10 is significant because the 'p' value is lesser than the 0.05, level of confidence. So there was a significant improvement on the hand eye coordination between pre and post tests of the experimental group, whereas the control group showed no significant improvement. Hence the result indicates that the significant improvement on the hand eye coordination was due to the combined training alone. The result of the study is in consonance with the research done by Deepa S Rathod and Sakpal Hoovanna (2017).

CONCLUSIONS

It was concluded that there was a significant improvement on the selected variables namely reaction time and hand eye coordination by the application of combined training programme of aerobic dance and yogic practices.

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