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Effect of yogic practices on speed among secondary school students

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Abstract

Yoga is a way to harmonious development of mankind that is physical, mental, intellectual, emotional and spiritual aspect of life. The study was conducted on 80 secondary school students. On the variable speed, subjects belonging to experimental groups i.e. Asana, Pranayama and Dhyana group differed significantly than the control group. Speed indicating positive effect of selected yogic practices (Asana, Pranayama and Dhyana).

Keywords: Asana, Pranayama and Dhyana

Introduction

The growing children are the builders of society. The children are very sensitive and adaptive in nature. What they see around them; they get influenced and start imitating the same. Class, school, home and society play an important role to educate the children. Education is the most important institution in the society for the change and exploration of new direction of thought and perfection. The system of modern education is in question whether it can educate the generation ethically, socially and morally. Education is a mockery if it deviates from the path of character formation. According to vedas there should be four targets of education, which should be achieved, dharma (righteousness), arth (purposefulness), karma (concerning) and moksha (salvation). These ideals and motives add more merit in the character formation. In today's people world, which is fast moving and materialistic society compels the people to have a fast and haphazard way of living, and in this regard children are not exceptional. Children find themselves living in an everlasting transitional phase of life. Where it is required to have a good deal of educational, ethical and behavioural input. Yoga is a way to harmonious development of mankind that is physical, mental, intellectual, emotional and spiritual aspect of life. The development of a family, a society, a nation and the world depends upon the development of an individual. Individual is the foundation stone of the society. The concept of yoga is that each seed has an inherent capacity gifted by the nature to grow in shape of a big tree. The process of growing into a big tree, laden with flowers and fruits, needs proper soil, irrigation, sunlight, heat and other support. Likewise human beings right from childhood to the old age, need proper diet, education and other facilities in order to become a healthy person and the process of yoga is meant for the total development of an individual. It is clear that the creator of this trinity has made every material and living organism with a definite purpose in order to make the creation well managed and balanced. The human body gets enormous energy and strength. With the help of yogic treatment it gets enlightened about its potential and can make best use of power lying within. Human life is a precious gift of nature, which is not meant for purposeless stress and frustration. Therefore, one should understand responsibilities towards body to make it healthy and worthy for ourselves and for the society at large. The growing children of our society are very vulnerable to this haphazard living style prevalent in our society; therefore, it is very important and essential to impart yogic education to our children.

Speed may be defined as rapidity with a movement or successive movements of the same kind may be performed by an individual. (Kansal, Devinder. K 1996). The maximal rate at which an individual is able to move his entire body or parts of his body over a specified distance is considered to be his speed of movement. (Eckert, Helen M 1974)

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Objective of the study

To measure the strength of the arms and shoulders in the 50 Yard-dash movement among secondary school children.

Hypothesis

There exit significant effect of yogic practices on speed among senior secondary school children

Psychological variable

50 Yard-dash

Methodology

Sample: The present study was conducted on male subjects of 16 to 19 years of age, studying in XI and XII grades in Government Senior Secondary School, Sector 23, Chandigarh. To ensure the selection of subject having normally sound mind in sound body, the investigator checked the health records maintained by the school with the help of a small team of physical instructors and eliminated (20) subjects finally selecting (80) students. Further the selected subjects were assigned the following four (4) groups.

1. Experimental Group I (Asana)
2. Experimental Group II (Pranayama)
3. Experimental Group III (Dhyana)
4. Control Group

Due emphasis was laid an aspects like age, height, weight, past game / sports experience / participation and health records before allocating the groups to ensure homogeneity. Prior to the administration of pre-test; a meeting of all the selected subjects were held in which the principal and the teachers of physical education of the said school were present. The purpose of the study along with various testing procedures and training program were explained to them in detail. Later on the selected subjects were also explained the same so that, they could grasp the importance and should suffer from no confusion what-so-ever regarding the hard work and interest they would have to put in. All the subjects agreed to co-operate whole heartedly.

Experimental design: A simple random group design was adopted for this study as it seemed to be the most appropriate one. The eighty (80) subjects were classified into four equal groups with twenty (20) subjects in each group. Three experimental groups (Asana, Pranayama, Dhyana) and fourth as a control group.

Training design: The training lasted twelve weeks. There were three sessions of one hour for each group in a week. Time was controlled for each group and the sessions commenced at 7.00 A. M. sharp. The training design was broadly classified as follows.

1. Experimental Group I (Asana): Following exercises short listed & administered on experimental group-I

- Surya Namaskara
- Paschimotianasana
- Sarvangasana
- Halasana
- Pavan Muktasana
- Uthit Padmasana
- Shavasana

2. Experimental Group II (Prayanama): Following was practiced by experimental group-II

- Surya Bhedana
- Kapalbhati
- Sitali
- Sitakari

3. Experimental Group III (Dhyana): Following was administered to Experimental Group III.

- Dot Trataka
- Candle Trataka

Statistical Analysis

To find out the significance of the differences among the groups as a result of training, the analysis of covariance (ANCOVA) was applied since the study employed the random group design and the four group were not equal with reference to the factors examined through the analysis of covariance, the final means and the adjusted final means were listed for significance. In the case of variables where the F-ratio (ANCOVA) was found significant with regard to paired adjusted means post-hoc test was applied. The level of significance chosen to test the hypothesis was chosen as .05 which was recognized as appropriate in relation to the research process adopted and the equipment used in the study. Finally to find out the significance of the differences between pre-test and post-test means of the two experimental groups and control group ‘t’ test was applied.

Table 1: Analysis of Covariance for three experimental and control groups on 50 Yard-dash

	Asana	Pranayama	Dhyana	Control	Ss	DF	MS	F
Pre-test means	8.10	7.50	7.51	7.37	A: 6.3 W: 15.9	3 76	2.1 .2	10.05*
Post-test means	8.05	7.36	7.32	7.40	A: 7.2 W: 15.5	3 76	2.4 .2	12*
Adjusted post-test means	7.42	7.48	7.62	7.64	A: .7 W:3.3	3 75	.2 .04	5*

P<.05 =2.73*

Table 1 presents the pre-test, post-test and adjusted post-test means of Asana group, pranayama group, Dhyana group and control group. The pre-test means for three experimental groups (Asana, Pranayama, Dhyana) and Control group are 8.10, 7.50, 7.51 and 7.37 respectively. The resultant ‘F’ ratio 10.05 has been found statistically significant (p<.05).

The post-test means for the same group are 8.05, 7.36, 7.32 and 7.40 respectively. The resultant ‘F’ ratio 12 also found statistically significant at (p<.05).

The adjusted post-test means for above said groups are 7.42, 7.48, 7.62 and 7.64 respectively. Hence analysis of covariance resulted in ‘F’ ratio of 5 which has been found statistically significant (p<.05) which indicate that groups were significant different at the endof the twelve weeks period of Yogic training Programme. The ‘F’ ratio obtained for the adjusted final means has been found significant. Scheffe’s post-hoc analysis was applied to study the significance difference between the paired adjusted final means.

Table 2: Paired Adjusted Final means and differences between the means for three experimental groups and Control group on 50 Yard-dash.

Adjusted Means				Differences Between Means	Scheffe's Post-hoc
Asana	Pranayama	Dhyana	Control		
7.42	7.48	-	-	.06	.17
7.42	-	7.62	-	.2	.17
7.42	-	-	7.64	.22	.17
-	7.48	7.62	-	.14	.17
-	7.48	-	7.64	.16	.17
-	-	7.62	7.64	.02	.17

Table 2 presents that there is no statistical significant differences in the adjusted means between groups of Asana and pranayama, Asana and Dhyana, Pranayama and Dhyana, Pranayama and control, Dhyans and Control groups. The adjusted mean value of pranayama (7.48) indicate Pranayama group better than the control group.

However, Asana group observed significant in comparison to Control groups as difference between means .22 of this group was found greater than the obtained critical ratio.

Table 3: Significance of the difference between pre-test and post-test of experimental groups and control group on Yogic practices (50 Yard-dash)

Groups	Pre-Test		Post-Test		Pairt 't' Value
	Mean	S.D.	Mean	S.D.	
Asana	8.10	.64	8.05	.63	6.55*
Pranayama	7.50	.42	7.36	.38	3.01*
Dhyana	7.51	.31	7.32	.37	2.60*
Control	7.37	.40	7.40	.37	.74

* t .05 (df .38) = 2.02

In table 3 significance of the differences between pre-test and post-test means of three experimental groups (Asana, Pranayama, Dhyana) and Control group are presented. The pre-test mean values of Asana group, Pranayama group, Dhyana group and control group were 8.10, 7.50, 7.51 and 7.37 respectively. Whereas, the post mean value of above same groups were 8.05, 7.36, 7.32 and 7.40 respectively. The respective 't' values were 6.55, 3.01, 2.60 and .74 respectively. The t-values of Asana and Pranayama group were found statistically significant at .05 (df .38) level. The intra-group differences between the means of pre and post on yogic practices are graphically represented in Figure.

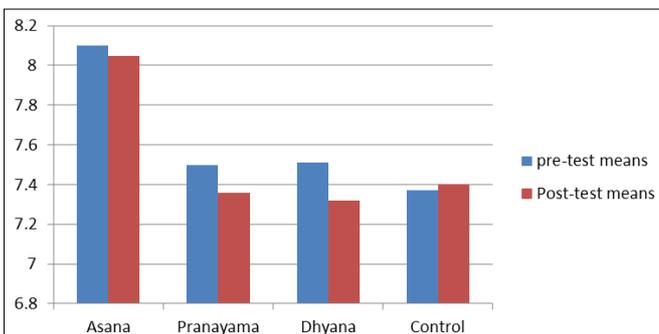


Fig 1: Pre-test and Post-test means of Asana group, Pranayama group, Dhyana group and Control group on the 50 Yard-dash

The results of covariance demonstrated significant inter group differences in the variable of 50 yard-dash. Therefore to know the direction of differences post-hoc analysis was conducted only on 50 yard-dash. Post-hoc analysis on 50 yard-dash demonstrated significant difference between Asana group and Control group table-1. While the other groups were not significant differ on this variable. This indicates that regular

practice of Asana improves the strength of the arms and the shoulders which are required for 50 yard-dash. However, there have been improvements of pull-up although in varying degrees as a result of the experimental treatment. These findings of the investigator, that using Asana, Pranayama and Dhyana contributed positively on 50 yard-dash.

There were significant difference found between the subjects belonging to three experimental groups i.e Asana group, Pranayama group, Dhyana group and that of Control group. Asana group performed better than the other groups on motor fitness variable 50 yard-dash

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