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EFFECT OF 8 WEEKS TRAINING PROGRAMME ON SPEED AND STRENGTH OF SCHOOL GOING CHILDREN

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Abstract: A training programme is the essence of the sports performance. The main purpose of the study was to find out the effect of 8 weeks swimming training on school going children. Required data for this study were collected on the school going male swimmers who used to come for regular practice to Shree Hanuman Vyayam Prasarak Mandal's Swimming Pool, Amravati. Forty School going male swimmers were selected as subjects by using Purposive Sampling Technique. To measure the abdominal strength of the selected subjects, abdominal strength of the subjects was measured by employing the Bent Knee Sit Ups test was used and the score was recorded in numbers and to measure the speed ability of the subject 50 yard dash test was administered and score was recorded in second. The training was given after pre test for 8weeks, six days in a week i.e. Monday to Saturday from 5.30 to 7.30 p.m. To determine the significance difference between the means of the control and experimental groups, independent t-test was employed for pre-test and post-test separately for each variable. To test the hypothesis the level of significance was at 0.05. There is no significant difference between Control group mean of Pre and Post test in Strength. But Experimental group shows significant difference in mean Pre and Post test in Strength Similarly Post test Control and Experimental groups shows significant difference with calculated't' value of 2.135. There is no significant difference between Control group mean and Experimental group mean of Pre and Post test in Speed. Similarly, there is no significant difference between Control and Experimental group Post-test means in Speed as the calculated t-value 0.377 is less than the tabulated t-value.

Keywords: Children, Speed, Strength, Swimming training

Introduction:

It is notable that achievements at the present day stage of development of sports swiftly increase with a corresponding increase in the volume of training. Even the most gifted athlete will not score outstanding results if he does not undergo training persistently and systematically and prepares himself for the next achievement. As the system of sports training improves, its effect on the general level of sports achievement increases. It is indicated that Olympic records of the first modern Olympic Games, which in those items seemed to be outstanding, today are within reach of thousands and thousands of rank and file athletes.

Purpose of the study:

The main purpose of the study was to find out the effect of 8 weeks training programme on speed and strength of school going children.

Methodology:

Sources of Data and Selection of Subjects:

- For this study 40 school going male swimmers age between 12 to 14 years who used to come to Shree Hanuman Vyayam Prasarak Mandal's Swimming Pool, Amravati for regular practice were selected as subjects using Purposive Sampling Technique
- Only beginner swimmers were selected who were able to swim at least 500 meters in any survival stroke. The subjects were divided into two groups viz. Experimental group and control group; each group consisted of twenty subjects.

Selection of Tests and Criterion Measure:

Strength: Abdominal strength of the subjects was measured by employing the Bent Knee Sit Ups test and the score was recorded in numbers.

Speed: To measure the speed ability of the subject 50 yard dash test was administered and score was recorded in second.

Administration of Training Programme :

The training was conducted for two hours per day it was for 2 month continuously (a sample of swimming training programme is given below). The training programme was corrected and modified before and during the training as per the requirement after discussion with expert and guide.

1) The training was given after pre test for 8 weeks, six days in a week i.e. Monday to Saturday from 5.30 to 7.30 p.m.
2) The training volume increased along with the duration of training programme.
3) No training was given to the control group.

Analysis of the Data:

To determine the significance difference between the means of the control and experimental groups, independent t-test was employed for pre-test and post-test separately for each variable. To test the hypothesis the level of significance was at 0.05.

Findings:

The results pertaining to the above variables are presented separately under the following tables.

Table-1. Mean, standard deviation and t-ratio for the variables in the pre test for control and experimental groups

Variable	Group	Mean	Standard Deviation	Mean Difference	Standard Error	t-ratio
Strength	Control	24.75	4.9723	0.30	1.5189	0.198@
	Experimental	25.05	4.6280			
Speed	Control	10.06	0.6607	0.08	0.2132	0.394@
	Experimental	10.15	0.6872			

@ Not significant at 0.05 level Tabulated t0.05(38) = 2.021

The above table reveals that, there is no significant difference between Pre-test means of Control and Experimental group in Speed as the calculated t-values 0.394 is less than the tabulated t-value of 2.021 at 0.05 level of confidence for the 38 degrees of freedom.

Similarly, there is no significant difference between Pre-test means of Control and Experimental group in Strength and Speed. Hence the subjects selected for the present experimental study having nearly same Strength and Speed.

Table – 2 Mean, standard deviation and t-ratio of the control and experimental groups for the pre and post-test in strength

Groups	Mean	Standard Deviation	Mean Difference	Standard Error	t-ratio
Pre Test Control	24.75	4.9723	1.15	1.5110	0.761@
Post Test Control	25.90	4.5757			
Pre Test Experimental	25.05	4.6280	3.75	1.3671	2.743*
Post Test Experimental	28.80	3.9947			
Post Test Control	25.90	4.5757	2.90	1.3582	2.135*
Post Test Experimental	28.80	3.9947			

@ Not significant at 0.05 level Tabulated t0.05(38) = 2.021
* Significant at 0.05 level

The above Table revealed that, there is no significant difference between Control group mean of Pre and Post test in Strength as the calculated t-value 0.761 is less than the tabulated t-value of 2.021 at 0.05 level of confidence for the 38 degrees of freedom. But Experimental group shows significant difference in mean Pre and Post test in

Strength as the calculated t-value 2.743 is greater than the tabulated t-value. Similarly Post test Control and Experimental groups shows significant difference with calculated 't' value of 2.135.

From the table it is also observed that the mean Strength scores for Control and Experimental groups are 24.75 and 25.05 in Pre-Test while 25.90 and 28.80 in Post-Test respectively.

From the above table, it can be clearly inferred that Control group does not differ significantly in respect to Strength in Pre and Post Test. Hence there is no significant change in the Strength of Control group swimmers. But in Post Test, Control and Experimental groups differ significantly. Moreover, there is a significant difference in Pre and Post Test mean Strength of Experimental group. It is also observed that, Post Test mean Strength of Experimental group is greater than the Pre Test value which clearly shows that the training programme has positive affect on the Strength of swimmers. The mean values of Strength are graphically depicted in Figure-1.

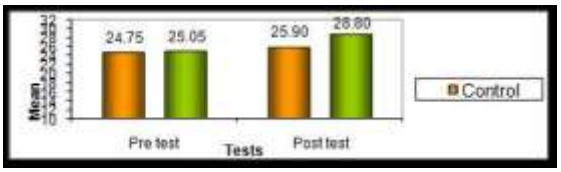

Figure-1. Comparison of Means among the Pre and Post-Tests of Control and Experimental Groups in Strength

Table-3. Mean, standard deviation and t-ratio of the control and experimental groups for the pre and post-test in speed

Groups	Mean	Standard Deviation	Mean Difference	Standard Error	t-ratio
Pre Test Control	10.06	0.6607	0.09	0.2041	0.443@
Post Test Control	9.97	0.6298			
Pre Test Experimental	10.15	0.6872	0.25	0.2207	1.153@
Post Test Experimental	9.89	0.7082			
Post Test Control	9.97	0.6298	0.08	0.2119	0.377@
Post Test Experimental	9.89	0.7082			

@ Not significant at 0.05 level Tabulated t0.05(38) = 2.021

From the above Table it is evident that, there is no significant difference between Control group mean and Experimental group mean of Pre and Post test in Speed as the calculated t-values 0.443 and 1.153 are less than the tabulated t-value of 2.021 at 0.05 level of confidence for the 38 degrees of freedom. Similarly, there is no significant difference between Control and Experimental group Post-test means in Speed as the calculated t-value 0.377 is less than the tabulated t-value.

From the above table, it can be clearly inferred that Control and
Experimental both the groups does not differ significantly in respect to speed in Pre as well as Post Test. Moreover, in post test Control and Experimental groups showed non-significant difference. Hence the effect of training programme is not observed on the speed of swimmers. The mean values of Speed are graphically depicted in Figure-2.

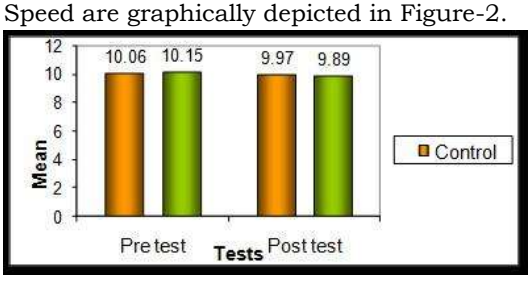

Figure-2. Comparison of Means among the Pre and Post-Tests of Control and Experimental Groups in Speed

Discussion on Findings:

The result of the statistical analysis further revealed that there was significant improvement among the subjects of Experimental group in strength due to 6 months of swimming training. It may be attributed to the fact that swimming is such an activity through which all the muscles are given exercises specifically shoulder, chest, back, trunk, abdominal and leg muscles.

Conclusions:

Within the limitations of the present study and on the basis of the findings, the following conclusions are drawn-

1) Significant improvement has been shown by the experimental group in Strength due to training programme, whereas no significant improvement has been shown in Control group.

2) No significant difference is found is speed with the subject of Experimental groups due to training programme, whereas on significant improvement is shown in control group.

References:

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