

Research Paper :

## The effect of movement education on physical and mental fitness of school children

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### ABSTRACT

The purpose of the study was to investigate the effect of movement education on physical and mental fitness of school children. Subjects for the study were 15 male students studying in a class 4<sup>th</sup> of H.P. University, Model School, Shimla. The physical fitness was measured by the selected tests of muscular strength, muscular endurance and cardio-vascular endurance and the mental fitness asses by general awareness test. After 15 days of movement education training programme, the post test of the same physical and mental fitness were conducted. The gathered data were analyzed by using 't' test. The findings of the study indicated that the movement education programme seems to be appropriate for the development of mental and physical fitness of school children.

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**F**it people, fit nation is a slogan which emphasizes that the fit citizens are nation's best assets and weak one's are its liabilities. It is the responsibility of every government to promote physical and mental fitness of its citizens because it is the basic requirement to do the daily tasks efficiently (Clarke *et al.*, 1987). Children's physical and mental fitness is of interest to educate us as it improves health and prevents diseases. Movement education is one of the new concepts in the present scenario because it explores the technique to develop the basic skills, self and body involvement in the learning experience. This concept already exists in most of the developed countries.

The purpose of the study was to investigate the effect of movement education on physical and mental fitness of school children.

### METHODOLOGY

The subjects were 15 male students studying in a class 4<sup>th</sup> H.P. University, Model School, Shimla. The school principal was requested through a common circular to render their help to the investigator. The requirement of the research study was explained to the school principal in detail besides explaining to all the subjects in the presence of the school physical education teacher. The physical education teacher exerted the subjects to co-operate in the study even though they might have to work

hard to their utmost limits of capacity in the interest of this study and enhancing their own performance. For selecting the subjects the name of all the subjects were taken from the records of their respective schools and the 15 subjects were selected randomly from the list. All the subjects voluntarily agreed to co-operate in the testing procedure explained to them. They responded favourably and extended all possible co-operations for conducting of tests.

On the first day of the test, all the subjects were assembled and each test item was demonstrated and its requirements and purpose was explained. The subjects were given sufficient time for warming up before conducting of the pre test. For physical fitness the four test items: Pull-ups (AAHPERD, 1976), Sit-ups Bent Knee (Johnson, 1967), 6-minute run/walk test (Custer and Chaloupka, 1977), 50 -Yard dash (AAHPERD, 1976) were conducted. The mental fitness of the students was evaluated by giving them a test in which general and simple question of different areas were asked. This area included Math's, Computer, Transportation, Communication and knowledge about surroundings. The students were evaluated out of 50.

### Criterion measures:

The physical and mental fitness tests were conducted

for the present study and the criterion measures followed for the collection of the data of each test items have been presented in Table 1.

Sr. No.	Test items	Actual measuring unit of the performance
1.	Pull-ups	Maximum number
2.	Sit-ups bent knee	Maximum number
3.	6 k Minutes Run/Walk test	Maximum distance covered in 5 minutes, in meters
4.	50 -Yard dash	Minimum time required in seconds
5.	Mental fitness test	Max. marks scored

For pre-test, all the tests items were conducted in a pre-set order and after the pre test, the experimental treatment, the training of movement education programme was conducted for 15 days. In the movement education training programme, the target hitting, front roll, back roll and reflex action activities/tests were included. After the completion 15 days training programme, the post test for physical and mental fitness was conducted. To find out the significance difference between pre and post test the 't' test was applied.

## OBSERVATIONS AND DISCUSSION

The results have been obtained with the help of "Micro Soft Excel Software Package" Version 2000 in IBM Pact Computer at Himachal University, Shimla. Microsoft Excel Software Package provides all the essentials of statistical calculation from the basic to advanced level.

For the unification of the tests scores of physical fitness, the Z scale has been used. With the help of Z scale the scores of adopted 4 physical fitness tests were converted into standard score and then added the standard scores of all four tests for every student to get the composite scores. On the basis of composite scores of physical fitness, the significance difference of mean of pre and post test were determined by applying 't' test. The details of Mean, Standard deviation and t- ratio for the physical fitness test are given below in Table 2.

It is evident from Table 2 that the mean of pre test

Physical fitness	Number	Mean	S.D.	t- ratio	Level of significance
Pre-test	15	199.71	23.46	.04	.05
Post-test	15	200.04	24.09		

$$t_{.05} (N_1+N_2 - 2) = t_{.05} (28) = 2.04$$

scores of physical fitness was 199.71 and post test was 200.04 and the standard deviations of pre and post test were 23.46 and 24.09, respectively. The calculated 't' value was .04 which is less than the tabulated 't' value required to be significant as 2.04.

In the succession for the second purpose, the mean, Standard deviation and 't' - ratio for the mental fitness test are given in Table 3.

Mental fitness	Number	Mean	S.D.	t- ratio	Level of significance
Pre-test	15	38.90	4.81	.36	.05
Post-test	15	39.50	3.93		

$$t_{.05} (N_1+N_2 - 2) = t_{.05} (28) = 2.04$$

It has been observed from Table 3 that the mean and standard deviation of mental fitness in a pre-test were 38.90 and 4.81, respectively and same in the post test were 39.50 and 3.93, respectively. The 't' ratio obtained for mental fitness was .36 which was found to be insignificant as the required value of 't' ratio was 2.04 at .05 level of confidence.

The finding of the study indicates that the movement education programme is insignificant for physical and mental fitness of school children because their calculated 't' values were smaller than tabulated 't' at .05 level of significance. But as far as the means of pre and post test are concern with respect to physical and mental fitness, the post test means were greater than pre-test means in both the cases.

Hence, the movement education programme is better for the physical and mental fitness of school children.

## Conclusion:

Based on the findings and within the limitations of this study, the following conclusions were drawn:

- The movement education programme may help the children physically as well as mentally when it is of longer duration.
- The movement education programme carries some techniques to develop the basic skills, self and body involvement in the learning experience.

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