Effect of Lezium training programme on physical fitness of boys

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Abstract

Lezium, which has a physical and cultural background since our ancient times, was also restructured to suit the modern need and in turn it became a part of physical activities in physical education. Lezium, being a traditional Indian activity, has not so far been considered on scientific lines. Due to lack of scientific investigation less attention has been given to this activity. To revive this activity in the light high values, several scientific research activities are the need of the day. In a first attempt, the researchers undertaken the present study entitled, “Effect of Six Weeks Lezium Training Programme on Physical Fitness of Boys”. The objectives of this study was, to establish the utility of Lezium training as one of the physical educational activities in school curriculum. Related measure design with one control group and one experimental group was used in the present study. 60 students of age 11 to 13 years of Sahakar Nagar Municipal School Wadala, Mumbai 31; were volunteered as subjects and they were randomly divided equally in to two groups. AAHPER Youth Fitness Test was administered in the beginning on both the groups to collect the pre-post test data. The test is intended to measure the ability of the individuals to perform fundamental physical skills such as pull ups, bent knee sit ups, shuttle run, standing long jump, 50 yard dash and 1.5 mile run, which involve the basic elements of strength, endurance, agility, power, speed and cardiovascular endurance respectively. The findings of the study were, Experimental group showed significant superiority over the control group in Pull up test (CD=0.45, \( p<0.05 \)), Experimental group showed significant superiority over the control group in Sit up test (CD=5.90, \( p<0.05 \)), Although the experimental group did not show significant improvement within group comparison, however, it maintained its superiority over the control group in Standing Broad Jump test (CD=0.40, \( p<0.05 \)), Experimental group could not show significant superiority over the control group in 50 M Run test, Experimental group could show significant superiority over the control group in 600 M Run test (CD=2.10, \( p<0.01 \)), Experimental group could show significant superiority over the control group in Shuttle Run test (CD=3.86, \( p<0.01 \)) & Experimental group could show significant superiority over the control group in 1.5 Mile Run test (CD=2.08, \( p<0.01 \)). Finally concluded that, A proper schedule of Lezium Exercises can effectively improve physical fitness level within a very short period of 6 weeks.

Keywords: Physical exercise, Traditional activity, Fitness ability & School students

1. Introduction

Out of many rhythmic activities, Lezium is one of the most popular traditional activity in Maharashtra. Though at present different systems are followed in different parts of the province, it is one of old and most traditional indigenous activities. Even till-to-day, it is generally played during social and religious festivals by the village folk in Maharashtra. Historical evidences revealed that Lezium got a place as a recreative activity among the solders in ancient days. Generally people accept that Lezium has physiological, rhythmical, recreative and demonstrative values of a very high order. If properly performed, one gets a lot of exercise in a very short-time. Experiencing such psycho-physiological benefits of Lezium, it has been introduced in the school curriculum in India and is gratifying to note that boys and girls have accepted it with a great zeal.

The above statements help to assume that as an indigenous activity in school curriculum, Lezium exercises have psycho-physiological values and may lead to maintain better health and fitness for school boys. The present investigation is an endeavour to prove the efficacy of Lezium exercises for health and fitness. To revive this activity in the light high values, several scientific research activities are the need of the day. In a first attempt, the researcher undertaken the present study entitled, “Effect of Six Weeks Lezium Training Programme on Physical Fitness of Boys”. 
The objectives of the present study included were:
To measure over all physical fitness level of the school boys of age 11 to 13 years; To render regular training program in Lezium exercises to the selected experimental subjects; To compare the scores of physical fitness between experimental and controlled subjects; To evaluate the efficacy of Lezium practice on physical fitness ability as assessed by selected physical fitness test. To establish the utility of Lezium training as one of the physical educational activities in school curriculum.

The hypotheses sought to be tested were:
H: The practice of Lezium exercises would help to improve the strength, agility, and endurance of the children of age 11 to 13 years.
OH: The practice of selected Lezium exercises would not improve all the variables of physical fitness as tested by the items of AAHPER Youth Fitness Test.

2. Review
Sincere efforts were made by the research scholar to locate literature related to this study. The relevant studies from various sources, which the research scholar has come across, are cited below:
Barton, conducted a study on the effect of aerobic dance programme on the self-concept and the development of physical fitness in Education Mentally Retarded (EMR) children. The results revealed a significant increase in physical fitness as indicated by the subject’s scores on the modified AAHPER Special Fitness Test and most positive self-concept as indicated by scores on Fisher’s Self Concept Picture Test. It was concluded that participation in a planned, systematic and progressive aerobic dance programme enhances the self-concept and physical fitness of EMR Children.

Jeanette and Marian, studied the effectiveness of archery, badminton, basketball, dance fundamentals, fencing, field hockey, folk dancing, tennis, volley ball and swimming on some variables of physical fitness. They concluded the dance fundamentals produce significant improvement in the scores of muscular endurance as measured by the number of squat thrusts performed while maintaining a set cadence and shoulder girdle strength whereas participation in folk dance produced significant improvement only in muscular endurance.

3. Method
A sample of 60 male students of age 11 to 13 years was selected from the students population of the Sahakar Nagar Municipal school Wadala, Mumbai- 31. From various standardized tests, AAHPER Youth Fitness test has been selected to measure the different components of physical fitness. The items in the AAHPER Youth Fitness Test, considered as dependent variables and included in this experiment, were as follows:

4. Data Analysis
After completion of data collection, the data were analysed by using 2 x 7 Factorial ANOVA. The results have been narrated and logically as well as scientifically interpreted with the help of presented Tables. The pre-test performance (Mean and SD) of control and experimental groups in Pull Up test were 1.81 (SD=0.32) and 1.85 (SD=0.36) respectively. This result indicates that the pre-test means of both the control and the experimental groups were more or less similar.

Table 3: Measures of Central Tendency and Dispersion of Experimental Group and Control Group in Fitness Variables

<table>
<thead>
<tr>
<th>Physical Fitness variables</th>
<th>Groups</th>
<th>Control group</th>
<th>Experimental group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-Test</td>
<td>Post-Test</td>
<td>Pre-Test</td>
</tr>
<tr>
<td>Pull Ups (pts.)</td>
<td>1.81 (0.32)</td>
<td>1.83 (0.39)</td>
<td>1.85 (0.36)</td>
</tr>
<tr>
<td>Sit Ups (Pts.)</td>
<td>7.30 (0.94)</td>
<td>7.62 (0.56)</td>
<td>8.56 (0.98)</td>
</tr>
<tr>
<td>Standing Broad Jump (M)</td>
<td>1.28 (0.36)</td>
<td>1.38 (0.34)</td>
<td>1.40 (0.40)</td>
</tr>
<tr>
<td>50 M Dash (Secs.)</td>
<td>9.52 (0.63)</td>
<td>10.23 (0.72)</td>
<td>8.45 (0.85)</td>
</tr>
<tr>
<td>600 M Run (Min./Sec.)</td>
<td>5.23 (0.60)</td>
<td>5.42 (0.32)</td>
<td>4.21 (0.25)</td>
</tr>
<tr>
<td>Shuttle Run (Secs.)</td>
<td>28.52 (4.05)</td>
<td>29.20 (5.29)</td>
<td>27.15 (3.62)</td>
</tr>
<tr>
<td>1.5 Mile Run (Min./Sec.)</td>
<td>26.45 (3.51)</td>
<td>25.59 (3.29)</td>
<td>26.39 (3.54)</td>
</tr>
</tbody>
</table>

5. Results
The statistical significance of Scheffe’s Post Hoc test revealed that-
Control group did not show significant improvement in Pull Up test (CD=0.02, p>0.05). The result of experimental group showed significant improvement (CD=0.43, p<0.05) in Pull Up test. Experimental group showed significant superiority over the control group in Pull up test (CD=0.45, p<0.05).
Control group did not show significant improvement in Sit Up test (CD=0.32, p>0.05). The result of experimental group showed significant improvement (CD=4.96, p<0.01) in Sit Up test. Experimental group showed significant superiority over the control group in Sit up test (CD=5.90, p<0.05).
Control group did not show significant improvement in Standing Broad Jump test (CD=0.02, p>0.05). The result of experimental group did not show significant improvement (CD=0.38, p>0.05) in Standing Broad Jump test. Although the experimental group did not show significant improvement within group comparison, however, it maintained its superiority over the control group in Standing Broad Jump test (CD=0.40, p<0.05).
Control group did not show significant improvement in 50 M Run test (CD=0.71, p>0.05). The result of experimental group also did not show significant improvement (CD=0.05, p>0.05) in 50 M Run test. Experimental group could not show significant superiority over the control group in 50 M Run test (CD=1.12, p>0.05).
Control group did not show significant improvement in 600 M Run test (CD=0.19, p>0.05). The result of experimental group showed significant improvement (CD=1.89, p<0.05) in 600 M Run test. Experimental group could show significant superiority over the control group in 600 M Run test (CD=2.10, p<0.01).
Control group did not show significant improvement in Shuttle Run test (CD=0.68, p>0.05). The result of experimental group showed significant improvement (CD=1.81, p<0.05) in Shuttle Run test. Experimental group could show significant superiority over the control group in Shuttle Run test (CD=3.86, p<0.01).
Control group did not show significant improvement in 1.5
Mile Run test (CD=0.86, p>0.05). The result of experimental group showed significant improvement (CD=2.88, p<0.01) in 1.5 Mile Run test. Experimental group could show significant superiority over the control group in 1.5 Mile Run test (CD=2.08, p<0.01).

6. Discussion

- This result helps to interpret that the selected Lezium exercises could be used effectively to improve strength and endurance of arm muscles as assessed by the Pull ups test.
- This result helps to interpret that the selected Lezium exercises could be used effectively to improve abdominal strength and endurance as assessed by the Sit up test.
- This result helps to interpret that although the experimental group showed significant superiority over the control group, the selected Lezium exercises could not improve leg muscle power or explosive strength of leg muscles as assessed by the Standing Broad Jump test.
- This result helps to interpret that the selected Lezium exercises could not improve speed ability of lower limbs as assessed by the 50 M Run test.
- This result helps to interpret that the selected Lezium exercises could improve the general endurance ability as assessed by the 600 M Run test.
- This result helps to interpret that the selected Lezium exercises could improve ability in agility as assessed by the Shuttle Run test.
- This result helps to interpret that the selected Lezium exercises could improve ability in cardiovascular endurance as assessed by the 1.5 Mile Run test.

The above results helps to test the formulated hypotheses. The results cited above indicate that the Lezium exercises selected in this study could help to improve the strength, agility and endurance of the subjects of age 11 to 13 years. Thus, the hypothesis-H formulated in this study was retained.

The results also revealed that the subjects participated in Lezium exercise programme could not even improve the variables viz., explosive power of leg muscles as assessed by standing broad jump and speed as assessed by 50 M dash. This in turn suggests that Lezium exercises included in this study were not effective to improve all the variables of physical fitness. Thus, the null hypothesis-OH formulated in this investigation was proved true and has been sustained.

7. Recommendations & Conclusion

This study recommends that -

- Lezium exercises can be recommended for improving level of physical fitness of school children.
- Present study, in general, may assist the physical education teachers to evaluate the status of physical fitness of their school childrens.

Within the limitations the present study warrants the following conclusions

- Lezium Exercises are useful for improving physical fitness levels of school boys.
- A proper schedule of Lezium Exercises can effectively improve physical fitness level within a very short period of 6 weeks.

8. References