ABSTRACT
The purpose of this study is to understand the effect of isometric exercise on explosive strength of blind school students. Isometric exercise is one of the important exercises in sports field because it is economic and need less space for doing. This exercise may suitable for every age and sex even old age people can do the exercise. This exercise may be done with or without equipment; this training is beneficial to blinds. Blind people are negligible in sports field to a great extend. In modern times authorities make so many sports activities designed for blinds. These activities may reduce the feeling of loneliness among blinds. I assure blind people will enjoy this training very much and they use this activities for enjoyment and leisure time. From the result of the studies the authorities make new policies for blind students.

Keywords: Isometric Exercise; Blind Students

INTRODUCTION
Day to day life needs graceful movements of the body segments in normal man and much more in visually impaired persons. The efficiency of human body depends up on many factors. Sight of eye is an important factor for everyone. Physical education is essential for blind students. Physical Education is important for the health and well being of people of all ages. It is enjoyable, builds self-confidence and improves ones health and fitness. Specific sports skills are developed in individual as well as team sports. Students experience a variety of lifetime and recreational activities. Students who are blind or visually impaired also need to experience physical activity. The visually impaired student with additional disabilities should experience a program designed to improve their fitness levels by participating in various games, activities and exercises. Some students may have developed poor circulation, limited lung capacity, poor muscle tone, poor posture, and a tendency to become overweight. A regular physical activity program will improve the kinesthetic sense and give the student confidence to move through space without instructions. It can also develop motor skills needed for daily living and mobility. Physical education is an integral part of the total education program and makes significant contributions toward the achievement of desirable education and health outcomes. The medium of physical education program may promote the physical growth and development of blind children and youth while contributing to their general health and well being.

Isometric Exercises
Isometric exercises, also known as static strength training, involve muscular actions in which the length of the muscle does not change and there is no visible movement at the joint. The term 'static contraction training' is sometimes used to describe isometrics. However, 'contraction' signifies a change in length (shortening) of the muscle belly, which does not occur during static strength training. The term 'static action' is preferred to static contraction. Isometric exercises can be used for general strength conditioning and for rehabilitation where strengthening the muscles without placing undue stress on the joint is warranted.
REVIEW OF RELATED LITERATURE

R H Haggard (2005 June) have conducted study Effects of exercise; diet and their combination on blood pressure. Epidemiological studies suggest an inverse relationship between physical activity or fitness and blood pressure. In a meta-analysis of 44 randomized controlled intervention trials, the weighted net change in conventional systolic/diastolic blood pressure in response to dynamic aerobic training averaged -3.4/-2.4 mmHg. The effect on blood pressure was more pronounced in hypertensive than in normotensives. This type of training also lowered the blood pressure measured during ambulatory monitoring and during exercise. However, exercise appears to be less effective than diet in lowering blood pressure, and adding exercise to diet does not seem to further reduce blood pressure.

Arthur E H (2007, June) did a research effect of heavy Marijuana Use in College blind Students. To assess whether frequent marijuana use is associated with residual neuropsychological effects. Two samples of college undergraduates: 65 heavy users, who had smoked marijuana a median of 29 days in the past 30 days and who also displayed cannabinoids in their urine, and 64 light users, who had smoked a median of 1 day in the last 30 days and who displayed no urinary cannabinoids. Subjects arrived at 2 PM on day 1 of their study visit, and then remained at our center overnight under supervision. Neuropsychological tests were administered to all subjects starting at 9 AM on day 2. Thus, all subjects were abstinent from marijuana and other drugs for a minimum of 19 hours before testing. Main Outcome Measures Subjects received a battery of standard neuropsychological tests to assess general intellectual functioning, abstraction ability, sustained attention, verbal fluency, and ability to learn and recall new verbal and visuospatial information. Heavy users displayed significantly greater impairment than light users on attention/executive functions, as evidenced particularly by greater perseverations on card sorting and reduced learning of word lists. These differences remained after controlling for potential confounding variables, such as estimated levels of premorbid cognitive functioning, and for use of alcohol and other substances in the two groups. Heavy marijuana use is associated with residual neuropsychological effects even after a day of supervised abstinence from the drug. However, the question remains open as to whether this impairment is due to a residue of drug in the brain, a withdrawal effect from the drug, or a frank neurotoxin effect of the drug.

Gary E (2008 December) done a research on Systolic Blood Pressure Tracking Over 25 to 30 Years and Cognitive Performance in Older Adults. Objective—To determine the extent to which individual changes in systolic blood pressure over a 30-year interval are associated with differential neuropsychological outcomes in old age. Methods—Seven hundred seventeen survivors from the Western Collaborative Group Study, a longitudinal study of cardiovascular risk factors now in its 38th year of follow-up, with blood pressures measured in middle age (45 years) and in old age (75 years) and neuropsychological tests administered at follow-up were included in this analysis. Participants were grouped according to 30-year change in systolic blood pressure (increased, decreased, or "normal"). Analyses focused on comparisons of neuropsychological performance of "high systolic blood pressure trackers" (i.e., those with persistent SBP 140 mm Hg throughout adult life) and of systolic blood pressure "decreases" with the performance of those whose systolic blood pressure was either stable or changed in an expected way over time. Results—Only 7.5% of participants had elevated systolic blood pressure in middle age, but 43.8% of participants had elevated systolic blood pressure in old age. After adjustment for age, education, depression, clinically defined stroke, and use of antihypertensive medications and after exclusion of individuals with impaired cognitive performance at follow-up, high systolic blood pressure trackers, 5.0% (n=36), performed consistently less well than the "normal" systolic blood pressure subgroups on a composite measure of verbal learning and memory. When compared with the "normal" systolic blood pressure subgroup, the systolic blood pressure decreases, 5.3% (n=38), performed less well on speeded performance. Conclusions—there is a relatively small group of people who maintain elevated systolic blood pressure throughout their adult lives. These persons are at increased risk for reduced verbal
learning and memory function. There is also a group of individuals who experience a decrease in systolic blood pressure and who are at risk for decreased psychomotor speed. Delineation of these 2 systolic blood pressure subgroups may lead to further clarification of the effects of systolic blood pressure on neurobehavioral function in older adults.

OBJECTIVES

1. To find out the effect of isometric exercises on leg explosive strength of blind school students.
2. To know the study helps to attract the blind students to physical activities.

HYPOTHESIS

Based on research finding it was hypothesized that isometric exercise will have a significant effect on among blind students.

METHODOLOGY

Sampling

The present study was confirmed to the blind students from the Louie brail memorial blind school kudayathoor, idukki. The sample of twenty boys and girls students(ten experiment and ten control group)

Training method used

The following training methods were used according to the purpose of study.

Leg Extension
Leg Flexion
Hip Extension
Heel Raise
Hip Abduction
Hip Adduction
Wide-legged Squat
Leg Hold
Straight Leg Hold
Hundred breath isometric squats
Seated Leg Extension
Lying Hamstring Squeeze
Bodyweight Squat

Administration of Isometric Exercise

The nature and importance of the study was explained to the subjects for their maximum participation. The researcher verbally explained the isometric exercise to the experimental groups. The experimental group was given six week isometric exercise. The isometric exercise three days in a week Monday, Wednesday and Friday was given.

Collection of Data

The pre test data on explosive strength were taken using vertical jump and standing broad jump. After the pre test subject were given six week training. The post test was taken for both groups using vertical jump and standing broad jump after the six week training.
Statistical Technical

To find out whether there was any significant difference after the training period among control and experimental groups, the dependent ‘t’ test was applied.

ANALYSIS OF DATA

The purpose of the study was to find out the effects of six weeks of isometric exercises on blind students of Louie Brail memorial blind school, Kudayathoor. The pre and post test data pertaining to respective physical variable were collected by employing standard test and instrument used on both the experimental and control group.

RESULTS

The detailed statistical analysis of the data collected is presented in the following tables and figures:

Table 1. Mean difference on vertical jump among pre and post test of control group

<table>
<thead>
<tr>
<th>Vertical jump</th>
<th>N</th>
<th>Mean</th>
<th>sd</th>
<th>df</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Test</td>
<td>10</td>
<td>15.700</td>
<td>4.4485</td>
<td>9</td>
<td>1.473</td>
</tr>
<tr>
<td>Post Test</td>
<td>10</td>
<td>14.400</td>
<td>3.6576</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

The above table indicates that there is no significant difference between the pre and post test of vertical jump in control group, since the calculated ‘t’ value of vertical jump, 1.473 is lesser than tabulated ‘t’ value of 1.833 at 0.05 level of significance with 9 degrees of freedom. The difference in means of vertical jump among pre and post is shown in fig I

![Fig 1. Pre and Post mean score of vertical jump](image)

Table 2. Mean difference on standing broad jump among pre and post test of control group

<table>
<thead>
<tr>
<th>Standing b jump</th>
<th>N</th>
<th>Mean</th>
<th>sd</th>
<th>df</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Test</td>
<td>10</td>
<td>39.419</td>
<td>43.0828</td>
<td>9</td>
<td>.779</td>
</tr>
<tr>
<td>Post Test</td>
<td>10</td>
<td>46.945</td>
<td>42.0892</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

The above table shows that there is no significant difference between pre and post test of standing broad jump of control group, since the calculated ‘t’ value of standing broad jump, .779 is lesser than tabulated’ value of 1.833 at 0.05 level of significance with 9 degrees of freedom. The difference in means of standing broad jump among pre and post is shown in fig II

![Fig 2. Pre and Post mean score of standing broad jump](image)
Table 3. Mean difference on vertical jump among pre and post test of experimental group

<table>
<thead>
<tr>
<th>Vertical jump</th>
<th>N</th>
<th>Mean</th>
<th>sd</th>
<th>df</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Test</td>
<td>10</td>
<td>23.2000</td>
<td>7.871</td>
<td>9</td>
<td>4.333*</td>
</tr>
<tr>
<td>Post Test</td>
<td>10</td>
<td>25.8000</td>
<td>8.243</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Note: * Significant at 0.05 level of confidence, the tabulate value is 1.833

The above table reveals that there is a significant difference between the pre and post test of vertical jump of experimental group, since the calculated ‘t’ value of vertical jump of experimental group, 4.333* is more than tabulated ‘t’ value of 1.833 at 0.05 level of significance with 9 degrees of freedom. The difference in means of vertical jump of experimental group among pre and post is shown in fig III

Fig 3. Pre and Post mean score of vertical jump experimental group

Table 4. Mean difference on standing broad jump among pre and post test of experimental group

<table>
<thead>
<tr>
<th>Standing b jump</th>
<th>N</th>
<th>Mean</th>
<th>sd</th>
<th>df</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Test</td>
<td>10</td>
<td>1.4360</td>
<td>6.740</td>
<td>9</td>
<td>1.990</td>
</tr>
<tr>
<td>Post Test</td>
<td>10</td>
<td>1.5450</td>
<td>6.730</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

The above table shows that there is a significant difference between the pre and post test of standing broad jump of experimental group, since the calculated ‘t’ value of standing broad jump 1.990, is less than tabulated ‘t’ value of 1.833 at 0.05 level of significance with 9 degrees of freedom. The difference in means of standing broad jump among pre and post is shown in fig IV

Fig 4. Pre and Post mean score of standing broad jump
DISCUSSION ON FINDINGS

From the statistical analysis it is evident that in the case of two aspects of standing broad jump and vertical jump in experimental group between pre and post test, there is a significant difference.

The result shows that there was no significant difference found in standing broad jump and vertical jump among controlled group.

This may due to the fact that, the proper training improves performance of blind students.

CONCLUSIONS

The results of the study permit the following conclusions;

- Six weeks of isometric exercises program increase the explosive strength
- The control group had seemed no change in explosive strength

REFERENCES

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