

# A Study on Sports Performance of Physical Education Trainee Females

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**Abstract:** *The researcher will attempt to throw light on the influence of organized Physical Education training programme, that prevailing in the training colleges of our country, on trainee females on perspectives of Sports Performance. The subjects of the present study were 18 female students aged 22 through 24 years. They were undergoing physical education training course (2014-15) in the Department of Physical Education Kalyani University, West Bengal. Physical fitness was considered as criteria to assess the influence of organized physical education programme on trainee-females. The total duration of the training course was ten months (July 1<sup>st</sup> to May 6<sup>th</sup> next year). The structure of the training programme was two and half hours morning activity session, two hours afternoon activity session and four hours theoretical session. Moreover there were a number of outdoor education session which includes camping, picnic, officiating, tour, social service etc. Sports Performance in general, of the trainee females was improved significantly following participation in the organized physical education training programme. The performance in calisthenics, marching and dumb-bell activities improved significantly. The magnitude of improvement was maximum in dumbbell (133.33%) followed by marching (36.07) and calisthenics (7.86%). Of the two rhythmical activities performance improvement in Lazum was in higher order than in Bratachri activity. Of the four individual activities magnitude of improvement was maximum in track and field events followed by gymnastics, badminton and Tenikoit. Of the four group activities magnitude of improvement was maximum in Netball followed by Kabaddi, Kho-Kho and Volleyball.*

**Keywords:** *Female, Physical Education Programme, Sports Skill*

## I. INTRODUCTION

Because of traditional cultural and social attitudes toward women in sports, some women have been limited in their opportunities and their outlook. Many girls have not reached their full potential in sports simply because they have been defeated psychologically before they even competed. The participation of women in competitive sports has been hampered by myths and superstitions. Today however, because we are becoming aware of the fact that women have a much greater capacity for physical activity and a much greater desire for sports programme, more women are developing their talents in this field. Women's role in society has changed

greatly in the last few decades. This change has been accompanied by a change in the public's attitude towards the women athlete and sports programme. Our sports programme for women must of course be geared to women's abilities, both as performers' coaches and leaders. Being a physical education professional the investigator wanted to elicit the potentiality of female endeavour through organized programme. She observed that lack of leadership quality, perhaps, forced them to accept male dominance in sports along with other walks of life. In Indian context' the researcher has no hesitation to say that the girls and the women who are admitting themselves in physical education training college for a professional carrier in physical education and sports are

definitely progressive in respect to their times . They would lead the profession in future at the same time they will teach the young talents.

The researcher thought it would be fit to study critically these trainee females by a wide range of variables to observe the training influence from a total humanistic approach. In next few pages to come, the researcher will attempt to throw light on the influence of organized physical education training programme, that prevailing in the training colleges of our country, on trainee females on perspectives of Sports Performance.

## OBJECTIVE OF THE RESEARCH WORK

To look into the skill development, if any, in selected sports and games through organized training programme of physical activities.

## II. METHODOLOGY

### THE SUBJECTS

The subjects of the present study were 18 female students aged 22 through 24 years. They were undergoing Bachelor physical education training course (2014-15) in the Department of Physical Education Kalyani University, West Bengal. Since the course is a residential one they were all boarders of the University hostel and the physical environmental condition and diet was almost identical. The admission to the physical education course was on the basis of performance in a fitness and skill tests suitable for the course. Most of the subjects, had past experience in sports and games at college level. Four students had the credit of representing their university in their respective specialized field of sports in the inter university level. They had the training age of about three to four years. Others had the experience of participation in sports and games. The subjects were actual habitants of seven districts of West Bengal state. They had similarities in many aspects and at the same time they were different in socioeconomic and cultural background. In overall review the group may be considered as a homogeneous group in respect of sports and physical activity background. There were no visual abnormalities among the subjects and they may be considered as possessing normal psychological state of mind and mental make up. Academic background was also identical.

### CRITERION MEASURED

Performance in selected activities was considered as criteria to assess the influence of organized physical education training programme on trainee-females.

### PHYSICAL ACTIVITIES

Selected physical activities in which performances were measured, are as follows;

- ✓ Formal Activities
- ✓ Rhythmical Activities

- ✓ Individual Activities
- ✓ Group Activities (Small Area Games)

## PROCEDURE FOR ADMINISTERING TESTS

The tests were conducted in the Human Performance Laboratory of the Department of Physical Education and the Playground of the same department of Kalyani University, Kalyani, West Bengal, India.

## III. DESIGN OF THE STUDY

### THE TRAINING PROGRAMME UNDERWENT BY THE SUBJECTS

In physical education training course a trainee have to participate in a variety of physical activities. The prime objective was to provide opportunity to the trainee students in a variety of skills and movement which were conducive to health & fitness as well as enjoyable. The trainee students following their successful completion of course were likely to be appointed in schools or other educational institutions. As a teacher they may be required to teach basic skills, fundamental movements, organized major and minor games, small area games, recreational games etc. Accordingly it was essential that the trainee students be required to have personal experience of participation as well as skill of teaching to these variety of activities. Accordingly the training schedule of a training institution was prepared to fulfil the desired objectives. The present subjects were the trainee students (2014-15) of the Dept. of Physical Education K.U, undergoing B.P.Ed physical education course. The total duration of the training course was ten months (July 1<sup>st</sup> to May 6th next year). The structure of the training programme was two and half hours morning activity session, two hours afternoon activity session and four hours theoretical session. Moreover there were a number of outdoor education session which includes camping, picnic, officiating, tour, social service etc.

The variety of programme activities in which the subjects had to have personal experience and the time spent in each programme during ten months session were enlisted below:

| Activity / Programme                  | Time spent during the session(hours) |
|---------------------------------------|--------------------------------------|
| 1) General warm up and conditioning – | 50 hrs                               |
| 2) Formal activities - /              | 105 hrs                              |
| a) Callisthenics-                     | (15hrs)                              |
| b) Dumbbell -                         | (10")                                |
| c) Marching -                         | (25 ")                               |
| d) Lazium -                           | (25")                                |
| e) Indian club -                      | (10")                                |
| f) Pole drill -                       | (10 ")                               |
| g) Wand drill -                       | (10 ")                               |
| 3) Weight training -                  | 20 hrs                               |
| 4) Swimming -                         | 20 hrs                               |
| 5) YOGA                               | 20 .hrs                              |
| 6) Combative                          | 15 hrs                               |
| 7) Small area games                   | 155 hrs                              |
| a) Kabaddi -                          | (25hrs.)                             |

|                       |          |
|-----------------------|----------|
| b) Kho-Kho-           | (25")    |
| c) Badminton -        | (30 ")   |
| d) Tenikoit -         | (20 ")   |
| e) Throwball -        | (20")    |
| f) Netball -          | (20 ")   |
| g) Handball -         | (15")    |
| 8) Major games -      | 105 hrs  |
| a) Volley ball-       | (30 hrs) |
| b) Basket ball -      | (30 hrs) |
| c) Hockey -           | (25 hrs) |
| d) Softball -         | (20 hrs) |
| 9) Gymnastics         | (40 hrs) |
| 10) Track & Field     | (60 hrs) |
| 11) Folk Dance        | (25 hrs) |
| 12) Intramural        | (60 hrs) |
| 13) Practice Teaching | (20 hrs) |
| Total                 | 695 hrs  |

Regarding pre and post test of selected physical activities (Formal, Rhythmic, Individual and Group) the procedure-adopted were identical and in each case tests were conducted for all the subjects in a fixed date and in identical conditions.

| Test/Activity                      | Pre test                     | Post test     |
|------------------------------------|------------------------------|---------------|
| 1. Selected physical activities    |                              |               |
| <b>1st Part</b>                    |                              |               |
| As per schedule of the Department  |                              |               |
| i) Formal                          | 1st and 3rd week of July '14 | September '15 |
| ii) Rhythmics                      | „                            | „             |
| iii) Few group activities          | „                            | „             |
| <b>2nd Part</b>                    |                              |               |
| i. Few individual activities       | 3rd week of September '14    | December '15  |
| ii. Few group activities           | 1st week of October '14      | December '15  |
| <b>3rd Part</b>                    |                              |               |
| i) Remaining individual activities | 3rd week of December '14     | March '15     |
| ii) Remaining group activities     | 1st week of January '14      | March '15     |

Table 1: The Schedule of the Test of the subjects of the present study

#### IV. PRESENTATION OF THE DATA RESULTS AND DISCUSSION

##### PERSONAL DATA

The age, height and weight of the subjects had been considered as personal data and their mean values, range and SD were presented in Table No. -2.

| Variables                   | Mean   | Range     | SD     |
|-----------------------------|--------|-----------|--------|
| Age(Year)                   | 23.11  | 21 - 25   | ± 1.28 |
| Height(cm)                  | 156.66 | 150 - 168 | ± 4.62 |
| Weight Pre test during July | 46.29  | 36 - 72   | ± 8.44 |

|   |       |         |        |
|---|-------|---------|--------|
| 14 (kg)                                       |       |         |        |
| <b>Weight Post test during March '15 (kg)</b> | 47.83 | 38 - 75 | ± 8.30 |

Table 2: Mean, range and SD of age, height and weight of the subjects

##### PERFORMANCE IN SELECTED ACTIVITIES

Performance in selected activities were rated in a ten point scale .Selected activities were subdivided into four groups. Discussion were made group wise.

| Activities    | Pre Test Mean ,SD | Post Test Mean ,SD | SED | Obtained 't' value |
|---------------|-------------------|--------------------|-----|--------------------|
| Callisthenics | 6.10 ± .45        | 6.58± .46          | .04 | 12*                |
| Marching      | 3.77 ± .80        | 5.13± .87          | .05 | 27.2*              |
| Dumbbell      | 3.06 ± .86        | 7.14 ± .80         | .20 | 20.4*              |

\*Significant at 0.05 Level

Table 3: Mean and SD of the pre and post test data of formal activity and their comparison

##### FORMAL ACTIVITY

Formal activities comprised of callisthenics, marching and dumbbell. The mean scores in these three activities at pre and post test respectively and 't' value comparing the mean scores were presented in Table No - 3. In these three activities the post test means were found significantly higher than the pre test mean scores. It means performance in these three activities improved following participation in the physical education training programme. The duration of participation in these activities were about six weeks. However the magnitude of improvement in these three activities were not equal. The maximum improvement noticed in dumbbell (133.33%) followed by marching (36.07%) and in callisthenics it was minimum (7.86%). Since the pre test score in Callisthenics was considerably high, the magnitude of improvement after six weeks was minimum. Further more learning in dumbbell activity was probably easier and due to very nature of the activity the magnitude of improvement was considerably high.

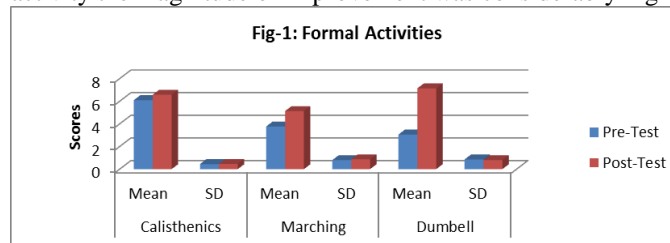


Figure 1

| Activities | Pre Test Mean ,SD | Post Test Mean SD | SED | Obtained 't' value |
|------------|-------------------|-------------------|-----|--------------------|
| Lazium     | 2.63 ± .54        | 6.06 ± .78        | .11 | 31.2*              |
| Bratachari | 5.39 ± 1.09       | 6.22 ± 1.31       | .17 | 4.88*              |

\*Significant at 0.05 Level

Table 4: Mean and SD of the pre and post test data of Rhythmical Activity rating scores and their comparison

## RHYTHMICAL ACTIVITY

In rhythmic group subjects participated in two different types of activities. These were LAZIUM (a classical Indian light apparatus drill in combination with In rhythmic group subjects participated in two different types of activities. These were LAZIUM (a classical Indian light apparatus drill in combination with rhythmic movement and BRATACHARI (a traditional Bengali physical culture, combined of vigorous movements to body parts, folkdance and traditional marshal art). The mean rating scores of pre and post test in these two activities were presented in Table No - 4. The pre test score of LAZIUM was reasonably lower, 2.63. This is because LAZIUM activity is not very popular in eastern part of the country (W.B) in comparison of the western part of the country (MAHARASTRA state). The other rhythmic activity BRATACHARI is very popular in WEST BENGAL and even in schools this programme is being conducted. Therefore the mean pre test score was some what better (5.39) in comparison to LAZIUM. The post test score in both the activities were improved and the magnitude of improvement was very high in LAZIUM (130.41%). When the pre and post test means were compared, the obtained 't' value showed that the post test mean was significantly higher than the pre test score of both LAZIUM and BRATACHARI activities. The pre test was conducted in 3rd week of July '14 and the post test was conducted in 3rd week of September '15. Within the eight weeks period by participation in various physical activities and conditioning programme general physical fitness had improved. This had perhaps improved the balance and co-ordination of the body. A good performance in rhythmic activity was related to have a high degree of balance and co-ordination. Therefore improvement in the performance of rhythmic activities may be attributed due to the improvement of general fitness, along with balance, co-ordination etc. Moreover learning in rhythmic activities for female students were enjoyable and have a natural inclination towards dancing movement which perhaps influenced in the improvement of performance in rhythmic activities.

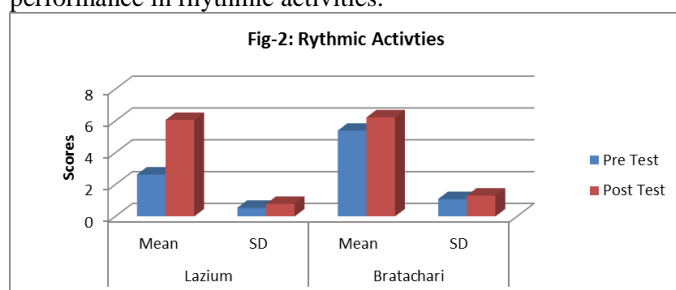


Figure 2

## INDIVIDUAL ACTIVITY

The individual activities in which the subjects had to undergo training during their course were gymnastics, track and field, tenikoit and badminton. The mean scores of performance during pre and post test and 't' score comparing the two sets of means were presented in table No-5.

| Activities      | Pre Test Mean, SD | Post Test Mean, SD | SED | Obtained 't' value |
|-----------------|-------------------|--------------------|-----|--------------------|
| Gymnastics      | 2.36 ± .48        | 5.44 ± .62         | .14 | 22*                |
| Track and Field | 3.39 ± .18        | 6.72 ± .80         | .19 | 17.52*             |
| Tenikoit        | 3.22 ± .97        | 5.97 ± .79         | .20 | 13.75*             |
| Badminton       | 2.83 ± .91        | 5.64 ± .76         | .11 | 25.55*             |

\* Significant at 0.05 level

Table 5: Mean and SD of the pre and post test data of the individual Activity and their comparison

## GYMNASTICS

The pre test of gymnastic was conducted during 3rd week of December '14 and the post test was conducted during 4th week of March '15. In gymnastics the subjects had to learn floor exercises, vaulting horse and balance beam. The performance rating in these three events were taken separately and the mean of three events were considered as total performance rating of an individual in gymnastics.

The pre test performance rating in gymnastics was relatively low (2.36). This because most of the subjects had no previous experience. However due to training for about three months they had to learn various events and by practice they improved their performance. In the post test the mean score observed was 5.44. The pre and post test means were compared accordingly and 't' value was found significant at .05 level. It simply means, by participation in various gymnastic events and probably through appropriate learning the overall performance had significantly improved. The subjects were introduced in physical education training programme in July 2014 and after six months when their general strength, Co-ordination, muscular endurance etc. have-improved then they were introduced to gymnastics programme. The improvement of general motor quality and confidence, motivation etc. perhaps influenced the gymnastics performance. Learning process in a new skill also had definitely influenced the higher rating at post test.

## TRACK & FIELD

In track and field events performance rating was made in similar fashion as indicated in gymnastics above. There were seven Track and Field events in which the subjects participated for about six and half months. There were two running events (short sprint & distance running), two jumping events (long, & high) and three throwing events (shot put, discuss & Javeline). The pre test was conducted in the month of September and cumulative performance rating, considering all events was 3.39. It appeared from observation that only a few subjects had their previous experience in track and field events. Most of them had no personal participation experience in these events.

However during the course of training and within a span of six and half months the subjects improved a lot and had learned skills in executing performance in track and field events. For this reason post test cumulative performance score was improved (mean post test score was 6.72). The comparative analysis of the two means (pre and post test) showed that post test score significantly higher than that of pre



test score. The computed 't' value was 17.52 and was found significant at .05 level. The improvement in post test score is obvious and this is due to learning phenomenon and other reasons which had already been mentioned in gymnastics performance analysis and are also equally applicable in track and field events.

### TENIKOIT

The mean pre test score was 3.22 with a variation of .97. The mean pre test score within the range of other individual sports in which the subjects were tested. Since the most of the subjects had no knowledge and personal experience in the game tenikoit, the score was relatively low. The pre test was conducted in 3rd week of Dec'14. The duration of participation in tenikoit period between pre & post test was utilized by the subjects for development of specific skills and technical, tactical strategy of the game. Since the post test, score (5.97) was higher than pre test, it may be concluded that training programme helped them in improving performance in tenikoit. The pre and post test means were compared by 't' test and found post test significantly higher than the pre test. This also justified the positive improvement in performance of the game.

### BADMINTON

The mean pre test score of Badminton (Table No-5) was also relatively low like other individual activity. The duration of participation in this game during their training course was almost ten weeks. The pre test was conducted in 3rd week of Dec '14 and post test in 2nd week of March '15. The mean post test score (5.64) was found significantly higher than that of pre test score. This was evident from the obtained 't' value (25.55) which was highly significant and revealed that the post test mean score was significantly higher. The training programme underwent by the subjects helped considerably in improving their performance in Badminton.

Analyzing the performance in four individual sports and games it may safely be concluded that the organized physical education training programme in which the subjects participated had a positive influence in improving performance capacity of the subjects. Moreover the teaching learning situation had a positive influence in this regard. The improvement of general fitness and motor capacity due to regular participation in well designed course programme also had a positive influence in improving skill performance in the said, individual activity.

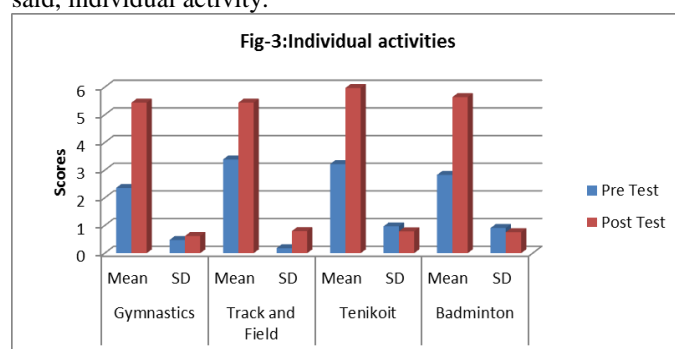


Figure 3

### GROUP ACTIVITY (SMALL AREA GAMES)

The group activities in which the performance tests conducted were four small area games namely KABADDI, KHO-KHO, NET-BALL, VOLLEYBALL. First two games were Indian National Games and were widely being played in this country including rural areas. In these games subjects had to learn a variety of skills specific to the game with necessary technical and tactical aspects. In the training programme of physical education course the subjects had to participate in variety sports and games but only four small area games were considered. Due to complications in learning, some very technical skill oriented games were excluded in this research programme. This is because the period allotted to these games were not sufficient to improve their performance. These games were Basketball, Hockey, Soccer, Cricket, Softball etc.

| Activities | Pre Test Mean, SD | Post Test Mean, SD | SED | Obtained 't' value |
|------------|-------------------|--------------------|-----|--------------------|
| Kabaddi    | 1.22 ± 1.55       | 4.44±1.15          | .12 | 26.83*             |
| Kho-kho    | 1.17 ± 1.28       | 3.86±1.33          | .14 | 19.21*             |
| Netball    | 2.72 ± .55        | 6.22 ± .65         | .11 | 31.82*             |
| Volleyball | 2.58 ± 1.00       | 5.78 ± .65         | .12 | 26.67*             |

Table 6: Mean and SD of the pre and post test data of the Group Activity and their comparison

### KABADDI

The mean pre test score of this game was very low. This is because most of the subjects had no personal experience in this game. The contact nature and strength involve in this game perhaps force many girls to avoid this game. The duration of participation in training programme of KABADDI game was about eight weeks. The post test score was 4.44, not very high but when compared with pre test score, the 't' value obtained was found highly significant. Since pre test score was very low, the post test score though not very high, found significantly higher. Comparing the performance rating in individual sport and other group activities namely netball and volley ball it appears that the post test score in KABADDI was comparatively low, less than five in a ten point scale. It simply means that the time allotted to this game was not sufficient to improve performance capacity up to an optimal level. The motivation of the subjects and other related factors might have influenced the teaching learning situation during the course.

### KHO KHO

In KHO KHO almost similar results was observed as in KABADDI. The efficiency in KHO-KHO game requires high level of fitness and skill of body movement.

It appeared from the Table No - 6 that the subjects had a poor capability in this game during pre test. The mean pre test score was 1.17. On enquiry the researcher understood that most of them had no personal experience of participation in this game. The duration of participation in this game was about eight weeks and the performance improvement in this game was not satisfactory. The post test mean score was 3.86 which was similar with pre test score of some individual sports. However when the mean pre and post test performance

scores of KHO-KHO were compared by 't' test, value obtained was found statistically significant. The relatively low post test score was found significantly higher because pre test score was very low. Conclusion in this regard may be same as in KABADDI, i.e. the time spent in teaching-learning situation perhaps was not sufficient to improve performance capacity up to certain level. Many other factors which were not considered in this study may have influenced to restrict performance capacity.

## NETBALL

The mean pre test score in Netball was 2.72 and the mean post test score was 6.22. The comparison of pre and post test score revealed a highly significant improvement. The obtained 't' value (31.82) was significant at .05 level. The skill involved in netball was rather simple and had some similarities with Basketball. Moreover before participation in netball the subjects had underwent the training programme in Basket ball for about ten weeks. The duration of participation in Net ball was eight weeks and the course work definitely helped them in improving performance capacity in netball.

## VOLLEYBALL

Volleyball is one of the important games in which organized physical education training programme was providing more emphasis. The duration of participation in volley ball training programme was about ten weeks, January '15 to March 15. The mean pre test score was 2.58 and mean post test score was 5.78. The difference between pre and post test was statistically significant which means post test performance rating was significantly higher. Moreover the training programme in volleyball helped them in improving their performance. It also be mentioned that inspite of emphasis given the post test performance was not very high, though significantly higher than pre test. The performance in Volley ball was related to specific fitness and skill perception etc. The subjects underwent organized physical education training programme had improved their fitness capacity particularly in leg explosive strength which might have influenced the performance in volleyball. The learning factor, interest, attitude, motivation etc. may had played their roles in improving their performance.

By participation in training programme designed in physical education professional course had helped the subjects in improving the performance in group activities also along with individual activities. It appeared that performance in post test i.e following training, in KABADDI & KHO-KHO was low in comparison to netball and volleyball in a ten point scale. The complexity in learning skill may be one of the factor but the duration of the programme participated in these games was comparatively less than volleyball and some other individual sport & games. The findings tend to indicate that duration of participation in the training of KABADDI and KHO-KHO were not sufficient to improve performance capacity at the same level with other games.

Considering the performance capacity in various physical activities participated by the trainee females in the organized physical education training course, it may safely be concluded

that performances in formal, individual, rhythmical and group activities were improved significantly.

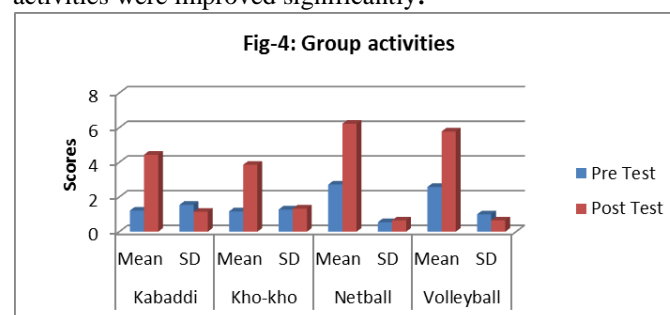


Figure 4

## V. CONCLUSION

The present study had its own limitations, however accepting these limitations following specific conclusion may be drawn were presented dimension wise.

### FORMAL

- ✓ Performance of the trainee females in formal activities improved significantly during post test in comparison to pre test.
- ✓ Following six weeks participation in the formal activity programme of the organized physical education training course, the performance in calisthenics, marching and dumb-bell activities improved significantly. The magnitude of improvement was maximum in dumbbell (133.33%) followed by marching (36.07) and calisthenics (7.86%).

### RHYTHMICAL

- ✓ Performance in both the rhythmical activities also improved significantly during post test than that of pre test.
- ✓ Of the two rhythmical activities performance improvement in LAZIUM was in higher order than in BRATACHARI activity.

### INDIVIDUAL

- ✓ Performance of the trainee females in all the four individual activities participated by them during training course were improved significantly at post test than that of pre test.
- ✓ Of the four individual activities magnitude of improvement was maximum in track and field events followed by gymnastics, badminton and tenikoit.

### GROUP

- ✓ Performance of the trainee females in all the four group activities (small area games) improved significantly during post test than that of pre test, following participation in training course.

- ✓ Of the four group activities magnitude of improvement was maximum in Netball followed by KABBADI, KHO-KHO and volleyball.

#### VI. RECOMMENDATIONS

- ✓ An interested researcher may find enough scope to study further on the followed aspects :
- ✓ The present investigation was delimited only to female subject, the same type of study may be made with male subjects also.
- ✓ The study may be conducted on a large samples.
- ✓ This study may be extended among the females of different training institution of West Bengal.

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