



Correlation Study of Psychomotor Profile and Sports Performance of University Volleyball, Basketball and Handball Women Players in Tamilnadu

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ABSTRACT

This research paper is an attempt to study the prominent Psycho motor and performance aspects of women handball, volleyball and basketball players from different universities in Tamilnadu with thirty subjects respectively. Selected psychomotor variables and performances in volleyball, basketball and handball were studied. The statistical analysis proved that all the players namely volleyball players, basketball players and handball players were equal in the psychomotor ability and showed difference in comparison with regard to performance in the respective games and Psycho motor profile.

Keywords: Psycho-Motor Profile, Sports performance variables, Correlation.

Introduction

Psychomotor is a combination of mind and motor system of the body and movement. Psychomotor plays an important role in the field of sports and games. Perception, Kinesthetic sense and some other factors are involved in this. Every action before execution needs some degree of mental alertness. This leads to the further movement of the motor organs to perform the specific movement. Psychomotor domain is concerned with movements and other closely related factors that influence it. The present investigation is a unique responsibility of the investigator and a long felt need to find out the relationship between psychomotor parameters and performance in volleyball, basketball and handball. This domain includes all movement behavior objectives that emphasize the ability to demonstrate motor skill requiring neuro muscular co-ordination, and movements. Evaluation of performance in games and sports can be through numerous ways. But functional variables are one of the important means for evaluation. This research paper is an attempt to study this prominent domain with Psycho motor and performance aspects of the above said games.

Design of the Study

The primary purpose of this study the psychomotor profile and performance in handball, volleyball and basketball players. To fulfill the purpose thirty university women handball players, volleyball players and basketball players from different universities in Tamilnadu were selected as subjects namely Madras University, Chennai, Bharathidasan University, Trichy, Bharathiyar University, Coimbatore, Madurai Kamaraj University, Madurai, Manonmanium Sundaranar University, Tirunelveli and Annamalai University students who represented their respective universities in the south zone inter-university competition and all India inter university competition were selected as subjects. Their age ranged between 18 and 25 years. The statistical techniques namely Pearson's product moment correlation, partial correlation, multiple correlation and one way analysis of variance (ANOVA) were employed. The following

psychomotor variables were selected besides the performances in volleyball, basketball and handball.

| S.NO. | Psychomotor Variables | Motor Elements | Test |
|-------|-----------------------------|----------------------------|-------------------------|
| 1 | Visvo Spatial Co-ordination | Limb Co-ordination | Standing Broad jump |
| 2 | Hand-Eye Co-ordination | Arm and Eye Co-ordination | Basketball passing Test |
| 3 | Visvo Motor Co-ordination | Arm Shoulder Co-ordination | Volleyball Volley Test |
| 4 | Leg-Eye Co-ordination | Bilateral Co-ordination | Soccer Volley test |
| 5 | Psychomotor Mobilization | Hand and Leg Co-ordination | Skipping Rope Test |

The total performance in handball, volleyball and basketball for each player was determined individually through subjective rating by the three experts in handball, volleyball and basketball respectively. Each category was scored with a maximum of ten points and a minimum of one point. The total score was the sum of the scores of all the categories. The total score was divided by ten to get each raters individual score from the rating scale. The average score of three experts was the measure of the total performance for each player. The psychomotor abilities were measured for handball, volleyball and basketball players, using standing broad jump test (visvo spatial), basketball passing test (hand - eye co-ordination), volleyball volley test (visvo motor co-ordination), soccer volley test (leg - eye co-ordination) and skipping rope jumping test (psychomotor mobilization). To find out the relationship between the psychomotor parameters and performance, Pearson's product moment correlation, partial correlation and multiple correlations were employed separately for handball, volleyball and basketball players as suggested by Cohen. When the 'F' ratio was significant scheffe's post hoc test was employed to find out the difference between the paired means.

Analysis, Results and Conclusion

The following tables illustrate the statistical results of the relationship between psychomotor parameters and the total performance in volleyball, basketball and Handball.

Table –I
Inter Correlation Matrix - Volley Ball Players

| variables | Total Performance | Visvo spatial Coordination | Hand Eye coordination | Visvo motor Coordination | Leg Eye coordination | Psychomotor Mobilisation |
|----------------------------|-------------------|----------------------------|-----------------------|--------------------------|----------------------|--------------------------|
| Total Performance | 1.00 | 0.236 | -0.200 | 0.473 | -0.217 | -0.208 |
| Visvo spatial Coordination | | 1.00 | -0.298 | 0.317 | 0.286 | 0.301 |
| Hand Eye Coordination | | | 1.00 | -0.112 | -0.072 | 0.0015 |
| Visvo Motor Coordination | | | | 1.00 | 0.281 | 0.119 |
| Leg Eye Coordination | | | | | 1.00 | 0.574 |
| Psychomotor Mobilisation | | | | | | 1.00 |

Significant at 0.05 level, Table value = 0.294, df = N – 2, = 45 – 2, 43. Table I shows the relationship between the psychomotor parameters and the total performance in volley ball

Table – II
Inter Correlation Matrix - Basket Ball Players

| Variables | Total Performance | Visvo spatial Coordination | Hand Eye coordination | Visvo motor Coordination | Leg Eye coordination | Psychomotor Mobilization |
|----------------------------|-------------------|----------------------------|-----------------------|--------------------------|----------------------|--------------------------|
| Total Performance | 1.00 | -0.397 | -0.613 | 0.093 | -0.230 | -0.075 |
| Visvo spatial Coordination | | 1.00 | 0.255 | -0.067 | 0.274 | 0.447 |
| Hand Eye Coordination | | | 1.00 | -0.114 | 0.125 | -0.175 |
| Visvo Motor Coordination | | | | 1.00 | -0.622 | 0.359 |
| Leg Eye Coordination | | | | | 1.00 | -0.313 |
| Psychomotor Mobilisation | | | | | | 1.00 |

Significant at 0.05 level, Table value = 0.294, df = N – 2, = 45 – 2, 43. Table II shows the relationship between the psychomotor parameters and the total performance in basket ball

Table – III
Inter Correlation Matrix - Hand Ball Performance

| Variables | Total Performance | Visvo spatial Coordination | Hand Eye coordination | Visvo motor Coordination | Leg Eye coordination | Psychomotor Mobilisation |
|----------------------------|-------------------|----------------------------|-----------------------|--------------------------|----------------------|--------------------------|
| Total Performance | 1.00 | 0.191 | 0.139 | 0.483 | 0.127 | -0.302 |
| Visvo spatial Coordination | | 1.00 | 0.120 | 0.110 | 0.0466 | -0.337 |
| Hand Eye Coordination | | | 1.00 | 0.712 | 0.425 | -0.439 |
| Visvo Motor Coordination | | | | 1.00 | 0.459 | -0.743 |
| Leg Eye Coordination | | | | | 1.00 | -0.534 |
| Psychomotor Mobilisation | | | | | | 1.00 |

Significant at 0.05 level, Table value = 0.294, df = N – 2, = 45 – 2 = 43. Table-III shows the relationship between the psychomotor parameters and the total performance in hand ball. From the statistical analysis it was apparent that the combined contribution of visvo spatial co-ordination, hand-eye co-ordination, visvo motor co-ordination, leg-eye co-ordination and psychomotor mobilization to the total performance of volleyball players, basketball players and handball players had good correlation of 0.6164, 0.6794 and 0.6284 respectively.

All the players namely volleyball players, basketball players and handball players are equal in the psychomotor ability and all the players are equal in the psychomotor ability. The statistical analysis observed that the volleyball players were found better than other players and it was found that the handball players are found better in the leg-eye co-ordination than other players. The volleyball players are found better in their psychomotor mobilization and it was observed that the total performance of all the players is found equal.

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