Chapter V

Summary

Conclusions and Recommendations
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SUMMARY

The purpose of the study was to determine the psychomotor distinct variables in relation to performance in basketball ability in the 58th Senior National Basketball Championship players. As a sub-problem the psychomotor distinct variables were compared among the participating state teams including services and railways players.

The 58th Senior National Basketball Championship was held in December 2007 at Puducherry. The players represented from 28 states including services and railways from all over India. Based on the performance of the players the first 20 ranked teams (N = 240) were selected on a purpose sampling and grouped into three groups. Group I comprised of seven teams (N = 84) they were the first best elite players. Group II (N = 84) were the second best elite players and Group III consisted of six teams (N = 72). The selected nine psychomotor distinct variables such as agility, balance, differentiation ability, explosive power, eye–hand coordination, kinesthetic perception, orientation ability, vacation ability and speed were independent variables. The basketball playing ability was termed as the dependent variable.

The study was formulated as a status cum prediction design, and the sub– problem as a status cum comparative design.
Criterion measure chosen for agility was shuttle run time taken in 4 x 10 mts. Shuttle run was recorded to the nearest 1/10th of a second. Balance was determined by administrating modified bass test of dynamic balance was used up to five second each mark and five point score was awarded for each successful landing on the mark. Differentiation ability was assessed by using backward medicine ball throw and score was measured in points. Explosive power was measured by using jump and reach test (Sargent jump) and score was recorded in centimeters. Eye – hand coordination the total number of correct trials of the subject with the help of ball transfer test and score was recorded in points. Kinesthetic perception was measured by kinesthetic obstacle test and score was recorded in points. Orientation ability was measured by numbered medicine ball test and score was recorded in seconds. Reaction ability was measured by using ball reaction exercise test and measured in centimeters. Speed time taken by an individual to run a distance of 30 mts. dash recorded to the nearest 1/10th of a second.

In order to determine the distinct variables on the basketball performance, the dependent variable was basketball performance in the 58th National Basketball Championship while the independent variables were the selected as psychomotor variables. The basketball performance was assessed with the help of scores attained by players given by the selected three experts during the 58th Senior National Basketball Championship. The score was awarded by the experts for maximum of 50 marks for each players during the championship matches. The playing ability was assessed under ten (10) categorical skills.
1. Passing 6. Offensive rebound
2. Dribbling 7. Defensive rebound
3. Shooting 8. Tactis

The test was administrated during the Senior National Basketball Championship held at Puducherry in December 2007.

The tester’s reliability and subject reliability of tests were established by test – retest method and the reliability of coefficients were found to be satisfactorily high.

For analysis of the data, the mean and standard deviation were calculated. To examine the significance of the psychomotor components among the groups ‘F’ ratio were calculated. The data on performance along with psychomotor variables was examined by Pearson’s product moment correlation separately. Multiple regression equation was developed in order to predict the basketball performance on the basis of selected psychomotor variables.

The level of significance was set at the point 0.05 level of confidence to test the obtained correlation by Pearson’s product moment correlation. 0.05 level was considered appropriate, because the research process adopted did not involve highly sophisticated equipments, demanding the application of more stringent level of significance. In using the product moment correlation a value of 0.138 was needed for
significance at the 0.05 level of confidence for two hundred and thirty eight degree of freedom.

Findings indicated that among the different elite groups of basketball in psychomotor distinct variables no significant differences was found in agility (0.389), balance (1.606), differentiation ability (1.675), kinesthetic perception (1.611), orientation ability (1.461), reaction ability (1.611) and speed (1.271), as the obtained values was less than the desired value of 2.41 at the 0.05 level confidence.

The score for each of the selected psychomotor distinct variables were correlated with the criterion variable that is the basketball performance ability.

Findings indicated that performance in basketball was significantly associated with agility (r=0.470) balance (r=0.936), differentiation ability (r=0.953), explosive power (r=0.968), eye-hand coordination (r=0.655), kinesthetic perception (r=0.744), orientation ability (r=0.897), reaction ability (r=0.972) and speed (r=0.625) as the obtained values were more than the desired value of 0.138 required for the coefficient of correlation to be significant at 0.05 level of confidence, with 238 degree of freedom. Therefore, it is evident that agility, balance, differentiation ability, explosive power, eye – hand coordination, kinesthetic perception, orientation ability, reaction ability and speed contribute to the performance of players in basketball.
The multiple regression analysis showed that significant linear relationship exists between basketball performance with reaction time differentiation ability, explosive power, eye-hand coordination, kinesthetic perception, orientation ability and balance ability respectively.

The resulting regression equation was: basketball performance = 20.0291 + 0.047 reaction time 0.109 (explosive ability) + 0.186 (differentiation ability) + 0.008 (kinesthetic perception) + 0.0340 (orientation ability) + 0.018 (balance ability) + 0.104 (eye – hand coordination).

CONCLUSIONS

On the basis of the analysis of the data as well as in the view of observations, along with the objectives and within the limitations of the present study the following conclusions were drawn:

1. No significant differences were found among the three groups of basketball player in selected psychomotor variables that is agility, balance, differentiation ability, explosive power, eye-hand coordination, kinesthetic perception, orientation ability, reaction ability and speed.

2. There was a significant correlation between the agility, balance, differentiation ability, explosive power, eye-hand coordination, kinesthetic perception, orientation ability, reaction ability and speed with performance.
3. The selected psychomotor variables were balance, differentiation ability, kinesthetic perception, orientation ability and reaction ability may be used as predicting factor to assess the basketball performance.

RECOMMENDATIONS

Within the limitations of the present study the following recommendation were made:

1. The result of this study can be used by the physical education teachers and coaches as an aid in screening and selecting the basketball players.

2. In the selection and training programmes for basketball players emphasis must be laid on agility balance, differentiation ability, explosive power, eye-hand coordination, kinesthetic perception, orientation ability, reaction ability and speed respectively.

3. It is recommended that the same study may be repeated by selecting subjects belonging to different age groups and levels of competitions other than those employed in the present study.

4. It is recommended that similar study with variations in the variables may be conducted on female state basketball players.

5. A longitudinal study may be conducted to see if high scores on selected psychomotor variables by a player will predict the basketball performance as a national or international player.

6. A similar study may be conducted utilising the other psychomotor variables in addition to the variables chosen in this study.

7. Study may be conducted other team games and sports with similar variables.