SUMMARY

Sports performance can be viewed as the expression of a number of components called – Performance factors, and in which there are inherent specific factors. These factors are so complex and exclusive as to be unwieldy and almost indefinable. Any performance might be predicted, formally or informally, through determining its components in terms of general or specific factors. Determining the factor that contributes to performance has been a long standing quest by both researches and practitioners. According to Bloomfield (1980) it is the prediction apparently through good accuracy whether or not a sportsman has a chance of becoming successful player of a particular level.

Basket ball in one of the sport which has become highly specialized and competitive activity requiring a good deal of Motor fitness and fairly a high level of perfection in the skills of the game. Keeping in view of the significant contribution of motor fitness and Motor skill variables in the playing ability of number of sports. An attempt was made to identify the motor fitness and motor skill variables to predict the playing ability of male and female basket ball players.

To achieve the objectives of the study the following procedure were adopted:

SAMPLE

To accomplish the study random sampling technique was used to select the subjects. The subjects were Sixty-Six male and Fifty female inter college level basketball players, who were studying in various affiliated colleges and different departments of Panjab University. Chandigarh and these subjects, had participated in at least Panjab University inter college Basket ball competition for
men and women which was held at Panjab University campus, Chandigarh in the month of October and November 2003.

**SELECTION OF THE VARIABLES**

**Dependent Variables**

Overall basketball playing ability.

**Independent Variables**

(A) Motor Fitness Variables

1. Speed
2. Coordinative ability.
3. Explosive leg power.
4. Shoulder strength
5. Endurance
   a) Cardiovascular Endurance
   b) Abdominal muscle endurance
6. Flexibility

(B) Motor skills variables

1) Shooting
2) Lay up shooting
3) Dribble control
4) Defensive movements
5) Passing.

**TOOLS USED FOR THE COLLECTION OF DATA**

**MOTOR FITNESS**

The following tests were applied to measure the related motor fitness variables.
Speed:  
   i) 50-yard dash

Coordinative ability:  
   i) SEMO Agility test
                 ii) Shuttle run

Explosive leg power:  
   i) Standing broad jump
                 ii) Sargent jump

Shoulder strength:  
   i) Basket ball throw for distance

Endurance:  
   i) 9/12 minute run and walk test for
       Cardiovascular endurance
                 ii) One minute sit-ups test for abdominal muscle
                     strength endurance

Flexibility:  
   i) Bridge – up test

Motor Skills

Shooting:  
   i) AAHPERD Speed spot shooting from 9 feet’s
       12feet’s and ‘15’ feet’s test items

Lay – up shooting:  
   i) Knox basket ball test item:

Dribble control:  
   i) AAHPERD: Dribble control test item.

Defensive movement:  
   i) AAHPERD: defensive movement test item.

Passing:  
   i) AAHPERD Passing test item.

Overall Basketball Playing Ability

The playing ability of the subjects was measured by the panels of three experts judges during inter college Basketball competition on Five-point Rating Scale, on the basis of their all round performance. The average of scores given by three judges was considered as score for their playing ability.
ANALYSIS OF DATA

The collected data was subjected to the application of multiple step-wise regression, in order to identify meaningful motor fitness and motor skill variables affecting basketball playing ability of male and female players.

CONCLUSIONS

Within the constraints and limitations of this study, the conclusions deduced are enumerated as follows:

Results of male basketball players in relation to motor fitness variables:

The motor fitness variables namely speed, coordinative ability, explosive leg power, shoulder strength, endurance, and flexibility were found significantly related to the playing ability of male basketball players.

However following motor fitness test variables were considered meaningful to draw out final regression equation.

1. 50-yard dash ($X_2$)
2. Shuttle run ($X_4$)
3. SEMO Agility ($X_5$)
4. Basketball throw for distance ($X_6$)
5. Standing broad jump ($X_7$)
6. Sit-ups ($X_9$)

The final regression equation came to be as under:

$$Y = 5.2498 - 0.5044 (X_2) - 0.1765 (X_4) - 0.1837 (X_5) + 0.0308 (X_6) + 0.0200 (X_7) + 0.0308 (X_9)$$

Results of male basketball players in relation to motor skill variables:

Shooting, control dribble, lay-up shooting, defensive movements and passing motor skill variables were found significantly related to the playing ability
of male basketball players. However following motor skill test variables were considered meaningful to draw out final regression equation:

1. Speed spot shooting from '12' feet's ($X_{12}$)
2. Speed spot shooting from '15' feet's ($X_{13}$)
3. Control dribble ($X_{14}$)
4. Passing ($X_{15}$)
5. Lay-up shooting ($X_{17}$)

The final regression equation came to be as under:

$$Y = 6.7080 + 0.0476 (X_{12}) + 0.0303 (X_{13}) - 0.2083 (X_{14}) + 1.3634 (X_{16}) - 0.0030 (X_{17})$$

Results of Male Basketball Players in Relation to combined contribution of Motor Fitness and Motor Skill Variables:

The following motor fitness and motor skill test variables were considered meaningful to draw out final regression equation.

1. 50-yard dash ($X_2$)
2. SEMO Agility ($X_5$)
3. Basketball throw for distance ($X_6$)
4. Standing broad jump ($X_7$)
5. Speed spot shooting from '12' feet's ($X_{12}$)
6. Control dribble ($X_{14}$)
7. Lay up shooting ($X_{17}$)

The final regression equation came to be as under:

$$Y = 8.6287 - 0.4677 (X_2) - 0.1870 (X_5) + 0.0207 (X_6) + 0.0171 (X_7) + 0.0390 (X_{12}) - 0.1067 (X_{14}) - 0.0020 (X_{17})$$
Results of Female Basketball Players in Relation to Motor Fitness Variables

The motor fitness variables namely speed, coordinative ability, explosive leg power, shoulder strength and endurance were found significantly related to the playing ability of female basketball players. However following motor fitness test variables were considered meaningful to draw out final regression equation.

1. 9/12 minute run and walk (X₃)
2. Basketball throw for distance (X₆)
3. Sargent Jump (X₈)

The final regression equation came to be as under:

\[ Y = 4.4645 + 0.1361 (X₃) + 0.0458 (X₆) + 0.1855 (X₈) \]

Results of Female Basketball players in Relation to Motor Skill Variables

Shooting, lay-up shooting, control dribble, defensive movements, and passing were found significantly related to the playing ability of female basketball players. However following motor skill test variables were considered meaningful to draw out final regression equation.

1. Control dribble (X₁₄)
2. Passing (X₁₆)

The final regression equation came to be as under:

\[ Y = 4.0178 − 0.1602 (X₁₄) + 4.0381 (X₁₆) \]

Results of female basketball players in relation to combined contribution of motor fitness and motor skill variables

The following motor fitness and motor skill test variables were considered meaningful to draw out final regression equation.

1. Sit ups (X₉)
2. Speed spot shooting from '9' feet's (X₁₁)
3. Speed spot shooting from '15' feet's (X₁₃)
4. Passing ($X_{16}$)

The final regression equation came to be as under:

\[ Y = -3.0138 + 0.0408 (X_9) + 0.0277 (X_{11}) + 0.0283 (X_{13}) + 3.1829 (X_{16}) \]

RECOMMENDATIONS

In the light of the findings of the present study, the following recommendations are made to the coaches, physical education teachers and sports scientists.

1. The results of the study might help the coaches to assess and investigate the potentials of the players to spot out the talent and in selection of players for university teams.

2. On the basis of results, coaches and trainers may develop their training program laying more emphasis on the related motor fitness and motor skill variables proved to be important for the performance.

3. It is recommended that the same study may be conducted by selecting subjects belonging to different age groups and levels of achievement.

4. A similar study may be conducted utilizing the functional components in addition to the components chosen in this study.

5. Keeping in view, the latest trends in fitness and skill training, similar study may be attempted in other sports discipline also.