

Chapter – V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to determine the effect of physical and biomechanical variables on the performance of pace bowling in cricket. The subjects were 30 students from different universities those who have participated in cricket championships at various levels were selected. The subjects were ranging from 17 – 25 years of age. Depending upon the level of participation, subjects were divided into three groups such as – beginners, the intermediate and the advanced group. The criterion measure was the scores of the subjects in pace bowling. Selected physical variables were standing height, arm length, leg length, grip strength, arm strength, explosive strength of leg, running speed, hip flexibility and shoulder flexibility, angle of wrist joint, shoulder joint, hip joint, knee joint and ankle joint and other kinematic variables were height of center of gravity, height of ball at release, duration of flight and velocity of the ball, were recorded at moment release during execution of pace bowling.

Video graphic techniques were used in order to register and analyze the performance of the subjects in pace bowling. The data for the other variables were obtained by using the standard procedures.

Pearson's Product Moment Correlation (r) were calculated for assessing the relationship of performance to each selected physical variables, biomechanical variables such as angular kinematic variables and other kinematic variables. One way analysis of variance was employed to check the variability of selected group. Least Significant Difference (LSD) test was used to find out the significant difference between the mans of various group.

Conclusions

Within the limitations of the study the following conclusions may be drawn:

1. In case of intermediate group, standing height and arm length, leg length had exhibited significant relationship with the performance of cricket players.
2. In case of advance group, arm length and leg length had exhibited significant relationship with performance of cricket players.
3. In case of advance group, speed and shoulder flexibility had exhibited significant relationship with the performance of cricket players.
4. In case of advance group, height of ball at release had exhibited significant relationship with the performance of cricket players.

5. In case of beginners, intermediate and advanced group of cricket players differ from each other on selected angular kinematic variables i.e. angle of wrist joint, shoulder joint, hip joint, knee joint and ankle joint at moment release.
6. In case of beginners, intermediate, and advanced group of cricket players differ from each other on selected kinematic variables i.e. height of center of gravity, height of ball at release, duration of flight and velocity of the ball.
7. Significant differences were also found in the performance of beginners, intermediate and advanced group in pace bowling.

Recommendations

1. The result of this study may be used by physical education, teachers and coaches as a model for pace bowling in cricket.
2. Similar studies may be concluded on the subjects of different age, sex and level of participation.
3. Study may be carried out in other games and sports on similar lines.
4. An extensive research work may be concluded utilizing bigger sample.
5. The variables other than those used in this study may also be included in further research projects.