Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary and Conclusions

The Physical Education and Sports which till recently were considered as "Low Priority Item" have started attracting the attention of sports promoters in a big way. The scientific support is still in its infancy stage. Our selection and training systems are questionable. In this work an attempt has been made to suggest a scientifically supported system.

In the last few years rapid progress and miraculous achievements in gymnastics is due to scientific approach, research findings and innovations of sophisticated facilities. Technical skills and specific fitness are receiving much importance to assist in identifying talent, planning, control and also evaluation of training methodology. The gymnast who aspires to excell requires a very high level of specific physical fitness and technical status. It is, therefore, necessary to make specific physical fitness programmes as integral part of the total training process.

In the present study an attempt has been made to design the specific fitness norms for three different age groups. While designing norms one element from each structural group alongwith some specific exercises were selected to assess the skill proficiency as well as level of specific
physical fitness. With the help of 16 variables two important aspects, namely proficiency in basic technical skills on all apparatus and also the level of physical abilities required to execute these elements have been tested. The purpose to test all subjects through 16 variables is manifold, e.g.

Hand-spring on Vaulting Horse

Hand-spring on Vaulting Horse belongs to the structural group of "Take-off Movements." It provides information on the level of sprinting ability and explosive strength in legs at the time of take-off and also explosive strength in arms during pushing-off movement.

Kip on Uneven Bars

Kip on Uneven Bars is an element from structural group of "Upstart movements." Physical abilities predominating in the performance of this element are strength and explosive strength in the arms and abdominal muscles.

Back Hip Circle on Uneven Bars and Back Roll to Handstand

It requires simultaneous opening of angles in Hips and Arms. Explosive strength in shoulders and abdominal muscles is the deciding factor in addition to mastery of the skill.
Uprise on Uneven Bars

Uprise on Uneven Bars is a swing movement. Successful completion of this movement depends mainly on pulling strength in Arms and Shoulder muscles.

Jump from Board to Roll Forward on Beam

It is an exercise from structural group "Rolling Movements." It will provide sufficient information as to the level of dynamic equilibrium.

Standing Scale on Beam, Hand-stand on Beam

These are exercises from Structural Group "Forms of Holding." It has helped in assessing the equilibrium ability.

Back-flip and Hand-spring on Floor

Back-flip and Hand-spring on floor measures agility and coordination ability.

Maximum Number of Kips on Uneven Bars and Jack Knife

These were used to assess explosive strength and strength endurance of abdominal muscles.

Leg Circles to Right and Left on Uneven Bars

These were used to evaluate strength-endurance in abdomen, back and lateral muscles. This movement belongs to structural group "Leg Circles Movements."
60 Metres Sprint

60 Metres Sprint was used to assess the level of sprinting ability.

Competition Performance

Competition performance reflected the level of skills performed in combination.

On the basis of results obtained, the following conclusions may be drawn:

1. It has been confirmed that performance level in 16 variables differs significantly from group to group.

2. The findings in this study support the statement and confirm that levels of specific fitness are different for all the three groups i.e. Sub-junior, Junior and Senior.

3. The data and results are also supportive of the view that classification criteria viz. Very-good, Good, Average, Poor and Very-poor will have to be separate for each group.

Recommendations

This is the first study of its own kind in India. The logical and theoretical support for the training in this study is sound. It will provide a modern and scientific base in the field of measurement and evaluation
in gymnastics. The coaches may use the norms to evaluate total performance level of their gymnasts. These norms can also be used for identification of talent. For the proper control and regulation of the improvement of specific fitness as well as technique, time to time measurement and assessment of specific motor abilities and technical aspect is a must.

The evaluation is important because it serves to determine the level of specific abilities, the effectiveness of different means and method of training, conditioning and talent identification. It is recommended that similar studies may be carried on large number of groups in India. It is also recommended that similar study may be conducted on men gymnasts at all the three levels.