Chapter – V

SUMMARY, CONCLUSION AND RECOMMENDATIONS
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5.1. Summary

Human beings have consistently tired to run faster, jump higher and exhibit greater strength, endurance and skill. We are naturally competitive and ambitious for excellence in athletic performances. As a result of practical experience, observation and scientific experimentation, old method of conditioning, through fascinating and rich in tradition, have been discarded and replaced by new methods based on insight and understanding. For centuries, this evaluation towards better method of conditioning was slow but in the recent years the dramatic changes that have taken place have brought about outstanding results in performance.

Perhaps one of the most exciting rewarding aspects of life is the experience of going beyond what were once thought to be limitations. We begin to realize that many of our beliefs that impose serious limitation (What can and cannot be done) on us are simply pre-conceived restrictions and attitudes taught to us by parents, teachers and others during formative years. The
field of sports and games is no exemption to this. None of our ancestors would have predicted or even dreamt of techniques applied, the equipments utilized. The performance achieved and the training methods followed by the present athlete are the result of systematic and continuous research.

The human body is an amazing creation. During test, countless events are occurring simultaneously in perfect coordination, allowing complex functions such as seeing, hearing, smelling, testing, breathing and thinking to continue without conscious effort. The transition from rest to exercise is accompanied by substantial changes in a number of bodily functions, allowing the body to adapt successfully to additional stress. As the body experiences repeated bouts of exercise, such as in a physical conditioning program, long term adaptations occur in the body allowing higher performance levels without undue fatigue as well as providing the body with a feeling and/or sense of well being.

Performance is the combined result of the coordinated exertion and integration of variety of functions. Genetic factors probably play a major role in a person's performance capacity. It appears that up to 70 percentage of an individual's maximal
force, power of capacity is a matter of genetic factors. The environment and geographic location also have a considerable role in the performance. Adding to this the performance of an individual depends largely upon the physiological, psychological and motor fitness qualities in which definite improvement can be achieved by appropriate training.

Training is not a recent discovery. In ancient times, people were trained systematically for military and Olympic endeavors. Today athletes prepare themselves for a goal through training. The major objective in training is to cause biological adaptations in order to improve performance in a specific task. To enhance physiological improvement effectively and to bring about a change, specific exercise and over load must be followed by exercising at a level above normal; a variety of training adaptations takes place in the body that makes it to function more efficiently. Numerous training procedures are in practice to improve each and every physiological psychological and motor fitness quality at various levels. These basics training procedures will serve better than utilized with modifications suited to the individual or a group dealt with. The best training
program is that which increases the desired quality at a higher rate without causing unwanted effects.

For higher performance, physical and motor fitness qualities should be developed harmoniously. Importance should be given based on their role in improving performance and preventing injury. Based on these functional associations between training and the enhancement of fitness and performance factors the investigator was impelled to identify the training impacts of yoga and physical exercises on the selected psycho-physiological and motor ability components among the men cricket players.

**OBJECTIVE OF THE STUDY**

The purpose of the study was to identify the training impacts of designed capsule of yoga and physical exercises on selected psycho-physiological and motor ability components among the cricket players

**HYPOTHESES**

The hypotheses formulated in the present study were as follows:
1) Both yoga and physical exercises would have a training impact on the psycho-physiological and motor ability components.

2) The experimental groups would be significant in the training outcomes more than the control group.

3) The experimental group (Yoga) would be a most significant and better group in the training outcomes compared to the physical exercises group and the control group.

SIGNIFICANCE OF THE STUDY

The Significance of the present study is as follows

1) The findings of the present study would help the players to identify their level of psycho-physiological and motor ability through the adapted training methods.

2) The study indicates the suitable training methods for various fitness and performance variables.

3) The findings of the viable source for physical education teachers and coaches to develop the scientific training program.

4) The study paves the way for integrating yoga and physical exercises.
5) The study would also highlight the positive contribution of yoga to personal health and performance in sports.

DELIMITATIONS

1) The study was confined to the cricket players at the collegiate level.

2) Only male subjects were taken to this study.

3) Sixty subjects were taken for this study; they were divided into three equal groups.

4) Two experimental groups and one control group was employed for the study.

5) The training period was limited to twelve weeks only.

6) Only selected psycho-physiological and motor ability components were selected for the study.

LIMITATIONS

1) Certain factors like food habits, lifestyle, daily routine, climatic condition, and environmental factors which may have an effect on the result of this study were not taken in to consideration while interpreting the results.

2) Apart form the training programme the involvement of the subjects in daily routines were not taken in to consideration.
3) No special motivational techniques were used to encourage the subjects to attain their maximum performance.

**METHODOLOGY**

To achieve the purpose of the present study, sixty men cricket players at the intercollegiate level in trichy district of Tamilnadu were selected at random as subjects and they were in the age group of 18 to 24.

The criterion variables used in the present study are as follows:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Psychological Variables</th>
<th>Tools</th>
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</thead>
<tbody>
<tr>
<td>01</td>
<td>State Anxiety</td>
<td>State and Trait anxiety inventory by spiel Berger and his associates</td>
</tr>
<tr>
<td>02</td>
<td>Trait Anxiety</td>
<td></td>
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<table>
<thead>
<tr>
<th>S. No.</th>
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</thead>
<tbody>
<tr>
<td>01</td>
<td>Systolic pressure</td>
<td>Sphygnomanometer, Stethoscope</td>
</tr>
<tr>
<td>02</td>
<td>Diastolic pressure</td>
<td>Sphygnomanometer, Stethoscope</td>
</tr>
<tr>
<td>03</td>
<td>Pulse rate</td>
<td>Stethoscope</td>
</tr>
<tr>
<td>04</td>
<td>Respiratory rate</td>
<td>Cotton, Stopwatch</td>
</tr>
<tr>
<td>05</td>
<td>Breath holding time</td>
<td>Stopwatch</td>
</tr>
</tbody>
</table>
Using the standardized tests and tools the numerical data were collected before the subjects underwent the respective treatment and were recorded as pretest scores. With the same procedures the post test scores were also collected after the training period. The pretest scores and the post test score were analyzed for significance using ANCOVA (Analysis of Co-Variance) Seheffee’s post-hoc test was used to find out better group.

5.2. FINDINGS

With the application of ANCOVA the initial means and final means were adjusted for significance to observe the training impacts of two training on the experimental groups and control group as a separate segment.

From the statistical analysis the following findings were observed on the psycho-physiological and motor ability components.
**State anxiety**

Initial means – ‘F’-ratio-.078 significance-.925

Final means – ‘F’-ratio-8.113 significance-.001

Adjusted means – ‘F’-ratio-10.0428 significance -.000

*Statistical significance to yoga*

**Trait anxiety**

Initial means – ‘F’-ratio-.184-significance -.833

Final means – ‘F’-ratio-8.628-significance -.001

Adjusted means – ‘F’-ratio-10.367-significance -.000

*Statistical significance to yoga*

**Systolic pressure**

Initial means – ‘F’-ratio-.152-significance -.859

Final – “ - ” - ” -4.297 - ” -.018

Adjusted “ - ” - ” -9.690 - ” -.000

*Statistical significance to yoga*

**Diastolic pressure**

Initial means – ‘F’- ratio-.020-significance-.980

Final ” - ‘F’- ” -3.803 - ” -.028

Adjusted ” - ‘F’- ” -4.368 - ” -.017

*Statistical significance to yoga*
### Pulserate

- **Initial means**: ‘F’- ratio - .045  - significance - .956
- **Final**:  - ‘F’ - ” - 4.129  - ” - .021
- **Adjusted**:  - ‘F’ - ” - 3.609  - ” - .032

_Statistical significance to yoga_

### Respiratory rate

- **Initial means**: ‘F’- ratio - 3.298  - Significance - .056
- **Final means**:  - ‘F’ - ratio - 75.881  - Significance - .000
- **Adjusted**:  - ‘F’ - ” - 138.462  - ” - .000

_Statistical significance to yoga_

### Breath holding time

- **Initial means**: ‘F’- ratio - .845  - Significance - .435
- **Final**:  - ‘F’ - ” - 20.159  - ” - .000
- **Adjusted**:  - ‘F’ - ” - 22.676  - ” - .000

_Statistical significance to yoga_

### Speed

- **Initial Means**: ‘F’ - ratio - 1.693  - Significance - .193
- **Final**:  - ‘F’ - ” - 15.005  - ” - .000
- **Adjusted**:  - ‘F’ - ” - 18.024  - ” - .000

_Statistical significance to Physical Exercise_
Agility

Initial means - 'F' - ratio - 1.670 - Significance -.197
Final " - 'F' - " - 4.034 - " - .023
Adjusted " - 'F' - " - 6.372 - " - .003

Statistical significance to Physical Exercise

Cardio respiratory endurance

Initial Means - 'F' - ratio - .337 - Significance -.716
Final " - 'F' - " - 9.212 - " - .000
Adjusted Means - 'F' - ratio - 90.502 - Significance -.000

Statistical significance to Physical exercise

5.3. CONCLUSIONS

Within the limitations of the present experimental study the following conclusions can be made.

1. The yoga group evidenced significant improvement over the physical exercises group and Control group in all the psycho-physiological variables such as state anxiety, trait anxiety, systolic pressure, Diastolic pressure, pulse rate, Respiratory rate, and Breath holding time.

2. The practice of physical exercise evidenced significant improvement over yogic practices group and control in all
the motor ability components such as speed, Agility and cardio respiratory endurance.

3. Physical exercise group shows training effects in all psycho-physiological and motor ability components when compared to the control group.

4. In the overall training effects in terms of improved number of variables and their magnitude of improvement through training, yoga group is found to be the better group when compared to other two groups.

5.4. IMPLICATIONS OF THE STUDY

1. The findings of this study highlight that yogic practice is a viable source to develop (as listed in the result) psycho-physiological variables. Moreover yogic practice is an energy conserving one unlike the energy exhaustion of physical exercises. Thus it is suggested that yoga could be better for achieving health and fitness.

2. Yoga is energy conserving in nature it could make a remarkable change in the metabolic process purifying the waste products and increasing the supply of glucose and oxygen to the tired muscles. Hence diet and physiological changes could be complemented with yoga.
3. Monotonous and stereotyped exercises included in the health and fitness training could be altered and revitalized with yogic practice for better outcome.

4. The relaxation, calmness of mind and body, better concentration and integration of mind and body obtained through yogic practices could be an ideal way for maintaining health and fitness.

5.5. RECOMMENDATIONS

1. In the present study yogic practice is compared with physical exercises. Likewise a comparison with specific training methods can be attempted.

2. A study of comparison between yoga and physical exercise can be made for skill related and health fitness on a wider scale.

3. Other than the selected parameters in the present study others can be included for further study.

4. A combination of yoga and physical exercises training schedule can be tested on studies of this sort.

5. A study of the same sort can be dealt with for prevention of injuries and rehabilitating injuries.