Chapter-V

SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

The primary study of the study is to determine and find out the effectiveness of physical fitness training programme on psycho-physiological efficiency on Volleyball players. Volleyball is a very popular game in India played at recreational to comparative by childhood to old age in both sexes. Volleyball was first developed in 1895 by a physical education instructor, William Morgan, in Massachusetts, USA. He gives in the name 'Minotonette' The game really took off as volleyball worldwide because it could be played so easily, all that was needed was a ball and a net. With no need for expensive equipment, it became popular all over the world, especially in countries where finance for sports facilities was limited. This fast team game is played in 1957 affiliated countries, by more than 70 million registered players. It is also a popular beach sport, since sand is an excellent surface to learn on.

Volleyball teams have six members, whose object is to ground the ball on the other side to the net. The game was introduced to the Olympics in Tokyo, in 1964. The host nation then had a history of success in volleyball, hence their enthusiasm to have it played in the Olympics.

Only one group was targeted experimental group, there was no control group. The 30 male volleyball players, participated in the study and their age ranged between 19-30 years. Training was given to the experimental groups. The data was collected through respondents in the form of different experimental tests. The demographic information about Gender, age, daily smoking, drug use, etc. was obtained before seeking responses. Pre and post-test was taken on 30 Volleyball Players from various colleges, voluntary to participate in the Physical fitness training programmes. Exclusion criteria were the presence of chronic medical conditions such as asthma, heart disease or any other condition that would put the subjects at risk when performing the experimental tests. The subjects were free of smoking, alcohol and
caffeine consumption, antioxidant supplementation and drugs during the programmes. They completed an informed consent document to participate in the study. The age, height, weight, resting heart rate, vital capacity, respiratory rate, and breath holding capacity of all subjects were measured in physical education department laboratory. All 30 acted as experimental group for Physical fitness training programmes with no control groups. A training program was planned for 12 weeks, 5 days a week and 90 minutes a day. Exercise that use large muscles groups that can be maintained continuously and are aerobic in nature. These exercises include walking, running, jogging, climbing, jumping row and cross country. There was training programmes in the academic schedule of physical education department. The exercise session should consist of the following procedure: Warm-up period will be approximately 10 min., this was combine callisthenic type stretching, exercise and progressive aerobic activity. However, cool down period was 5 to 10 min. The study depends mainly on primary source of data.

The data was collected before & after training to the students through questionnaires too. The instruction was given by the investigator to the students before filling these questionnaires. Mental health was measure through Balkrishna (3004) questionnaire and personality measure through EPI and self-concept questionnaire were measure through the questionnaires of Rajkumari. Resting heart rate of each subject was recorded before & after training. Before recording Resting heart rate the subject was instructed to remain lying on their bed to record the heart rate. Heart rate was recorded by the palpation at radial artery per minute. The score was express in number of heart rate per minute. The Respiratory rate of each subject was recorded before & after training. Before recording Respiratory rate the subject was instructed to remain lying on their bed in supine lying position. The tester then record rate of respiration in units per minute by carefully watching the movements of the subjects abdominal. Total number of respiratory movement per minute finally recorded. The breath holding capacity after inspiration was recorded before & after training. Before recording breath holding capacity after inspiration the students were instructed to stand erect with leg bended, after getting signal the student inhale air through his nostrils. Then the nose was locked or closed with nose clip. The total time of air holding capacity after inspiration of the students was measured in seconds. The breath holding capacity after expiration was recorded before & after training. Before
recording breath holding capacity after expiration the students were instructed to stand erect with leg bended, after getting signal the student exhale air through his nostrils. Then the nose was locked or closed with nose clip. The total time of air holding capacity after inspiration of the students was measured in seconds. The collected data was analyzed as a whole and fragments. The data was checked for accuracy and completeness and was coded and put-up into the SPSS Descriptive statistics for all studied variables, T-test, was considered statistically technique throughout the study. The level of significant was set-up at 0.05 level. It had been hypothesized that there would be insignificant effects of physical fitness training programme on RHR of volleyball players. With regards to RHR (Resting Heart Rate) of pre and post-test of Volleyball Players, there was significant effects of Physical fitness training programme was found in HR (t=p<.05) on Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on RHR of volleyball players was rejected. It had been hypothesized that there would be insignificant effects of physical fitness training programme on RR of volleyball players. With regards to RR of pre and post-test of Volleyball Players, there was significant effects of Physical fitness training programme was found in RR (t=p<.05) on Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on RR of volleyball players was rejected. It had been hypothesized that there would be insignificant effects of physical fitness training programme on BHC of volleyball players, significant effects of Physical fitness training programme was found in BHC (Inhale) (t=p<.05) on Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on BHC (inhale) of volleyball players was rejected. It had been hypothesized that there would be insignificant effects of physical fitness training programme on BHC (Exhale) of volleyball players, significant effects of Physical fitness training programme was found in BHC (Exhale) (t=p<.05) on Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on BHC (Exhale) of volleyball players was rejected. It had been hypothesized that there would be insignificant effects of physical fitness training programme on VC of volleyball players, significant effects of Physical fitness training programme was found in VC (t=p<.05) on Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on VC of volleyball players was
rejected. It had been hypothesized that there would be insignificant effects of physical fitness training programme on BP(Diastolic) of volleyball players. Insignificant effects of Physical fitness training programme was found in BP(Diastolic) on Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on BP(Diastolic) of volleyball players was accepted. It had been hypothesized that there would be insignificant effects of physical fitness training programme on BP(Systolic) of volleyball players, insignificant effects of Physical fitness training programme was found in BP(systolic) on Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on BP(Systolic) of volleyball players was accepted.It had been hypothesized that there would be insignificant effects of physical fitness training programme on BMI of volleyball players, significant effects of Physical fitness training programme was found in BMI on Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on BMI of volleyball players was rejected. It had been hypothesized that there would be insignificant effects of physical fitness training programme on neuroticism of volleyball players, significant effects of Physical fitness training programme was found in Neuroticism (t=p<.05) on Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on neuroticism of volleyball players was rejected. It had been hypothesized that there would be insignificant effects of physical fitness training programme on Extraversion of volleyball players, significant effects of Physical fitness training programme was found in Neuroticism (t=p<.05) on Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on Extraversion of volleyball players was rejected. It had been hypothesized that there would be insignificant effects of physical fitness training programme on Psychoticism of volleyball players, significant effects of Physical fitness training programme was found in Neuroticism on Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on Psychoticism of volleyball players was accepted. It had been hypothesized that there would be insignificant effects of physical fitness training programme on Lie-scale of volleyball players, significant effects of Physical fitness training programme was found in Neuroticism on Volleyball players. The hypothesis of the study regarding effects of physical fitness
training programme on lie-scale of volleyball players was accepted. It had been hypothesized that there would be insignificant effects of physical fitness training programme on physical sub-dimension of universal supreme health for all well-being of volleyball players with respect to Exercise, significant effects of physical fitness training programme was found in exercise aspect of universal supreme health for all physical well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on physical sub-dimension of universal supreme health for all well-being of volleyball players with respect to Exercise was rejected. It had been hypothesized that there would be insignificant effects of physical fitness training programme on physical sub-dimension of universal supreme health for all well-being of volleyball players with respect to Nutrition; no significant difference was found out in nutrition aspect of universal supreme health for all physical well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on physical sub-dimension of universal supreme health for all well-being of volleyball players with respect to Nutrition was accepted. It had been hypothesized that there would be insignificant effects of physical fitness training programme on physical sub-dimension of universal supreme health for all well-being of volleyball players with respect to hygiene and safety, significant effects of physical fitness training programme was found out in ($t=P < 0.05$) hygiene and safety aspect of universal supreme health for all physical well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on physical sub-dimension of universal supreme health for all well-being of volleyball players with respect to hygiene and safety was rejected. It had been hypothesized that there would be insignificant effects of physical fitness training programme on physical sub-dimension of universal supreme health for all well-being of volleyball players with respect to De-addiction; significant effects of physical fitness training programme was found out in ($t=P < 0.05$) De-addiction aspect of universal supreme health for all physical well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on physical sub-dimension of universal supreme health for all well-being of volleyball players with respect to De-addiction was rejected.
It had been hypothesized that there would be insignificant effects of physical fitness training programme on physical sub-dimension of universal supreme health for all well-being of volleyball players with respect to De-medication, significant effects of physical fitness training programme was found out in De-medication aspect of universal supreme health for all physical well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on physical sub-dimension of universal supreme health for all well-being of volleyball players with respect to De-Medication was accepted.

It had been hypothesized that there would be insignificant effects of physical fitness training programme on sub-dimension of universal supreme health for mental well-being of volleyball players with respect to happiness, significant effects of physical fitness training programme was found out in happiness aspect of universal supreme health for all physical well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on mental sub-dimension of universal supreme health for all well-being of volleyball players with respect to happiness was rejected.

It had been hypothesized that there would be insignificant effects of physical fitness training programme on sub-dimension of universal supreme health for mental well-being of volleyball players with respect to Kindness and empting, significant effects of physical fitness training programme was found out in (t=P < 0.05) to kindness and empting aspect of universal supreme health for all mental well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on mental sub-dimension of universal supreme health for all well-being of volleyball players with respect to Kindness and empting was rejected. It had been hypothesized that there would be insignificant effects of physical fitness training programme on sub-dimension of universal supreme health for mental well-being of volleyball players with respect to learning, no significant effects of physical fitness training programme was found out in learning aspect of universal supreme health for all mental well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on mental sub-dimension of universal supreme health for all well-being of volleyball players with respect to learning was accepted.
It had been hypothesized that there would be insignificant effects of physical fitness training programme on sub-dimension of universal supreme health for mental well-being of volleyball players with respect to self-esteem, significant effects of physical fitness training programme was found out in self-esteem aspect of universal supreme health for all mental well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on mental sub-dimension of universal supreme health for all well-being of volleyball players with respect to self-esteem was accepted. It had been hypothesized that there would be insignificant effects of physical fitness training programme on sub-dimension of universal supreme health for mental well-being of volleyball players with respect to ethics, significant effects of physical fitness training programme was found out in (t= P < 0.05) ethics aspect of universal supreme health for all mental well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on mental sub-dimension of universal supreme health for all well-being of volleyball players with respect to ethics was rejected.

It had been hypothesized that there would be insignificant effects of physical fitness training programme on sub-dimension of universal supreme health for spiritual well-being of volleyball players with respect to harmlessness, significant effects of physical fitness training programme was found out in harmlessness aspect of universal supreme health for all spiritual well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on spiritual sub-dimension of universal supreme health for all well-being of volleyball players with respect to harmlessness was rejected.

It had been hypothesized that there would be insignificant effects of physical fitness training programme on sub-dimension of universal supreme health for spiritual well-being of volleyball players with respect to awareness, significant difference was found out in (t= P < 0.05) awareness aspect of universal supreme health for all spiritual well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on spiritual sub-dimension of universal supreme health for all well-being of volleyball players with respect to awareness was rejected.
It had been hypothesized that there would be insignificant effects of physical fitness training programme on sub-dimension of universal supreme health for spiritual well-being of volleyball players with respect to lovingness, significant effects of physical fitness training programme was found out in lovingness aspect of universal supreme health for all spiritual well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on spiritual sub-dimension of universal supreme health for all well-being of volleyball players with respect to lovingness was not accepted.

It had been hypothesized that there would be insignificant effects of physical fitness training programme on physical sub-dimension of universal supreme health for spiritual well-being of volleyball players with respect to faith and devotion, significant effects of physical fitness training programme was found out in faith and devotion aspect of universal supreme health for all spiritual well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on spiritual sub-dimension of universal supreme health for all well-being of volleyball players with respect to faith and devotion was not accepted.

It had been hypothesized that there would be insignificant effects of physical fitness training programme on physical sub-dimension of universal supreme health for spiritual well-being of volleyball players with respect to transcendence and joy, insignificant effects of physical fitness training programme was found out in transcendence and joy aspect of universal supreme health for all spiritual well-being of Volleyball players. The hypothesis of the study regarding effects of physical fitness training programme on spiritual sub-dimension of universal supreme health for all well-being of volleyball players with respect to transcendence and joy was accepted.

It had been hypothesized that there would be insignificant effects of physical fitness training programme on Physical self-concept of volleyball players, no significant effects of physical fitness training programme was found out in Physical Self-concept of volleyball Players. The hypothesis of the study regarding effects of physical fitness training programme on Physical self-concept of volleyball players was accepted.
It had been hypothesized that there would be insignificant effects of physical fitness training programme on social self-concept of volleyball players, *no significant effects of physical fitness training programme was found out in social Self-concept of volleyball Players*. The hypothesis of the study regarding effects of physical fitness training programme on social self-concept of volleyball players was accepted.

It had been hypothesized that there would be insignificant effects of physical fitness training programme on temperamental self-concept of volleyball players; *no significant difference was found out in TemperamentalSelf-concept volleyball Players*. The hypothesis of the study regarding effects of physical fitness training programme on temperamental self-concept of volleyball players was accepted.

It had been hypothesized that there would be insignificant effects of physical fitness training programme on educational self-concept of volleyball players, *no significant effects of physical fitness training programme was found out in Educational Self-concept of volleyball Players*. The hypothesis of the study regarding effects of physical fitness training programme on educational self-concept of volleyball players was accepted.

It had been hypothesized that there would be insignificant effects of physical fitness training programme on moral self-concept of volleyball players, *no significant difference was found out in Moral Self-concept of Pre Test and Post Test of volleyball Players*. The hypothesis of the study regarding effects of physical fitness training programme on moral self-concept of volleyball players was accepted.

**Conclusions:**

After findings of the study the following conclusions were drawn by the research investigator:

1. There was significant effects of Physical fitness training programme was found in HR on Volleyball players.
2. There was significant effects of Physical fitness training programme was found in RR on Volleyball players.
3. Significant effects of Physical fitness training programme was found in BHC (Inhale) on Volleyball players.

4. Significant effects of Physical fitness training programme was found in BHC (Inhale) on Volleyball players.

5. Significant effects of Physical fitness training programme was found in VC on Volleyball players.

6. Insignificant effects of Physical fitness training programme was found in BP(Diastolic) on Volleyball players.

7. Insignificant effects of Physical fitness training programme was found in BP (systolic) on Volleyball players.

8. Significant effects of Physical fitness training programme was found in BMI on Volleyball players.

9. Significant effects of Physical fitness training programme was found in Extraversion on Volleyball players.

10. Significant effects of Physical fitness training programme was found in Psychoticism on Volleyball players.

11. Insignificant effects of Physical fitness training programme was found in Lie-Scale on Volleyball players.

12. Significant effects of physical fitness training programme was found in exercise aspect of universal supreme health for all physical well-being of Volleyball Players.

13. Significant difference was found out in nutrition aspect of universal supreme health for all physical well-being of Volleyball players.
15. Significant effects of physical fitness training programme was found out in hygiene and safety aspect of universal supreme health for all physical well-being of Volleyball players.

16. Significant effects of physical fitness training programme was found out in De-addiction aspect of universal supreme health for all physical well-being of Volleyball players.

17. Significant effects of physical fitness training programme was found out in de medication aspect of universal supreme health for all physical well-being of Volleyball players.

18. Significant effects of physical fitness training programme was found out in happiness aspect of universal supreme health for all physical well-being of Volleyball players.

19. Significant effects of physical fitness training programme was found out in kindness and emptying aspect of universal supreme health for all mental well-being of Volleyball players.

20. Significant effects of physical fitness training programme was found out in learning aspect of universal supreme health for all mental well-being of Volleyball players.

21. Significant effects of physical fitness training programme was found out in self-esteem aspect of universal supreme health for all mental well-being of Volleyball players.

22. Significant effects of physical fitness training programme found out in ethics aspect of universal supreme health for all mental well-being of Volleyball players.

23. Significant effects of physical fitness training programme was found out in harmlessness aspect of universal supreme health for all spiritual well-being of Volleyball players.

24. Significant difference was found out in awareness aspect of universal supreme health for all spiritual well-being of Volleyball players.
25. Significant effects of physical fitness training programme was found out in lovingness aspect of universal supreme health for all spiritual well-being of Volleyball players.

26. Significant effects of physical fitness training programme was found out in faith and devotion aspect of universal supreme health for all spiritual well-being of Volleyball players.

27. Insignificant effects of physical fitness training programme was found out in transcendence and joy aspect of universal supreme health for all spiritual well-being of Volleyball players.

28. No significant effects of physical fitness training programme was found out in Development of Physical Self-concept volleyball Players.

29. No significant effects of physical fitness training programme was found out in Development of social Self-concept of volleyball Players.

30. No significant difference was found out in Development of Temperamental Self-concept of volleyball Players.

31. No significant effects of physical fitness training programme was found out in Development of Educational Self-concept of volleyball Players.

32. No significant difference was found out in Development of Moral Self-concept of volleyball Players.
Recommendations:

After completion of research the investigator has thought of various related problems which may be selected for further research work. Findings of this study may serve as a guideline for research workers in the field of Physical education, sports, medical education specially and specially in volleyball. The findings of the present research would lead to the following recommendations:

1). This research may inform policies and practices designed to improve the awareness in volleyball players, coaches and physical education teachers regarding the effects of physical fitness training programme on sport performance,

2). Findings of this study will be implication for health professionals working with sport person.

3). This research may provide knowledge regarding different type of fitness in volleyball players.

4). This will also investigate the predication of psychological factor responsible for performance in volleyball.

6). Physical educator and Sports trainers should give the focus cum health-related strategies to reduce health related problems among volleyball players.

8). This study will provide guide line to players, Coaches, physicians physical educationist and sports trainers that how to improve the awareness regarding physical fitness programme.

9). Coach and Sports trainers should give the focus on physical fitness training programme for enhance the performance.

11). This research will provide expertise knowledge regarding understanding of physical fitness programme at deferent ways.

12). This research will be interest to clinicians, sports physicians and those interested in rehabilitation and injury prevention.
15). A similar study could be done in different games and sports like Hockey, Cricket, Basketball, Handball etc.

16). A similar study could be done with subjects belonging to different sex and age groups other than those employed in this study.

17). A similar study could be investigated among the volleyball of more countries.

18). A comparative and co relational study could be done among other games and sports.

19). The physician, Physiotherapist, Sports Trainers should consider the incidence of injuries and their ill effect on performance while imparting training to the volleyball before their competition. They should lay emphasis on their correct technique and physical fitness.

21). The Physical Educator should prepare the fitness related problem of the volleyball players with the help of Doctor and Physiotherapist to minimize the incidence of injuries to follow-up the progress made by them in their performance due to a little incidence of injuries during training as well as competition periods.

23). If the players are facing some psychological related problem during competition and training efforts should be made to alleviate their suffering and their emotional problems may be solved.

**Implication for further research**

This study can contribute to future work in the field of Physical education sports medicine to be of great use and importance to the sportsperson, physiotherapist, doctors and physical educationist as the same can be utilized in formulating the modalities in putting their knowledge acquired through devoted scientific investigations, analysis and interpretation of findings to use of all sports person. The
results of this study may also help to contribute the prevention and reduction of injuries among football players. This research may inform policies and practices designed to improve the awareness in volleyball players, coaches and physical educationist regarding the ill effects of injuries on sport performance. Results from this study could be useful for policymakers, coaches sportsperson and physical educators as they work to construct programmes and policies regarding maintaining a high sports performance in the country. Having a clearer understanding of how sportsperson perform themselves in a sports competition, within a national context. It may also contribute to help the physical Educators, volleyball expertise and coaches to know about the importance of correct technique thereby avoid the occurrence of injuries to volleyball players and ensuring the peak performance in the game. It may also provide insight to volleyball players and volleyball related experts will know about the benefit psychological and physiological characteristics for performance in predicting success of volleyball players. The results of the study would add further scholarly knowledge to the existing literature of sports medicine and sports sciences. Finally, this research may contribute to provide expertise guidance for a unique understanding of psychological and physiological characteristics of volleyball players particular and athletes in general.