CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

The purpose of the present study is to find out the effect of various physical fitness training programmes on health related physical fitness of high School children. Over the years, physical fitness has become the well built foundation of a structure that supports the many concrete blocks on it. This represents all the activities that make life worth living; intellectual life, spiritual life, love life and social life.

In the modern era considerable interest has been shown in both public and private sectors to develop physical efficiency and physical fitness, by making physical education programme compulsory in many educational and social service institutions. The state of Kerala is a rising sun in the present era, government of Kerala has introduced a new scheme in schools called “Total Physical Fitness Programme” (Sampurna Kayeka Shematha Padhati) under this programme the health related physical fitness of all school children up-to 10th standard will be taken. The AAHPERD test battery is used to find out the physical fitness level. Government is giving keen interest to promote the project and also motivating the schools and children by giving grades and awards on the basis of their physical fitness (physical fitness norms are given in appendix).

The concept of wellness has taken a mode of broader, more holistic, and more proactive view of health. The factors that define wellness include not only traditional criteria of freedom from diseases, but also a number of positive criteria, such as adaptability to cope up with everyday stress, feeling of accomplishment and personal growth, ability to express a positive and creative life style and a feeling of contentment and happiness. To be
well in a more holistic sense, a person needs to be active, good in spirits, and must be free from disease and pain, to an extent.

Fitness and wellness have been approached primarily as if they were personal and individual issues. More recently, however health has become a world-wide issue. In our country a major part of national wealth goes for health care. Physical fitness tends to vary from one individual to other. Apparently it varies in accordance with the nature of person, depending on whether he is sedentary or dynamic.

Regular exercise is a pre-requisite for physical fitness which leads to healthy life. Physical fitness can be classified into two – those pertaining to health and those pertaining to motor skill performance. Health related physical fitness is concerned with the development of those qualities that offer protection against disease that is associated with physical activity. Performance related physical fitness, on the other hand is associated with those qualities which are conducive to better performance in sports and other physical activities such as those require speed, strength, endurance, and coordinative abilities.

Physical education emphasises the importance of physical activities as they are directly related to growth and development. Physical fitness movement is another area of development, which is receiving more attention now-a-days among all segments of the society. People are striving to improve their fitness are engaged in activities like jogging, brisk walking, cycling, yoga, aerobics dancing, calisthenics etc. AAHPERD give thrust to health related physical fitness as it is very important for everyone throughout their life span. Cardio-vascular endurance, muscular strength endurance, body composition and flexibility are the components stressed for health related physical fitness.

Health related physical fitness is important for all individuals throughout their life span. Motor performance fitness emphasis the development of the qualities that improve sports performance. Participation in exercise regularly increases physical fitness. Individual with regular
exercise has an improved sense of general well being and has an enhanced self-image. Physical fitness is the best investment one can make for a long and healthy life. One of the prominent tests to measure the health related physical fitness is AAHPERD health related physical fitness. It refers to the aspects of physiological functioning which are believed to offer the individual some protection against degenerative diseases such as coronary heart diseases obesity and various musculoskeletal disorders.

This study will enable the students to be aware of their fitness, to compare the fitness with the students of different age groups to understand the present condition of physical education programmes in school curriculum, preference for physical education in professional area, and also various plans of the government for the upliftment of health and fitness among citizens.

In Kerala the government is indebted to apply the total physical fitness programme in schools. In this study the research scholar try to reveal which programme is more effective to health related physical fitness. Here yoga, aerobics and calisthenics training programmes are conducted and the result shows that the different programmes are effective to different health related physical fitness components. This can be used in schools and other professional fields to give training for health related as well as performance related physical fitness training programmes. This will help the physical education teachers and the coaches in identifying the talented youth, who could be trained further for elite level of competitions.

At the school level, the AAHPERD Health Related Physical Fitness Test battery was selected after taking into consideration the importance of measuring health related physical fitness of high school children in the age group of 13-16 years.

To facilitate this study, 240 high school students with 13-16 years of age were randomly selected as subjects from four high schools in Ernakulam and Kottayam district of Kerala state. The physiological variables chosen for this study were related to AAHPERD health related
physical fitness test battery. At present physical fitness is a matter of importance for daily life of all the human beings. Very few studies have been conducted in this field by giving emphasis to training programmes like yoga, aerobics, and calisthenics. Under these circumstances the investigator took up this study. The following components are tested to find out the effect of the different training programmes (yoga, aerobics, and calisthenics).

- Cardio-respiratory endurance (one mile run).
- Body composition (sum of triceps and sub-scapular skin folds).
- Abdominal and low back hamstring musculoskeletal function (modified timed sit-ups and sit and reach).

The random group design was employed for this study. Three groups were subjected to the experimental training and one group is the control group. Pre-test was conducted to all four groups and after training post–test was conducted to both experimental and control groups. During the period of training, first group is given training on selected yoga, second group is given training on Aerobics and the third group is given training on Calisthenics. All the groups except control group were given training for one hour in the evening for all the days, excluding Saturdays and Sundays, for a period of eight weeks.

To find out the effect of various physical fitness training programmes, AAHPERD health related physical fitness test battery and statistical tools: mean, standard deviation t-test, scheffe’s test and ANACOVA was used.

Conclusion

It was observed that a good and considerable improvement in all variables namely, cardio-respiratory function, body composition and abdominal and low back hamstring musculoskeletal function. All the three experimental groups have shown considerable improvement in all variables
and the rate of improvement will be varying. The following conclusions where drawn from the results of the study.

- Cardio respiratory endurance, body composition and abdominal and low back hamstring musculoskeletal function has significantly improved due to the influence of the yoga, aerobics and calisthenics training programs among school children.
- Yoga training programme has significantly improved the cardio respiratory endurance and abdominal and low back hamstring musculoskeletal function.
- The study reveals that yoga group is better than that of other three groups in one mile run (cardiorespiratory endurance).
- In one mile run between yoga group and aerobic group, aerobic group and callisthenics group were statistically not significant.
- Body composition has improved significantly in yoga group, aerobic group and calisthenics group, but the control group has no significant improvement on body composition.
- The result of the study shows that aerobic training group is better than that of other three groups in body composition (body fatness).
- In body composition between yoga group and aerobic group, yoga group and calisthenics group are not statistically significant.
- The study reveals that aerobic training is better than the other three groups for reducing the body mass.
- Abdominal and low back hamstring musculoskeletal function has significantly improved due to yoga training, aerobic training and calisthenics training.
- This study reveals that yoga training group is better than that of other three groups in flexibility of the low back and posterior thigh (sit and reach).
In sit and reach between yoga group and aerobic group is not statistically significant.

The result of the study shows that yoga training group is better than that of other three groups in abdominal strength endurance (sit-ups).

Yoga training is better than aerobics and calisthenics training for the improvement of abdominal and low back hamstring musculoskeletal function (sit-ups and sit and reach).

**Recommendations**

On the basis of the conclusions, the following recommendations are made:

- The present study shows that there is a significant improvement in cardio-respiratory endurance, body composition, flexibility and muscular strength endurance, due to the influence of yoga and aerobic training. Hence yoga and aerobic training can be included as one of the daily training programme.

- Further, it is recommended that the yoga and aerobic training programme can be included in the school curriculum.

- The department of physical education in schools and colleges can utilise the result of this study for the health related and performance related training programmes of their students and athletes.

- The physical education teachers, coaches, fitness experts can utilise the results of this study.

- The results can be studied along with the Kerala State government venture ‘Samboorna Kayika Kashamatha Padhathi’

- Further research can be conducted with various age groups, boys and girls in different states.

- Compulsory yoga education (training) could be imparted in schools and colleges.
• This study findings challenge policy makers, researchers, teachers and members of the general community for conducting a healthy discussion about actions needed for the upliftment of future fitness and physical activity habits of children in schools and colleges.

• Conduct studies to determine which health related fitness measures should have the highest priority when accessing the effectiveness of health-oriented exercise training programmes.

• Scientifically determine the most effective and efficient methods of evaluating pre-selected health-related fitness measures in representative samples of general population.

• Determine the most effective strategies for encouraging persons of all ages to engage in physical activity at the level necessary to achieve fitness.

• Determine what effects have been made physical education, in schools and colleges to continue exercise in later life? How can children be motivated to develop life-long exercise habits? Will the development of clubs or community centres improve the transitions from school sports to physical activity in later life?