Chapter V

SUMMARY CONCLUSION AND RECOMMENDATIONS

SUMMARY

Childhood and adolescence are crucial periods of life, since dramatic physiological and psychological changes take place at these ages. Likewise, lifestyle and healthy/unhealthy behaviors are established during these years, which may influence adult behavior and health status. Adolescents make important choices about their health and build up attitudes and health practices that affect their present safety and well-being as well as influence their threat for future serious chronic disease. It is a crucial period for healthy development in both physical and psychological terms. The nature of children’s leisure time pursuits has changed dramatically over the last few decades. The importance of physical activity for the physical, mental and social health of youth is definite, and therefore it is vitally important that efforts are made throughout the world to reinforce physical activity into our adolescents.

Physical fitness is an important marker of the health of children and adolescents and also a good predictor of health in later life. Physical fitness can be thought of as an integrated measure of most, if not all, the body functions involved in the performance of daily physical activity and/or physical exercise. It refers to a
set of inherent or achieved personal attributes that relate to the capacity to perform physical activity and/or exercise. The results and experience gained from several studies suggest that physical form is a key indicator of the health of children and adolescents.

Despite the known benefits of physical activity and fitness, physical activity levels tend to decrease with age. Reduced physical activity and/or physical fitness is associated with the etiology and prevalence of several non-communicable diseases, such as cardiovascular disease, diabetes, cancer, and their risk factors. Physical inactivity is recognized as a major public health concern, primarily because it is associated with the leading causes of death, illness and disability.

It is universally accepted that health education should become a part and parcel of any organized system of education. Health is essential for success and happiness in every aspect of life. Many habits are acquired during childhood and adolescence. As such, good health practices need to be inculcated from young. Improving adolescent health, safety, and well-being is a complex endeavor that requires the collaborative efforts of a wide array of societal sectors and institutions including, for example, parents and families, adolescents themselves, schools and postsecondary institutions, health care providers, community organizations and
agencies that serve youth, faith-based organizations, media, employers, and government agencies.

In India, right from the inception of the planning era, problems of balanced regional development had attracted the attention of economists, planners and politicians. The regional imbalances within a state are more important than those of inter-state. To reduce the regional imbalances Karnataka state Government has taken various steps like setting up Hyderabad Karnataka state Area Development Board, Bayaluseeme Development Board, Border Area Development Programme, Malanad Area Development Board and so on. Karnataka state is presently divided into 30 districts and 4 administrative divisions representing four distinct geographical locations within Karnataka state.

Regular monitoring of the level of physical activity and physical fitness of the entire population should be considered a public health priority. The challenges posed by the growing issue of physical inactivity and childhood obesity can be considered to be one of the greatest challenges to public health in the 21st century. An effort has been made by the researcher to identify regional differences on physical fitness of adolescents belonging to Karnataka state. These regional diversity need to be identified as regard to high school children. Since research interrogation in similar lines had not been conducted so far in Indian scenario, the
researcher has made an attempt to fill in the existing gap in the field of Physical Education through this research investigation. The purpose of the study was to examine the influence of regional diversity on physical fitness parameters and health awareness of students studying in the high schools of Karnataka state.

Students for the study were high school attending boys and girls studying in eighth and ninth standard within Karnataka state during the academic year 2012-13. Their age ranged between 14 to 16 years. All together one thousand six hundred students from various schools representing different divisions of Karnataka state viz Gulbarga, Belgaum, Mysore and Bangalore were selected for this study. Stratified random sampling technique was observed for the present investigation to give equal opportunity to both male and female students from all the divisions. Equal importance was also given to students from rural as well as urban background. All the students selected for this study were tested for physical fitness components by using AAHPERD Youth Fitness test battery. It included Pull-ups (boys), Flexed Arm Hang (girls), Shuttle Run, Flexed Leg Sit-ups, Standing Broad Jump, 50 yard dash and 600 yard run. A self structured questionnaire duly constructed and standardized was administered for inquiring health awareness of the students.
Prior to the administration of the test the investigator had a meeting with the students. The objectives and importance of intended tests was made clear to the students. Data regarding physical fitness was collected by the researcher with the help of an assistant. In order to assess health awareness, students were asked to assemble inside class room. Objective of the test was made clear and questionnaires distributed to the students. Enough time was provided to complete the questionnaire and any queries from the students were attended by the investigator timely.

In order to test the hypothesis of the study ‘analysis of variance’ (ANOVA) was used. Further, the results of the study were tested under appropriate post-hoc test. To illustrate the results tables, graphs and suitable charts are used. Norms were constructed with the resultant data with the help of percentiles. Statistical Package for Social Science was employed for the purpose of analyses. The results are discussed elaborately.
CONCLUSIONS

On the basis of the results and within the limitations of the study, following conclusions were drawn:

Boys Section:

1. There was significant difference in the ability to perform pull-ups among male high school students belonging to different geographical regions of Karnataka state. The boys of Mysore division were better in muscular strength when compared to Gulbarga division, Bangalore and Belgaum divisions equal in muscular strength but lower to that of Mysore division.

2. There was significant difference in the ability to perform flexed leg sit-ups among male high school students belonging to different geographical regions of Karnataka state. High school boys of Mysore division were good in abdominal strength to that of Bangalore division. Gulbarga and Belgaum divisions were almost equal in abdominal strength of boys. There was significant difference in abdominal strength among students of different regions.

3. There was significant difference in the ability to perform flexed shuttle run among male high school students belonging to different geographical regions of Karnataka state. High school boys from Mysore division boys were superior than Bangalore and Gulbarga divisions. There was significant difference in agility among the students of different regions of Karnataka state.
4. There was significant difference in the ability to perform *standing broad jump* among *male* high school students belonging to different geographical regions of Karnataka state. Mysore division boys excelled in explosive power when compared to rest of three divisions. There was significant difference in explosive power among the students of four divisions of study.

5. There was significant difference in the ability to perform *fifty yard dash* among *male* high school students belonging to different geographical regions of Karnataka state. High school boys from Mysore division were the best and those from Gulbarga were the least; there was significant difference in speed among the students of different regions.

6. There was significant difference in the ability to perform *six hundred yard run* among *male* high school students belonging to different geographical regions of Karnataka state. High school boys from Gulbarga division boys were good in cardio-respiratory endurance followed by Mysore, Belgaum and Bangalore division was least. There was significant difference in cardio-respiratory endurance among the students of different regions.

7. There was significant difference in *total physical fitness* among *male* high school students belonging to different geographical regions of Karnataka state. High school boys from Mysore were the highest, followed by Gulbarga, Belgaum and those from Bangalore were the lowest. There was significant difference in total physical fitness among the students of different regions, except Gulbarga and Bangalore wherein they were almost similar fitness levels.
8. There was significant difference in *health awareness* among *male* high school students belonging to different geographical regions of Karnataka state. High school boys from Mysore were the highest, followed by Bangalore, Gulbarga and those from Belgaum were the least. There was significant difference in health awareness knowledge among the students of different regions.

**Girls Section:**

1. There was significant difference in the ability to perform *flexed arm hang* among *female* high school students belonging to different geographical regions of Karnataka state. High school girls from Bangalore division were the premier when compared to Belgaum with least performance. There was significant difference muscular strength among the students of different divisions.

2. There was significant difference in the ability to perform *flexed leg sit-ups* among *female* high school students belonging to different geographical regions of Karnataka state. High school girls from Mysore division had upper edge over Belgaum division. Gulbarga and Bangalore divisions were the lowest. There was significant difference in abdominal strength among students of different regions.

3. There was significant difference in the ability to perform *shuttle run* among *female* high school students belonging to different geographical regions of Karnataka state. High school girls from Gulbarga division were superior when compared to Belgaum followed by Bangalore and Mysore divisions. There was significant difference in agility factor among the girls of different regions of Karnataka state.
4. There was significant difference in the ability to perform *standing broad jump* among *female* high school students belonging to different geographical regions of Karnataka state. High school girls from Belgaum and Mysore divisions were equal to that of Gulbarga division. Bangalore were least. There was significant difference in explosive power among four regions of study.

5. There was significant difference in the ability to perform *fifty yard dash* among *female* high school students belonging to different geographical regions of Karnataka state. High school girls from Mysore division were the best and those from Gulbarga were the lowest; there was significant difference in speed factor among the students of different regions in Karnataka state.

6. There was significant difference in the ability to perform *six hundred yard run* among *female* high school students belonging to different geographical regions of Karnataka state. High school girls from Belgaum were superior to that of other three divisions. Gulbarga and Mysore divisions were equal in cardio-respiratory endurance, whereas Bangalore division girls were very weak in this factor. There was significant difference in cardio-respiratory endurance among the students of different regions.

7. There was significant difference in *total physical fitness* among *female* high school students belonging to different geographical regions of Karnataka state. High school girls from Belgaum were the highest, followed by Gulbarga division. Mysore and Bangalore divisions’ girls fitness levels were less. There was significant difference in total physical fitness among the girls of different regions of Karnataka state.
8. There was significant difference in *health awareness* among *female* high school students belonging to different geographical regions of Karnataka state. High school girls from Mysore were the highest, followed by Bangalore, Belgaum and those from Gulbarga were the lowest. There was significant difference in health awareness knowledge among the students of different regions, except between Gulbarga and Belgaum divisions.
RECOMMENDATIONS

The following recommendations are made on the basis of observations and conclusions drawn from the study:

1. The inclusive growth of Karnataka state in terms of physical fitness of high school boys and girls has to be focused.
2. The administrators, policy makers and academicians should strive to improve physical fitness of high school boys and girls on regional basis.
3. It is advocated to improve physical fitness of high school students where ever poor fitness levels is observed.
4. It is suggested to resolve the problem of regional disparity in terms of physical fitness of high school boys and girls by means of need based programs.
5. Study on similar lines was felt necessary to elicit disparity in physical fitness among Pre-University level and Graduate levels.
6. A similar study is necessary to find the influence of climatic conditions on physical fitness of young boys and girls.
7. A similar study is also essential to find the influence of season on physical fitness of young boys and girls.
8. Play grounds, gymnasiums and other facilities have to be provided in ample amount in regions where physical fitness is comparatively poor.

9. Availability of physical education teachers have to be ensured in regions where physical fitness is comparatively poor.

10. Raising health awareness among high school boys and girls should become priority for subject as well as physical education teachers.

11. Belgaum and Gulbarga divisions boys and girls need to be given attention to get awareness on health.

12. Schools can provide health awareness and health status programs so that students can have better understanding of health.