Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

History points that the peoples who cared for their bodies and engaged in vigorous physical activities remained strong and prosperous, whereas those neglected them, waned and perished. Physical fitness represents a complex assortment of components that may be grouped as either motor skill related or health related. Health related fitness includes muscular strength and endurance, flexibility and body compositions.

The proper way of determining ideal body weight is through body composition that is by finding out what percent of total body weight is fat and what amount is lean tissue. The importance of good body composition in the achievement and maintenance of good health cannot be underestimated. Body composition is considered to be an important measure of health fitness. A high percentage of body fat relative to bone and muscle has been shown repeatedly to be predictor of wide range of degenerative diseases. Body composition is much better measure of health fitness.
The purpose of the study is to construct the norms on selected body composition components for the college youth of Delhi State. Another purpose of the study is to compare the body composition of adult men of Delhi state on the basis of age, economic status of living and level of physical activity.

For the purpose of present study 5000 adult males of Delhi State were selected randomly as the subjects for the study. The age of the subjects were ranging from 18-25 years. Subjects were from various colleges of Delhi State. Subjects were divided into three different categories on the basis of age, their family income and level of physical activity.

The scores for each variable were gathered for each subject separately and then pooled age wise for preparing the norms. The age wise norms were computed in terms of percentile and hull scale separately for each variable.

Analysis of variance was employed to compare the subjects belonging to different age groups, income groups and activity groups on different variables. The level of significance was set at .05.
For the purpose of analysis of data, Software SPSS for Windows (11.0 version) and Microsoft Excel 2000 were used, to construct norms and compare different groups on selected variables.

Conclusions

Based on the findings and limitations of the present study following conclusions were drawn:

1. The two normative scales namely the percentile scale and hull scale were prepared for college youth of Delhi State with age ranging from 18 – 25 years have been presented in chapter IV separately for the selected variables only.

2. In motor fitness variables significant difference was found among all age groups in relation to sit-up and sit & reach test.

3. In motor fitness variables significant difference was found among all income groups in relation to sit-up and sit & reach test.
4. In motor fitness variables significant difference was found among all activity groups in relation to sit-up and sit & reach test.

5. In body composition components significant difference was found among all age groups in relation to body density, body fat percent, fat mass, lean body mass, chest skin fold, triceps skin fold, sub scapular skin fold and sum of three skin folds.

6. In body composition components significant difference was found among all income groups in relation to body density, body fat percent, fat mass, lean body mass, chest skin fold, triceps skin fold, sub scapular skin fold and sum of three skin folds.

7. In body composition components significant difference was found among all activity groups in relation to body density, body fat percent, fat mass, lean body mass, chest skin fold, triceps skin fold, sub scapular skin fold and sum of three skin folds.

8. In subject’s characteristics significant difference was found among all age groups in relation to height and weight.
9. In subject's characteristics significant difference was found among all income groups in relation to height and weight.

10. In subject's characteristics significant difference was found among all activity groups in relation to height and weight.

11. Among all the age groups significant difference was found in relation to income and activity.

12. All the income groups showed significant difference in relation to activity level.

13. All the activity groups showed significant difference in relation to income of the family.

14. In relation to body fat percentage the sequence of obtained mean scores among all age groups was 18 years < 19 years < 20 years < 21 years < 22 years < 23 years < 24 years < 25 years.

15. In relation to fat mass the sequence of obtained mean scores among all age groups was 18 years < 19 years < 20 years < 21 years < 22 years < 23 years < 24 years < 25 years.
16. In relation to lean body mass the sequence of obtained mean scores among all age groups was 18 years < 19 years < 20 years > 21 years < 22 years > 23 years > 24 years > 25 years.

17. In relation to body mass index the sequence of obtained mean scores among all age groups was 18 years < 19 years < 20 years < 21 years > 22 years < 23 years < 24 years < 25 years.

18. In relation to sit & reach test the sequence of obtained mean scores among all age groups was 18 years > 19 years > 20 years > 21 years > 22 years > 23 years > 24 years > 25 years.

19. In relation to sit up the sequence of obtained mean scores among all age groups was 18 years > 19 years > 20 years > 21 years > 22 years > 23 years > 24 years > 25 years.

20. In relation to weight the sequence of obtained mean scores among all age groups was 18 years < 19 years < 20 years < 21 years > 22 years < 23 years < 24 years < 25 years.
21. In relation to height the sequence of obtained mean scores among all age groups was 18 years < 19 years < 20 years < 21 years < 22 years < 23 years < 24 years < 25 years.

22. In relation to chest skin fold the sequence of obtained mean scores among all age groups was 18 years < 19 years < 20 years < 21 years < 22 years < 23 years < 24 years < 25 years.

23. In relation to triceps skin fold the sequence of obtained mean scores among all age groups was 18 years < 19 years < 20 years < 21 years < 22 years < 23 years < 24 years < 25 years.

24. In relation to sub scapular skin fold the sequence of obtained mean scores among all age groups was 18 years < 19 years < 20 years < 21 years < 22 years < 23 years < 24 years < 25 years.

25. In relation to body density the sequence of obtained mean scores among all age groups was 18 years > 19 years > 20 years > 21 years > 22 years > 23 years > 24 years > 25 years.

26. In relation to income the sequence of obtained mean scores among all age groups was 18 years < 19 years < 20 years < 21 years > 22 years < 23 years < 24 years < 25 years.
27. In relation to activity the sequence of obtained mean scores among all age groups was 18 years < 19 years > 20 years > 21 years > 22 years < 23 years < 24 years < 25 years.

28. In relation to sum of three skin fold the sequence of obtained mean scores among all age groups was 18 years < 19 years < 20 years < 21 years < 22 years < 23 years < 24 years < 25 years.

29. In relation to body fat percentage the sequence of obtained mean scores among all income groups was Low Income Group < Medium Income Group < High Income Group.

30. In relation to fat mass the sequence of obtained mean scores among all income groups was Low Income Group < Medium Income Group < High Income Group.

31. In relation to lean body mass the sequence of obtained mean scores among all income groups was Low Income Group > Medium Income Group < High Income Group.
32. In relation to weight the sequence of obtained mean scores among all income groups was Low Income Group > Medium Income Group < High Income Group.

33. In relation to body mass index the sequence of obtained mean scores among all income groups was Low Income Group > Medium Income Group < High Income Group.

34. In relation to body density the sequence of obtained mean scores among all income groups was Low Income Group > Medium Income Group > High Income Group.

35. In relation to chest skin fold the sequence of obtained mean scores among all income groups was Low Income Group > Medium Income Group < High Income Group.

36. In relation to triceps skin fold the sequence of obtained mean scores among all income groups was Low Income Group < Medium Income Group < High Income Group.
37. In relation to sub scapular skin fold the sequence of obtained mean scores among all income groups was Low Income Group < Medium Income Group < High Income Group.

38. In relation to sum of three-skin fold the sequence of obtained mean scores among all income groups was Low Income Group < Medium Income Group < High Income Group.

39. In relation to sit & reach the sequence of obtained mean scores among all income groups was Low Income Group > Medium Income Group < High Income Group.

40. In relation to sit up the sequence of obtained mean scores among all income groups was Low Income Group > Medium Income Group > High Income Group.

41. In relation to height the sequence of obtained mean scores among all income groups was Low Income Group < Medium Income Group < High Income Group.
42. In relation to activity the sequence of obtained mean scores among all income groups was Low Income Group > Medium Income Group > High Income Group.

43. In relation to body fat percentage the sequence of obtained mean scores among all activity groups was Low Active Group > Medium Active Group > High Active Group.

44. In relation to fat mass the sequence of obtained mean scores among all activity groups was Low Active Group > Medium Active Group > High Active Group.

45. In relation to lean body mass the sequence of obtained mean scores among all activity groups was Low Active Group < Medium Active Group < High Active Group.

46. In relation to weight the sequence of obtained mean scores among all activity groups was Low Active Group < Medium Active Group < High Active Group.
47. In relation to body mass index the sequence of obtained mean scores among all activity groups was Low Active Group < Medium Active Group < High Active Group.

48. In relation to body density the sequence of obtained mean scores among all activity groups was Low Active Group < Medium Active Group < High Active Group.

49. In relation to chest skin fold the sequence of obtained mean scores among all activity groups was Low Active Group > Medium Active Group > High Active Group.

50. In relation to triceps skin fold the sequence of obtained mean scores among all activity groups was Low Active Group > Medium Active Group > High Active Group.

51. In relation to sub scapular skin fold the sequence of obtained mean scores among all activity groups was Low Active Group > Medium Active Group < High Active Group.
52. In relation to sum of three skin fold the sequence of obtained mean scores among all activity groups was Low Active Group > Medium Active Group > High Active Group.

53. In relation to sit & reach test the sequence of obtained mean scores among all activity groups was Low Active Group < Medium Active Group < High Active Group.

54. In relation to sit-up the sequence of obtained mean scores among all activity groups was Low Active Group < Medium Active Group < High Active Group.

55. In relation to height the sequence of obtained mean scores among all activity groups was Low Active Group > Medium Active Group < High Active Group.

56. In relation to income the sequence of obtained mean scores among all activity groups was Low Active Group > Medium Active Group > High Active Group.

57. Fat mass and body fat percentage increase with increase in age.
58. Fat mass and body fat percentage increase with increase in family income.

59. Fat mass and body fat percentage increase with decrease in activity level.

60. Performance in motor fitness variables showed deterioration with advancement of age and status of living.

61. Performance in motor fitness variables showed improvement with increase in activity level across the groups.

**Recommendations**

In the light of the conclusions of the present study, the following recommendations are made:

1. The normative scales constructed in this study may be used to evaluate the motor fitness and body composition of the college youth of Delhi State.

2. It is recommended that the same study may be repeated by employing the subjects of higher age groups of Delhi state.
3. It is recommended that similar study may be conducted on the college Women of Delhi state.

4. Similar study may be undertaken for research purpose at the National level.

5. It is also recommended that regular and effective health related fitness programme should be introduced in the colleges of Delhi state.

6. Norms should be revised each year as the fitness level of the youth improves.

7. Similar research may be carried out to construct norms for school children, professional of physical education and special groups like army, air force, navy, police, civil services employees etc. where the weight is one of the important criteria of eligibility.

8. Teachers, coaches and professional of physical education should utilize the findings of this study in assessing the health related fitness of the college youth.
9. It is suggested that norms prepared in this study may be adopted by the college administrations to evaluate the health related fitness of the college youth of Delhi.

10. On the basis of present study, body composition status of the youths of other states may be compared.

11. Similar norms are further advised for the rural population and non-college youth of urban areas.