CHAPTER V

SUMMARY, CONCLUSION
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CHAPTER – V
SUMMARY, CONCLUSION AND RECOMMENDATION

In this chapter the summary of all the previous chapters have been incorporated. Conclusions draw on the basis of results obtained have also been put up in this chapter. Recommendations for future investigations and for practical applications have also been included in this chapter.

5.1 SUMMARY

The purpose of the present study was to locate the rural-urban differences in relation to somatotyping profile and physical, motor and personality characteristics of higher secondary boys. The word ‘somatotyping’ is derived from the Greek root ‘Somatos’ meaning body type. Somatotyping is the classification of human physique based on body shape and size. More precisely, it is the quantification of size and shape of human body. Somatotype express as the human body in a three number rating expression in the particular order as mentioned i) Endomorphy, ii) Mesomorphy and iii) Ectomorphy. The Endomorphy, Mesomorphy and Ectomorphy will remain in same order always.

W. H. Sheldon in 1940 introduced the concept of somatotype in “The Variation of Human Physique”. After Sheldon, there were other methods developed by different anthropometrists and lastly Barbara Heath and J. E. Lindsay Carter in 1967 modified Sheldon’s Somatotyping Method and developed the Heath-Carter Somatotype Method. This Method has been widely accepted by scientific communities and become the only standard method of somatotyping.

Performance related fitness has been identified as that part of motor fitness which helps an individual to achieve high level of performance in movement activities depending on the components mostly hereditary in nature. Performance related fitness requires the abilities necessary for proficient execution of sports skill. The performance related components are speed, power, balance, coordination, agility and reaction time.

Personality is the dynamic organisation within the individual of those psycho-
physical system that determine his unique adjustments to his environment. The personality profile determines the behavioural pattern of individuals. According to literature this psychological make up also bears relationship with physique and motor ability.

Somatotyping profile, performance related fitness and personality – these are genetically influenced. Of course, it is also agreed that environmental influence may have noticeable dominance on these factors.

Research findings have indicated that the students of higher secondary stage are most appropriate for starting high level performance in most of major games and sports. So this stage appears as a dilemma for the young group of students. In one side they have the potentiality for achieving high level performance in physical and motor activities and in other side they become compiled to remain away from participation in games & sports activities because of academic pressure. The present condition of education also has not made any provision for physical education for this intermediate group of students. So, it is very important to study the condition of this population in respect of their physical, motor and psychological aspects of personality.

In the hierarchy of education system prevailing in our country, higher-secondary stage of education is the transitional phase between the basic education and specialization. So, it is very interesting to have an in-depth study about the body build and its relationship with physical, motor and personality characteristics of this population.

The present study was planned to analyse the somatotyping profile of higher secondary male students and its relation with physical, motor and personality characteristics. To analyses the relation both for rural and urban higher secondary groups was the sub-areas of present investigation. Accordingly, the problem was stated as – “An in-depth study on rural-urban differences in relation to somatotyping profile and physical motor & personality characteristics of higher secondary male students”.

A total of five hundred (500) male students of Class XI and XII were selected as subjects for the present study. The subjects were divided into two groups – Rural (300) and urban (200). The selected physical parameters were height, weight, BMI
and %BF. Skinfolds (biceps, triceps, subscapular, suprailliac, supraspinale), girth (biceps and calf) and breadth (humerus and femur) were taken for anthropometric measurements. The somatotyping were assessed by Heath-Carter Somatotyping technique. In performance related fitness the selected parameters were locomotor speed, leg explosive strength and agility. All these selected parameters were measured by using standardised tests viz. 50 yard dash for locomotor speed, standing broad jump test for leg explosive strength and shuttle run test for agility. Personality profile of the subjects were assessed by Cattell’s 16 Personality Factor Questionnaire. Reliability of data was ascertained by conforming reliability of instruments and tools as well as testers reliability. Reliability of instruments was guaranteed from their manufacturers. Testers reliability was ascertained by test-retest method.

The data were analysed by using standard statistical techniques. The mean and standard deviation were calculated as descriptive statistics. Coefficient of correlation was calculated as the measure of relationship. T-test was used to find out the statistical significance of two group mean difference.

On the basis of analysis of data following results were obtained:
1. In somatotyping profile it appeared that rural boys had ectomorphic body type. On the other hand urban boys were more muscular and more fatty.
2. Rural boys were older than the urban boys and physical structure of urban boys was greater than the rural boys.
3. Urban group of subjects had more BMI and %BF than rural group of subjects.
4. There was a positive significant correlation between endomorphic component and body weight & %BF for urban boys. On the other hand, rural endomorphs showed significant positive correlations with all the physical parameters.
5. For rural boys, mesomorphic component exhibited significant positive correlations with weight, %BF & BMI and in case of urban boys mesomorphic component revealed significant positive correlations with weight, height and %BF.
6. There were negative significant correlations between rural ectomorphs with body weight, BMI and %BF. On the other hand, urban ectomorphs expressed negative significant correlations with body weight and %BF.
7. In selected motor fitness parameters, i.e. locomotor speed, agility and leg
explosive strength, rural boys were better than their urban counterparts.

8. Both rural and urban endomorphs depicted positive significant correlation with all the selected performance related components excepting the leg power for urban boys.

9. There was a positive significant correlation with speed for rural mesomorphs whereas they showed negative insignificant correlations with leg power and agility. However, urban boys revealed positive significant correlation with leg power and negative significant correlation with agility.

10. Both rural and urban ectomorphs expressed negative significant correlations with leg power, speed and agility excepting the leg power for urban subjects.

11. Urban boys appeared to be statistically more intelligent, socially bold, emotionally stable, independent, imaginative and self-sufficient.

12. Urban students were open minded, confident, self-reliant, perfection oriented and less sentiment with endomorph body build whereas similar rural subjects were role conscious, more private minded and more stable.

13. Mesomorphic urban boys were less reasoning and apprehensive but more stable, lively and tensed. On the other hand rural mesomorphs were less vigilant and more private minded.

14. The ectomorphs from urban area were more reasoning, stable, dominant, sensitive private minded and tensed. On the other hand rural ectomorphs were less private minded and less perfection-oriented but more tensed.

5.2 CONCLUSION

On the basis of above results the following conclusions are drawn. For better presentation the conclusions of different areas namely physical characteristics, somatotyping, motor fitness and personality profiles have been put up separately as follows:

5.2.1 Conclusions regarding Physical Characteristics:

i) The age of rural higher secondary boys is more than that of urban boys.

ii) Physical structure of urban higher secondary boys with greater height and weight.
iii) Urban group of higher secondary boys possess more BMI.
iv) Higher secondary boys of urban group possess more %BF.
v) Both rural and urban higher secondary boys show significant positive correlation between endomorphic component and weight & %BF.
vi) Both rural and urban higher secondary boys show significant positive correlation between mesomorphic component and weight & %BF.
vii) Both rural and urban higher secondary boys show significant negative correlation between ectomorphic component and weight & %BF.

5.2.2 Conclusions regarding Somatotyping Profile:
i) Rural higher secondary boys are predominantly ectomorph.
ii) Urban higher secondary boys are inclined to be more endomorph and mesomorph.

5.2.3 Conclusions regarding Motor Fitness Profile:
i) The motor fitness of rural higher secondary boys is better than the urban higher secondary boys.
ii) Rural and urban higher secondary boys show significant positive correlation between endomorphic component and locomotor speed & agility.
iii) Rural higher secondary mesomorphs show significant positive correlation between mesomorphic component and locomotor speed.
iv) Urban higher secondary mesomorphs show positive significant correlation with leg power and negative significant correlation with agility.
v) Both rural and urban higher secondary boys show significant negative correlation between ectomorphic component and locomotor speed & agility.

5.2.4 Conclusions regarding Personality Profile:
i) Urban boys appear to be statistically more intelligent, socially bold, emotionally stable, independent, imaginative and self-sufficient.
ii) Urban students are open minded, confident, self-reliant, perfection oriented and less sentiment with endomorph body build whereas similar rural subjects are role conscious, more private minded and more stable.
iii) Mesomorphic urban boys are less reasoning and apprehensive but more stable, lively and tensed. On the other hand, rural mesomorphs are less vigilant and more private minded.

iv) The ectomorphs from urban area are more reasoning, stable, dominant, sensitive private minded and tensed. On the other hand, rural ectomorphs are less private minded and perfection-oriented but more tensed.

5.3 RECOMMENDATION

On the basis of results obtained and conclusions drawn the following recommendations are framed for future investigations and practical applications.

5.3.1 Recommendations for Future Investigation:

i) The present study was conducted on subjects selected from two distinctly specific regions only, to get more meaningful results. More regions within the state with other typical physical and climatic conditions may be considered in future investigations.

ii) Similar study may be taken up with subjects from different educational levels and age groups.

iii) The present study was conducted with only 500 subjects to get more reliable results. Large number of subjects may be selected beyond the state jurisdiction, from all over the country.

iv) Similar studies may also be conducted with the subjects of special population

v) Similar studies may also be conducted on elite athletes or players and female students.

vi) A comparative study can be undertaken using the same parameters of Indian and foreign higher secondary male students.

vii) A comparative study can be undertaken getting more performance related fitness components.

viii) A comparative study can be undertaken between these groups with both performance related fitness and health related fitness.
5.3.2 Recommendations for Practical Application:

The results of the study would be applied for practical fields in the following cases:

i) Considering the ectomorphy as the dominant somatotyping factor for rural higher secondary boys, it is recommended that the nutritional aspects of this group of boys should be duly taken care of.

ii) Considering the endomorphy as the dominant somatotyping factor for urban higher secondary boys, it is recommended that the implementation of physical education programme for this group of subjects should be planned and implemented.

iii) Additional programmes should be emphasized with normal academic programmes for the personality development of higher secondary school boys of rural area.