CHAPTER- 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS
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Summary

Males and females differ in many morphological and physiological variables. By the time full maturity is attained the average female is approximately 13 cms shorter, 15 kgs lighter in total body mass and 20 kgs lighter lean body mass with considerably more adipose tissue than the average male. The large difference in lean body mass is seen to be predominantly due to a much higher production of the hormone testosterone in males.

Based on percentage of body fat, boys and girls are classified as obese, Overweight, Ideal weight and underweight. Obesity and overweight are commonly thought of as interchangeable expressions. Obesity is excessive accumulation of fatty tissue whereas overweight does not imply fatness. Obese, Overweight and underweight boys and girls develop a complex and it is reflected in motor and strength performances.

Therefore, the present study was undertaken to assess the status of motor and strength performance of boys and girls of obese, Overweight, Ideal weight and underweight.

The object of the present study was to compare and analyse the selected motor and strength variables among obese, Overweight, Ideal weight and underweight Junior College boys and girls. For this study purpose the selected variables were speed, agility, leg explosive power, relative arm strength and relative leg strength. To achieve the purpose of this study, 300 Junior College boys and 300 Junior College girls were selected from the Govt. and aided Junior Colleges in and around Tirupati, by using systematic random sampling method. They were classified, according to the body type, namely obese, Overweight, Ideal weight and underweight boys and girls.

The following motor fitness tests were conducted on the subjects: for speed - 50 yards run; for agility (4 x 30') 4 x 10 yards shuttle run; for leg explosive power - standing broad jump. The following tests were conducted on the subjects to assess
the strength variables for relative arm strength – bench press test and for relative leg strength – bench squat test.

Tester’s reliability and instrument reliability were established by test and re-test method. All the tests used were standard tests and their validity is already accepted.

Two-way analysis of variance was used to find out any significant difference on selected motor and strength variables among obese, Overweight, Ideal weight and underweight boys and girls, and their interactions. The main factors namely gender were assigned in rows and body weight categories namely such as obese, Overweight, Ideal weight and underweight were assigned to columns. If the obtained ‘F’ ratio for rows were significant only comparing the means of the both boys and girls. For columns ‘F’ ratio were found to be significant, the Scheffe’s test was used as a post hoc test of significance to find out any significant difference between any two paired means. If the interaction (gender x body weight categories) were significant, simple effect test was used as a post hoc test of significance. All the hypotheses were tested for significant at 0.05 level.

The datas were analysed with SPSS statistical package at utilized.

Conclusion

The following conclusions are drawn based on the results of the present study.

Speed

The speed is better for Ideal weight group as compared to obese, Overweight and underweight groups. Underweight group is better than obese and Overweight group. Overweight group is better than obese group.

♦ The obese boys are better in speed than obese girls.

♦ The Overweight boys are better than Overweight girls.

♦ The Ideal weight boys are better than Ideal weight girls.

♦ The underweight boys are better than underweight girls.
The Ideal weight boys are better than obese, Overweight and underweight boys. The underweight boys are better than obese, Overweight, the Overweight boys are better than obese boys. But there is no significant variation in speed between overweight and underweight boys.

The Ideal weight girls are better when compared to obese, Overweight and underweight girls. The Overweight and underweight girls are better than obese girls. But there is no significant variation in speed between Overweight and underweight girls.

Agility

The agility is better for Ideal weight group as compared to obese, Overweight and underweight. Underweight group is better than obese and Overweight. The Overweight group is better than obese group.

- The obese boys are better in agility than obese girls.
- The Overweight boys are better than Overweight girls.
- The ideal weight boys are better than Ideal weight girls.
- The underweight boys are better than underweight girls.

The Ideal weight boys are better in agility than obese, Overweight and underweight boys. The underweight boys and Overweight boys better than obese. However there is no significant variation in agility between Overweight and underweight boys.

The Ideal weight, Overweight and underweight girls are better in agility than the obese. There is no significant variation in agility between Overweight and Ideal weight, Overweight and underweight and Ideal weight and underweight girls.

Leg Explosive Power

The leg explosive power of Ideal weight group is significantly different from obese, Overweight and underweight groups. The leg explosive power of underweight group is significantly differs from obese and Overweight. Further leg explosive power of Overweight group is significantly differs from obese group.
- The obese boys are better in leg explosive power than obese girls.
- The Overweight boys are better than Overweight girls.
- The Ideal weight boys are better than Ideal weight girls.
- The underweight boys are better than underweight girls.

The Ideal weight boys are better in leg explosive power than obese, Overweight and underweight boys. The underweight boys are better in leg explosive power than obese and Overweight boys. Overweight boys are better than obese boys.

The Ideal weight girls are better in leg explosive power as compared to obese, Overweight and underweight girls. Underweight girls are better than obese and Overweight girls. The Overweight girls are better than obese girls.

**Relative Arm Strength**

The relative arm strength of Ideal weight group is better than obese, Overweight and underweight groups. The Overweight group is better than obese and underweight groups. The obese group is also better than underweight group.

- The obese boys are better in relative arm strength than obese girls.
- The Overweight boys are better than Overweight girls.
- The Ideal weight girls are better than Ideal weight girls.
- The underweight boys are better than underweight girls.

The Ideal weight boys are better in relative arm strength than obese, Overweight and underweight boys. The Overweight boys are better than obese and underweight boys. Further obese boys are better than underweight girls.

The Ideal weight girls are better than obese, Overweight and underweight girls. Overweight girls are better when compared to obese and underweight girls. However, there is no significant variation in relative arm strength between obese girls and underweight girls.
Relative Leg Strength

The relative leg strength of Ideal weight group is better than obese, Overweight and underweight groups. The underweight group is better than obese and Overweight. The Overweight group is better than obese group in relative leg strength.

- The obese boys are better in relative leg strength than obese girls.
- The Overweight boys are better than Overweight girls.
- The Ideal weight boys are better than Ideal weight girls.
- The underweight boys are better than underweight girls.

The Ideal weight boys are better than obese, Overweight and underweight boys in relative leg strength. The underweight boys are better than obese and Overweight boys. The Overweight boys are better than obese boys.

The Ideal weight girls are better in relative leg strength compared to obese, Overweight and underweight girls. The Overweight and underweight groups are better than obese group girls. The underweight group is better than overweight group girls.

Recommendations

1. Studies may be conducted to identify the causes for obesity, Overweight, Ideal weight and underweight among school boys and girls, among men and women of graduation according to the Indian conditions.

2. Studies may be conducted by giving specific training for obese, Overweight, Ideal weight and underweight male and female and its effects may be explored.

3. Fitness programmes may be prepared to reduce obesity and Overweight.

4. Vitamins and other supplements may be given for underweight male and female and its effects may be assessed.

5. Variation in psychological and sociological factor and existing complexity among obese, Overweight and underweight male and female may be assessed.