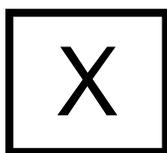


# CHAPTER-X

# CONCLUSIONS



## CONCLUSIONS

In conclusion, the main findings of the present research investigation may be summarized as follows –

- (1) The age-wise anthropometric characteristics of the present study of both sexes agree, in general, with previous studies conducted among adolescents (ICMR 1996, Savva et al. 2001, Mukhopadhyay et al. 2007, Dasgupta et al. 2010, Jackson et al. 2010, Bamoshmoosh et al. 2013, Jaswant et al. 2014, Singh et al. 2014, Anuradha. et al. 2015).
- (2) There is a decrease in fat with advancement of ages of both sexes in central body part (i.e. waist and abdominal region) as the three central adiposity indices (conicity index, waist-hip ratio and waist-height ratio) are negatively associates. This is because increase in hip circumference is greater than waist circumference, resulting in lower adiposity indices. This indicates a differential pattern and intensity of fat deposition at these two levels.
- (3) There are statistically significant age variations in all the anthropometric, adiposity and body composition measures among the Bengalee Muslim children aged 10 to 17 years.
- (4) Net and percent increases or decreases in anthropometric characteristics from 10 to 17 years provide vital information on the physical growth pattern of the

studied samples. Height of boys increases 21.97% and weight increases 51.77% from 10 to 17 years of age. Height of girls increases 15.88% and weight increases 44.82% from 10 to 17 years of age. The maximum percent increase of boys in girth and skinfold measurement occurs in mid-upper arm circumference (25.49%) and subscapular skinfold (37.10%), respectively. The maximum percent increase of girls in girth and skinfold measurement occurs in maximum hip circumference (21.44%) and subscapular skinfold (43.96%), respectively.

- (5)** The net and percent increase in different adiposity and subcutaneous fat patterning and body composition measures from 10 to 17 years demonstrates distinctive differential rates of increase or decrease among Bengalee Muslim boys and girls. Body mass index, a well established measure of generalised adiposity, indicates 20.97% increase of boys and 22.01% increase of girls from 10 to 17 years, whereas percent body fat, a widely accepted measure of total body fat content, decrease 10.29% of boys and increase 23.00% of girls during the same chronological age. The relative percent increase of boys in fat mass (46.38%) and fat free mass (52.58%) but the percent increase of girls in fat mass (57.64%) and fat free mass (41.12%) from 10 to 17 years. It means that the fat contents among Bengalee Muslim adolescent boys decreases (6.20%) than the non-fat body components (fat free mass) and the fat contents among Bengalee Muslim adolescent girls increases (16.52%) than the non-fat body components (fat free mass).
- (6)** Nutritional status (based on body mass index) of the Bengalee Muslim children reveals a moderate rate of undernutrition (41.67%). A distinctive age variation in the change of the rate of undernutrition is observed in both sexes. The rate of undernutrition among adolescent boys of the present study is 52.49%. However, these rates of undernutrition are, in general, lower than rural boys of nine provinces of India (67%) and Kenyan refugees (75%) but these rates of undernutrition are higher than two studies of Kolkata, West Bengal (50.50% and 41.08%). The rate of undernutrition among adolescent girls of the present

sample is 31.32%. However, these rates of undernutrition are, in general, lower than Kenyan refugee girls (55%) and rural Indian girls (40%) but these rates of undernutrition are higher than Bangladeshi girls (16%) and urban Bengalee girls of Kolkata (30.61%).

- (7)** Present research clearly demonstrates that the study boys (who practiced regular physical exercise) are taller and heavier than the Bengalee Hindu boys who undertook regular physical exercise reported by Mukhopadhyay et al. 2005. But the present samples (boys) who are not practiced physical exercise are shorter and lower than the boys who did not undertake regular physical exercise of same findings.
- (8)** Result also reveals that there is a considerable variation in adiposity level of boys and girls on effect of physical activity. The NPE children have significantly greater amount of subcutaneous body fat and adiposity level than PE children.
- (9)** There is a considerable variation in body composition level of both the sexes on effect of physical activity. The NPE children had significantly greater amount of percent body fat level than PE children.
- (10)** There is a decrease in adiposity, subcutaneous fat content and body composition almost all ages of PE boys and girls compared with the children who did not practiced regular physical exercise resulting from non sedentary lifestyle.