



Physical Growth and Body Composition Assessment among Rural Adolescent Girls (10-16 Years) of Karbi Anglong, Assam, Northeast India

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ABSTRACT Physical growth and body composition assessment are of interest to the nutritionists and biological anthropologists due their variations and impact of nutrition, dietary habit, exercise, lifestyle, disease, sedentary behaviour, endocrine and genetic factors. The present community based cross-sectional investigation assesses the physical growth pattern and body composition characteristics and their associations with a set of anthropometric growth variables among rural adolescent girls of Assam, Northeast India. This cross-sectional investigation was undertaken among 542 adolescents (aged 10-16 years) of Karbi Anglong, Assam, India. A set of anthropometric measurements of weight, height, mid-upper arm circumference and skin-fold thickness were recorded by standard procedures. Standard anthropometric variables were used to assess the physical growth and body composition status. The age-specific mean values of BMI, PBF, FM, FFM, UMA, and UFA increased with ages ($p < 0.05$). BMI and PBF were significantly correlated with FM, FFM, FMI, FFMI UMA and UFA ($p < 0.05$). Linear regression analysis has shown the significant association between anthropometric and body composition variables with BMI and PBF ($p < 0.05$). Comparison with growth references shown poor physical growth and body composition attainment among adolescent girls. The present investigation provides anthropometric data on physical growth and body composition variables in comparison to population. In-depth studies are also necessary for identifying the factors responsible for the physical growth retardation and body composition among adolescents.