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Relationship between Cardiorespiratory Fitness and Anthropometric Variables among School-going Adolescents in Nigeria

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ABSTRACT The increase in physical activity (PA) levels has been known to be associated with improved cardiorespiratory fitness status which helps in reducing the risk factors of non-communicable disease. However, the interaction between cardiorespiratory fitness and anthropometric variables remains unclear and needs further investigation. This study assessed the relationship between cardiorespiratory fitness and anthropometric variables among school-going adolescents in Nigeria. Two hundred and fifty apparently healthy participants ranging from 12 to 20 years of age, who were randomly selected, participated in this study. Height, body weight, and body mass index (BMI) were measured. Cooper's 12 minutes run/walk test was conducted to assess cardiorespiratory fitness (estimated by maximal oxygen uptake: VO_{2max}). There was a significant correlation between VO_{2max} and BMI. In the regression model, weight, height, gender, and BMI accounted for ninety-five percent of the total variance in the participants' cardiorespiratory fitness. Body weight, height, gender, and BMI were significant predictors of cardiorespiratory fitness in the school-going Nigerian adolescents.