

**Association and correlation between cardiorespiratory fitness, bmi, musculo-skeletal and handgrip strength among young adult student girl population in Sullia, Karnataka, India**

**ABSTRACT**

Background: Obesity is at a rising trend among the childhood age group and is a WHO priority on classification of non-communicable diseases. High income group countries once had a statistically higher percent of obesity problems which has been extended both to the developing and low-income countries. Prevalence rate of obesity in India vary between 11.8% to 31.3% and is higher among the women than men. Obesity also affects the physical and cardio-respiratory fitness thereby leading to a group of metabolic, cardiovascular and musculoskeletal disorders. An association between BMI, musculo-skeletal and cardio-respiratory fitness is less reported among the young adult girl population in the context of Indian professional students. Aim & Objectives: To assess few of the musculo-skeletal, cardio-respiratory parameters in relation to BMI among the young adult girl students of medical and dental colleges. Material & Methods: One hundred and seventy-one girl students in the range of 19 to 21 years were randomly selected from the educational institute of Sullia, Dakshina Kannada, Karnataka and were assessed for BMI, muscular strength, handgrip strength, flexibility test, cardio-respiratory test and pulmonary function test by standard methods. Data was analysed. Results: Musculo-skeletal flexibility, strength, cardio-respiratory fitness and pulmonary functions have an inverse association when compared to the BMI and weight of the girl students. Conclusion: Obesity and overweight reduces the flexibility, musculoskeletal and cardio-respiratory fitness in addition to the pulmonary functions among the young adult girl population as confirmed by the battery of tests. © 2021, Ibn Sina Trust. All rights reserved.