Relationship between anthropometric parameters, socio-demographic characters and physical activity: a cross-sectional study among non-diabetic population

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Incidence of obesity in the world has doubled from 1980s to date. Anthropometric assessments are used in assessing obesity and used as an indicator of body fat content. Thus, the objective of the study was to identify the relationship between anthropometric parameters and socio-demographic factors, physical activity in non-diabetic subjects. A cross-sectional study was conducted among 244 subjects (age 20-70 years). Weight, height, Waist Circumference (WC), Hip Circumference (HC) and Mid Arm Circumference (MAC) were obtained then Body Mass Index (BMI) and Waist Hip Ratio (WHR) were calculated. Demographic characteristics and levels of physical activities were obtained using an interviewer administrated questionnaire. Majority were females (61.9%) and Sinhalese (93.9%). Mean ($\pm$SD) BMI, WC, HC, WHR and MAC of the male population were 23.9 ± 3.5 kg m^{-2}, 86.9 ± 10.7 cm, 98 ± 7.4 cm, 0.88 ± 0.07 and 30.1 ± 3.0 cm respectively. Mean ($\pm$SD) BMI, WC, HC, WHR and MAC of the female population were 24.0 ± 4.3 kg m^{-2}, 80.5 ± 10.9 cm, 96.4 ± 9.3 cm, 0.83 ± 0.08 and 28.7 ± 4.1 cm respectively. There was a significant difference in mean WC ($P=0.000$) and WHR ($P=0.000$) among males and females. BMI, WC and WHR had a significant positive ($P<0.01$) correlation with age among female population whereas males had a significant ($P<0.05$) correlation with MAC (negative) and WHR (positive) only. Physical activity had a non-significant ($P>0.05$) negative correlation with BMI and WHR. WHR showed a significant positive association with age among both males and females. However, anthropometric assessments did not indicate significant correlations with physical activity.

Key words: anthropometric measurements, anthropometric indices, demographic factors, physical activity

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