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Reliability of body mass index in predicting cardiovascular risk factors in overweight and obese children

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Introduction: Childhood overweight and obesity is in an increasing trend throughout the world. Distribution of body fat is an important determinant in predicting the future cardiovascular risk factors. Body Mass Index (BMI) is the commonly used tool in diagnosing overweight and obesity. Waist circumference (WC) percentile and waist height ratio (WHtR) demonstrated high sensitivity and speci city for detection of abdominal fat mass.

Aim: e aim of this cross sectional study involving children from an urban area, Sri Lankan aged 3-18 years was to investigate the reliability of BMI in predicting central adiposity.

Method: Weight, height, and WC were measured using standard methods and BMI, and WHtR were calculated. e BMI of 85th and 95th percentiles were adopted as cuto points for overweight and obesity respectively and similar values were considered for WC to de ne obesity and overweight based on age and sex as per centre for disease control classi cation. WHtR 0.6 and 0.5 were consider as alert line and action line for interventions respectively.

Findings: Among 116 subjects, 29 (25%) were overweight and 87 (75%) were obese. According to WC percentile 9 (7.7%) were overweight while 107 (92.2%) were obese. us BMI has 77.7% (83/83+24) sensitivity and 55.5% (5/5+4) speci city to detect central obesity. e positive predictive value was 95.4% (83/83+4) while the negative predictive value was 17.2% (5/24+5). In our study, 83.7% of actually overweight population lied in alert line (Figure 1) and 43.7% of actually obese population lied in action line (Figure 2).

Conclusion: Even though BMI is a simple tool in detecting ur stl in det Tf 0 -165.337 0g8opulppnpercentilespulf ac

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