



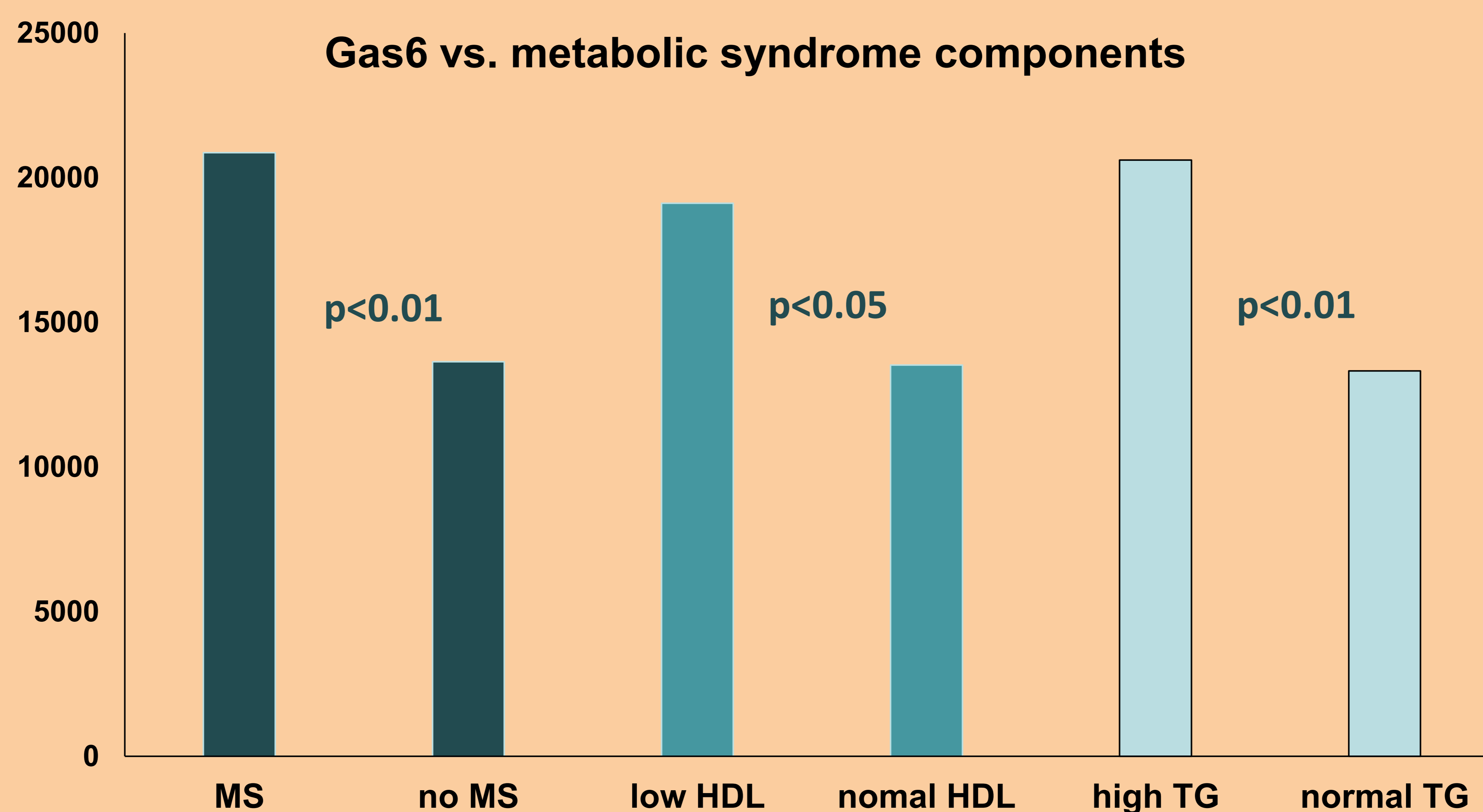
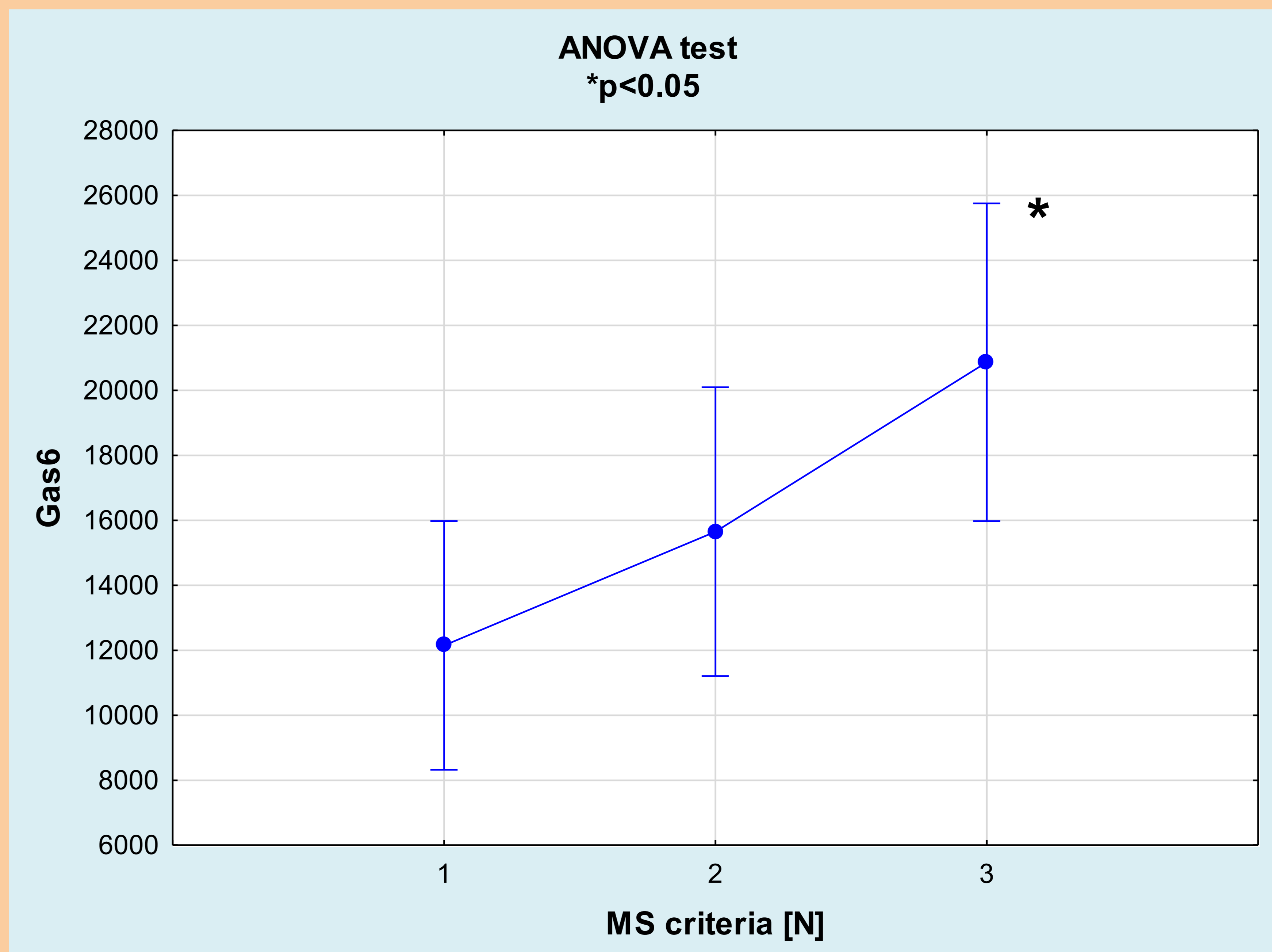
Growth Arrest-Specific 6 (Gas6) Protein is Associated with Adiposity and Metabolic Syndrome in Obese Children and Adolescents



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Introduction: Growth arrest-specific 6 (Gas6) is a vitamin K-dependent protein produced by several types of cells including adipocytes and regulates their homeostasis. Previous studies indicate that Gas6 signaling may be involved in the pathogenesis of obesity and its complications, including systemic inflammation and insulin resistance. However, little is known about the clinical significance of the Gas6 system in childhood obesity. **Objective:** The aim of the study was to determine the potential association of circulating Gas6 with anthropometrical and metabolic status of obese children and adolescents.

Material and methods: In 74 obese children and adolescents (33 boys and 41 girls) in the mean age of 13.92 ± 3.14 years growth arrest-specific 6 (Gas6), glucose and insulin fasting and in oral glucose tolerance test (OGTT), HOMA-IR index and lipid profile were determined. Anthropometric parameters expressed as BMI Z-score, WHR, W/HtR and body composition was evaluated by bioelectrical impedance analysis (BIA) such as fat mass (FAT), fat-free mass (FMM), and total body water (TBW). Gas6 level was then correlated to the all anthropometrical and metabolic parameters. Patients were divided into two groups: with (26%) and without metabolic syndrome (MS), which were then compared for Gas6 level. The association for the Gas6 level and specific MS criteria was also assessed.



Gas6	FAT%	FFM%	TBW%
	R = 0.300; p<0.05	R = -0.298; p<0.05	R = -0.299; p<0.05
Gas6	BMI	BMI Z-score (SD)	TG
	R = 0.270; p<0.05	R = 0.244; p<0.05	R = 0.2018; p<0.05

Conclusions: Circulating Gas6 levels are significantly associated with body composition (especially adiposity level) and is also related to the risk of metabolic syndrome development in obese pediatric population. The potential role of Gas6 signalling in the pathogenesis of childhood obesity and its complications requires further investigation.