

Effectiveness of a Multidisciplinary Lifestyle Intervention to Reduce Obesity among Children and Adolescents

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Abstract:

Background: Now a day's unhealthy lifestyle primarily responsible for the dramatic increase obesity among children and adolescents.

Objective: The purpose of the study is to see the effects of a multidisciplinary lifestyle intervention to reduce obese children and adolescents. The main outcome was cardio metabolic risk based on the waist-to-height ratio (WHTR) measurement. Secondary outcomes were (1) changes in body composition; (2) adherence to a Mediterranean diet; and (3) physical performance.

Methods: The study involved 64 overweight/obese children or adolescents conducted at Dhaka Shishu Hospital from October 2017 to September 2018. The intervention was multidisciplinary including nutrition, exercise, and psychological aspects based on a family-based approach; it was delivered for six months for children and three months for adolescents. Before and after the intervention, several anthropometric measures height, body weight, body mass index (BMI), waist circumference, and body composition, cardio metabolic risk index waist-to-height ratio (WHTR), and dietary habits of the participants and their families were evaluated. In addition, a set of functional motor fitness tests was performed to evaluate physical performance measures.

Results: After the intervention both children and adolescents showed a significant reduction in body weight, BMI, waist circumference, fat mass, and WHTR index and an improvement of fat-free mass, adherence to the Mediterranean diet, and physical fitness performance.

Conclusion: A short term family-based multidisciplinary approach is effective in ameliorating the health status, dietary habits, and physical performance in children and adolescents.

Key words: Lifestyle intervention, obesity, children, adolescents.