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Adolescents with severe obesity attending a weight management clinic in Singapore



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Background: Adolescent obesity has led to chronic medical conditions such as type 2 diabetes mellitus, hypertension, and dyslipidemia, which used to be typically seen in adults. The earlier presentation of these comorbidities will have a significant impact for the future as this group of adolescents will present with complications of these chronic medical conditions at an earlier age and will have a significantly decreased life expectancy. American Academy of Pediatrics expert committee proposed the recognition of a BMI of above 35 kg/m², which is above 99th percentile on the BMI chart, as extreme obesity.

Objectives: Objective is to look at the prevalence of adolescents with severe obesity attending a weight management clinic aged 13–17 years old and their co-morbidities.

Methods: This is a retrospective study of children aged 13 to 17 years old, who attended the weight management clinic, from January 2009 to December 2012. Patients' clinical, anthropometric, polysomnography and metabolic blood test results were collected.

Results: A total of 59 adolescents (64% males) with BMI above 35 kg/m² attended the weight management clinic. Mean age at presentation was 14.9 ± 0.97 years. 40 adolescents underwent oral glucose tolerance test and 7 adolescents underwent polysomnography. 4 adolescents had diabetes mellitus based on their oral glucose tolerance test. 4 adolescents had severe obstructive sleep apnea based on polysomnography results.

Conclusion: There is a significant proportion of adolescents with severe obesity attending the weight management clinic with obesity related co-morbidities. More studies should look into the outcomes of adolescents with extreme obesity and the role of surgical treatment.

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Change in self-esteem following paediatric weight management interventions: a systematic review and meta-analysis



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Objective: Children and adolescents with overweight or obesity are likely to have lower self-esteem compared to normal weight peers. Weight management interventions are successful at reducing BMI however, the effect on self-esteem is unclear. This systematic review investigates the impact of weight management

interventions in children and adolescents with overweight or obesity on self-esteem.

Methods: Four databases were searched in May 2017 to retrieve peer-reviewed articles that met the following eligibility criteria: (1) children and adolescents with overweight or obesity, aged < 18 years, (2) weight management intervention with a nutrition component, (3) case studies, pre-post studies and randomised controlled trials (RCTs), (4) pre- and post-intervention assessment of self-esteem using a validated tool.

Results: Of 2799 articles screened, 40 studies (9.3–15.6 years, $n = 10131$) met the inclusion criteria. Meta-analyses showed a medium positive effect for self-esteem post-intervention (one week to 15 months) (standardised mean difference (SE) = 0.42 [0.05] $p < 0.001$). Sixteen studies had follow-up measurements (2.5 months to 2.4 years post-intervention) which indicated the effect was maintained (0.36 [0.05], $p < 0.001$). However, the effect is unlikely to be clinically significant. Analysis of RCTs (eight studies), supported these findings. Studies with a targeted self-esteem component had a larger effect (0.558 [0.13], $p < 0.001$) than studies with no self-esteem component (0.373 [0.05], $p < 0.001$). Studies which included parental involvement had a larger effect (0.417 [0.05], $p < 0.001$) than studies with no parental involvement (0.365 [0.06], $p < 0.001$). In terms of setting, there was no difference in effect between inpatient programs (0.477 [0.23], $p = 0.038$), outpatient programs (0.452 [0.06], $p < 0.001$) and summer camps (0.440 [0.06], $p < 0.001$), with the smallest effect observed in a community setting (0.319 [0.05], $p < 0.001$).

Conclusion: Engagement in weight management interventions was not associated with a decrease in self-esteem. The inclusion of targeted self-esteem components within weight management may lead to a clinically significant improvement.

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Childhood obesity, weight management and depression: a systematic review and meta-analysis



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Introduction: Child and adolescent overweight and obesity is associated with depression, and may contribute to increased depression into adulthood. The aim of this systematic review and meta-analysis was to investigate the impact of weight management interventions on depression in children and adolescents with overweight or obesity.

Methods: Four databases were searched in May 2017 to retrieve peer-reviewed articles that met the following eligibility criteria: (1) children and adolescents (<18 years) with overweight or obesity; (2) weight management intervention with a nutrition component; (3) case studies, pre-post studies, RCTs; (4) pre- and post-intervention assessment of depression using a validated tool.

Results: Of 2799 articles screened, 29 studies ($n = 1542$, 9.5–16.5 years) met the inclusion criteria. Meta-analyses showed reduced