EP02.09

The Children's Obesity Clinic's Treatment Protocol transferred into a community-based treatment programme

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Background: The prevalence of childhood obesity has reached alarming levels worldwide and improvements in treatment capacity and accessibility are needed. Community-based childhood obesity treatment has the potential to improve treatment capacity and accessibility, but few treatment programmes have been evaluated in community settings, and their results are inconsistent.
Objective: To evaluate if an efficient, family-centred, multidisciplinary, hospital-based childhood obesity treatment protocol transferred into a community-based setting would reduce the degree of obesity during a 1.5-year period of treatment. The community-based treatment was provided by nurses and dieticians employed at eight municipal health care centres across Denmark, and the degree of obesity was assessed by the body mass index (BMI) standard deviation scores (SDS). Improvements in BMI SDS were analysed in this single-arm, observational study.
Results: From June 7, 2012 to January 23, 2015, 1,001 children (455) boys were consecutively enrolled in treatment. Upon entry, the median age was 11 years (range: 3-18), and the median BMI SDS was 2.85 (range: 1.26-8.96) in boys and 2.48 (range: 1.08-4.41) in girls. After 1.5 years of treatment, BMI SDS was reduced in 74% of the children. The BMI SDS was reduced by 0.38 (95% confidence interval (CI); 0.30-0.45, $p<0.0001$) in boys and by 0.18 (95% CI: 0.25-0.12, $p<0.0001$) in girls, regardless of baseline age, BMI SDS, or pubertal development stage ($p>0.08$). The dropout rate was 31% after 1.5 years. On average 4.5 consultation hours were invested per child per year.
Conclusion: The degree of obesity was significantly reduced during 1.5 years of community-based treatment, with low dropout rate and low time cost. Thus, community-based treatment may help improve treatment capacity and accessibility.
Key words: Body mass index, Childhood, Community, Obesity, Treatment.
Trial registration: Registered at Clinicaltrials.gov, ID numbers NCT02013843.