



center for children's
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nutrition

Outcomes of a Weight Management Program for Young Children by Obesity Severity Class Recommendations

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Background

- Severe obesity affects 2% to 5% of young children and is associated with serious immediate and long-term cardiovascular, metabolic, and other health consequences.
- Despite the prevalence and negative consequences of severe pediatric obesity, little research is available on treatment outcomes.

Objective

- This study examined body mass index (BMI) and obesity severity outcomes of a 6-week family-based behavioral lifestyle intervention for young children with overweight or obesity.

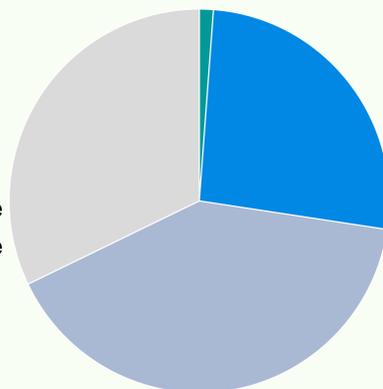
Participants

- Families of 84 children ages 2-8 years (M = 6.71, SD = 1.62) who completed the treatment program.

Baseline Participant Demographics	
BMIz	2.68 (0.55)
BMI%ile	99.23% (0.95%)
Bmi%ile over the 95 th percentile	133.58% (19.67%)
Sex	
Male	31 (36.9%)
Female	53 (63.1%)
Ethnicity	
White	19 (22.6%)
Black	23 (27.4%)
Latino	38 (45.2%)
Multiracial/other	4 (4.8%)

Distribution of Obesity Classes at Baseline

- Overweight
- Class 1: BMI=100-119% of 95thile
- Class 2: BMI>120-140% of 95thile
- Class 3: BMI>140% of 95thile



Methods

Measures

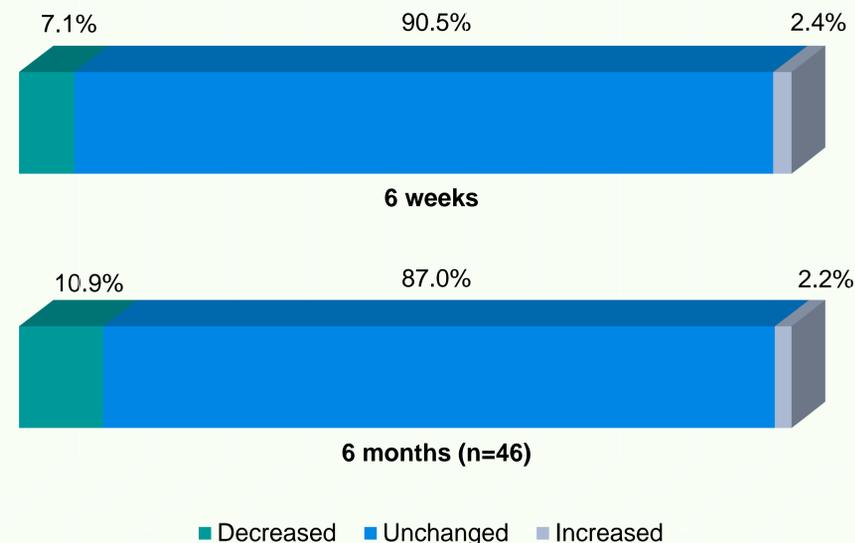
- Demographic information, such as age, sex, and ethnicity, were assessed at the time of entry to the intervention.
- Child height and weight were measured at baseline, treatment end (6 weeks), and follow-up (6 months) using standardized procedures. Height and weight, along with age and sex, were used to calculate BMI and categorize youth into obesity severity classes.
- Data collection procedures were approved by the hospital's Institutional Review Board. All families signed informed consent prior to participating.

Statistical Analysis

- Paired-samples t-tests tested outcomes and between-groups ANOVA tested differences in outcomes between obesity severity classes.

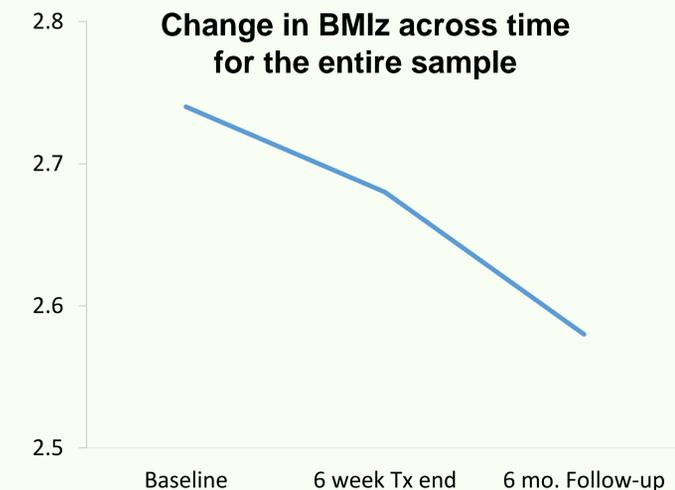
Results

Change in Distribution of Obesity Classes from Baseline



Results (cont.)

- Children showed significant reductions in BMIz from baseline to treatment end (change = -0.06; $t(83) = 5.79, p < .001$) and baseline to follow-up (change = -0.15; $t(51) = 5.98, p < .001$), and in BMI%ile over the 95th percentile from baseline to treatment end (change = -1.72; $t(83) = 4.26, p < .001$) and baseline to follow-up (change = -3.72; $t(45) = 4.15, p < .001$).



- Baseline obesity class did not predict changes in BMIz or BMI%ile over the 95th percentile at treatment end or follow-up.

Discussion

- Though the intervention aimed to target children over the 85th percentile, nearly 75% of presenting youth had Obesity Class 2 or 3, which is associated with significant medical comorbidities. It is essential to figure out ways to engage families of young children in interventions at lower levels of severity.
- Although baseline obesity class did not predict weight outcomes, there were significant improvements in BMIz and BMI%ile over the 95th percentile at treatment end and follow-up. Further, 11% of youth decreased one class at follow-up.
- Future research is needed to improve intervention effectiveness, particularly for those with severe obesity.

Acknowledgements

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