Abstract: 4225

Effectiveness of a behavioural incentive scheme linked to goal achievement in overweight children: a multicenter cluster randomized controlled trial

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Background: The prevalence of childhood overweight and obesity is becoming an increasing concern worldwide and management is vital for primary prevention of cardiovascular disease. Studies in adults have shown that provision of incentives may facilitate behaviour change but there are no similar studies targeting weight management in children.

Purpose: To determine effectiveness of a structured goal setting incentive scheme, delivered within a community program, on health outcomes (with a focus on cardiovascular risk factors) in overweight children at 6 and 18 months.

Methods: Single-blind, multicenter, cluster randomized controlled trial with 10 weeks, 6 and 18 month follow-up. Eligible sites had to be delivering the standard children’s weight management program and enrol at least 10 children per term. Eligible children had to be 7-13 years and have a body mass index (BMI) > 85th percentile. Recruited sites were randomized to (i) standard weight management program plus incentive scheme (intervention) or (ii) standard program alone (control). The intervention group participated in the standard program plus received milestone based incentives for achievement of goals. Incentives were practical, and healthy in nature such as fun vegetable slicers, sports store vouchers, sport equipment and family zoo passes. Primary outcome was mean BMIz score at 18 months. Secondary outcomes included anthropometric (body weight, waist circumference), behavioural (physical activity, nutrition) and self-esteem (Physical Activity Enjoyment Scale, Rosenberg Self Esteem Scale) measures.

Results: A total of 37 sites (33 urban and 4 regional) and 512 children were recruited. There were no significant differences between the control and intervention groups at any follow-up time-points. There were significantly more participants in the intervention than control group who completed 10 sessions of the weight management program (23% v 13%, p=0.015). Compared to baseline, at 18 month follow-up, the total cohort achieved significant reductions in the mean BMIz score (1.7 v 1.0, p<0.001), median screen time (16.5 v 15.8 hours/week p=0.0414), median number of fast food meals per week (1.0 v 0.7, p<0.001) and significant increases in physical activity (6.0 v 10.0 hours/week, p<0.001) and self-esteem score (20.7 v 22.0, p<0.002).

Conclusions: The incentive scheme, delivered in addition to a standard community weight management program, did not have a significant impact on health outcomes in overweight children. However, the intervention increased program attendance and overall cohort achieved sustained improvements in clinical and lifestyle outcomes. The results of this study suggest that extrinsic rewards may not provide added value to current community weight management programs however, participation in such programs is likely to support primary prevention of cardiovascular disease.
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