

## **MSc Nutrition and Dietetics**

An evaluation to review the effectiveness of an established residential weight management intervention on short-term health outcomes in overweight and obese children and adolescents

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## **DECLARATION OF ORIGINALITY**

I hereby declare that work contained herewith is original and is entirely my own work (unless indicated otherwise). It has not been previously submitted in support of a Degree, qualification or other course.

## ABSTRACT

### Background

Overweight and obesity are rapidly escalating to epidemic proportions in the paediatric population. Obesity has profound health and social consequences in both the short- and long-term. Multi-component interventions have been highlighted as the treatment of choice but the current evidence base is limited and many interventions have not been properly evaluated.

### Objective

To review the effectiveness of the Carnegie International Camp (CIC) programme, an established, residential, multi-component weight management intervention, previously demonstrated to be effective across a range of health outcomes for overweight and obese youth (Gately et al., 2005).

### Methods

Replication of the previous evaluative study (Gately et al., 2005); 290 children and adolescents (mean age 13.7 years) participated in one of three successive residential weight management programmes during the school summer holidays of 2006-2008. Design: A prospective cohort study investigation incorporating a quasi-experimental, repeated measures design across a range of physiological and psychological variables associated with overweight and obesity. Measurements were taken before, during and after the intervention period. Comparisons were made with the data from the earlier evaluative study (Gately et al., 2005).

### Results

Significant ( $p < 0.05$ ) improvements were achieved in all outcome variables from baseline (pre) to post intervention. Mean reductions: body mass = 5.56kg (6.0%), total percentage body fat = 4.0%, BMI = 2.19 kgm<sup>-2</sup>, BMI SDS = 0.27 units, waist circumference = 5.47cm (5.7%), systolic pressure = 3.23mmHg (2.7%), diastolic pressure = 7.92mmHg (10.5%), and a significant increase in self-esteem scores was achieved (+0.22 units, 9.4%). Significant improvements across all outcome variables were also reported by Gately et al. (2005). Similar changes were attained in both studies; significant between-group differences were only identified in three of the outcomes measures; percentage body fat, diastolic blood pressure and self-esteem, and the magnitude of these between-group differences were only small to moderate (eta squared = 0.017; 0.024; 0.038, respectively).

### Conclusions

The CIC programme, an established multi-component, residential weight management intervention, specifically designed to meet the needs of overweight and obese young people, has been re-evaluated and the results from the current study demonstrate its continued acute effectiveness in producing positive outcomes across a range of physiological and psychological variables associated with overweight and obesity.

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