

The Odense Overweight Intervention Study: A randomized controlled intervention study examining the effect of an intensive 6 week day camp in overweight children

Study design and participant flow

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Background

To encounter the problem of increasing cases of overweight among children, it is important to develop methods that are feasible and effective. Since 2005 the Municipality of Odense and the Institute of Sports Science and Clinical Biomechanics cooperatively founded Camp Fanoe for overweight children. Taking place on an island 150 km from Odense, the 40 fifth grade children accepting to participate undergoes an intense 6-week program based on a combined diet, physical activity and lifestyle intervention programme. During the following year the intervention continues with inclusion of parents. The camp resulted in 2011 a mean weight loss of 2,5 to 2,8 BMI points. However, until now it has not been possible to implement a scientific evaluation of the programme, but this was made possible based on a grant from the Tryg foundation in 2011. As generalizability was a priority the setting of the camp was established in the city of Odense. In 2011 forty children were recruited for a pilot project to gain practical knowledge of conducting a day camp in Odense based on the same principals as Camp Fanoe.

Aim

The primary purpose of the OOIS is to evaluate the effects on BMI of a 6 week day camp intervention and a consecutive 10 months follow up period on a group of overweight and obese fifth grade children in a randomized controlled setting.

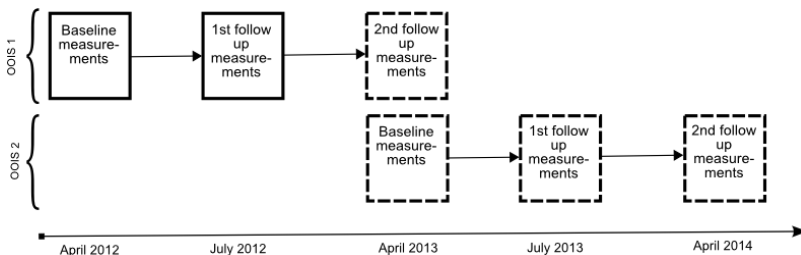


Fig. 1 OOIS timeline

Study design

In 2012 the subjects were recruited from the mandatory annual schoolchild examination which is conducted on all fifth grade school children ($N \approx 2200$) from the municipality. 60 subjects were initially recruited. As the initial recruitment failed to include sufficient participants, a second cohort will be included in 2013 increasing the total expected number of participants to approximately 120 (fig. 1). The children are eligible for participation in the study if they exceed age- and sex-specific BMI cut-points for overweight based on criteria from the International Obesity Task Force [1]. The participants are randomly allocated to either an intervention group or a control group. The intervention consists of a day camp for six weeks and a subsequent forty-six week family-based intervention. The children in the day camp are engaged in three structured hours of fun-based physical activity and sports per day. All food on the camp are served without restrictions and according to the Danish Health and Medicines Authority's guidelines. The subsequent family-based intervention consists of four meetings targeting physical activity and dietary behaviour using an appreciative approach. Children allocated to the control group receives a standard intervention, which consists of one hour physical activity session per week for six weeks and one educational session.

The outcomes are measured four weeks before intervention start, within two weeks after completed interventions, and 12 month post randomization.

References

- 1) Cole TJ, Bellizzi MC, Flegal KM, Dietz WH: Establishing a standard definition for child overweight and obesity worldwide: international survey. *BMJ* 2000, 320 (7244):1240-1243

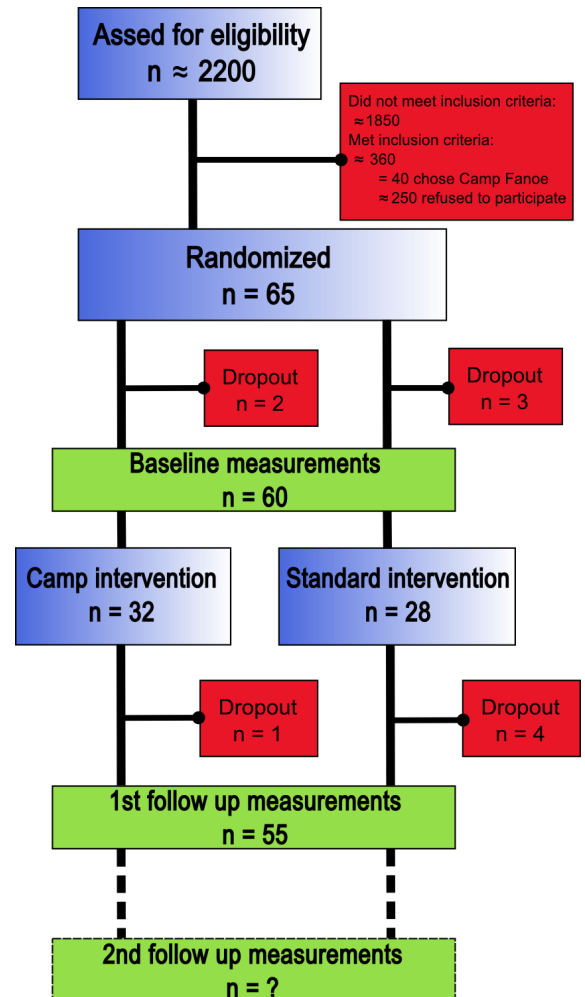


Fig. 2 Flowchart of the OOIS

All findings regardless of outcome will be reported.

Future perspectives

Since all children in public and private schools within the municipality of Odense will have their height, weight and waist circumference measured in the mandatory annual schoolchild examination in 9th grade, a 4 year follow-up measurement will be done on the primary outcome. Based on earlier experience from the pilot project and Camp Fanoe we expect a markedly effect on BMI from the camp at 6 weeks follow up. At ten months follow up the effect is expected to be more vague, but still present.

In case of positive results it is planned to devise a manual of contextual practice, potentially allowing the project to be implemented in other municipalities in Denmark.