The MEND Study: Sustained improvements on health outcomes in obese children at one year

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Background
- Despite the global increase in child obesity prevalence, there is a dearth of effective randomised controlled trials (RCT) to combat this issue.
- This RCT followed a pilot study and was conducted to assess the effects of the MEND (Mind, Exercise, Nutrition... Do it!) child obesity intervention programme on relevant health outcomes.

Methods
- Children were self-referred or referred by health professionals.
- Inclusion criteria:
  - ≥98th BMI centile
  - 8-12 years
  - Simple obesity
  - Parental attendance compulsory
- Outcomes:
  - Primary: waist circumference at 6 months
  - Secondary: BMI, cardiovascular fitness, physical activity & self-esteem
- Study design:
  - Groups:
    - Intervention: 9-week MEND Programme & 12 week free family swimming pass
    - Control: delayed intervention (at 6 months)
  - Measurements at:
    - baseline
    - 6 months (in the entire sample)
    - 12 months (in half of participants)
  - Study venues: sports centres and schools (urban & rural)
  - Delivery: 5 separate multi-disciplinary teams (health, exercise & social care professionals)

Results:
- 107 children were recruited, of which 104 completed the intervention (43% boys; mean age 10.1 SD 1.1 years; 52% Caucasian)
- Waist circumference at 6 months (primary outcome) was significantly reduced in the intervention group compared to the controls (n = 82, mean difference = -4.3 cm, 95% CI -7.8 to -0.08, p=0.02)
- Positive results were observed for other secondary outcomes including BMI (mean difference = -1.9 kg/m², 95% CI -3.8 to -0.03, p=0.046)
- Longitudinal follow-up within subjects indicated that the positive benefits which were evident at 6 months were sustained at 12 months from baseline for both the primary and secondary outcomes (Table 1)

Conclusion:
- The sustained benefits of the MEND intervention suggest that this is an effective and feasible community-based programme for childhood obesity

Methods
- 18 x 2-hour group sessions over 9 weeks:
  - Mind highlights:
    - SMART goals & rewards
    - Group star chart
    - Stimulus control
    - Internal & external triggers
    - Role modelling
    - Self-esteem & confidence
  - Nutrition highlights:
    - Land- & water-based games
    - Healthy eating advice customised for obese children
      - Not a diet – no forbidden foods!
      - Nutrition targets
      - MEND Food Tables: MEND-Friendly vs. MEND-Unfriendly
      - Label reading
      - Supermarket tour
      - Cooking & tasting

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References:
MEND References


MEND programme cited in: