Treatment of obesity in adolescents, where should interventions focus?
Adab, Peymane

DOI: 10.1136/archdischild-2017-312807
License: None: All rights reserved

Document Version
Peer reviewed version

Citation for published version (Harvard):
Adab, P 2017, ‘Treatment of obesity in adolescents, where should interventions focus?’ Archives of Disease in Childhood, vol. 102, pp. 689-690. DOI: 10.1136/archdischild-2017-312807

Link to publication on Research at Birmingham portal

Publisher Rights Statement:
Final Version of record available online at: http://dx.doi.org/10.1136/archdischild-2017-312807
Eligibility for repository: Checked on 2/5/2017

General rights
Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

• Users may freely distribute the URL that is used to identify this publication.
• Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
• Users may use extracts from the document in line with the concept of ‘fair dealing’ under the Copyright, Designs and Patents Act 1988 (?)
• Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

Take down policy
While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact UBIRA@lists.bham.ac.uk providing details and we will remove access to the work immediately and investigate.

Download date: 08. Jan. 2019
Treatment of obesity in adolescents, where should interventions focus?

The upward trend in child and adolescent obesity is of global concern, with up to 16% of 10-17 year olds being classified as obese in some countries\(^1\). Given the well-established short and long-term health\(^2\) and psychosocial\(^3\) consequences, the increasing prevalence and the impact on social inequalities in health, there is an urgent need to tackle obesity at an early stage.

Several systematic reviews have summarised the evidence on the effectiveness of weight management interventions for child and adolescent obesity\(^4-6\). In general they highlight methodological limitations, with many previous trials not being adequately powered, and interventions lacking a theoretical framework\(^6\). Trials are particularly sparse among adolescent populations.

The findings from a trial evaluating the Healthy Eating and Lifestyles Programme (HELP), aimed at weight management in obesity 12-18 year olds, is reported in this issue. This trial addresses many of the limitations in previous studies. The 12-week family based intervention is theoretically informed and the trial was adequately powered to detect clinically important outcomes. However, despite promising findings from a pilot study, the definitive trial found no evidence of benefit in terms of BMI reduction, psychological or metabolic outcomes among those in the intervention group, compared to adolescents receiving a single educational session on health eating and physical activity in a primary care setting.

Comprehensive process measures alongside the trial showed high intervention fidelity, suggesting this was not an explanation for the null findings. Relatively low attrition suggests that the trial was also adequately powered. The authors consider one possible explanation for the findings relates to the highly deprived population that took part. This is partly supported by the findings of another systematic review focusing on weight management interventions among adolescents from disadvantaged backgrounds\(^7\). The quality of included studies was generally low. Nevertheless, a feature of the interventions showing a beneficial effect on BMI was that they were more experiential rather than educational as in HELP.
Within the wider literature, systematic reviews conclude that lifestyle weight management interventions generally do result in modest weight loss among children and adolescents, at least in the short term\textsuperscript{4,5,8}. Evidence on long term outcomes is limited and it is not known whether any short term effects are maintained. A review of child and adolescent weight management studies by the National Institute for Health and Clinical Excellence (NICE) found a small reduction in standardised BMI for children in the intervention compared to those in the control arm at the end of intervention (standardised mean difference = −0.17; CI 95% = -0.30 to −0.04, p = 0.01). However, meta-analysis of data from studies that included a longer term follow up (≥ 6 months) showed a null effect (SMD = -0.07; CI 95% = −0.15 to 0.02, p = 0.12) \textsuperscript{4}. Furthermore, even if behavioural interventions resulted in BMI reduction equivalent to the largest upper pooled estimate of effect in meta-analyses (reduction in BMI z-score of 0.3), an adolescent with extreme obesity is unlikely to achieve normal weight by participating\textsuperscript{9}. Substantial benefit is only likely if the short term effects are maintained\textsuperscript{8}.

A further complication is that the majority of children and adolescents who are obese do not attend or complete weight management programmes. An observational study in five districts in London found that among 285 overweight children identified through school measurements, only a third sought further help, mainly from informal sources\textsuperscript{10}. Difficulty in referring and uptake of weight management services by children and their families has also been highlighted by service providers\textsuperscript{11} and by NICE\textsuperscript{12}. Once recruited, retention of families in programmes is also challenging, with completion rates ranging from 33% to 89% across programmes in one region\textsuperscript{13}. Reasons given for non-participation in weight management services mainly relate to lack of time and interest, with some families highlighting the importance of focusing on health rather than obesity\textsuperscript{14}. A review of qualitative studies\textsuperscript{15} highlighted a range of factors, including lack of recognition of obesity, low motivation, or time pressures, as well as service-related factors such as the timing, duration or location of services posing a barrier. Thus, child and adolescent weight management programmes also need to consider how to improve attendance and retention.

In summary, child and adolescent weight management programmes may be effective in some groups, but uptake and completion rates are low. In particular, evidence on the most effective interventions for more disadvantaged groups is lacking. This group are at
particularly high risk of obesity, and unless interventions focus on deprived sub-groups, inequalities in health will widen. Other interventions, including upstream measures and a greater focus on prevention need to be considered and evaluated.

References:
