A qualitative investigation into the levers and barriers to weight loss in children: opinions of obese children

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Background: The alarming increase in the worldwide prevalence of childhood obesity is now recognised as a major public health concern. Failure to isolate and understand the external and internal factors contributing to successful weight loss may well be contributing to the ineffectiveness of current treatment interventions.

Aim: To identify the physical and psychological levers and barriers to weight loss experienced by obese children using qualitative techniques.

Methods: 20 participants were randomly selected from a population of clinically obese children (7–15 years old) attending a weight-loss clinic for >3 months. The children expressed their opinions in a series of interviews and focus group sessions. Data were recorded, semitranscribed and analysed using the thematic framework analysis technique and behavioural-change models.

Results: Children described the humiliation of social torment and exclusion as the main reasons for wanting to lose weight, although initiation of behavioural change required the active intervention of a role model. The continuation of action was deemed improbable without continual emotional support offered at an individual level. Behavioural sacrifice, delayed parental recognition and previous negative experiences of weight loss were recognised as barriers to action. Participants identified shortcomings in their own physical abilities, the extended time period required to lose weight and external restrictions beyond their control as barriers to maintaining behavioural change.

Discussion: This study identifies the important levers and barriers experienced by obese children in their attempt to lose weight. Dealing with these levers and barriers while acknowledging the complex interplay of social and emotional factors unique to the individual may well promote successful weight control.

Recent expansion of population-based epidemiological evidence shows dramatic increases in both overweight and obese populations across the developed world.¹ Research suggests that the levels of childhood obesity in the UK have more than doubled within the last decade,² and increasing numbers of children are maintaining their obesity status into adulthood.³ With the National Health Service already fronting an annual sum exceeding £2.5 billion² as a direct result of the obesity epidemic, the implications for future health expenditure are obvious. Obesity should be our public health priority, as it is proving to be one of the largest threats to longevity achieved over the last century.

A review of the evidence base⁴ allows weight-reduction studies centred around overweight and obese children to be categorised into five types: family-based physical activity and health promotion interventions; family-based programmes using parents as the major agents of change; family-based behaviour-modification programmes; behaviour-modification programmes with no parental input; and exercise treatment programmes. The results have been mixed, with tentative conclusions and little indication as to the most effective way to progress forward.

So why is it that our population of obese children find it so difficult to lose weight when those lifestyle factors that contribute to the condition are so widely recognised? Perhaps one explanation lies with the social psychology of risk taking. Human nature dictates that people will not always respond in a rational and predictable manner when given information about future health risks.⁵ Simply educating a population rarely has a marked effect on behavioural change,⁶ particularly with regard to children, in whom evidence has shown

that supplying the required knowledge does not necessarily lead to action.⁷ To engage the obese child, we must first gain an insight into the ideas and opinions of that child so that we can work together towards a weight-reduction scheme that is relevant to the child as an individual. This study aimed to examine the levers and barriers to weight loss from a child's perspective using qualitative techniques previously proved successful in exploring human perception and opinion.^{8–9} A qualitative approach to this study was deemed most appropriate as it provides "a holistic perspective which preserves the complexity of human behaviour".¹⁰

METHODS

The study sample for this research was taken from a population of clinically obese children attending a National Health Service-funded weight-loss programme for >3 months. The weight-loss programme was located in community-based centres and was easily accessible to the obese population, for whom the programme had been designed.

To recruit children, information packs regarding the nature of the study, its aims and the process of data collection were provided for every family enrolled in the programme. A total of 20 children (14 boys), aged 8–14 years (mean body mass index (standard deviation) 3.09 (0.49)), were selected on the basis of availability to take part in a series of interviews and focus group sessions. Each child was given the option of having a parent or guardian present at the time of recording, although only one child indicated the need for this. Most participants took part in both interview and focus group aspects of the study although, owing to reasons of

availability, three subjects were unable to attend a focus group meeting.

During their time spent with the research team, the children were encouraged to discuss their views on the following issues of major interest:

- When they first became aware of their weight problem
- What instigated the process of behavioural change
- The presence of barriers to behavioural change
- Whether attempts to lose weight had been made previously
- Why they felt the need to lose weight
- What helps them lose weight
- What makes it difficult to lose weight.

Individual interviews typically lasted approximately 20 min and were conducted in a non-domineering fashion using open-ended questions to explore issues most important to the individual interviewee. In addition, three focus groups were formed, as children are known to have a greater tendency towards group self-disclosure than adults.¹¹ The focus groups were designed to allow children to discuss and develop ideas and opinions brought to light through their interviews. These focus groups were facilitated and supervised by the primary researcher (JM) and a health promotion specialist (RD). Each focus group typically consisted of 6–8 children and lasted approximately 40 min. The issues raised and discussed through the personal interviews were revisited. The focus groups were conducted in a permissive and non-judgemental environment where all children were given an opportunity to voice their opinions.

Written consent was obtained from both parents and children, allowing the recording and transcribing of data generated through this research. Research ethics approval was obtained from Leeds West Ethics Committee (Leeds, UK).

Data analysis

All data were tape-recorded, semitranscribed, anonymised and then analysed using the framework analysis technique as set out by Ritchie and Spencer.¹² This involves distinct, although highly interconnected, stages of systematic and disciplined data analysis, enabling the researcher to sift, chart and sort large volumes of qualitative data identifying issues key to the subject matter. The box summarises the stages of this technique.

The five stages of framework analysis technique¹²

- Familiarisation—the process of sifting and sorting audio and written data
- Theme identification—identifying key issues, concepts and themes
- Indexing—a thematic framework is systematically applied to the data in its textual form
- Charting—data lifted from original context is rearranged according to appropriate thematic reference
- Mapping and interpretation—research notes are reviewed; perceptions, accounts and experiences are compared and contrasted in the search for patterns, and connections in the search for explanation and meaning

RESULTS

The levers and barriers to weight loss brought to light by the participants of this study were common to both interview and focus group sessions. Actual transcribed quotations are included in this section. Indicators are given for each child, and for whether the quotations were drawn from focus group scenarios. Quotations were selected for inclusion on the basis of how well they highlighted the common themes generated through the recorded data. The themes that were identified were:

- Reasons to change
- Cues for action
- Barriers to action
- Continued compliance
- Barriers to compliance.

Reasons to change

Both bullying and a desire to “fit in” were important reasons that motivated the children.

A. Bullying

Bullying was a prime reason. Every child admitted to enduring some form of bullying, which had dramatic effects on negative self-worth.

People call me names because they think it's funny but it's not (child 6)
You're fat, you're slow, you're ignorant, you're useless (child 1)

The participants' attitudes indicated that bullying has become “normal” behaviour even to those at the receiving end. It suggests that such displays of cruelty to the obese child have become part of normative beliefs of the school environment.

You hear people calling them fat but that's just normal isn't it? (child 12)

Most boys who were interviewed described how bullying had led to retaliation and uncharacteristic behaviour at school, often punished with exclusion from school activities.

If I be naughty, make em laugh, then they might not call me names (child 5)
At school I'm a different person to who I am at home (child 6)

B. A desire to “fit in”

The desire to lose weight in these children stemmed not from a need to be “perfect”, but from a desire to be “normal”, to “blend in” with their peers so as not to be signalled out for social torment.

[I feel] different and terrible, like I'm not like everyone else (child 4)
So I can take my top off and not get laughed at (child 3)

C. Health and physical ability

Eleven interviewees expressed the desire to enhance their own physical capabilities. Although a large number of these children had received health advice directly from health professionals, only two mentioned future health implications as a reason to lose weight. In fact, these children seemed to attach little importance to the long-term implications of their

own obesity. It was the social issues confronting them in the school playground, and not the promise of future morbidity that was fuelling their desire to lose weight.

Cues for action

The decision to change an aspect of an individual's life may not necessarily be the same factor that initially brings the problem to that person's attention. Although most children identified bullying as the means by which they obtained recognition of their obesity status, only four gave it as the instigating factor for behavioural change. The progression from contemplating action to behavioural change is complicated and sometimes drawn out. Most children went through a period during which they were aware but unengaged by their problem. In almost every case, the driving force behind the child's decision to lose weight was the influence of an external influential figure or role model. This was more often than not the intervention of the mother who finally moved the child to act.

Barriers to action

When contemplating behavioural change, people must first weigh up what they will gain from an action against what they will have to give up. The children spoke freely about the difficulties of making the sacrifices necessary to achieve weight loss while struggling to adhere to the lifestyle restrictions essential in their drive to lose weight.

It's just that fatty foods are dead nice (child 12)

You have a chocolate bar and put on a pound, you have sixteen hundred apples and you take off half a pound (child 5, focus group 1)

Those who had received input from dietetic services were particularly articulate about their value. In this case, the opportunity of encountering a potential behavioural change facilitator was not helpful, and in fact set as a barrier to engaging the problem.

Dieticians never listen (child 15)

They just tell you what to eat, what to do (child 14, focus group 1)

Some children blamed their parents for their delay in action. A failure to recognise the problem meant that these children were not engaged until the problem had become a much greater issue than it need have been.

Ma Mum for 5 years: "its just puppy fat" (child 13, focus group 2)

I knew about it but my parents didn't believe me (child 11, focus group 1)

Continued compliance

The decision to take action, although important, was rarely the most difficult aspect of the behavioural-change process. The real challenge lay in taking action and maintaining it. The children identified the need for continual support as being central in raising their self-efficacy and remaining motivated, without which they felt success would be unlikely.

If I were by myself, I don't think I would [lose weight] (child 7)

It's just motivation, it helps me (child 8)

Barriers to compliance

Behavioural change requires motivation and self-belief, two qualities underpinned by confidence. The low levels of confidence and self-esteem common in obese children were evident and acknowledged in this study.

I don't have confidence at all (child 14)

I don't like going shopping for clothes because I feel people are looking at me (child 2, focus group 3)

The child's perceived control over behaviour was also an important barrier to compliance. The actions of peers, voices of authority, physical inability, access to sports facilities, the expense of "healthy" school meals and area of residence were all given as barriers perceived to be beyond the child's control.

The weight-loss time frame proved to be another obstacle barring the way to continued compliance. Weight loss needs to be a gradual event that takes place over an extended period of time with delayed gratification. This time frame was simply too long for these children, who were principally concerned with the immediate gratification of social conformity.

I should be skinny by now (child 6)

Can't we just do liposuction and just suck it all off? (child 5, focus group 1)

DISCUSSION

As the obesity epidemic of the 20th century rages on, it is apparent that to fully understand this health crisis we must start focusing on the ideas and opinions of those people who matter the most: our obese population. This study identifies the levers and barriers experienced by obese children in their attempt to lose weight, and so provides an important contribution to our understanding of the processes required for successful weight management. The results should be viewed with a caveat that the participating children had already embarked on the first step of initiating behavioural change and so may not be a reflection of the unengaged obese child. Unequal sex ratios of participating children may have influenced the emphasis placed on various levers and barriers; also, resource limitations did not permit us to follow up these children to endorse our conclusions. As is often the case with qualitative data, quotations were selected in terms of themes identified by the research team and so include an element of research bias. Nonetheless, this study provides a contribution to the evidence base, and looks beyond the effect that obesity has on children towards what they perceive will help achieve the goal of weight reduction.

Few health-related behavioural changes have notable short-term benefits, and so motivation to work towards a long-term goal is constantly being challenged by the short-term rewards of an unhealthy lifestyle. For those obese children who have made the decision to lose weight, the battle against obesity may well be a struggle that lasts a lifetime. Certainly, the frustration at the weight-loss time scale was obvious in this study. It is important that the child does not focus on the rate of weight-loss alone, as this may result in frustration and the termination of all positive behavioural-change goals that have already been made. We should encourage these children to acknowledge achievable, non-weight-related, short-term goals in terms as "stepping stones" to a longer-term goal of actually losing weight. For example, setting a child a simple goal such as increasing his or her daily consumption of fruit and vegetables may not change the immediate weight; however, it may be the

initiating factor in a healthy eating programme that will eventually result in weight loss. The achievement of such goals should be highly praised so that the children feel they are progressing in a positive direction, even if their weight remains static. For these participants, long-term compliance is unrealistic without a continued source of support and motivation, a lever identified as being extremely important.

The children in this study describe a time period during which they are aware of their obesity status and yet make no effort to take action. The concept of unrealistic optimism¹³ identifies our reluctance to acknowledge potential health risks. This reluctance can be rationalised through a lack of personal experience,¹⁴ our idealistic belief in the controllability of health risks¹⁵ and the low probability of these risks ever taking place. It is therefore understandable why obese children may not fully appreciate or even choose to ignore warnings of future health complications associated with their present state. Any obesity intervention is likely to have a greater chance of success if applied early. The importance of a parental "cue for action" is a concept identified through previous research.¹⁶ Increasing a child's awareness of the importance of early action increases the chance of success. Some children blamed their delayed action on their parent's failure to recognise the problem, which would seem to be in keeping with recent evidence suggesting that parents no longer seem to appreciate that their children have become obese.¹⁷

Negative experiences of dieting and of dietitians were identified as a barrier to action. Most participants attributed unsuccessful weight-loss regimens to unrealistically strict dietary guidelines. To obtain successful long-term compliance, it is imperative that the obese child receives continuous encouragement in working towards flexible, regularly reassessed behaviour-based goals.

The children expressed a longing "to be like everyone else" driving them to lose weight. Our desire to be part of a group, to form societies, is fundamental to human nature, and any undesirable trait, such as childhood obesity, frowned on by the society in which we place ourselves can have dramatic effects on our quality of life.¹⁸⁻¹⁹ Scientific study continuously reminds us of the negative stereotyping endured by obese children,²⁰⁻²² and this study supports previous evidence suggesting that social exclusion seriously damages confidence and self-esteem.²³ Of course it is impossible to make a child popular with their peers, but perhaps we could look at influencing the negative stereotyping, playground bullying and school exclusion that is obviously an issue with these children. Obesity should not be a barrier to participation. These children need to be supported, not ridiculed.

CONCLUSION

This study presents the various levers and barriers that present themselves to an obese child trying to lose weight. The identification of such factors may prove useful in facilitating future action and the continuation of that action against childhood obesity. As our understanding of human behaviour and those factors contributing to behavioural change increases, the implications for the treatment of childhood obesity become clear. Simply providing the relevant health information is not enough to induce behavioural change. The obese child must be engaged at a personal level where those issues that are most important to that child can be dealt with.

What is known about this subject

- Recent expansion of population-based epidemiological evidence shows dramatic increases in rates of childhood obesity across the Western world.
- Simply supplying children with health advice does not necessarily instigate action reducing obesity-related lifestyle factors.

What this study adds to current evidence

- This study deals with a current lack of evidence based on the ideas and opinions of obese children.

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