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Childhood Obesity – are we missing the point?

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Should strategies to tackle childhood obesity also focus on mental health?

Abstract

Childhood obesity continues to be a concern in the UK as in many other countries. Although there has been a 'levelling off' of BMI recorded through the National Childhood Measurement Programme in recent years the upward trend continues in older and more deprived children. Childhood obesity has been linked to poor mental health but whether psychological and social problems are a consequence or a contributor to obesity is unknown. Childhood obesity programmes that recognise and address psychosocial problems are proving useful in addressing obesity problems but their continued support is subject to continued funding. School Nurses, by measuring children's height and weight, can identify children at risk of obesity but this is ineffective on its own and more support and advice is needed for School Nurses on how to tackle the complex conditions surrounding childhood obesity.

Key take home messages

- The NCMP has identified that childhood obesity continues to rise, in particular in children aged 10-11 and those from the most deprived area
- Children with weight problems may also have other social and psychological problems
- A lack of appreciation of low confidence, self-esteem and abilities to interact can make recommending diet and physical activity ineffective
- The lack of skills of those referring to and/or delivering weight management may be a barrier to participation
- There are schemes that show it is possible to address both the mental and physical needs of obese children.

Key words: Childhood obesity; National Childhood Measurement Scheme; Start Scheme, mental health

The Government's 'Call to Action on Obesity' in England set out the national ambition for a 'sustained downward trend in levels of excessive weight' by 2020 (DoH, 2011). In the UK in 2013/14 at Reception age (4-5 year olds) 9.5% of children were identified through the National Childhood Measurement Scheme (NCMP) as obese, by Year 6 (10-11 year olds) this had increased to 19.1% (Health and Social Care Information Centre (NSCIC), 2015). The trends over the last few years show this may be levelling off at Reception but it is still on the increase for children in Year 6 (NSCIC, 2015).

Table to illustrate the increase trend in obesity levels of children aged 10-11 years in the UK. Source Public Health England (2015)

	2006/7	2013/14
• Year 6 boys	• 19%	• 20.8%
• Year 6 girls	• 15.8%	• 17.3%

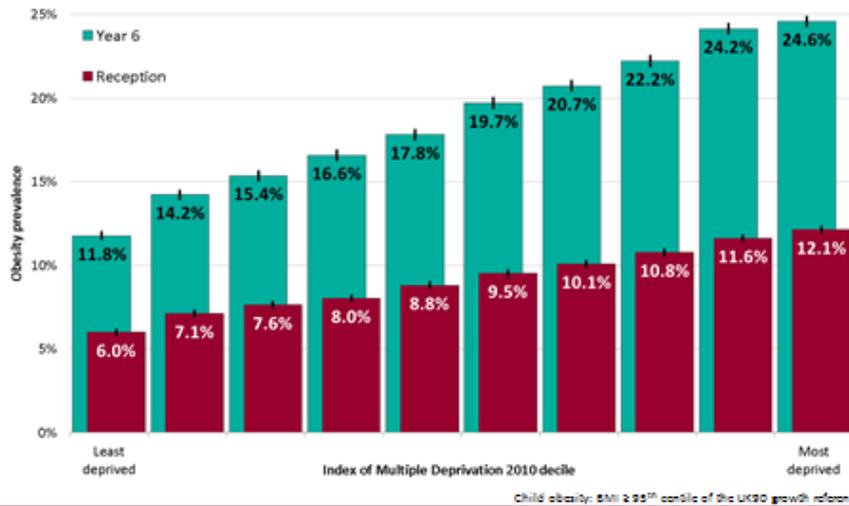
What is even more interesting is that although it appears to be levelling off for Reception aged children it is only those in the least deprived areas of the UK. In the most deprived areas the rates are increasing at all ages and the inequality gap is growing. By Year 6 11.8% of children from the least deprived areas are categorized as obese but in the most deprived area it rises to 24.9%.

Graph to illustrate the widening inequality gap in childhood obesity levels at age 4-5 and 10-

11

Obesity prevalence by deprivation decile

National Child Measurement Programme 2013/14



Source www.noo.org.uk

If we are able to 'diagnose' children who are at risk of overweight in Reception, why then are we not successful in preventing them from increasing their weight gains and ending up as obese by Year 6? School nurses spend many hours measuring and weighing children but to what use if we are then unable to prevent their continuing weight gain as they progress through school? Parents are notoriously bad at recognising their child's weight status; a recent study found that of 369 obese children only 4 parents thought their child was overweight (Black et al. (2015)). There is a need for intervention, the NCMP is an opportunity to alert parents to the potential risk, but without adequate provision to refer children on to, and advice and support for parents, the figures are likely to continue to rise.

How is childhood obesity currently being addressed?

Once identified as overweight or obese through the NCMP, parents are typically sent a letter informing them of their child's weight status and provided information about local weight management services and National advice regarding 'Change 4 Life'. Parents then decide whether or not to take up this advice. The assumption being that once alerted parents will

take action and their children will enrol on a programme. The uptake from these letters in some areas is as low as 1%. So why are more families not coming forward? It appears that despite the letter parents do not recognize their children as overweight and prefer to tackle it within the family (Black et al. 2015). It is unclear who is responsible for measuring and following up children after the NCMP but it is clear that just identifying weight status is ineffective.

Whilst there are now a number of schemes available locally to which children can be referred they rely on local commissioners and public health leads to support them. The typical weight loss from these schemes is a decrease in BMI of 0.9 (Sacher et al. 2006). The long term impact is less well known as many schemes will run for a limited time (typically 12 weeks). Whilst BMI is the crude figure used to determine success of the schemes it does not acknowledge the complex nature of obesity. Subjective measures such as self-esteem, dietary quality or improved fitness may go unnoticed (Pryke, 2014) and these are what may lead to long term success.

Obesity is complicated by the child's growth, parental and child engagement, pubertal status and cultural and economic influences (Pryke, 2014). BMI may be quick and easy but it is difficult to show changes in the short term and decisions on commissioning may be made without realisation of the complexity of obesity and the numerous influences upon it.

Why is the current model not working?

The difficulty is not only providing funding for children's weight loss services, but in getting children to the schemes and getting them to adhere once they arrive. The schemes typically focus on diet and exercise, however many of these children have complex mental and physical health needs. Whilst NICE (2013) recommend that children's mental health is assessed and dealt with the 'treatment' is diet and exercise advice. There is growing recognition of the link between mental and physical health but questions remain over

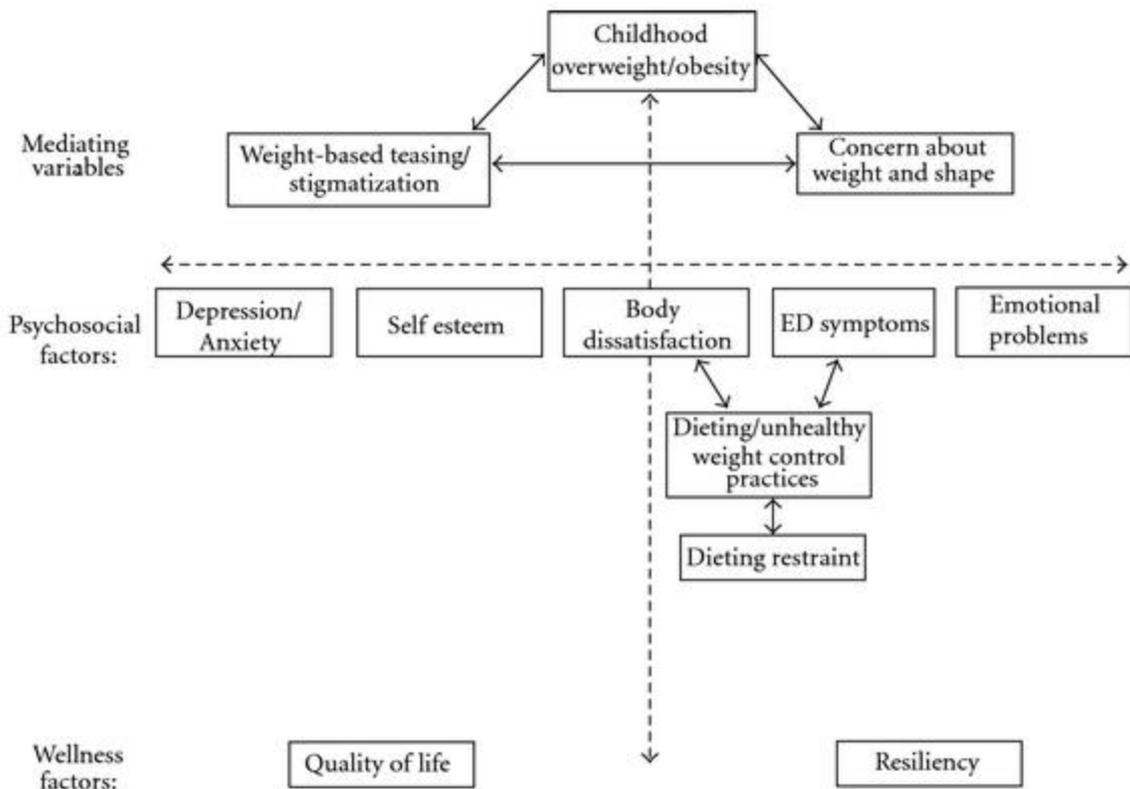
whether psychosocial issues may be causing obesity problems, rather than being a consequence.

A recent study suggests that many children would not have become obese if they had not been bullied and that early interventions to support the victims of bullying could not only help their mental health but also their physical health (telegraph). The impact of bullying and or of a lack of parental support may lead to a child overeating and avoiding physical activity opportunities.

A recent survey (Fink et al. 2015) found that mental health issues in children have increased over the last two years, with school staff believing at least a quarter of students in their schools were affected by mental health problems. These findings have been replicated in Kirklees where increasingly children are presenting at weight management services with social and psychological problems in addition to weight problems: these include eating disorders, low self-esteem, anger management, mood swings, depression and self-harming. The first battle is to engage with the child on a one-to-one basis and gain their trust and provide an empathetic approach. Tackling the weight problems requires a long term relationship and working on the child's self-esteem and confidence, before healthy eating and physical activity can become normalised.

What is effective?

Most interventions focus on physical health and disregard psychological or social wellbeing, assuming treating the obesity will also treat the mental health problem. However obese children are 5x more likely to report lower global health-related Quality of Life than healthy-weight children. The direction of the relationship between mental health and obesity remains unclear due to the cross-sectional nature of most of the research (Russell-Mayhew, McVey, Bardick and Ireland, 2012), however the links are now well recognised. A proposed model showing the links is reported by Russell-Mayhew et al. (2012)



The authors recommend that their needs to be a change in focus away from the child's weight status. They suggest interventions should target the psychosocial and emotional health of the child and not just be an 'add on' to the primary outcome of weight loss (Russell-Mayhew et al. 2015).

Case study: Kirklees

In the UK schemes such as those in Kirklees have taken on board the relationship between mental and physical health and provide a tailored approach to the individual child's needs. The interpersonal skills of the staff involved in delivering the scheme have been found to be key (Lewis et al. 2014). An evaluation of the scheme found that whilst weight loss was modest, 70% of the children increase their self-esteem (Fraser et al. 2012). In general the children became more sociable, increase in confidence and became more resilient to bullying:

“When you’ve been bullied at school...they {instructors} make you feel good in yourself and make you feel like your confidence has grown back...They’re very friendly and help you”

(14 year old participant from the *Start*).

The children who enter the scheme are generally in the highest obesity category (98th centile or above), a majority are between the ages of 5 and 11 and they are from some of the most deprived regions of the UK (Fraser et al, 2012). The adherence rate is around 67% and of those who drop out many continue to be physically active elsewhere. The success of the scheme is put down to how the children feel about themselves whilst on the scheme and this is due to the instructors and the supportive and encouraging environment they provide for these vulnerable children.

This paradigm shift from the child’s physical to mental health is seen as essential in providing an effective intervention

It has been suggested that:

“In general, obese children are neglected. They are often lonely and many of them don't participate in activities with their peers. They lack self-confidence”

Mullerup et al. 2015

Whose responsibility?

Previous research shows that G.P.s are reluctant to take on the responsibility (refs) and once admitted to hospital paediatric nurses, even when the child is admitted for an obesity related condition, do not see it as their job to intervene (Greenwood and Lewis, 2015). If however we recognise the potential complications of children’s psychosocial and emotional wellbeing we then have to see obesity as not a medical condition but a public health problem. This requires action from the public, government and corporate entities (Russell-

Mayhew et al 2015). Schemes such as the Kirklees one above will only work with those children who turn up. A better way of communicating both with parents and their families is needed. This may mean the School Nurse talking to the overweight child about their weight whilst they are in school and ringing parents and talking to them about their options. School Nurses may be reluctant to take on this extra role or feel they do not have the necessary training, skills or confidence to be effective. Motivational Interviewing is one technique that has had some success with overweight children (Bonde, Bensten and Hindhede, 2014) and is used regularly in the Kirklees's *Start* scheme. Investing in Motivational Interviewing and obesity training based on behaviour change theories, for all clinical staff could lead to significant gains (Pryke, 2014). The time has come to stop 'passing the buck', the NCMP is a costly scheme – it needs to do more than identify overweight children it needs to be backed by professionals with the resources and training to tackle the complex issue of childhood obesity. We also need to challenge weight stigmatizing behaviour in adults and tackle the psychosocial and emotional well-being of all children if we are to prevent further increases in childhood obesity levels.

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