
Combating childhood obesity: Reactions of children aged 10–11 years towards the National Child Measurement Programme

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Abstract

The aim of this study was to explore the reactions of children aged 10–11 years towards being weighed and measured and subsequently told their correct weight as part of the National Child Measurement Programme (NCMP). The study was undertaken in primary schools in a Primary Care Trust (PCT) in the North East of England, UK. One-to-one semi-structured interviews were conducted post-NCMP measurement (and the feedback) with a sample of 21 children, aged 10–11 years, conveniently sampled from the primary schools in the PCT. Findings from the study indicate that the NCMP, especially the weight feedback letter caused annoyance, panic and worry among children who were indicated to have weight problems and oversensitised all children about weight issues, regardless of their weight category. The NCMP is a potentially useful 'wake-up call' to the fact that something needs to be done for children identified to be overweight or obese but needs to be delivered with a sensitivity to the impact of the news on the child

Keywords

Child and adolescent mental health, child health, qualitative approaches, childhood obesity

Introduction

Tackling childhood obesity remains one of the major goals in modern public health. Although the evidence for what works in this task has been, at best, equivocal (Luttikhuis et al., 2009; Summerbell et al., 2005), there is a general consensus that childhood obesity is of multifactorial genesis. Tackling it thus needs a multidimensional approach. Whether interventions to prevent childhood obesity should be universal or targeted towards only the obese children is a dilemma that continues to cause serious yet unresolved debates (Khambalia et al., 2012; Lissau et al., 2002). Ells et al. (2005) strongly supported the use of universal approaches for preventing childhood obesity based on the fact that obesity begins early in life, yet there are no methods by which children at risk of obesity can be identified with precision. This means that by targeting only the obese children, a large proportion of children at risk of obesity who are often missed by the available tests would be left to develop obesity in adulthood. Thus, it is preferable to target the whole population in childhood obesity prevention programmes, especially in terms of behavioural changes among families.

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The UK Government's attempts to combat the rise in childhood obesity have included implementing a universal measurement programme called the National Child Measurement Programme (NCMP) – developed in 2005. It involves the measurement of height and weight, usually by a school nurse, of all children in year 1 (aged 4–5) and year 6 (aged 10–11) within the primary school setting. Parents and children are given the opportunity to opt out of the NCMP (Ells et al., 2005; Han et al., 2010). Since 2008, all parents of children are now given feedback on weight and height measurements, and those whose children are assessed to be overweight or obese receive template letters alerting them to the fact that their child is at risk of various medical problems, including cancer, and advising them to contact their local doctor or school nurse. The introduction of this policy follows similar developments in other countries, but the evidence for whether feedback on child weight status to parents results in benefit to the child is heavily contested (Foresight report, 2007). Aphramor (2009) has discussed the stigmatizing potential for such activity and have posited an impact on children's self-esteem.

The impact of the NCMP on the mental well-being of children is of particular importance; however, earlier studies did not place much emphasis on this aspect. For instance, Mooney et al. (2010) did not directly investigate the reactions of children towards the feedback, as they only interviewed parents, Primary Care Trust (PCT) staff and school teachers. They suggested that parents reported that a substantial number of children ended up opening up the feedback letter rather than their parents. They argued that the fact of children seeing the NCMP letter was accidental and suggested sending the letter with terms like 'confidential' on top to avoid children seeing the content. However, it is arguable that the goal of the Department of Health in recommending routine feedback in the NCMP is to raise awareness about weight issues among parents and their children, a point reiterated by Shucksmith and colleagues (Shucksmith et al., 2009). Such a claim that feedback to children is unimportant or that children should not be involved in or given information about their treatment runs counter to all current trends to recognize the competence of children and to address their rights to give assent and be consulted in such matters. This means that the NCMP as a whole should be made palatable to children as well.

One of the concerns the Department of Health overlooked in making a decision to recommend PCTs to consider routinely feeding back the results of the NCMP to the parents/guardians and children was the impact the entire process could have on the mental well-being of children and their families, and this still remains a gap in knowledge, as no studies were found that explored this important aspect directly.

The aim of this study was to explore the reactions of children aged 10–11 years towards being weighed and measured and subsequently told their correct weight through the NCMP feedback mechanism.

Methods

The study reported here was part of a larger PhD project conducted in a single PCT in the north-east of England (Nnyanzi, 2012). This region has a relatively high prevalence of childhood obesity compared with other areas of England (Ells et al., 2010). Using free school meals as a surrogate measure for deprivation, schools in the PCT were stratified

into high, moderate and low deprivation. In total, 24 schools took part in the larger PhD project (14 high deprivation, 4 moderate deprivation and 6 low deprivation). The interviews with children took place between March and July 2010, following the release of weight feedback as part of the NCMP 2009 cycle.

The study involved a convenient sample of 21 children aged between 10 years and 11 years subsampled from the group that took part in the larger PhD project ($n = 264$). Following the release of weight feedback from the PCT, children were approached in school and given a pack containing an invitation letter for the child to participate in the interviews and the consent letter for the parent to agree that the child may participate in the child interviews. Children who assented and had parental/guardian consent were recruited into the study. Interviews were conducted until a saturation point was reached.

Data from children were collected using one-to-one semi-structured interviews. Children taking part were interviewed at school in a private room in periods suiting the school's convenience. Each interview took about 35 minutes during which children were encouraged to speak freely as much as possible. The child interview explored experiences just before, during and after participation in the NCMP. All the interviews were audio recorded to ensure that vital information was not lost or missed out in the analysis.

Interviews were transcribed verbatim, and the transcripts were analysed using the thematic content analysis method following steps laid by Burnard (1991). This method was chosen for use because it allows the researcher to immerse himself/herself into the data, which enables identification and proper interpretation of the themes rooted in the data (Brannen, 2005). Coding of the data was done by two researchers independently to generate themes and categories. The independent lists were later merged to generate a comprehensive list of the themes and categories that covered all the accounts of the respondents. Audit trails were kept to increase the credibility, confirmability, dependability and transferability of the findings. A saturation point was reached as the interviews were conducted until no new themes were emerging from the children. Ethical approval to conduct the study was obtained from Teesside University.

Results

The majority of children taking part in interviews were female (66.7%). Most of the children (61.9%) came from areas of high deprivation when percentage free school meals is taken as the surrogate measure for poverty. Of the 21 children, 7 had been identified as overweight or obese. One-to-one semi-structured interviews conducted with children revealed intriguing findings regarding the feelings, reactions and perceptions children hold towards the NCMP. This article reports on two main themes that came out of the data, namely perspectives of children on taking part in the NCMP and what children go through on receiving weight feedback.

Taking part in the NCMP – the perspective of children

At first sight, children are quite happy to take part in the measurement process. However, digging deep into this phenomenon reveals different reasons for this happiness about the programme. Many children, especially those with normal weight feel happy

when they first learn that they are to be measured and weighed because they are curious to know their height and weight. One child with a normal weight reported:

“.... I think I was just curious to see my weight and height” (child 03).

This enthusiasm is usually increased by the fact that everyone else is taking part in the measurement process. To these children, the whole exercise is exciting, it is fun, and they would like to see who is taller than the other. This sort of reaction was typical of children who perceived themselves to be of ideal weight.

However, for children with weight problems, the experience is different. Some children who perceive themselves as being overweight live in denial of their own weight status. At one moment they feel overweight and at another moment they don't really accept that they are overweight. These children see the NCMP as a source that will finally tell them the truth about their weight status. For instance, one child who perceived himself to be overweight said:

“..... I think I am actually getting quite confused, sometimes I am like, oh yeah I am actually overweight and then sometimes I am like, no I am not, I can't be” (child 05).

Even though children are quite happy to take part in the NCMP, the moments before being measured are characterized with mixed feelings depending on the backgrounds of the children. Many children feel anxious, nervous, and worried, yet with no clear understanding of what happens during the actual measurement. Children rely on each other for information on what is about to happen to them. They ask each other questions about what goes on in the room where actual measurement is taking place. For example, a child said:

“... children were asking me how it was and I said it was ok, children were anxious thinking it was a terrible thing. You could look at the face of the next person and you could see he was absolutely terrified” (child 10).

It is clear that many children, after realizing how simple the measurement of their height and weight is, start to question why they worried before. This poor level of information could be one of the reasons why some children opt out of such a programme. One child reported:

“At first I felt a bit uncomfortable, I was really worried and I didn't want to be measured and weighed, but when I saw my friends going in I thought it was okay. After being measured I thought it was quite funny because I had been worrying about it and I didn't know that there was nothing to worry about, so I started laughing” (child 18).

However, this does not happen for all children; for some children whose parents/guardians routinely weigh and measure them at home, there is no pressure at all. They have neither worry nor anxiety when they are about to be measured, and they see this whole process as something normal. A child noted:

“I wasn't worried or anything because I have been measured and weighed before by my mum and grandma so it was practically just the same”. (child 12)

This underscores the importance of raising awareness about issues of weight status among families. Reactions of children before being measured have been presented above, yet of most importance is what happens to children after they have been

measured. Different things happen in the lives of children after being measured, but perhaps the most conspicuous is the increase in the curiosity of children about their weight and height. Most children reported that months after they had been weighed and measured by the nurse their interest in their weight increased. Some children even urged their parents/guardians to buy scales for them so that they can monitor their weight., for example:

“I wasn’t really bothered if like I knew the weight or not but now I sort of want to know all the time, I do stand on the weighing scale more often than I used to do before” (child 20).

For some children, this change in behaviour was clearly out of curiosity; after all they had discovered something new about weighing scales. Consequently, children who just used to look at scales and ignore them before had then learnt their role and wanted to explore how they work.

“..... I had never really gone on it before and I wanted to see how it really works, I never knew how it works. After the school nurse weighed us, I have been going on the scale every now and again”(child 15).

This sort of behavioural change was conspicuous among children of all weight status categories, however, it was more pronounced among those children who perceived themselves to have weight problems. Consequently even before the weight feedback could be sent home, children were already changing their attitudes about their weight status. One child who perceived herself to be underweight reported:

“I felt down because of my weight, I thought I was really skinny, so day after day I would step on the scale to see if anything has changed’ (child 04).

For some children, this curiosity of getting on the scales soon fades away with time. However for others, it gets mixed with the anxiety brought about by the long wait for the feedback showing their height and weight. Many children feel frustrated when they don’t receive their height and weight feedback in the weeks after being measured and weighed. This is more pronounced among children who perceive themselves to have weight problems. A child reported:

“..... I just felt oh, when am I gonna get this letter to see what height and weight I am and I was just quite nerve rackened” (child 11).

Receiving weight feedback – What children go through

When the letter showing weight feedback finally arrives home, there are different reactions children have towards the news of their weight status. Feelings of shock are evident among children who are told that they are overweight when in fact they thought they had a normal weight. One child narrated:

“..... I was just seated watching tele then and my dad said, ‘Come here please’. He said, ‘You are overweight somehow’. And I am like, ‘No! You are joking. No!’ I looked at the letter and it said that. I looked quite surprised” (child 05).

It was evident that such children for some time live in denial of their weight status. One moment they think it is true they are overweight and at another moment they think that something must have gone wrong and they have not been properly diagnosed. They even feel they would like to be weighed and measured again, just in case the school nurse got it wrong. To these children, the measurement process should be done routinely to enhance proper monitoring of the changes in weight status while maintaining accuracy of the diagnosis. For instance one boy said:

“..... I would like to see them take my weight again because I am just not sure they have got that one right. I would say children should be weighed once every month. Like if you are getting overweight they would be able to know and tell you” (child 05).

Undoubtedly, the weight feedback letter seemed to impact on the mental well-being of children who were indicated to have weight problems, especially those who did not think that they had weight problems. Changes in relationships among their peers stood out. Some children reported identifying themselves with new friendships with children in the same weight category. For instance, a boy who had been told that he is overweight said:

“... I now have a new friend called BT whose letter also said that he was overweight. My brother thinks he is tiny, but yeah, my dad thinks he is overweight. We sometimes talk about it with him” (child 09).

Other than changing relationships, children reported that it plays on their minds a lot of time causing them to get worried. Exploring the cause of this worry indicated that children feel they have limited information about what they can do about their situation. A lot of children reported relying on their parents/guardians for information about what can be done. On this, child 08 said:

“..... I sometimes think about it a lot. Yeah I keep on thinking like when I am by myself I just think I am like, oh yeah I am overweight. I am worried because I don’t know what to do about it. But my mum said I need to do more exercise, especially out of the house” (child 08).

On the other hand, children whose weight status came out to be normal received the news with a lot of joy and happiness. To some children, especially those who normally perceived themselves as overweight or underweight, it is a great relief. Such children say that the news makes them happy and they are finally able move on without worrying. For instance, a child said:

“ I was really happy that I wasn’t overweight or underweight” (child 13).

But this seemed not to happen to children only; some parents/guardians went ahead to reward their children with incentives such as a pet, a party and many others. One child reported that her mother bought her a dog when the feedback letter came back, indicating that she was of ideal weight. The child said:

“when the letter came my mum was very happy to see that I was normal and so she bought me a dog and I was like, I was very happy”(child 19).

A number of other children reported parties being thrown at home because their weight status turned out to be ideal. Whilst this would seem bizarre, it simply emphasizes the point about the inability of parents/guardians to identify the true weight status of their children.

Discussion

The current study suggests that there may be a negative impact of the NCMP on the mental well-being of children indicated to have weight problems. Children described being shocked, worried and anxious after receiving the weight feedback letter identifying them as overweight or obese when in fact they thought they were always of ideal weight. Children reported the issue of knowing that they are overweight/obese playing on their minds a lot of time causing them to get worried and to consider changing relationships with their peers in favour of those who were identified to be under the same category.

A number of reasons might explain the emotional reactions of children towards the weight feedback. In the first place, society too often associates being overweight/obese as being equivalent to being stupid, lazy and unable to control oneself. Hill and Silver (1995) discussed the negative attributes society holds towards overweight and obesity. Therefore, people are unwilling to consider themselves to be overweight because they reject the associated negative attributes. Ultimately, this could explain why the news of the child being overweight/obese is a source of worry to the children. Nevertheless, there could also be a genuine inability among children to distinguish overweight/obese from ideal weight, which could explain why children receive the news of their weight status being overweight/obese with utter surprise.

Overall, children's accounts indicate that most children felt overly sensitized about their weight status, however heavy they were. These findings could indicate that the role of the NCMP in potentially increasing awareness regarding weight issues among children cannot be underestimated. But whether this change in awareness is good or bad is an issue that continues to spark debate (Phillips et al., 2010). Researchers and commentators disagree over whether measuring children and feeding back the weight status to parents and children could provide the solution to problems of childhood obesity. The Foresight report (2007) overtly criticized this strategy of sending weight feedback to families, for example, because it engenders a feeling of personal responsibility for obesity rather than promoting a more contextualized approach that focuses on the role of the environment and society in causing obesity. Whilst the potential for individual weight feedback to engender such feelings of personal responsibility cannot be underestimated, it is argued here that not sending weight feedback to parents/guardians and their children would not help the families either, and the negative consequences of not getting parents/guardians on board to support interventions aimed at combating childhood obesity could be potentially more damaging.

Although findings from the current study indicate that feeding back weight status to children caused annoyance, panic and worry among those indicated to have weight problems, such a strategy has the potential to act as a 'wake-up call' to families to come on board to support government interventions aimed at combating childhood obesity. In fact, previous studies into the impact of weight feedback to families posited that weight feedback could act as an important spur to parents and children to think of adopting

healthy lifestyles (Grimmett et al., 2008; Nihiser et al., 2007). However, some of these studies were experimental and others were conducted in the United States, which presents problems associated with cultural transmissibility. Similar studies could be done in each country to localize how children respond in their own culture. The current study therefore adds the advantage of being conducted in the natural setting of the NCMP in the United Kingdom using qualitative methods.

Conclusion

The current study provides a vital step towards enhancing our understanding of some of the psychosocial impacts produced by participating in school-based screening/monitoring programmes. This study identified that such programmes have the potential to oversensitise children about weight issues and induces worry, anger and panic in the short term. Despite this, it is argued here that, although sending weight feedback to families could have potential negative side effects, not sending it provides no positive outcomes, and could worsen an already bad situation. The current study therefore supports the recommendation of the Department of Health of the UK government for PCTs to encourage measurement of children in primary schools and to routinely feedback height and weight measurements of children to their families with a view to bring to their attention to child weight problems and encourage them to support government interventions to combat these problems. However, this should be done sensitively avoiding placing blame on individuals and acknowledging the role of the environment in exacerbating childhood obesity. It is also recommended that feedback could be provided immediately with explanations being given along with the weight information. There is also a need for further studies to be conducted into the best way to deliver weight feedback to overweight/obese children without causing harm.

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