

RESEARCH PAPER

Training community practitioners to work more effectively with parents to prevent childhood obesity: the impact of HENRY upon Children's Centres and their staff

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Abstract

Background: One in four children in England is overweight/obese upon starting school. HENRY (Health Exercise Nutrition for the Really Young) offers a novel, preventive approach to this problem by training practitioners to work more effectively with the parents of preschool children around obesity and lifestyle issues. The programme is being delivered to all Sure Start Children's Centres (the UK government initiative providing family support and childcare in disadvantaged areas) in Leeds, UK.

Methods: The evaluation covered the first 12 Centres to be trained (these had a reach of approximately 5000 families). A series of semi-structured interviews were conducted with Centre managers, and 'drop boxes' were provided for all staff to leave their comments. Interviews took place up to 11 months post-training, allowing a consideration of any long-term impact.

Results: Data from 12 interviews and 106 comment slips indicated that HENRY training was associated with considerable changes to the Centre environment. Immediate effects included changes to Centre policy and practice, including the provision of age-appropriate portion sizes and the introduction of healthy snacks; a strengthening of team working and increased staff confidence around tackling lifestyle change; and enhanced skills when working with families. Training also induced changes within the staff's personal lives (e.g. increased physical activity and family mealtimes).

Conclusions: The findings suggest that positive and lasting lifestyle effects can be achieved by brief training courses involving Children's Centre staff teams. Both staff and attendant families appear to benefit. The effect on levels of preschool obesity across the city once HENRY has extended to the remaining Centres is yet to be seen.

Introduction

Approximately 25% of children in UK are overweight/obese by the time they start school, rising to one third by the end of primary school (Department of Health, 2009). Preventive strategies are required before children start school: heavier babies are at increased risk of later obesity, and babies who grow rapidly (but are not necessarily

overweight) also have an increased risk (Baird *et al.*, 2005). Child obesity is not benign and there is evidence that overweight children may display physiological and metabolic changes associated with later diabetes and cardiovascular ill-health (Freedman *et al.*, 2004; Gardner *et al.*, 2009). Thus, there is a need for obesity prevention to begin in early life. Unfortunately, health professionals tend to address childhood obesity only once excess weight

is established, and early intervention opportunities are often missed (Edmunds, 2005). Even when professionals do attempt to tackle the problem, their efforts may be considered unhelpful: parents of obese preschoolers have reported finding advice judgmental or dismissive (Edmunds *et al.*, 2007). Moreover, health professionals themselves report lacking confidence in working around obesity and lifestyle change (Story *et al.*, 2002; Perrin *et al.*, 2005b; Edmunds *et al.*, 2007).

HENRY (Health Exercise Nutrition for the Really Young) was developed as an attempt to meet these needs, at the same time as providing a novel approach for tackling the child obesity problem. Many obesity interventions take a prescriptive view, proffering advice on issues such as dietary intake and physical activity. Although HENRY training incorporates information about healthy lifestyles, according to guidance in the Healthy Child Programme (Rudolf, 2009), its primary focus is upon the methods and manner by which these messages are delivered. In other words, its major aim is to train community and health practitioners to work more effectively and confidently with parents and young families. Staff are encouraged to reflect on their practice and, following from the extra knowledge, ideas and skills gained during training, to identify any changes that they recognise as being necessary (for information on the basis of the HENRY approach, see Box 1; for course content informa-

tion, see Box 2). Additional detail is provided by Rudolf *et al.* (2010) and the Healthy Child Programme Framework for Action (Rudolf, 2009).

Representing the cornerstone of the city's obesity strategy, HENRY training is being delivered to all Sure Start Children's Centres within Leeds, UK. Children's Centres are a key UK government initiative that aims to tackle inequalities through the provision of family support, day-care and other health and community opportunities. It is hoped that, following HENRY training, changes will be initiated at the Centres and in the professional work of staff (i.e. the way that they interact with families, particularly regarding healthy lifestyle issues). An evaluation of the programme's impact was conducted with the first 12 Centres to receive the training. These Centres are all located in deprived areas, where obesity levels are high. The evaluation included feedback from training course evaluation forms, a pre- and post-course questionnaire investigating the course's impact, inspection of Centre action plans, and focus groups with parents about a related 8-week parent course. We report the qualitative data collected from staff as part of this evaluation, and examine the impact of the training upon the Centres and staff teams. The present study expands upon previous pilot work (Rudolf *et al.*, 2010) through the use of more rigorous qualitative methodologies, a broader sample of respondents and an extended follow-up period.

Box 1 The basis of the HENRY approach: the Family Partnership Model and solution-focused support

Much of the 2-day Core Training focuses upon improving trainees' skills in interacting with families. The programme is founded upon two key principles that help to achieve this:

Family Partnership Model (Attride-Stirling *et al.*, 2001; Davis *et al.*, 2002). This emphasises the importance of the parent-practitioner relationship as the most effective kind of relationship. The process of helping aims to integrate parents' expertise with that of potential helpers, rather than helpers simply dispensing expert knowledge. The model's use has been associated with positive outcomes, including improvements in family relationships, as well as children's development, behaviour and emotional functioning (Davis & Rushton, 1991; Davis & Spurr, 1998; Davis *et al.*, 2005).

Solution-focused support. Practitioners work with clients to highlight strengths and identify solutions, as opposed to focusing on weaknesses and problems. This technique is widely used in clinical settings (in the form of solution-focused brief therapy), with positive treatment effects (Gingerich & Eisengart, 2000; Kim, 2008).

Other skills covered early in the course are those crucial to successful relationship-building (e.g. empathy, listening, using open-ended questions), as well as consideration of the factors that can motivate or inhibit change. For example, trainees are invited to consider the feelings and emotions that they and the families they support may experience when discussing aspects of their lifestyle.

Box 2 HENRY course content

HENRY training challenges the traditional way of working with families, which tends to highlight a family's weaknesses or difficulties and give information and advice from an 'expert' position. Instead, it recommends a strengths-based and solution-focused approach that recognises parents' own knowledge and expertise; an empowering model that builds their self-efficacy and improves the motivation to change. The differences in this approach are explored during the course. For example, a parent seeking help in dealing with their toddler's difficult eating habits would be invited to describe the issue and then to identify occasions when the child is co-operative, and to explore in detail what is happening at these times (settings, circumstances when the child is calm, etc.). The practitioner would then help the parent to recognise that (s)he already possesses many of the skills (s)he needs, and to build on these so (s)he uses them more often. Empathy plays an important part in this process, as does thinking about the challenge of change (for parents and practitioners alike) and a reflective attitude. As part of the course, practitioners are encouraged to practise the new skills, giving them confidence to adapt the way they support client families. The elements of a healthy family lifestyle are also discussed (i.e. parenting skills, eating patterns, healthy eating, physical activity, emotional wellbeing). At the end of the course, trainees are invited to develop their own ideas about what changes they may make in their professional roles as practitioners and in their work setting.

Materials and methods

Sample

The evaluation covered 12 Sure Start Children's Centres in Leeds, UK. Data available from 11 of these indicated that 4963 families were registered and attending the Centres, giving a total reach in excess of 5000 families. HENRY Core Training was delivered to entire staff teams, including kitchen and administrative staff, over a period of 2 days. Across the 12 Centres, 271 staff from varied professional backgrounds were trained (Table 1). The majority were female ($n = 267$, 98.5%) and sociodemographic data collected from 102 trainees in five Centres gave a median age of 30–40 years.

Data collection

Data were gathered through a combination of semi-structured interviews and 'drop boxes'. Audio-taped interviews lasting 30–60 min were conducted with members of each Centre's management team. All took place at the respective Centres and were completed between 1 and 11 months post-training. Interview questions centred on the impact of the training upon the Centre (e.g. reporting any changes made to Centre policy, or meal provision) and staff (e.g. changes in the frequency or ability in raising lifestyle issues with families).

In an attempt to collect data from as many staff members as possible, the drop box method was developed. A sealed box was left in the staff room at each Centre, with paper slips attached for staff to report any ways that they were using HENRY. Slips could be completed as frequently as they wished, anonymously or by leaving their name if they were happy to be contacted to provide further details. Because it was not possible to conduct interviews with all staff, it was hoped that the boxes would permit a greater range of staff to provide feedback, quickly and easily. Ten boxes were delivered to Centres 4–11 months post-training, and two received theirs immediately post-training. All were collected after approximately 4 weeks. All slips were retained for analysis.

Table 1 Professional role of participants

Job title	<i>n</i>	%
Manager/assistant manager	38	14.0
Nursery staff/child care	147	54.2
Kitchen staff	14	5.2
Teaching staff	19	7.0
Family outreach/social work	27	10.0
Health visitor	15	5.5
Other: administrative staff	2	0.7
Other/not reported	9	3.3
Total	271	100

The work was supported by National Health Service (NHS) Leeds Primary Care Trust as service evaluation designed to improve current provision. Leeds City Council Children's Services and Leeds Community Health Care Trust supported staff to attend and implement changes. Verbal consent was given by all interviewees and drop box statements were self-completed with implicit consent provided. The results were presented at a meeting of Children's Centre staff, who concurred with the findings.

Analyses

The interviews and drop box slips were transcribed verbatim by the interviewer, and managed using NVivo 8 (QSR International Pty Ltd). A rigorous, thematic analysis was conducted, (for a detailed overview of the use of qualitative methods in nutrition and dietetics research, see Swift & Tischler, 2010). Specifically, two researchers independently read for emerging themes aiming to minimise arbitrariness and to maximise the consistency of coding (Fade & Swift, 2011). They later compared codes and themes, and resolved differences by consensus. During further analytical process, a constant comparison and contrastive approach was undertaken, with understandings and relationships within and between themes further refined by searching for negative cases (Pilnick & Swift, 2011). This was inductive research and, as such, did not rely on any particular theoretical positions to capture the holistic perspectives of the participants.

Results

Interviews were completed with managers at 12 Centres, and 106 slips were returned from the drop boxes at 10 Centres (one box was returned empty, another was lost). All interviewees were female; the gender of those providing drop box comments is unknown, although the majority are likely to have been female (reflecting the fact that the majority of Centre staff are female). The high number of drop box responses can be taken as indication that HENRY was having an impact in itself. Analysis of data from both sources showed that the impact related to professional practice, Centre policy and individual's personal lives.

Impact upon professional practice

Participants consistently reported an increase in staff confidence. Managers and staff described being able to approach families with greater confidence than before, and to be better equipped to interact with them around obesity and lifestyle issues. One manager, who had missed being trained with her Centre (and was due to attend later), reported that she noticed a change in the attitude and approach of her colleagues:

'I think they're more confident in tackling and bringing up things regarding food. I've noticed that people are talking about it more and are concerned about it' (Interview 11)

A key training component is the importance of relationship-building and forming a collaborative partnership with families. For many staff, there had been a realisation that when approaching parents to discuss lifestyles issues, *how* a message was introduced was as important as the message itself:

'It's not just about what you were saying, it's about how you would say it' (Interview 7)

Having formed a partnership, this new method of working was reported to have been successful:

'I have found the HENRY method beneficial when talking to parents about any issues or concerns they may have. Helping them find their own answers seems to get a more positive response' (Drop box – Centre 5)

Training staff teams in their entirety was identified as a positive aspect of the programme. Typically, courses are usually attended by only one or two team members who then report back to their colleagues. This was considered to have variable success in terms of impact upon other team members, and reduced the likelihood of key messages being integrated. By contrast, completing the HENRY training together was considered to be more productive, with staff now providing key lifestyle messages in a more unified, coherent manner. Previously, they had perhaps been inconsistent with some of the advice offered:

'I feel different people were treating the children different from each other. And now as they're talking they're trying to work more as a team to do the same thing, instead of one person doing it this way and another person ... and that's very confusing for children' (Interview 11)

'It was really valuable to have that discussion as a staff team so we're all saying the same thing. It has more of an impact' (Interview 4)

Similarly, it was considered important that the HENRY training was being completed by other agencies outside of Children's Centre teams (e.g. Health Visitor services). This served to make the messages more consistent:

'They're [Health Visitors] all doing it and it's fantastic because it's really hard when one service does something but it's not happening in the whole community' (Interview 11)

Impact upon the Centre

The participants reported that changes had been made to aspects of the Centres' policies and environment.

These frequently concerned meal provision and eating behaviours.

Meals and eating behaviours

All interviewees described modifications to Centre meal-times, including revised menus, items provided at snack-times, and, most commonly, a reduction in the size of portions served to children:

'We have cut down on portion sizes already [approximately 1 month post-training], because we felt we have been giving the children too big a portion' (Interview 11)

'We're more conscious as a team – because we've discussed this – we're more conscious at mealtimes of actually how much we're giving them now. We're a lot more cautious of what we're actually feeding them' (Interview 11)

Although most Centres reported greater attention to portion sizes, other changes were reported that impacted upon the amount of food consumed. For example, some had recognised that the children were eating from adult-sized plates and planned to replace these with more appropriately-sized dinnerware. Others achieved a similar effect by using smaller serving spoons. At some Centres, there had been a shift towards encouraging children to serve themselves, allowing them to define how much food they required. This was found to have additional benefits:

'Following the HENRY training, at lunchtime, we allow the children to serve themselves. The children appear to enjoy the independence and responsibility. It has opened up more discussions around food, portions, sharing, likes and dislikes and trying new foods' (Drop Box – Centre 12)

'Instead of practitioners serving the children's meals we encourage them to help themselves. I have noticed that usually "fussy eaters" will now try other foods' (Drop Box – Centre 12)

Some staff were now more willing to let children decide whether they wanted second helpings, and avoided encouraging them to clear their plate:

'[The children] are not always saying that they want seconds, and it used to be something we would say to them: "have you eaten all that, do you want some more?" So we've tried to do it the other way around and wait for the children to say that they want it' (Interview 11)

As noted, the HENRY training is provided to all members of staff teams, including kitchen staff. The interviews showed that inviting kitchen staff to complete the training was beneficial. Asked if the course could have an impact on what the kitchens served, one manager responded:

'Yeah, definitely. I mean, our cook came and did the training with us [...] I think in some ways they then

cut down on things that they do when they're cooking – in the kitchen, they maybe put a bit less fat in that, or a little less oil in that' (Interview 7)

Play and physical activity

Reported changes were not concentrated solely around food and eating. There was also evidence of changes relating to physical activity provision (e.g. the use of new equipment, or the completion of existing plans that had perhaps stalled):

'We've talked for a long time about putting them in place [new exercise resources], and it made us think: "Let's get on with it, let's stop talking and let's move on and do it now"' (Interview 10)

Frequently, Centre teams had become more aware of the importance of exercise (particularly outdoor play) and were trying to make this a more prominent feature of the day:

'... it's not that we didn't do outdoor play, but I think the staff ... their understanding of the importance of outdoor play I would say has definitely increased. There's less thinking about the weather and things like that and more getting out there and getting on with it. Definitely increased the amount going on there' (Interview 1)

Centre ethos and passing the messages to parents

A number of interviewees commented that the messages presented in the training were being incorporated into the ethos of the Centre. For example, several described a shift in the types of items that staff brought in to celebrate special occasions:

'I think staff have definitely become more aware in the staff room, because we used to always have a lot of biscuits and chocolate. Now when it's been birthdays and things – there have been a couple in the past month and staff have brought grapes, strawberries and fruit and put them out instead' (Interview 11)

Two individuals described a significant change in staff members' lunches:

'We haven't been to McDonalds since!'

'The staff team, it used to be like a Friday thing, going to the chip shop and they've all said, "now I won't have chips, we've done the HENRY training". Staff are bringing more salads and things into the fridge'

Interviewer: the staff used to all go to McDonalds?

'Quite regularly, yeah'

'Yeah, or the fish shop. Used to be a sort of Friday treat. They haven't have they? Used to have one person drive and we'd carshare to McDonalds and we haven't done that since ... well, since the training' (Interview 11)

In many Centres, HENRY-based notice boards had been created by staff who were eager to pass the programme's core messages onto local families. Typically, these made use of the HENRY resources, at the same time as also linking to other associated options (e.g. forthcoming fitness classes, contact information for health practitioners). Many staff recognised that the positive changes made within Centres would need to be replicated more widely in the community if they were to have long-term benefits. For example:

'I think it's stuff like portion control, and involving parents in that decision-making about the children. So it's alright for us to do it here but try and encourage them to do it more at home' (Interview 10)

Impact on staff's personal lives

An unanticipated result of training was the sizeable impact upon staff's personal lives, with many changes being implemented at home immediately following the course. All interviewees provided examples of changes made either to their own lifestyle or that of their colleagues:

'I think it's had an impact on everybody. I don't think there was anybody that did the training and didn't really look at themselves and think, "Oh ...", you know?' (Interview 10)

Matching the changes in Centre mealtimes, individuals frequently cited changes to their personal diet and the meals that they provided for their family. Many staff expressed shock at how much food they were serving to their children, whereas others spoke of changes to the food served at home:

'It has helped me focus on healthy eating with my family. We have implemented different ways within the family to eat fruit and vegetables' (Drop box – Centre 4)

One interviewee, speaking 1 month after training, reported a substantial change to her family's eating habits:

'We used to go as a family every Wednesday, from work to McDonalds. Wednesday night tea was McDonalds, and Friday night tea was McDonalds. Yeah, because we were so busy because Wednesday is like Brownies, and Guides, and Friday it's swimming lessons. It was just easier to go to McDonalds. And we haven't been since. I can't remember the last time we went actually' (Interview 11)

Making mealtimes a more sociable, distraction-free experience is one of the messages contained in the HENRY training. Several individuals reported applying this in meals with their family:

'... [we eat] with no distractions (TV). Now eat at the table with daughter' (Drop box – Centre 2)

'I make time at home to sit down at the dining room as a family and eat our tea' (Drop box – Centre 2)

As with changes at the Centres, personal changes covered more than just meals and eating habits. Several staff spoke of changes to their levels of physical activity:

'Started running again. After that [HENRY training] I thought, 'God, I haven't done any exercise in absolutely ages', and now I run every Saturday morning – do 5k around the park every Saturday. Me and my sister and my daughter do it' (Interview 7)

One interviewee emphasised that the changes made by her colleagues were enduring, and not simply temporary:

'It is carrying on, it wasn't just a fly-by-night thing, it has carried on and quite a lot of us have done different things' (Interview 4)

She was then asked if there were any particular reasons why the course had had a lasting effect, whereas similar changes often fell by the wayside:

'I think probably because there is that many of us doing it, so you've got the whole sort of team support in a way [...] so I think we have all sort of chivvied each other along and you're not just that one person that's trying to change and you're fighting a battle on your own' (Interview 4)

For some individuals, real, tangible outcomes had already arisen:

'Since doing the course I have continued to be aware of what I eat and also how much exercise I take ... since the course I have lost 3.5 stone' (Drop box – Centre 4)

'I've encouraged myself to follow the 'Eatwell Plate' and I have made sure my portion sizes have been suitable for children and myself and this has also helped me to lose half a stone in weight!' (Drop box – Centre 12)

Representativeness and time since training

Following analysis of the data, checks were made to ascertain the extent to which drop box comments were representative of wider changes and attitudes held within the Centres. Consistency between the methodologies was evident, with drop box comments reflecting information gathered through the interviews. The comments within each drop box also commonly corroborated each other; for example, in Centre 2, 11 (of 19) slips made reference to a reduction in children's portion sizes, suggesting that this change was being well implemented. The data (interviews and drop boxes) were also considered to determine whether the interval since training influenced response rates. As shown in Fig. 1, no differences were evident in

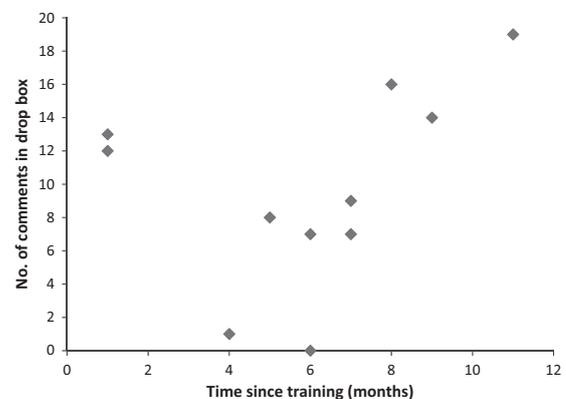


Figure 1 Time since training and the number of comments returned at each Centre. Note: One box was reported lost by a Centre and thus there are eleven data points.

terms of responses and impact on Centres between those trained 11 months previously and those trained more recently. Moreover, there was no suggestion that staff trained recently were more likely to comment in the drop boxes: the number of comments were highest in both those Centres trained first and more recently.

Discussion

Child obesity rates are rising (Department of Health, 2009) and health professionals often lack confidence in recognising and discussing lifestyle and weight issues (Edmunds, 2005; Edmunds *et al.*, 2007). Together, these findings form the rationale for HENRY: a programme designed to help practitioners work in a different, more accessible way with the parents of preschool children around lifestyle and obesity. Pilot work has demonstrated that staff value the course and report increased self-confidence following its completion (Rudolf *et al.*, 2010). The present study extends this work by using more in-depth qualitative interviews, collecting data from a broader range of individuals (drop boxes permitted the opportunity for all staff to comment) and exploring the impact over a longer duration. Interviews were conducted between 1 and 11 months post-training, yet the reported changes were similar and thus our evaluation suggests that HENRY training had a relatively rapid and prolonged impact upon the Centres under consideration. Changes were reported in Centre provision (menus, play opportunities) and in the staff's approach to working with families. An additional, unexpected (yet positive) finding was an impact upon staff's personal lives. It is important to note that no specific recommendations are made during the training: all changes described were self-initiated by trainees through the learning of new information and skills and by reflecting upon existing practice.

Taken together, the data obtained in the present study indicated that HENRY training is associated with positive changes at the Centres. Interviewees described a realisation that the portions they provided (both within the Centre and at home) were larger than was necessary. This insight is consistent with a preliminary report on healthy eating guidance within UK Early Years settings (Sharp *et al.*, 2010). It described a lack of guidance concerning suitable portion sizes for children, and stated that some settings offered portions more appropriate for adults. A shift to more age-appropriate portion sizes may have positive effects upon the weight and health of preschool children (Mcconahy *et al.*, 2004). Our respondents also reported increased opportunities for play and activity. Greater levels of play, particularly outdoors, are likely to benefit children's health and wellbeing: children are more active outdoors (Brown *et al.*, 2009) and outdoor play may also have positive effects upon mood and cognition (Burdette & Whitaker, 2005) in addition to its physical health importance. Analysis of the reported changes in relation to the time since training revealed no differences in either the types of changes described, or the number of comments received. This was encouraging because it indicated that changes following a brief training are sustainable over time. Furthermore, reported changes were considered to be indicative of broadly held attitudes and changes within staff teams: in those Centres where more than 10 drop box slips were returned, similar changes were reported by several respondents.

The data additionally support an important aspect of the HENRY training package: that everyone at the Centres, from management to administrative staff, is involved and participates in the course. It was frequently expressed that completing training as a team was beneficial, particularly in improving the consistency of messages delivered by staff. It may also make change more likely because trained staff support one another: one interviewee described how training courses are usually attended by one or two staff members, who are then required to disseminate to their colleagues. This can make sharing information among the team difficult and any momentum to make changes may be lost. By contrast, training all team members means that responsibility is less likely to lie with one or two individuals.

The staff's reported increased confidence is in line with previous work showing that confidence rose significantly following HENRY training (Rudolf *et al.*, 2010). The present study extends this by suggesting that staff use this heightened confidence to approach families and initiate contact that they might not have done previously. An increase in staff's perceived ability to work successfully with parents might be expected to lead to further changes: self-efficacy features as an important predictor of behaviour in several theoretical models of behaviour change (Bandura, 2004; Godin *et al.*, 2010).

Increased self-efficacy being conducive to behaviour change also helps to explain another encouraging finding: the training appeared to have an impact beyond the immediate professional domain, and that staff (and their families) were personally benefiting too. Many reported that it triggered thoughts about their own lifestyle and encouraged them towards healthier behaviours. Such changes would be of personal benefit, and may have consequent implications for their effectiveness as a role model: healthy lifestyle messages may be more credible delivered by someone who is of a healthy weight themselves (Perrin *et al.*, 2005a). Furthermore, staff reported changes within their own family environment. The HENRY programme promotes a reduction of screen time, particularly for preschoolers, as well as shared, distraction-free, family mealtimes. Our respondents described more family mealtimes and removing distractions such as the television. In adolescents, family meals are associated with higher vegetable and vitamin intake, and fewer soft drinks (Gillman *et al.*, 2000; Videon & Manning, 2003), whereas television viewing during meals is associated with reduced dietary quality (Feldman *et al.*, 2007).

The findings provide an indication that relatively long-term changes to lifestyles and eating behaviours may be possible with a short and relatively simple intervention. This is important when considering the current financial climate and budgetary constraints upon Children's Centres. The reported changes to Centre policy or individuals' personal lives are either free or of minimal cost. Variations in approach (praising positives, self-service at mealtimes, etc.) cost nothing, whereas reducing portion sizes could even result in savings. The reported heightened confidence alone may lead to benefits, at no additional cost: several interviewees suggested that staff were now more frequently initiating discussions with families about lifestyle issues.

The potential limitations of the present study should be considered. First, interviews were completed at a limited number of Centres (the first twelve to be trained), such that the sample may not be entirely representative of Children's Centres in Leeds or more widely. It is also possible that only those experiencing positive changes would contribute to the drop-boxes (conversely, it could be argued that the anonymity afforded by the method may make negative comments more likely). Because so many of the views and general conclusions were consistent across Centres, it does suggest that the findings were reliable. Second, there may have been a perception that the interviewer was associated with the HENRY organisation because he was familiar with the course and the facilitators. HENRY's impact could therefore have been overemphasised. However, all interviewees were able to provide tangible examples of actual changes, thus providing assurance that this was not a strong factor.

The results of the present study are therefore encouraging but preliminary, and further quantitative or mixed-methods research is necessary to assess the extent of the changes described. This may include longer-term follow-up of self-rated confidence levels, or a detailed inspection of Centres' meals, physical activity provision and staff interactions with children, perhaps using an instrument such as the Environment and Policy Assessment and Observation tool (Ward et al., 2008). The ultimate effect would be a measurable impact on children's obesity levels on starting school.

Conclusions

The data obtained in the present study indicate that staff were implementing a range of changes to their Centres, their work practice, and their personal and family lives. Many of these changes were relatively straightforward and could be achieved quickly and at minimal expense. Importantly, all changes were self-generated by the staff teams following a 2-day training course. All changes, if maintained, could be expected to have a positive impact upon physical and emotional health. Additional work is necessary to quantify the magnitude of these changes and their long-term consequences.

Conflicts of interests, source of funding and authorship

HENRY was established by CH and MR; CH is now Programme Director of the organisation. The research was funded by a grant from NHS Leeds. Training was delivered by NHS Leeds Public Health Directorate and Leeds City Council Children's Services. TW completed the data collection, the initial analyses and wrote the original and revised manuscripts. BP supervised the data analysis and contributed to the manuscript and its revision. CH and MR contributed to the design of the study and manuscript revision. All authors read and approved the final version.

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