



Dietitian-led intensive lifestyle intervention programme for children identified as overweight or obese by NCMP in the London Borough of Brent: an overview

Background

Brent is one of the most deprived boroughs in London and has one of the highest rates of childhood obesity across all London Boroughs and in England^{1,2}. Nutrition & Dietetics Brent (London North West University Healthcare NHS Trust) successfully bid for and delivered the **'Fit4Health' lifestyle intervention programme** from September 2015 to March 2016.

'Fit4Health' was designed to offer support to children identified as overweight and obese by the National Child Measurement Programme (NCMP)³. Provided by Dietitians and Nutrition Assistants, the programme encouraged positive lifestyle changes for the whole family through good nutrition and physical activity. A sub-contracted private company provided certified physical activity instructors for each session⁴.

'Fit4Health' had these objectives:

Short Term:

- 300 overweight / obese reception and year 6 children to complete the programme
- Overweight/ obese children unable to attend but still interested given telephone advice on a healthy lifestyle and ways to implement daily activities.

Medium Term after 10 weeks:

- Improved nutrition and physical activity outcomes at 3 & 6 month follow ups
- Increased knowledge of behaviour change and goal setting
- Maintenance or reduction in waist circumference and BMI post programme and 3 & 6 month follow ups.
- 80% positive feedback from participants

Long Term if programme continued:

- Those children completing the programme who were identified as overweight or obese in reception will measure a healthy weight in year 6
- Increased engagement in publicly available nutrition and physical activity programmes

- Overall decrease in number of overweight and obese children in targeted schools

Practice development

Fit4Health' delivered structured group education sessions: a 7 week intensive after school programme for child and one family member based on:

- Behaviour change through goal setting and rewards
- Nutrition workshops & interactive cooking classes
- Fun and active exercise

The nutrition component was led by a registered Dietitian with a syllabus covering topics such as fats and sugars, label reading, fussy eating and managing mealtimes, Eat Well plate, portion sizes and healthy snacks. The practical component saw the preparation of healthy foods including yogurt sundaes, fruit kebabs and rainbow wraps which culminated in the children making a healthy snack at home to bring for a group healthy picnic.

The physical activity component was led by an independent organisation specialising in children's sports activities. Each session consisted of one hour of physical activity that the children could take part in together. The games required minimal equipment so that families could replicate them at home or in the park. Families were also taught the recommendations for physical activity and the risks of sedentary behaviour.

This **whole family approach** supports the adoption of healthy lifestyle behaviours and sustainability of the intervention⁵. With guidance from 'Fit4Health' staff at individual consultations, families were asked to create SMART goals the entire family would aim to complete by the end of the programme. These goals were reviewed in the final consultation to assess progress and offer any further support.

Schools identified by NCMP data³ with the highest levels of obese children were given priority to participate. The programme was adjusted to include a Special Needs Primary School for the first time. 'Fit4Health' dietitians worked closely with school staff to ensure that appropriate adjustments were made.

Measuring impact

Overall, the 7-month programme reached 303 children and 338 parents, carers and family members.

There was a 66% attendance rate and the majority of children came from minority ethnic backgrounds and deprived areas. 'Fit4Health' worked with 13 mainstream primary schools, 1 special needs school and 2 community leisure centres.

Key outcomes of the 10 week programme:

- 78% maintained or reduced their waist circumference post programme indicating a reduction in adiposity, specifically in the central region.
- 63% maintained or reduced their BMI at the end of the programme. While lower than the desired 80% it is still a good result over a 10 week time period. As the participants are young children it would be expected for them to be growing in height and weight.
- 87% reported to have increased or maintained their intake of fruit since starting the programme

- 86% reported to have increased or maintained their intake of vegetables since starting the programme
- 85% reported to have increased or maintained their intake of water since starting the programme

All qualitative data was collected using validated questionnaires pre and post. These showed that 88% of families achieved at least one of their long-term SMART goals and 96% of participants would recommend the programme to a friend.

Participant comments included:

“The programme has really helped my child try new foods. Before I was cooking a meal for us and a separate meal for my son but now I only have to cook the one meal because he is more willing to be adventurous with his food.”

“The programme is really starting to make a difference. We have taken the messages on board as a whole family. I didn’t expect it to have such a big impact. We make sure we do our goals each week.”

Learning points

The clinical outcomes and participant feedback indicated that ‘Fit4Health’ programme methodologies can have a beneficial and lasting impact upon families to prevent childhood obesity. However there is an urgent need to continue involvement with families on a long term basis in order to have a sustainable influence on the health and weight throughout the growing years and into adulthood. This approach is only possible with longer term investment in the commissioning process for whole systems care pathway for obesity.

If ‘Fit4Health’ were to be commissioned in the future the following recommendations should be considered:

- Incorporate the use of gym equipment and sports (eg. volleyball) into the physical activity component of the sessions for year 7 children. Feedback from both parents and children indicated the decline in attendance that took place with the year 7 children was due to the Activity Instructor-led games being played repeatedly were not suited to the older age group. The use of the gym equipment would allow the year 7 children to feel more like young adults rather than young children and would be likely to promote continued attendance.
- Physical Activity Instructors to give renewed focus to addressing the benefits of physical activity to parents and ways to incorporate physical activity into their day to day lifestyles.
- Special Need Schools should be included as part of the mainstream programme to ensure children with special educational needs are not excluded and therefore encourage health equality.
- Comments from teachers indicated a number of overweight and obese children not identified by the NCMP hence not invited to take part in the programme. In future, would encourage other children not identified to take part in the programme to ensure all children and families are being reached. Teaching staff and health professionals are in an excellent position to assist with this.
- Use a total wellbeing approach to the programme rather than the whole emphasis of the programme being on overweight and obese children.

- Consider conducting the one to one consultations as a group consultation- this will allow parents to share concerns and possible strategies when dealing with the overall health of their children. It may also allow parents to feel as if they are not alone in their concerns and struggles around their child's diet and physical activity lifestyles.
- Efforts need to be focused on the Early Years settings and Year 1 children (primary prevention) in order to prevent childhood obesity in the first instance. Therefore, a combined approach is required in order to have an effective influence on reducing childhood obesity - targeting families in the early stages and secondary prevention measures to target those older children who have been identified as overweight or obese.
- A long term, well designed and streamlined approach to childhood obesity across all the life span stages is in need if we are serious about preventing or reducing the levels of the UK's childhood obesity with parental involvement and responsibility of paramount importance.

References

- 1 Annual Report 2014/15, Brent Clinical Commissioning Group. pp. 5
- 2 Brent Joint Strategic Needs Assessment (JSNA) Overview Report: 2015/16. pp.28
- 3 National Child Measurement Programme England 2013-14: Tables, Health and Social Care Information Centre, UK.
- 4 <https://www.fitforsport.co.uk/>
- 5 A whole family approach to childhood obesity management (GOALS): Relationship between adult and child BMI change. Watson, Dugdill, Pickering, Bostock, Hargreaves, Staniford and Cable 2011, , Annals of Human Biology, 38 (4) , pp. 445-452