Abstract

This document is a summary of the Healthy Lifestyles Pathway
service as part of the Preliminary evaluation stages

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Contents

Introduction

This document has been prepared by the Royal Society for Public Health and is detailing a rapid literature review and preliminary evaluation in relation to Nottingham City Care's Healthy Lifestyle Pathway (HLP) programme.

About the Healthy Lifestyle Pathway Programme

The Children's Public Health 0-19 Nursing Service, delivered by Nottingham City Care, is funded by Nottingham Local Authority to deliver the Healthy Child Programme, using universal contacts to promote healthy lifestyles to promote healthy growth. Alongside this, SSBC commissioned the Children's Public Health 0-19 Nursing Service to deliver the Healthy Lifestyles Pathway Programme, an early intervention for families with children at risk of childhood obesity and poor health outcomes within Nottingham City.

The service has the capacity to see up to 420 children annually and it has been designed to work holistically with families; helping them to set achievable goals around healthier lifestyles by offering a variety of one-to-one and group activities to help families.

Referral pathway and service offer

The service began taking referrals in September 2022 and is commissioned to deliver until March 2025.

The service accepts referrals from GPs and the 0-19 Nursing Service. The criteria is as follows for:

- 0-2 years olds: rapid weight gain (2+ weight centiles crossed), or weight above the 98th centile and 2+ centiles above length/height.
- 2-4 year olds: Body Mass Index (BMI) above 91st centile.

If the parent/carer accepts the referral, they are invited to complete a face-to-face Initial assessment which explores needs and goal setting in line with 12 categories. Considering the following needs:

- Nutrition (appropriate milk feeds, textures, balance, portion size, sugar/salt)

- Play (active play, less screen time, safe spaces)

- Parenting (role modelling, responsive feeding, rewards, routine, and mealtimes)

Parents/carers are offered 6 one to one sessions within a period of 4 months. They are delivered by a Nutritionist, Community Public Health Nurse, Public Health practitioner or a Childrens and Young Peoples Support Worker in the child's home. Each session is tailored to the family's need and covers a wide range of topics depending on the goals that have been set. Families are also offered virtual groups / face to face group sessions on topics such as:

- Moving from milk to meals/ adapting family meals

- Movement/screen time

- Portions/food groups

- Positive/responsive parenting

Discharge and evaluation

Once completed the one-to-one sessions, parents/carers are congratulated and sent a certificate. Three months later parents/carers are contacted by telephone call to complete a qualitative evaluation exploring their experience with the service.

Data and data collection

Most of service users' data is recorded on SystmOne, the organisational data recording system. However, some data might be recorded in spreadsheets and word documents, for example qualitative evaluation comments.

Literature review

The following rapid literature review has been prepared to help RSPH contextualise the intervention and assess the design of the intervention. In summary, from the literature explored, we can conclude that the HLP programme targets a significant local public health need, and it is evidence based.

Childhood Obesity in Nottingham

According to Nottingham's Local Authority Health Profile (2019), the health of people in Nottingham is generally worse than the England average, with lower life expectancy for both men and women. Nottingham is among the 20% most deprived areas in England, with a high proportion of children (29.5%, or 17,555) living in low-income families.

A report by NHS Nottingham and Nottinghamshire CCG (2021) indicates that severe obesity in children and young people has been increasing by 1.3% annually. In 2020, 7% of children in Nottingham City were severely obese when they left primary school. The report also shows a correlation between deprivation and severe obesity. In 2019, 23.2% (817) of Year 6 children in Nottingham were classified as obese, higher than the England average. Nottingham City has significantly higher severe obesity rates compared to the national average, while Nottinghamshire is average or lower. Severe obesity rates are higher among children from Mixed, Black, and Asian ethnicities compared to national ratios, with a growing gap between boys and girls.
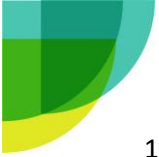
Intervention and Best Practice

The first 1,000 days of a child's life are crucial for the development and a key period for effective behavioural and lifestyle interventions (House of Commons, Health, and Social Care Committee, 2019; NIHR Policy Research Unit in Obesity 2022).

The National Institute for Health and Care Excellence (NICE) has produced 8 Quality Standards for preventing childhood obesity, promoting a combination of diet and physical activity techniques. The standards also emphasise the role of families and carers in supporting overweight and obese children, recommending their involvement in the co-production of initiatives and participation in lifestyle weight management services.

Furthermore, NICE has issued 15 weight management recommendations (PH47) for lifestyle services catering to overweight or obese children and young people. These include:

1. Planning lifestyle weight management services.

2. Commissioning lifestyle weight management programmes.

3. Outlining core components of lifestyle weight management programmes.

4. Tailoring plans to meet individual needs.

5. Promoting adherence to lifestyle weight management programmes.

6. Increasing awareness among commissioners and programme providers.

7. Raising awareness among health professionals, other practitioners, and voluntary organisations.

8. Formalising referrals to lifestyle weight management programmes.

9. Providing ongoing support from health professionals.

10. Offering ongoing support through lifestyle weight management programmes.

11. Training for staff involved in lifestyle weight management programmes.

12. Ensuring staff possess necessary knowledge and skills.

13. Training on how to make referrals to lifestyle weight management programmes.

14. Support for staff involved in lifestyle weight management programmes and those making referrals.

15. Monitoring and evaluating the effectiveness of programmes.

Family Based Interventions

Family-based behavioural weight management interventions are efficacious and widely used to address childhood obesity (Liu et al 2019). The value of family-based intervention programmes is thought of as one of the most valuable methods for childhood obesity reduction or prevention (Gruber and Haldeman 2009).

Research into child obesity found that over the long term, treatment of childhood obesity with the parents as exclusive agents of change was superior to the conventional approach. (Golan and Crow 2012). Similarly, a meta-analysis conducted by Berge and Everts (2011) indicated that there is preliminary evidence suggesting that family-based interventions targeting childhood obesity are successful in producing weight loss in the short and long-term, but socio-economic status contributes to the complexity of reaching positive results.

Barriers to Family Based Interventions

According to a systematic review by Van de Kolk (2019), the level of parental involvement appears to positively impact the effectiveness of interventions on children's weight and energy-balance behaviours across research studies. However, it is important to recognise that the implementation of family-based interventions can be negatively impacted by low parent engagement, effecting both efficacy and effectiveness (Schmied et al 2023).

Various parental characteristics are associated with lower levels of participation, including lower socio-economic status, single parenthood, difficult living circumstances, stress, family dysfunction, and belonging to a minority group ethnicity (Mendez, 2009 and Homs et al 2021). Gunnarsdottir et al (2012) also observed that low parental confidence can influence premature dropout from family-based behavioural treatment as well as poorer outcomes among those who do complete treatment.

In the UK the National Child Measurement Programme (NCMP) measures the height and weight of children in Reception class (aged 4 to 5) and year 6 (aged 10 to 11), to assess overweight and obesity levels in children within primary schools. An evaluation of the programme by Viner et al (2020) provides relevant lessons for early years interventions such as HLP. The work identified six barriers to health-related behaviour change were identified: (1) The parental perceptions of their child's health (weight and appearance), (2) cultural differences, (3) access to and availability of local services, (4) contradictory advice from health professionals, (5) relevance of lifestyle advice and (6) limits to parental control.

The results illustrated that many parents did not consider the NCMP result and its associated health concerns to reflect their child's situation. When looking at the first barrier 'parental perceptions of their child's health', it was observed that parents placed more importance on their child's emotional and physical health than on their weight e.g. pointing out that their child is 'happy' and maintains a 'healthy lifestyle'. Furthermore, some parents felt their child's weight was out of their control, as they believed their child was genetically heavy or overweight. The importance of perception has been emphasised across literature. A recent systematic review and meta-analysis by Alshahrani et al (2021) highlighted that 55% of caregivers underestimated their child's level of overweight and obesity using a verbal scale and 47% using visual scales. This under-detection of overweight and obesity may be explained by the normalisation theory. Robinson et al (2017) highlighted that larger body sizes are becoming more common, which has increased the visual threshold for what constitutes 'overweight'.

Cultural influences also affected some parents' responses to the NCMP feedback. Some parents of non-white ethnicity described a disparity between the predominant 'British' views of overweight and those of their culture, in which overweight was not viewed negatively. Similar findings were also observed by Robinson et al (2017) who highlighted the greater acceptance of larger body size within some cultures.

Furthermore, within the scoping report of the NCMP on the Childhood Obesity Pathway, the most reported barrier to seeking help was a lack of knowledge about where to go for help and some parents described that when they did follow up health advice, there was limited availability of services.

A lack or limit to parental control was cited by parents, with some highlighting problems of controlling all aspects of their child's lifestyle, as other influences come into play such as schools, other family members and the child's own preferences.

Pre-school Aged Children

Approximately 10% of children in the United Kingdom are obese when they start school (Rudolf et al. 2019). To address obesity rates earlier, it's crucial to focus on interventions for preschool children (Narzisi and Simons 2020). Since 2010, studies on interventions to prevent obesity in children under five have increased, with a particular emphasis on infant feeding (Narzisi and Simons 2020).

Narzisi and Simons (2020) identified several barriers to involving families in these interventions. They found that simply wanting to include families isn't sufficient, as many of the families needing these interventions live in deprived areas and face cultural or accessibility challenges. To address this, three studies in their systematic review offered monetary incentives to parents, making participation possible, while one study used participatory research to involve parents in the study design.

A systematic review of UK-based studies by Michalopoulou et al. revealed that only a few preschool obesity interventions have been implemented and evaluated in the UK, and even fewer have undergone robust evaluation through randomised controlled trials. This review highlights a significant gap in well-evaluated UK interventions, with only the Planet Munch programme being evaluated through such a trial.

Michalopoulou et al. also found mixed opinions among parents, who acted as public contributors, regarding the effectiveness of early childhood obesity interventions. Half of the parents believed these interventions could be effective, while the other half were skeptical. The review noted that all parents considered the cost of maintaining a healthy lifestyle important and suggested financial assistance or subsidies for low-income families. There was a general agreement that interventions should be thoroughly evaluated and better funded to ensure their effectiveness. Parents also felt that families, early years practitioners, and parents of children with excess weight should be involved in developing these interventions.

Intervention Style

In terms of the intervention style for overweight or obese children and young people, the importance of developing tailored plans to meet individual needs has been widely recognised. The NICE public health guidelines [PH47] included this as a recommendation for providers of lifestyle weight management programmes.

When exploring the effectiveness of group-based, parent-only weight management interventions for children. Research by Looney and McDarby (2023) observed that parent-only interventions may be an effective treatment for improving the health status of children and their families. Finding that parent-only group interventions are effective in changing children's weight status, as well as other outcomes such as health behaviours and self-esteem, although these were reported inconsistently. Furthermore, factors found to be associated with treatment outcomes, included session attendance the child's age and weight at baseline, socioeconomic status of families and modification to the home food environment.

Furthermore, according to a research paper by Liu et al 2019, findings observed from many randomised controlled trials indicated that family-focused behavioural programmes, delivered in-person, can be effective strategies to

manage childhood obesity. However, Liu highlighted that there are negatives to these types of interventions, including having a limited geographical reach and being resource intensive.

Therefore, to increase the scalability, alternative methods of communication are now widely adopted such as the internet. Liu et al highlighted that there are currently two main methods of using the internet to deliver family-based health childhood obesity management interventions: (1) a stand-alone internet-based programme and (2) a blended intervention internet and face-to-face. The research paper indicated that a blended face-to-face and internet-based programme may be more advantageous as it can retain the positive aspects associated with both forms of support while mitigating the disadvantages.

Secondary Impacts of Family Based Interventions

There is an array of literature concluding that family-based interventions targeting childhood obesity are successful in producing weight loss in the short and long-term (Berge and Everts 2011). However, it may be useful to explore secondary indirect impacts of family-based interventions, given parents' influence and control over children's energy-balance behaviours, including diet, physical activity, media use, and sleep (Ash et al 2017).

Within Berge et al's (2011) meta-analysis of family-based interventions tackling childhood obesity, the research found that several studies examined links between family-based interventions for child obesity and secondary health outcomes for the target child(ren). The behaviours included: fruit/vegetable intake, consumption of water and sugar-sweetened beverages, physical activity, and sedentary behaviours. Similarly, Agaronov et al (2018) observed that family-based interventions tend to target diet and physical activity, but also highlighted the impact such interventions can have upon media use and sleep.

The behaviour changes associated with family-based interventions among children have been explored across literature. Rosal et al (2023) observed that few childhood obesity prevention intervention studies have assessed parent outcomes. However, one study by Elder et al (2013) that did measure parental outcomes found no significant change in parent BMI. Rosal's (2023) study indicated that a childhood obesity prevention intervention may not be of sufficient intensity to impact weight control among parents.

Elder et al (2013) observed the primary and secondary behaviours of a 2-year family and recreation centre-based randomized controlled trial of the 'MOVE/me Muevo project' which aimed to promote healthy eating and physical activity among children. The findings indicated that primary results showed no significant reductions in children's body mass index (BMI). However, when looking at secondary impacts, the children in the intervention conditions improved on several obesity-related behaviours compared with those in the control condition. For example, key dietary changes were apparent for fat and sugary beverage. The positive impacts to children's diet was also observed by scholars who found significant increases in fruit/vegetable intake post-intervention (Berge et al, 2011).

Within Berge et al (2011) meta-analysis of family-based interventions targeting childhood obesity, a number of studies examined links between family-based interventions for child obesity and secondary health outcomes for the target child(ren), such as physical activity. The findings illustrated that studies by Beech et al, Epstein, Paluch, and Gordy et al all observed significant increases in physical activity as a secondary outcome of the intervention.

To understand the impact of screen time among a range of childhood obesity interventions, Zhang et al (2022) carried out a meta-analysis of randomized controlled studies. The findings suggested that the interventions carried out at home or with parental involvement had more significant effects on reducing screen time compared with those counterparts.

The association between short sleep duration and obesity or adiposity during early childhood has emerged in numerous epidemiological studies over the last decade (Miller et al 2015). Agaronov et al (2018) examined the proportion and context of family-based interventions to prevent childhood obesity that promote child sleep. Finding that 24 (20%) of 119 eligible family-based interventions to prevent childhood obesity promoted child sleep. Agaronov concluded that sleep promotion is underrepresented and variable in family-based childhood obesity.

Preliminary Analysis of Intervention Data

Summary

- This report primarily relies on information from the HLP service user database, concerning children aged 1 to 4 years.
- Self-reported data indicates positive behaviour changes in families in the short-term.
- Data suggests a reduction in post BMI Z score for children aged 2 to 4 years, but a bigger sample and more post-evaluation data is required to assess statistical significance.
- Children who completed the programme were more likely to live in more deprived areas than those who did not.
- There is a relatively large dropout rate in the programme which will be explored in the next stage of the evaluation.

Methodology

Nottingham City Care provided the data from the intervention in an Excel spreadsheet. The information is linked to the "Targeted Assessment" questionnaire, which Community Public Health Nurses or Public Health Nutrition Leads manually administer through one-to-one sessions with parents of children participating in the intervention.

The dataset included information on 131 children (see Table 1) but there is a high dropout rate (around 31% for 2023 participants). The system divided service users into two types: the first group consists of children aged 1 to 4 years, and the second group consists of children under 1 year. The data for children aged 1 to 4 years consists of two waves, one that began in 2023 and another that started in 2024. The programme includes two "Targeted Assessments," conducted before and after the intervention (for instance, collecting information about BMI pre-intervention and BMI post-intervention). However, around 30% of child participants in the wave that started in 2023 have dropped out of the programme. Additionally, a subset of participants has been requested to take part in a follow-up evaluation six months after the programme to assess the persistence of effects or changes not captured in the post-evaluation stage.

The data-gathering process is still ongoing:

a) Some children participating in the 2023 intervention have not completed the programme yet (classified as "ongoing").

b) The programme is ongoing for children participating in the 2024 intervention.

c) Only 13 observations (out of a total of 94) have provided information for the follow-up evaluation six months after the programme.

Table 1. Descriptive statistics

| | Aged 1-4 | | | | Under 1 year | | Total | |
| | 2023 | | 2024 | | | | | |
	Total	%	Total	%	Total	%	Total	%
Dropout	29	30.9%	-	-	2	28.6%	31	23.7%
Completed the programme	52	55.3%	-	-	2	28.6%	54	41.2%
On going	13	13.8%	30	100%	3	42.9%	46	35.1%
Total	94	100%	30	100%	7	100%	131	100%

The 2023 intervention data provides the largest set of observations among the available data. The other datasets (Table 1) do not provide enough information due to either a very small sample (intervention for children under 1 year and the three-month follow-up evaluation) or ongoing participation in an intervention (2024 intervention). However, this analysis could be developed further when more information becomes available.

Assessing outcomes

The expected outcome of the HLP intervention is that children and their families will be eating healthier meals and be more physically active. This will also bring awareness and influence behaviour change in friends, families, and wider community. Subsequently, this is expected to impact on their weight, oral health, and taste palettes.

Behavioural Changes

The intervention appears to have had improvements reported across all intended dimensions[1] (Chart 1 and Table 2). This assessed through the S1 score, which is generated by SystmOne from the data in the lifestyle questionnaire and summarises all dimensions. The best score possible is 40. For example, if a participant has 3 portions of vegetables a day, this will contribute 3 points out of a possible 5 for that question. This score indicates an overall improvement in a healthy lifestyle. The most important changes seem to be related to a healthier diet, in contrast to changes related to other activities (such as sleep time).

Nonetheless, the data suggests a number of adverse shifts. This pattern may be indicative of changes in families' contexts (food poverty, difficulties undertaking physical activity during winter, job changes etc) and in some cases a level of social desirability bias[2] during the initial assessment.

Chart 1. Behaviour Changes: Healthier lifestyles after intervention (Proportions %)

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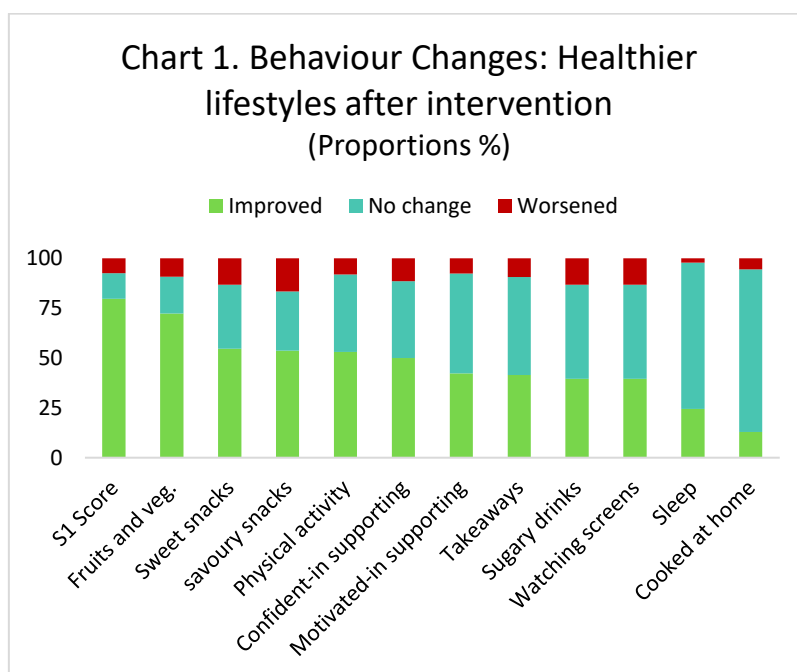
[1] Only children who completed the program and had available data both before and after the intervention were included in this analysis. Hence, some children may not be represented in certain questions if they responded to one question but not to others.
2 Such a bias manifests when individuals tailor their responses to appear more favourable in the eyes of others (in this case, the professional leading the assessment), thus withholding their experiences. This is a common issue with self-report methodologies for collecting data.

Table 2. Behaviour changes: summary statistics

Assessment Questions	Total				Percentages (%)			
	Worsened	No change	Improved	Total	Worsened	No change	Improved	Total
S1 Score	4	7	43	54	7.4%	13.0%	79.6%	100%
Fruits and veg.	5	10	39	54	9.3%	18.5%	72.2%	100%
Sweet snacks	7	17	29	53	13.2%	32.1%	54.7%	100%
Savoury snacks	9	16	29	54	16.7%	29.6%	53.7%	100%
Physical activity	4	19	26	49	8.2%	38.8%	53.1%	100%
Confident - in supporting	3	10	13	26	11.5%	38.5%	50.0%	100%
Motivated - in supporting	2	13	11	26	7.7%	50.0%	42.3%	100%
Takeaways	5	26	22	53	9.4%	49.1%	41.5%	100%
Sugary drinks	7	25	21	53	13.2%	47.2%	39.6%	100%
Watching screens	7	25	21	53	13.2%	47.2%	39.6%	100%
Sleep	1	33	11	45	2.2%	73.3%	24.4%	100%
Cooked at home	3	44	7	54	5.6%	81.5%	13.0%	100%

A disaggregated assessment of each behaviour provides further detail on the starting point and magnitude of changes. This can explain, for example, the apparent small change in the number of times families eat food that has been freshly cooked at home. Chart 2 indicates that the reason the change is small is due to a relatively high starting point: approximately 85% of families reported in the pre-intervention phase that they ate freshly cooked food at home at least 5 times per week (or more), the maximum response option available. Following the intervention, this proportion rose by more than seven percentage points to 92.5%.

Chart 2. How many times a week do you and your family eat food that has been freshly cooked at home? (Proportions %)

Table 3.

	Pre-Intervention		Post-Intervention	
	Total	%	Total	%
1 time (or less)	4	7.5%	0	0.0%
2 times	1	1.9%	1	1.9%
3 times	1	1.9%	0	0.0%
4 times	2	3.8%	3	5.7%
5 times (or more)	45	84.9%	49	92.5%
Total	53	100%	53	100%
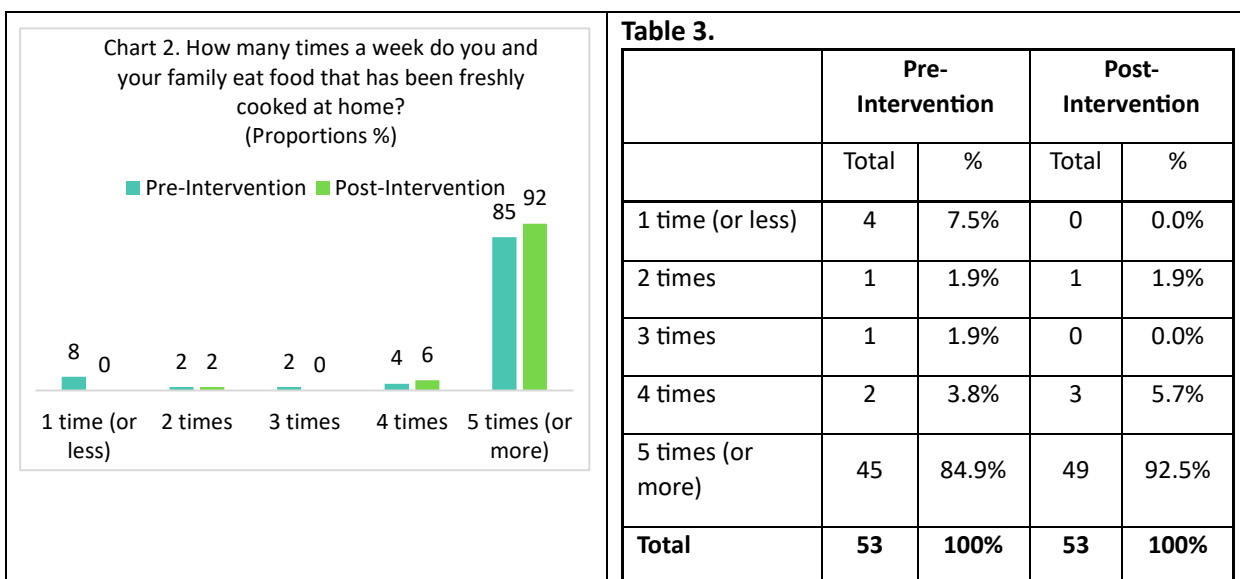
There has been a considerable reduction of takeaways meals. However, whilst this suggest the change is related to the programme's effect, families' contexts could play a role, for example if the main cook has changes on their job pattern or changes in income.

Chart 3. On average how many times do you and your family eat takeaway foods? (Proportions %)

Pre-Intervention | Post-Intervention

Table 4. Takeaway food

	Pre-Intervention		Post-Intervention	
	Total	%	Total	%
a. More than 3x a week	2	3.8%	0	0.0%
b. 2x a week	6	11.3%	1	1.9%
c. 1x a week	8	15.1%	11	20.8%
d. 1x a fortnight	12	22.6%	5	9.4%
e. 1x a month or less	25	47.2%	36	67.9%
Total	**53**	**100%**	**53**	**100%**
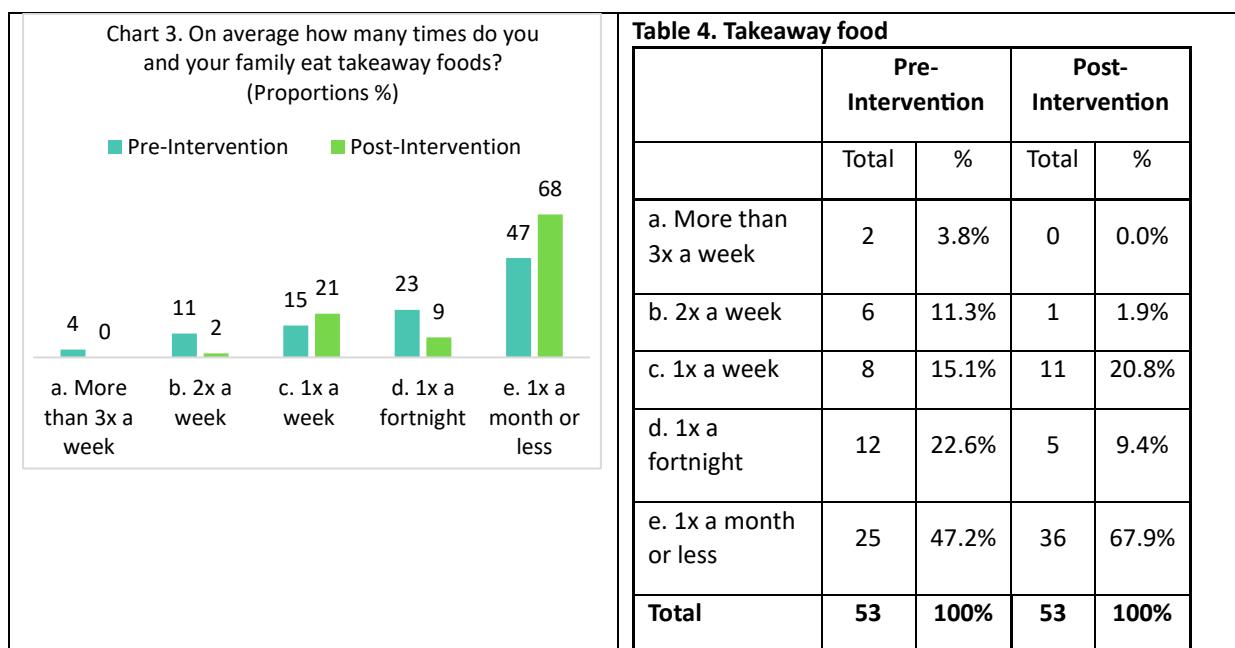
The most notable change is the increased consumption of fruits and vegetables. The data suggests that families have drastically changed their habits. Further analysis may be useful to understand if families' contexts could have also impacted this behaviour.

Chart 4. How many portions (handfuls) of fruit and vegetables does your child have on an average day: (Proportions %)

Pre-Intervention | Post-Intervention

Table 5. Portions of fruit and vegetables your child have on an average day

Portions (handfuls)	Pre-Intervention		Post-Intervention	
	Total	%	Total	%
0	6	11.3%	0	0.0%
1	11	20.8%	1	1.9%
2	12	22.6%	3	5.7%
3	15	28.3%	14	26.4%
4	2	3.8%	14	26.4%
5	7	13.2%	21	39.6%
Total	**53**	**100%**	**53**	**100%**

Behaviour changes also highlight important reductions in the consumption of snacks (sweet and savoury) and sugary drinks. Sweet snacks were remarkably popular before the intervention, much more so than savoury snacks and sugary drinks: before the intervention, around 54% children ate sweet snacks 2x a day or more or most days, compared to 35% for savoury snacks and 31% for sugary drinks. After the intervention, consumption patterns show a shift towards

healthier behaviours: the proportion of those eating sweet snacks 2x a day or more or most days was reduced to 23%, savoury snacks to 15% and sugary drinks to 9.5%.

Chart 5. On average, how many sweet snacks does your child eat? (Proportions %)

	Pre-Intervention	Post-Intervention
a. 2x a day or more	15	6
b. Most days	38	17
c. 2-4x a week	27	35
d. 1x a week	6	19
e. Less than 1x a week	13	23

Chart 6. On average how many packets of crisps or savoury snacks does your child eat? (Proportions %)

	Pre-Intervention	Post-Intervention
a. 2x a day or more	13	0
b. Most days	23	15
c. 2-4x a week	34	28
d. 1x a week	9	26
e. Less than 1x a week	21	30

Chart 7. On average, how many sugary drinks does your child drink? (Proportions %)

	Pre-Intervention	Post-Intervention
a. Most days	19	2
b. 2-4x a week	12	8
c. 1x a week	8	4
d. Less than 1x a week	12	15
e. Never	50	71

Table 6. Sweet Snacks

	Pre-Intervention		Post-Intervention	
	Total	%	Total	%
a. 2x a day or more	8	15.4%	3	5.8%
b. Most days	20	38.5%	9	17.3%
c. 2-4x a week	14	26.9%	18	34.6%
d. 1x a week	3	5.8%	10	19.2%
e. Less than 1x a week	7	13.5%	12	23.1%
Total	**52**	**100%**	**52**	**100%**

Table 7. Savoury Snacks

	Pre-Intervention		Post-Intervention	
	Total	%	Total	%
a. 2x a day or more	7	13.2%	0	0.0%
b. Most days	12	22.6%	8	15.1%
c. 2-4x a week	18	34.0%	15	28.3%
d. 1x a week	5	9.4%	14	26.4%
e. Less than 1x a week	11	20.8%	16	30.2%
Total	**53**	**100%**	**53**	**100%**

Table 8. Savoury drinks

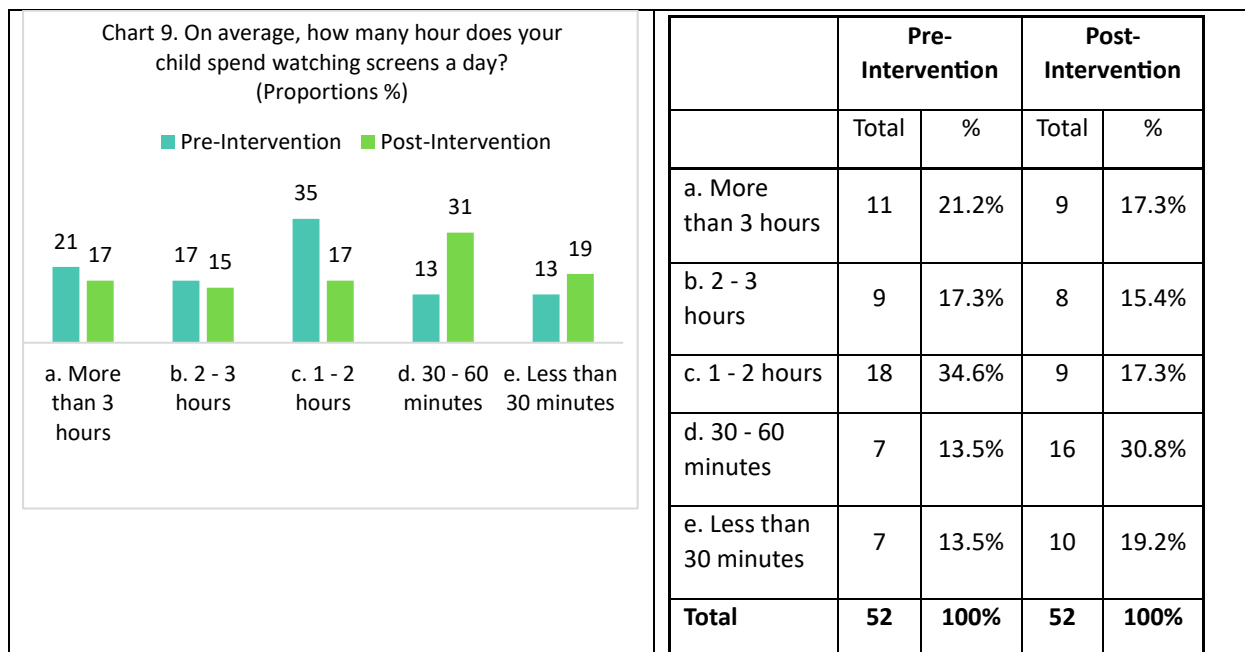|	Pre-Intervention		Post-Intervention	
	Total	%	Total	%
a. 2x a day or more	10	19.2%	1	1.9%
b. Most days	6	11.5%	4	7.7%
c. 2-4x a week	4	7.7%	2	3.8%
d. 1x a week	6	11.5%	8	15.4%
e. Less than 1x a week	26	50.0%	37	71.2%
Total	**52**	**100%**	**52**	**100%**

Regarding activities, the data suggests a slight improvement in screen time and sleep duration, and a remarkable improvement in physical activity time. Physical activity increased from around 15% of children engaging in one hour or less and 33% engaging in more than three hours, to 0% engaging in one hour or less and around 70% engaging in more than three hours.
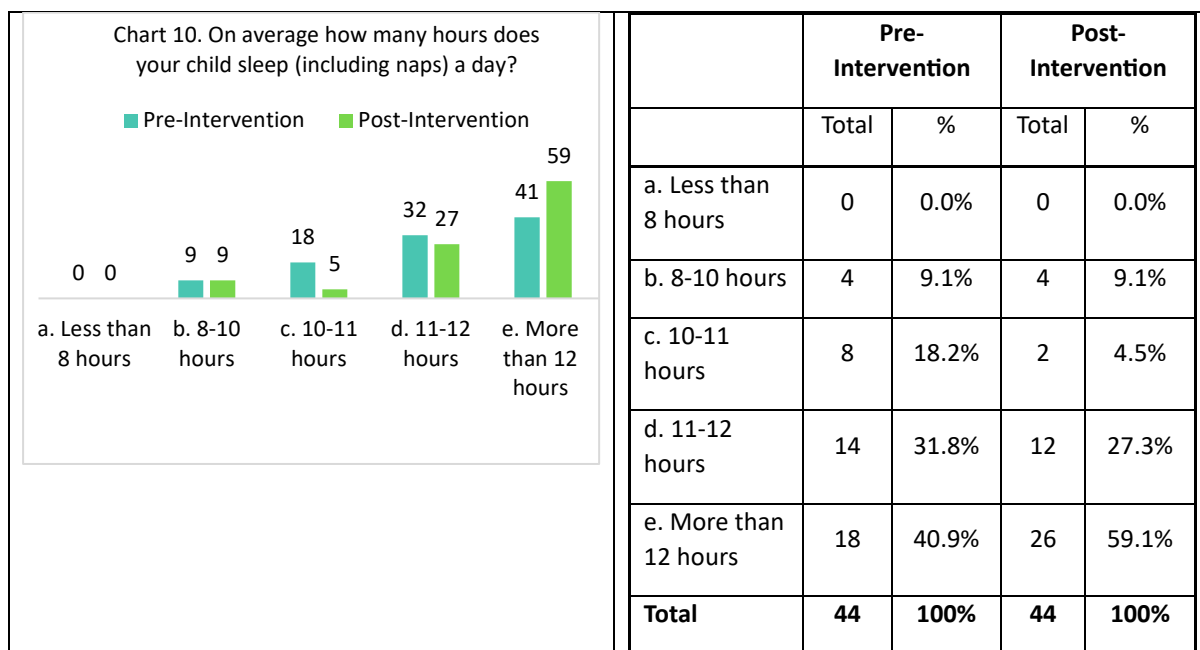
Table 9. Physical Activity

	Pre-Intervention		Post-Intervention	
	Total	%	Total	%
a. Less than 30 minutes	3	6.3%	0	0.0%
b. 30-60 minutes	4	8.3%	0	0.0%
c. 1-2 hours	12	25.0%	5	10.4%
d. 2-3 hours	13	27.1%	9	18.8%
e. More than 3 hours	16	33.3%	34	70.8%
Total	48	100%	48	100%

Chart 8. How much physical activity does your child do on an average day? (Proportions %)
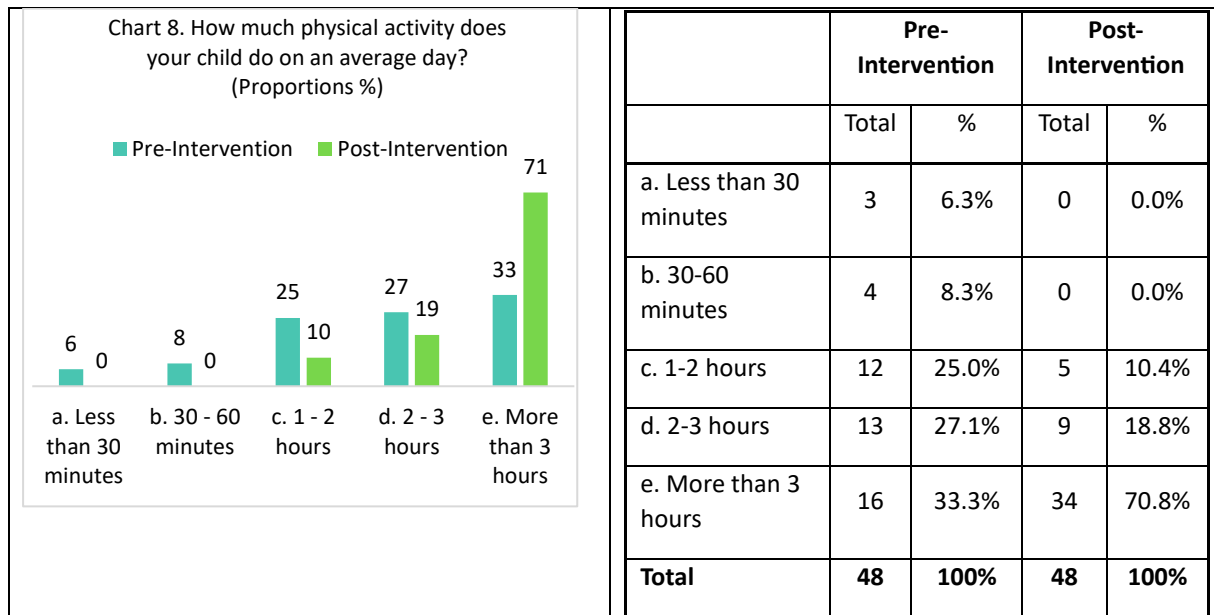
The improvement in screen time is large as the number of children spending more than one hour went from 73% to 50%.

Table 10. Screen time

	Pre-Intervention		Post-Intervention	
	Total	%	Total	%
a. More than 3 hours	11	21.2%	9	17.3%
b. 2 - 3 hours	9	17.3%	8	15.4%
c. 1 - 2 hours	18	34.6%	9	17.3%
d. 30 - 60 minutes	7	13.5%	16	30.8%
e. Less than 30 minutes	7	13.5%	10	19.2%
Total	52	100%	52	100%

Chart 9. On average, how many hour does your child spend watching screens a day? (Proportions %)

Finally, the proportion of children sleeping more than 10 hours remained around 90%, but the number of children sleeping more than 12 hours increased from 40% to 60%.

Table 11. Sleep time

Chart 10. On average how many hours does your child sleep (including naps) a day?

	Pre-Intervention		Post-Intervention	
	Total	%	Total	%
a. Less than 8 hours	0	0.0%	0	0.0%
b. 8-10 hours	4	9.1%	4	9.1%
c. 10-11 hours	8	18.2%	2	4.5%
d. 11-12 hours	14	31.8%	12	27.3%
e. More than 12 hours	18	40.9%	26	59.1%
Total	**44**	**100%**	**44**	**100%**

Maintenance of behavioural changes

The analysis of the six-months assessment data suggests that some changes might be slightly reversing in some cases, however on average the situation indicate healthier lifestyles. It is worth considering that this analysis was based on a small sample of around 10-11 children. Hence, it is difficult to draw conclusions. However, this information provides a preliminary insight into the difficulty of promoting lasting effects and the areas that could be reinforced in the sessions and possibly with further support from other services. In particular, the worst-performing responses were related to sweet snacks, sugary drinks, and watching screens.

Chart 11. Behaviour Changes: 3rd assessment vs Initial assessment (Proportions %)
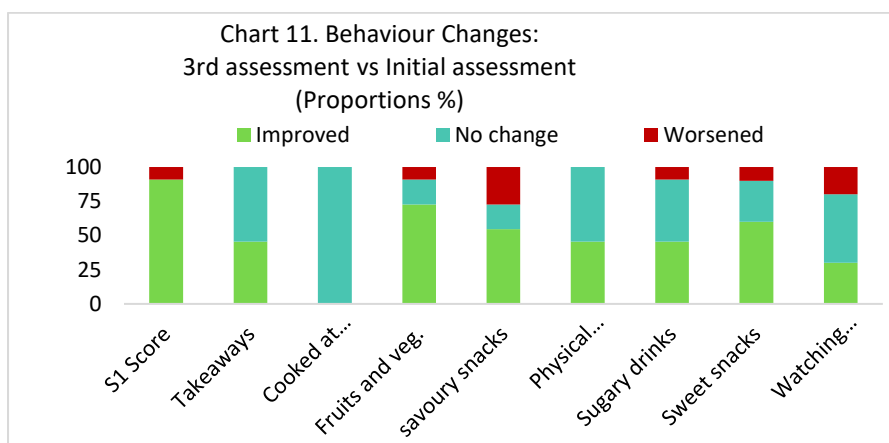
A comparison to the starting point indicates that, despite some worsening, the overall situation reflects much healthier lifestyles. An analysis of individual questions shows that the magnitude of the worsened situations does not reverse the positive impacts. For example, in the question about eating snacks (Chart 15), the current situation does not include any cases in the worst scenario (2x snacks a day), although the improvement has deteriorated. The availability of more data will allow to conduct a more rigorous analysis about this situation.

Chart 12. Behaviour Changes:
3rd assessment vs Initial assessment
(Proportions %)
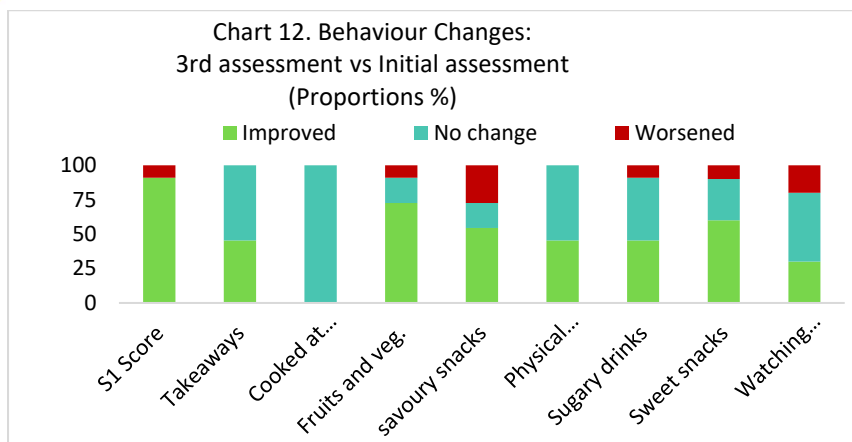
Analysis of BMI Z Score

Children (2 to 4 years of age) who completed the intervention had a lower pre-BMI Z score compared to those who dropped out (2.5 vs. 2.8). Although the difference is not large, it is worth further assessment to determine if this is a factor that explains the decision to drop out. For example, these results might suggest that the programme may be more appealing to children with a relative lower BMI Z score.

Table 12.

Statistics	Completed	
	No	**Yes**
Total Obs.	29	65
Obs Pre BMI Z score	12	33
Mean	2.8	2.5
Median	3.1	2.5
Max	4.3	4.9
Min	1.2	1.1

An analysis by gender is constrained by the small sample size, as among those that did not complete the programme there are just 10 observations for male children and 2 observations for female children that have data of pre BMI Z score[3]. However, it is worth mentioning that in principle **both female and male seem to have had a reduction in the BMI Z score after the programme.**

		Table 13. BMI Z Score pre and post		
		Gender	**Female**	**Male**
		Obs.	15	13
	Mean	Pre	2.38	2.55
		Post	1.98	2.24
		Variation	-0.40	-0.31

---

[3] Similarly to the overall situation, the pre BMI Z score for male children who completed the program is lower in comparison to those that did not complete the program (2.6 vs. 3.0).
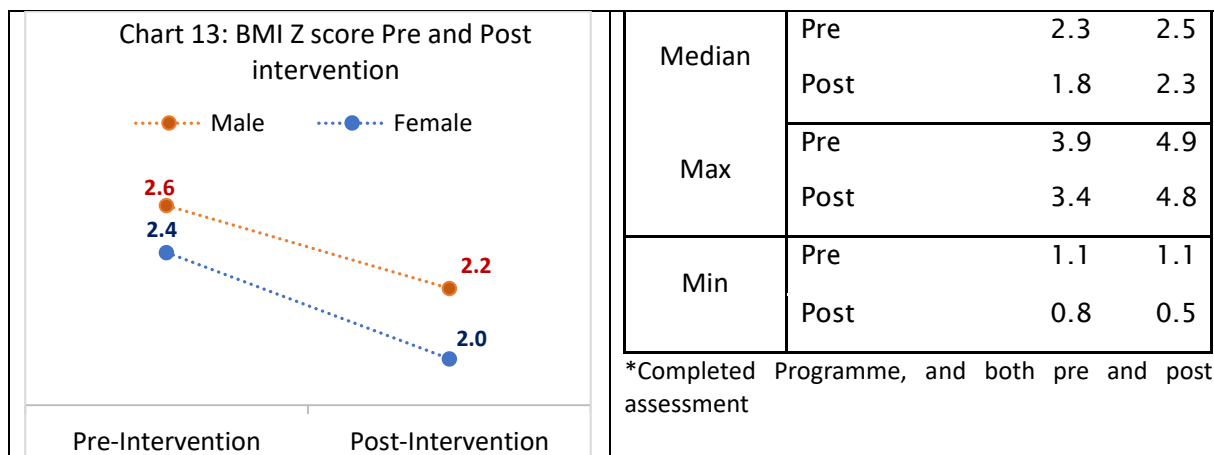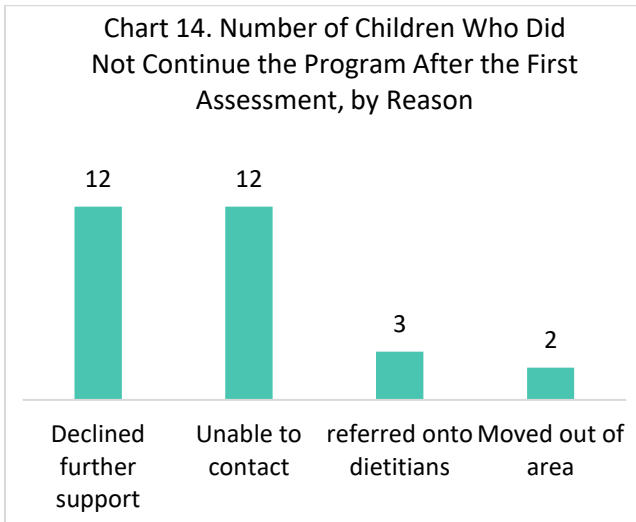
Chart 13: BMI Z score Pre and Post intervention

●●●● Male   ●●● Female

2.6
2.4
2.2
2.0

Pre-Intervention   Post-Intervention

Median	Pre	2.3	2.5
	Post	1.8	2.3
Max	Pre	3.9	4.9
	Post	3.4	4.8
Min	Pre	1.1	1.1
	Post	0.8	0.5

*Completed Programme, and both pre and post assessment

Table 14. BMI Z Score pre and post

*Completed and possible to follow up

	Gender	Female	Male
	Obs.	15	13
Mean	Variation	-0.40	-0.31
	Pre	2.38	2.55
	Post	1.98	2.24
Median	Pre	2.3	2.5
	Post	1.8	2.3
Max	Pre	3.9	4.9
	Post	3.4	4.8
Min	Pre	1.1	1.1
	Post	0.8	0.5

Dropouts

As mentioned earlier, the dropped out rate the programme is relatively high (around 31%, see Table 15). The data set shows that the main reasons for dropping out are that a family member declined further support or was unable to be contacted. Additionally, in one response related to declining further support, more details were specified: due to work commitments. Similarly, in one response for being unable to be contacted, it was specified: "Unable to contact mother". Reasons for dropping out will be explore with a sample of former service users in the next stage of the evaluation.

Chart 14. Number of Children Who Did Not Continue the Program After the First Assessment, by Reason

Reason	Count
Declined further support	12
Unable to contact	12
referred onto dietitians	3
Moved out of area	2

The dropout rate is higher for male children. Although the overall participation rate is higher for male children, the drop-out rate is significantly larger but there were more male participants in the programme.
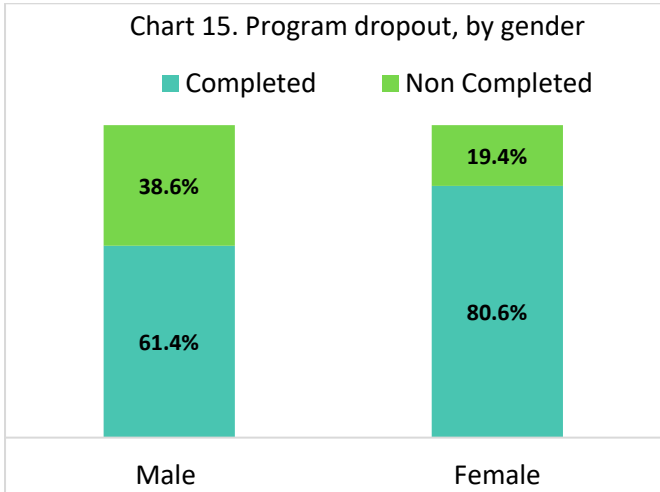
Chart 15. Program dropout, by gender

Legend: Completed | Non Completed

Gender	Completed	Non Completed
Male	61.4%	38.6%
Female	80.6%	19.4%

Table 15. Programme's participation, by gender

Gender	Completed	%	Not Completed	%	Total	%
Male	35	61.4%	22	38.6%	57	100%
Female	29	80.6%	7	19.4%	36	100%
Total	64	68.8%	29	31.2%	93	100%

Children who dropped out the service had a higher age in months when rapid weight gain was identified in comparison to those that completed the programme. However, the age difference is only two months. Therefore, it is not possible to determine if this is an important factor that explains the decision not to continue in the programme. It is worth continuing to test if this is a key factor.
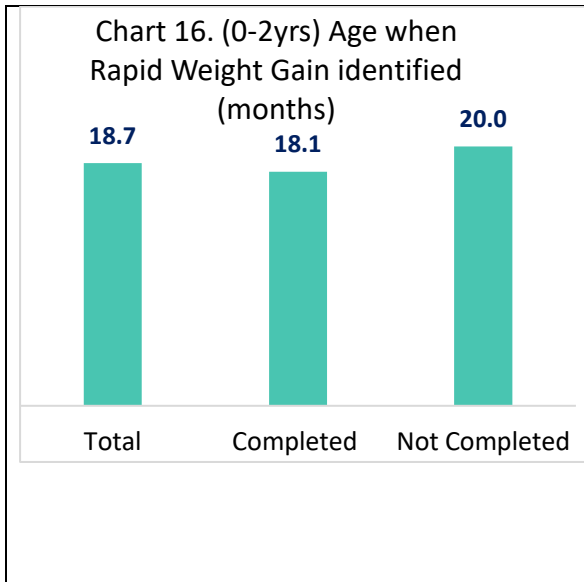
Chart 16. (0-2yrs) Age when Rapid Weight Gain identified (months)

	Total	Completed	
		Total	18.7
Completed	18.1		
Not Completed	20.0		

Table 16. Age when RWG was identified

		Total	Completed	
			Yes	No
Age RWG was identified	Mean	18.7	18.1	20.0
	Median	14	14.0	15.0
	Min	6	6.0	10.0
	Max	43	41.0	43.0
	Obs.	48	32	16
	% missing values	48.9	50.8	44.8

Table 15. Age when RWG was identified

		Total	Completed	
			Yes	No
Age RWG was identified	Mean	18.7	18.1	20.0
	Median	14	14.0	15.0
	Min	6	6.0	10.0
	Max	43	41.0	43.0
	Obs.	48	32	16
	% missing values	48.9	50.8	44.8

The average number of sessions for children who completed the programme is 4.5, with a median of 5 sessions. It is worth considering that even children who dropped out attended an average of 2.3 sessions, suggesting that the sessions may have had some effect on them.

Table 17. Statistics of sessions for children in the programme

		Total	Completed	
			Yes	No
Contacts	Mean	4	4.5	2.3
	Median	4	5.0	2.0
	Min	1	2.0	1.0
	Max	6	6.0	6.0
	Obs.	68	53	15
	% missing values	27.7	18.5	48.3

Deprivation

Demographic information might be useful to better understand the large drop out. The dataset provided information about the Indices of Deprivation (IMD), in specific **deciles**. The Index of Multiple Deprivation **ranks** every small area in England from 1 (most deprived area) to 32,844 (least deprived area). This is an index based on seven different "domains, or facets" of deprivation. Hence, the postcodes can be used to identify the information for each different domain. **Deciles** are calculated by ranking the 32,844 small areas in England, from most deprived to least deprived, and dividing them into 10 equal groups. Using the postcode, it is possible to use the complete public dataset provided by the UK government.

Table 18. Deprivation deciles and ranks of children in the programme

	Completed	No	Yes
	Total Obs.	29	65
	Obs Pre BMI	14 [1]	38 [2]
	Mean Pre BMI	21	20.2
Decile [3]	Mean	2.2	2.2
	Median	1.5	2
	Max	9	7
	Min	1	1
Rank [3]	Mean	5,642.4	5,367.1
	Median	3,475.0	3,727.0
	Max	29,073.0	21,258.0
	Min	594.0	130.0

Notes:

[1] *One value was excluded 99.6*

[2] *Two values were excluded (9.25 and 12.05)*
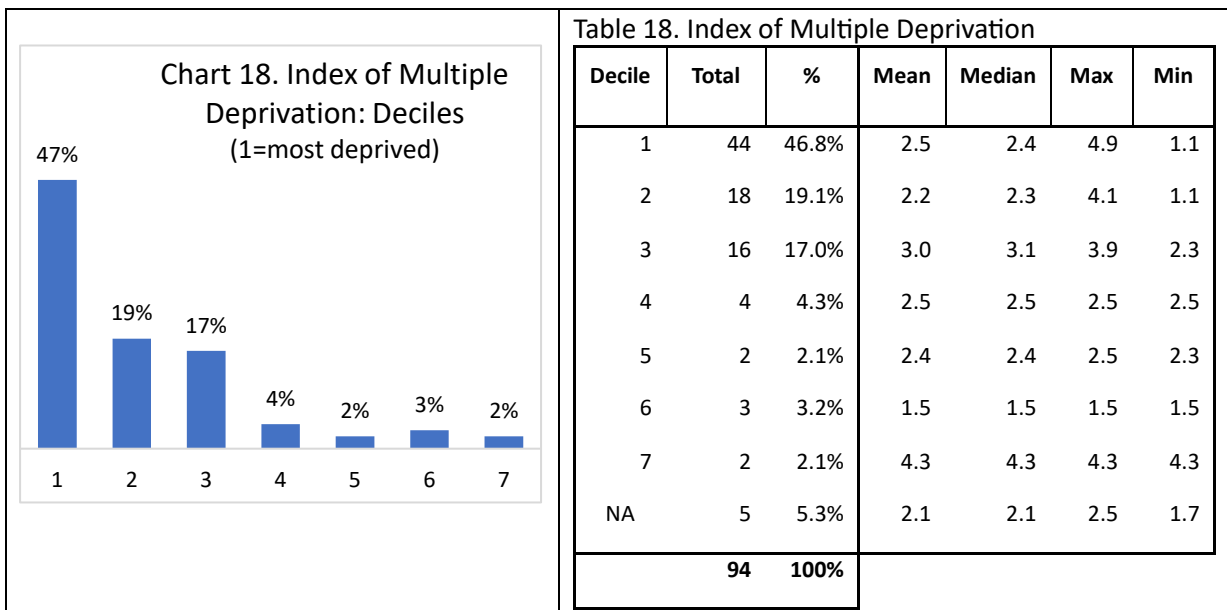
[3] *From 1, most deprived areas*

Children who completed the programme were more likely to live in more deprived areas than those who did not, according to the English Indices of Deprivation (see chart below), as the mean rank was slightly higher for children who completed the programme. Specifically, children who completed the programme lived in areas with higher deprivation levels in terms of Crime, Health and Disabilities, Education and Skills, Housing and Living Environment. However, in terms of Income and Employment, these children seemed to be living in less deprived areas than those who did not complete the intervention.

The differences may not be large enough to conclude that these factors played an important role in the decision to remain in or drop out of the programme. However, this highlights the relevance of gathering additional and precise information for each family, as the index of deprivation only allows for the assessment of average indicators for specific areas, and individual characteristics may be obscured by inequality.

Chart 17. Comparison ranks by dimensions (*Highest is most deprived*)
(Thousands)
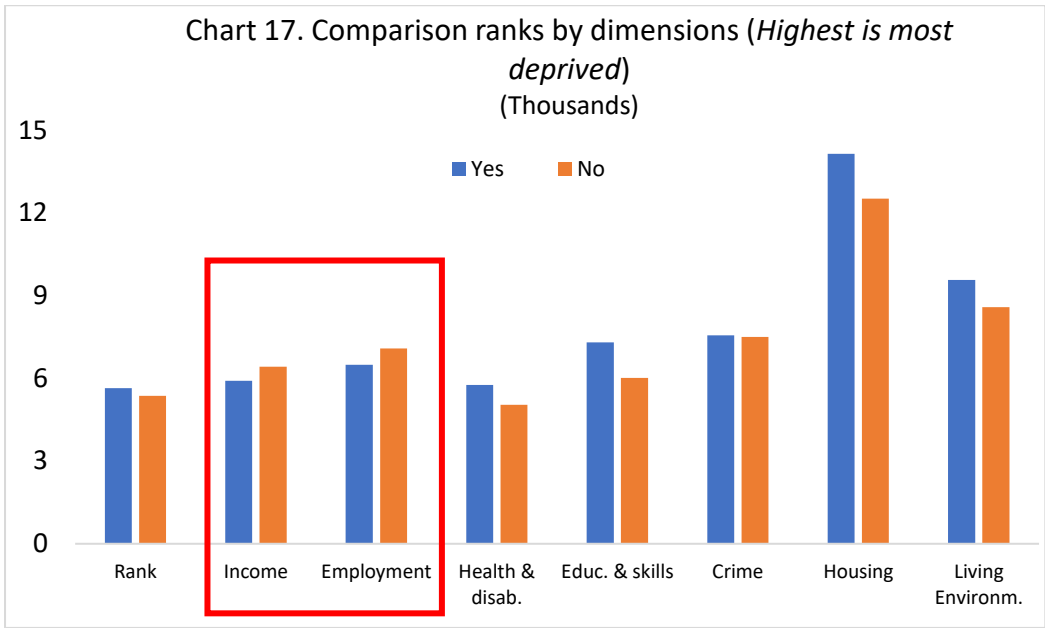
Most of the children participating in the programme are from the lowest decile, which is expected as the programme was initially commissioned within the 4 SSBC wards with high levels of deprivation.

Chart 18. Index of Multiple Deprivation: Deciles
(1=most deprived)

Table 18. Index of Multiple Deprivation

Decile	Total	%	Mean	Median	Max	Min
1	44	46.8%	2.5	2.4	4.9	1.1
2	18	19.1%	2.2	2.3	4.1	1.1
3	16	17.0%	3.0	3.1	3.9	2.3
4	4	4.3%	2.5	2.5	2.5	2.5
5	2	2.1%	2.4	2.4	2.5	2.3
6	3	3.2%	1.5	1.5	1.5	1.5
7	2	2.1%	4.3	4.3	4.3	4.3
NA	5	5.3%	2.1	2.1	2.5	1.7
	94	**100%**				

Preliminary Analysis of Qualitative Evaluation

Summary

- This section analyses data collected by the service as part of its internal monitoring and evaluation.
- Respondents indicated an overall positive experience with the service mentioning that it had been useful, appropriate, and relevant.
- Respondents were satisfied with the frequency of visits and how they were reminded of the appointments.
- Respondents were able to identify areas to improve with the support of the service.
- All the respondents were able to change something from their initial behaviours.
- Making changes was difficult for most.

About the Qualitative Evaluation

The purpose of the qualitative evaluation is to obtain feedback from parents and carers participating in the HLP service. The qualitative evaluation is completed 3 months after the child has been discharged from the service.

The aims of the qualitative evaluation:

- To get an understanding of what works well and what needs improvement in the programme (from a parent's perspective).
- To get an understanding of why some participants did not complete the programme.
- To understand how many participants have made lifestyle behaviour changes.
- To understand if/how additional support methods could have improved the experience of the participants
- To get an understanding of how parents would like to be informed if their child is above a healthy weight in the future.

Methodology

The data analysed was collected by a professional from the HLP service via telephone call with the parent/carer of the child. To analyse the qualitative data, the RSPH evaluators applied a thematic analysis, firstly by coding responses and then grouping these codes into broader themes. (To see all responses view Appendix 2).

Please note that whilst quotation marks have been used throughout this report, these might not direct quotes from participants, the responses were noted down by service staff.

Experience and expectations.

Firstly, participants were asked to explain a little bit about their families experience with the HLP service, and if it was what they had expected. The responses to this question were categorised into six themes: positive comments, perceptions, support received, training delivery, behaviour change and intervention content.

Within the positive comments category. Key words mentioned included: useful, helpful, and positive. Indicating that many participants found the intervention to be a positive and beneficial experience.

"Yes really enjoyed sessions. Learnt a lot and found it helpful"

"Very positive referrals"

"Yes found very helpful. Sad that sessions finished"

Many responses to this question also discussed the support and information received from the THLP. Participants highlighted that the intervention was informative and useful.

"From the beginning to the end been very informative and friendly. Lots of ideas and solutions given"

"Each visit has been very informative"

The style of training delivery was also feedback by participants, the comments highlighted how the staff delivered training in a way that was non-judgemental and comfortable for users.

"Really enjoyed all the visits. Felt it was delivered in a non-judgemental way".

"Yes, initially nervous you were going to tell me off but enjoyed the session when I realised it was more like friends having a chat"

Another key area that was highlighted when participants were asked about their experience was in regard to behaviour change. Respondents highlighted that following the intervention they had introduced healthier and more diverse foods into their diets such as fruit and vegetables.

"Yes learnt a lot. Have made changes from information given"

"Eating more variety of foods/fruits"

Other comments focused specifically on their perceptions of the intervention, to clarify if the intervention was what they had expected. See examples comments below.

"Yes, more than expected"

"What the family expected"

"Mum was not sure what to expect"

Finally, the content was referenced by a few participants, feedback highlighted that they had learnt amount portion sizes and traffic lights on food labels.

"The information is interesting and useful. Especially the bits about portion sizes"

"Enjoyed all the visits. Found them all useful and learnt new things. Great information on portion control"

"Reading all traffic lights on food labels"

Frequency of visits

The second question asked participants if they were happy with the number and frequency of the contacts. These responses were categorised into four categories, including: positive general comments, number of sessions, improvements, and explanations.

Positive general comments included responses such as 'yes' referenced by 16 participants and 'yes felt very supported' which was referenced by 2 participants.

Other comments included that the 'number of sessions were appropriate' and that they were 'happy with the frequency of sessions' indicating that the majority of participants were happy with the frequency of visits.

Other participants highlighted an explanation as to why they were happy with the number and frequency of sessions e.g. mentioning they had time to try out all the information.

"Yes good amount of visits and time in between was good so had time to try out all the information (visits carried out every 2-3 weeks)"

"Found us helpful. Received messages to remind me of appointments. We were on time."

Identifying areas to improve

Participants were asked 'were you able to identify the areas of your lifestyle that you wanted to improve in the first contact?'. The responses to this question were categorised into four areas including: general comments, behaviour change, understanding what areas to improve and other.

The general responses to this question included 'yes' which was mentioned by four participants. Another responded said 'yes- few things to work on' and another said, 'yes throughout as the programme progressed'.

Some responses to this question highlighted that participants were able to identify areas of their lifestyle that required changes as the sessions progressed.

"Unable at the beginning, but once completed sessions able to identify changes"

"Yes following the assessment realised need to make changes but felt more knowledge needed. This was done with THLP support"

Other comments were slightly more precise highlighting specific changes e.g 'Yes, started to reduce milk' and 'yes more activities'.

The next category included feedback where participants had mentioned having a better understanding of what areas to improve e.g the intervention helped participants identify what areas they wanted to fix, in order to make changes.

"The areas I needed to focus on were eating more fruits and vegetables and cut out snacks and drinks"

"Following the session aware that the family was not eating enough fruit and vegetables"

One participant highlighted that they were not able to identify and make changes, answering 'NO'.

Ability to make changes

The qualitative evaluation also sought to explore the extent to which participants had been able to make changes. The responses to this question varied, therefore they were categorised into the following categories: variety of foods, healthier options, physical activity, portion size and general feedback.

Variety of foods
Many of the responses to this question highlighted that participants are now eating a healthier variety of foods. See some examples comments below.

"Eating more variety of fruits. Eating less sugary snacks. Healthier breakfast cereals and now eating cheese and yogurts"

"Offering fruit and veg at every meal. Offering fruit first as a snack. Only having Macdonalds once a month"

Healthier alternative
Similarly, many of the comments highlighted that participants are now eating healthier snacks because of the intervention. Many of these responses were particularly in regard to eating fruit and vegetables.

"Changed to Healthier snacks. Still eats fruits and vegetables. Mum is consistant with offering foods that may not have been eaten prior"

"Eating more vegetables. Now in a better routine. Before she was having too much cereal and milk so now her portions are much better"

<u>Physical activity</u>

Participants also mentioned that as a result of the intervention they are now doing more physical activity such as walking.

"Introducing more physical activity"

"Walking more now"

<u>Portion size</u>

Furthermore, participants highlighted that as a result of the intervention they are now more aware of their portion sizes. See some comments below.

"Change portion sizes. After sugar session changes to snacks. Offer more fruit and vegetables although picky at the moment consistently offering portions"

"Still aware of portion sizes, feel like I got off to a good start with weaning"

Finally, other participants left more general comments including, 'more confident' and 'subjective question, agree'.

Barriers to making changes

Within the qualitative evaluation, question 5 asked participants what factors made it difficult or easy to maintain changes. The behaviour changes were categorized into the following themes: practicalities, individual factors, positive comments, and external factors. Responses regarding practicalities included more practical issues that may have prevented their ability to make changes.

"The difficulty is when all children wanted different meals. Only 1 meal is offered now."

"Structure between and change routine"

The second theme explored individual factors that may have been a barrier to making changes e.g. being fussy.

"Still doesn't like green things but I'm still trying"

"Introducing Diary has caused constipation."

"Hard to say no sometimes"

Interestingly some participants highlighted that external factors that were out of their control were barriers to making changes.

"Now weathers changing harder to do exercise outside"

"Other family members."

Other comments highlighted some positive comments whereby participants mentioned that changes were not difficult to make.

"The advise given was good and felt supported with continuing this. Mum felt that praise helped that she was doing a good job."

"Its been easy to carry on changes"

Opinions on resources

Participants were also asked what they thought of the resources or handouts received. Some positive feedback included that the resources made the sessions easy to understand, that they useful, helpful and informative and step by step.

Some of the specific resources mentioned included the eatwell guide, sugar/fat kits, physical activity wheel, toothbrushing chart, leaflets, sugar scanner and the portion size handout.

Participants also mentioned more general comments including 'yes' and 'very good'. One respondent said that they were 'sometimes overwhelmed, that it should be summarised and include more images or graphs.

Intervention improvements

Table 1, below, indicates some on the intervention improvements mentioned by participants.

Whilst most responses to this question were positive. Some participants highlighted intervention improvements including that they wanted more visits and a text message service to ask questions directly to the team, in-between visits. Participants also mentioned that they would have liked a meal plan/healthy eating program, more activities and more information about portion control.

Referral process

Lastly, participants were asked if they were happy with how they were referred to the service and how their child's growth was explained.
In response to this question most participants answered 'yes' that they were happy with the referral process. Of those who gave an explanation as to why, responses included that the referral was well explained.
However, one respondent said that they did not know what to expect and another said that the referral was a shock, and they were not expecting it.

Preliminary Conclusion

The HLP service meets an important public health need, and its design aligns with good practice explored from the literature reviewed, including national guidance.

The preliminary analysis of the service data indicates a positive effect on behaviour change. However, due to the small data set and the large number of dropouts, there is a need to explore this in further detail through the next phase of the evaluation, which will include analysis of more users' data and qualitative interviews with parents/carers who completed the intervention and those who dropped out.

The analysis of the qualitative evaluation carried out by the service indicates that the service is well received by those who completed the intervention and that it helped them take positive steps to change their behaviours.

Preliminary Recommendations

To improve the dataset for the next phase of the evaluation, we suggest a number of adjustments to the way it is collected:

- Ensure accuracy, cleanliness, and completeness of data collected in SystmOne.

- Include any service user data that might be available for example, ethnicity.

- Those collecting the qualitative evaluation data should write literal comments from respondents and prompt them to unpack their initial comments a bit more.

In addition, the evaluators would like to carry out qualitative interviews with participants who completed the programme and with those who dropped out, to explore their reasons, particularly whether they are linked to the design of the service.

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Appendix 1 – Statistical Method and Limitations

The analysis is based on correlation analysis and descriptive statistics. Due to the small sample size and the absence of an experimental design, this report relies on correlation analysis and descriptive statistics. While the main goal is not to establish causal relationships, this analysis provides valuable insights that could be further investigated with a larger sample and qualitative interviews.

Limitations

The current phase of the programme and the small sample size make it difficult to identify the effects of the intervention on BMI Z Score for children over 2 years of age. There are two main reason that restrict the analysis. First, the project needs enough pre and post-intervention information to assess if the intervention has contributed to changes, including BMI Z score at post-intervention and BMI Z score six months evaluation.

The main outcome of interest for HLP is behaviour changes, however it is worth considering that the data that is used to do this analysis is self-reported, which may introduce either voluntary or involuntary bias.

Appendix 2

1. Can you tell me a little bit about your families experience with the THLP? Is it what you expected?

Positive comments	Perceptions	Support received	Training delivery	Behaviour change	Content
Very Good	Mum was not sure what to expect	Lots of support that was not getting before.	Really enjoyed all the visits. Felt it was delivered in a non-judgemental way.	Eating more variety of foods/fruits	The information is interesting and useful. Especially the bits about portion sizes
Enjoyed the sessions	Yes, more than expected.	From the beginning to the end benn very imformative and friendly. Lots of ideas and soultions given	Yes, intially nervous you were going to tell me off but enjoyed the session when I realised it was more like friends having a chat	Yes learnt a lot. Have made changes from information given	Enjoyed all the visits. Found them all useful and learnt new things. Great information on portion control
Yes (X 4)	What the family expected	Enjoyed all visits, helpful advice	The staff were really friendly,		Reading all traffic lights on food labels.
Yes found very helpful. Sad that sessions finished.	=	Supporting to have the right foods			
Yes really enjoyed sessions. Learnt a lot and found it helpful.		Each visit has been very informative			
Enjoyed sessions. Helpful.					
Was pretty sure					
Very positive referrals.					
Really good					

2. Were you happy with the number and frequency of the contacts?

Positive general comments	Number/frequency of sessions	Improvements	Explanation as to why?
Yes felt very supported (X2)	Number of sessions were appropriate	Would like to have more visits so could finish the whole programme	Yes good amount of visits and time in between was good so had time to try out all the information (visits carried out every 2-3 weeks)
Yes (x16)	Happy with frequency of visit		Yes, only wanted the eatwell plate and happy that you let me not continue
Happy, goood advise given	The number of session was approprite for my needs		Found us helpful. Received messages to remind me of appointments. We were on time.
	Yes happy with amount and service		

3. Were you able to identify the areas of your lifestyle that you wanted to improve in the first contact?

General comments	Behaviour change	Understanding what areas to improve	Unable to identify areas
Yes - few things to work on	Unable at the beginning, but once completed sessions able to identify changes	The areas I needed to focus on were eating more fruits and vegetables and cut out snacks and drinks	NO
N/A	Yes following the assessment realised need to make changes but felt more knowledge needed. This was done with THLP support	With help could identify and make changes	
Yes x4	The changes were identified following the sessions	I was aware of areas to focus on.	
With help	Yes It all made sense. And mum made changes	After session I could	
Wanted help with how to wean my child	Yes started to reduce milk.	Yes, to have a healthier diet	
Yes, throughout as programme progressed.	yes more activities.	Helped knowing what to fix	
	Changed to fortified oat milk.	Yes , for the whole family portion sizes-	
	Yes, less milk	Following the session aware that the family was not eating enough fruit and vegetables.	

4. To what extent have you been able to make changes?

Variety of foods	Healthier options	Physical activity	Portion size	General feedback
Eating family foods. More variety in diary.	Changed to Healthier snacks. Still eats fruits and vegetables. Mum is consistant with offering foods that may not have been eaten prior.	Introducing more physical activity	Change portion sizes. After sugar session changes to snacks. Offer more fruit and vegetables although picky at the moment consistanly offering portions.	Subjective question, agree
Eating more variety of fruits. Eating less sugary snacks. Healthier breakfast cereals and now eating cheese and yogurts	Yes having fresh veg now Yes , for the whole family portion sizes	More active.	Reduced snacks	Mum was aware of sugery Snacks
Introducing more fruits and vegetables.	Changed crisps to crackers and cheese, rice cakes	Walking more now	Consider portion sizes now. Stick to 3 meals.	Yes (x2)
Offering fruit and veg at every meal. Offering fruit first as a snack. Only having Macdonalds once a month.	Fruit in diet.	Lots of walks	Still aware of portion sizes, feel like I got off to a good start with weaning	Not sure
Eating more variety.	Eating more fruits & veg.	Walking to nursery.	Yes reducing sweets	Food labeling changes.
Eating meat Now.	Has fruit for pudding. More fruit and veg		sugarery foods been reduced	More confident.
	Having a healthier diet		More food, less milk	I believe I have been able to make changes up to 80%. Children are now eating traditional foods
	a healthier diet.			
	Eating more vegetables. Now in a better routine. Before she was having too much cereal and milk so now her portions are much better.			

Question 5. What factors have either made it difficult or easy to maintain changes?

Other general comments	Practicalities	Individual factors	positive comments	External factors
Nothing (x2)	The difficulty is when all children wanted different meals. Only 1 meal is offered now.	Can sometimes be fussy	Wasn't difficult. No concerns	Now weathers changing harder to do exercise outside
Yes	Structure between and change routine	Still wants a lot of food.	It's been easy to carry on changes	Other family members.
Behaviour still tricky	Sometimes run out of healthy meals ideas	Difficult at present due to child becoming picky. Realised portion sizes were too big and changes made.	Children adapted very well	
Don't hav sugury snacks in house	not applicable because you helped me introduce food rather than change it	Bed time working	The advise given was good and felt supported with continuing this. Mum felt that praise helped that she was doing a good job.	
none		Hard if older sibling has something they want it too		
		His behaviour can be challenging		
		Hard to say No sometimes		
		Introducing Diary has caused constipation.		
		Still doesn't like green things but I'm still trying. Mum finds shopping hard.		
		Behaviour still tricky		

6. What did you think of any of the resources of hand outs you received?

Benefits	Behaviour change	Specific resources mentioned	General feedback	Other
Very helpful	Loved using the sugar/fat kits. These had a big impact on the changes made by mum	The eatwell guide is attached to the fridge. The visual guides (Sugar and fat kits were useful)	Yes	Sometimes overwhelmed. Summarised, more images or graphs
Resources made the sessions easier to understand. Especially sugar and fat kit	Loved the sugar kits - raised awareness of sugar in children's snacks. Uses the Sugar Scanner that was discussed.	Loved sugar/fat kits. Physical activity wheel helpful.	very good.	
Really useful because was able to show all the images to the children.		Enjoyed sugar kits	Yes were good.	
Helpful, useful for whole family\nYes helpful.		Toothbrushing Chart.	Very good -	
Everything was step by step		Leaflets were very useful.	Good	
It was helpful and informative		Used the portion size handouts for a few weeks before I felt I understood it more.	Yes very good	
Useful				
Very useful resources.				
They were helpful to remember things				
Very helpful still got some leaflets up in kitchen as a reminder				

7. In your opinion, what could be improved or changed about the programme?

No improvements	Benefits (positive)	More of...	Suggestions
Nothing x5	Very happy with the service and the amount of visits, felt supported to make changes	Meal plan would help.	Create a healthy eating Program.
No- really good programme	Happy with it all	More visits. Text message service to ask questions directly to the team in between visits.	Portion control.
No changes	Overall good programme and user friendly resources.	More about behaviour	
Happy with it all\nX2	Really good	More activitys	
No it was good	Happwith sessions		
No	No it was good		
Nothing,consistancyof visits			

8. Were you happy with how you were referred to our service? And how your child's growth was explained?

Yes	Why	Perception
Yes x14	Was explained well	Did not know what to expect.
Yes, attended the group and at home sessions due to requiring further support	Following assessment had a clearer understanding of centiles charts	Was a shock as wasnt expecting it.
Yes, explanation very clear		
Happy with the referral		
Yes, happy with referral		

10. In your opinion, what could be improved or changed about the programme?

No improvements	Benefits (positive)	More of...	Suggestions
Nothing x5	Very happy with the service and the amount of visits, felt supported to make changes	Meal plan would help.	Create a healthy eating Program.
No really good programme	Happy with it all	More visits. Text message service to ask questions directly to the team in between visits.	Portion control.
No changes	Overall good programme and user-friendly resources.	More about behaviour	
Happy with it all X2	Really good	More activities	
No it was good	Happy with sessions		
No	No it was good		
Nothing, consistency of visits			