Better Start Bradford Innovation Hub

HAPPY

Final End of Contract Report

March 2022

This is a report provided by the Better Start Bradford Innovation Hub (BSBIH) for the Better Start Bradford (BSB) and the HAPPY team. The document provides an overview of the HAPPY project, its performance and findings from the evaluation of the project since the start of the contract in April 2018 to the end of delivery in January 2022.

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Version 1.0

Approved by:

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Produced for Better Start Bradford

Better Start Bradford Innovation Hub
HAPPY Final End of Contract Report
MARCH 2022

Executive Summary

Project Summary

HAPPY is a key intervention in the 'Eat, Live, Love' theme of Better Start Bradford. The project is a parenting and healthy lifestyle programme aimed at preventing childhood obesity. HAPPY was developed as a targeted programme and aimed to reduce childhood obesity risk by engaging an at-risk group - women with overweight and obesity - during and after pregnancy, by promoting healthy behaviours and addressing known risk factors. The original programme model included delivery of 12 group sessions (6 antenatal sessions and 6 postnatal) for women with a body mass index (BMI) of 25 or more and was designed to reduce the risk of childhood obesity through promotion of effective parenting and healthy lifestyles for families with young children. However, early in the third year of the HAPPY contract, a decision was made to adapt the programme.

At the start of the COVID-19 public health crisis measurement of women's height and weight (needed to calculate BMI) at booking into the Maternity service became less consistent, making it difficult to identify women who would be eligible for HAPPY. In addition, delivery of the universal antenatal offer usually provided through Family Hubs was paused. For these reasons the decision was made to broaden the eligibility for HAPPY so that it became a universal offer. It was also decided that only antenatal sessions would be delivered and delivery would take place online. This changed the model from 12 weeks of content across the antenatal and postnatal periods, to 6 weeks of content delivered in the antenatal period only. Towards the end of the project contract in June 2021, the programme was further adapted from 6 weeks antenatal to 8 weeks to ensure all of the antenatal content could be appropriately covered. Since July 2020 all HAPPY delivery has taken place online making it a purely virtual offer.

Evaluation to date

HAPPY is a theory based and culturally adapted intervention. A feasibility randomised controlled trial (RCT) of HAPPY, conducted in Bradford between 2013 and 2014, demonstrated that HAPPY was a feasible and acceptable intervention to the participating women as well as programme facilitators. Although the feasibility trial was not sufficiently powered to detect a definitive effect on outcomes for participants, results after 12 months were promising and indicated reduced risk of infant obesity in the intervention group compared to the control group.

For this reason the Innovation Hub had originally identified HAPPY as suitable for Implementation, 'Before and after', and Effectiveness evaluations (see BSBIH Framework for Monitoring and Evaluating BSB Projects for evaluation categories). The intention was for a Trial Within Cohorts (TWiCs) design to be used for the Effectiveness evaluation, comparing outcomes for a random selection of participating women and their babies enrolled in the Born in Bradford's Better Start (BiBBS) cohort with other eligible women and babies in the BiBBS cohort who did not take part in HAPPY.

However, early in the delivery of HAPPY it became evident that recruitment of women into the project was low and was unlikely to reach the level required for the effectiveness evaluation. Efforts were made to optimise recruitment but the necessary levels were not reached in time and plans for an effectiveness evaluation were paused. An implementation evaluation was completed in January 2021 (Better Start Bradford Innovation Hub HAPPY End of Contract Report JANUARY 2021).

Changes made to the model since 2020 presented significant challenges to further evaluation of HAPPY. This is because the Theory of Change which forms the basis of the project and describes how it will bring about the intended outcomes no longer aligns with the current model. 6 sessions delivered in the postnatal period are a key part of the project Logic Model. It remains unclear which key elements, if any, may have been lost with the shortening of the programme. It is also unclear if and how delivering the programme virtually may impact on its success.

Family Links and Born in Bradford, who have Intellectual Property of the HAPPY programme, have worked with Barnardos to understand the adaptations they have made and acknowledge the work involved. Both Born in Bradford and Family Links have given their support to Barnardos in continuing to deliver HAPPY antenatal with an agreement that should delivery continue, every effort should be made to explore if and how the new model delivers against the original aims of the project.

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Recruitment for the HAPPY project began in April 2018 with the programme delivery starting in May 2018 and ending in January 2022. This report covers the entire period of delivery and so gives an overall view of project performance to date.

Project performance

Data

Data were made available in line with the timeline for this report. There were some minor issues around data quality and completeness which were identified during the preparation of the report and the project worked hard to resolve these. For this reason, the rating for this project is AMBER.

Recruitment

67%

Recruitment targets related to the number of women enrolled onto the project. It was anticipated that 400 women would enroll over the total project contract.
A total of 269 women were recorded as having enrolled onto a programme (67% of the target),
placing the project in RED.

Completion

77%

It was anticipated that 70% of participating women would complete the HAPPY project each year. This gave an overall target of 142 over the length of the contract.
A total of 109 women completed a programme (77% of the target), placing the project in AMBER.

Implementation

61%

Implementation targets related to the number of programme sessions delivered. It was anticipated that the project would deliver 381 programme sessions across the whole contract.
A total of 234 sessions were recorded as delivered (61% of the target) placing the project in RED.

*See Appendix (page 13) for progression criteria cut-offs

Key findings

- Evaluation of the HAPPY programme has revealed real challenges in implementing antenatal parenting programmes in the Better Start Bradford area with recruitment proving particularly challenging.

- Initial low rates of recruitment to the targeted model meant programmes were delivered with small group numbers which created a challenge in retaining participants, and led to a high rates of programme cancellation. The move to the adapted model has seen both recruitment and retention of participants improve. The project has seen increases in the number of referrals, and a greater proportion of referrals going on to enroll. This suggests the new model is acceptable to women and this is reflected in the high levels of satisfaction reported by participants. Key components might include the virtual nature of the offer with women being able to join groups from home, and the reduction in the length of the course which is now 8 consecutive weeks rather than 12 weeks spread across a year.

- While the project struggled to meet anticipated figures during the first years of the contract, performance has improved year on year, and the project was exceeding targets for recruitment and implementation, and meeting targets for completion by Year 4.

Project Performance

Data

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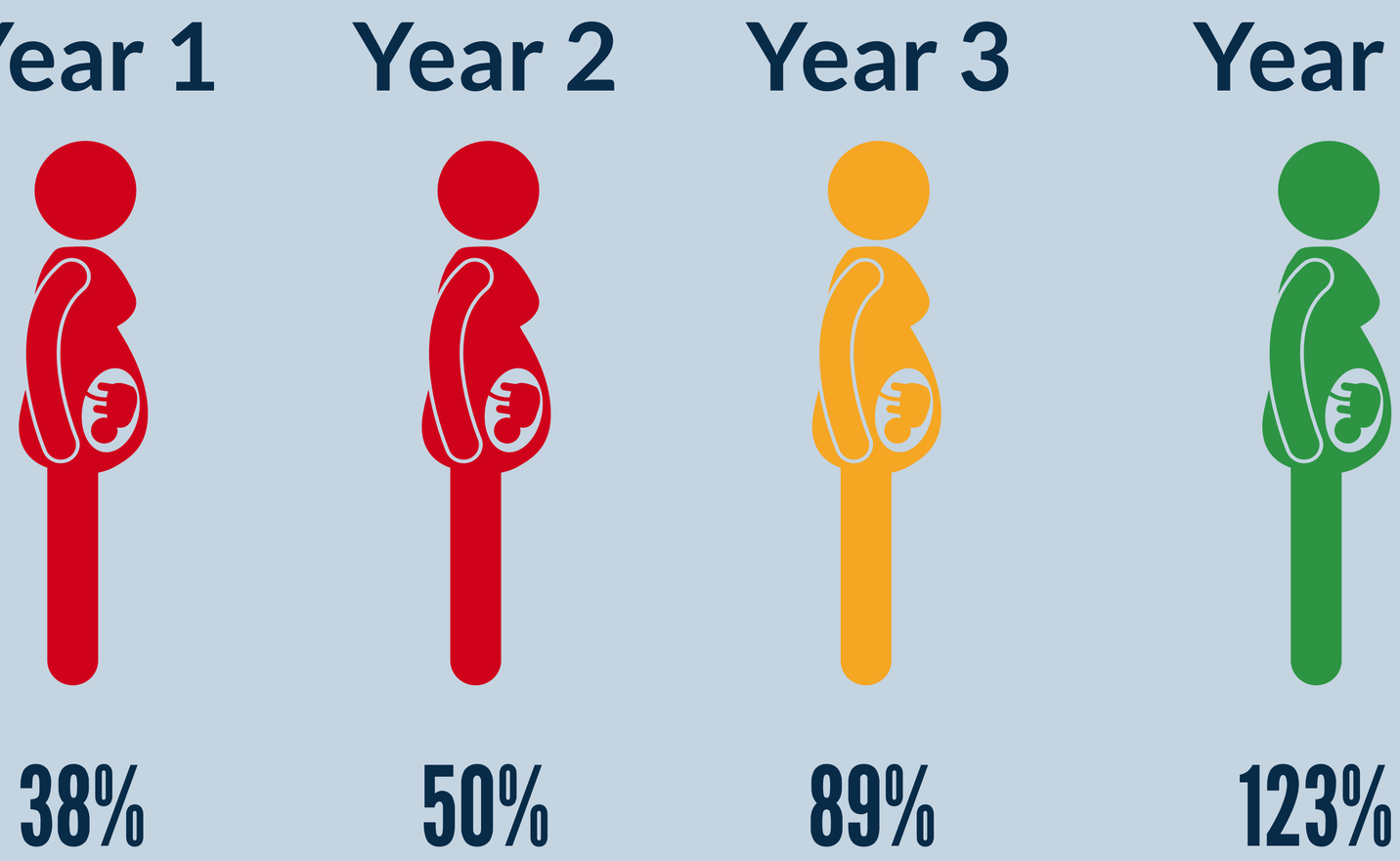
Recruitment



The recruitment progression criteria for HAPPY related to enrolment onto the project.

Initially, it was anticipated that 120 pregnant women would be enrolled onto a HAPPY programme each year (a total of 360 for the original three year contract). The anticipated figure for year 3 was then revised to 100 after the introduction of the universal offer, with an anticipated figure of 60 for the final 9 months of the contract in Year 4.

In Year 1, 46 women enrolled onto a programme (38% of the target) placing the project in RED.

In Year 2, 60 women enrolled onto a programme (50% of the target) placing them in RED.

In Year 3, 89 women enrolled onto a programme (89% of the target) placing them in AMBER.

In Year 4, 74 women enrolled onto the programme (123% of the target) placing the project in GREEN.

The project achieved 67% of the overall target having enrolled 269 women, of the anticipated 400 placing them in RED for this progression criteria.

Project Performance

Completion

% of completion target met

31%

Targeted programme

99%

Universal programme

Completion of the targeted 12 week programme was defined as attending at least 8 of the 12 sessions. Completion of the 6 week universal programme was defined as attending at least 4 of the 6 sessions. And completion of the 8 week programme was defined as attending 6 of the 8 session.

It was anticipated that 70% participating women would go onto complete a programme each year. The length of the targeted programme meant it was not possible for women to participate and complete in the same year so rather than focus on annual targets this report focuses on the overall number of completers across the evaluation period.

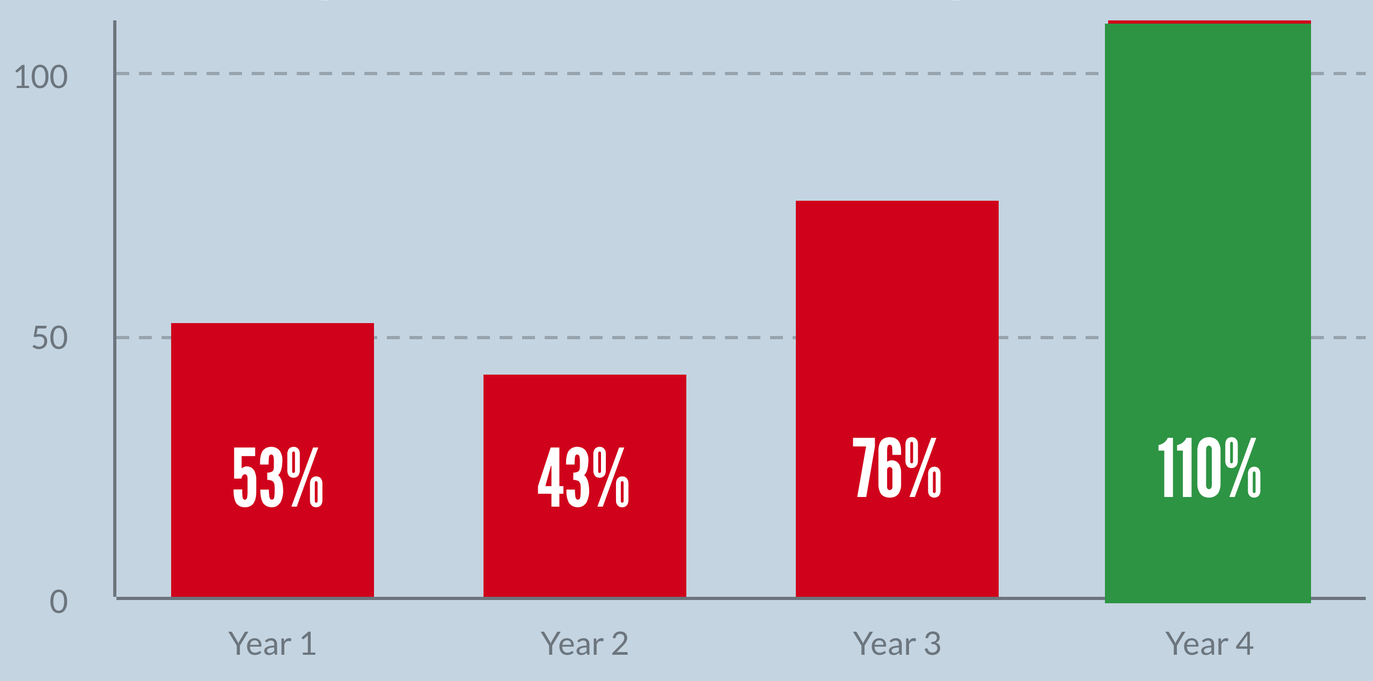
Data showed that a total of 109 women completed a programme, 54% of particpants and **77% of the overall target**, placing the project in AMBER overall. When this is broken down by programme model 29% of targeted participants completed a programme (31% of the target which is RED), while 69% of universal participants completed a programme (99% of the target which is AMBER).

Implementation

It was originally anticipated that 12 HAPPY programmes would be delivered each year, each consisting of 12 sessions with the exception of Year 4 with a target of 6 programmes consisting of 8 sessions. Anticipated figures were then adjusted for the change to the model part way through Year 3 and a pause in delivery due to COVID-19. For the purpose of this report, annual targets were also adjusted to allow for the length of the targeted programme and delivery spanning multiple contract years. These means anticipated figures for implementation were as follows: 99 in Year 1, 150 in Year 2, 84 in Year 3, and 48 in Year 4.

Figure 1 shows performance against implementation targets. In Year 1, 52 sessions were recorded as delivered (53% of the target), in Year 2, 65 sessions were recorded as delivered (43% of the target), in Year 3, 64 sessions were recorded as delivered (76% of the target) placing the project in RED. However, in Year 4, 53 sessions were recorded as delivered (110% of the target) meaning the project was in GREEN. Overall the project met 61% of its target for Implementation having delivered 234 sessions, placing them in RED overall for this progression criteria.

Figure 1: % of implementation target met



Recruitment

Who was eligible for the project?

The original 12 week model of the HAPPY programme targeted pregnant women with overweight or obesity in pregnancy. The full eligibility criteria for the 12 week model can be seen in Box 1.

Box 1. Targeted 12 week programme

Pregnant women were eligible for the targeted HAPPY programme if:

- lived in the Better Start Bradford area
- they had overweight or obesity (had a BMI of 25 or more) at the time of booking with Maternity Services.
- they were between 22 and 32 weeks gestation at the start date of a planned programme

Given these specific eligibility criteria , the main referral pathway for women was via Perinatal Project Coordinators (PPCs) based within the hospital, who were able to identify eligible women and contact them to offer a referral to the project. Referrals could also come directly from midwives, other community settings, and from women themselves but self referrals were not introduced until November 2019.

Data collected by the PPCs showed that they identified around 33 eligible women each month for the targeted programme. On average 80% of these women were contacted by the PPCs. Of those contacted an average of just over a third (36%) accepted the offer of a referral to the project (approximately 9 referrals a month).

The adaptation of the model to an universal antenatal only programme meant a change to eligibility for the project (seen in Box 2). The PPCs remained the main source of referrals. Based on their data they identified around 52 eligible women each month. On average they were able to contact 89% of these women . The acceptance rate was also just over a third (38%) of contacted women (approximately 16 referrals a month).

Box 2. Universal 6 and 8 week programmes

Pregnant women were eligible for the universal HAPPY programme if:

- lived in the Better Start Bradford area
- they were between 22 and 32 weeks gestation at the start date of a planned programme

The most commonly recorded reasons for declining a referral to HAPPY at the point of being contacted by the PPCs were:

- not being interested in the programme - some women specifically stated that because it was not their first pregnancy, they did not feel they needed the programme
- being too busy or not having time to attend - this was often due to other family commitments

Recruitment and Reach

Referrals and enrollees

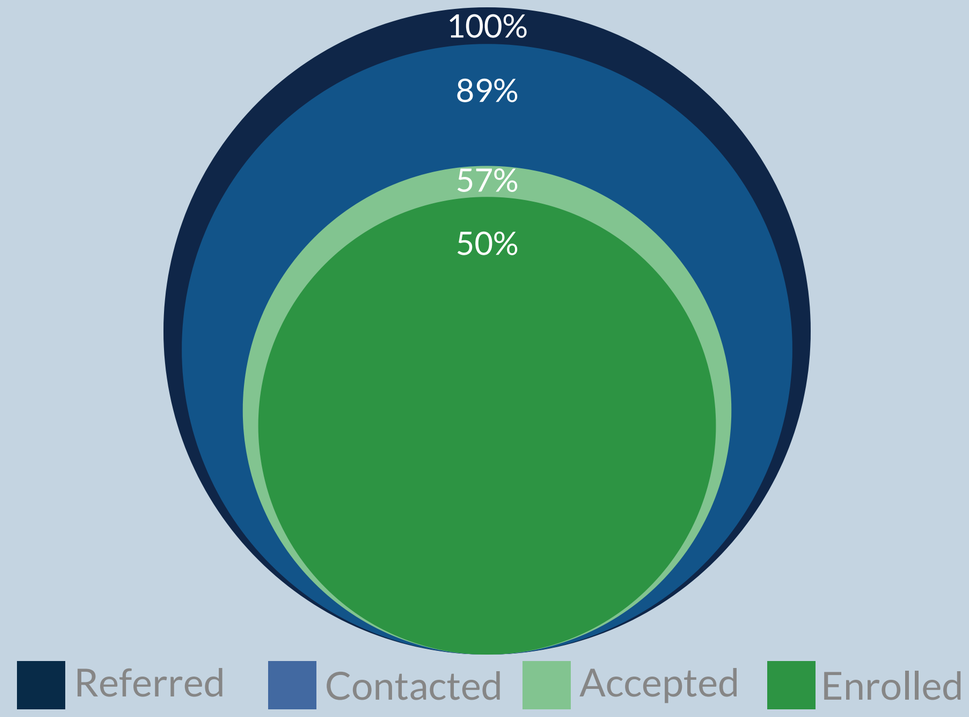
A total of 535 unique women were recorded as having been referred into the project across the full contract period.

442 (83%) of these referrals were contacted by the HAPPY team and offered the project.

304 women accepted the offer of attending a programme at this first contact. This represents 57% of all referrals and 69% of those referrals contacted by the project.

As previously reported, 269 women were recorded as having enrolled onto a specific HAPPY programme. This represents 50% of all referrals, 61% of those contacted, and 89% of those that accepted the offer at first contact from the project.

Figure 2: % of referrals who were contacted by the project, accepted the offer, and enrolled onto a programme



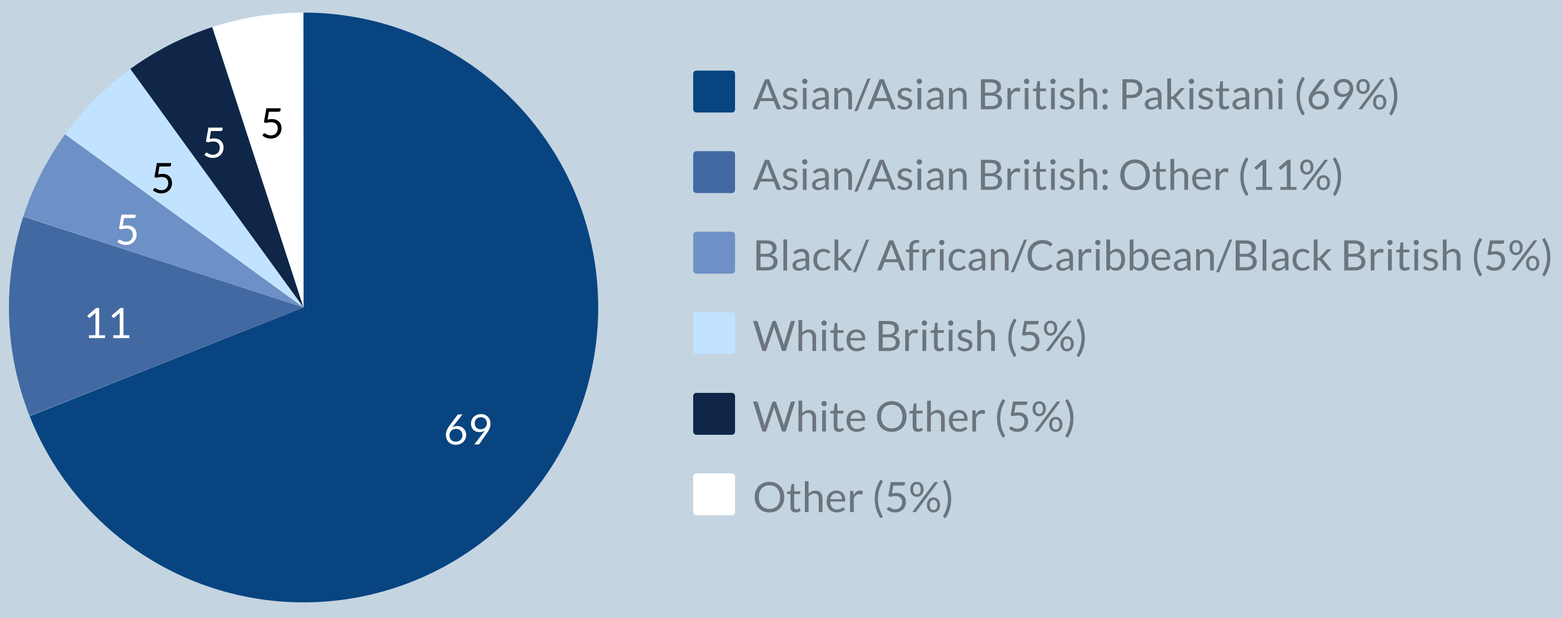
The most commonly recorded reasons women gave for not taking up the programme when contacted by the HAPPY team were having other competing time commitments, such as family or work commitments, or already being enrolled on an antenatal programme, or experiencing other barriers including language, ill health, religious observations, not wanting to travel to the venue.

Who enrolled on the project?

Of the 269 enrollees, ethnicity was recorded for 255 (95%).

69% were Asian/Asian British: Pakistani and 11% Asian/Asian British: Other. 5% were White: Other and 5% were White: British. A further 5% were Black/ African/Caribbean/Black British. Due to the low numbers in other ethnic categories, these were were grouped as 'Other'. This category includes Mixed ethnicities, Arab and all other.

Figure 3: Ethnicity of pregnant women enrolled on the HAPPY project (%)



When we compare the ethnicities of women who enrolled onto the HAPPY programme with the wider population of women in the Better Start Bradford area, the project is over-representative of Asian/Asian British: Pakistani women and Black African/ Caribbean/ British women and under representative of White British and Other White ethnicities.

Participation

How many women took part in a programme?

Participation was defined as attending at least one programme session.

It was originally anticipated that 120 women would participate in a programme each contract year. Anticipated figures were then adjusted for the change to the model part way through Year 3 and a pause in delivery due to COVID-19.

This means anticipated figures for particpation were as follows: 120 in Years 1 and 2, 100 in Year 3, and 60 in Year 4 (which was only 9 months).

Figure 4 shows performance against these targets. Overall, 203 unique women were recorded as having participated (51% of the overall target of 400).

28 took part in Year 1 (23% of the target), 48 in Year 2 (40% of the target), 59 in Year 3 (59% of the target), and 68 in Year 4 (133% of the target)*.

Anticipated figures for participation were based on 100% of enrollees going on to participate.

Figure 5 shows the actual proportion of enrollees who went onto participate in a programme.

61% of enrollees took part in Year 1, 80% in Year 2, 66% in Year 3, and 92% in Year4.

The number of women participating in the project across the first years of the contract were low, but have increased year on year. The proportion of women that enroll and then go on to participate has also increased across the contract with the project performing strongly against anticipated figures in Year 4.

Figure 4: % of participation target met

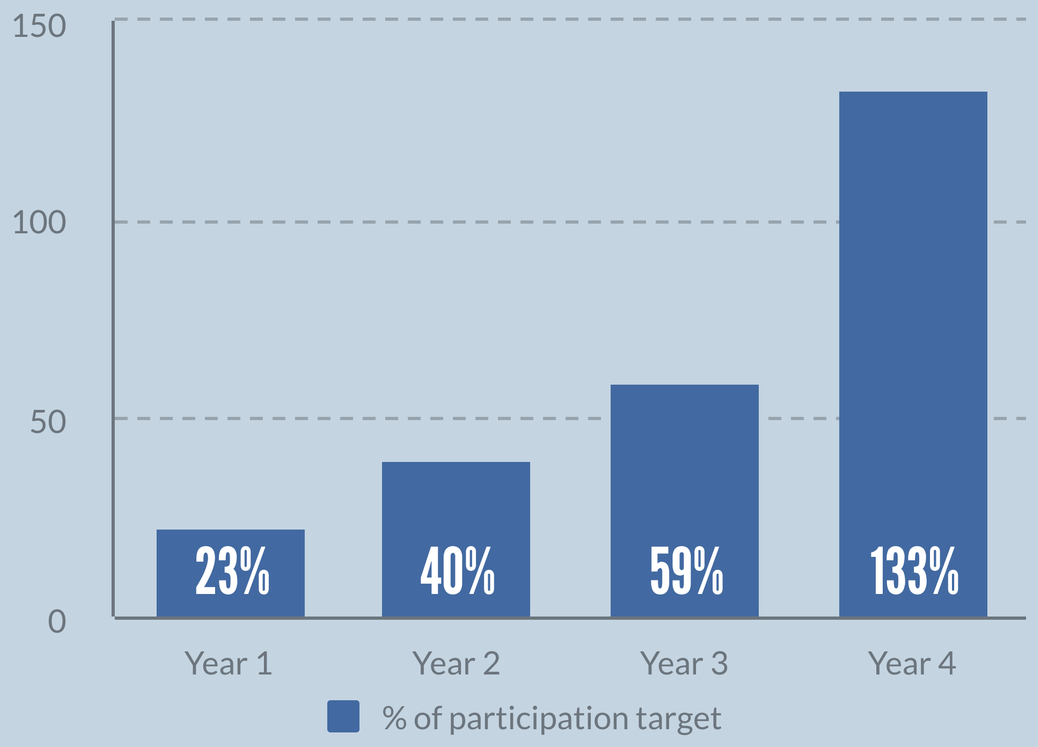
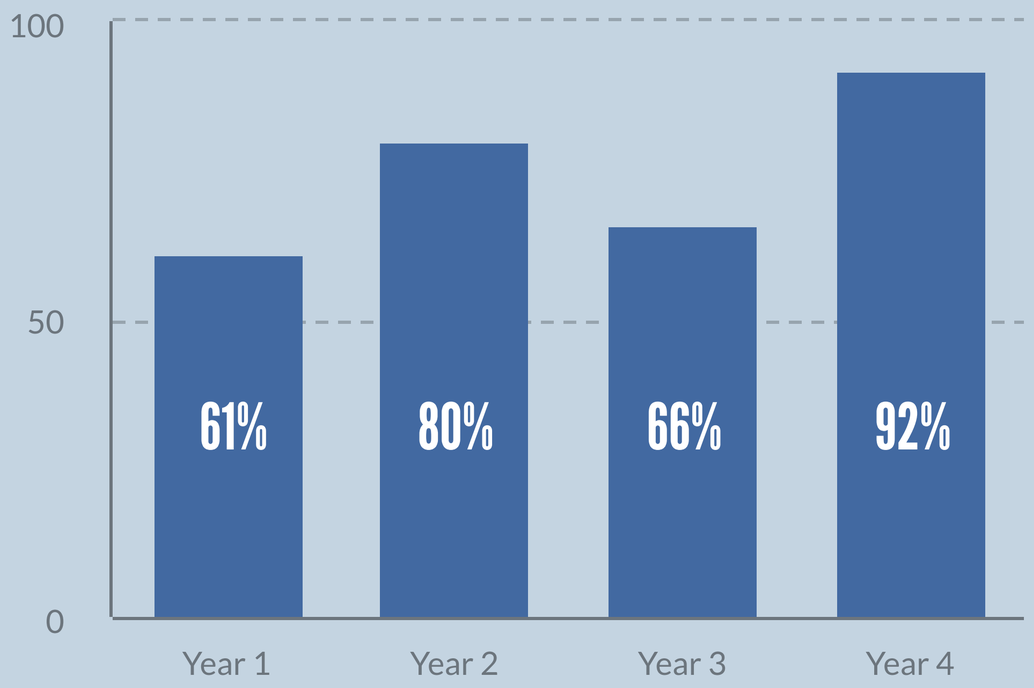


Figure 5: % of enrollees going on to participate



*Calculated by determining the contract year a woman first attended a programme session.

Participation and Implementation

What did women's participation look like?

Targeted 12 week programme

Antenatal

6 weekly sessions

Group based

Face to face

+

Postnatal

6 sessions around key milestones for baby

Group based

Face to face

106 women enrolled onto the 12 wk targeted programme.

76 attended at least one antenatal session (72% of enrollees)

On average women attended 3 antenatal sessions (min. 1 max. 6)

42 attended at least one postnatal session. On average women attended 3 postnatal sessions

22 women completed the targeted programme (29% of participants)

Universal 6 and 8 week programmes

Antenatal

6 or 8 weekly sessions

Group based

Virtual

163 women enrolled onto the universal programme.

127 attended at least one session (78% of enrollees)

On average women attended 3 antenatal sessions of the 6 week programme (min. 1 max. 6)

On average women attended 3 antenatal sessions of the 8 week programme (min. 1 max. 6)

87 women completed the universal programme (69% of participants)

Reasons enrolment ended with the project were recorded for 135 enrollees.

- 76% were recorded as having dropped out of a programme
- 13% became uncontactable

Other reasons included loss of pregnancy, moving out of area, baby being in hospital or being unable to make the time or venue.

Was HAPPY delivered as planned?

At the start of the contract, it was anticipated that the project would deliver 12 programmes each contract year - approximately one new programme starting each month.

However, with a pause in delivery due to COVID-19 and adaptations to the model anticipated figures for delivery were adjusted.

This means the overall anticipated number of programmes to be delivered was 40; 12 in Years 1 and 2, 10 in Year 3, and 6 in Year 4 (which was 9 months).

Implementation

Was HAPPY delivered as planned?

Targeted programmes (12 weeks):

It was originally anticipated that the project would deliver 12 targeted programmes a year. Each consisting of 6 weeks of antenatal content and 6 weeks of postnatal content. However, given the length of a full programme, this meant that the antenatal element could be delivered in one contract year, with the postnatal element being delivered in another. This gave an overall target of 36 targeted programmes. However, a pause in delivery due to COVID-19 and adaptation of the model part way through Year 3 means that anticipated figures were adjusted to 12 programmes in Years 1 and 2, and 2 in Year 3.

Data showed that 25 of these programmes had been delivered - meaning at least one session of the programme was recorded as having taken place - by the end of the evaluation period. The project therefore achieved 96% of the target for programme delivery.

96%

of anticipated targeted programmes delivered*

*at least one session took place

However, of the 26 postnatal elements that should have taken place, only 9 were recorded as having been delivered (35% of anticipated). 12 of these programmes did not take place as the preceding antenatal programmes had been cancelled. A further 2 were cancelled because minimum attendance was not met. In total 54% of planned postnatal programmes were cancelled. Many postnatal sessions were also cancelled and this tended to be because participants did not attend for reasons including last minute family commitments, health issues, moving out of area, or becoming uncontactable.

35%

of anticipated postnatal programmes delivered

Of the targeted 12 week programmes, 1 was delivered in full (all 12 sessions). The average number of sessions delivered across all programmes was 5. The average number of sessions delivered where both antenatal and postnatal elements took place was 9 (5 antenatal and 4 postnatal).

From November 2019, where minimum attendance was not met, postnatal programmes were delivered to women 1:1 to allow them the opportunity to complete the programme. From July 2020 the postnatal element of the programme was scrapped.

Universal programmes (6/8 weeks):

The move to a universal antenatal only offer involved a revision of anticipated figures. It was anticipated that a further 10 universal programmes would be delivered in Year 3 (in addition to the 2 targeted) and that another 6 would be delivered in Year 4.

100%

of anticipated universal programmes were delivered

20 universal programmes were recorded in the data as having been planned and started, 9 in Year 3 (90% of anticipated) and 10 in Year 4 (150%). 11 of the 20 antenatal programmes were recorded as having been delivered in full (55%) which means all of intended sessions took place and were attended.

Cancelled programmes:

A total of 13 planned programmes were cancelled, 6 with no sessions recorded as having taken place, and 7 after 3 or less sessions of delivery.

With the exception for 1 programme cancelled due to COVID-19 in Year 3, the other programmes were cancelled because minimum attendance was not met. A total of 186 antenatal sessions were delivered (71% of anticipated).

71%

of anticipated antenatal sessions delivered

Satisfaction

What did parents/caregivers say about the support they received?

64 women completed and returned satisfaction questionnaires at the point when data was collated for this report. Scores of 4 or more in response to questions demonstrate satisfaction with the project. However, results should be interpreted with caution given the low number of respondents.

100% **of respondents had a median score of 4 or more**

100% of respondents agreed or strongly agreed that the project was helpful to them

100% of respondents agreed or strongly agreed that they were satisfied with the support they received

100% of respondents agreed or strongly agreed that the project gave them useful information

100% of respondents agreed or strongly agreed that the project was easy to access

100% of respondents agreed or strongly agreed that they would recommend the project to family or friends

100% of respondents were happy with the project overall

"Such a wonderful course with lovely co-ordinators. Would highly recommend to others given the course contents. ."

"The best support I could ever wish for!"

"Happy team is very professional but friendly the same time, I was delighted and appreciate that all hints and knowledge was present very simple and accessible way"

Outcomes

How many women completed pre and post course questionnaires?

Women were asked to complete a questionnaire before starting the programme which included questions about diet, physical activity and other lifestyle behaviours, and intentions around infant feeding. At the end of the progamme they were asked to complete another questionnaire including similar questions. 218 women had a pre-course questionnaire recorded. 91 had post-course questionnaires recorded.

Before and after questionnaire data was available for women who completed both a pre and post questionnaire (n=77).

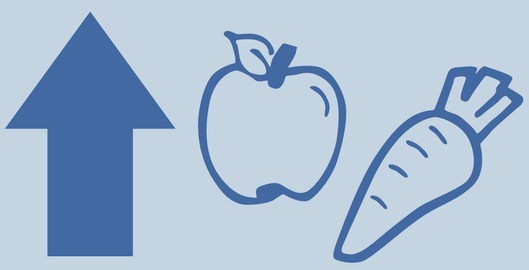
Findings

A 'before and after' evaluation tells us about changes that have taken place from the time before women took part in a project, to immediately after. However, it does not tell us whether those changes are a result of taking part in the project. This is because there is no control group for comparison.

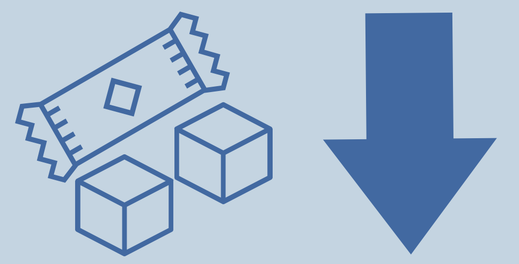
Given changes to the HAPPY programme partway through the contract, post questionnaires had to be adapted to remain relevant for an antenatal only programme meaning some questions from the original version were dropped and some added. This makes analysis of the data difficult. Interpretation of findings is also complex. For example, changes in physical activity from the start to the end of an antenatal programme may be related to physical changes across pregnancy which can reduce women's mobility.

For these reasons, in addition to low numbers of completed questionnaires, findings presented here should not be taken as an indication of the effectiveness of HAPPY.

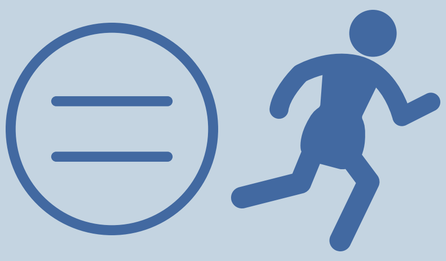
Diet



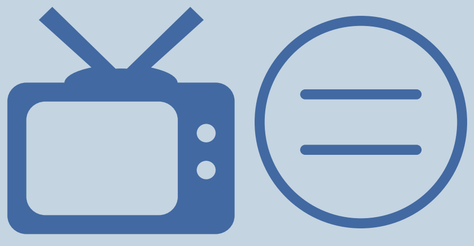
Women were asked a number of question about their diet.
More women reported eating fruit 2-3 times per day or more after finishing the HAPPY programme than at the start (80% vs 61%). More women also reported eating vegetables 2-3 times per day or more (cooked green vegetables 46% vs 18%; cooked root vegetables 43% vs 16%; raw salad vegetables 26% vs 14%).
Fewer women reported eating sweets and chocolates more than once a week at the end of the programme than at the start (30% vs 60%) with the proportion eating sweets once a day or more dropping from 23% to 6%.



Physical activity and screen time



Women were asked a number of question about their activity habits, including how often and for how long they engaged in vigorous and moderate physical activity, walking, and sitting, and how long they engaged in screen time.
Activity levels were comparable from the start to the end of the programme with the average number of days active and inactive remaining the same. 41% of women did report an increase in moderate activity of at least an hour per day at the end of the programme. However, another 41% reported a decrease in moderate activity of at least an hour a day.
Screen time was also similar at the start and end of the programme.

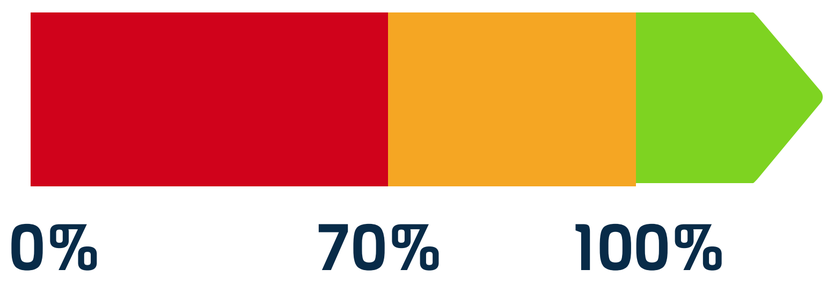


Infant feeding intention

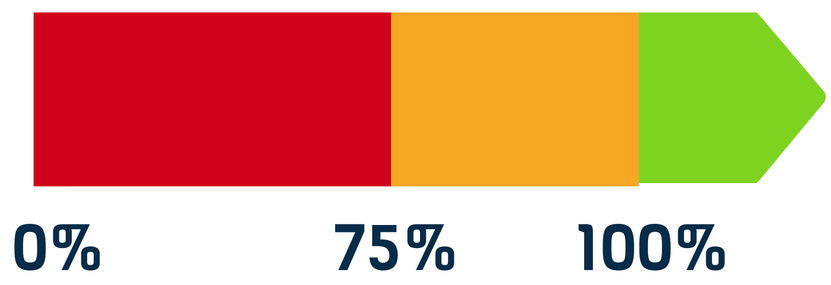
Only 35 of those women who completed pre and post questionnaires answered questions about their intentions to breast or formula feed their baby at both time points. No differences were found in infant feeding intention.

Appendix - Progression Criteria Cutoffs

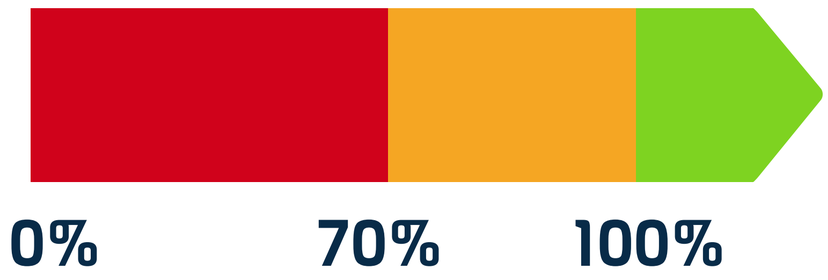
Recruitment



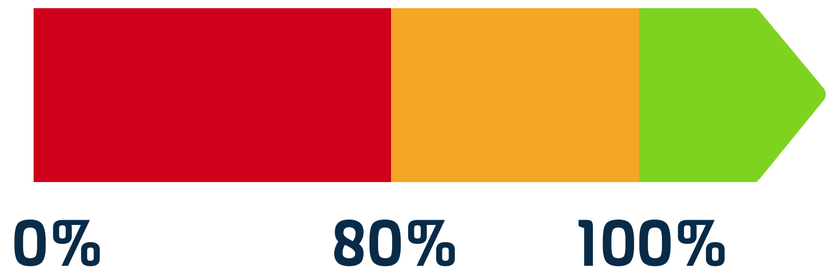
Completion



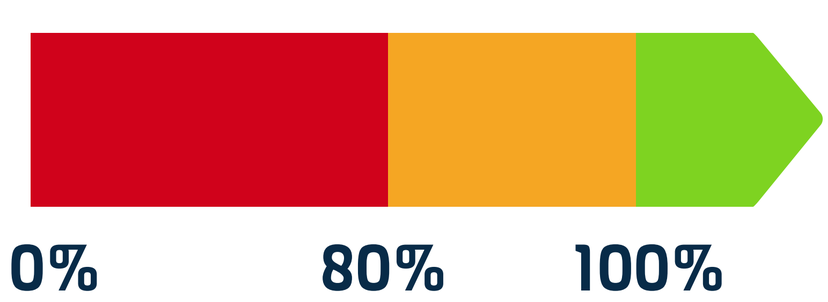
Reach



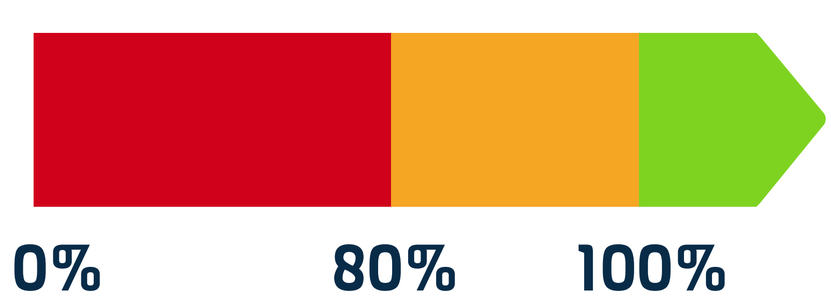
Fidelity



Implementation



Satisfaction



For more information on how progression criteria and associated cut-offs have been developed please see Bryant, et al., 2019 Use of progression criteria to support monitoring and commissioning decision making of public health services: lessons from Better Start Bradford. BMC Public Health