

## Better Start Bradford Innovation Hub

# Baby Steps End of Contract Report - September 2022

*This is a report provided by the Better Start Bradford Innovation Hub (BSBIH) for the Better Start Bradford (BSB) and the Baby Steps teams. The document provides an overview of the Baby Steps project and its performance. The report provides a summary of data collected by the project between March 2018 and July 2022. The design of this evaluation is described in more detail in the Evaluation Outline which was approved by key stakeholders from the BSBIH and BSB.*

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Produced for Better Start Bradford

## Better Start Bradford Innovation Hub Baby Steps End of Contract Report September 2022

# Executive Summary

## Project Summary

Baby Steps is a relationship based antenatal and postnatal parenting education programme. Originally a targeted offer within the Better Start Bradford programme, the project is particularly suitable for vulnerable and socially excluded parents who often face challenges and 'overload' in pregnancy and early parenting. Participants enroll before they are 24 weeks pregnant, and involvement with the service begins around the 26th to the 30th week of pregnancy.

The targeted programme ran as an in person group based service from March 2018 to February 2020 consisting of six weekly antenatal sessions and 3 further postnatal sessions. In March 2020, in response to the COVID-19 pandemic, Baby Steps moved to an online delivery model which was adapted to consist of four weekly group sessions before the baby is born and two online group sessions delivered postnatally. In order to reach a wider population in need, Baby Steps moved from a targeted to a universal offer in May 2022 and continues as a virtual offer.

This report summarises the BSBH's evaluation of the implementation of Baby Steps alongside a before & after evaluation. The report is based upon data collected by the project provider across 4 years and 4 months of delivery (1st March 2018 to 15th July 2022).

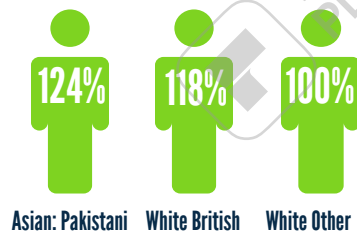
## Project Performance

### Completion



Targets for completion relate to the number of unique postnatal women who complete a programme. The project is in **AMBER** for this progression criterion.

### Reach



Targets for reach relate to the representativeness of participants of the three main ethnic groups in the Better Start Bradford area. This places the project in **GREEN** for this progression criteria.

### Implementation



Targets for implementation relate to the number of programmes started and delivered. The project is in **AMBER** for this criterion.

### Data



Data is made available on time and is well complete. The project is in **GREEN** for this progression criteria.

## Planned evaluation

In addition to the implementation and before and after evaluations reported here, an enhanced effectiveness evaluation is currently underway. This evaluation will aim to establish whether taking part in the project impacts upon maternal sensitivity (measured by the Mothers Object Relations Scale (MORS)), and maternal mental health (measured using the PHQ-9 and GAD-7) at approximately 6-10 weeks post birth. The study will identify a control group within the Born in Bradford's Better Start (BiBBS) cohort of families who have completed the measures and not taken part in Baby Steps, and compare their outcomes with BiBBS families within the Baby Steps project. More information about the detail of the evaluation can be found by requesting the protocol from BSBH. The study is registered here: <https://doi.org/10.1186/ISRCTN12196131>

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# Executive Summary continued

## Planned evaluation

The success of the effectiveness evaluation relies on four key things:

Recruiting sufficient numbers of families to the BiBBS cohort that have also been referred into and enrolled onto Baby Steps. The BiBBS team are currently monitoring recruitment to ensure they are reaching these families within current processes. They will also be working with the Baby Steps team to explore options for promoting participation in BiBBS with families already enrolled onto the project

Sufficient numbers of those women enrolled into Baby Steps having outcome data recorded, particularly the MORS. Postnatal collection of the MORS within the project has not yet started. Outcome data are needed for at least 62 participants in the intervention to be able to detect a difference in the primary outcome.

Sufficient numbers of BiBBS women completing the outcome measures at 6-10 weeks postnatally. The BiBBS team are currently undertaking an additional timepoint of data collection to facilitate this. Outcome data are needed for at least 187 control families.

Good quality and accurate data collection. Currently the identification of women who have been referred to the project more than once in relation to subsequent pregnancies is difficult due how the data is being captured. Ensuring that each individual referral has its own ID within the data will help to ensure all eligible women can be included in the effectiveness evaluation.

## Key findings

Baby Steps has continued to deliver close to anticipated targets despite the huge disruption of COVID-19, and have been flexible with the way they engage with parents and deliver the service to them.

The high levels of parental satisfaction suggest that the project is valued by the community, and the results of the before and after evaluation suggest that parental mental health and self esteem may be improved by the project.

While less than half of referrals go on to enroll onto the project, once enrolled, retention within the project is high with good rates of participation and completion. The high levels of retention in the programme reflect that it is an engaging and valuable project.

The project continues to recruit well following the move from a targeted to a universal offer, despite challenges experienced during the transition to a new maternity data system. The growing number of universal referrals alongside those for vulnerable families suggest referral pathways are now working well.

## Recommendations

Baby Steps is performing well and reaching families representative of the Better Start Bradford area who are experiencing a range of vulnerabilities. The shift to a universal offer appears to be successful while the project continue to reach the most vulnerable families through the maintenance of a targeted pathway. Evaluation to date suggests the project is valuable to Better Start Bradford families.

An effectiveness evaluation is underway but will only be deliverable if the project is recommissioned and the MORS measure is collected.

For these reasons the BSBIH recommend that the project is recommissioned.

It is also recommended that the project work to improve questionnaire completion, particularly at the postnatal time point, to support the planned effectiveness evaluation and ensure sufficient outcome data.

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# Project Performance

## Data



Data is consistently made available on time and is well complete. There is a small issue with estimated due dates being duplicated per referral ID which indicates a process/data quality issue. This has made mapping individual journeys for each mother difficult. We will work with the project to explore ways of resolving this issue. Better labelling of questionnaires as antenatal and postnatal within the data would also support evaluation.

The project is in **GREEN** for data quality.

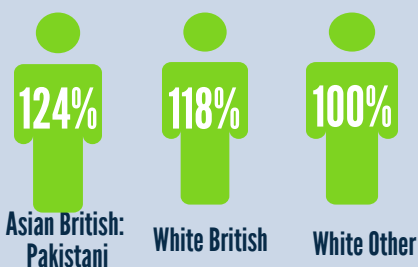
## Completion

98%

Targets for completion relate to the number of women who complete a programme. A completer is defined as someone who attends at least 6 of 9 programme sessions (including at least one postnatal session).

It was expected that 266 women would complete the project during this evaluation period (25 in Year 1, 50 in Year 2, 60 in Year 3, 60 in Year 4, and 55 in Year 5, across 4 years and 3.5 months). 260 women completed the project (98% of anticipated). This places the project in **AMBER** for this progression criterion. It is worth noting that anticipated figures were based on 50% of annual participants going on to complete. In fact 72% of participants completed a programme, demonstrating higher than anticipated rates of completion.

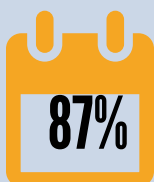
## Reach



The ethnicity proportions of the Better Start Bradford (BSB) population from maternity databases for the past year are: Asian/Asian British: Pakistani (41%), White: British (11%), and White: Other (8%). The project have successfully recruited a representative population of the BSB area for all of these populations (Pakistani: 51% (124% of the target), White British 13% (118% of the target), and White: Other 8% (100% of the target))

This places the project in **GREEN** overall for this progression criterion.

## Implementation



of anticipated courses delivered

87%

Targets for implementation relate to the number of complete programmes delivered (defined as containing 6 antenatal and 3 postnatal sessions with attendance from 1 or more women, and including catch up sessions). It was expected that 53 programmes would be delivered during this evaluation period (based on 5 courses in Year 1, 10 in Year 2, 12 in Years 3 and 4, and 11 in Year 5 over a period of 4 years and 3.5 months), and the project delivered 46 programmes total over the current evaluation period. This places the project in **AMBER** for this progression criterion.

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# Recruitment

## How many pregnant women were referred to Baby Steps?

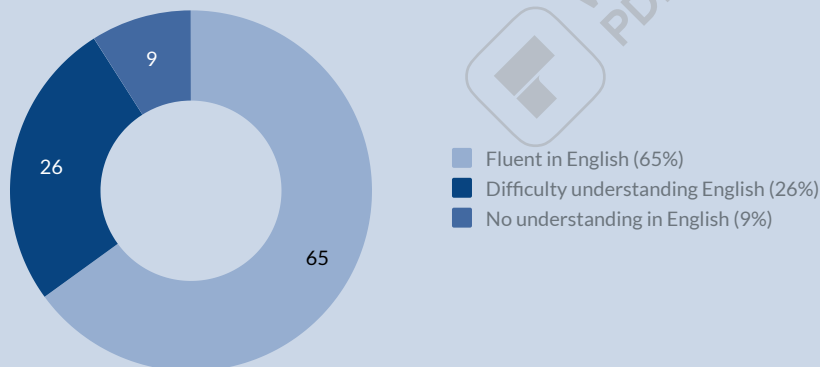
Across the evaluation period a total of 1417 offers of referral were made which related to 1322 unique pregnant women (as women can be referred into the project multiple times). In total, 936 offers were accepted (66% of offers) relating to 891 unique women.

As previously stated, the project was delivered as a purely targeted service until 30th April 2022. To be eligible women needed to be identified by their midwife as having met one or more of the relevant vulnerabilities specified in the project eligibility criteria (e.g. ethnic minority, experience of domestic violence, isolated). Midwives would make the offer of a referral to women and where the offer was accepted, this would be recorded within the maternity data system and then 'actioned' by the Perinatal Project Administrators PPAs). During this time 1313 referrals were recorded.\*

From the 1st May 2022 the offer moved from purely targeted to a universal offer which maintained a targeted pathway. This means that now all pregnant women in the Better Start Bradford area are eligible for the project. Midwives continue to identify women with vulnerabilities for referral into Baby Steps and make the offer as before. All other eligible women (who haven't already been approached by their midwife) are now contacted by the PPAs directly and offered a referral to the project. Progress with introducing this new universal pathway was hindered by a transition to a new data system within Maternity services. However despite this 104 referrals were recorded since this time.\*

\*These numbers are taken from data collated by the PPAs

## What languages did the referrals speak?



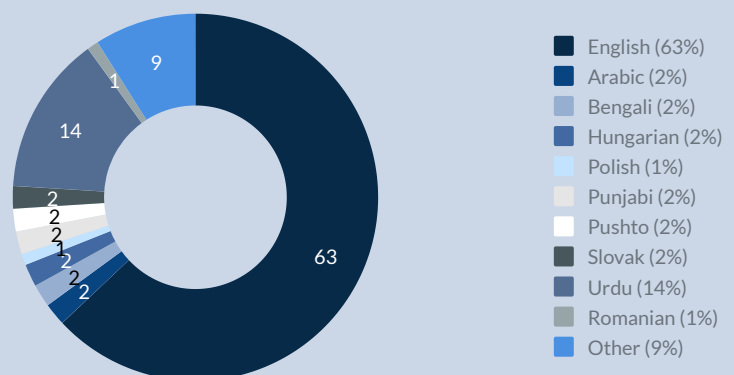
The majority of recorded referrals were recorded as being fluent in English (n = 917, 65%). A large minority were recorded as having difficulty understanding English (n = 370, 26%), and the remaining participants were recorded as having no understanding in English (n = 125, 9%).\*

\*These numbers are taken from data collated by the PPAs

## What were their English speaking skills?



The majority of referrals were recorded as having English as their spoken language (n = 902, 63%). A large minority had Urdu as their spoken language (n = 192, 13%). The next largest language groups were Bengali (2%), Pushto (2%), Slovak (2%) and Hungarian (2%). Please note that where fewer than 10 reported a language these have been grouped as 'Other'.

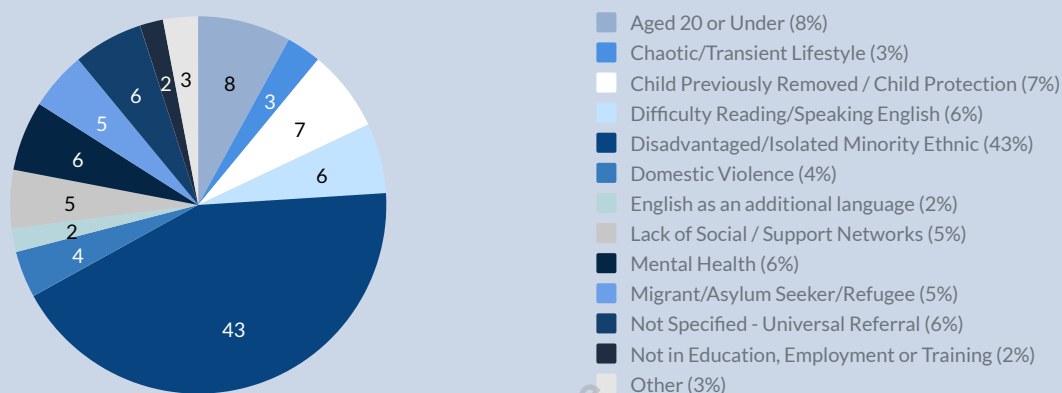


\*These numbers are taken from data collated by the PPAs

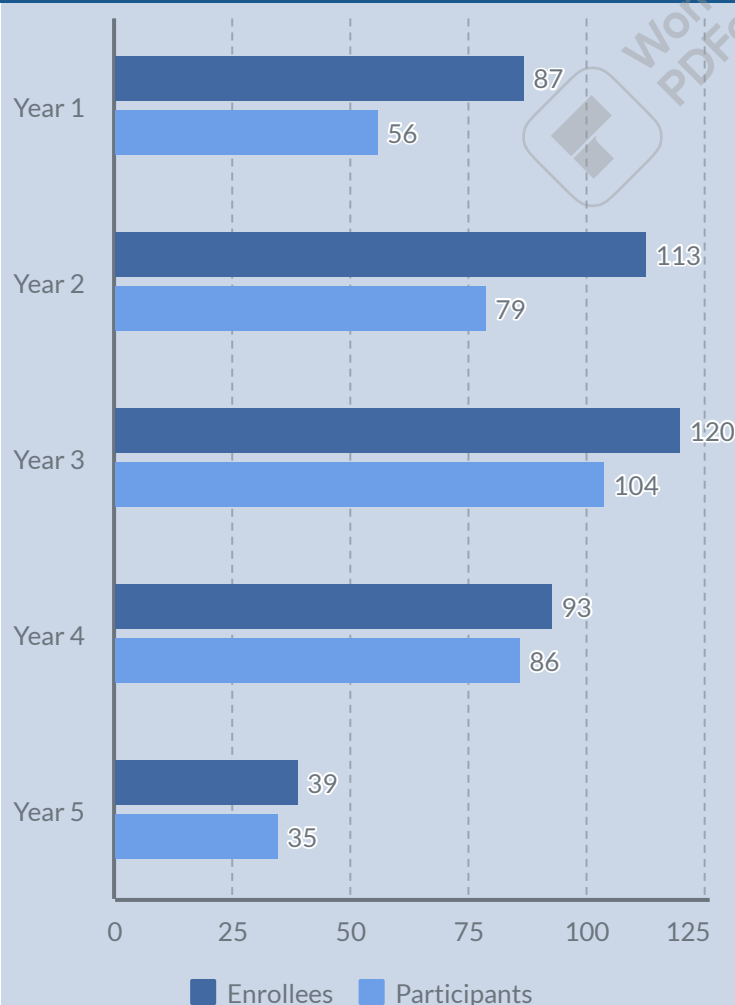
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### Why were pregnant women referred into the project?

Reasons for referral were recorded by the project once referrals were received. As referrals can come through via pathways outside of Maternity these reasons relate to 969 referrals. Data demonstrated that women were referred for a wide variety of reasons. However, by far the most commonly recorded reason was 'disadvantaged/isolated minority ethnic background'



### How many women took part in the project?



An enrollee is a woman who consents to participate in the programme (usually during the home visit).



A participant is defined as a woman who attends at least one session.

It was anticipated that 422 women would enroll in the project during this evaluation period. The project actually enrolled **452** women (107% of the anticipated figure). This means that 48% of referrals went on to enroll on the project.

It was anticipated that 422 women would participate in the project during this evaluation period. A total of **360** women participated in the project during the evaluation period (85% of the anticipated figure). This means that 80% of enrollees go on to participate in the project.

The figure shows the number of enrollees and participants per year. Please note that Year 5 only covers a period of 3.5 months and anticipated figures were adjusted to reflect this.

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# Participation and completion

## How many home visits were completed?

Participating women should receive two antenatal visits before their baby is born. The first visit is usually in the participants home, and the second is usually a virtual appointment where evaluation questionnaires are completed. After the baby is born, and before the postnatal group sessions begin, women are expected to receive a postnatal home visit to re-engage them and complete some of the evaluation questionnaires.



### Targeted service 993 home visits in total

The project completed **363** first antenatal home visits, and **330** second antenatal home visits. In the postnatal stage of the programme the project completed **300** home visits.

### Universal service 70 home visits in total



So far, the project have completed **22** first antenatal home visits, and **24** second antenatal home visits. In the postnatal stage of the programme the project completed **24** home visits.

## How many women attend each session on average?

The maximum group size possible for a programme is 10 women.



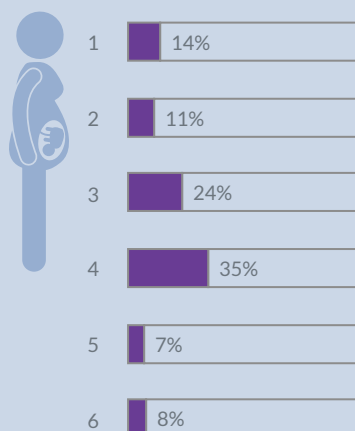
On average, **4** women attended each of the six antenatal sessions and **3** women attended each of the 3 postnatal sessions.

On average, **2** women have attended each of the six antenatal sessions and **3** women attended each of the 3 postnatal sessions



## How many sessions do women attend?

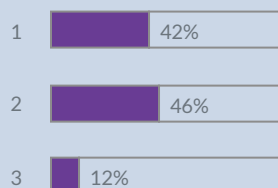
### Antenatal sessions (Participants n=331)



There are 331 women who are recorded as having attended 1 or more antenatal sessions. Within them, the majority of women attended 4 sessions (35%). Very few women attended 5 or more sessions (15.3%).

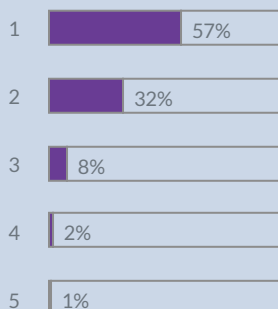


### Postnatal sessions (Participants n=189)



There are 189 women who are recorded as having attended postnatal sessions. Within them, the majority of women attend 2 sessions (46%). Very few women attend all 3 sessions (12%).

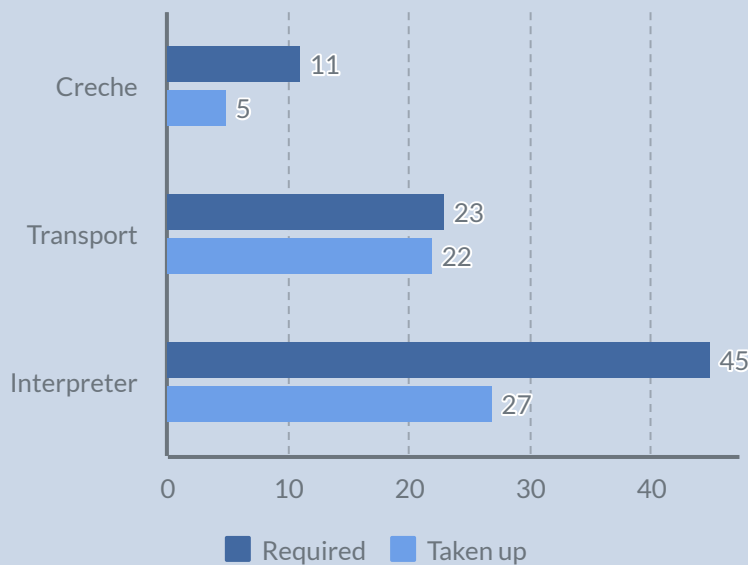
### Catchup sessions (Participants n=144)



There are 144 women who are recorded as having attended catch up sessions. Catch-up sessions are the same as a normal programme session of the course, they are usually needed due to illness, medical appointments, or early birth. The majority of these women attended only 1 catch up session (57%). It is not known whether these sessions are at the antenatal or postnatal timepoint.

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### Did parents use the facilitators for attendance?



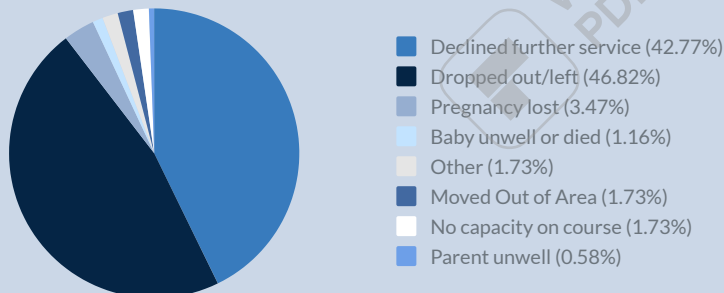
Before the move to a virtual offer, the project would offer creche places and support with transport to help enable participants to attend. The project also provides interpretation where possible. We are referring to these as facilitators for attendance.

The figure shows the number of times a facilitator was recorded as requested, and number of times it was taken up by families.

Families requested creche 11 times, and it was used 5 times. Transport support was requested 23 times, and it was used 22 times. During both the face-to-face and online period, parents required an interpreter 45 times, and it was provided 27 times.

The recorded requests for facilitators are relatively low compared to the number of enrollees. The take up of the facilitators varies across creche (45%), transport (96%), and interpreter (60%)

### Why did women withdraw from the programme?



Reasons that women withdrew from the project or did not go on to participate after enrolling are shown in the figure. The most common reason for withdrawal was "dropped out/left" (47%), and the second most common was "declined further service" (43%).

### How many women completed the programme?



A completer is defined as a woman who attends at least 6 sessions of a programme (including at least one postnatal session, and any catch up sessions).

Across the evaluation period it was anticipated that 266 women would complete a programme. As already reported, 260 women completed (98% of anticipated). This means that 72% of participants go on to complete the project.

\*Please note that Y5 only covers a period of 3.5 months and anticipated figures have been adjusted to reflect this

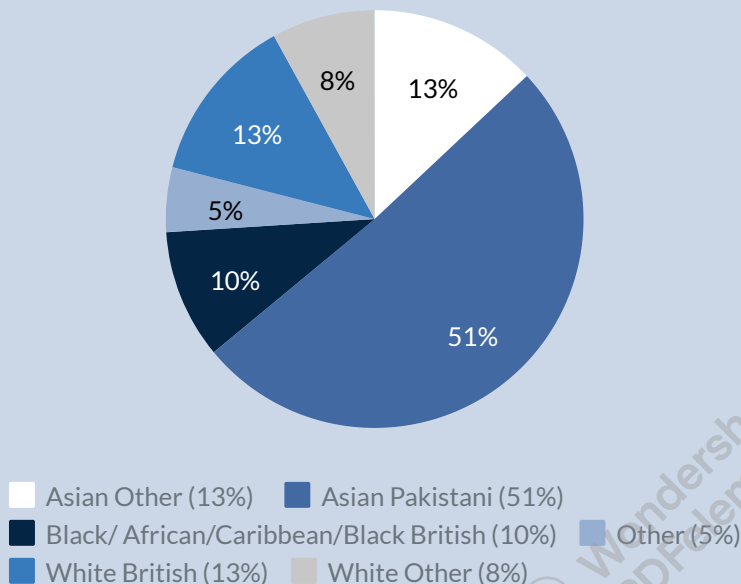


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# Reach

## Who are the women who take part in the project?

% of participants by ethnic group



Of the 360 recorded participants, ethnicity data were available for 345 (96%). The largest ethnic group are Asian Pakistani (51%). The second largest group are White British (13%).

The project have successfully recruited a representative sample of the Better Start Bradford area. The population also appear to be broadly representative of the target population when we split these data by the 'targeted' and 'universal' programmes.

Please note that cell counts <10 have been combined into 'other' to reduce the risk of reidentification.

## How many participants were recorded as having a disability?

Fewer than 10 participants were recorded as having a disability, and all but one of these participants participated in the project. This shows that the engagement strategies to recruit vulnerable participants and engage them in the project are working. More than half of these participants also completed the project.

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# Implementation

## From an 'in person' to 'online' service

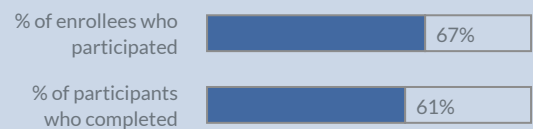
As previously reported, Baby Steps moved from an in person programme to an online programme in response to the Covid-19 pandemic in March 2020 and has remained online ever since. To adapt to remote delivery, the project team condensed the content from the original nine group sessions (6 antenatal and 3 postnatal) to six (4 antenatal and 2 postnatal).

### How has this effected uptake?

Data shows that a larger proportion of enrollees on the online programmes have gone onto participate (88%) when compared with those on the in person programmes (67%), and rates of completion have also been higher in the online service (79%) compared to the in person service (61%). This shows that the move to an online programme may have made Baby Steps more accessible for caregivers.

*The conversion to participants is calculated by dividing no. of enrollees/no. of participants, and conversion to completers is calculated by dividing no. of completers/no. of participants. A completer is defined as someone who attends at least 6/9 programme sessions (including at least one postnatal session).*

#### In person service



#### Online service



## From a targeted to universal service

Baby Steps was previously delivered as a 'targeted' service, where women were eligible to receive the programme if they met any of the eligibility criteria. After redesigning the service delivery manual and making changes to the referral system, the change was made to a universal service on 01/05/2022, where *all* women are now eligible to receive the programme. The targeted service includes a period where both an in person and an online model were delivered, and the universal model has always followed the online programme as described above. As this is a relatively recent change, we have not reported individual information by this time period as the numbers are relatively small, however, we do report programme level information below.

### How many programmes were delivered across the targeted and universal service?

For a programme to be considered delivered, at least one session needs to have been recorded as taking place with attendance. For it to be considered delivered in full, every session should have been recorded as taking place with attendance.

#### Targeted service



There were **43** full programmes delivered during the targeted service period. Only 1 course was cancelled, with the reason being 'no capacity on course'.

#### Universal service



So far, there has been **3** full programmes delivered during the universal service period. There have been no courses cancelled as of yet.

### How many sessions have been delivered across the targeted and universal service?



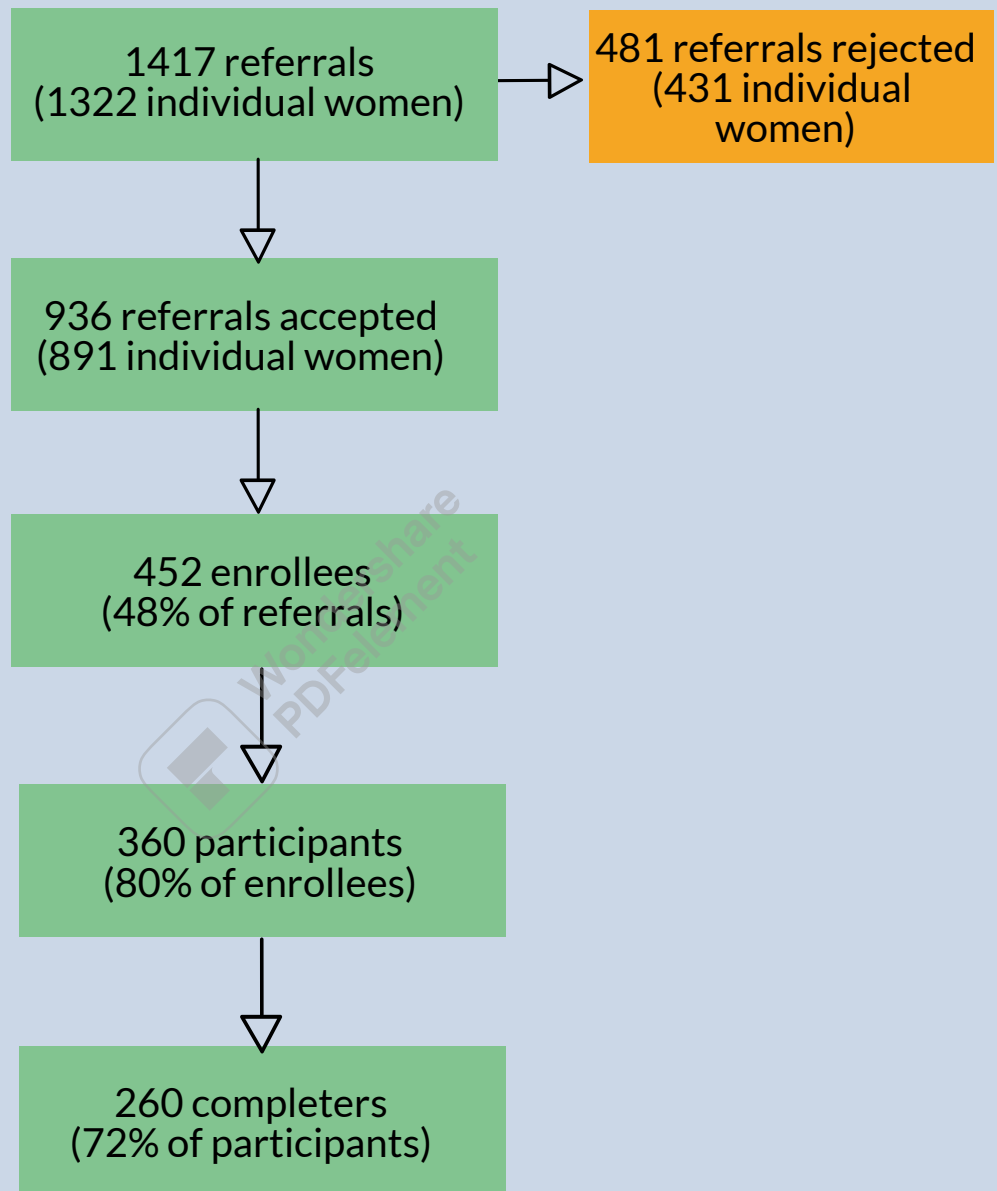
There have been **502** sessions delivered in total during the targeted service period. On average, there were **18** sessions per delivered programme.



There have been **48** sessions delivered in total during the targeted service period. On average, there have been **22** sessions per delivered programme.

## Participant flow diagram

What is the flow of participants through the programme?



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# Satisfaction

## What did families think of Baby Steps?

A total of 43 families completed satisfaction questionnaires. This only includes those completed before 15th July 2022, and only includes complete questionnaires.

**95%** of respondents had a median score of 4 or more

**93%** of respondents agreed or strongly agreed that the project was helpful to them

**93%** of respondents agreed or strongly agreed that they were satisfied with the level of support they received

**95%** of respondents agreed or strongly agreed that the information they received was useful to them

**93%** of respondents agreed or strongly agreed that it was easy for them to access support

**95%** of respondents agreed or strongly agreed that they would recommend Baby Steps to their friends and family

**98%** of respondents were happy with Baby Steps

17 respondents also added comments to the free text box for Baby Steps satisfaction questionnaires, all of which were positive. We have included 4 of these below.

The level of help and support I received from the baby steps team was amazing, they were warm and friendly and very supportive. They went out of their way to help and support me. The program was amazing I am a first time mum so everything I learned was so valuable. I feel every mum should have this level of help and support.

I am so thankful for all the support and all the advice what has been given to me all the staff were kind and friendly.

I believe this baby steps should be available to everybody. Really enjoyed this course, amazing staff

As a first time dad I have learnt about pregnancy and baby development. I have enjoyed the programme and I was offered languages support. Now I am feeding and changing my baby's nappies. I enjoy spending time with my baby. Thanks

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# Before and after evaluation

## When and what questionnaires are collected?

The project collect data at two key timepoints in the programme. The first set of measures are collected at the second antenatal homevisit, before the baby is born and before the programme has began. The second set of measures are collected postnatally at the last postnatal group session, immediately at the end of the programme.

The measures collected relate to:

- **Parent mental health** (Patient Health Questionnaire 9 (PHQ9) and Generalised Anxiety Disorder assesment 7 (GAD7) as measures of depression and anxiety).
- **Parent self esteem** (Rosenberg Self Esteem Scale (RSES))
- **Relationship satisfaction** (Couples Satisfaction Index 4 (CSI-4))

BiBBS is a cohort study that parents enrol in during pregnancy, and high enrolment in BiBBS is crucial for the effectiveness evaluation. BiBBS has linked routine data for maternity and education records.

## How many measures have been collected?

**No. of antenatal measures recorded**  
PHQ-9: 259  
GAD-7: 286  
RSES:  
Couples Satisfaction Index: 257

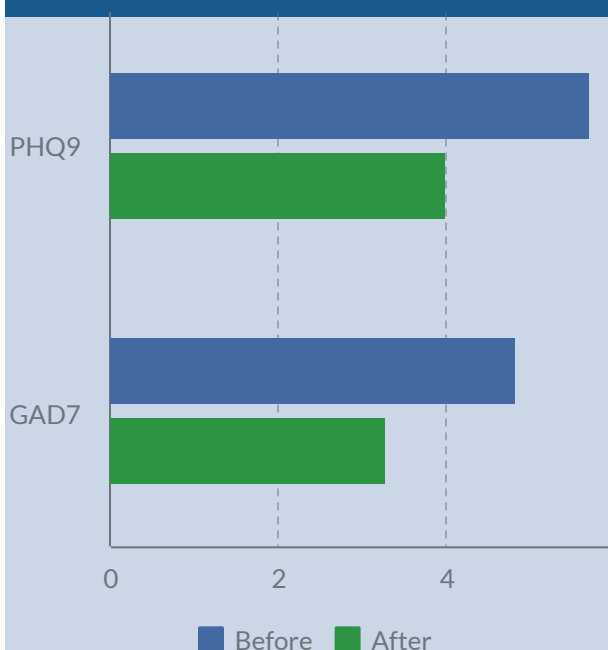
**No. of postnatal measures recorded**  
PHQ-9: 171  
GAD-7: 138  
RSES:  
Couples Satisfaction Index: 121

**BiBBS data linkage**  
Birth outcomes: 93

The majority of participants in the programme have complete data at the antenatal timepoint, however, far fewer have completed measures at the postnatal timepoint. We recommend that the project aim to improve data collection at both timepoints to enable the effectiveness evaluation to have a sufficient sample size. We have linked BiBBS data for 93 Baby Steps enrollees.

Please note that not all questionnaire data have been linked at this time due to a difficulty in identifying unique referrals for the same women where they have enrolled on the project more than once.

## Parent mental health: PHQ-9 & GAD-7



The PHQ-9 is a measure of depression while the GAD-7 measures anxiety.

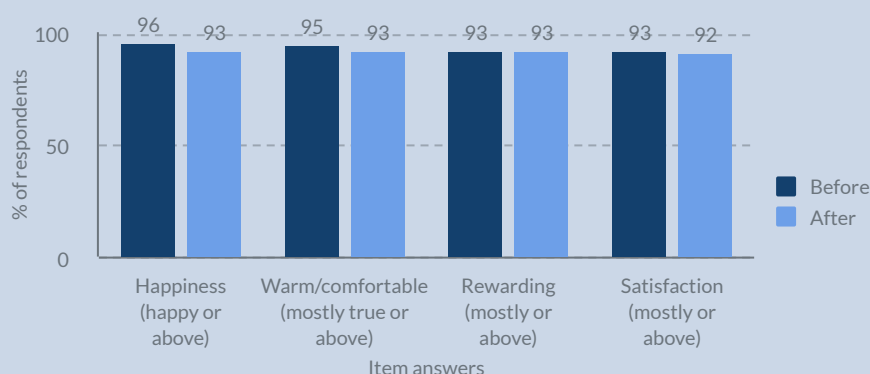
Mean scores on the PHQ-9 (n=259 before, n=171 after) and GAD-7 (n=279 before, n=136 after) measures are on average 1.5 and 1.7 points lower after participation in the project. It should be noted that a difference of 2 points is clinically significant.

This is **statistically significant** (indicated by the 95% confidence intervals of the score distributions) and this does not change by in person or online delivery. There is not yet enough data to explore whether this differs for the targeted & universal models.

While these results do not tell us that the programme is effective, as there is no control group for comparison, they do give a promising indication that participation in the project may result in improved mental health outcomes. The planned effectiveness evaluation will establish the project is effective in these outcomes.

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### Relationship satisfaction: CSI-4

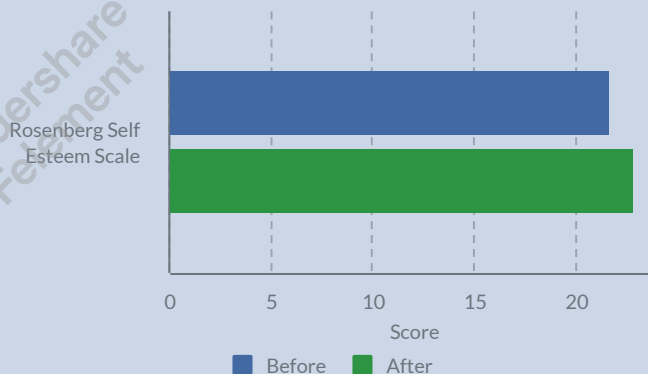


The CSI-4 measures relationships satisfaction in four areas; happiness, warmth, reward and satisfaction. 89% of participants were recorded as being in a relationship at the time of participating in the project.

The results from the couples satisfaction index indicate that there do not appear to be any differences in womens relationship satisfaction before (n=257) and after (n=121) participation in the project.

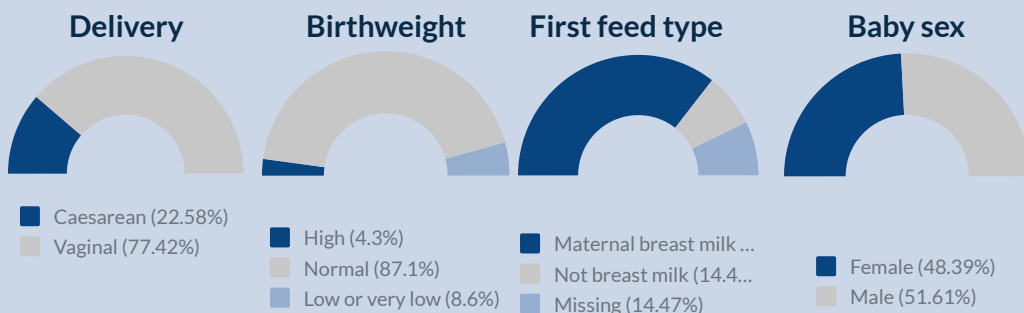
### Parent self-esteem: RSES

The RSES measures self-esteem using ten items answered from strongly agree to strongly disagree. The minimum score is 0 and the maximum is 30, with higher scores representing higher self-esteem. Mean scores on the RSES (n=286 before, n=138 after) show a rise in average self esteem after participation in the project. The difference is **statistically significant** (indicated by the 95% confidence intervals of the score distributions), and this does not change by in person or online delivery. There is not yet enough data to explore if this differs by the targeted & universal models. Again, while this does not tell us the project is effective, it is promising indication that taking part may lead to improved self-esteem.



### Birth outcomes

Birth outcomes are linked via maternity records for caregivers who are also BiBBS participants (n = 93). There are no control group data to compare these outcomes to yet, but are reported here to demonstrate the type of data collected.

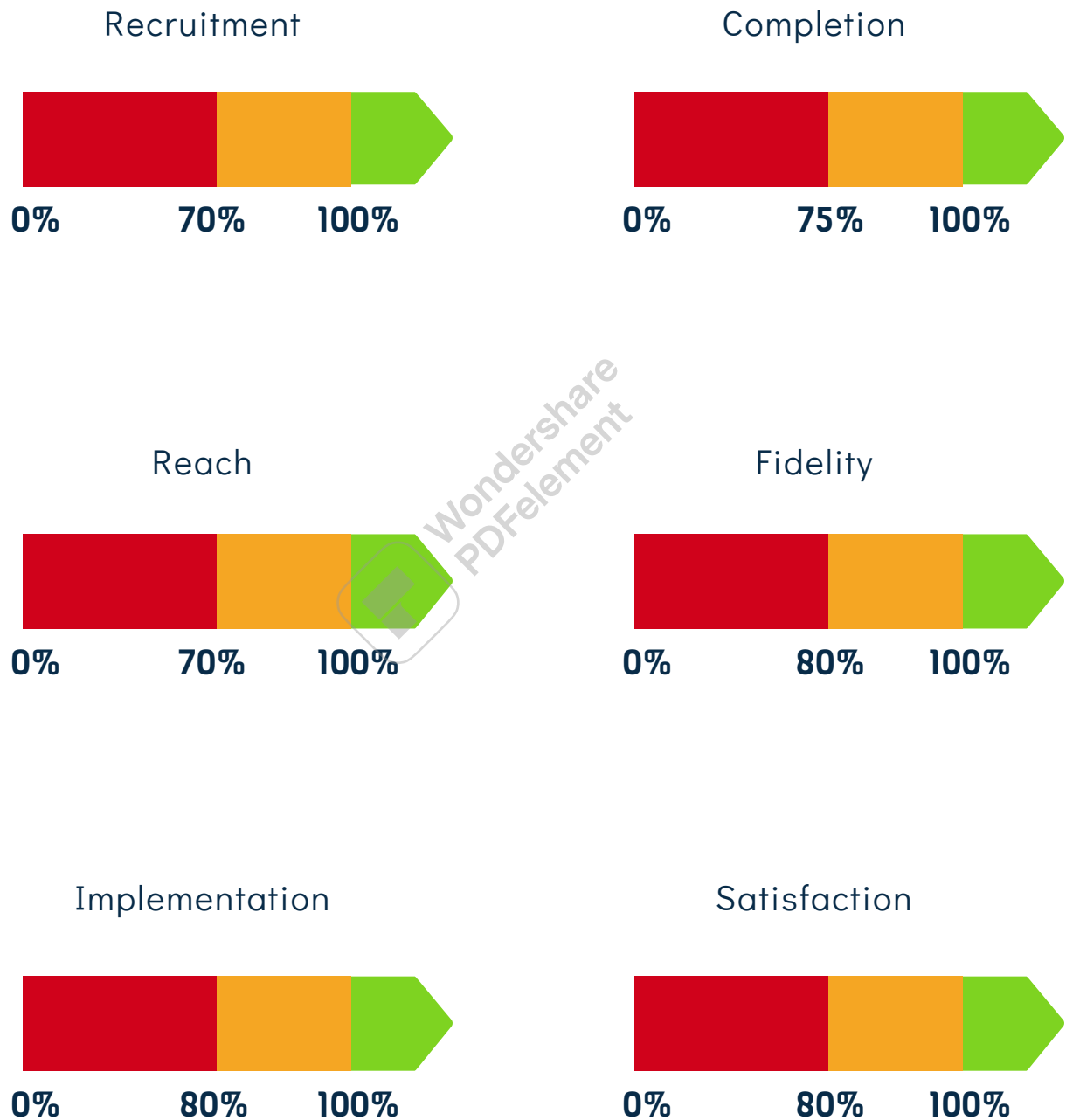


### Parent attachment: Prenatal Attachment Inventory (PAI) and Parent sensitivity: Mothers Object Relations Scale

It is planned that the project will begin to collect the Prenatal Attachment Inventory (PAI) at two antenatal timepoints, and the MORS and two postnatal timepoints. The MORS is the primary outcome for the effectiveness evaluation and it is essential that this is effectively collected in order to have a sufficient sample size to conduct a robust effectiveness evaluation of Baby Steps. A risk to the evaluation is if the collection of this measure is delayed and the completion rate is low.

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## Appendix - Progression Criteria Cutoffs



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