

**Evidence based
interventions to target
risk factors for
childhood obesity**

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&
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- 
- Describe health and ill-health and their causes;
 - Develop, design and evaluate interventions to promote health;
 - Provide a model for integrating research into practice
 - Build and strengthen local research capacity in Bradford.

8 this year



ool

diets

**Baseline
Questionnaire
(mother)**

- Lifestyle
- Environment
- Medical (physical & mental health)
- Socio-economic
- Genetic

**Routinely
collected data**

- Health visitor/school nurse
- Hospital Admissions
- GP records
- Bradford Education

**Full Sweep @
8-10yrs**

- Lifestyle
- Environmental
- Medical
- Socio-economic

Lifestyles,
obesity &
activity

Asthma,
Allergies,
infection

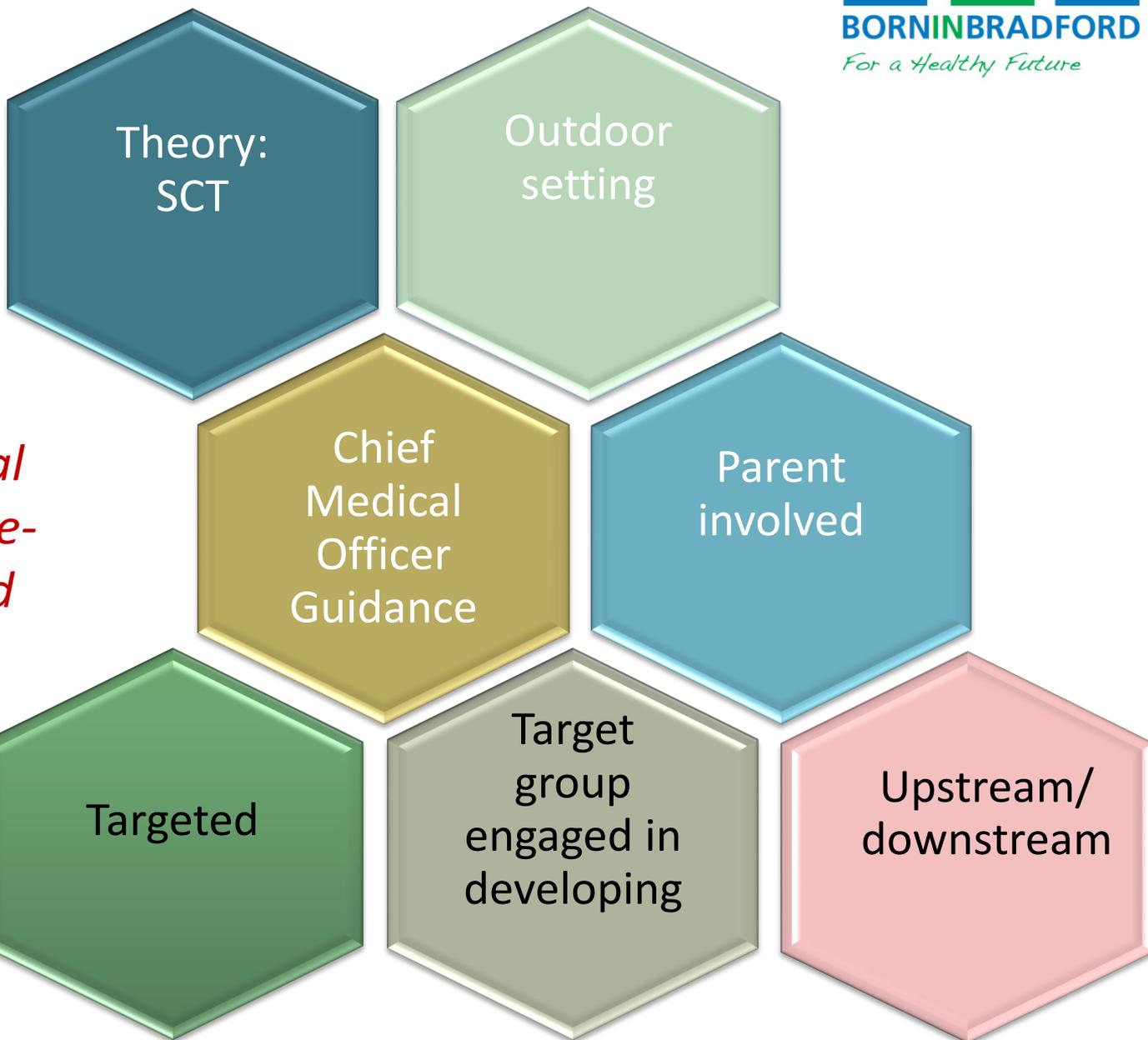
Pollution
& green
space

Learning &
behaviour



“Pre-schoolers in the Playground” – a pilot cluster RCT of a physical activity intervention for children aged 18 months – 4 years old.

Evidence-base



Intervention aim:

To increase physical activity levels for pre-school children and reduce health inequalities



Setting

- Primary school playgrounds

Delivery

- Parental involvement workers
- Early years workers

Training

- 2 hour face-to-face
- Manual
- Telephone support

Structure

- Initiation phase (10 weeks)
- Maintenance phase (20 weeks)

Content

- Structured & unstructured play
- Information to parents
- Take home play equipment

Aims and Objectives

Assess feasibility of a full scale trial of the PiP intervention

- Recruitment & follow-up
- Acceptability and feasibility of trial, outcome measures & intervention
- Fidelity of implementation & delivery
- Effect sizes and sample size calculation
- Cost effectiveness
- *Ethnic comparisons*

Barber *et al.* *Public Health Res* 2015;3(5)



Schools
n = 10

6 South Asian
4 White

Free School Meals
= 48%
(31 – 78%)

English Additional
Language = 57%
(11.5 – 96.6%)

Children
n = 164

2.8 ± 0.7 yrs

52% female

57% South Asian
37% White
6% Other

Motives for participation

* School familiarity

* Child will benefit, help child to be more active

* New way to engage with hard to reach families

* Parent & child meaningful activity, improved language and learning

Benefits for children, parents & schools

“He shares a lot now...He’s made more friends I guess that’s the best thing.”

[Mother]



they (parents) were active with children, and they were doing, you know, you know, things that they would never have done, ideas for sort of ball games and play activities and just other people are modelling good language... certainly the, the parents are coming to us, you know, they, they’ve been more involved with their children’s learning this year. [Head teacher]

The project made the Nursery staff more aware of the work that needs to be done with parents playing outside. Parents do not seem to realise the importance of play. Nursery will be looking into encourage parents to play next year [Head teacher]

Attendance to PiP Initiation

Season and school ethnicity	 White	 South Asian	 South Asian	 South Asian	 White	Total
Children, n	13	16	15	21	18	83
Attended any session, %	45.2	62.5	40.0	81	83.3	65.1
Sessions attended Mean (SD)	1.8 (1.0)	2.3 (1.4)	10.7 (10.6)	13.6 (9.8)	10.8 (10.7)	9.1 (9.6)

Reasons for not attending:

- Weather & season
- Competing priorities
- Family & child sickness
- Session timings
- Facilitator unfamiliar

Conclusion

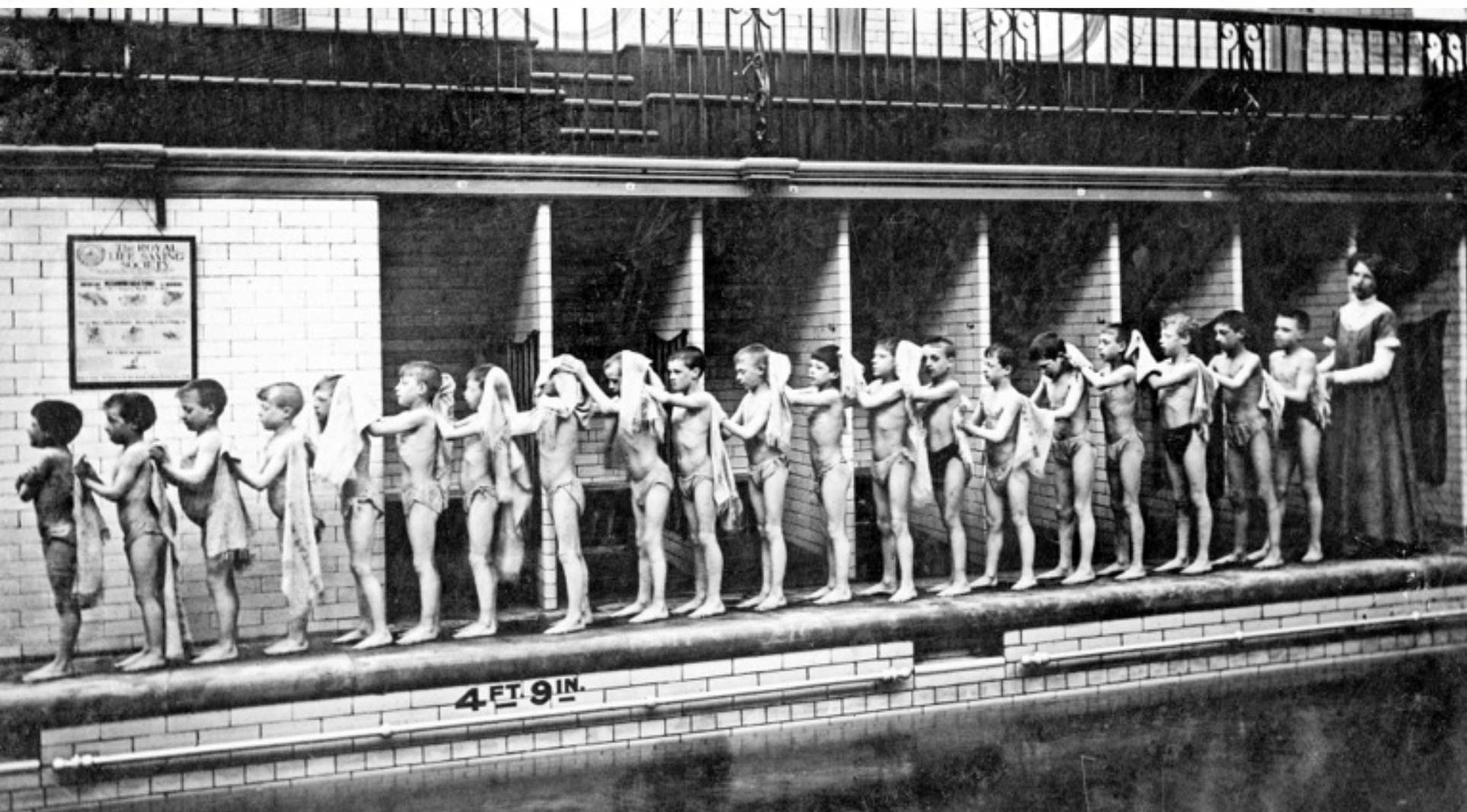
- A full scale trial would be feasible
- No evidence of effectiveness & low attendance
- High fidelity, acceptable and deliverable

Feasibility of a revised intervention building on successful intervention elements and incorporating strategies to improve attendance will be tested in the Better Start Bradford Programme



1899

The First School Baths in the country was opened at Wapping Road School to be followed by those at Green Lane School. Margaret McMillan played a big part in this decision and stated that these were not for the purpose of cleanliness, as all children had to be thoroughly washed before entering the bath, but for health, physical development and good breathing.



...2015

**40% of variability in children's break-time MVPA
can be explained by the school environment**



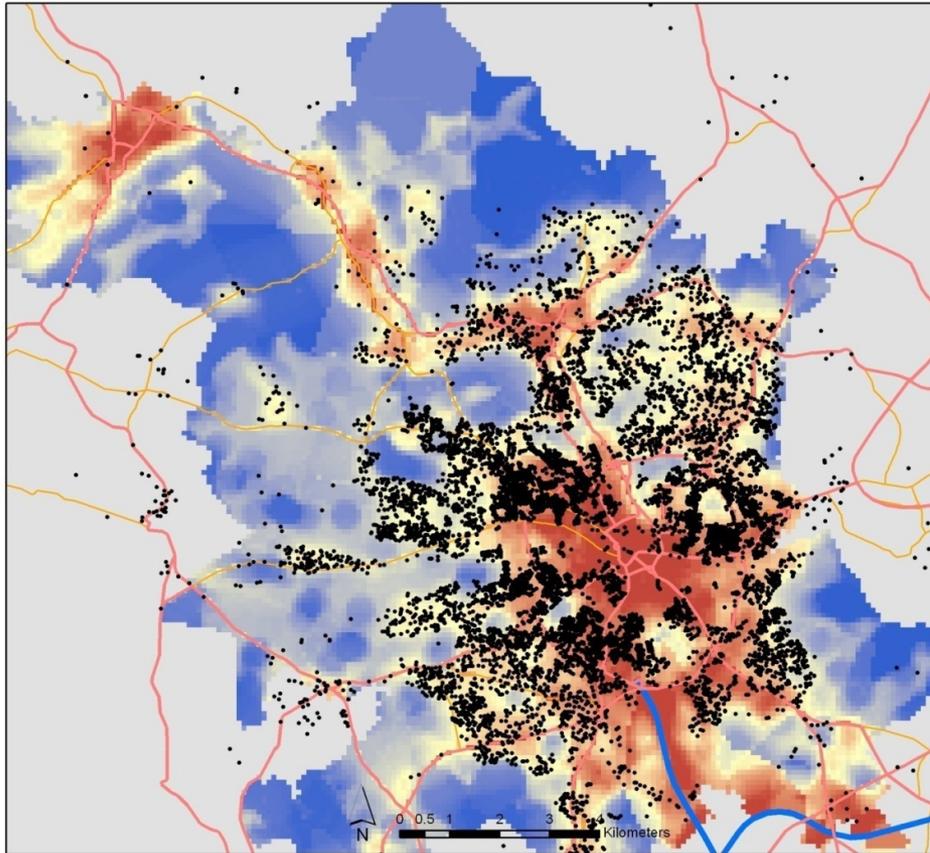
**swapping car travel to walking or cycling to school
could increase a child's physical activity by 9%**

Active travel and health

- children who engage in active travel tend to be more physically active than those who don't
- swapping car travel for active travel has ***other potential health benefits***

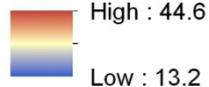


Air pollution in Bradford



NO2 estimates

ug/m3

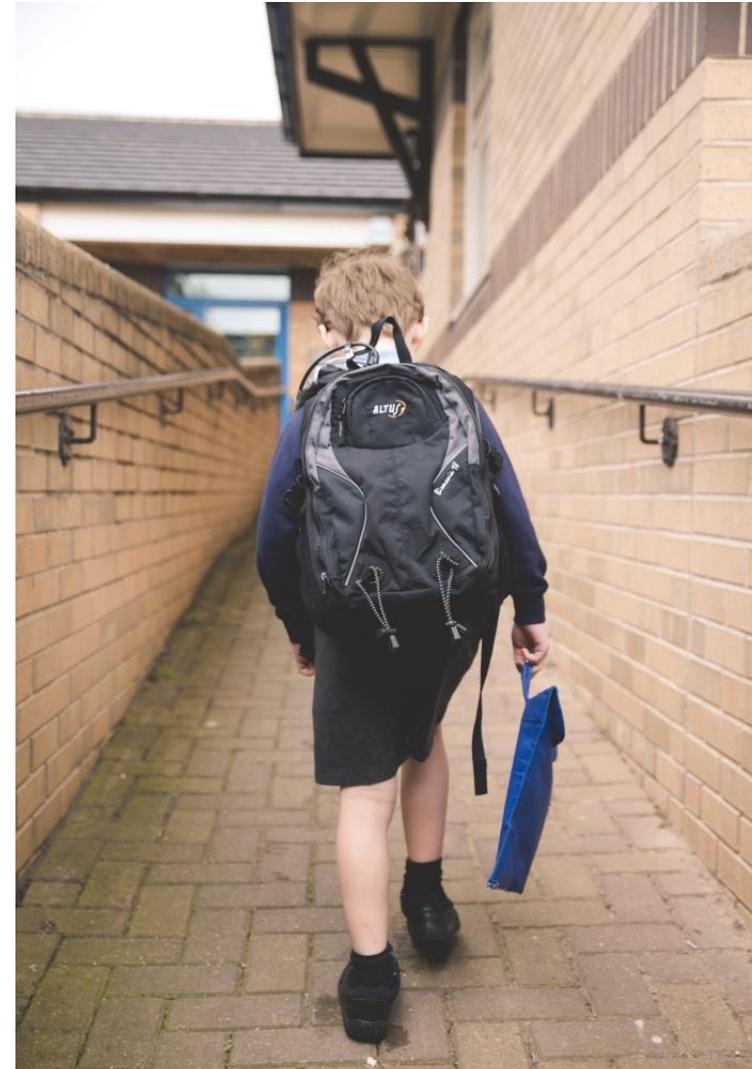
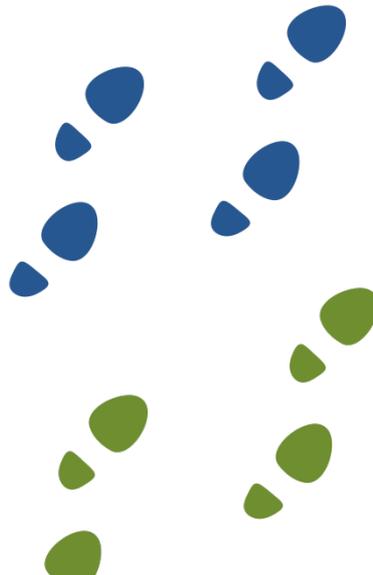


- traffic related air pollution impacts on children's health
- associated with:
 - *increased risk of pre-term birth*
 - *increased risk of low birthweight**
 - *childhood asthma development and exacerbation*
 - *poorer cognitive performance*

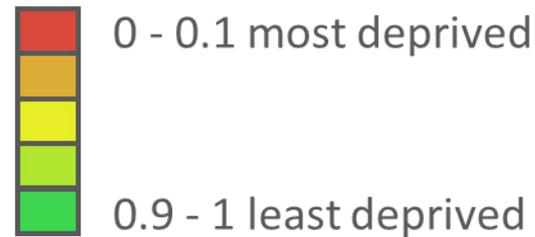
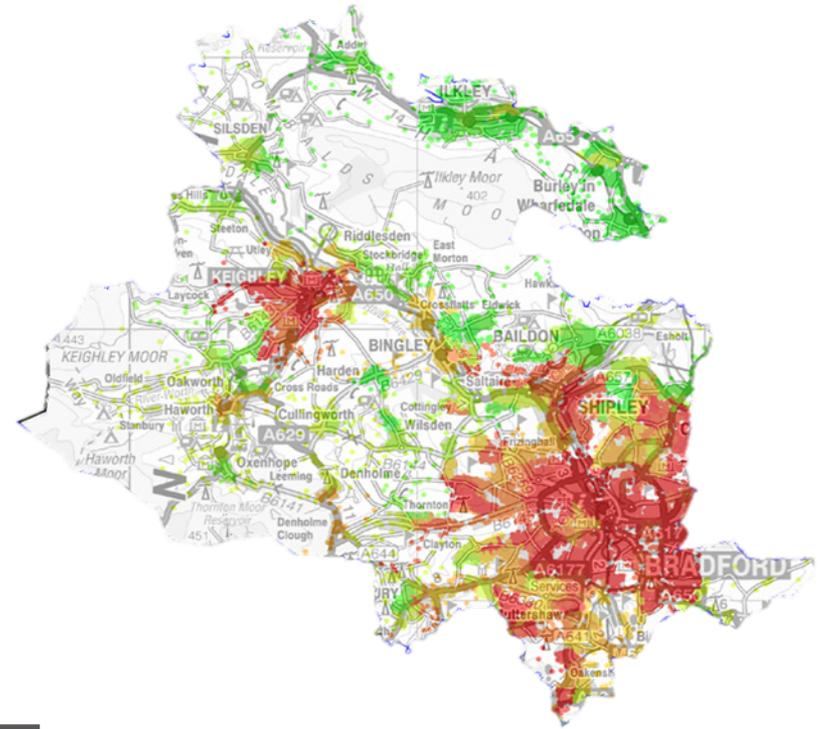
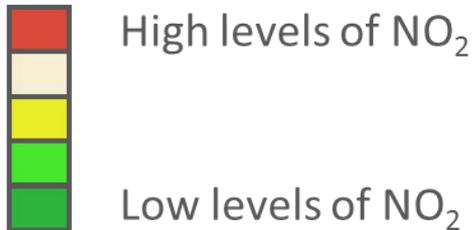
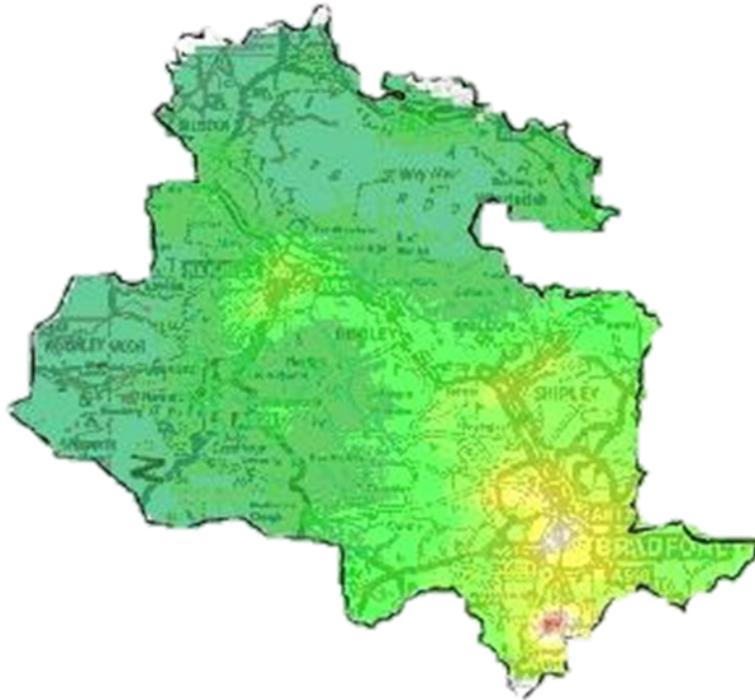
*Pedersen, M., et al., *The Lancet Respiratory Medicine*, 2013. 1(9): p. 695-704.

Air quality and health project

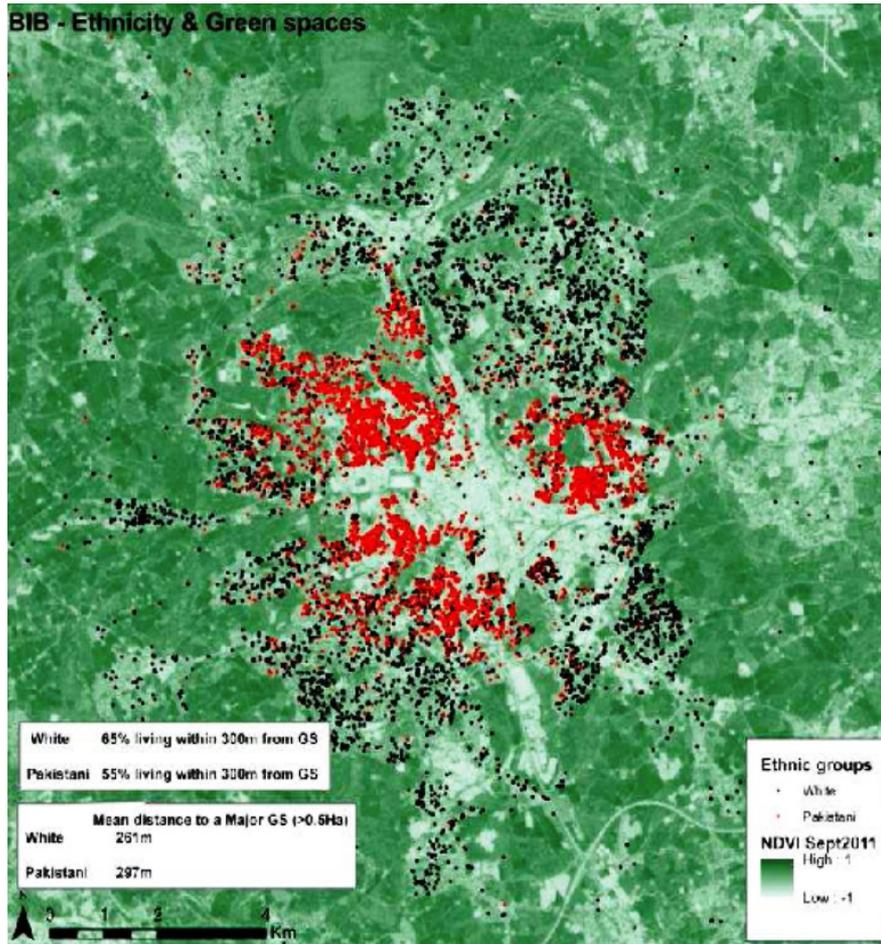
- explored barriers to active travel for school with primary school children
- evaluation of *Living Street's Walk once a Week* programme



Health inequalities

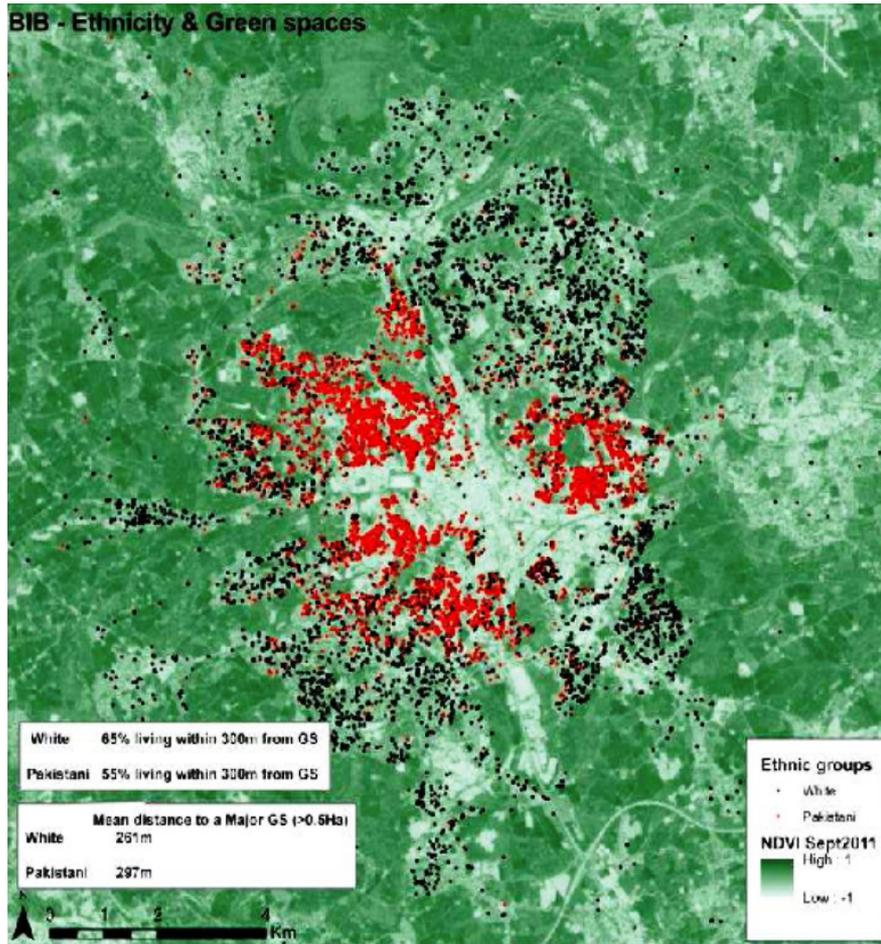


Green space and health



- proximity to and access to green space can impact on health and wellbeing
- associated with:
 - *increased physical activity*
 - *reduced risk of overweight and obesity*

Green space and health



- also associated with:
 - *improved mental health and wellbeing*
- However this can depend on
 - **quality of green space**
 - **frequency of use**



Big Lottery: £49 million over 10 years

Bradford Trident: Community led partnership

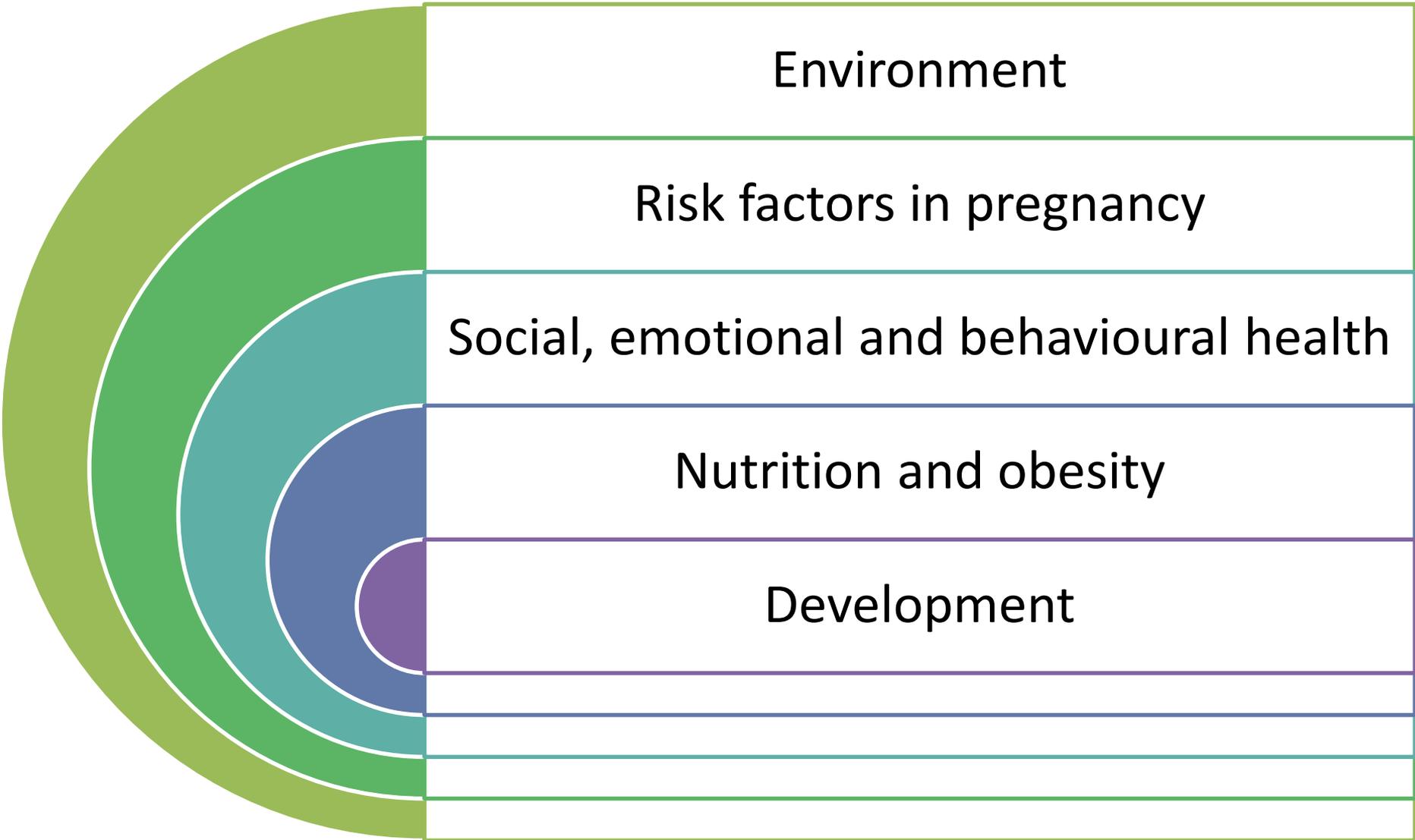
Pregnant mums, and 0-3 years

Bowling and Barkerend, Bradford Moor, Little Horton

Evidenced based interventions for key outcomes:

Nutrition and obesity, language and communication, well-being

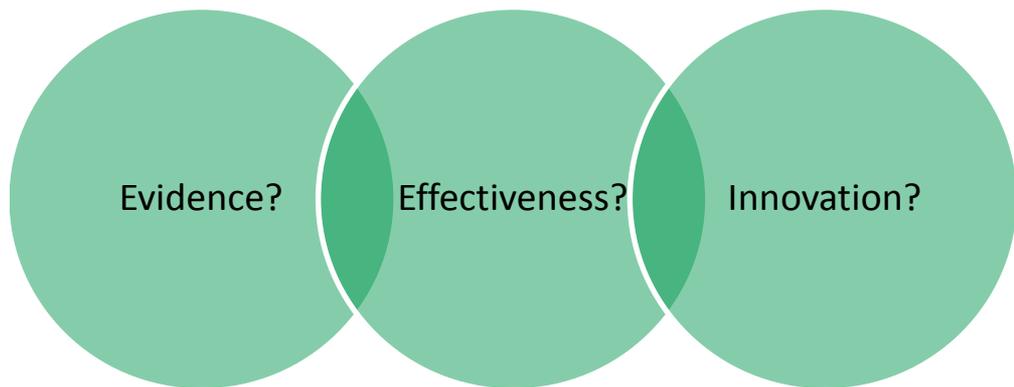
Developed from key evidence of need



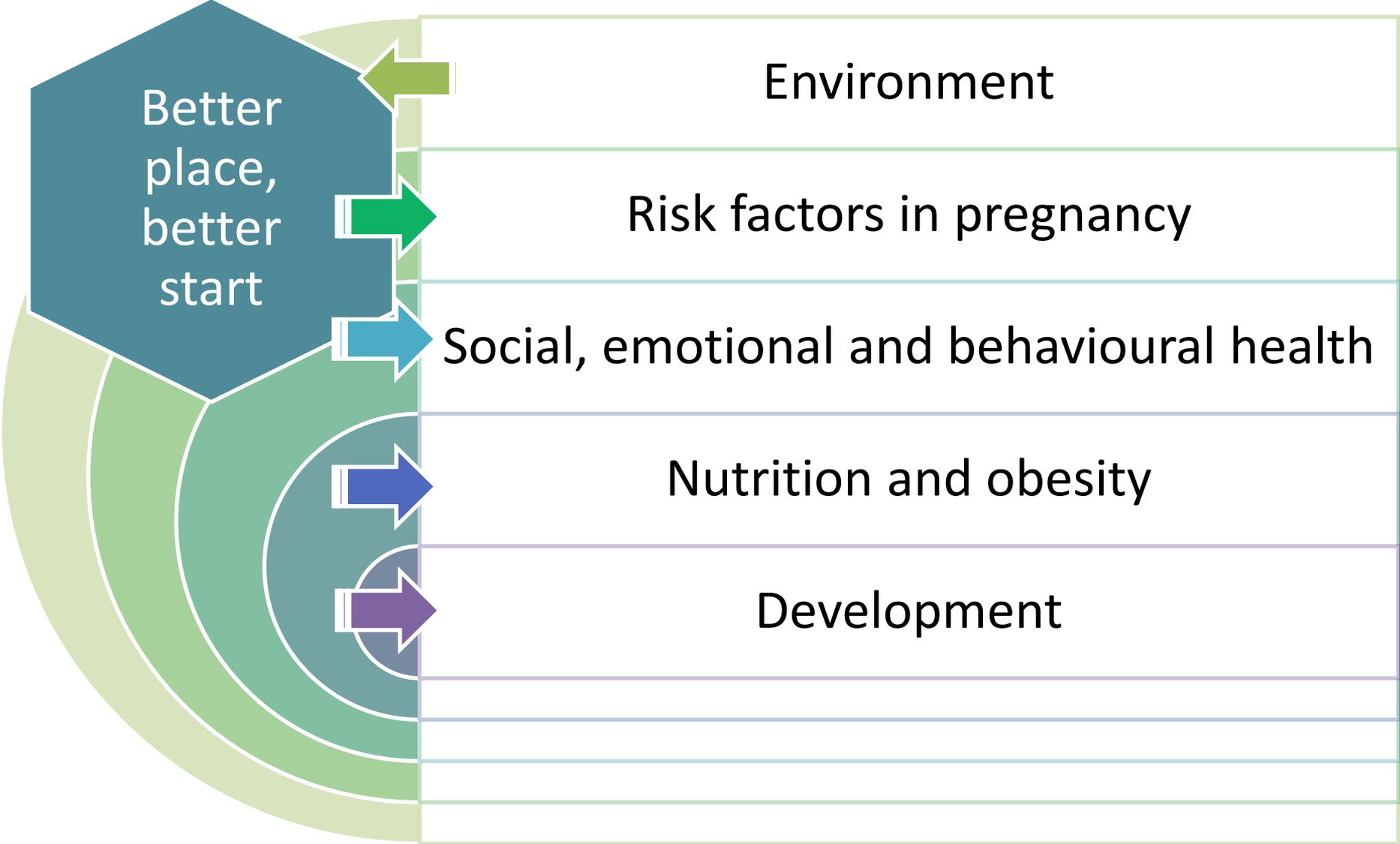
Intervention themes



BORN IN BRADFORD'S BETTER START



Place, health and wellbeing



Take home messages

- interventions which incorporate and/or adapt outdoor space can increase physical activity levels in children
- they can also have additional positive impact on both mothers' and children's health and wellbeing
- these additional outcomes can be just as important for promoting engagement with interventions
- improving social, emotional well being may be more of a priority for some than reducing rates of obesity