

FreshStreet voucher scheme to tackle food insecurity: Evaluating the impact of fruit and vegetable intake in two disadvantaged communities in England



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INTRODUCTION

- Fruit and vegetables (FV)-
unaffordable,
inaccessible or
unavailable
in disadvantaged communities.
- Leads to a higher intake of cheap
high-fat, high-sugar, low-fibre
foods, resulting in poorer health.
- A couple of FV schemes
exist in the UK.
- However, households need
to prove eligibility criteria,
which can be a barrier and
create a stigma.



A vibrant collage of fresh produce. In the center is a large head of white cauliflower. To its left is a bright yellow lemon. Below the cauliflower are two oranges and a mushroom. To the right of the cauliflower are green herbs and a green vegetable, possibly a fennel bulb. The background is a solid green color.

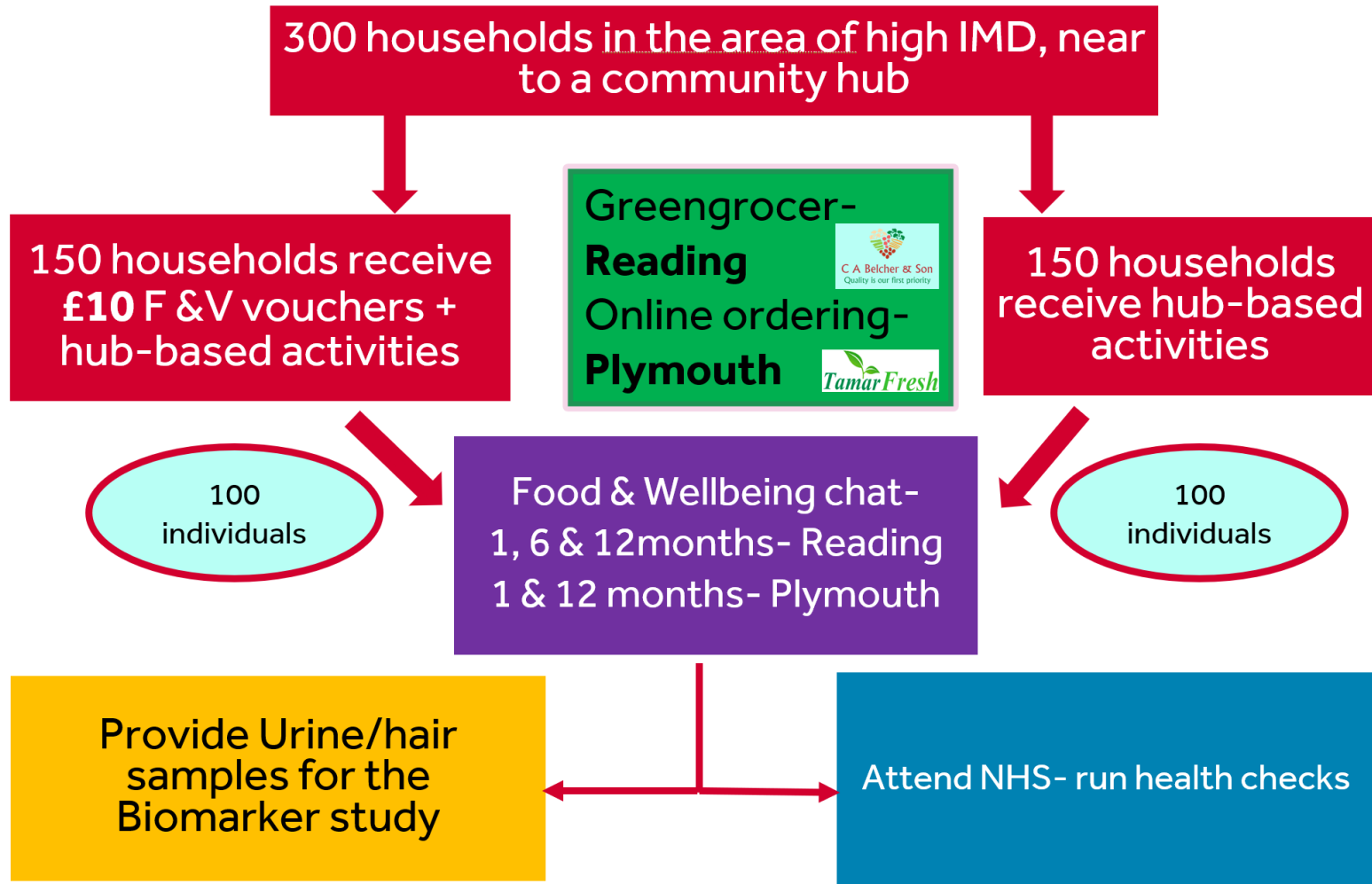
RESEARCH QUESTION

What are the most effective ways to embed FreshStreet Community within local food systems in areas of high deprivation?

**Fresh
Street**



STUDY DESIGN



READING - INTERVENTION

READING INTERVENTION



Households from the Intervention group received £10 FV vouchers fortnightly.

Engagement & support activities were co-developed by project team and project community researchers who are embedded in the community.

Self-reported FV consumption data were collected at the start and end (F2F conversations).

Voucher redemption and footfall data were collected weekly, with qualitative feedback through informal conversations



- Easier to increase fruit consumption because of its high palatability, which can be eaten raw and as a snack.
- Harder to increase vegetable consumption, as it requires processing.

Big soup Saturday



To create dishes that use minimal kitchen equipment.

ENGAGEMENT ACTIVITIES -READING

OBSERVATIONS- READING



A greater diversity of ethnicities attending the community hub

People who initially handed back vouchers are now using them

More exotic veg (mooli, okra) being requested





Voucher Power

SOCIAL CONNECTIVITY

It has brought people together who wouldn't normally speak to each other.



Whitley



~80% of adults with excess weight



27% of adults had high blood glucose



~28% of residents with high blood pressure



68% of adults with cholesterol levels above national guidelines (>5mmol/L)



In the previous 24 hours, 39% did not consume vegetables and 44% of citizens did not consume fruit



In the previous 24 hours, 27% of Whitley citizens did not consume a single portion of fruit and vegetables.



In the top 20% most deprived areas in England, including Whitley, 50% of disposable income is required for a healthy diet.

National



63% of adults with excess weight



9.5% of adults had high blood glucose



32% of residents with high blood pressure



43% of adults with cholesterol levels above national guidelines (>5mmol/L)



In the previous 24 hours, 6.3% did not consume vegetables and 10.7% of citizens did not consume fruit



In the previous 24 hours, 3.0% of adults did not consume a single portion of fruit and vegetables

FRUIT & VEG INTAKE AND HEALTH STATISTICS OF WHITLEY, READING VS NATIONAL



***“I want to get to a point
where price comes after my
nutrition needs”***

***“I will be there every
Saturday”***

***“This is great and it’s on
my doorstep”***

FEEDBACK- READING



TIMELINE OF THE PROJECT

Phase 1

Nov '23

£10 FreshStreet vouchers delivered to the Intervention households



Phase 2



June '24,
£10
FreshStreet
vouchers were
delivered to
control
households

Phase 3

July '24

The FreshStreet voucher value was doubled, and collection started from the hub



Phase 4



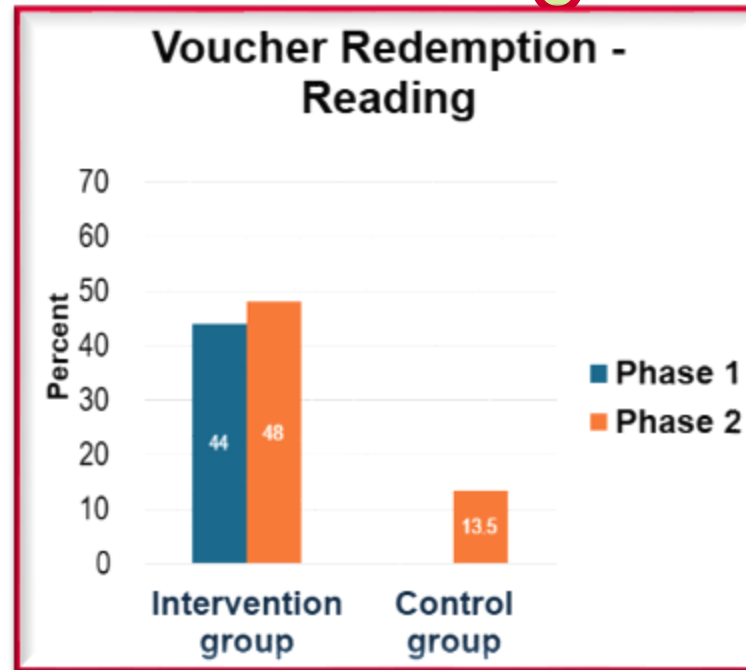
Funding
received by
Reading
Borough
Council from
**Oct '24-
March '25**

FRESHSTREET COMMUNITY

A weekly 'pop-up' FV stall supplied by a local supplier, CA Belchers & Sons, was opened at WCDA



31 'pop-up' stalls took place at the end of phase 2.



At the end of phase 2 the average weekly footfall was 45

PLYMOUTH - INTERVENTION


PLYMOUTH INTERVENTION

1


HOW DOES IT WORK?

2


PLACE ORDER FOR
FRUIT + VEGETABLES


 Tuesday
(Fortnightly)


 10 AM - 12 PM

 The Salvation
Army, PL5 4AA

COLLECT ORDER FOR
FRUIT + VEGETABLES

 Thursday of
the same week

 10 AM - 12 PM

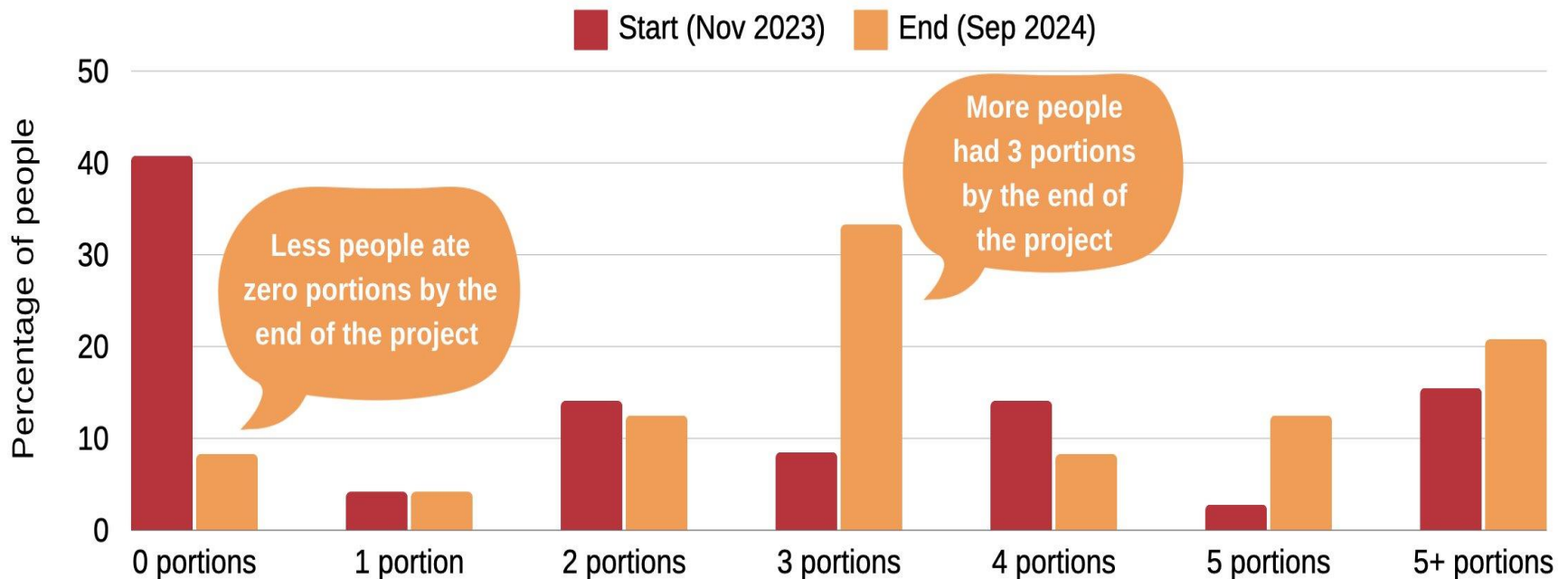
 The Salvation
Army, PL5 4AA



 Tamar Fresh



Self-reported portions of FV consumed in the previous 24 hrs - Plymouth



MONTHLY COMMUNITY MARKET- PLYMOUTH

FRUIT AND VEGETABLE PRICES



Our hand-picked seasonal bag of fruit and veg for only £5

Name	Quantity	Price	Name	Quantity	Price
Tomatoes		£0.50	Potatoes		£1.25
Satsumas		£0.50	Cauliflower		£0.75
Carrots		£0.50	Parsnips		£0.50
Banana		£0.50	Little Gem Lettuce		£0.75

- Loose items and '£5'bags available
- People had a preference for choosing loose items
- Slightly more expensive than local shops
- Increase local awareness of the project
- Eye-catching display and clear pricing

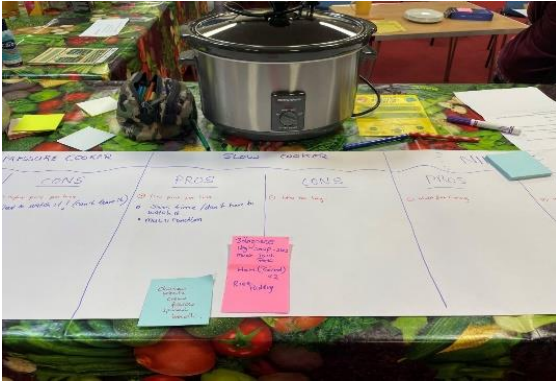


More options below		
Name	Quantity	Price
Apples		£0.50
Onions		£0.50
Swede		£0.50
Raw Beetroot		£0.50
Half Cucumbers		£0.50



Tamar Fresh





- Cooking with gadgets
- Cooking with children
- Energy efficient cooking; saving time + money.

ENGAGEMENT ACTIVITIES - PLYMOUTH



Vegetable
Portraits –
shared on
local social
media

FEEDBACK- PLYMOUTH

What do you think
of the Fresh Street
initiative?



Have you seen any
changes in
your food
intake due to Fresh
Street?

*"very positive,
good for the
community"*

"Love it!"

*"Good idea,
helping out
the community"*

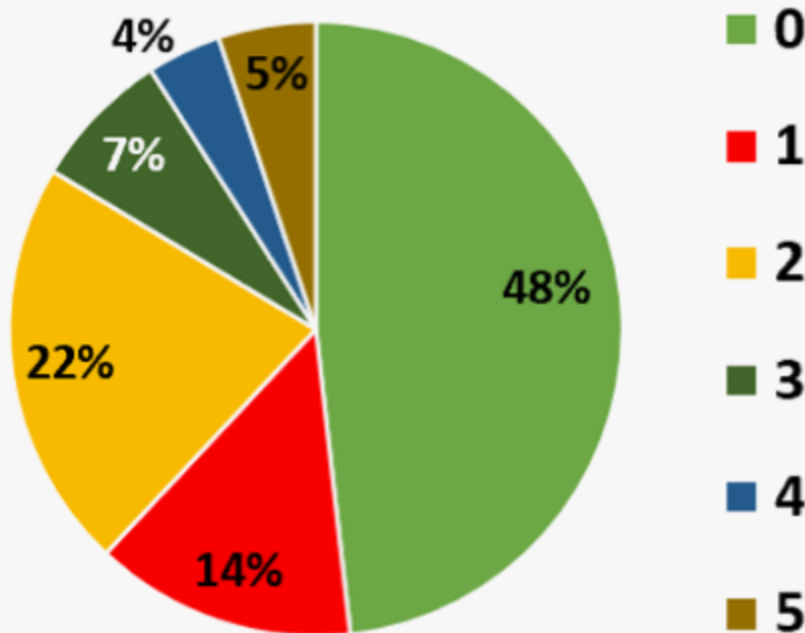
*"Eating less
fatty food"*

*"Children are
eating more
fruit and veg"*

"Eat more fruit"

Baseline self-reported portions of FV consumed in the previous 24 hrs at both locations

Proportion of participants consuming FV portions/day

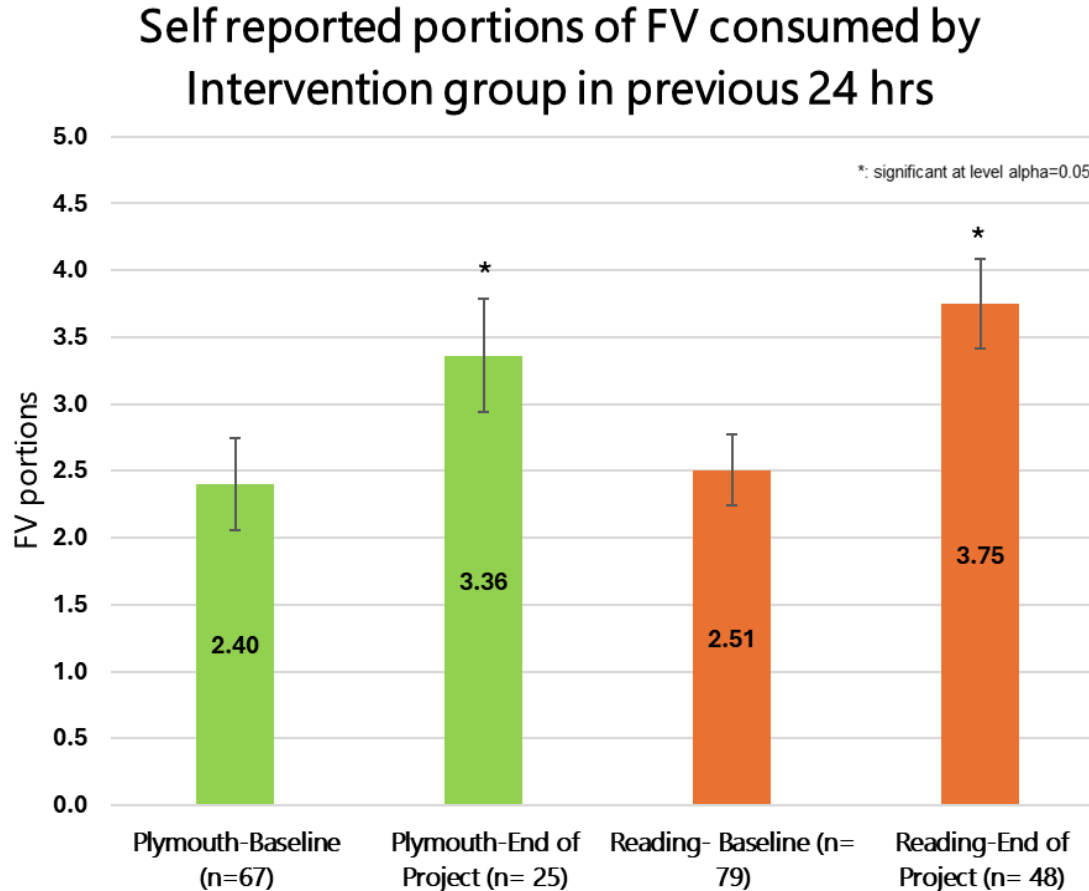


Almost half (48%) of households reported eating **no fruit or vegetable** the preceding day.

An average baseline FV portions/person/day was 2.4 compared to the UK Gov recommendation (5 portions/day).

Does it increase the FV consumption?

Increase by
0.96
(~1) portions
/day of FV
consumption
from baseline
to the end of
the project



Increase by
1.24
portions/day
of FV
consumption
from baseline
to the end of
the project.

Mean and std error of the mean are shown. * Denotes significant difference at $P < 0.05$. Statistical test: t-test

Task -1

Foody Chat



24-hour dietary recall



Fruit & Veg



Salt



Sugars



Fish



Meat



Task -2

Biomarker Study



Hippuric acid
by
LCMS

Sodium &
Potassium
by
ICP-MS

Sugars by
QTOF-MS

$\delta^{13}\text{C}$ & $\delta^{14}\text{N}$
by
IR-MS

DIETARY & NUTRITIONAL BIOMARKER ASSESSMENT

TO INVESTIGATE FOOD INTAKE, WELL-BEING & HEALTH USING DIETARY INTAKE ASSESSMENT AND NUTRITIONAL BIOMARKER



Urine and hair samples give better information about some aspects of what you eat



Hair samples can provide information about what you have eaten in the last couple of months



Urine samples can tell us more about individual nutrients



In combination with the answers provided in a foody chat, this gives a much better understanding of eating habits

KEY FINDINGS



Preliminary evidence indicates an increase in FV intake among households receiving vouchers



Vouchers are bringing people together



An average voucher redemption was **42%** in Reading, whereas that in Plymouth was **10%**



Average footfall of **42** and **20** was observed at Reading and Plymouth, respectively



ENABLERS FOR USING THE SCHEME

 Engagement activities are environmentally friendly

 Creates social connection and education.

 FV vouchers are free and provide direct financial support.

 It also allows people to try new fruits and vegetables (FV) without the risk of spending money.

 Community partnerships & word of mouth

 Fresh & Long-lasting FV quality

 Convenient location

BARRIERS TO USING THE SCHEME



Limited opening timings



Low awareness about our project



Project for short duration



Stigma: Don't want to be considered as poor



Limited monetary & human resources

CONCLUSION

- This scheme is acceptable to householders in both locations. This is evidenced by the uptake of the scheme and informal chats between residents and researchers.



- Market-style F&V stalls were popular in both locations, indicating that choice and the ability to buy what is needed are important to householders.



- This scheme has the potential to address dietary as well as health inequalities whilst simultaneously changing the local food environment by increasing access (physical & economic) to F&V and supporting local businesses.



- This scheme facilitated community cohesion by building stronger connections between neighbours, fellow residents and charity organisations.



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<https://research.reading.ac.uk/food-systems-equality/>



<https://www.freshstreet.uk/fresh-street-community/>



<https://foodplymouth.org/project/foodsequal-health/>