



FLAT PACK MEALS – An evaluation of a healthy food and cooking initiative in Glasgow

Peter Burton

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EXECUTIVE SUMMARY

It is known that the Scottish diet has consistently missed government guidelines for many years. In particular, it is too low on fruit, vegetables and fibre; a problem that is accentuated in more deprived populations. Tackling poor diet could be a route to alleviating or preventing these serious health issues resulting in a reduced burden on individuals, their families and the healthcare system.

Developed by Drumchapel L.I.F.E. (a healthy living organisation based in Drumchapel, Glasgow) in 2014, Flat Pack Meals (FPM) is a not-for-profit, healthy food initiative that aims to address poor diet. It does so by selling, in local communities, easy-to-cook, complete meal and soup packs for people to buy and cook in their own homes. These packs are made and sold locally by volunteers. By facilitating the cooking of healthy meals with fresh produce from scratch, FPMs provides an easy and affordable means to help increase the number of vegetables and fibre into people's diets. FPMs also aims to increase customers confidence, motivation, skills, and knowledge with regards cooking and healthy living.

In early 2016, with funding from the NHS North East CHP Child Healthy weight Fund, FPMs was piloted in in the East End of Glasgow. The pilot ran for 6 weeks with packs sold in four family learning centres (Garthamlock, Lochview, Parkhead and Westerhouse) and The Calvy Centre (Calvy housing Association).

KEY FINDINGS:

- With 80% of all survey responses being positive, respondents were overwhelmingly favourable across all categories. These reported benefits were greater in those who had spent a longer period as FPM customers.
- Survey respondents reported that their cooking skills and confidence to cook from scratch had been improved by FPM. It was also reported that people had been inspired to start cooking for the first time by FPM and that FPM helped people be more adventurous with their cooking.
- With 86% of survey respondents asserting that the number of vegetables in their diet had increased because of this project, FPM can be seen to directly contribute to the delivery of the government guideline target of five portions of fruit and vegetables day – a target consistently missed in the Scottish diet. FPMs delivered approximately 4500 portions of vegetables into the homes of customers in the East End of Glasgow in the 6 week pilot alone.
- Poor diet in children can be a predictor of poor diet in adulthood so encouraging healthy eating from an early age is important in establishing this behaviour throughout life. Focus group attendees and customer comments indicated that FPM had a positive impact on the diets of their children. Children were seen to consume more vegetables and a wider range than they would normally have eaten. It was agreed that involving the children with the preparation and cooking

helped facilitate interest and excitement towards the healthy produce. This is important as FPM could be seen as a means to help overcome some children's unwillingness to eat healthy diets.

- FPM can contribute to reducing food inequalities as 87% (91% of East End Pilot customers) of the customer base live in areas with higher than average levels of deprivation. FPMs also covered regions that contain some of the most deprived areas in Scotland.
- The community-spirited aspect of FPM was seen as very important by Drumchapel volunteers and East End focus group attendees. Furthermore, the pilot volunteers suggested that FPM could expand outside of the FLCs into places such as churches and other community venues/groups.
- Alongside benefits to the customers, FPM offered a great deal of benefits to the volunteers including a reported increase in confidence. The operational requirements of the project provide a wide range of opportunities for volunteers to learn new skills which could help with employability or returning to work. FPM also created social benefits by connecting people, providing a social environment for volunteers, and giving opportunities to interact with members of the public during the selling of packs.
- The pilot has demonstrated that FPM can be popular and operated from multiple areas indicating a great potential to expand this initiative across Glasgow, Scotland and beyond.

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1. BACKGROUND

1.1 INTRODUCTION

Poor diet is known to be a contributing factor in the development of diabetes, hypertension, stroke, coronary heart diseases and a number of cancers. In 2006-2007 illness related to poor diet was estimated to cost the NHS £5.8 billion¹. Tackling poor diet could be a route to alleviating or preventing these serious health issues resulting in a reduced burden on individuals, their families and the healthcare system.

In December 2015 Food Standards Scotland published the report: “The Scottish Diet: It needs to change”². It found Scotland’s diet to be too low in fruit and vegetables, with people being, on average, 1.6 portions of fruit and veg a day short of the 5-a-day target. This problem is accentuated in more deprived populations, who tend to consume 2.1 fewer portions a day. These short-comings are deep rooted, having not improved since at least 2001. Fibre is also consumed at approximately two-thirds of the recommend amount, and progress in consumption has not improved in the same timeframe.

Flat Pack Meals (FPM) is a not-for-profit, healthy food initiative that aims to address poor diet. It does so by selling, in local communities, easy-to-cook, complete meal and soup packs for people to buy and cook in their own homes. By facilitating the cooking of healthy meals with fresh produce from scratch, FPM provides an easy and affordable means to help increase the number of vegetables and fibre into people’s diets. FPM also aim to increase customer’s confidence, motivation, skills, and knowledge with regards cooking and healthy living.

Flat Pack Meals was developed by Drumchapel L.I.F.E. (a Healthy Living organisation based in Drumchapel, Glasgow) after collaboration with the Glasgow based Centre for Contemporary Arts in 2014. This followed on from the work of WochenKlauser, who initiated a women-led co-operative selling meal bags in the local area.

Currently, Flat Pack Meals is being operated in the East End of Glasgow after a successful pilot in early 2016. This report evaluates the project during its time in Drumchapel and the pilot in the East End.

1.2 HOW FLAT PACK MEALS WORKS

All fresh produce and accompanying ingredients required to make each recipe were sourced, ordered, portioned, and packed locally by a team of volunteers in a Drumchapel based community centre (The Phoenix Centre). The recipe packs were then sold in various locations including Drumchapel Health Centre, Chester's Nursery School, Glasgow Wood Recycling, and 2 Drumchapel community centres for up to 2 days a week. Meal packs (£3) would contain an average of 9 portions of vegetables and serve 3-4; soup packs (£1.20) would contain an average of 6 portions of vegetables and make 5-6 bowls (The number of vegetable portions is calculated on the average weight of the vegetables in each pack (not including potatoes) with 80g being a portion size. Tins of tomatoes or pulses were counted as 2 portions each).

In order to ensure sustainability past initial funding, stock was purchased each week from the revenue of sales from the previous week(s). Furthermore, after the initial development period, FPM was ran and maintained mainly by volunteers.

1.3 PILOTING FLAT PACK MEALS IN THE EAST END OF GLASGOW

In early 2016, with funding obtained from the NHS North East CHP Child Healthy Weight Fund, FPM was piloted in the East End of Glasgow. After a January 2016 launch event in Westerhouse Family Learning Centre (FLC), the pilot ran for 6 weeks with packs sold in 4 FLCs (Garthamlock, Lochview, Parkhead and Westerhouse) and The Calvy Centre (Calvy Housing Association). One day every week each centre had 10 meal packs and 10 soup packs for sale. The pilot bags were produced by Drumchapel L.I.F.E., transported for sale in the East End, and sold by parent volunteers from each FLC.

The majority of the establishments receiving FPM during the pilot are located in some of the most deprived areas of Scotland. Selling in these areas is in accordance with the aim of FPM to reduce food inequalities in the Scottish diet.

2. EVALUATION

2.1 OVERVIEW

In order to assess the efficacy of the project in terms of health and wellbeing outcomes, a customer survey was carried out. In addition, customer and volunteer feedback was obtained and a focus group was held with parent volunteers from the FLCs in the East End, after the pilot was complete.

The survey was carried out on two separate occasions: firstly, with customers of the Drumchapel L.I.F.E. initiative after approximately a year of selling; secondly, with customers in the East End of Glasgow directly after the pilot.

Customers were asked to assess whether 7 aspects of their lives had changed or been influenced by FPM (The full questionnaire and survey methods can be found in Appendix 1).

Respondents answered each question by choosing one answer from 5 possible choices, on a Likert scale, relating to whether the factor in question had improved, remained the same or worsened (1: “A lot [negative]”; 2: “Slightly [negative]”; 3: “No different”; 4: “Slightly [positive]”; 5: “A lot [positive]”). Alongside a space for additional comments, postcode stem, time spent as a FPM customer, and household status were also requested. 78 responses were received in total, with 36 coming from the pilot.

For each question the responses were overwhelmingly positive, with 80% of all answers indicating improvement in the lifestyle factor questioned (Table. 1 -- full break down of the individual responses can be seen in Appendix Figure 2a). Likewise, the results for the pilot alone were very positive and broadly similar, with 75% of all answers being positive. The remaining, non-positive answers were almost all neutral (see Appendix Figure 2b). The mode response for each question was always response 4 (“slightly [more positive]”) or 5 (“a lot [more positive]”).

QUESTION CATEGORY	% OF ANSWERS INDICATING IMPROVEMENT (Pilot)	% OF ANSWERS INDICATING IMPROVEMENT (All respondents)
FOOD BUDGET	64	72
HEALTH	64	73
COOKING SKILLS	71	79
HEALTHY PRODUCE KNOWLEDGE	74	79
CONFIDENCE TO COOK FROM SCRATCH	81	83
HEALTHY CHOICES IN OTHER ASPECTS OF LIFESTYLE	83	86
NUMBER OF VEGETABLES IN DIET	86	84
TOTAL (ALL ANSWERS COMBINED)	75	80

Table 1. Percentage of positive responses given in the Flat Pack Meals (FPM) evaluation survey. Answers show that the majority of respondents believed the FPM project had been beneficial to them. *Pilot*: responses received after the pilot in the East End; *All Respondents*: responses to all surveys received. For further details of survey questions and detailed responses see Appendices 1 and 2).

A number of survey responses indicated that FPM has long-term customers, with some having regularly purchased packs in Drumchapel for over a year. It is worth noting that these long-term customers reported, on average, a greater number of positive responses (Fig. 1). These findings suggest that FPM can successfully be maintained long term with repeat custom and deliver more benefits over time to these customers.

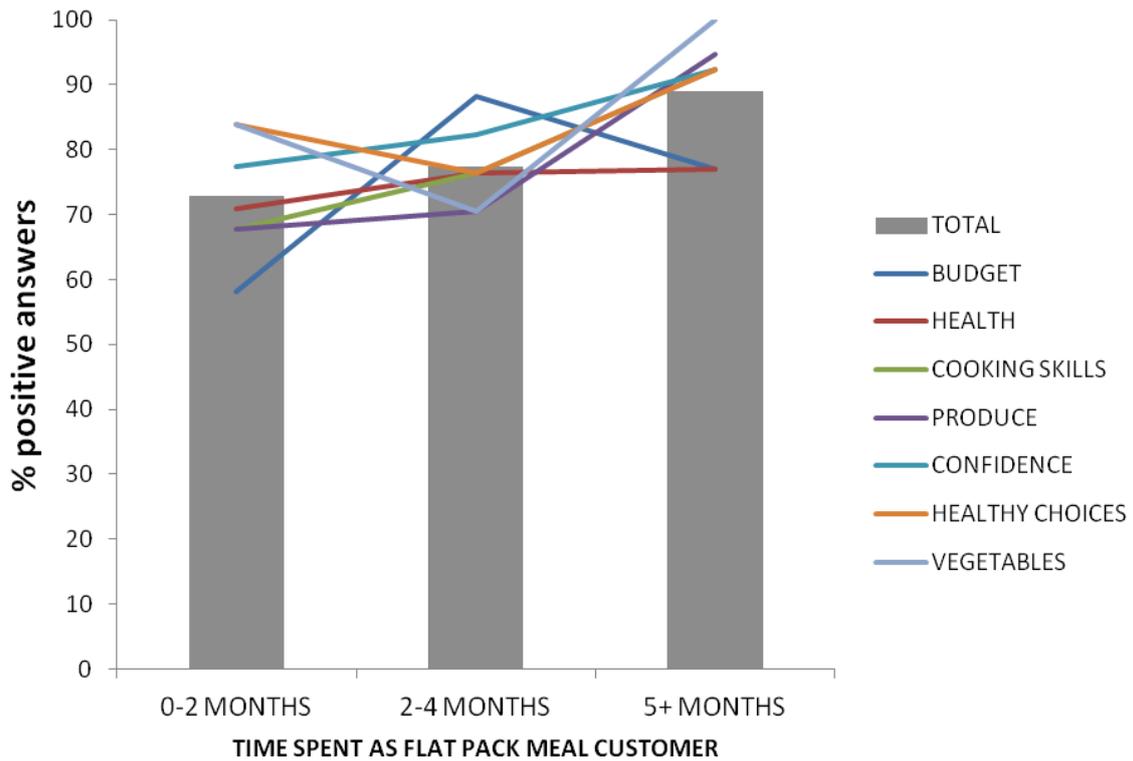


Figure 1. Percentage of positive answers given to survey responses grouped by time spent as a Flat Pack Meal customer. Survey respondents tend to give more positive feedback the longer they have been a customer. The line graphs indicate the average positive response given by all respondents for each question separately. The bar graph indicates the average positive response for all questions combined.

In addition 39 comments (25 from the pilot) were collected and coded into categories (Table 2). Most comments received were extremely positive, with the only non-positive comments relating to product suggestions (changes which could easily be put in place).

COMMENT CATEGORY	NUMBER OF COMMENTS
General positive feedback	10
Product improvement/advice	7
Increased knowledge	5
Children involved in cooking/eating more veg.	5
Increased confidence to cook healthy food	4
Buy for others to encourage cooking	3
Convenient	3
Good value for money	2

Table 2. Coded responses of additional comments given in survey.

2.2 SOCIO-ECONOMIC AND HOUSEHOLD DEMOGRAPHICS OF FLAT PACK MEAL CUSTOMERS

In order to assess the socio-economic status of FPM customers, respondents were asked for their postcode stems (71 of the 78 respondents gave usable information). Stems, rather than the full postcode, were asked for to ensure a higher response rate by maintaining anonymity. Relative socio-economic deprivation of residential areas was estimated by analysing the proportion of full postcodes in each stem according to their quintile (20%) rank from the Scottish Index of Multiple Deprivation (SIMD)³. The postcode stems were then allotted our own deprivation rank based on the percentage of full postcodes from each stem found in the most deprived quintile according to the SIMD (see Appendix 3 for full details).

As expected from the locations of selling areas, we found the majority of FPM customers come from areas with higher than average levels of deprivation (Fig 2). Further to this finding:

- 87% (91% PILOT) of respondents live in areas that contain a higher percentage of the most deprived postcodes in Scotland than expected (i.e. greater than 20% of postcodes in the postcode stem are in bottom quintile of SIMD).
- 27% of PILOT respondents live in areas in which 100% of the postcodes are in the bottom 2 quintiles of SIMD.
- 4 of the postcode stems (G15, G31, G33 and G34) in which respondents live contain areas ranked in the 20 most deprived in the entire of Scotland (RANKS = 5, 6, 7, 10, 11, 12, 13 and 20 according to SIMD). These 4 postcode stems, of which 3 are from the East End, represent 51% of TOTAL respondents.

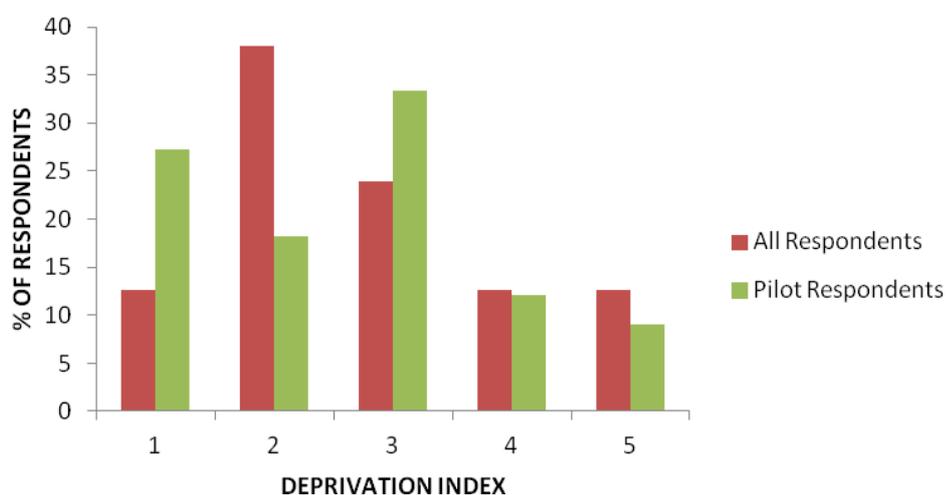


Figure 2. The percentage of survey respondents ranked according to postcode stem deprivation index. These data show that FPM customers come from areas with higher level of deprivation than expected. *Pilot*: responses received after the pilot in the East End; *All Respondents*: responses to all surveys received. Deprivation rank 1 = most deprived; Deprivation rank 5 = least deprived.

These results suggest that FPM is popular in areas of high socio-economic deprivation. Poor diet, however, is not exclusively linked to areas of most deprivation, and we found that positive impacts were approximately reported equally across all deprivation levels (Appendix Fig. 3.1). Together these signify FPM could benefit all socio-economic regions.

Out of the 77 respondents that registered their household status, 57% were designated as adult(s) with child or children, 29% as Adults only and 14% living alone. When the pilot data is removed, to avoid the bias of selling at FLCs, the proportions were: 41% adult(s) with child or children, 39% adults only and 20% living alone. This shows FPM is popular across all households, but in particular with families with children, suggesting the project may help to introduce a greater number and variety of vegetables into children's diets (see section 2.5).

According to our survey, the majority of respondents (72%) believed they spent less on their food budget since purchasing FPM (Table 1). The most common answer being response 4 (*"I spend slightly less now"*). In addition, two of the additional comments referred to FPM being good value for money (Table 2). The focus group also indicated that customers considered FPM to be inexpensive and cheap enough to take a risk on meals they had not tried before. The low cost of the product was believed to encourage return custom too.

2.3 FLAT PACK MEALS HAS A POSITIVE IMPACT ON HEALTH AND LIFESTYLE CHOICES

The majority (73%) of all respondents reported that their health had improved over the time they had been eating FPM (Table 1). This figure was a little lower (64%) in the East End, but, as the pilot was only 6 weeks long, this might be expected, as those individuals who have eaten FPM for longer give more positive responses (Fig1).

The notion of FPM improving self-reported health benefits is backed up by the high number (86%) of respondents who felt they had been motivated by FPM to make other healthy choices in their lives (Table 1). The pilot respondents gave a similarly positive response rate of 83%. The most frequent answers were equally responses 4 (*"slightly more motivated"*) and 5 (*"I'm a lot more motivated"*).

On the whole, respondents believed FPM had increased their knowledge of healthy produce with 79% (74% for the pilot) of all respondents giving positive answers to this question (Table 1).

Focus group attendees unanimously agreed that the FPM recipe packs were healthy. They reported the convenience of FPM made it easier for people to cook healthy meals, which was another factor in return custom. Three additional comments from the survey also referred positively to convenience, and the increased accessibility of healthy and fresh food brought by FPM.

Overall, it is clear that FPM not only provides healthy food in a convenient and accessible manner, but also encourages other healthy lifestyle choices and increases the knowledge base of its customers too.

2.4 FLAT PACK MEALS HELPS INCREASE THE NUMBER OF VEGETABLES IN THE DIETS OF THEIR CUSTOMERS

Drumchapel L.I.F.E. delivered, on average, 50 recipe packs a week. They are estimated to have sold up to 2000 individual packs in a year, equating to over 15 000 portions of vegetables - the equivalent of nearly 1.2 tonnes of vegetables.

In the pilot, 50 meal and 50 soup packs were sold each week. As nearly every pack was sold, approximately 4500 portions of vegetables were purchased from the FLCs (and The Calvy Centre) in just 6 weeks.

The question which elicited the most positive response from the survey was whether FPM had increased the quantity of vegetables in the diets of the respondents. 84% of all respondents (86% for the pilot respondents) indicated that FPM had increased the number of vegetables in their diet (Table 1). In fact, response 5 ("increased a lot") was the most common answer in the "all respondents" category. Also, 100% of respondents who had been consuming FPM for over 5 months responded positively, suggesting that people feel that FPM has a more positive influence in their vegetable intake over time.

It is clear from the long term results in Drumchapel, and the short pilot in the East End, FPM is a very successful initiative when measured by its ability to increase the number of vegetables in the diets of its customers.

2.5 FLAT PACK MEALS ENCOURAGES CHILDREN TO BE INVOLVED IN COOKING AND EAT MORE VEGETABLES

Poor diet in children can be a predictor of poor diet in adulthood⁴ so encouraging healthy eating from an early age is important in establishing this behaviour throughout life. It is also known that caregivers often experience problems feeding infants or toddlers, which includes "picky eating"⁵. It was of great interest that FPM had a positive impact on children's diets. In both the focus group and the additional comments, it was reported that children became involved in the cooking of FPM and subsequently ate meals that they would not have done so normally. Five of the additional comments from the survey were in this regard e.g.

"It is amazing, my kids eat healthy, and since flat pack meals they have enjoyed helping to cook and prepare their family meal"

"This is a great idea. When we buy the flat pack meals my two children make the dinner, they love taking part in this and it encourages them to eat the meal."

Focus group attendees reported that children were excited about the meals and proud after being involved in the preparation. Furthermore, they concurred with the survey comments in that involvement with the meal preparation led to their children eating more, and a greater variety of, vegetables than normal e.g.

“My wee girl, she’s funny trying new food, but see when she’s in the kitchen with me, like the Flat Pack meals, she’d take it out, she’d ask what it is, she’d smell it, she’d feel it ... when the meal was finished at the end, she quite happily sit there and dive right into it, whereas if I just put that down to her she’d have turned her nose up at it ... but see the fact she’s in there and you’re telling her what it is that’s going on and she’s getting involved and doing it with you -- what a big difference it makes.”

The quote above also highlights that the FPM product itself positively influenced the child’s willingness to eat vegetables; the child enjoyed, and was excited by, revealing the contents of the bag. This involvement with the produce from the initial stage, and the preparation of the meal, could help develop, or begin, a child’s healthy relationship with food. And in this sense FPM could be seen as a means to help overcome some children’s unwillingness to eat healthy diets – a common problem (for a review on the influence of children’s eating habits and parent focussed interventions see Mitchell *et al*, 2012⁶). It is worth noting that FPM could be worthy of further research in this regard.

As FPM helps increase healthy produce knowledge (Table 1), parents who are better educated in this area are better equipped to help their children learn about good diet. Healthy eating habits in the parents, enabled by FPM, may encourage their children to eat more healthy diets too.

2.6 FLAT PACK MEALS INCREASES COOKING SKILLS AND THE CONFIDENCE TO COOK FROM SCRATCH

79% of all respondents (71% of pilot respondents) believed their cooking skills had improved since preparing FPM (Table 1). In fact, for the pilot respondents, response 5 (“They’re a lot better”) was the most frequent answer (Appendix 2a).

The recipes were considered easy to follow, and detailed enough for complete beginners. In addition, focus group attendees noted the recipes inspired people to cook who have not done so before. FPM therefore provide a good base for a novice to begin cooking. In accordance with this, 83% of all respondents (81% of pilot respondents) believed FPM had made them more confident to cook healthy meals from scratch (Table 1). Also, 4 of the additional survey comments referred to increased confidence in cooking e.g. *“I found the flat pack meals to be a great idea. I am now much more confident in the kitchen and my culinary skills have improved immensely. Thank you.”*

The focus group found that FPM encouraged people to be more adventurous in their cooking by providing a range of meals that were new to a lot of customers. They also found that due to the low prices and trust engendered from previous meals, customers were happy to take the risk on new recipes. One additional survey comment reported: *“Great project. Made meals I would never normally make.”* Focus group attendees agreed that palates were broader these days, and it was good to take influence from the cuisines of other cultures.

Survey respondents reported they bought packs for other people who were perhaps less able to obtain healthy produce (*“When possible I buy and deliver them to my mum and dad who love the meals...”*) or less able to cook (*“I love flat pack meals. I buy them for my friends as well as myself. I have even go a friend cooking now, something they have never done before.”*). The FPM meal recipes

themselves have also been useful in encouraging others to cook outside of Glasgow (*"I buy and send recipe details to my son in London. He loves them and looks forward to getting any new ones."*).

Focus group attendees indicated that some people bought meals for relatives who had never cooked before. Furthermore, they noted that FPM had helped to get their partners cooking for the family who had never done so before.

All this indicates, that by helping to make it easier to cook meals from scratch, FPM has potential to help bring families and members of the community together.

2.7 FLAT PACK MEALS IS A BENEFIT TO VOLUNTEERS AND THE COMMUNITY

Alongside the reported benefits to customers in terms of diet, cooking skills and healthy living, FPM offers a great deal to volunteers in the project. Due to operational requirements, FPM is an ideal project to help people back into employment by developing essential work skills such as (amongst others): stock taking, ordering, computer literacy, financial administration, money handling, recipe design, social media, selling, and food preparation/portioning/handling. As an example, a number of volunteers in both Drumchapel and the East End now have Food Hygiene Certificates because of FPM.

FPM can offer a purpose for volunteers by their contributing to something worthwhile. Fulfilling personal values/goals are factors known to contribute to good mental health. Volunteers also reported increased confidence.

FPM has created social benefits by connecting people, providing a social environment for volunteers, and giving opportunities to interact with members of the public during the selling of packs. In the East End pilot, parents from separate FLCs met regularly and felt this was important. They were also keen on getting as many parents involved in the project as possible. These interactions were highly valued as a means to facilitate parents getting to know one another more closely: *"With more people involved, more people will get to know each other..."*. Likewise, parents felt that having more people in contact with one another could help foster a sense of community.

This community-spirited aspect of FPM was seen as very important by Drumchapel volunteers and focus group attendees. Furthermore, the pilot volunteers suggested that FPM could expand outside of the FLCs into places such as churches: *"Get churches involved... older members of the community... making it more of a community thing, and try and build the community back up..."*. People were also very keen to get more nurseries involved.

3. CONCLUSIONS

In conclusion FPM was considered a success all participants in Drumchapel and the East End pilot. This was reflected by the customers in their overwhelmingly positive survey responses and comments. Survey respondents reported many benefits of FPM including better health and more

motivation to make healthy lifestyle choices alongside improved cooking skills, knowledge and confidence.

FPM was successful in delivering more vegetables into local areas and into the diets of the customers. FPM therefore positively contributed to the delivery of the government guideline target of 5 portions of fruit and vegetables day – a target consistently missed in the Scottish diet².

Although FPM customer base is skewed to more deprived areas, packs were purchased across all socio-economic groups. As poor diet is not confined to these less advantaged regions – although it is worse – it is worth noting each group reported approximately equal benefits. This information, alongside the sustained customer base in Drumchapel and popularity in the pilot, demonstrates the capacity of this project to spread, not be a local phenomenon, and benefit a wide range of society.

Despite its operational complexity, FPM has the potential to run long term. This is demonstrated by the commitment of Drumchapel L.I.F.E. to running the project for approximately 18 months. Also, after initial development, FPM was almost entirely run by volunteers in Drumchapel, further demonstrating its sustainability

After initial funding, FPM became financially self-sufficient in terms of financial sustainability. The budget was tight, however, and without a safety net it was difficult to expand. A main aim of the pilot funding was to allow Drumchapel LIFE to produce the bags through remuneration and provide capital, through the sales of the bags, to FLCs in the East End. This capital would help establish the production of bags in their own area. In this regard the funding was a complete success as the sales of bags in the pilot was nearly 100%. This pilot demonstrated, therefore, FPM can be expanded to other areas. Furthermore, the skills and knowledge gained in developing the project by Drumchapel L.I.F.E. were transferable as the project has now begun operation independently in the East End.

Volunteers in the East End are highly committed to making a success of FPM in their area and are committed to maintain the volunteer-led aspect. The only potential problem anticipated by focus group attendees was the time available to commit to the project by volunteers. They hope to reduce this problem by increasing the number of volunteers involved.

It was noted that sales in the FLCs were more consistent than sales to passing customers in Drumchapel Health Centre and Community Centres in Drumchapel. Selling in this fashion could reduce the risk of financial loss and food waste. Those involved with FPM speculate that FLCs may represent an ideal venue for the sale of FPM as it meets the aspirations of families wanting to provide healthy meals for themselves and their children. It is this model that the East End is taking forward when producing and selling the bags. East End volunteers also see FPM as a means of bringing the community together by increased interaction between parents and expanding the project beyond FLCs.

Another noteworthy observation was the benefit to children seen when they were involved in making FPM. They became interested in the process of cooking and ate more vegetables because of it. Other adult non-cookers were also inspired to cook indicating

All in all, FPM offers an excellent opportunity for local residents to empower themselves by creating a sustainable, volunteer-led, community-spirited means to provide healthy food and improve cooking skills in a convenient and accessible manner that actually works.

4. REFERENCES

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ABOUT THE AUTHOR

Peter Burton received his PhD from the University of Glasgow in 2004 and has subsequently published scientific research in several academic journals. More recently, Peter volunteered for Drumchapel L.I.F.E. to help co-ordinate the Flat Pack Meals project, and carried out this evaluation research.

burtonpeter@hotmail.com

CONTACT INFO FOR CURRENT FLAT PACK MEAL COORDINATORS:

Debbie.Clark3@ggc.scot.nhs.uk

yvonne@calvay.org.uk

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APPENDICES

APPENDIX 1

Survey forms were available at the point of sales in physical form and online via Survey Monkey. Supermarket vouchers were also offered as a prize. Anonymity was assured to encourage honesty, and a separate form was used to obtain personal details for the prize draw to ensure this.

Responses were measured via a five point Likert scale answer set with the middle answer being neutral. Questions were worded to ensure an equal difference between each interval on the scale, and were not leading in a positive or negative direction.

The survey questions were as follows:

- 1) How would you consider your food budget to have been affected since purchasing Flat Pack Meals?
 - I spend a lot more now
 - I spend slightly more now
 - No Different
 - I spend Slightly less now
 - I spend a lot less now

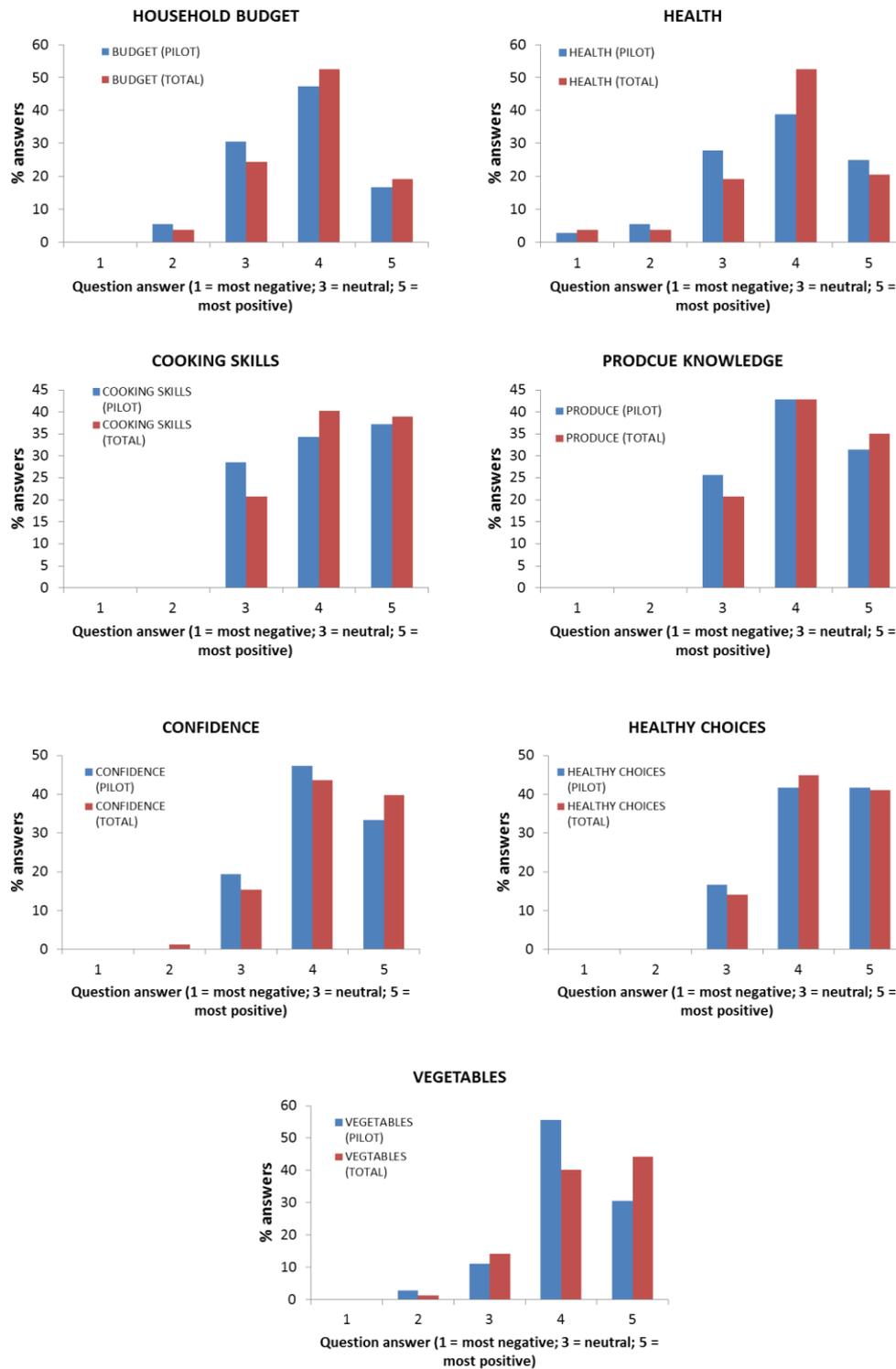
- 2) How do you feel your health or your family's health has changed since eating Flat Pack Meals?
 - A lot less healthy
 - Slightly less healthy
 - No difference
 - Slightly healthier
 - A lot healthier

- 3) How do you think your cooking skills have changed since preparing Flat Pack Meals?
 - They're a lot worse
 - They're slightly worse
 - They're no different
 - They're slightly better
 - They're a lot better

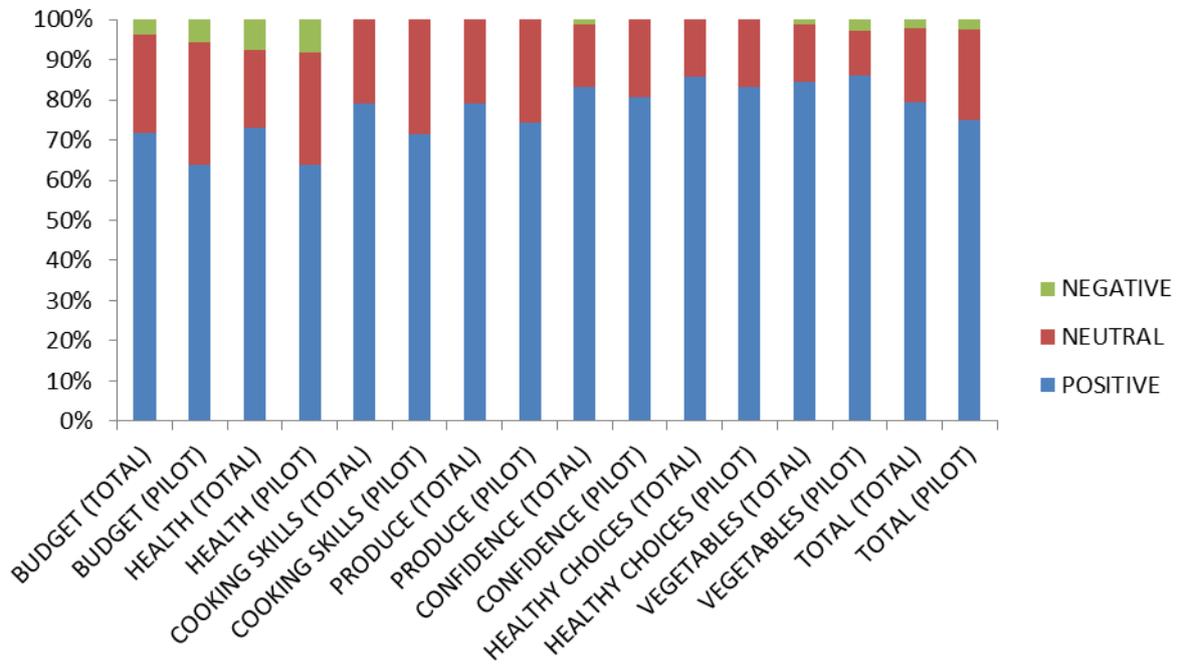
- 4) How do you think your knowledge of healthy produce and recipes has changed since purchasing Flat Pack Meals?
 - I know a lot less

- I know slightly less
 - No difference
 - I know slightly more
 - I know a lot more
- 5) How has your confidence to cook healthy meals from scratch been changed by Flat Pack Meals?
- I'm a lot less confident
 - I'm slightly less confident
 - No difference
 - I'm slightly more confident
 - I'm a lot more confident
- 6) How has your motivation to make other healthy choices in your life been changed by Flat Pack Meals?
- I'm a lot less motivated
 - I'm slightly less motivated
 - No difference
 - I'm slightly more motivated
 - I'm a lot more motivated
- 7) How has the number vegetables in your diet been changed by Flat Pack Meals?
- I eat a lot less
 - I eat slightly less
 - No different
 - I eat slightly more
 - I eat a lot more
- 8) How long have you approximately been buying Flat Pack Meals?
- 9) How would you describe your household status?
- I live alone
 - Adults only
 - Adult(s) with child or children
- 10) What are the first 3 digits of your postcode:
- 11) Any further comments about the Flat Pack Meals Project:

APPENDIX 2



Appendix Figure 2a. Individual responses as a percentage of the total answer of each question. *Pilot*: responses received after the pilot in the East End; *Total*: responses to all surveys received.



Appendix figure 2b. Percentages of each answers to each question as positive, neutral and negative. *Pilot*: responses received after the pilot in the East End; *Total*: responses to all surveys received.

APPENDIX 3

The deprivation rank used in this study was calculated by determining the percentage of full postcodes ranked in the most deprived quintile (according to SIMD) for each postcode stem given by respondents. Any deprivation rank below the least deprived category (Deprivation rank 5) contained more deprived areas than could be expected i.e. more than 20% of postcodes are in the bottom quintile. The rank was assigned as shown in Appendix Table 3.1.

DEPRIVATION RANK	% OF FULL POSTCODES IN BOTTOM QUINTILE OF SIMD
1	80-100
2	60-79
3	40-59
4	20-39
5	0-19

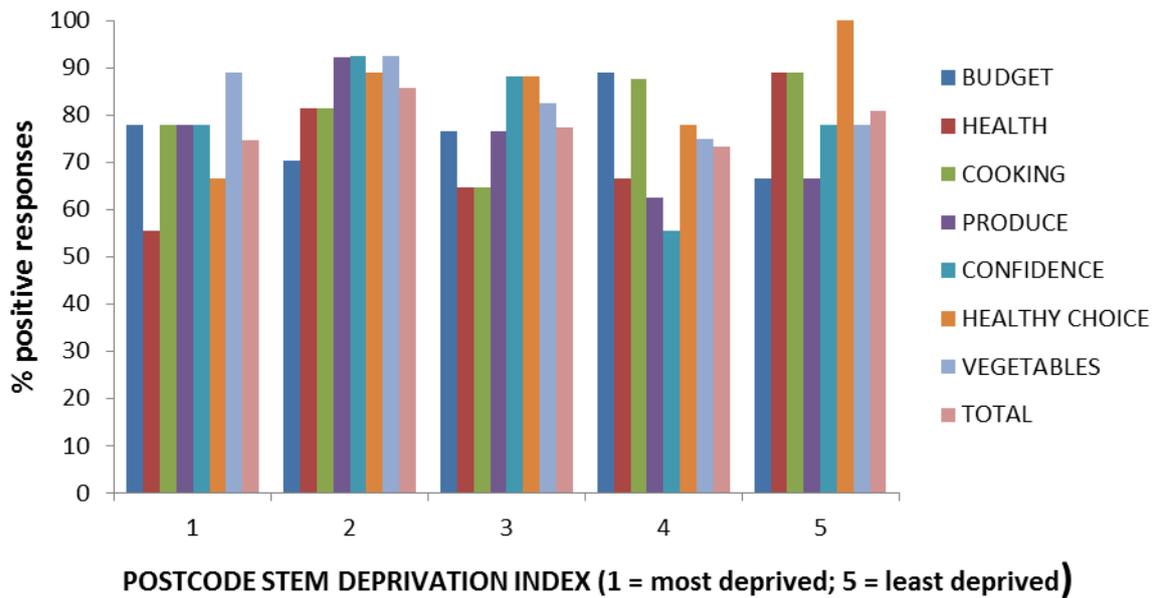
Appendix Table 3.1: Postcode Stem deprivation index. Deprivation rank 1 = most deprived; Deprivation rank 5 = least deprived). *SIMD*: Scottish Index of Multiple Deprivation.

A full list of each postcode stem, its deprivation rank and number of respondents is given in Appendix Table 3.2.

POSTCODE STEM	DEPRIVATION RANK	NUMBER OF RESPONDENTS
G11	4	3
G12	5	2
G13	3	3
G14	3	1
G15	2	21
G31	2	1
G32	3	11
G33	2	5
G34	1	9
G41	5	2
G42	4	1
G61	5	1
G62	5	1
G64	5	2
G66	5	1
G69	4	4
G81	3	2
G82	4	1

Appendix Table 3.2: List of Postcode Stems received in survey. Deprivation rank 1 = most deprived; Deprivation rank 5 = least deprived).

The percentage of positive responses to each question ranked by postcode stem deprivation index is given in Appendix Fig. 3.1.



Appendix Fig 3.1 The percentage of positive responses as ranked by postcode stem deprivation index.