All Ireland learning from “Decent Food for all”

Supporting document part III

Community-level impacts of the DFfA intervention – statistical analysis and interpretation

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Abbreviations

ADHAZ	Armagh and Dungannon Health Action Zone
BMI	Body Mass Index
CFT	Community Food Team
DFfA	Decent Food for All
DHSSPS	Department of Health, Social Services & Public Safety
FSANI	Food Standards Agency Northern Ireland
IfH	Investing for Health
HSS	Health and social services
IPH	Institute of Public Health in Ireland
KEO	Key Expected Outcome
LEG	DFfA Local Evaluation Group
NAPS	National Anti Poverty Strategy
NI	Northern Ireland
NISRA	Northern Ireland Statistics and Research Agency
OG	DFfA Operational Group
PAF	Postal Address File
PHAII	Public Health Alliance for the island of Ireland
PLA	Programme Logic Approach
RoI	Republic of Ireland
SHSSB	Southern Health & Social Services Board
TSN	Targeting Social Need

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Chapter 1. Introduction

1.1 The Programme Logic approach (PLA)

The Programme Logic Approach (PLA)[1] is intended to support personnel who are involved in the design, delivery and evaluation of complex interventions. It aims to promote collaboration between intervention and evaluation personnel by promoting understanding of their different backgrounds, perspectives and roles.

The central focii of the PLA are the intervention and the mechanisms by which it achieves its aims. Moving in an interactive manner from these to the final evaluation plan, the PLA aims to develop evaluations that contribute to a better understanding of complex interventions and how they work.

To understand features and benefits of the Programme Logic Approach (PLA), it is first useful to outline its main steps.

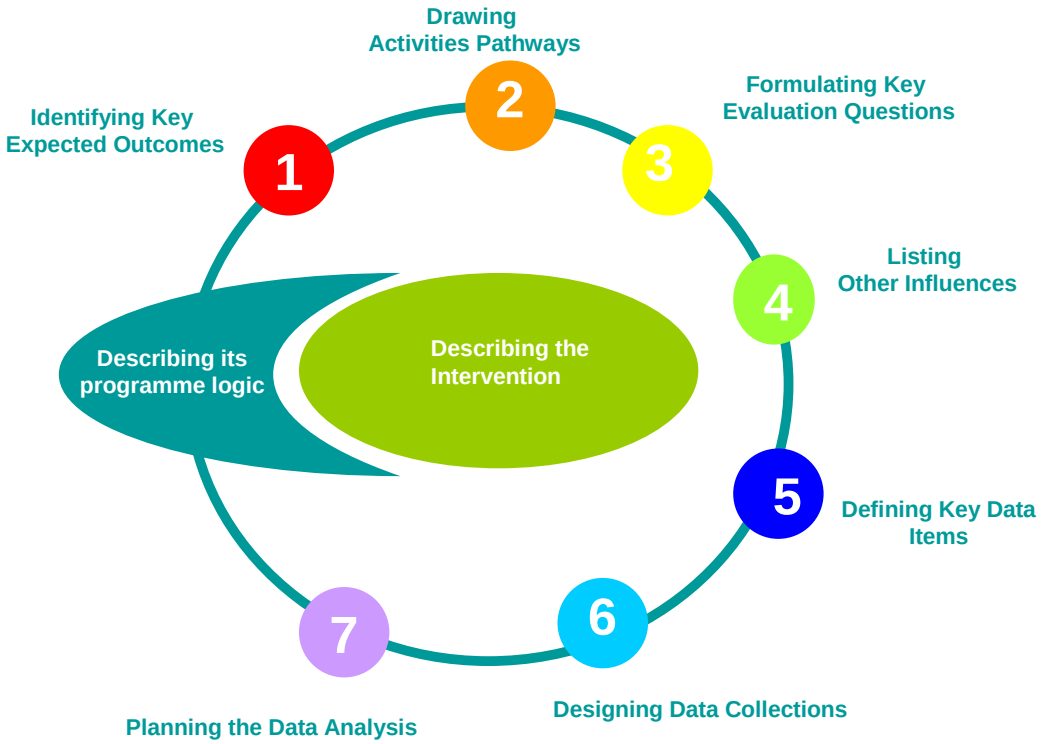


Figure 1 The stages of the Programme Logic Approach (PLA)

PREPARATION

Before working through the PLA Cycle, the main components of the intervention and its programme logic (the mechanism by which these components, together, are assumed to achieve the intervention aims) must be described. These were derived from preliminary documentation of the DFfA intervention.

STEP 1: IDENTIFY THE KEY EXPECTED OUTCOMES

After this, the key expected outcomes that are expected to be achieved are identified through an interactive process involving intervention staff and evaluation staff.

STEP 2: DRAW THE PATHWAYS OF ACTIVITIES

After identifying the key expected outcomes, a pathway of activities (sometimes called "hierarchy") is drawn for each of these key expected outcomes. This process involves identifying sequences of activities which, if undertaken, would lead to the key outcome being achieved. The assumption underlying this process is that each of these activities up to a certain level will together enable the activities of the next level to be undertaken.

Note: Sometimes, outcomes hierarchies are used instead. In this case people sometimes refer to "longer term outcomes" and earlier outcomes as "intermediate outcomes".

STEP 3: FORMULATE THE KEY EVALUATION QUESTIONS

Once the pathways of activities have been drawn, the process of formulating key evaluation questions begins. For each level of an activities hierarchy, a series of evaluation questions is formulated to assess if the activity achieved its aim and how well they were achieved.

STEP 4: LIST THE OTHER INFLUENCES

Other factors that could affect either the success of the intervention or the conduct of the evaluation are then listed. At the time of implementation of the evaluation plan, other factors may become relevant which would require this step to be revisited.

STEP 5: DEFINE THE KEY DATA ITEMS

For each key evaluation question, the necessary data items are then defined. This process involves perusing other related documents and liaising with intervention staff.

STEP 6: DESIGN THE DATA COLLECTIONS

At this stage, data collections to gather the necessary data items can be specified.

STEP 7: PLAN THE DATA ANALYSIS

In this step, strategies to answer each of the key evaluation questions are developed. This involves development of an analysis plan.

As part of the DFfA project management, the PLA was applied in an iterative fashion in collaboration with the community food co-ordinator, the community food workers, and other key stakeholders including the DFfA Research Group, the DFfA Operational Group and the DFfA Local Evaluation Group. The overall approach was an exploratory use of the PLA to develop models of working that bring together people involved in intervention implementation and research and evaluation. The PLA was used and further developed throughout the lifetime of the intervention.

1.2 Key expected outcomes

A number of key expected outcomes (KEO) for the DFfA intervention were identified. These outcomes are highlighted in the Table 1 under the themes: Local regeneration; Individual, Household and Community change; and Policy change. Key performance indicators from the community surveys and food basket studies were identified.

Table 1 Decent Food for All Key Expected Outcomes

1. LOCAL REGENERATION

Key Expected Outcome 1.1
Local food production and distribution

Key Expected Outcome 1.2
Improved accessibility to (affordable) safe and healthy food
- Financial Access (benefit/budget maximisation)
- Physical Access

2. INDIVIDUAL, HOUSEHOLD, AND COMMUNITY CHANGE

Key Expected Outcome 2.1
Improved awareness/knowledge of
- Food & nutrition
- Safety & hygiene
- Food poverty

Key Expected Outcome 2.2
Greater demand for (affordable) safe and healthy food.

Key Expected Outcome 2.3
Improved health behaviours
- Healthier eating choices
- Improved food hygiene and safety
- Increased healthy lifestyles

Key Expected Outcome 2.4
Greater social inclusion
- Increased community development & participation
- Less individual and community isolation
- Greater intergenerational working
- Empowerment

Key Expected Outcome 2.5
Greater individual development
- Increased self-esteem
- Greater recognition of the value of education, training & employment

4. POLICY CHANGE

Key Expected Outcome 4.1
Stronger food related policy and strategy with a greter emphasis on (affordable) safe healthy food
- Locally, regionally and nationally

Key Expected Outcome 4.2
Stronger food and well-being networks for sharing, learning and support
- Locally, regionally and nationally

1.3 Management

The DFfA Research group

A partnership group involving ADHAZ and IPH was established to oversee the research and evaluation programme and to ensure that it delivered the stated outcomes. Membership is listed in Appendix 5.

The DFfA Local Evaluation Group

In addition a local evaluation group was established to ensure that local findings and experience are added to the learning and to enhance the overall evaluation.

The roles and responsibilities of the DFfA Local Evaluation Sub-group:

- Develop a framework for broad evaluation of the DFfA intervention in order to assess, impact and outcome, and monitor/overview its implementation
- Provide advice and expertise to the Community Food Team in the development of project-based evaluations
- Report on processes and activities, local knowledge, evaluation of DFfA activities, events and materials
- Community observations, monitoring activities and resource use.
- Participation in studies of the food culture
- Scanning of other activities by other agencies
- Provide recommendations on effective dissemination and sharing of findings.

Membership is listed in Appendix 6.

Methods

1.4 Overview of the evaluation design

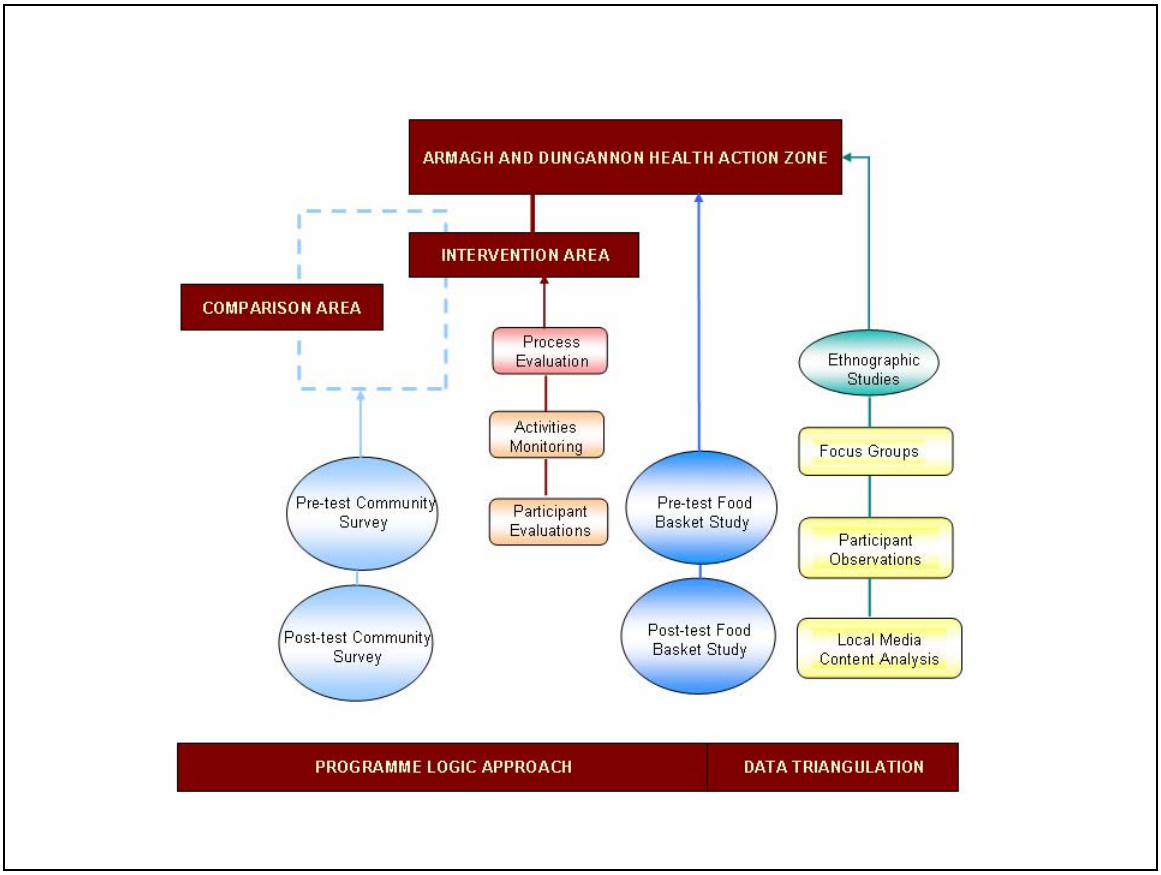


Figure 2 The DFfA evaluation design

A comprehensive research and evaluation programme entitled *'Lessons from the Decent Food for All (DFfA) Intervention'* was led by the Institute of Public Health in Ireland (IPH) and ran throughout the lifetime of the DFfA intervention. Funding for the research and evaluation was provided by the Food Safety Promotion Board. The research and evaluation programme ensured effective evaluation, and the sharing of best practices and experiences.

The aim of the research and evaluation programme was to assess the effectiveness of DFfA in reducing food poverty within the twelve target wards in ADHAZ. The objectives of the research and evaluation programme were to:

- Identify aspects of the intervention which increase food knowledge and reduce food poverty in rural and urban communities; in socio-economic disadvantaged areas; and in border areas

- Identify aspects of the intervention which can be applied across Northern Ireland and the island

- Identify aspects of the intervention which can be used to support all-island communication and marketing campaigns and

- Asses the overall effect of the DFfA intervention in the intervention area.

The research and evaluation incorporated a range of different methodologies to address different issues. The key information sources were:

- Pre-test (i.e. before the intervention) and post-test (i.e. after the intervention) community surveys which provided local contextual information about dietary and food safety knowledge and practices

- Pre-test and post-test studies of physical and financial access to healthy food (food basket studies)

- An ethnographic study of food culture and food consumption:

    - Qualitative studies to further assess the role of social and psychological factors

    - Community observational studies to further assess local regeneration and social inclusion

    - Analysis of food-related content in local media

1.5 Indicators of success

The research and evaluation programme incorporated a range of different methodologies to assess if the KEOs of the project were achieved.

For each KEO, a number of indicators were developed to evaluate the success of the DFfA intervention (see Table 2). Data relating to these indicators were collected mainly through the community surveys and the food basket study and contextual information was provided by the ethnographic study. Detailed information on these three data collections are provided in subsequent sections.

Table 2 Indicators of success for the DFfA intervention

1. REACH OF THE DFfA INTERVENTION

Indicators

- Awareness of local food-related activities/initiatives.
- Frequencies:
    - percentage of people who have heard of the following programmes or initiatives
    - percentage of people who have participated in the following programmes or initiatives:
      Cook it
      Balanced Beginnings
      My Body
      Looking Good Feeling Better
      Fresh fruit in schools
      RI:SE & Shine Breakfast clubs
      Community food gardens
      Community food co-op

2. LOCAL REGENERATION

Key Expected Outcome 1.2

Indicators

- Average distance in miles travelled to main food shop.
- Availability of food.
- Reduction of the amount of money spent on food in order to pay other household bills.
- Cost of a 53 items food basket.

3. INDIVIDUAL, HOUSEHOLD, AND COMMUNITY CHANGE

Key Expected Outcome 2.1

Indicators

- Understanding of “healthy eating”.
- Awareness of “food poverty”.

Key Expected Outcome 2.2

Indicators

- Consideration of healthy options when shopping for food.

Key Expected Outcome 2.3

Indicators

- Daily consumption of bread, rice, potatoes, pasta and other starchy foods.
- Daily consumption of fruit and vegetables.
- Consumption of milk and milk products.
- Consumption of fish.
- Consumption of foods and drinks high in fat and/or sugar.
- Compliance with food safety practices.
- Physical activity.
- Body Mass Index (BMI).

Key Expected Outcome 2.4

Indicators

- Community participation.
- Social contact.
- Community efficacy.

Key Expected Outcome 2.5

Indicators

- Self-confidence in food matters.

4. POLICY CHANGE

Key Expected Outcome 4.2

Indicators

- Awareness of local food-related activities/initiatives.

1.6 Food basket studies

Introduction

Availability and price of foods are two crucial factors which strongly influence the dietary choices of low income groups[2,3].

An accurate measure of the changes that have occurred in these factors over the period of the DFfA intervention is required to assess its success in achieving its KEOs.

Food basket studies are a tool that is well-suited to determine the availability and price of foods in a shopping basket across a range of stores in different regions.

Aims

The aims of the food basket studies were to describe the changes in:

- the geographical distribution of shops; and
- the availability and price of a basket of common food items in local shops that were located in the DFfA intervention area that occurred during the intervention period.

Methods

The pre-test and post-test food basket studies were carried out in 2003/2004 and 2006/2007 respectively in the Armagh and Dungannon Health Action Zone.

THE FOOD BASKET

Data were collected on 53 staple food items (see Appendix 3). The food items were chosen because they were considered to be representative of typically consumed foods and include a selection of foods from the five major food groups (see Appendix 4). The basket was based on foods chosen in similar studies carried out in the UK[4-6]. The composition of the final basket was also informed by a pilot study and consultation with the dietician on the DFfA Research Group. It was considered important to use a basket that was representative, realistic and acceptable to the local population, which is why foods such as crisps, biscuits and cola were included.

TYPES OF SHOPS

A list of all stores selling food in the ADHAZ area was supplied by the Armagh City and District Council and the Dungannon and South Tyrone Borough Council. In total, about 300 shops were surveyed. Shops ranged from large 'multiple' supermarkets to smaller corner shops. A classification of shops selling food was developed based on a version developed by Cummins & McIntyre[5]. This classification was then modified after

consultation with local representatives in order to reflect local knowledge of food sources (Table 3)[i].

Table 3 Classification of retail outlets used in the food basket studies

Type of Shop	Description
Multiples, Discounter and Freezer Store	Includes all major mainstream supermarkets such as Asda, Safeway, Tesco, Sainsbury's Includes operators such as Aldi, Lidl and Iceland
Affiliated Independents	Includes Spar & other franchise operators which are run by an independent trader.
Independents	Independent grocers
Specialist shops	Butchers, fruit & vegetable stores, bakers, fishmongers, and delicatessen shops which do not fit into the above categories

DEPRIVATION SCORES

In order to determine if the availability and price of food varied with the socio-economic circumstances, the shops were assigned the deprivation score of their ward. The Noble Index of Multiple Deprivation (2005) was employed; this score includes measures on income, employment, health deprivation and disability, education skills and training, geographical access to services, crime and living environment. For this study the wards were classified into deprivation quartiles based on their deprivation score[1]. The deprivation quartiles categories were labelled 'most deprived', 'more deprived', 'less deprived' and 'least deprived'. More detailed information on the construction of the categorisation in the Noble Index can be found on the Northern Ireland Statistics and Research Agency's website (www.nisra.gov.uk).

DATA COLLECTION

Shop owners were sent a letter prior to data collection informing them about the project and the fieldwork visit Council staff carried out the primary fieldwork in the pre-test survey (156 shops); a commercial research company carried the post-test fieldwork (143 shops). During each fieldwork visit, availability (indicated by presence of food in the shop) and price (£ per unit) of food basket items were recorded. Food brands were also documented, although this was not possible for certain food items such as meat products, fruit and vegetables which are rarely branded. Own brand products were not taken into account.

[i] *The shop classification and the deprivation quartiles are different than the one used in the report on the pre-test food basket survey.*

STATISTICAL ANALYSIS

Price

Specific food products were often sold in different quantities in different shops (for instance olive oil sold as a bottle of 500ml or 375ml). In such cases, the quantity was adjusted to a standard unit, often one kilogram or pound, to make sure the products prices were comparable.

Different food items are available in different types of shops. Therefore, to compare prices across the different types of shops, only food items that are stocked in at least one shop in each category ("Multiples", "Affiliated independents", "Independents" and "Specialists") can be used. To analyse the relationship between the price of foods and the type of shop, a reduced food basket of 43 items was used. The following ten food products were excluded: shredded wheat, cottage cheese, olive oil, bacon (lean back and rashers), frozen cod (breadcrumbs and battered), tuna, brown rice and wholemeal pasta.

Similarly, to compare prices in wards in different socio-economic circumstances, only food items that are stocked in at least one shop located in each deprivation quartile can be used. Only wholemeal pasta was eliminated for this reason.

To account for food inflation between 2003 and 2007, specific inflation factors for each food group were calculated using the Consumer Price index (UK), October 2007 release (previously known as the Harmonised Index of Consumer Prices). More detailed information on the calculation of inflation rates and Consumer Price Index are available on the Office for National Statistics (ONS) at a UK National level (http://www.statistics.gov.uk)

Statistical significance

All p-values give the likelihood that, when there is no real difference in the true values, a difference larger than the one observed in the sample would have occurred by chance. A 'small' p-value suggests the observed difference is statistically significant (unlikely to be due to chance variation) and so represents a real difference in the true values. A 'large' p-value suggests that the observed difference is not statistically significant (may be due to chance variation) and that there is no difference in the true values. To control the likelihood of spuriously significant results, only results with p-values less than 0.01 are considered 'statistically significant'. A p-value greater than or equal to 0.01 is considered to be 'not significant'. It is represented in the results tables as 'NS'.

Analysis

T-tests were used to compare changes in the availability and price of food during the intervention period.

Test for confounding by type of shop and deprivation quartile were also undertaken.

Variation in the change in the availability and price across the different types of shops or deprivation quartiles was assessed with Generalised Linear Models (genmod procedure, SAS).

Chi-squared (X^2) tests were used to compare the distribution of shop types in the different deprivation quartiles. A log-linear model was used to describe any associations between the type of shops, the deprivation quartiles and time (two class variable: 2003 and 2007).

All statistical analyses were carried out using the SAS program (release 8.02, SAS Institute Inc, Cary, NC).

Limitations

FOOD BASKET

In this questionnaire only branded food items were recorded, to ensure the results were directly comparable between the shops and areas. However, any item that was not available in the specified brand might have been present in a shop as the "own brand". This might have influenced the results on availability and price, as the branded product is often more expensive. The DFfA intervention aim was to help people to achieve a healthy diet, particularly among the disadvantaged and vulnerable groups. Disadvantaged people live on a low income and tend to buy cheaper foods. An alternative method would be to record the cheapest option as well, irrespective of the brand, in order to avoid any under-estimation of the overall availability of the food basket or over-estimation of the total cost of the basket.

RESPONSE BIAS

The Armagh and Dungannon Councils provided the filedworkers with a list of food retailers, their address and category of shop. In total, there were 241 food retailers identified in 2003 and 205 in 2007. The response rate for the Food Basket Studies were 65% in 2003 and 70% in 2007, wich corresponds to 156 and 143 shops respectively. These are slightly lower than for similar surveys[4-6].

The profile of shops which did not participate in the Food Basket Studies might be different than the profile of shops which participated, creating a selection bias, and possible impact on the availability and price indicators we used in this evaluation.

An analysis of the participating shops showed that specialist shops were under-represntented and affiliated independent shops were over-represeted when compared to the total population of shops in the area. However a weighted analysis showed that this under-representation of specialist shops and over-representation of affiliated independents had a minor impact on the availability and total cost of the food basket. In 2003 the total number of products available has been over-estimated by 3.1 products (10% of the basket), and the total cost was over-estimated by £1.19 (2% of the total cost). In 2007, the availability was over-estimated by 2.56 products (7% of the basket) and the cost was under-estimated by £3.4 (5% of the total cost).

When looking at specific products or food groups sold by the specialist shops, it seems that the availability of fruit and vegetables might have been under-estimated, especially in 2003 where 15 greengrocers out of 19 didn't participate in the survey. However this did not affect the fresh products only, as products such as tinned fruits, orange juices or frozen peas were not sold by greengrocers.

1.7 Community surveys

Introduction

An accurate measure of the changes that have occurred over the period of the DFfA intervention is required to assess its success in achieving its KEOs. Measures of change can be obtained from collecting data before and after the intervention has been implemented.

The Social and Market Research (SMR) was commissioned to conduct the pre-test and post-test community surveys in 2003/2004 and 2006/2007. The surveys involved an interviewer-administered structured questionnaire. Participants comprised a random sample of individuals selected from electoral wards making up the DFfA intervention area. A non-randomised matched comparison area (selected wards in the Newry/Mourne Health and Social Services Trust in Co. Down) was included in order to take into account background changes not directly attributable to the DFfA intervention.

The aims of the community surveys were to:

- Provide pre-test and post-test measures of the indicators underpinning the KEOs of the DFfA intervention;
- Identify factors influencing these measures

Study areas

INTERVENTION AREA

The intervention area comprised 12 wards (see Table 4) in the ADHAZ which were selected because they were priorities areas for New Targeting Social Need, the social Inclusion strategy for Northern Ireland at the time[9].

COMPARISON AREA

It is likely that background changes (both positive and negative) will occur in the intervention area, independently of the DFfA intervention. Indeed, many factors operate to change people's knowledge, behaviours and circumstances. In order to assess the changes that can be reasonably attributed to the DFfA intervention, an independent measure of such background changes is required. This usually involves selecting a 'comparison area' where the intervention is not conducted, measuring the change that occurs there, and comparing it to the change that occurred in the intervention area.

Wards in the Newry and Mourne HSS Trust were chosen as it contained both rural and urban wards and border and non-border wards. Rural wards were matched as closely as possible with all potentially similar wards on the basis of their border status, population density and deprivation score. The deprivation domain used for matching rural wards was the Noble geographical access to services score as access to service was thought to be the most relevant measure of deprivation in rural areas.

Urban wards were matched as closely as possible with all potentially similar wards on the basis of their population density and deprivation score (border status was not relevant as all urban intervention wards were non-border). The deprivation domain used for matching rural wards was the Noble multiple, income, and health deprivation scores.

Table 4 Characteristics of intervention and comparison wards[ii]

Intervention wards (Armagh and Dungannon HSS Trust)	**Rural or Urban**	**Border or Non-border**	**Comparison wards (Newry and Mourne HSS Trust)**	**Rural or Urban**	**Border or Non-border**
Caledon	Rural	Border	Camlough	Rural	Non-border
Carrigatuke	Rural	Border	Creggan	Rural	Border
Derrynoose	Rural	Border	Forkhill	Rural	Border
Killylea	Rural	Border	Newtownhamilton	Rural	Non-border
Washing Bay	Rural	Non-border	Sliverbridge	Rural	Border
Abbey Park	Urban	Non-border	Ballybot	Urban	Non-border
Ballysaggart	Urban	Non-border	Derrymore	Urban	Non-border
Callan Bridge	Urban	Non-border	Drumgullion	Urban	Non-border
Coalisland North	Urban	Non-border	Fathom	Urban	Non-border
Coalisland South	Urban	Non-border	St Mary's	Urban	Non-border
Coalisland South and Newmills	Urban	Non-border	St Patrick's	Urban	Non-border
Keady	Urban	Non-border			

Demographic differences between intervention and comparison areas

[ii] *A ward was classified as "rural" if population density is less than one person per hectare or Geographical Access to Service score is less than 0.63. (NISRA)*

Table 5 shows the demographic differences between the comparison and intervention area. The data were weighted to adjust the raw sample to the gender, age and rural/urban profile of the comparison and intervention wards combined. See Section 2.6.3 for details of the weighting strategy.

Table 5 Selected demographic characteristics of the comparison and intervention weighted samples

	Pre-test		**Post-test**	
	Comparison group %	**Intervention group %**	**Comparison group %**	**Intervention group %**
Gender; Weighted				
Male	48.4	48.4	48.4	48.4
Female	51.6	51.6	51.6	51.6
Pre-test p=1.0000				
Post-test p=1.0000				
Age; Weighted				
18-29 years	24.6	24.6	24.6	24.6
30-44 years	29.5	29.5	29.5	29.5
45-59 years	23.6	23.6	23.6	23.6
60+ years	22.4	22.4	22.4	22.4
Pre-test p=1.0000				
Post-test p=1.0000				
Rural/urban; Weighted				
Rural	42.8	42.8	42.8	42.8
Urban	57.2	57.2	57.2	57.2
Pre-test p=1.0000				
Post-test p=1.0000				
Border / non-border; Weighted				
Border	26.9	33.2	28.0	34.5
Non-border	73.2	66.8	72.0	65.5
Pre-test p=0.0168				
Post-test p=0.0151				
Education; Weighted				
Level 1	52.8	55.8	32.9	39.2
Level 2	23.5	26.0	38.2	31.0
Level 3	13.1	9.2	13.7	15.1
Level 4	10.7	9.1	15.2	14.7
Pre-test p=0.1085				
Post-test p=0.0472				
Employment; Weighted				
Working	38.7	41.6	55.5	51.4

	Pre-test		Post-test	
	Comparison group %	**Intervention group %**	**Comparison group %**	**Intervention group %**
Not working	42.1	39.7	27.1	28.7
Retired	19.3	18.8	17.4	19.9
Pre-test p=0.5844				
Post-test p=0.3378				
Deprivation; Weighted p<0.0001				
Highly affluent	8.4	41.7	8.8	43.2
Affluent	21.3	21.8	20.7	25.2
Deprived	42.1	7.4	42.9	6.0
Highly deprived	28.1	29.2	27.5	25.6
Pre-test p<0.0001				
Post-test p<0.0001				

REPRESENTATIVENESS

Table 6 Selected demographic attributes of the comparison and intervention weighted samples, the intervention area, the comparison area, and Northen Ireland wards with the deprivation range of the comparison and intervention area.

		Weighted sample %	Intervention area % Census 2001	Comparison area % Census 2001	NI wards within deprivation range of study areas % Census 2001
Gender	Weighted sample based on age 18 years and over. Census data based on age 18 and over unless otherwise sated.				
Comparison	Male	48.4		48.4	48.9
	Female	51.6		51.6	51.1
Intervention	Male	48.4	48.0		48.9
	Female	51.6	51.0		51.1
Age					
Comparison	18-29	24.6		24.1	23.6
	30-44	29.5		30.8	29.7
	45-59	23.6		22.9	22.9
	60+	22.4		22.2	23.8
Intervention	18-29	24.6	25.4		23.6
	30-44	29.5	30.2		29.7
	45-59	23.6	22.9		22.9
	60+	22.4	21.5		23.8
Rural/Urban					
Comparison	Rural	42.8		44.0	36.0
	Urban	57.2		56.0	64.0
Intervention	Rural	42.8	41.9		36.0
	Urban	57.2	58.1		64.0
Border Status					
Comparison	Border	27.4		26.6	12.8
	Non border	72.6		73.4	87.2
Intervention	Border	33.8	33.9		12.8
	Non border	66.2	66.1		87.2
Education	Census data based on ages 16-74 years.				
Comparison	Level 1	43.1		46.2	45.8
	Level 2	30.7		33.2	33.3
	Level 3	13.4		8.4	8.3
	Level 4	12.9		12.2	12.6
Intervention	Level 1	47.7	47.1		45.8
	Level 2	28.4	33.2		33.3
	Level 3	12.1	8.4		8.3
	Level 4	11.8	11.3		12.6

		Weighted sample %	Intervention area % Census 2001	Comparison area % Census 2001	NI wards within deprivation range of study areas % Census 2001
Employment Census data based on ages 16-74 years.					
Comparison	Working	47.0		47.5	52.4
	Not working	34.6		43.1	37.3
	Retired	18.3		9.4	10.4
Intervention	Working	46.4	49.4		52.4
	Not working	34.3	42.1		37.3
	Retired	19.3	8.5		10.4
Deprivation					
Comparison	HA	8.6		9.0	37.7
	A	21.1		30.3	28.2
	D	42.5		35.8	12.3
	HD	27.8		24.9	21.8
Intervention	HA	42.4	42.1		37.7
	A	23.5	26.7		28.2
	D	6.7	7.4		12.3
	HD	27.4	23.8		21.8

Intervention area data, comparison area data, and Northern Ireland data is based on Census 2001.

Education
Level 1= None
Level 2= GCSE/O Levels /NVQ Levels 1, 2
Level 3= A Levels / NVQ Level 3
Level 4= Third Level / NVQ Level 4, 5

Employment
"Working" refers to individuals who are self-employed, full-time employed or part time employed, "Not working" refers to individuals who are seeking work, not seeking work, on training schemes, and students.

Deprivation
Deprivation scores are relative quartiles within the 23 comparison and intervention wards.
HA= "Highly Affluent" (MDM score 2005 17.25 to 22.69)
A= "Affluent" (MDM score 2005 22.70 to 29.16)
D= "Deprived" (MDM score 2005 29.17 to 32.27)
HD= "Highly Deprived" (MDM score 2005 32.28 to 44.56)

See Appendix 7 for coding of soci0-demographic variables

Broadly speaking, the weighted samples are resprentative of the comparison and intervention areas. In turn, these areas are broadly representative of Northern Ireland areas within the same deprivation range. However, the distribution of the deprivation quartiles within this deprivation range are not similar between the comparison area, intervention area, and Northern Ireland.

Details of the representativeness of the sample and comparison and intervention areas are provided below:

- The weighted comparison and intervention samples are representative of their reference areas with respect to age, gender, rural/urban profile, and border/non-border area of residence. The comparison and intervention areas are representative of Northern Ireland areas within the same deprivation range in terms of gender and age but contain more rural areas and more border areas.

- The weighted comparison sample contains less people at the lowest two levels of education and more people at the third level of education than the comparison area. The weighted intervention sample contains less people at the second level of education and more people at the third level of education than the intervention area. The comparison and intervention areas are representative of Northern Ireland areas within the same deprivation range in terms of level of education.

- The weighted comparison and intervention samples contain less people who are “not working” and more people who are “retired” than their reference areas. The comparison and intervention areas contain less people who are “working” and more people who are “not working” than Northern Ireland areas within the same deprivation range.

- The weighted comparison and intervention samples are representative of their reference areas with respect to deprivation but the deprivation profiles are not similar between the comparison area, intervention area, and Northern Ireland.

The surveys were implemented on a face-to-face basis among a random sample of individuals selected from electoral wards making up the intervention and comparison areas. The objective was to conduct interviews with a total of 1200 residents at both pre-test and post-test, comprising 300 residents within each of the four areas: intervention rural; intervention urban; comparison rural; and comparison urban. The pre-test and post-test groups were cross-sectional independent samples.

SAMPLING DESIGN

Given the important contribution of the survey results to the DFfA intervention evaluation, it was imperative that the sampling methodology employed was representative of all individuals (aged 18 and over) within the areas. To ensure that all individuals aged 18 years or over had an equal chance of selection, the following procedures were applied:

- Within each of the four cells of the sample profile (intervention rural; intervention urban; comparison rural; and comparison urban), households were selected from each ward on a simple random sample basis. The number of households selected within each ward was directly proportional to the number of households in that ward as a proportion of the total number of households across all of the selected wards in the area or cell.
- To ensure that all individuals (aged 18 years or over) within selected households had an equal chance of being selected, interviewers were instructed to select for interview the person with the most recent birthday.

The Royal Mail Postal Address File (PAF) was used as the sampling frame for the surveys. The PAF is an established means of drawing household samples, and contains a listing of all domestic properties in Northern Ireland. The PAF also has an electoral ward field appended to each record, which was essential for this project. The PAF is updated twice annually by Royal Mail.

QUESTIONNAIRE DESIGN

A structured questionnaire was prepared by the IPH in consultation with SMR and ADHAZ. A copy of the questionnaire is included in Appendix 1 and 2. The questionnaire included questions related to the KEOs for the DFfA intervention, other influencing factors, and details of individuals and households. Its content included questions on:

- awareness of food-related activities
- food safety and hygiene
- food poverty issues
- demand for healthy food
- health behaviours (eating choices, physical activity, etc)
- local availability of affordable healthy foods
- social inclusion

SMR conducted a pilot survey on 20 respondents during the pre-test phase. The pilot served the following purposes:

- testing the content, structure, comprehensibility and acceptability of the questionnaire;
- allow interviewers to provide feedback on general reaction to the survey and any perceived omissions; and,
- provide an indication of the likely co-operation level with the survey.

Pilot interviews were conducted by SMR fieldworkers and the outcomes were communicated to the IPH and ADHAZ.

Interviewer briefings were held prior to the pre-test and post-test surveys. These briefings were carried out by SMR's Project Director and attended by representatives of the IPH and ADHAZ.

FIELDWORK

Advance letters were mailed by ADHAZ to each household listed in the sample giving notice of the survey. Interviewers made three visits to each address before a household was deemed non-contactable.

Fieldwork for the pre-test survey commenced on 24 October 2003 and was completed by 5 March 2004. Fieldwork in the programme/intervention area was completed before fieldwork in the comparison area commenced. For the post-test survey, the fieldwork commenced on 18 November 2006 and was completed by 30 March 2007.

Table 7 Household populations, required number of interviews and achieved interviews

ARMAGH & DUNGANNON HSS TRUST	**% Household Population**	**Pre-test Required Interviews**	**Pre-test Achieved Interviews**	**Post-test Required Interviews**	**Post-test Achieved Interviews**
INTERVENTION WARDS (RURAL)					
Caledon (Border)	4.9	59	69	59	59
Killylea (Border)	4.8	57	57	57	57
Derrynoose (Border)	5.8	69	60	69	69
Carrigatuke (Border)	4.6	55	47	55	55
Washing Bay (Non-Border)	5.0	60	60	60	60
SUBTOTAL		300	293	300	300
INTERVENTION WARDS (URBAN)					
Keady (Non-Border)	3.4	41	41	41	41
Ballysaggart (Non-Border)	3.5	42	42	42	42
Abbey Park (Non-Border)	3.0	36	33	36	36
Callan Bridge (Non-Border)	3.8	46	60	46	46
Coalisland North (Non-Border)	4.3	51	51	51	51
Coalisland South (Non-Border)	3.9	47	48	47	47
Coalisland West and Newmills	3.2	37	37	37	37

ARMAGH & DUNGANNON HSS TRUST	% Household Population	Pre-test Required Interviews	Pre-test Achieved Interviews	Post-test Required Interviews	Post-test Achieved Interviews
(Non-Border)					
SUBTOTAL		300	312	300	300
NEWRY / MOURNE HSS TRUST	**% Household Population**	**Pre-test Required Interviews**	**Pre-test Achieved Interviews**	**Post-test Required Interviews**	**Post-test Achieved Interviews**
COMPARISON WARDS (RURAL)					
Newtownhamilton (Non-Border)	4.3	52	53	53	53
Creggan (Border)	4.9	59	59	59	59
Silverbridge (Border)	5.2	62	63	62	62
Forkhill (Border)	5.8	69	69	69	69
Camlough (Non-Border)	4.8	57	57	57	57
SUBTOTAL		300	301	300	300
COMPARISON WARDS (URBAN)					
Ballybot (Non-Border)	4.1	49	49	49	49
Drumgullion (Non-Border)	4.5	54	54	54	54
St. Patrick's (Non-Border)	5.0	60	59	60	60
St Mary's (Non-Border)	3.6	43	43	43	43
Derrymore (Non-Border)	4.0	48	48	48	48
Fathom (Non-Border)	3.8	46	46	46	46
SUBTOTAL		300	299	300	300
TOTAL	100	1200	1205	1200	1200

RESPONSE RATE

Table 8 presents the electoral wards included in the survey with their proportionate household populations, required number of interviews (based on a sample of 1200 at both pre-test and post-test), and achieved number of interviews for the pre-test survey.

The survey aimed to generate an achieved sample of 1200 at pre-test and post-test Taking account of the level of non contactable individuals a wastage rate of 35% was considered likely. To account for this 50% more individuals were drawn from each electoral ward than the required number of interviews. In total 1816 and 1840 addresses were issued at pre-test and post-test respectively. This corresponds to a response rate of 66.4% at pre-test and 65.2% at post-test. Table 8 shows the response rate the reasons for non achievement of interviews at pre-test and post-test.

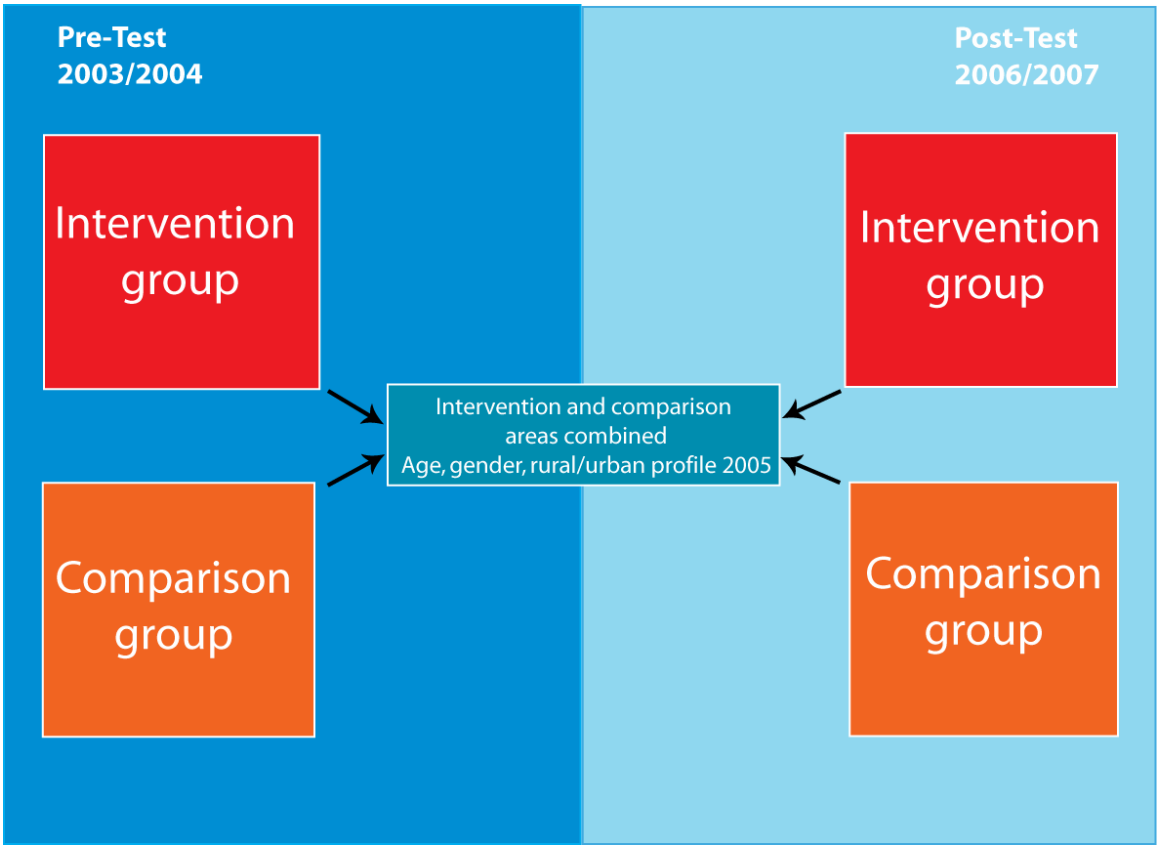
Table 8 Response rate and the reasons for non achievement of interviews at pre-test and post-test

	Pre-test		Post-test	
	N	%	N	%
Interviews	1205	66.4	1200	62.5
Refused	336	18.5	317	17.2
Sick/Elderly/Infirm	83	4.6	94	5.1
Unobtainable	192	10.6	229	12.4
Total Issued	1816	100.00	1840	100.0

WEIGHTING

The pre-test intervention group, pre-test comparison group, post-test intervention group, and post-test comparison group data were each weighted to match the age, gender, and rural/urban profile of the combined population of the comparison and intervention wards according to their mid 2005 Local Government District data. A combined age, gender, and rural/urban weight vector was computed and applied to the data prior to analysis in order to adjust for baseline differences in these factors and differences in any change in the comparison and intervention groups over time. The indicators values in Section 3 reflect this weighting.

Figure 3 DFfA weighting scheme.



STATISTICAL METHODS

The analysis assessed the effect of the DFfA intervention over the intervention period by comparing changes in indicators from pre-test to pos-test within the intervention group to changes from pre-test to pos-test within the comparison group. The difference between the change within the intervention group and the change within the comparison group is a measure of the impact of the DFfA intervention.

For each KEO of the DFfA intervention a series of indicators were identified (see Section 2.2) and the analysis plan addressed the following broad questions:

1. Were the changes from pre-test to post-test in the two groups different?
2. Was any difference explained by the selected confounding factors?
3. Did any intervention effect vary with key individual attributes or area attributes?

Thus, there were three phases to the analysis:

1. The preliminary analysis simply compared the changes that occurred in the intervention group to the changes that occurred in the comparison group. These preliminary effects are adjusted for age, gender and rural/urban area differences between the groups (achieved through post-hoc weighting described above) but are not adjusted for the possible confounding effects of other factors.

2. The adjusted analysis included adjustment for other possible confounding factors of the individual attributes of education and employment status, and attributes of the ward where people live such as border or non-border area, and deprivation score. The potential confounding effects of each of these attributes was assessed separately for each indicator. The indicator was adjusted for an attribute if it was deemed to be a confounder.

3. Finally, the sub-group analysis explored any intervention effect within target sub-groups defined by the individual attributes of age, gender, education, employment status, and the area attributes of urban or rural area, border or non-border area, and local deprivation score.

Analysis was conducted using SAS software (Version 8).

Changes within the comparison and intervention groups from pre-test to post-test were assessed using the chi-square statistic (preliminary analysis) and the Conchran-Mantel-Haenszel statistic (adjusted analysis) for binary indicators (i.e. indictors that have one of two possible values e.g. percentage of people who had heard/had not heard of food poverty). For numeric indicators, these “within group” differences were assessed using generalized linear modeling (preliminary and adjusted analyses).

The difference between the change within the intervention group and the change within the comparison group (the “impact” of the DFfA intervention) was assessed using generalized linear modeling for both the preliminary, adjusted, and sub-group analyses.

The values calculated from the survey responses are, as expected, not the true values – they are observed in the survey sample rather than the whole population. Because of

this, p-values are calculated which help to decide if a difference in observed percentages represents a real difference in the true values, or if it may simply be due to chance variation.

All p-values give the likelihood that, when there is no real difference in the true values, a difference larger than the one observed in the sample would have occurred by chance. A 'small' p-value suggests the observed difference is statistically significant (unlikely to be due to chance variation) and so represents a real difference in the true values. A 'large' p-value suggests that the observed difference is not statistically significant (may be due to chance variation) and that there is no difference in the true values. One of the more common problems with significance testing is the tendency for multiple comparisons to yield spurious significant differences even when there is no difference in the true values. However, to control the likelihood of spuriously significant results in this report, only results with p-values less than 0.01 were considered 'significant'. This means that the probability of obtaining the observed difference by chance is less than one in a hundred.

A p-value greater than or equal to 0.01 is considered to be 'not significant' (i.e. obtaining the observed, or a more extreme, difference when there is no real difference in the true values). It is represented in the results tables as 'NS'.

LIMITATIONS

COMMUNITY SURVEY DESIGN

The impact of the intervention was measured using a repeated independent sample survey. Statistical methods of standardisation and assessment of confounders were used to control for differences in important attributes at pre-test and post-test. An alternative method would be to survey the same cohort of people at pre-test and post-test as this would measure change over time independent of individual differences between respondents (both measured and unmeasured) at pre-test and post-test. Logistically, it is more difficult to implement this type of design due to loss of participants from pre-test to post-test follow-up.

The sampling method was a random sample of households from which a person aged 18 years or over was chosen at random. This means that a person living in a household with less people has a higher probability of being selected than a person living in household with more people. The survey is over-representative of people in smaller households.

The community survey only included people who were aged 18 years or over. Future studies should also address children.

A limitation of self-reported surveys as an assessment tool is that they can lead to information bias. The indicators derived form the questionnaires are based on claimed behaviours and beliefs rather than actual behaviours. The respondent's truthfulness may be compromised by a desire to be viewed in a positive manner.

Another problem for survey research designs is possible bias caused by people not willing to participate. If the people who participate have different characteristics than people who refuse to participate then the responses are not representative of the reference population. The post-hoc weighting strategy helps to reduce this possible bias due to differences in age, gender, and rural or urban area of residence.

COMMUNITY SURVEY COMPARISON AREA

The DFfA intervention was evaluated by comparing changes in indicators from pre-test to pos-test within the intervention group to changes from pre-test to pos-test within a comparison group. The use of a comparison group is intended to measure temporal changes that occur independently of the DFfA intervention. If local factors play a relatively important role (i.e. there geographical variation in the topic under investigation) and they vary greatly, the measure of "temporal changes" loses some meaning and its measurement in a single non-randomly selected comparison area become subject to unknown bias.

There are may also be some biased measurement of temporal changes in the chosen comparison area (e.g. Southern IfH Partnership introduced salad bars in schools and green vending machines in Newry/Mourne HSS Trust but not in other parts of Northern Ireland). Thus changes in the comparison area may not reflect the temporal changes that occurred in the intervention area

Powerful external factors may influence and wash out the differences between the interventions delivered in the intervention and comparison areas

Some of the "supporting programmes" (eg "fresh Fruit in Schools") and the "Cook It" classes were delivered across Northern Ireland

Changing policy context (eg "Fit Futures" [10] introduced during the intervention period).

COMMUNITY SURVEY QUESTIONNAIRE

There were also some deficiencies in the questionnaire. Specific issues relating to an indicator are discussed after the indicators results are presented.

There are some general concerns about recording of food consumption. Survey questions on dietary intake related to the frequency with which foods were consumed. However the selected frequencies were not detailed enough to reflect the FSA "Eatwell Plate" [7] recommendations. Moreover, no question on alcohol consumption was included.

Another issue in this type of dietary assessment is to measure the quantity of food that is consumed, in complement to the frequency of consumption. A possible method is to make reference to standard portion sizes. However people might not know what correspond to a portion and standard portion sizes are not available for all the food items. A photographic food atlas has been used to describe portion sizes elsewhere[11].

These biases in the estimation made the interpretation of dietary intake difficult, even in "fair reporters". One of the aims of the DFfA intervention is to measure a change of behaviour towards a healthier diet. This becomes difficult when the assessment tool is not completely appropriate. Other methods are available and were used in other dietary surveys, like the 24 hour recall, dietary history or food records (which are the gold standard). With exact protocols, they would provide a better measure of dietary intake though this would considerably increase respondents' burden and would recquire additional qualifications of the fieldworkers.

1.8 Reflections on methodology

Community surveys

DEFINING THE INTERVENTION

The core activities of the DFfA intervention were extended to include a range of "supporting programmes" and it was often challenging to know what part of the "intervention" was and what was not. Thus, it is difficult distinguish the effects of supporting programmes from the effects of the intervention on people's knowledge and behaviour. Defining the intervention can be challenging in community-based public health research.

REPRESENTATIVENESS OF INTERVENTION AREA

There may have been some selection bias in the choice of intervention area:

- The intervention wards were specifically selected because they were priority areas for Targeting Social Need[9]. These wards are more deprived that the Northern Ireland average so the evaluation cannot be generalised to all of Northern Ireland.

- Some of the intervention areas were recruited because they displayed a willingness to change their health behaviour and to participate in health-related activities/workshops. A positive change may not be directly attributable to the DFfA intervention.

MEASUREMENT OF KEOS

The KEOs of the DFfA intervention were not SMART (Specific, Measurable, Acceptable, Realistic, Time-limited). The objectives of this type of project usually have a structure such as: "The objective is to increase the consumption of fruit and vegetables by X% (based on evidence from literature review, other projects etc) in the population of Y by the year Z". Using this structure, it is simpler to develop relevant indicators.

The reach of the DFfA intervention

1.9 Awareness of local food-related activities/initiatives

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys, respondents were asked if they were aware of any food-related activities/initiatives that were running locally, et the time of interview. Their possible responses were

- Yes
- No

The percentage of respondents who responded “Yes” was used to indicate awareness of local food-related activities/initiatives.

AWARENESS OF LOCAL FOOD-RELATED ACTIVITIES PRIOR TO THE DFFA INTERVENTION

Prior to the DFfA intervention, fewer than one in six people in the study population were aware of local food-related activities.

The percentage of people who were aware of local food-related activities was significantly lower in the intervention group (10%) than it was in the comparison group (16%) ($p = 0.0006$).

DID THE DFFA INTERVENTION INCREASE AWARENESS?

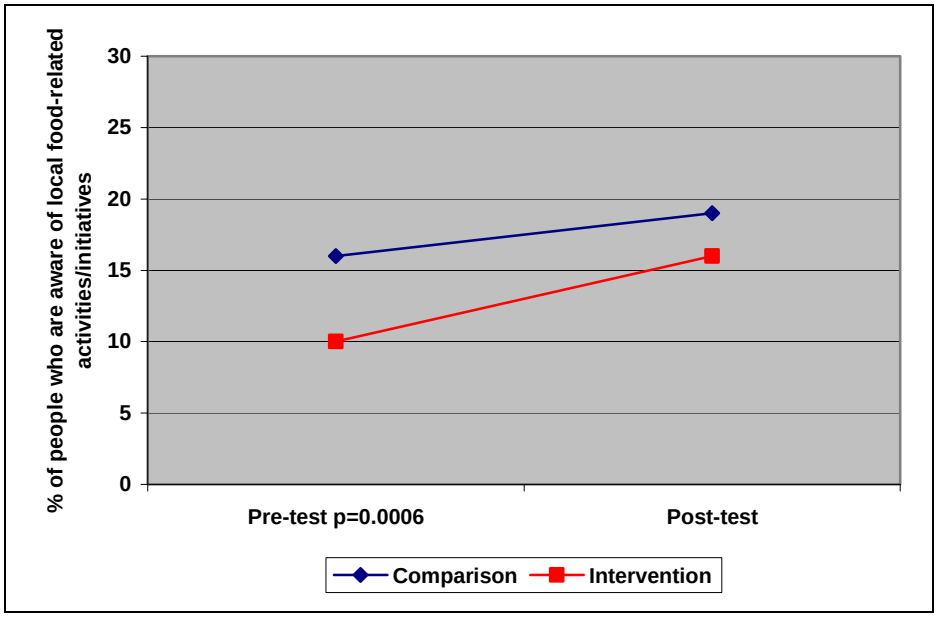


Figure 4 Changes in the awareness of local food-related activities; by survey group.

There was no significant difference between the changes in awareness of local food-related activities within the comparison group and within the intervention group. In the comparison group, the percentage of people aware of local food-related activities increased slightly from 16% to 19% though this increase was not statistically significant. In the intervention group, the percentage of people aware of local food-related activities increased from 10% to 16% during the intervention period. This increase was only marginally significant (p=0.0109) when adjusted for differences in education and employment status within the intervention group at pre-test and post-test.

DID GEOGRAPHY PLAY A ROLE?

Rural and urban areas

Overall, there was no significant difference in DFfA's impact, in rural and urban areas, on the awareness of local food-related activities.

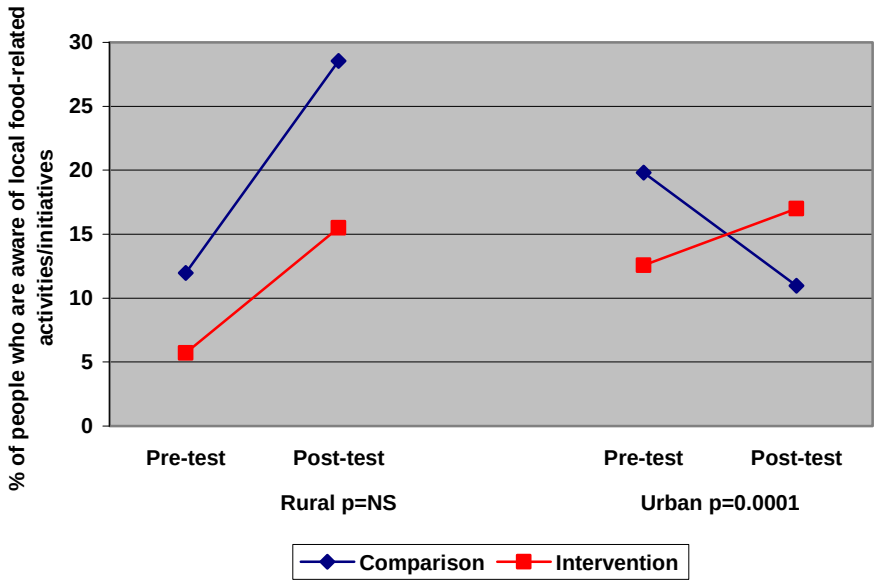


Figure 5 Changes in the awareness of local food-related activities in rural and urban areas; by survey group.

In rural areas there was no significant difference between the changes in awareness of local food-related activities observed in the intervention and comparison groups – both increased in a similar manner (see Figure 5).

However, in urban areas there was a significant difference between the changes in awareness observed in intervention and comparison areas (p=0.0001). In the comparison group, awareness of local food-related activities decreased (from 20% to 11%); in the intervention group, awareness increased from 13% to 17%.

Border and non-border areas

DFfA's impact on the awareness of local food-related activities in border areas was statistically different than its impact in non-border areas (p=0.0016).

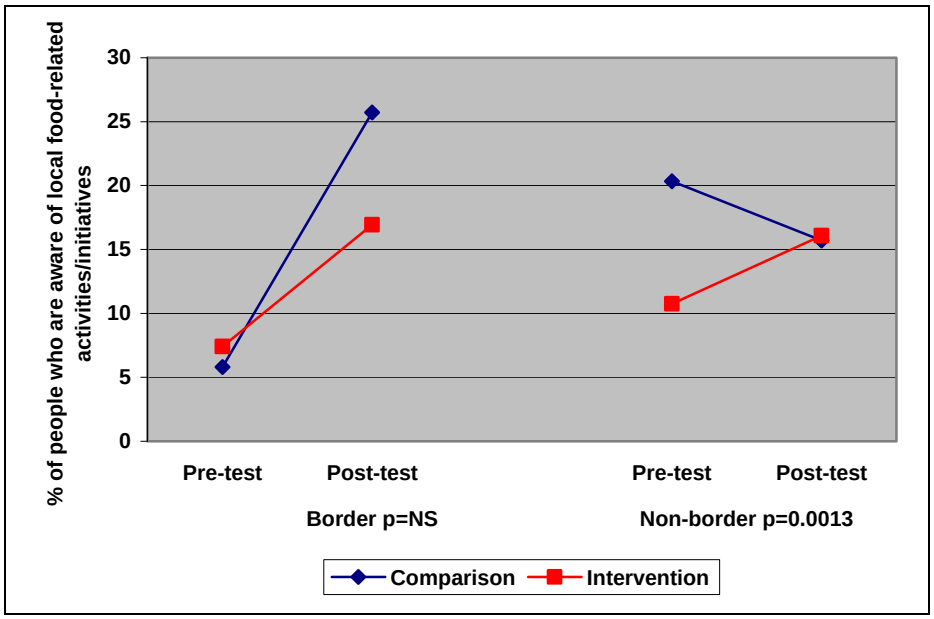


Figure 6 Changes in the awareness of local food-related activities in border and non-border areas; by survey group.

In border areas there was no significant difference in the changes in awareness observed in the intervention and comparison groups – both increased quite substantially in a similar manner (see Figure 6).

In non-border areas, however, there was a significant difference between the changes in the awareness observed in intervention and comparison groups (p=0.0013). In the comparison group, awareness decreased; in the intervention group it increased.

Deprived and non-deprived areas

DFfA's impact on the awareness of local food-related activities varied significantly with the socio-economic circumstances of the respondent's place of residence, even after adjustment for their individual education and employment status ($p < 0.0001$).

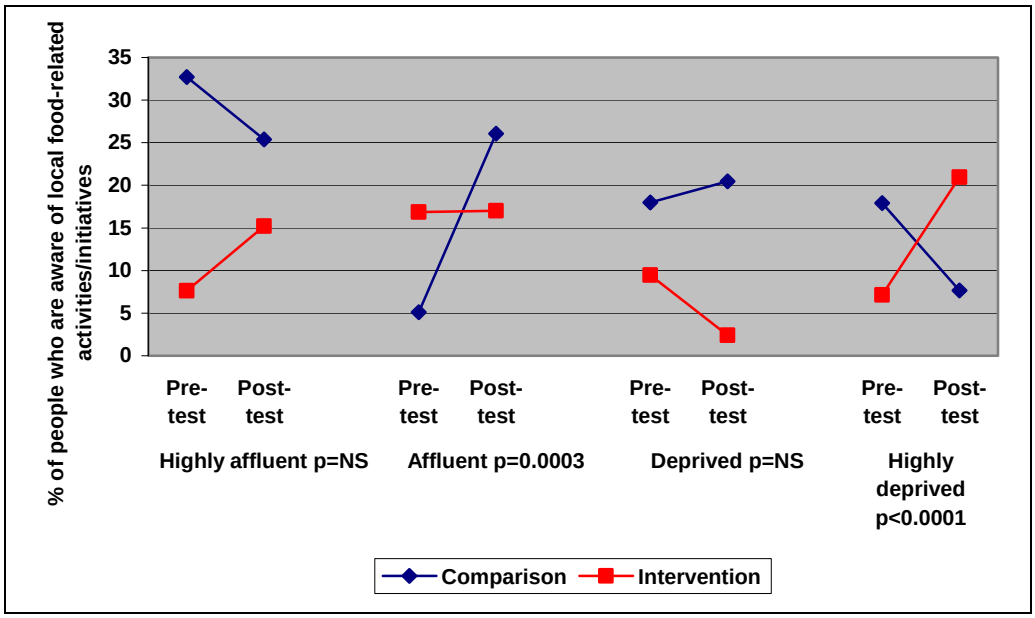


Figure 7 Changes in the awareness of local food-related activities in deprived and non-deprived areas; by survey group.

In both "highly affluent" and "highly deprived" areas, awareness increased in the intervention group but decreased in the comparison group (see Figure 7). This difference was statistically significant in the "highly deprived" areas ($p < 0.0001$). The reverse was observed in "deprived" areas where awareness decreased in the intervention group while increasing in the comparison group though difference was not statistically significant.

In "affluent" areas, awareness increased substantially in the comparison group while remaining relatively stable in the intervention group. This difference was statistically significant ($p = 0.0003$).

DID INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

Employment status

DFfA's impact on the awareness of local food-related activities varied significantly with employment status (p = 0.0018).

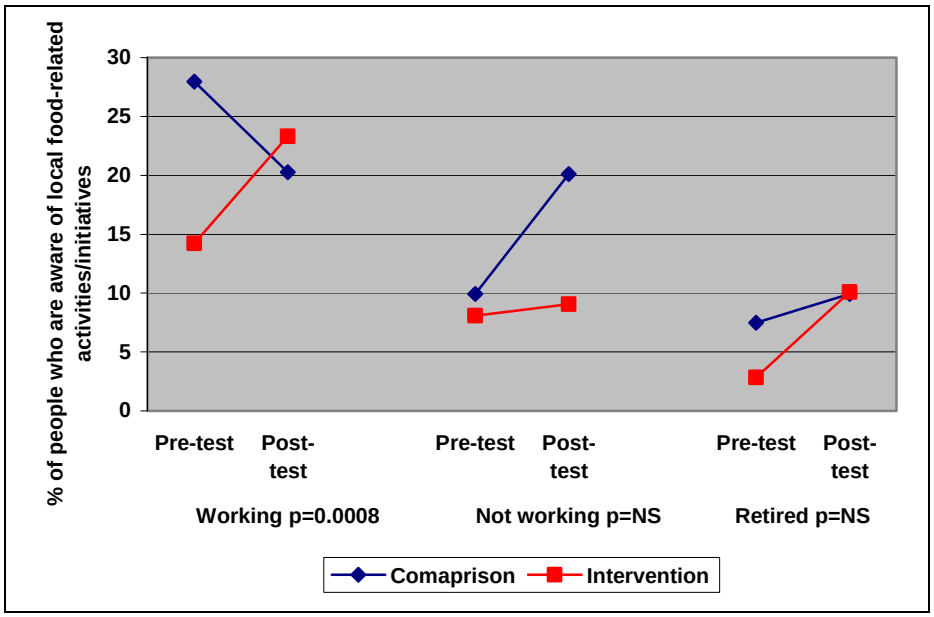


Figure 8 Changes in the awareness of local food-related activities amongst different employment groups; by survey group.

Amongst respondents who were working, awareness increased in the intervention group but decreased in the comparison group (see Figure 8). This difference was statistically significant (p = 0.0008).

There was no evidence that the DFfA intervention had a (statistically significant) impact amongst those who were not working or amongst those who were retired – in each employment status group, awareness increased in both the intervention and comparison group.

Other individual characteristics

There was no evidence that the individual characteristics of gender, age and education affected the impact of the DFfA intervention.

SUMMARY BOX

Prior to the DFfA intervention, fewer than one in six people were aware of any local food-related activities. Awareness of such activities was significantly lower in the intervention group (10%) than in the comparison group (16%).

The DFfA intervention had no significant impact on the overall awareness of local food-related activities. Awareness of such activities increased in both the comparison and intervention groups.

However, some geographical attributes played a role in the impact of the DFfA intervention on the awareness of local food-related activities:

- The impact of the intervention was statistically different in border and non-border areas. The intervention was associated with a positive impact in non-border areas where an increase in the intervention group contrasted with a decrease in the comparison group. The intervention did not appear to have any clear impact in border areas.

- The impact of the intervention varied significantly with the level of deprivation in an area. The intervention was associated with a positive impact in “highly deprived” areas. In “affluent areas”, however, it was associated with a negative impact.

The impact of the intervention varied significantly with an individual’s level of employment. The intervention was associated with a positive impact among people who were working but had no clear impact among people who were not working or retired.

Local regeneration

1.10 Local food production and food distribution

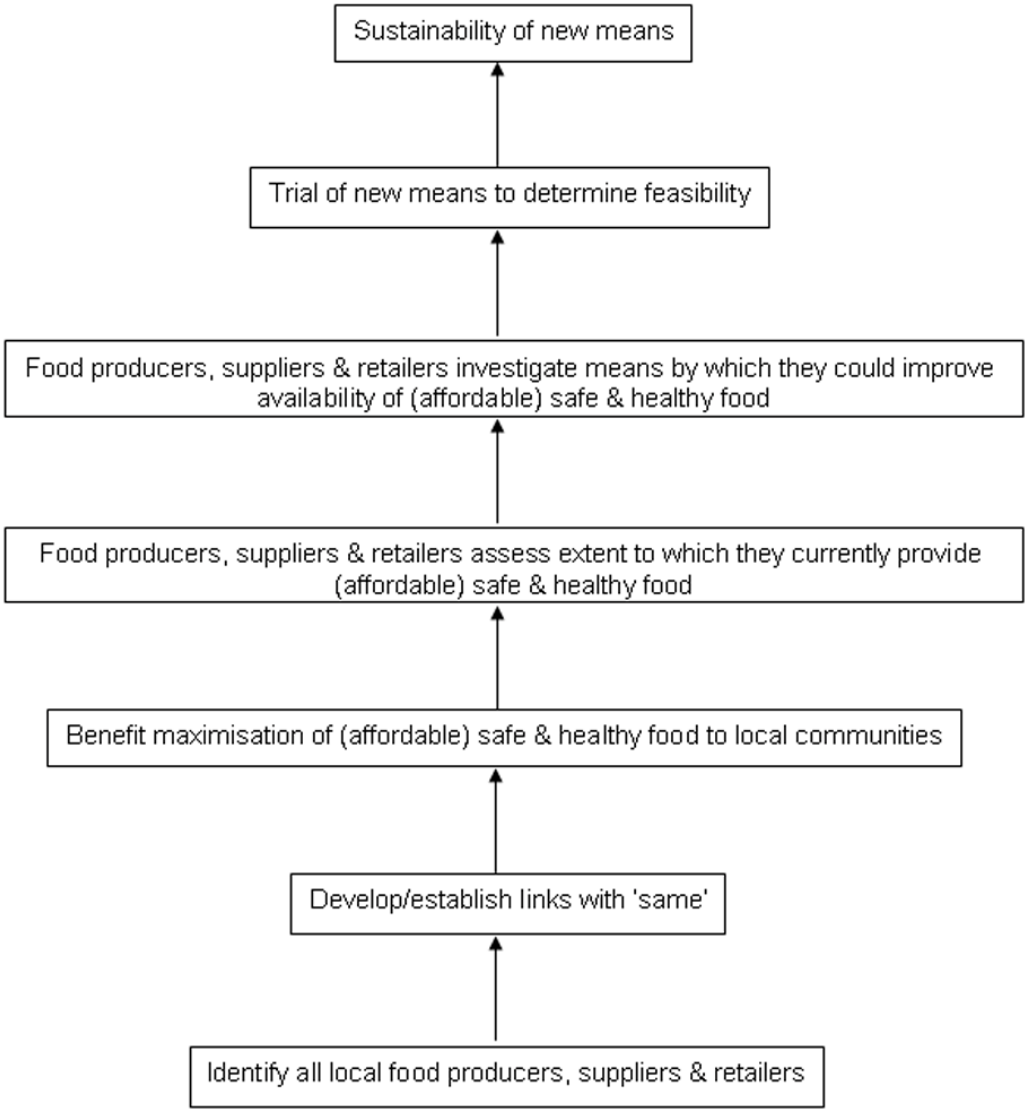


Figure 9 Outcomes hierarchy for the development of local food production and distribution.

DFfA recognizes that efforts to tackle food poverty need to be part of wider efforts to address local regeneration. Local production and distribution of food is an important component of local regeneration. Figure X shows a possible outcomes hierarchy for the development of local food production and distribution. While it is difficult to effect these outcomes solely through an intervention such as DFfA, and no specific measures were made of changes in local food production and distribution, the ADHAZ Partnership attracted additional funding of £225,000 for other supporting programmes which focused on the local production and distribution of food. These supporting programes consisted of community and school gardens and food co-operatives. Details of these programmes can be found in the DFfA supporting document *Lessons from the Decent Food for All (DFfA) intervention. Supporting Document Part II: Description of the Decent Food for All (DFfA) intervention*.

1.11 Physical and financial accessibility

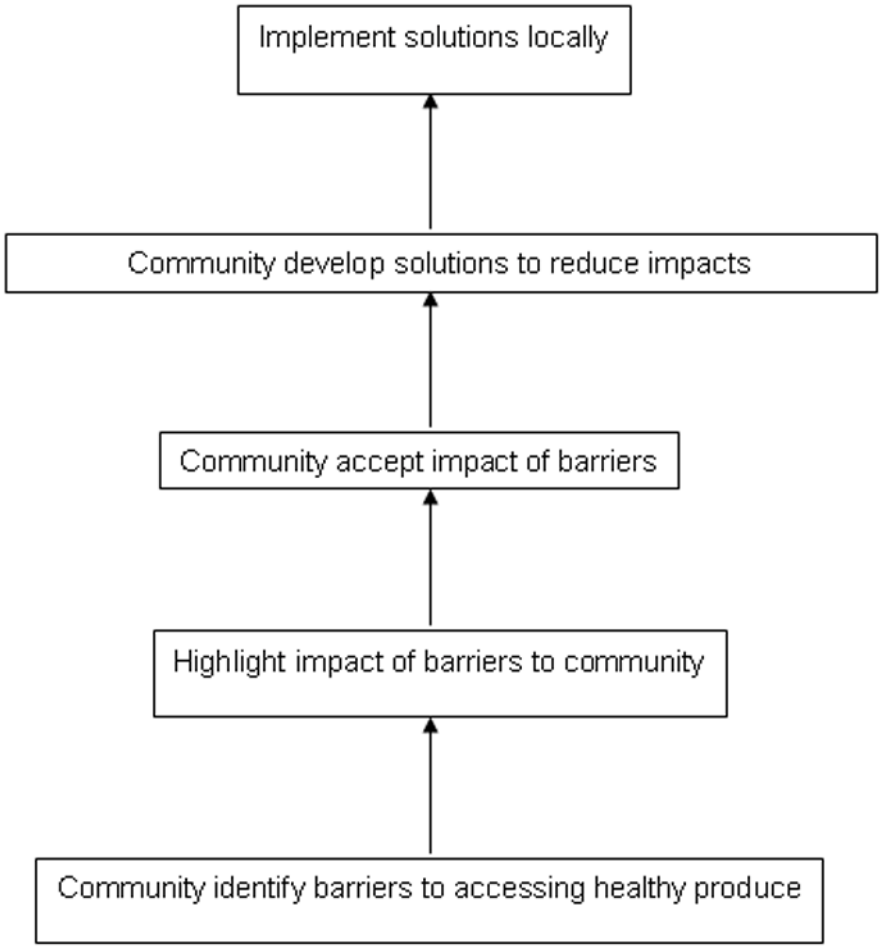


Figure 10 Outcomes Hierarchy for reducing barriers to accessing healthy food

Distance to main food shop

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys, respondents were asked what was the distance, in miles, they travelled to the shop where they did the main food shopping for the household.

DISTANCE TRAVELLED TO MAIN FOOD SHOP PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that the average distance travelled to the main food shop in the comparison and intervention groups was between four and five miles.

In the pre-test community survey, the number of miles travelled to the main food shop was significantly higher in the comparison group (4.8) than it was in the intervention group (4.0) ($p<0.0001$).

DID THE DFFA INTERVENTION REDUCE THE DISTANCE TRAVELLED TO MAIN FOOD SHOP?

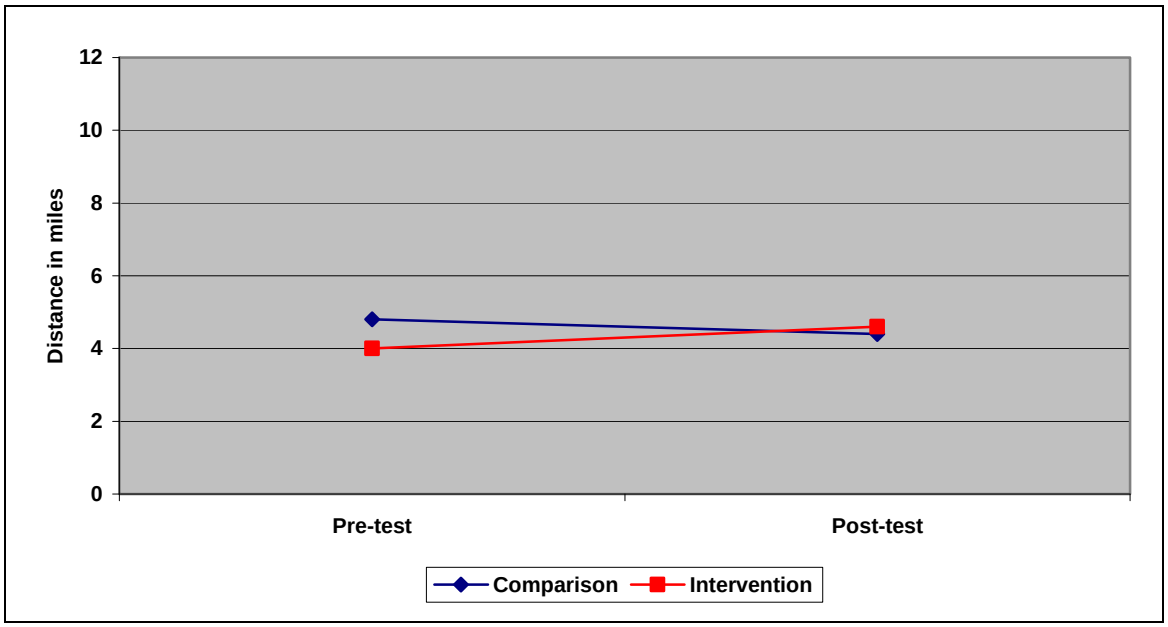


Figure 11 Changes in the distance travelled to main food shop; by survey group.

There was a significant difference between the changes in the distance travelled to main food shop within the comparison group and within the intervention group ($p=0.0016$).
In the comparison group, the average distance travelled to main shop did not change significantly during the intervention period (decreasing from 4.8 to 4.4). In the intervention group, the distance increased from 4.0 to 4.6 miles. However this change was not statistically significant.

DID GEOGRAPHY PLAY A ROLE?

Border and non-border areas

The impact of the DFfA intervention on the average distance travelled to main shop in border areas was not statistically different than its impact in non-border areas (see Figure 12).

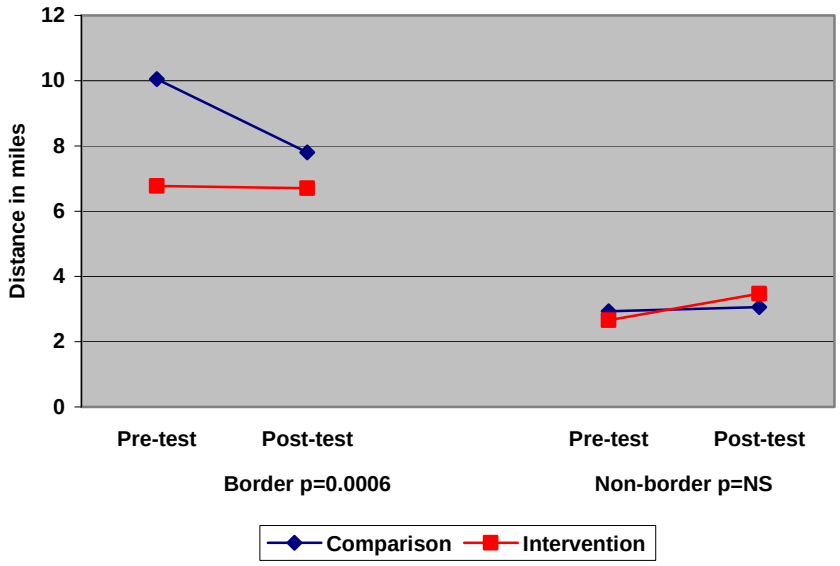


Figure 12 Changes in the distance travelled to shops in border and non border areas; by survey group.

In border areas, there was a significant difference between the changes in the average distance travelled to main food shop within the comparison group and within the intervention group (p=0.0006) – it decreased in the comparison group and remained relatively stable in the intervention group.

In non-border areas there was no statistically significant difference between the two survey groups.

Rural and urban areas

The impact of the DFfA intervention on the average distance travelled to main shop in rural areas was not statistically different than its impact in urban areas (see Figure X).

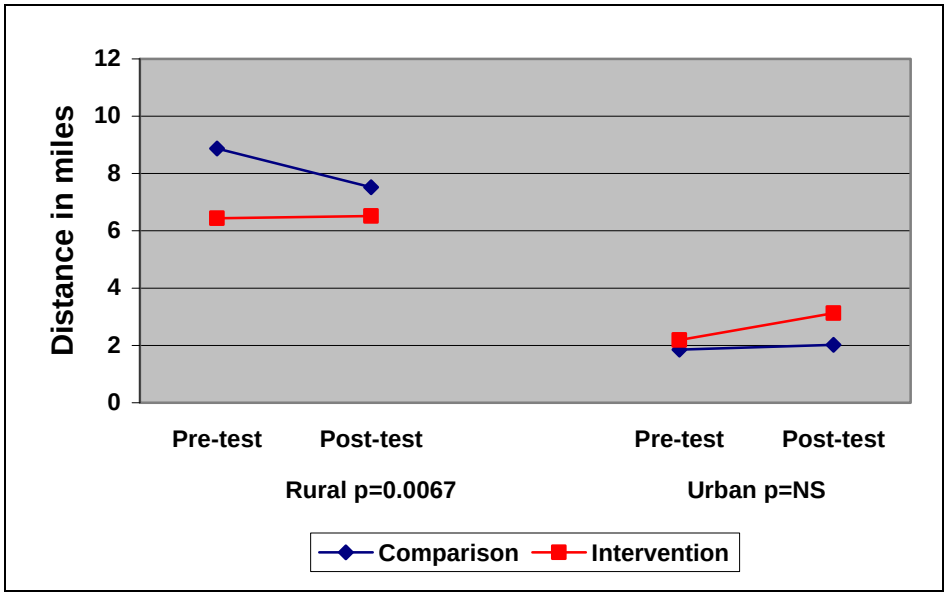


Figure 13 Changes in the distance travelled to shops in rural and urban areas; by survey group.

In rural areas, distance travelled to main shop remained relatively stable in the intervention group while it decreased in the comparison group (p=0.0067). In urban areas, disatance travelled to main shop increased in the intervention group but remained relatively stable in the comparison group though this difference between the changes in distance in urban areas between the groups was not statistically significant.

Deprived and non-deprived areas

Overall, the impact of the DFfA intervention on the average distance travelled to the main shop in deprived areas was not statistically different than its impact in non-deprived areas (see Figure 14).

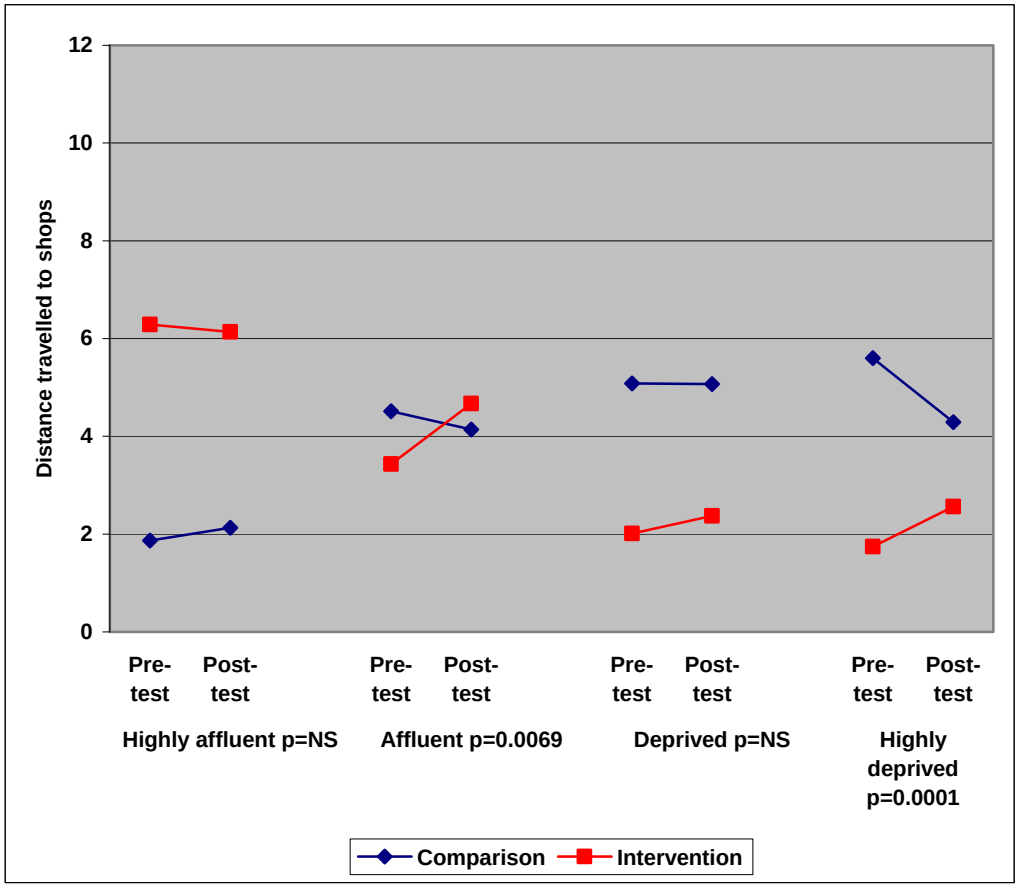


Figure 14 Changes in the distance travelled to shops in deprived and non-deprived areas; by survey group.

In general, the distance travelled to main food shop increased in the comparison group with increasing level of deprivation. In the intervention group however, the distance deceased with increasing level of deprivation.

The impact of DFfA was similar in the comparison and intervention groups in the "highly affluent" and "deprived" areas

.

In the "affluent" areas, the distance travelled to main food shop decreased in the comparison group and increased in the intervention group, and this difference was significant (p=0.0069).

In the "highly-deprived" areas, the distance travelled to shops substantially decreased in the comparison group and increased in the intervention group (statistical significant difference, p=0.0001).

DID INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

Gender

The impact of the DFfA intervention on the distance travelled to main food shop amongst males was not statistically different than its impact amongst females.

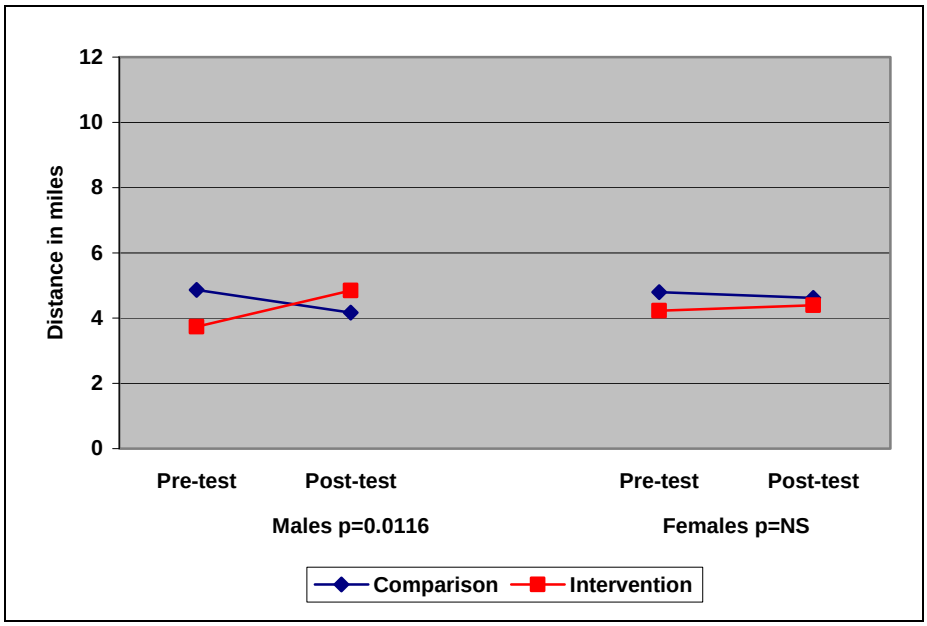


Figure 15 The impact on the distance travelled to main food shop by gender

Amongst males, the distance decreased in the comparison group while it increased slightly in the intervention group though this difference between the changes within the male groups was only marginally significant (p=0.0116). Amongst females, there was no significant difference between the changes in the distance travelled to the main food shop within the comparison and within the intervention groups - the distance remained relatively stable in both groups during the intervention period.

Other Individual Characteristics

There was no evidence that the individual characteristics of age, employment status or education, affected the impact of the DFfA intervention.

SUMMARY BOX

Prior to the DFfA intervention, the average distance to main food shop was between 4 and 5 miles. On average the comparison group had to travel a significantly greater distance than the intervention group (0.8 miles).

Overall, the impact of the DFfA intervention on the distance traveled to main shop was significantly negative. The distance decreased in the comparison group and increased in the intervention group. At the end of the intervention period, it was greater in the intervention group than in the comparison group, so that the intervention group had lost its apparent pre-test "advantage".

LIMITATIONS

The accuracy of responses to this question depended on the person's perception of distance and this may be prone to error. An important additional consideration in physical access to food is the time taken to travel the distance (e.g. a longer distance in a rural area could actually take less time to travel than a shorter distance in an urban area) but no information on travel time was requested.

DEFINITION OF THE INDICATOR

In both the pre-test and post-test food basket studies, the availability of a range of 53 food products was assessed in a number of shops (156 at pre-test and 143 at post-test) across the intervention area. The list of the food products composing the food basket is described in Appendix 3.
To indicate the availability of food, the average number of products available was used.

AVAILABILITY OF THE FOOD BASKET ITEMS PRIOR TO THE DFFA INTERVENTION

Before the intervention, the average number of products available in the 156 shops investigated was 30.8 out of the 53 items of the food basket. Thus only 58% of a typical food basket was accessible in the different types of shops across the target areas.

Food groups

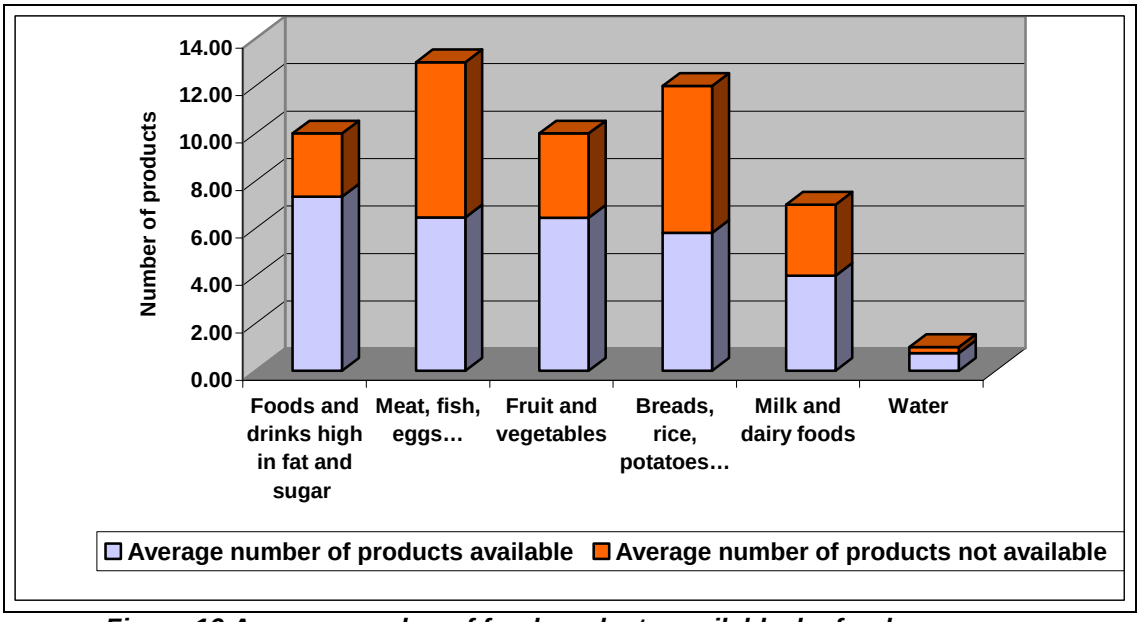


Figure 16 Average number of food products available, by food groups.

A large proportion of foods and drinks high in fat and sugar was available in the shops at pre-test. The availability of “Meat, fish, eggs, beans and other non-dairy sources of protein” and “Bread, rice, potatoe food basket present in the shops. For “Milk and milk products” and “Fruit and vegetables”, two-third of the products were available.

Type of shop

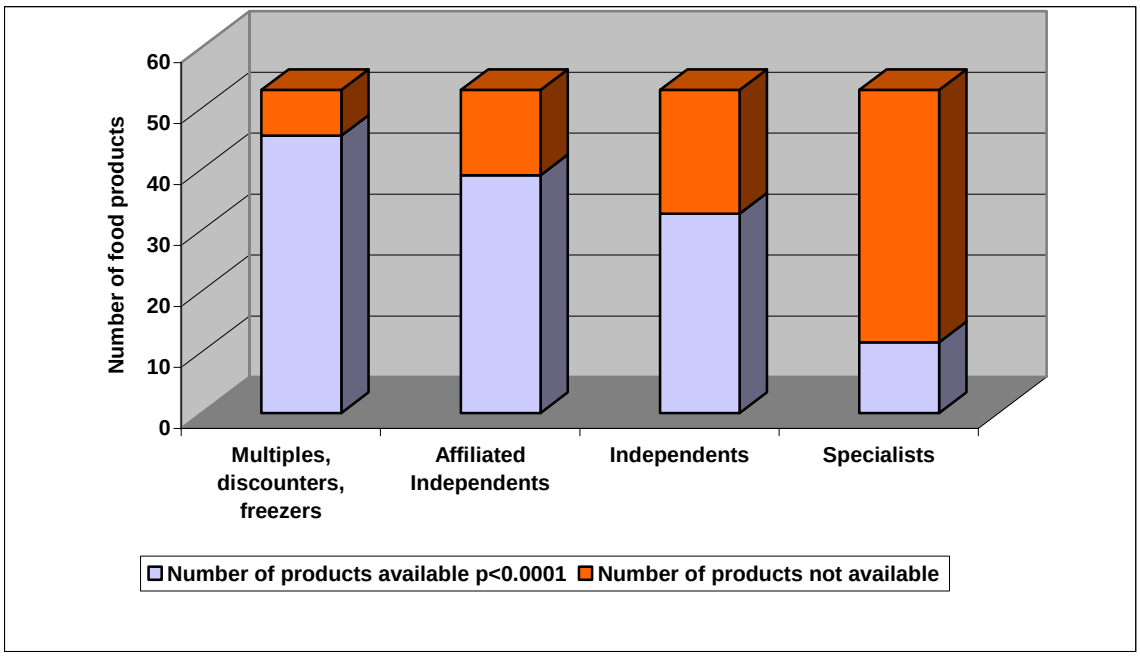


Figure 17 Average number of food products available, by type of shop.

There was a significant association (p<0.0001) between the type of shop and the availability of food products at pre-test. The average number of products available decreased with the degree of specialisation of food stores. On average, 46 food products out of 53 were available in “Multiples, discounters and freezers”, while only 12 products were present in specialists shops.

DID THE AVAILABILITY OF THE FOOD BASKET PRODUCTS CHANGE DURING THE DFFA INTERVENTION PERIOD?

During the intervention the average number of food items available significantly increased from 30.8 to 36.1 (58% to 68%).

Food groups

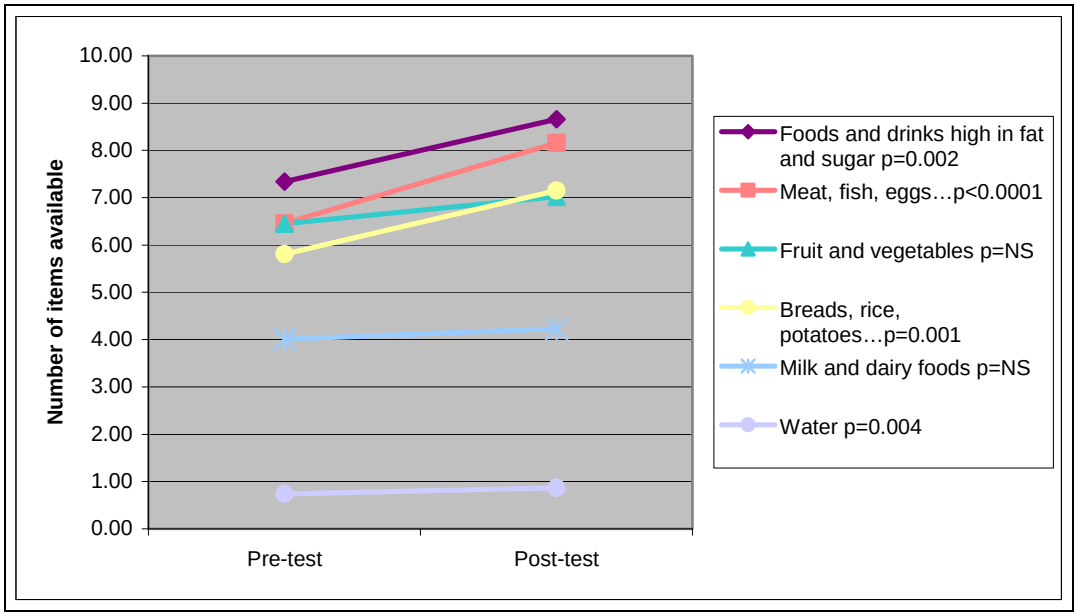


Figure 18 Changes in the average number of items available in each food group over the intervention period.

During the intervention period, the average number of "Milk and dairy products" and "Fruit and vegetables" did not change significantly. However, the availability of "foods and drinks high in fat and/or sugar", "meat, fish, eggs and other non-dairy protein sources", and "bread, rice, potatoes, pasta and other starchy foods" increased significantly over time (p-values= 0.002, <0.0001 and 0.001 respectively).

When looking at the overall percentage of shops that stock an item, it's interesting noting that the most commonly available products are often the less healthy options, both in 2003 and 2007, and that the least available products are mainly healthy options (see table 9 below).

Table 9 Percentage of shops that stored an item

2003		**2007**	
The most commonly available products		**The most commonly available products**	
Product	***% of shops***	***Product***	***% of shops***
Jam	81	Jam	90
Sausages	80	Sausages	85
Coke	79	Crisps	85
Milk (full and semi-skimmed)	79	Bacon (leanback)	85
White bread	79	Milk (full and semi-skimmed)	85
Baked beans	79	Potatoes	85
		Coke	84

The least available products		**The least available products**	
Product	***% of shops***	***Product***	***% of shops***
Wholemeal pasta	4	Wholemeal pasta	11
Frozen cod (battered)	13	Beef (mince)	13
Cottage cheese	15	Low-fat cheddar cheese	19
Beef (mince)	19	Mandarin oranges	20
Brown rice	20	Cottage cheese	20
Lean steak (mince)	32	Frozen cod (battered)	24
Low-fat cheddar cheese	35		

DID THE TYPE OF SHOP PLAY A ROLE?

There was no evidence that the change in the average number of products available in a shop varied with the type of shop. The same was observed in each food group of the "Eatwell Plate".

DID GEOGRAPHY PLAY A ROLE?

Border and non-border areas

The change in the average number of products available in a shop over the intervention period in the border areas was not statistically different than the change in the non-border areas.

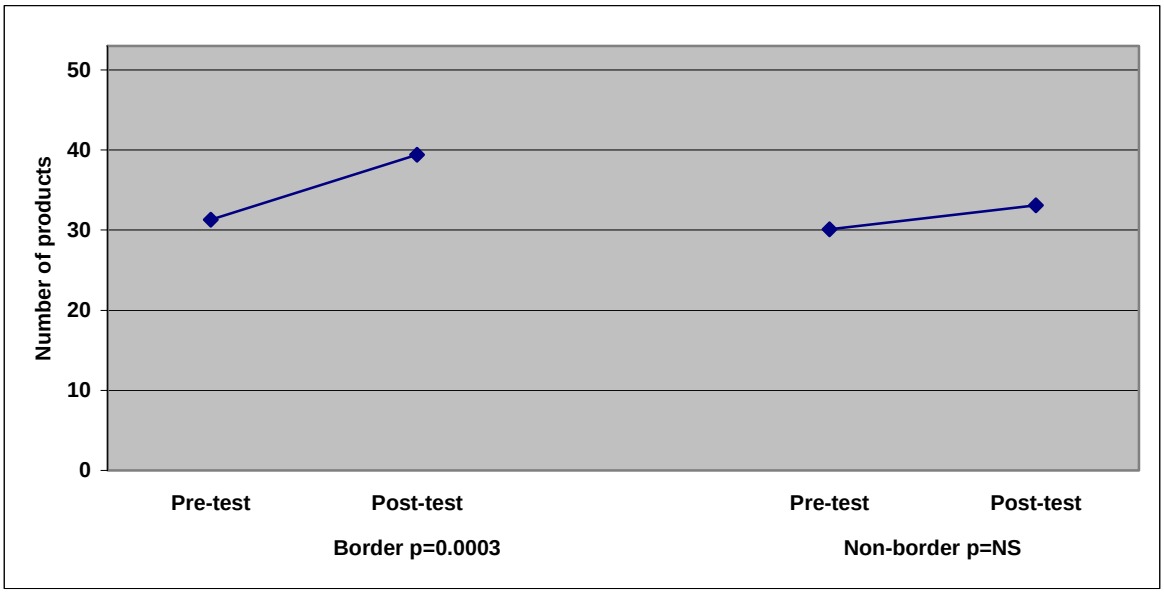


Figure 19 Changes in the average number of food products available, in border and non-border areas

In both border and non-border areas, the average number of products increased during the intervention period. This change was statistically significant in border areas only (p=0.0003) as the number of products available increased from 31 to 39.

Rural and urban areas

There was no evidence that the change in the average number of products available in a shop varied between rural and urban areas.

Deprived and non-deprived areas

The change in the average number of products available in a shop over the intervention period did not vary significantly with the socio-economic circumstance of the areas (p=0.3061).

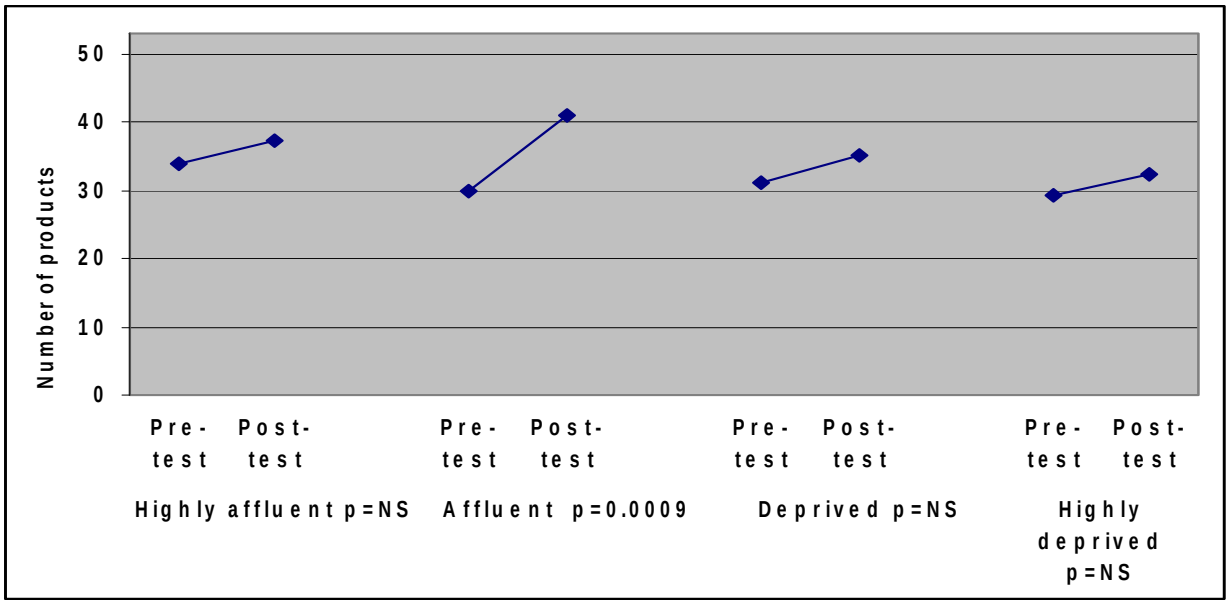


Figure 20 Changes in the average number of products available in deprived and non deprived areas

The average number of products increased during the intervention period, independently of the socio-economic circumstances of the areas. However, this change was statistically significant in “Affluent” areas only (p=0.0009) as the number of products available increased from 30 to 41.

SUMMARY BOX

At pre-test, 31 items out of 53 typical food products were available in the target shops. A large proportion of foods and drinks high in fat and sugar was available, while only half of the products listed in the food basket for meat and alternative products and starchy food products were present in the shops.
There was a significant association between the type of shop and the availability of food products at pre-test. The "Multiples, discounters and freezers" had the highest number of products available (46 out of 53). The number dropped in affiliated independents, independents and specialist shops to 39, 33 and 12 products respectively.

At the end of the intervention period, 70% (36 products) of the food basket items were available, against 60% at pre-test.
During the intervention period, the average number of "Milk and dairy products" and "Fruit and vegetables" did not change. The availability increased significantly for three food groups: meat and alternatives, starchy foods and foods and drinks high in fat and/or sugar.

There was no evidence that the change in the average number of products available in a shop varied with the type of shop.

In both border and non-border areas, the average number of products increased during the intervention period. This change was statistically significant in border areas only as the number of products available increased from 31 to 39.

There was no evidence that the change in the average number of products available in a shop varied between rural and urban areas.

The average number of products increased during the intervention period, independently of the socio-economic circumstances of the areas. However, this change was statistically significant in "Affluent" areas only as the number of products available increased from 30 to 41.

Interestingly, the most commonly available products were the less healthy options (sausages, jam, coke, crisps…), whereas the least available products were mostly healthy options such as wholemeal or low-fat products, independently of the time period or the type of shop.

Price of food

DEFINITION OF THE INDICATOR

In both the pre-test and post-test food basket studies, the price of a range of food products, constituting a food basket of 53 items, has been assessed in a number of shops (153 at pre-test and 141 at post-test) across the intervention area.
The list of the food products composing the food basket is described in Appendix 3.
The Indicator is the average price of this 53 food items basket, adjusted for inflation over the intervention period.

PRICE OF A FOOD BASKET PRIOR TO THE DFFA INTERVENTION

Before the intervention, the average price of a 53 items basket was £74.85.

Food groups

The average price of the products in different food groups were:

- Meat, fish, eggs, beans and other non-dairy sources of protein: **£24.47**.
- Bread, rice, potatoes, pasta and other starchy foods: **£15.28**.
- Milk and dairy foods: **£14.39**.
- Foods and drinks high in fat and/or sugar: **£13.01**.
- Fruit and vegetables: **£6.74**.
- Water: **£0.95**.

Type of shop

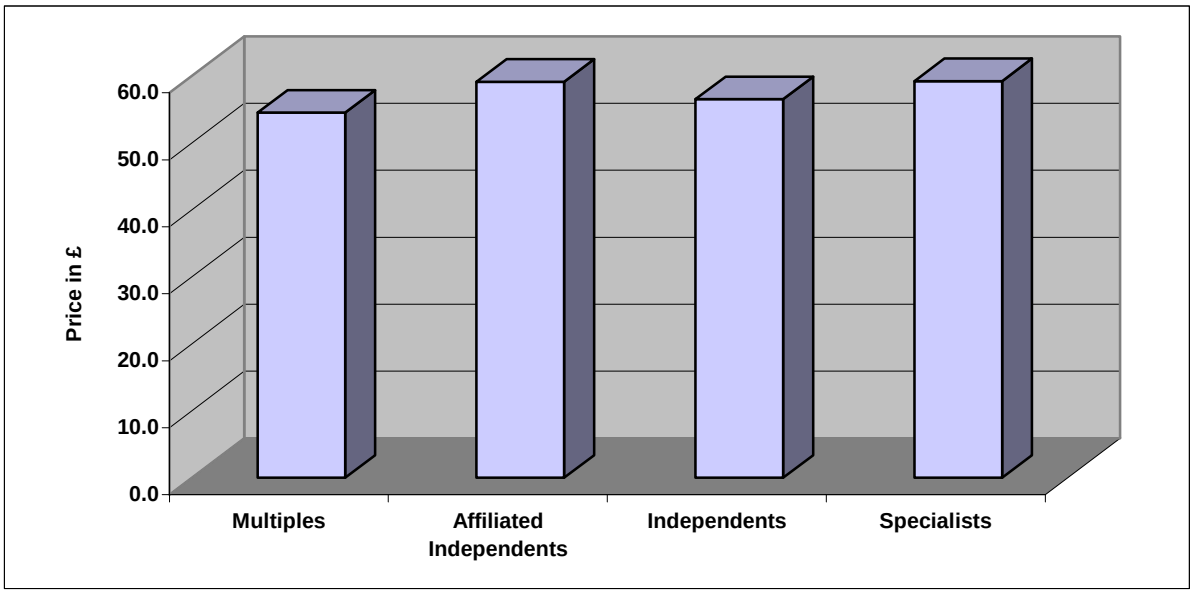


Figure 21 Average price of a 43 food items basket, by type of shop

Note: to be included in the food basket, a product had to be available in at least one shop of each shop category.

For this reason the following 10 products were excluded: shredded wheat, cottage cheese, olive oil, bacon (lean back and rashers), frozen cod (breadcrumbs and battered), tuna, brown rice and wholemeal pasta.

There was a significant association (p=0.0016) between the type of shop and the price of the food basket at pre-test. The food basket was cheaper in “Multiples, discounters and freezers” (£54.5) and “Independents” (£56.5). Higher prices were observed in “Affiliated independents” and “Specialists” shops (£59).

DID THE PRICE CHANGE DURING THE DFFA INTERVENTION?

During the intervention period the average price of a 53 items food basket significantly increased from £74.85 to £79.15.

Food groups

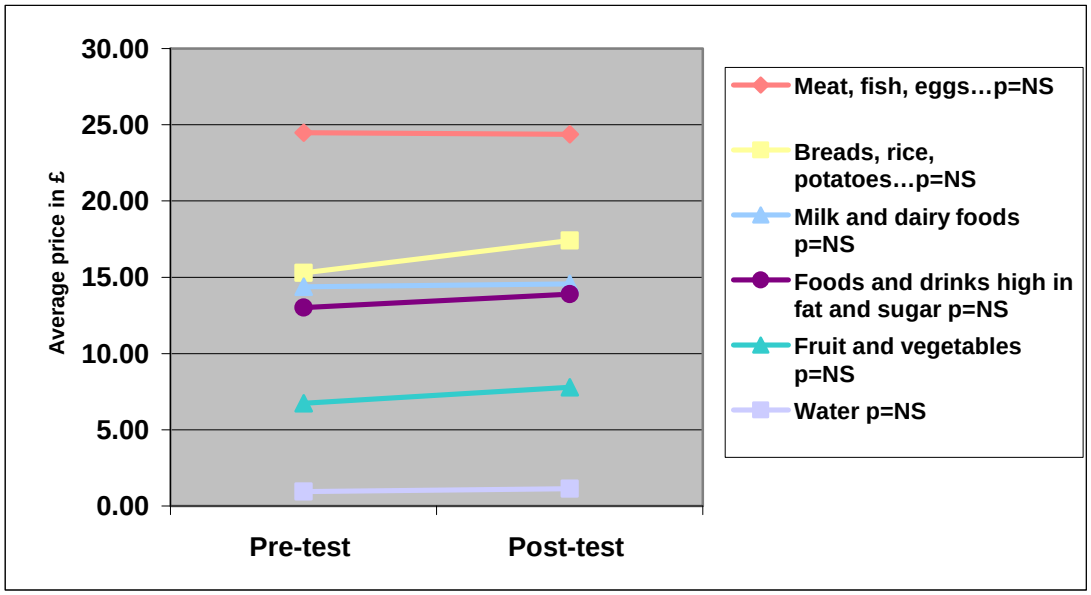


Figure 22 Changes in the total price of the products in each food group over the intervention period.

During the intervention period, the price of meat, fish … and dairy products did not change, whereas the price of cereal-based products and potatoes; foods high in fat and/or sugar, fruit and vegetables and water increased slightly. However, this change was not statistically significant.

DID THE TYPE OF SHOP PLAY A ROLE?

The change in the average price of a 43 items food basket over the intervention period varied significantly with the type of shop (p<0.0001).

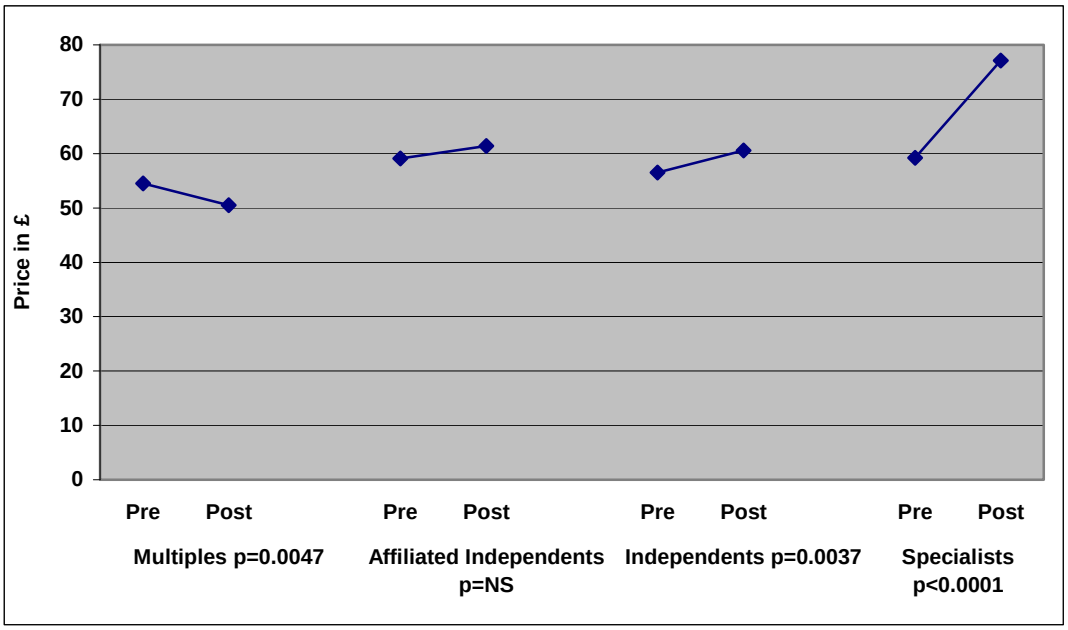


Figure 23 Changes in the average price of a 43 food items basket over the intervention period by type of retail outlet, in the intervention group.

Note: to be included in the food basket, a product had to be available in at least one shop of each shop category. For this reason the following 10 products were excluded: shredded wheat, cottage cheese, olive oil, bacon (lean back and rashers), frozen cod (breadcrumbs and battered), tuna, brown rice and wholemeal pasta.

While the price decreased significantly from 54.5 to 50.5 pounds in the 'Multiple' stores (p=0.0047), it increased in all other types of shops during the intervention period. The change in price was statistically significant in specialist shops (p<0.0001), as the price increased substantially from 59.2 to 77.1 pounds.

DID GEOGRAPHY PLAY A ROLE?

Border and non-border areas

The change in the average price of the food basket over the intervention period in the border areas was not statistically different than the change in the non-border areas.
In both border and non-border areas, the price of the food basket increased significantly during the intervention period (p<0.0001 in both cases).

Rural and urban areas

The change in the average price of the food basket over the intervention period in the rural areas was not statistically different than the change in the urban areas.
In both rural and urban areas, the price of the food basket increased significantly during the intervention period (p<0.0001 in both cases).

Deprived and non-deprived areas

The change in the average price of the food basket over the intervention period did not vary significantly with the socio-economic circumstance of the areas (p=0.6811).

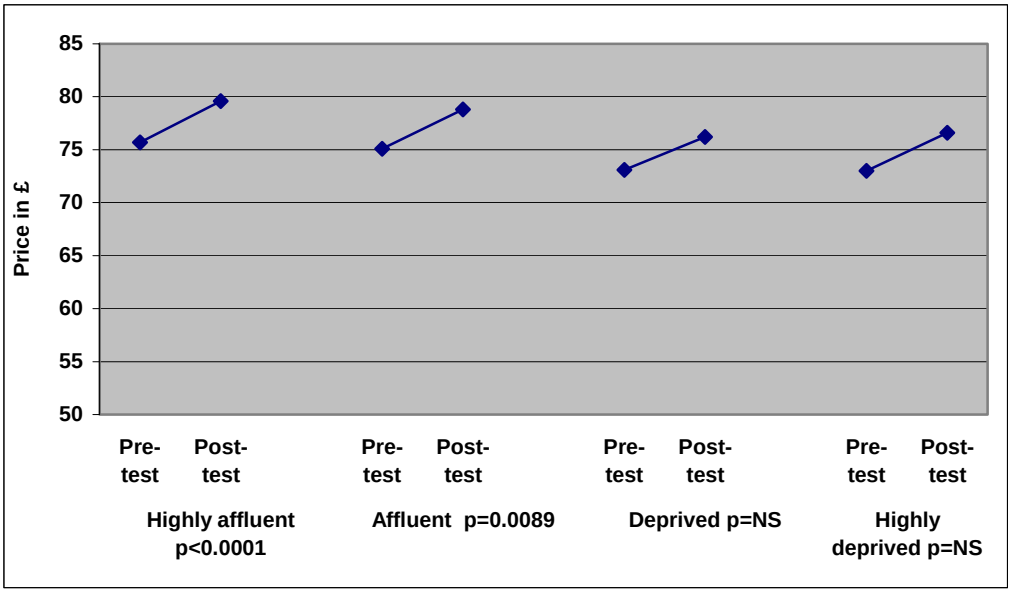


Figure 24 Changes in the average price of a 52 food items basket over the intervention period in deprived and non-deprived areas, in the intervention group

During the intervention period, the price of the food basket increased, independently of the socio-economic circumstances of the areas. However, the change in the price was statistically significant in "highly affluent" and "affluent" areas only (p<0.0001 and p=0.0089 respectively).

SUMMARY BOX

At pre-test, the average price of a 53 items basket was £74.85.

There was a significant association between the type of shop and the price of the food basket. The lower price was found in “Multiples, discounters and freezers”.

During the intervention period the average price of a 53 items food basket significantly increased from £74.85 to £79.15.
The price of meat and alternatives and dairy products did not change, whereas the price of cereal-based products and potatoes; foods high in fat and/or sugar, fruit and vegetables and water increased slightly (non-significant difference).

While the price decreased significantly from 54.5 to 50.5 pounds in the ‘Multiple’ stores, it increased in all other types of shops during the intervention period, with a substantial raise in specialist shops (£59 to £77).

In border and non-border areas, as well as in rural and urban areas, the price of the food basket increased similarly and significantly during the intervention period.

Finally, the price of the food basket increased independently of the socio-economic circumstances of the areas. However, the change in the price was statistically significant in “highly affluent” and “affluent” areas only.

Reduction in the amount of money spent on food in order to pay other household bills

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys, respondents were asked if they had ever substantially reduced the amount of money spent on food weekly to allow the payment of other household bills or expenses in the last 6 months (e.g. rent/mortgage, heating, electricity, holiday etc). Possible answers were:

- Yes
- No
- Don't know

The indicator represents the percentage of people who responded "Yes".

PERCENTAGE OF PEOPLE WHO HAD REDUCED THE AMOUNT OF MONEY SPENT ON FOOD PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that in the intervention and comparison groups combined less than 20% of the population had reduced the amount of money spent on food to pay other bills in the last six months.

In the pre-test community survey, the percentage of people who had restricted the amount of money spent on food to pay other bills was higher in the intervention group (23%) than it was in the comparison group (16%) bit this difference was not statistically significant.

DID THE DFFA INTERVENTION IMPROVE PEOPLE'S PURCHASING POWER IN TERMS OF FOOD?

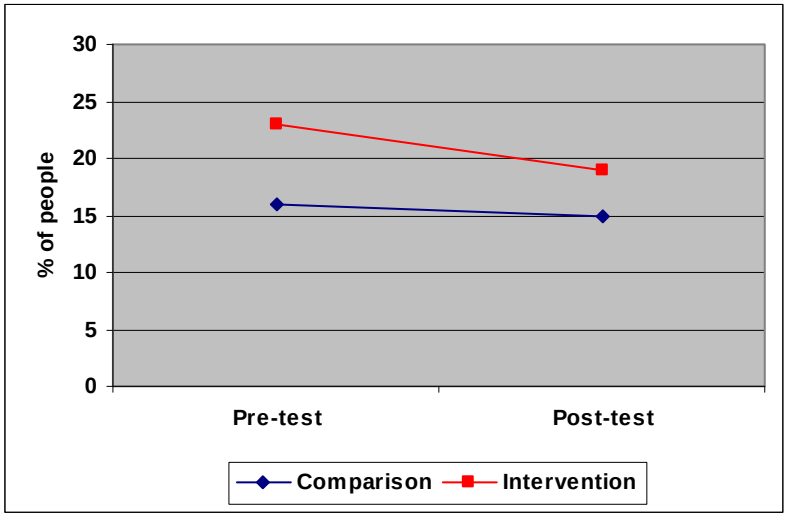


Figure 25 Changes in the percentage of people who had reduced the amount of money spent on food in the last 6 months; by survey group.

There was no significant difference between the changes in the percentage of people who had reduced the amount of money spent on food within the comparison group and within the intervention group (see figure 25).
In the comparison group the percentage of respondents who reduced the money they spent on food did not change significantly during the intervention period (dropping only slightly from 16% to 15%).

In the intervention group, a similar non significant decrease from 23% to 19% was observed.

DID GEOGRAPHY PLAY A ROLE?

Border and non-border areas

The impact of the DFfA intervention on the percentage of people who had reduced the expenses of food to pay other bills in border areas was statistically different ($p<0.0001$) than its impact in non-border areas (see Figure 25).

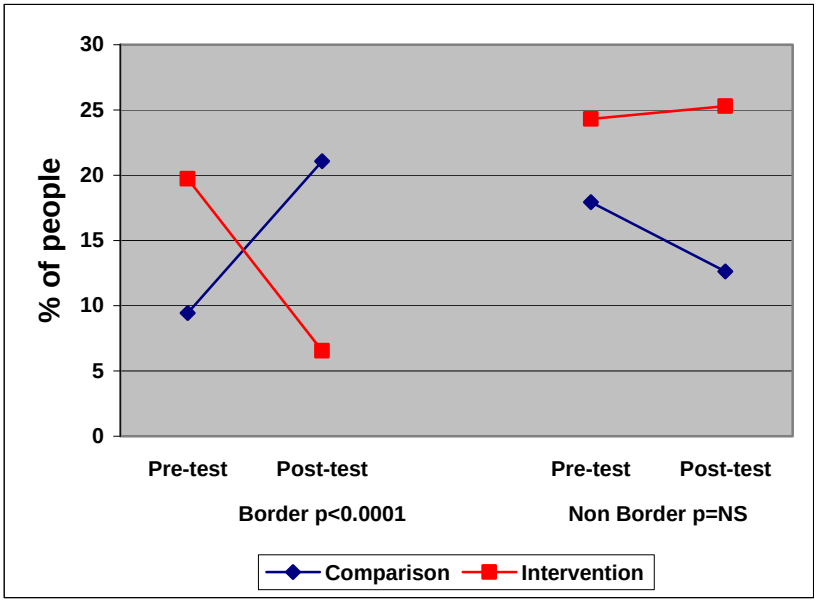


Figure 26 Changes in the percentage of people who had reduced the amount of money spent on food in border and non-border areas; by survey group.

In border areas there was a significant difference between the changes in the percentage of people reducing the amount of money spent on food within the comparison group and within the intervention group ($p < 0.0001$).

In the comparison group this percentage increased substantially from 9% to 21%. In the intervention group, however, the proportion of people who reduced their food expenses to pay other bills decreased from 20% to 7%.

In non-border areas there was no significant difference between the changes in the percentage of people reducing the amount of money spent on food that were observed in the intervention and comparison groups.

Rural and urban areas

The impact of the DFfA intervention on the percentage of people who had reduced the expenses of food to pay other bills in rural areas was statistically different (p=0.0001) than its impact in urban areas (see Figure 27)

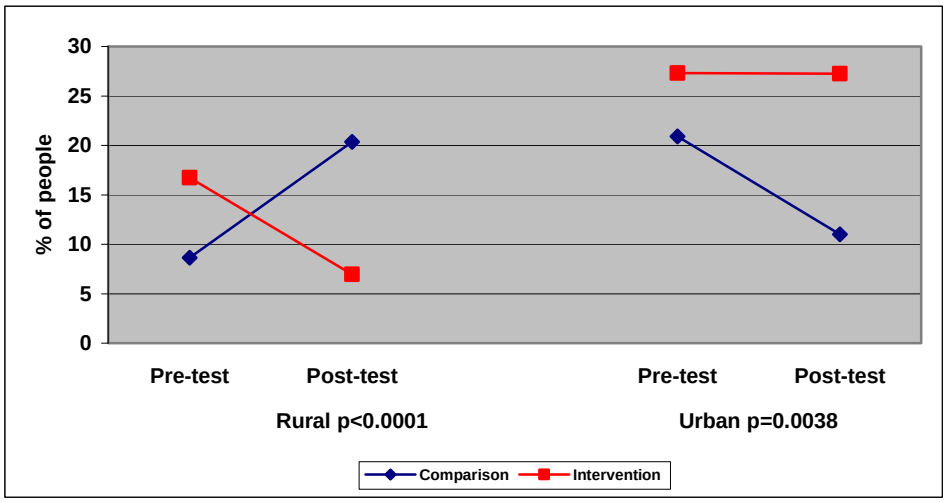


Figure 27 Changes in the percentage of people who had reduced the amount of money spent on food in rural and urban areas; by survey group.

In rural areas there was a statistically significant difference between the changes in the percentage of people who reduced the amount of money that were observed in the intervention and comparison groups (p<0.0001) – it increased in the comparison group from 9% to 20%, whereas it decreased in the intervention group from 17% to 7%.

In urban areas there was a significant difference between the changes in the percentage of people who had reduced their expenses on food within the comparison and intervention groups (p=0.0038). A decrease was observed in the urban comparison areas (21% to 11%) while urban intervention areas remained unchanged (see Figure 27).

Other geographical features

There was no evidence that the socio-economic circumstances of the areas affected the impact of the DFfA intervention.

DID ANY INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

Education

The impact of the DFfA intervention on the percentage of people who had reduced the expenses of food to pay other bills did not vary statistically with level of education (see Figure 28).

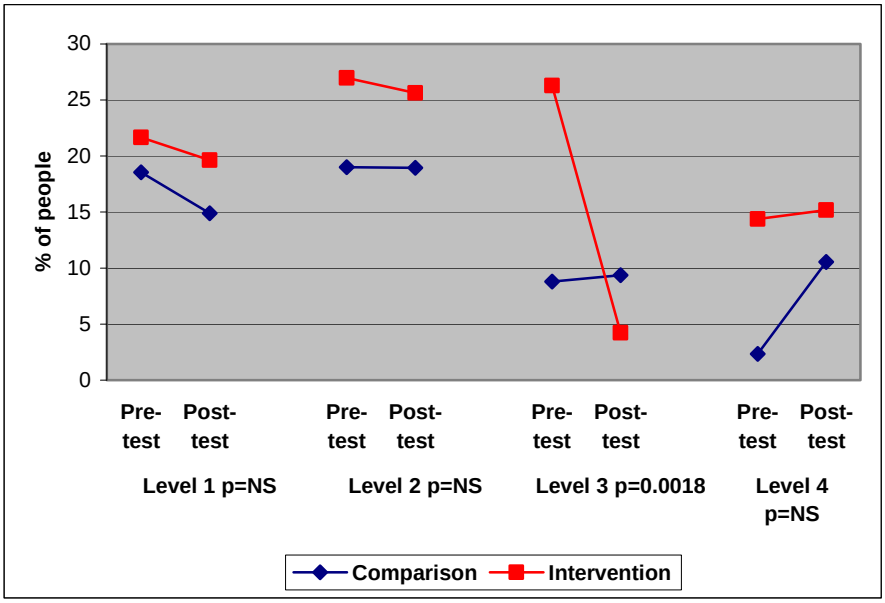


Figure 28 Changes in the percentage of people who had reduced the amount of money spent on food by level of education; by survey group.

The impact of the DFfA intervention on the percentage of people who had reduce the amount spent on food in the last six months was not significantly different amongst people who had attained education levels one, two and four (see Figure 27). The DFfA intervention was associated with a significant positive impact amongst people who had attained the third education level (A levels or NVQ Level 3; p=0.0018), as a substantial reduction in the percentage of people who reduced the money spent on food to pay other bills was observed in the intervention group over the intervention period.

Other individual characteristics

There was no evidence that the individual characteristics of age, gender and employment status affected the impact of the DFfA intervention.

SUMMARY BOX

Overall, less than 20% of respondents had reduced their budget on food to pay other bills in the previous six months at pre-test. There was a difference between the comparison and intervention groups at pre-test, as significantly more people were spending less on food to pay other expenses in the intervention group (23%) than in the comparison group (16%).

The DFfA intervention had no significant impact on the overall percentage of people who reduced the amount of money spent on food for other expenses in the last six months - it decreased similarly in the comparison and intervention groups.

However, some geographical attributes played a role in the impact of the DFfA intervention on the percentage of people who had reduced their food budget in the last six months:

- The impact of the intervention was statistically different in border and non-border areas. The intervention was associated with a positive impact in border areas where a decrease in the intervention group contrasted with an increase in the comparison group. The intervention did not appear to have any clear impact in non-border areas.

- The impact of the intervention was statistically different in rural and urban areas. The intervention had a positive impact in rural areas where, similar to border areas, a decrease in the intervention group contrasted with an increase in the comparison group. The DFfA intervention had a negative impact in urban areas where the percentage did not change in the intervention group but decreased in the comparison group.

Individual, Household and community change

1.12 Improved awareness/knowledge of nutrition, safety and hygiene, and food poverty

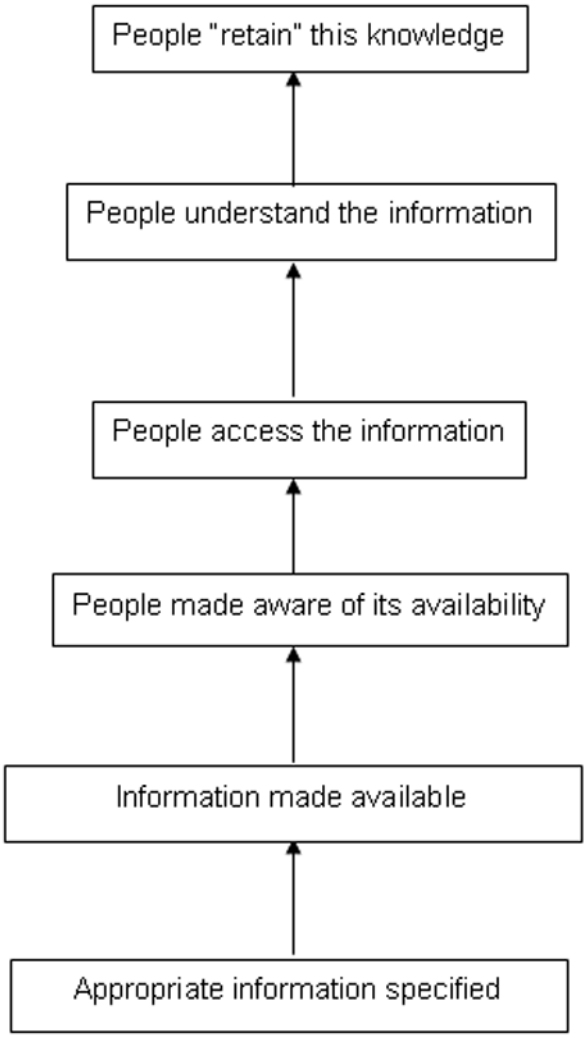


Figure 29 Outcomes Hierarchy for improved knowledge

Undestanding of "Health Eating"

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys, respondents were asked what they understood by the term "healthy eating". An initial list of items that indicated some understanding of the term was developed during the survey's pilot test and expanded during its fieldwork phase. The final list comprised:

- Reduce fat or fried foods
- Eat fruit and vegetables
- Reduce sugar and confectionery
- Eat plenty of fibre
- Eat plenty of starch and carbohydrates
- Reduce salt
- Drink water and fruit juice
- Avoid red meat/or eat white meat or fish

Respondents were not prompted and scored one point for each of the indicative items they mentioned. Their total score, representing their understanding of the term "healthy eating", ranged from 0 (least understanding) to 8 (most understanding).

UNDERSTANDING OF "HEALTHY EATING" PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that understanding of the term "healthy eating" - measured by the number of unprompted mentions of items indicating some understanding - was quite low in both the intervention and comparison groups. On average, respondents mentioned without prompting just over two of the possible eight items that indicated some understanding of the term "healthy eating".

In the pre-test community survey, the average number of unprompted mentions of items was significantly higher ($p<0.0001$) in the intervention group (2.4) than it was in the comparison group (1.8).

DID THE DFFA INTERVENTION IMPROVE UNDERSTANDING?

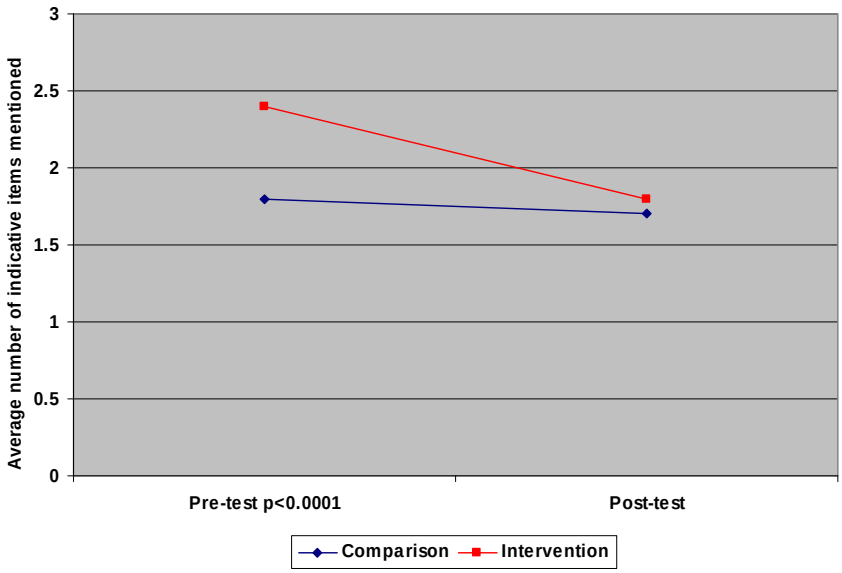


Figure 30 Changes in the understanding of "healthy eating"; by survey group.

Final production of the graphs to have a broken vertical scale up to 8.

There was a significant difference between the changes in understanding of "healthy eating" within the comparison group and within the intervention group (p=0.0001). This difference was not explained by differences in level of education between the groups. In the comparison group, the average number of unprompted mentions of items indicating some understanding of "healthy eating" did not change significantly during the intervention period (dropping only slightly from 1.8 to 1.7). The average number of unprompted mentions in the intervention group, however, decreased significantly from 2.4 to 1.8 (p<0.0001).

DID GEOGRAPHY PLAY A ROLE?

Border and non-border areas

The impact of the DFfA intervention on the understanding in "healthy eating" in border areas was statistically different than its impact in non-border areas (p=0.0093). This difference was not explained by differences in level of education between border and non-border areas.

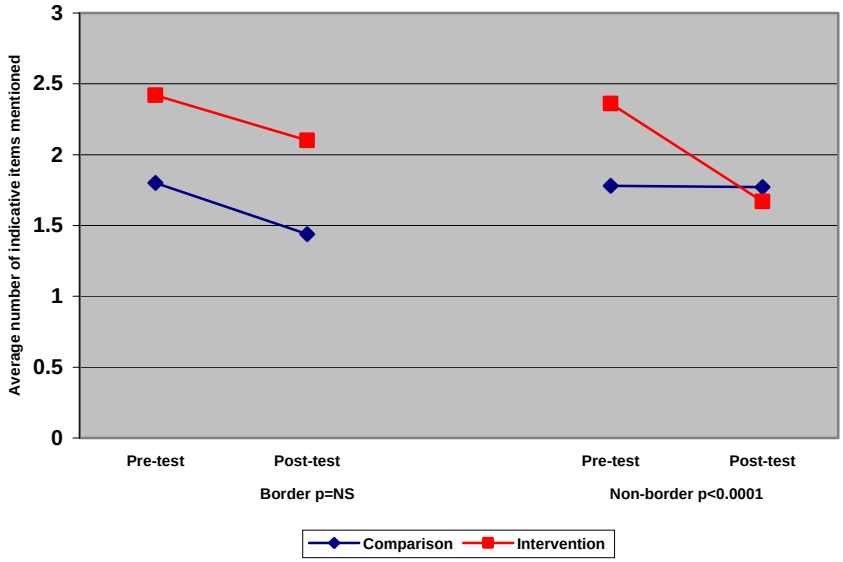


Figure 31 Changes in the understanding of "healthy eating" in border and non-border areas; by survey group.

Final production of the graphs to have a broken vertical scale up to 8.

In border areas there was no significant difference between the changes in understanding of "healthy eating" observed within the comparison and within the intervention groups – both decreased in a similar manner (see Figure 31).

In non-border areas there was a significant difference between the changes in the understanding of "healthy eating" observed within the comparison and within the intervention groups (p<0.0001). This difference was not explained by differences in level of education between the groups.

In the non-border comparison group no change was observed while in the non-border intervention group the average number of indicative items that were mentioned decreased from 2.4 to 1.7.

Rural and urban areas

The impact of the DFfA intervention on the understanding of "healthy eating" in rural areas was statistically different than its impact in urban areas (p=0.0017). This difference was not explained by differences in level of education between rural and urban areas.

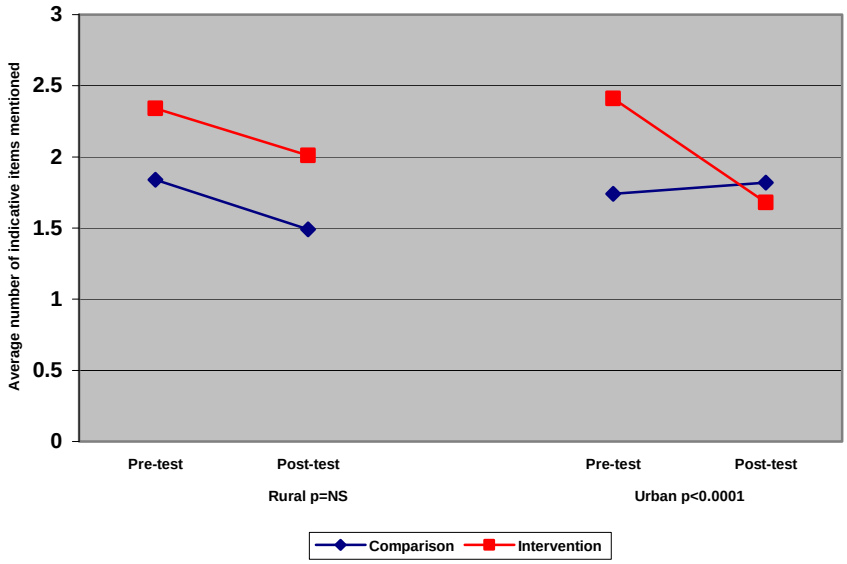


Figure 32 Changes in the understanding of "healthy eating" in rural and urban areas; by survey group.

Final production of the graphs to have a broken vertical scale up to 8.

In rural areas there was no significant difference between the changes in understanding of "healthy eating" observed within the comparison and within the intervention groups – both decreased in a similar manner (see Figure 32).

In urban areas, there was a significant difference between the changes in understanding of "healthy eating" observed within the comparison and within the intervention groups (p<0.0001). This difference was not explained by differences in level of education between the groups. In the urban comparison group the average number of unprompted mentions of items indicating some understanding of "healthy eating" was relatively unchanged. In the urban intervention group, however, the average number decreased from 2.4 to 1.7.

Deprived and non-deprived areas

The impact of the DFfA intervention on the understanding of "healthy eating" varied significantly with socio-economic circumstances in an area ($p<0.0001$). This difference was not explained by differences in level of education between areas of deprivation.

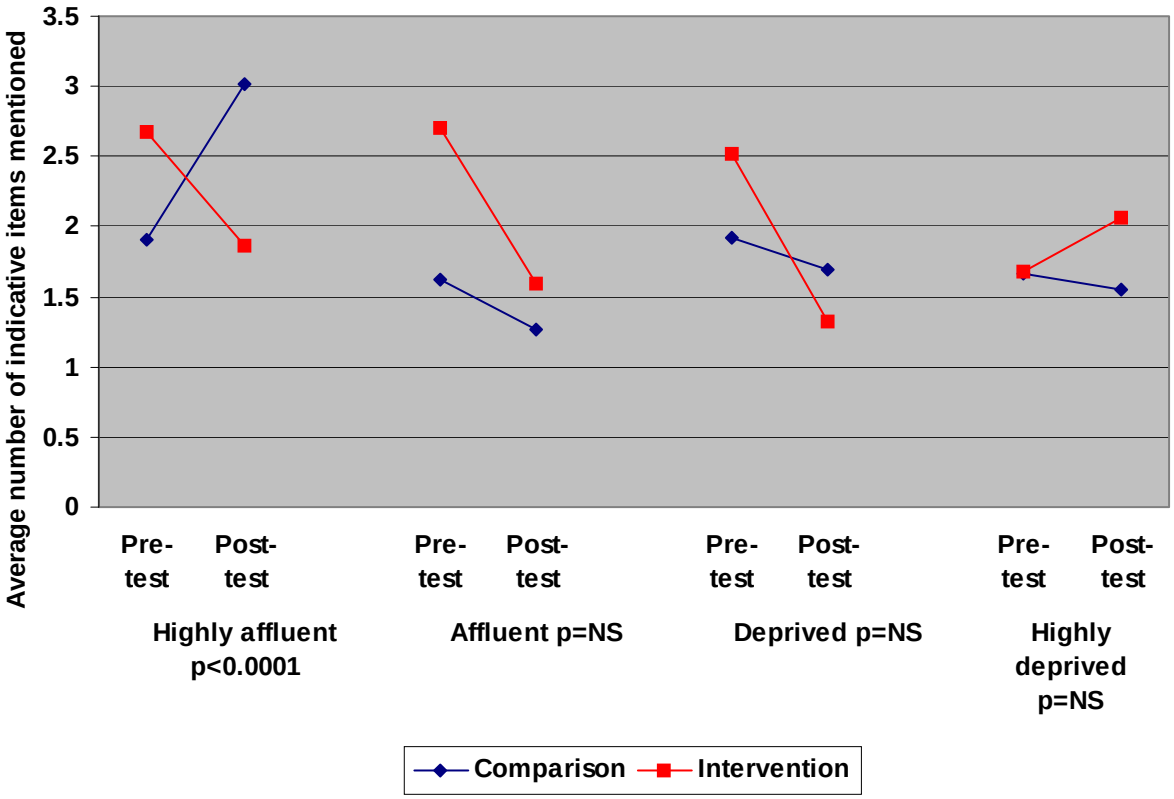


Figure 33 Changes in the understanding of "healthy eating" in deprived and non-deprived areas; by survey group.

Final production of the graphs to have a broken vertical scale up to 8.

Understanding of "healthy eating" decreased in all areas apart from "highly deprived" areas of the intervention group and "highly affluent" areas of comparison group (see Figure 33).

In the "highly affluent" areas there was a significant difference between the changes in understanding that were observed within in the comparison and within the intervention groups ($p<0.0001$). This difference was not explained by differences in level of education between the groups. Understanding decreased in the intervention group but increased in the comparison group.

DID INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

Gender

The impact of the DFfA intervention on the understanding on "healthy eating" amongst males was statistically different than its impact amongst females ($p<0.0001$). This difference was not explained by differences in level of education between males and females.

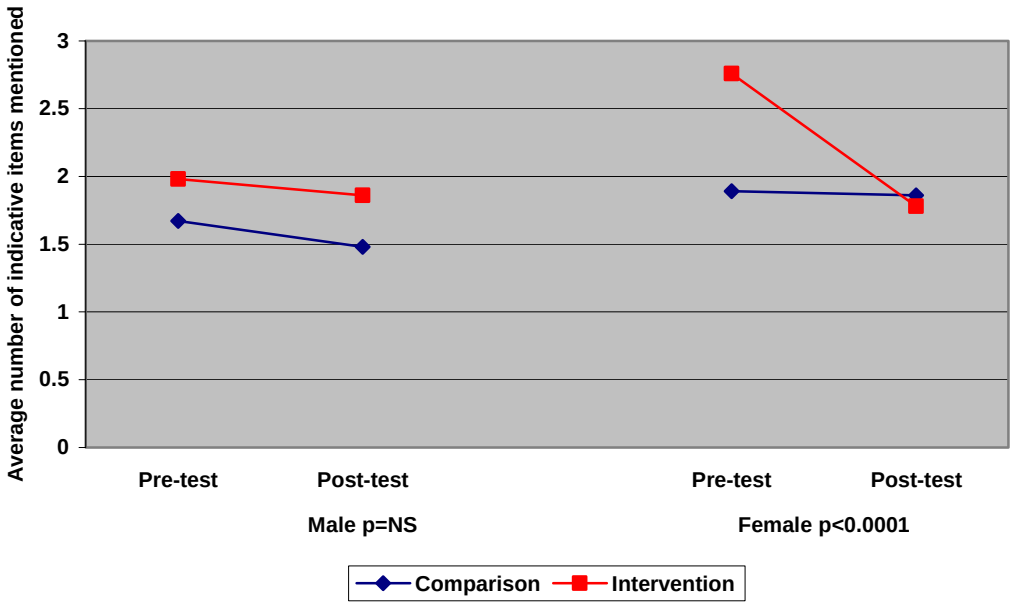


Figure 34 Changes in the understanding of "healthy eating" amongst males and females; by survey group.

Final production of the graphs to have a broken vertical scale up to 8.

Amongst males there was no significant difference between the changes in understanding of "healthy eating" observed within the comparison and within the intervention groups (see Figure 34).

Amongst females there was a significant difference between the change in understanding of "healthy eating" observed within the comparison and within the intervention groups ($p<0.0001$). This difference was not explained by differences in level of education between the groups. While the average number of unprompted mentions of indicative items remained unchanged in the female comparison group, it decreased from 2.8 to 1.8 in the female intervention group.

Age

The impact of the DFfA intervention on the understanding of "healthy eating" did not vary significantly with age.

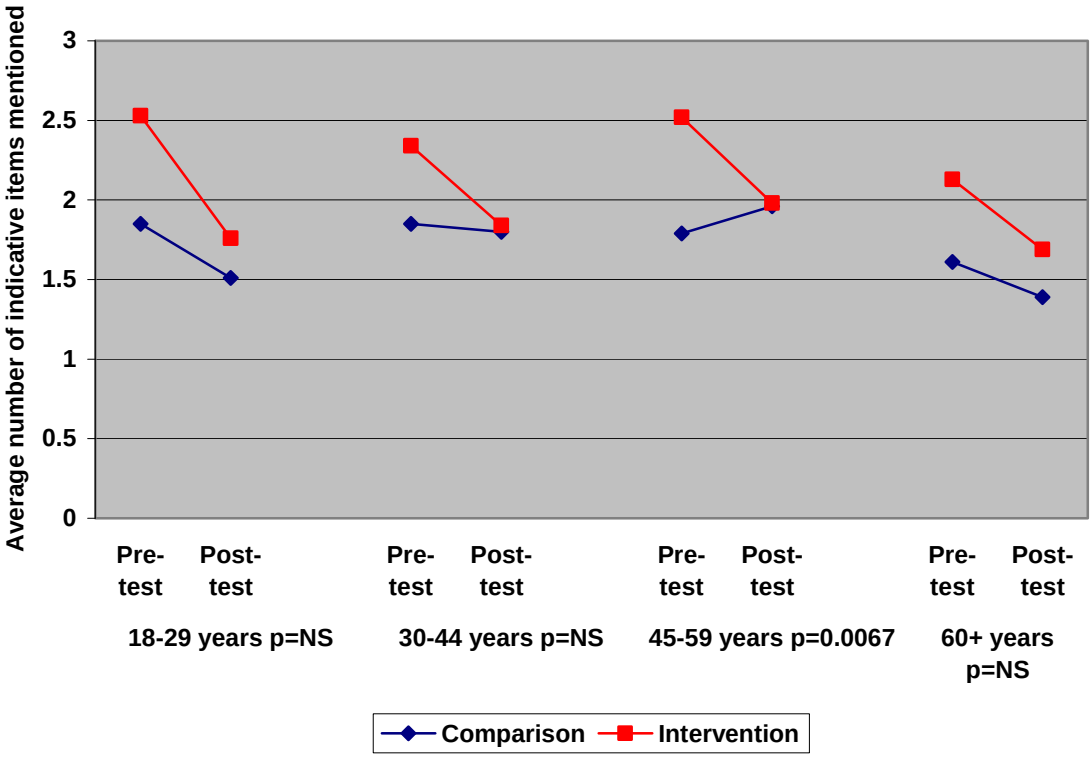


Figure 35 Changes in the understanding of "healthy eating" amongst age groups; by survey group.

Final production of the graphs to have a broken vertical scale up to 8.

The impact of the DFfA intervention was similar in the 18-29 years, 30-44 years and 60+ years age groups where decreases in understanding of "healthy eating" were observed in both the comparison and intervention groups (see Figure 35). The impact was significantly different in the 45-49 years age group where an increase in understanding of "healthy eating" in the comparison group contrasted with a decrease in understanding in the intervention group (p=0.0048). This difference was not explained by differences in level of education between the groups.

Employment

The impact of the DFfA intervention on the understanding of "healthy eating" did not vary significantly with employment status.

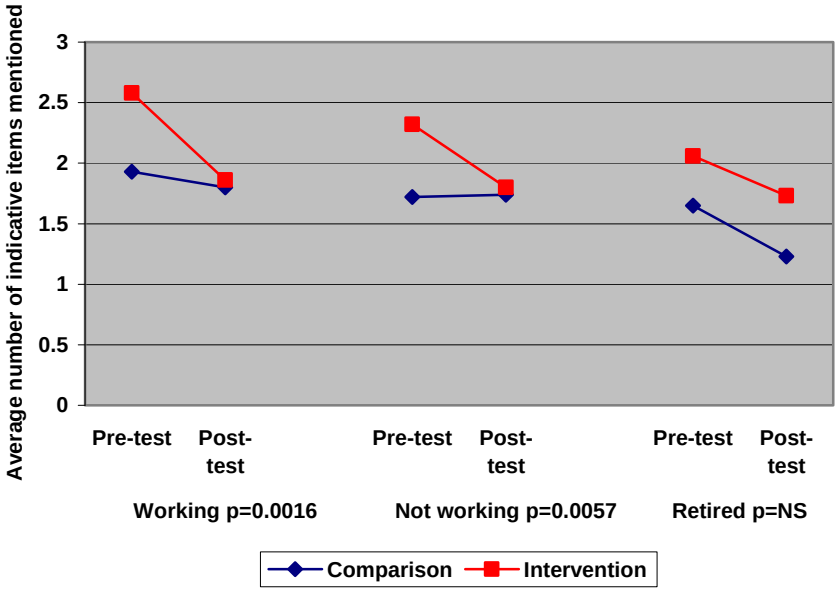


Figure 36 Changes in the understanding of "healthy eating" by employment status; by survey group.

Final production of the graphs to have a broken vertical scale up to 8.

Understanding of "healthy eating" generally decreased across all levels of employment status apart from people not working in the comparison group (see Figure 36). The impact of the DFfA intervention was significantly different among people who were working where a greater decrease in understanding was observed in the intervention group than in the comparison group (p=0.0016). The impact of the DFfA intervention was also significantly different among people who were not working where a decrease in understanding was observed in the intervention group while the comparison group remained relatively stable (p=0.0057). These differences were not explained by differences in level of education between the groups.

Other individual characteristics

There was no evidence that level of education affected the impact of the DFfA intervention on understanding of the term "healthy eating".

SUMMARY BOX

An average of just over two of the possible eight examples of understanding of healthy eating were mentioned at pre-test. Understanding of healthy eating was significantly higher in the intervention group than in the comparison group at pre-test.

Overall, the impact of the DFfA intervention on understanding of healthy eating was significantly negative. Understanding decreased in the intervention group while it remained relatively stable in the comparison group. This difference was not explained by differences in level of education between the groups. By the end of the intervention period, understanding of healthy eating in the intervention group had fallen to the level in the comparison group.

Geographical attributes played a role in the impact of the DFfA intervention on understanding of healthy eating:

- The impact of the intervention was statistically different in border and non-border areas. This difference was not explained by differences in level of education between border and non-border areas. The intervention did not appear to have any clear impact in border areas but was associated with a negative impact in non-border areas where a decrease in understanding was observed.

- The impact of the intervention was statistically different in rural and urban areas. This difference was not explained by differences in level of education between rural and urban areas. The intervention did not appear to have any clear impact in rural areas but was associated with a negative impact in urban areas where a decrease in understanding was observed. If we identify rural areas with border areas and urban areas with non-border areas, this is the same negative impact as what was observed above.

- The impact of the intervention varied significantly with the level of deprivation in an area. This difference was not explained by differences in level of education between areas of deprivation. The DFfA intervention did not appear to have any clear impact apart from a negative impact in “highly affluent” areas where a decrease in understanding within the intervention group contrasted with an increase within the comparison group.

Although the DFfA intervention was not specifically targeted at males or females, it is worth noting that the impact of the intervention was statistically different among males and females. This difference was not explained by differences in level of education between males and females. The intervention did not appear to have any clear impact amongst males but it had a negative impact amongst females where it was associated with a decrease in understanding.

LIMITATIONS

A limitation of this question may be that only the eight prescribed items, with which the respondent was not prompted, counted as demonstrating understanding of healthy eating. While there was an opportunity for people to provide additional examples of what they understood by the term “healthy eating”, these may not have been consistently recorded by different interviewers and so were omitted from analysis. The eight specific examples that were used in the survey item were developed with the help of a nutritionist and could be considered to provide a broad range of “healthy eating” behaviours.

Awareness of "food poverty"

DEFINITION OF INDICATOR

In both the pre-test and post-test community surveys, respondents were asked if they had heard of the term "food poverty". Their possible responses were

- Yes
- No
- Don't know

The percentage of respondents who responded "Yes" was used to indicate awareness of the term "food poverty".

AWARENESS OF "FOOD POVERTY" PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that almost one quarter (23%) of people in the comparison and intervention groups combined had heard of the term "food poverty" prior to the DFfA intervention.

There was no significant difference in the percentage of people in the comparison group (22%) and intervention group (23%) who had heard of the term "food poverty".

DID THE DFFA INTERVENTION IMPROVE AWARENESS OF "FOOD POVERTY"?

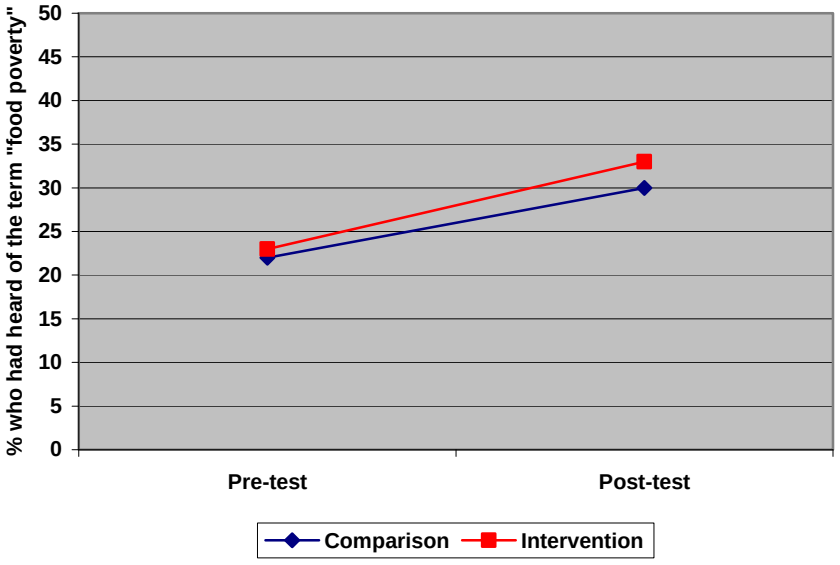


Figure 37 Changes in the percentage of people who had heard of the term "food poverty"; by survey group.

There was no significant difference between the changes in awareness of “food poverty” within the comparison group and within the intervention group. In the comparison group, the percentage of people who had heard of the term “food poverty” increased from 22% to 30% during the intervention period (see figure 37). This increase was not statistically significant when adjusted for differences in education level suggesting that the increase was largely due to differences in the education level of comparison group at pre-test and post-test. In the intervention group, the percentage of respondents who had heard of the term “food poverty” significantly increased from 223% to 33% during the intervention period. This increase was statistically significant when adjusted for differences in education level ($p=0.0016$).

DID GEOGRAPHY PLAY A ROLE?

There was no evidence that the impact of the DFfA intervention on awareness of “food poverty” was significantly different in border and non-border areas, or in urban and rural areas. Similarly, the impact of the DFfA intervention on awareness of “food poverty” did not vary with the socio-economic circumstances in an area.

DID INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

There was no evidence that individual characteristics of gender, age, education level or employment status affected the impact of the DFfA intervention on awareness of “food poverty”.

SUMMARY BOX

At pre-test, almost one quarter of people had heard of the term “food poverty”. Awareness of the term was not significantly different between the comparison and intervention groups at pre-test.

Overall, the DFfA intervention had no significant impact on awareness of “food poverty”. The percentage of people who had heard of the term “food poverty” increased in both groups over time. In the comparison group, this increase was largely explained by differences in the education level of the comparison group at pre-test and post-test. The intervention group displayed a significant increase even after allowing for differences in the education level of the group at pre-test and post-test. However, this difference between the changes in awareness of “food poverty” within the comparison group and within the intervention group was not statistically significant.

1.13 Greater demand for (affordable) safe and healthy food

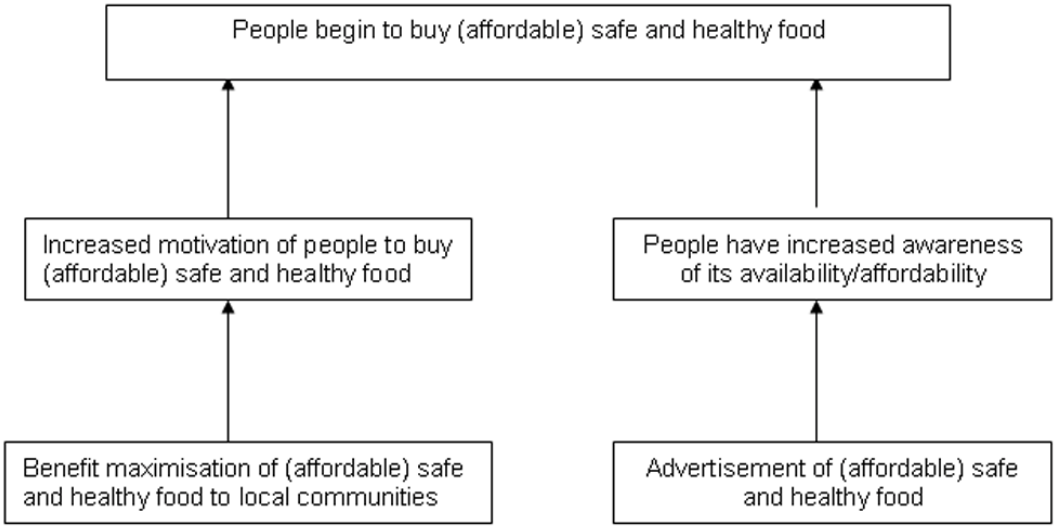


Figure 38 Outcomes Hierarchy for greater demand for affordable, safe and healthy food.

Consideration of "Healthy Options" when shopping

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys, respondents were shown a list of issues and asked if they considered any of them when shopping for food. The percentage of people who considered at least one of the following four healthy eating issues

- Help with weight control
- Fat content of item
- Organic
- Healthy option

was taken to indicate consideration of healthy options when shopping for food.

CONSIDERATION OF "HEALTHY OPTIONS" PRIOR TO THE DFFA INTERVENTION

Prior to the DFfA intervention, a little over half or all respondents in the study population said they considered at least one "healthy option" when shopping for food.

The percentage of people who considered at least one "healthy option" when shopping for food was slightly lower in the comparison group than it was in the intervention group (54% vs 55%). This difference, however, was not statistically significant.

DID THE DFFA INTERVENTION INCREASE CONSIDERATION OF "HEALTHY OPTIONS"?

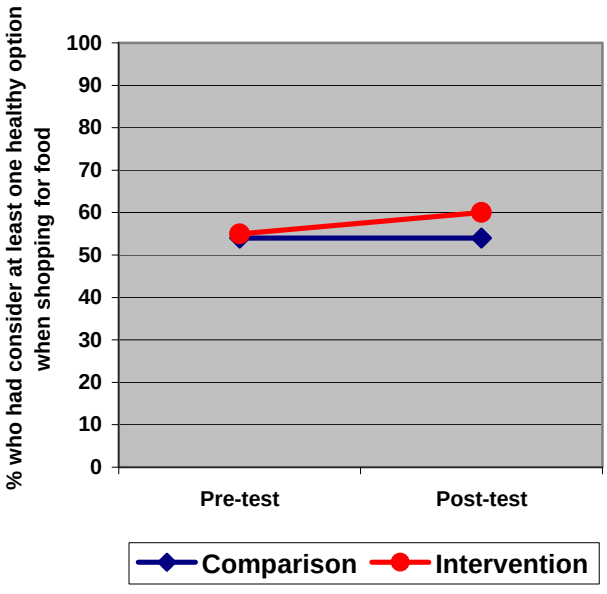


Figure 39 Changes in the consideration of "healthy options"; by survey group.

There was no significant difference between the changes in the percentage of people who considered at least one "healthy option" when shopping for food within the comparison group and within the intervention group. Consideration of healthy options did not change in the comparison group and, while it increased slightly in the intervention group, this increase was not statistically significant.

DID GEOGRAPHY PLAY A ROLE?

Border and non-border areas

DFfA's impact, in border and non-border areas, on the consideration of "healthy options" when shopping were statistically different (p=0.0045).

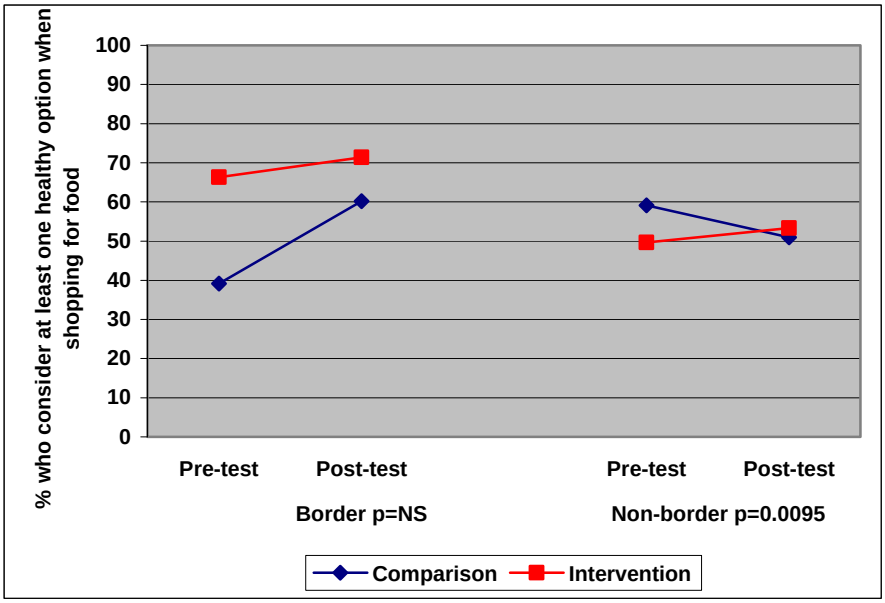


Figure 40 Changes in the consideration of "healthy options" awareness in border and non-border areas; by survey group.

In border areas there was no significant difference in the consideration of "healthy options" when shopping observed in the intervention and comparison groups – both increased in a similar manner (see Figure 40).

In non-border areas, there was a significant difference in the consideration of "healthy options" when shopping observed in the intervention and comparison groups (p=0.0095). Consideration of "healthy options" decreased in the comparison group and increased slightly in the intervention group.

Deprived and non-deprived areas

The DFfA intervention's impact on the consideration of "healthy options" when shopping varied significantly with the socio-economic circumstances of the respondent's place of residence, even after adjustment for their individual education, employment status, and border area ($p < 0.0001$).

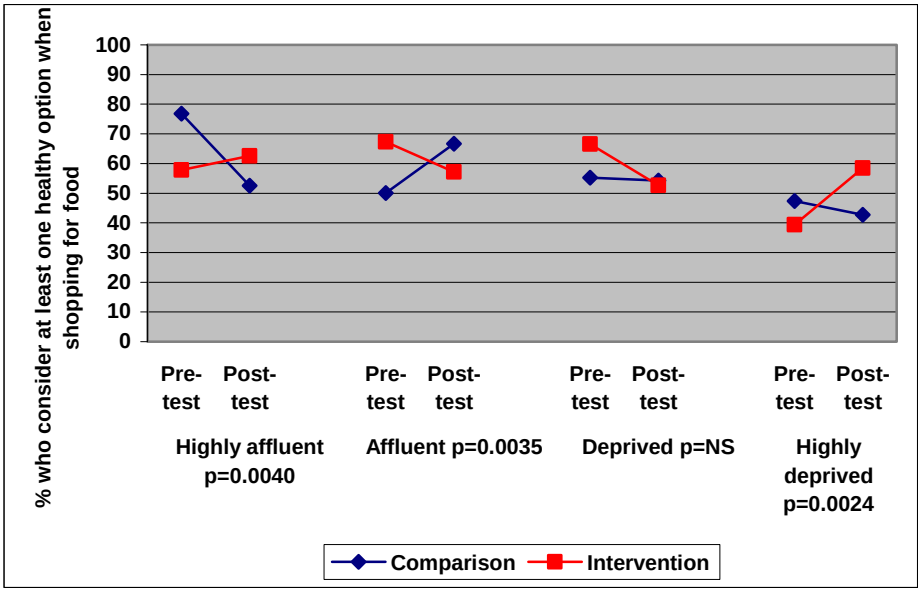


Figure 41 Changes in the consideration of "healthy options" in deprived and non-deprived areas; by survey group.

In all but "deprived" areas, there was a significant difference between the changes in the consideration of "healthy options" observed in the intervention and comparison groups (see Figure 41).

In "highly affluent" and "highly deprived" areas, the DFfA intervention had a significantly positive impact – consideration of "health options" while shopping increased in the intervention group while it decreased in the comparison group.

In "affluent" areas, the DFfA intervention had a significantly negative impact – consideration of "health options" while shopping decreased in the intervention group while it increased in the comparison group.

Other geographical features

There was no evidence that any other geographical feature affected the impact of the DFfA intervention. There was no significant difference between the DFfA's impact in rural and urban areas, and there was no significant difference between its impact in border and non-border areas.

DID INDIVIDUAL CHARACTERISTICES PLAY A ROLE?

There was no evidence that the individual characteristics of gender, age, education or employment status affected the impact of the DFfA intervention.

Summary Box

Overall, just over half of all people said they considered at least one of the four healthy options when shopping for food at pre-test. There was no significant difference between the comparison and the intervention groups at pre-test.

The DFfA intervention had no significant impact on the percentage of people who considered at least one of the four healthy options when shopping for food. The percentage of people who considered a healthy option when shopping for food did not change significantly in either the comparison or intervention group.

However, some geographical attributes played a role in the impact of the DFfA intervention on the percentage of people who considered a healthy option when shopping for food:

- The impact of the intervention was statistically different in border and non-border areas. The intervention was associated with a positive impact in non-border areas but did not appear to have any clear impact in border areas.

- The impact of the intervention varied significantly with the level of deprivation of an area. However, there was no consistent pattern to this variation. The intervention was associated with a positive impact in areas of highest affluence and areas of highest deprivation but had either no impact or negative impact in areas in the middle of the affluence-deprivation scale.

LIMITATIONS

A limitation of this question may be that only the four prescribed items, with which the respondent was prompted, counted as demonstrating consideration of healthy options when shopping for food. While there was an opportunity for people to provide additional examples of healthy considerations, these may not have been consistently recorded by different interviewers and so were omitted from analysis. Although only four examples were used, they were developed with the help of a nutritionist. The indicator was constructed so that respondents only had to agree to one of the four issues (one of which was the broad option “healthy option”) to show that they consider healthy options when shopping for food. Thus, the exclusion of people who, in fact, consider healthy options when shopping for food was minimized.

1.14 Improved health behaviours: healthier eating choices, healthier lifestyles, improved food hygiene and safety

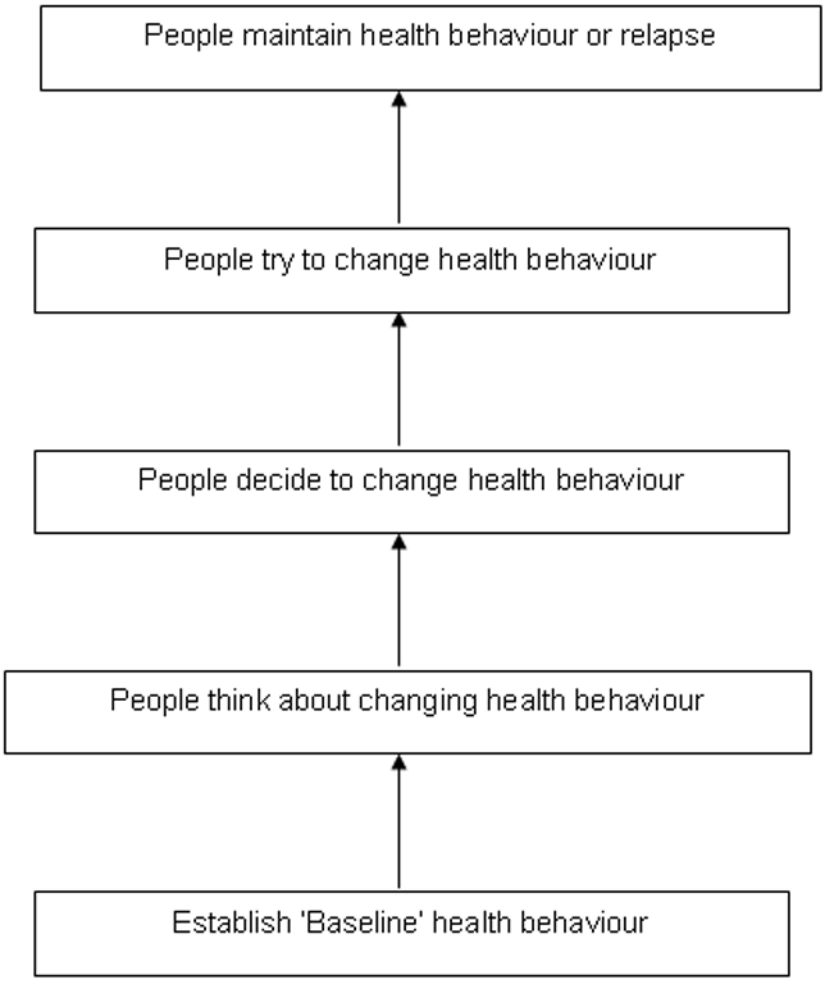


Figure 42 Outcomes hierarchy for improved health behaviours.

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys, respondents were asked how often they eat the following products in an average week.

- Bread
- Breakfast cereals
- Potatoes
- Rice/pasta

The possible responses were:

- More than once a day
- Once a day
- Most days (3+ a week)
- 1-2 times a week
- Weekly
- Never

The weekly frequencies for each of the four foods were converted into daily frequencies. The individual daily frequencies for the four foods were summed to give a total daily frequency for the “bread, rice, potatoes, pasta and other starchy foods” food group. The indicator was taken to be the number of times per day these starchy foods were consumed

DAILY CONSUMPTION OF BREAD, RICE, POTATOES, PASTA AND OTHER STYARCHY FOODS PRIOR TO THE DFFA INTERVENTION

Prior to the DFfA intervention, the community survey indicated that on average, people consumed starchy food products 3 times a day - half of the current nutritional recommendations for this food group.

In the pre-test community survey, the number of times bread, rice, potatoes, etc were consumed daily was significantly higher (p=0.0064) in the intervention group (3.2) than in the comparison group (3.1) when adjusted fro differences in deprivation between the groups at pre-test.

DID THE DFFA INTERVENTION INCREASE THE DAILY CONSUMPTION OF STARCHY FOOD PRODUCTS?

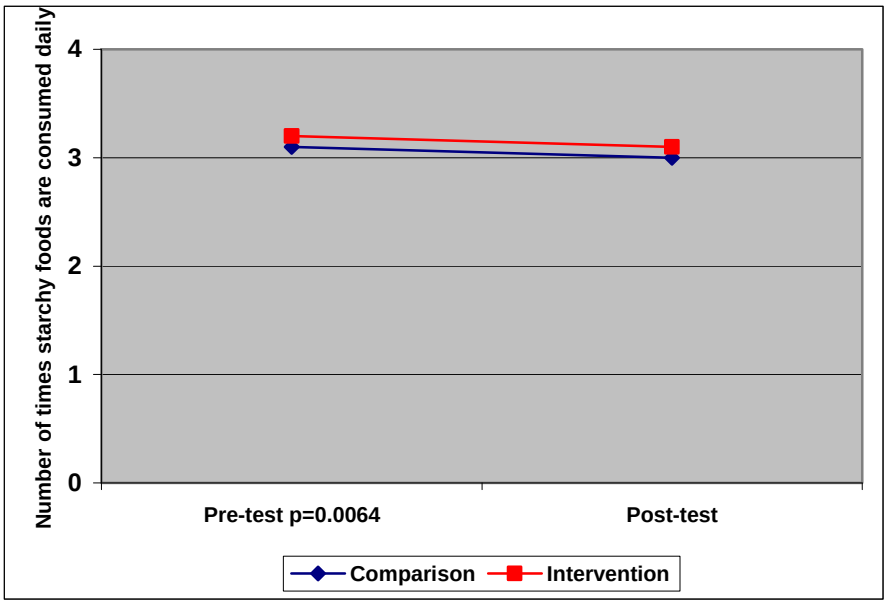


Figure 43 Changes in the number of times bread, rice, potatoes, pasta and other starchy foods were consumed daily; by survey group.

During the intervention period, the number of times bread, rice, potatoes, pasta and other starchy foods were consumed daily did not change in either the comparison or intervention groups. Moreover, no statistically significant difference was observed between the two groups.

DID GEOGRAPHY PLAY A ROLE?

Deprived and non-deprived areas

The impact of the DFfA intervention on the daily consumption of starchy foods varied significantly with the socio-economic circumstances of the areas, even after adjustment for their individual employment status (p=0.0035). While none of the impacts of the DFfA intervention in each area were statistically significant, the pattern of these impacts varied significantly across the areas (see Figure 44).

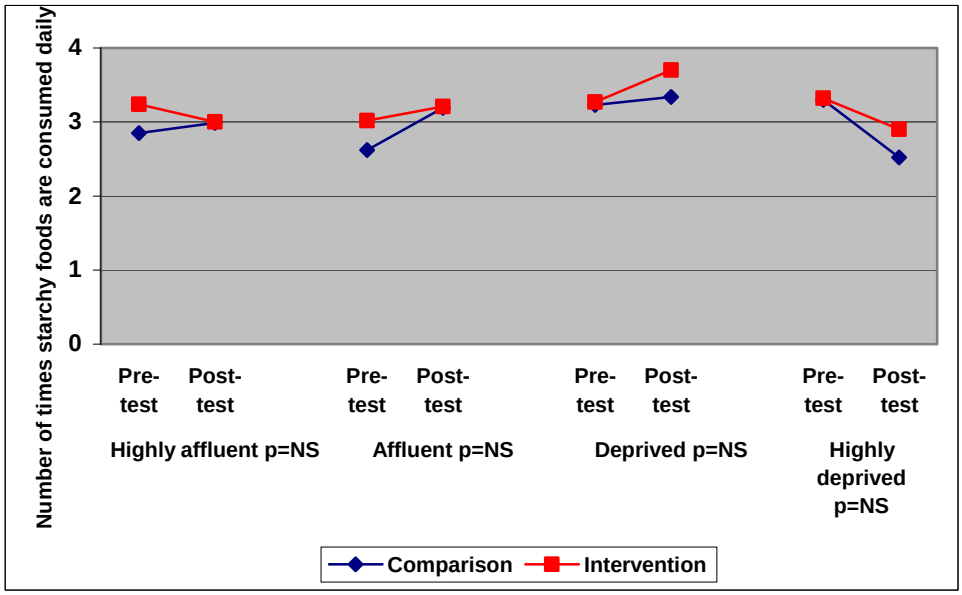


Figure 44 Changes in the number of times bread, rice, potatoes, pasta and other starchy foods were consumed in deprived and non-deprived areas; by survey group.

In "affluent" and "deprived" areas, the consumption of starchy food products increased similarly in both the comparison and intervention groups.

In the "highly deprived" areas it decreased similarly in both the comparison and intervention groups.

In the "highly affluent" areas it increased slightly in the comparison group and decreased slightly in the intervention group.

Other geographical features

There was no significant difference between the DFfA's impact in rural and urban areas, and there was no significant difference between its impact in border and non-border areas.

DID INDIVIDUAL CHARACTERISTICES PLAY A ROLE?

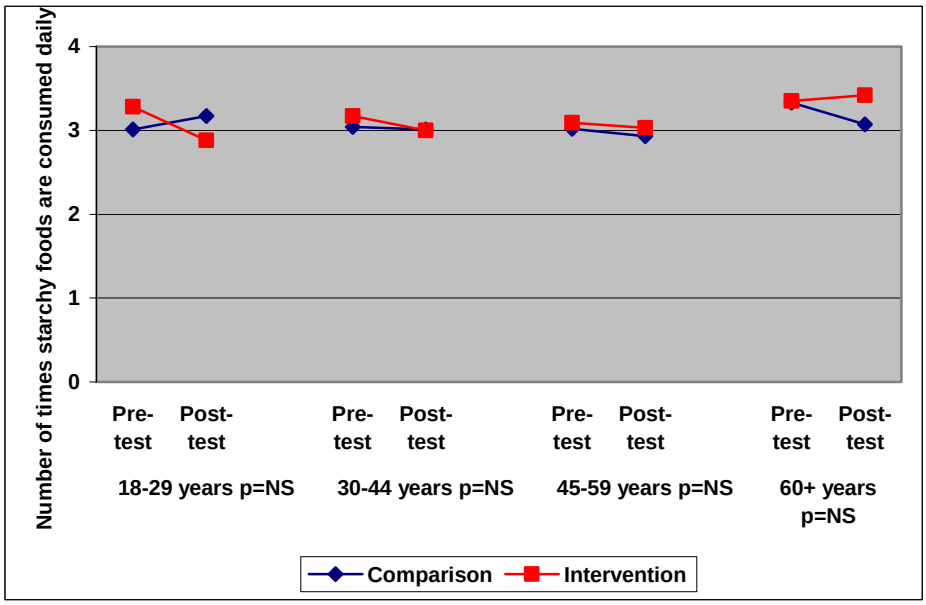


Figure 45 Changes in the number of times bread, rice, potatoes, pasta and other starchy foods were consumed amongst the different age groups; by survey group.

Other individual characteristics

There was no evidence that the individual characteristics of age, gender, employment status and education affected the impact of the DFfA intervention.

SUMMARY BOX

Prior to the DFfA intervention, the daily consumption of bread, rice, potatoes, pasta and other starchy foods was low. On average people consumed starchy foods three times a day while the recommended number of daily portions is six. No difference between the comparison and intervention groups was observed at pre-test.

Overall, the DFfA intervention had no significant impact on the daily consumption of starchy food products. Cosumption remained unchanged in both the comparison and intervention groups

However, the impact of the DFfA intervention varied significantly with the level of deprivation in an area. Despite this, none of the impacts within each level of deprivation was statistically significant.

LIMITATIONS

A limitation of this question was that frequency of consumption was recorded without reference to the number of standard portions. Thus, the responses measure how often the food is consumed rather than how much of the food is consumed. Furthermore, the highest frequency a person could indicate for each of the four foods was “more than once a day”. A conservative assumption of twice a day was made for these responses which may underestimate frequency of consumption. This made the interpretation of dietary intake difficult.

Daily Consumption of fruit and vegetables

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys, respondents were asked how many portions of fruit and vegetables they eat in an average day.

The possible responses were:

- None
- One
- Two
- Three
- Four
- Five or more

A portion of fruit was defined as 80 grams, equivalent to:

- 1 slice of a large fruit (e.g. melon, pineapple, half grapefruit)
- 1 medium sized fruit (e.g. apple, orange, banana, pear, peach)
- 2 small fruits (e.g. 2 kiwis, 2 plums…)
- A cupful of very small fruits (e.g. grapes, strawberries, raspberries)
- Tablespoon of raisins
- Medium sized glass of 100% juice, either fruit or vegetable (Was counted as 1 portion no matter how much was drank, because of its low fibre content)

A portion of vegetable was defined as 80 grams, equivalent to:

- 3 heaped tablespoons (e.g. carrots, peas, sweet corn)
- 1 cereal bowl of mixed salad
- 1 handful of vegetable sticks (e.g. carrots, peppers, spring onions)

Beans and pulses (e.g. kidney beans, lentils and chick peas) also counted as vegetables, but only as 1 portion a day no matter how many different types or how much was eaten, because they don't provide the same vitamins, minerals and other nutrients as fruits and vegetables.

Every type of fruit and vegetables was taken into account: fresh, frozen, chilled, canned and dried fruit and vegetables, and 100% juices.

The indicator was expressed as the number of portions of fruit and vegetables consumed daily.

DAILY CONSUMPTION OF FRUIT AND VEGETABLES PRIOR TO THE DFFA INTERVENTION

The community survey indicated that the comparison and intervention groups, on average, people consumed 2.6 portions of fruit and vegetables a day - half of the current nutritional recommendations for this food group.

In the pre-test community survey, there was no significant difference in the number of portions of fruit and vegetables consumed daily in the comparison and intervention groups (2.7 and 2.5 portions respectively)

DID THE DFFA INTERVENTION INCREASE THE DAILY CONSUMPTION OF FRUIT AND VEGETABLES?

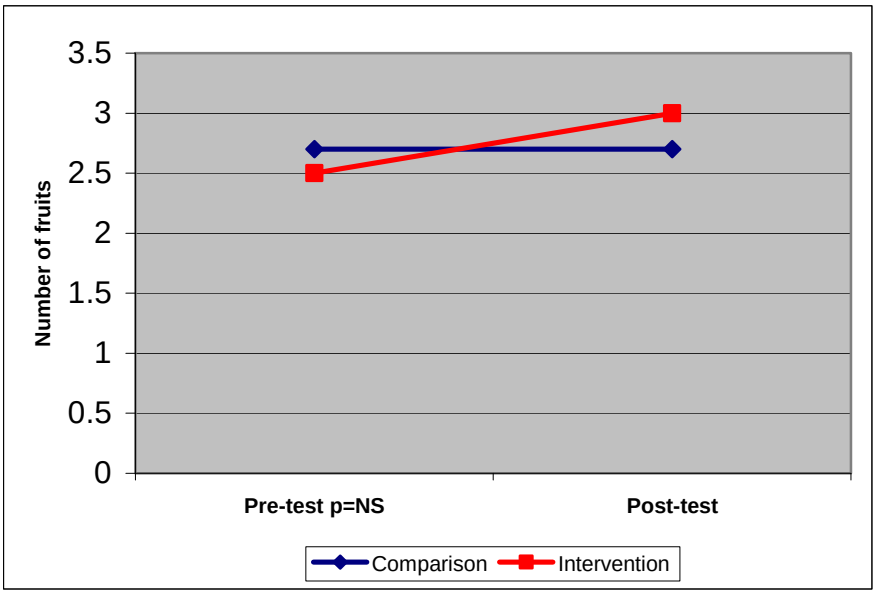


Figure 46 Changes in the number of portions of fruit and vegetables consumed daily; by survey group.

There was a significant difference between the changes in the number of fruit and vegetables portions consumed daily within the comparison group and within the intervention group ($p<0.0001$).

In the comparison group, the consumption of fruit and vegetables did not change during the intervention period, people consuming on average 2.7 portions of fruit and vegetables daily.

In the intervention group, the average number of daily portions increased significantly ($p<0.0001$) from 2.5 to 3.

DID GEOGRAPHY PLAY A ROLE?

Border and non-border areas

The impact of the DFfA intervention on the number of fruit and vegetables portions consumed daily in border areas was not statistically different than its impact in non-border areas.
In both the border and non-border areas, the consumption of fruit and vegetables did not change in the comparison group but increased significantly in the intervention group (p=0.0049 in border areas, p=0.0021 in non-border areas).

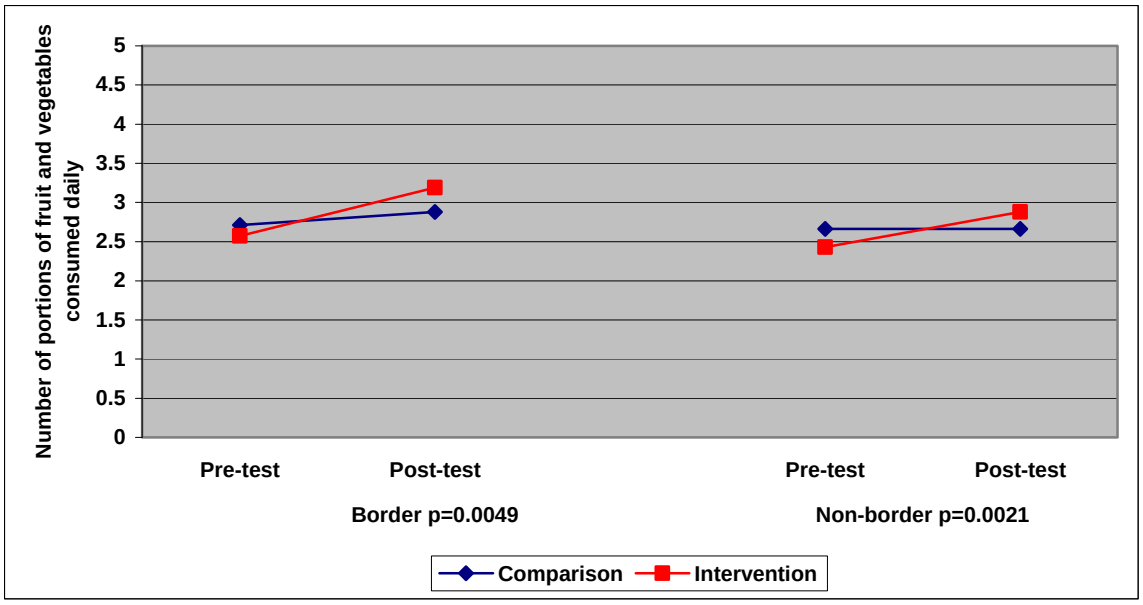


Figure 47 The number of fruit and vegetables portions consumed daily in border and non-border areas

Rural and urban areas

The impact of the DFfA intervention on the number of fruit and vegetables portions consumed daily in rural areas was not statistically different than its impact in urban areas (see Figure 48).

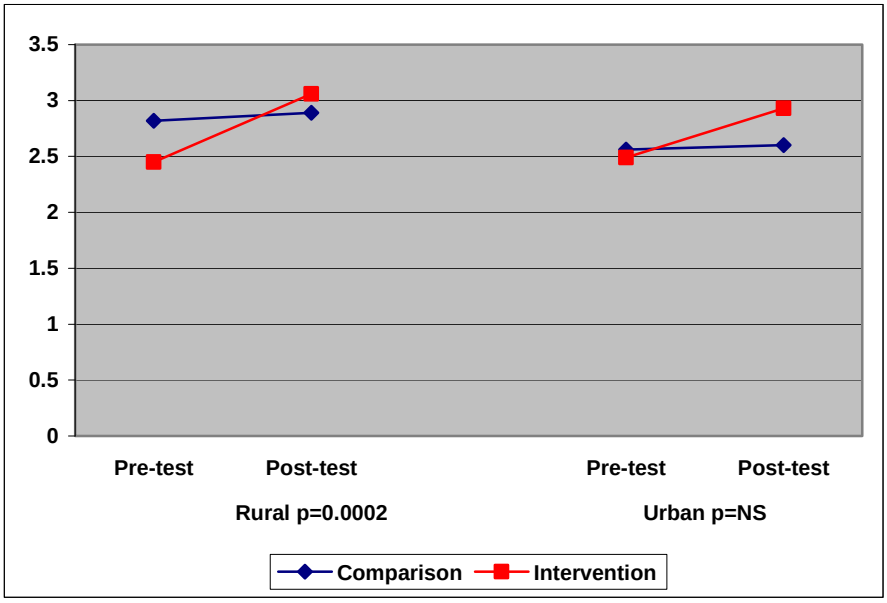


Figure 48 Changes in the number of daily portions of fruit and vegetables consumed in rural and urban areas; by survey group.

In rural areas there was a significant difference between the changes in the number of portions of fruit and vegetables consumed daily within the comparison and within the intervention groups (p=0.0002). No change was observed in the consumption of fruit and vegetables in the comparison group whereas it increased in the intervention group.

In urban areas there was no significant difference between the changes in the number of daily portions of fruit and vegetables within the comparison and within the intervention groups.

Deprived and non-deprived areas

The impact of the DFfA intervention on the daily consumption of fruit and vegetables varied significantly (p=0.0081) with the socio-economic circumstances of the areas (see Figure 49).

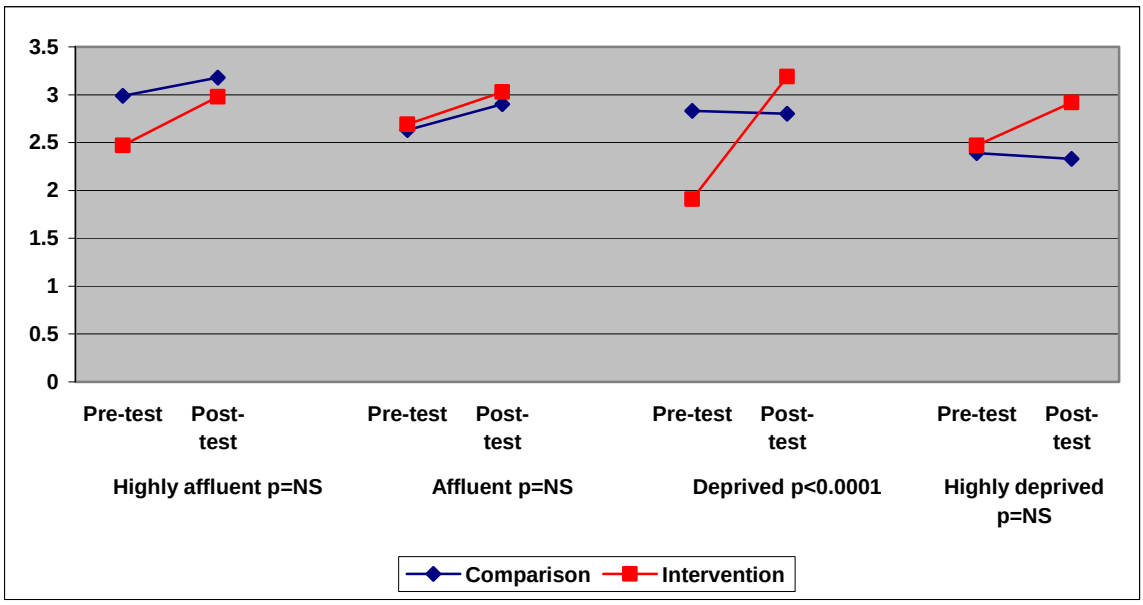


Figure 49 Changes in the number daily portions of fruit and vegetables consumed in deprived and non-deprived areas; by survey group.

The comparison group showed slight increases in the number of fruit and vegetables portions consumed daily in the non-deprived areas and slight decreases in deprived areas (see Figure 49).

The intervention group showed increases in the consumption of fruit and vegetables, across all of the socio-economic circumstances of the areas.

In “deprived” areas, there was a significant difference between the changes in the daily fruit and vegetables consumption within the comparison and intervention groups (p<0.0001). The intake decreased in the comparison group and increased in the intervention group.

DID INDIVIDUAL CHARACTERISTICES PLAY A ROLE?

Gender

The impact of the DFfA intervention on the number of fruit and vegetables portions consumed daily did not vary significantly with gender.
In both males and females, the consumption of fruit and vegetables did not change in the comparison group but increased significantly in the intervention group (p=0.0043 in males, p=0.0012 in females).

Age

The impact of the DFfA intervention on the daily consumption of fruit and vegetables did not vary significantly with age (see Figure 50).

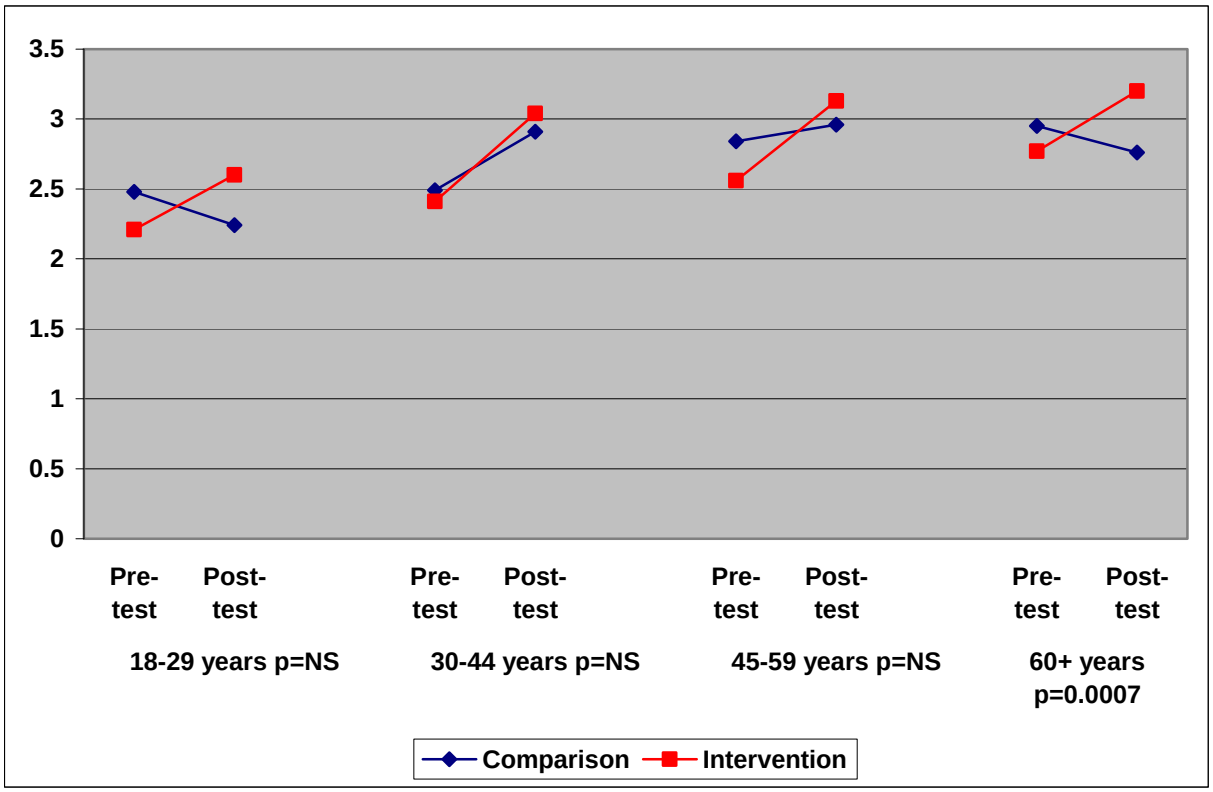


Figure 50 Changes in the number of daily portions of fruit and vegetables consumed amongst the different age groups; by survey group.

The impact was similar in the 30-44 and 45-59 years age groups where increases in the number of daily portions of fruit and vegetables were observed in both the comparison and intervention groups (see figure 50).

The impact was different in both the 18-29 and 60+ years age groups where the increase in the number of fruit and vegetables portions consumed daily in the intervention group contrasted with a decrease in the comparison group. However the difference between the two groups was statistically different in the people aged 60+ only (p=0.0007).

Education

The impact of the DFfA intervention on the daily consumption of fruit and vegetables did not vary significantly with level of education (see Figure 51).

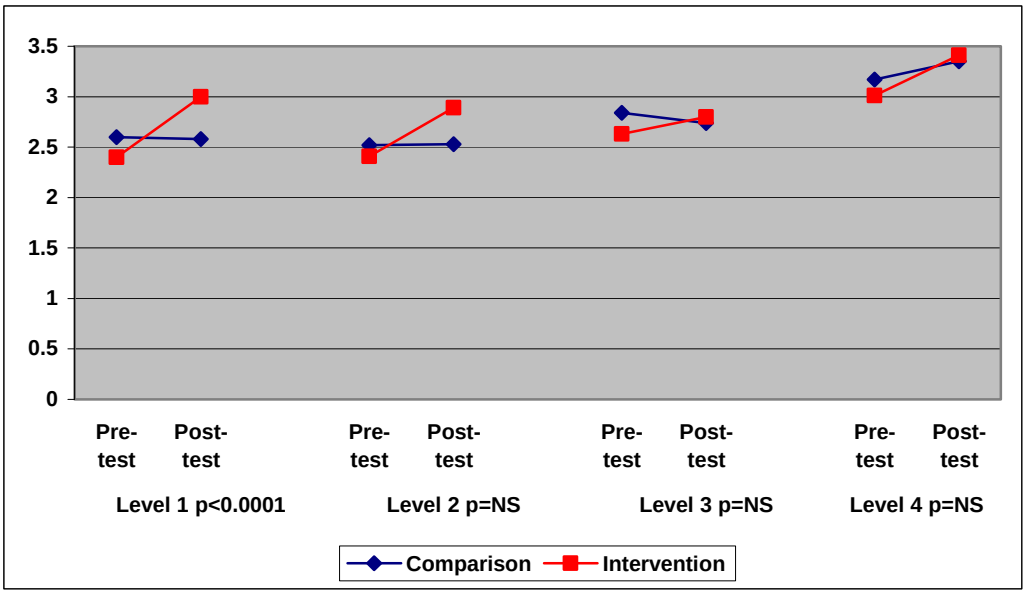


Figure 51 Changes in the number of daily portions fruit and vegetables consumed by education level; by survey group.

The impact of the DFfA intervention on the number of daily portions of fruit and vegetables was not significantly different amongst people who had attained education levels two three and four (see Figure 51).

The DFfA intervention was associated with a significant positive impact amongst people who had no educational qualifications (level one, $p<0.0001$), as the fruit and vegetables consumption did not change in the comparison group and increased in the intervention group.

Employment status

The impact of the DFfA intervention on the daily consumption of fruit and vegetables did not vary significantly with employment status (see Figure 52).

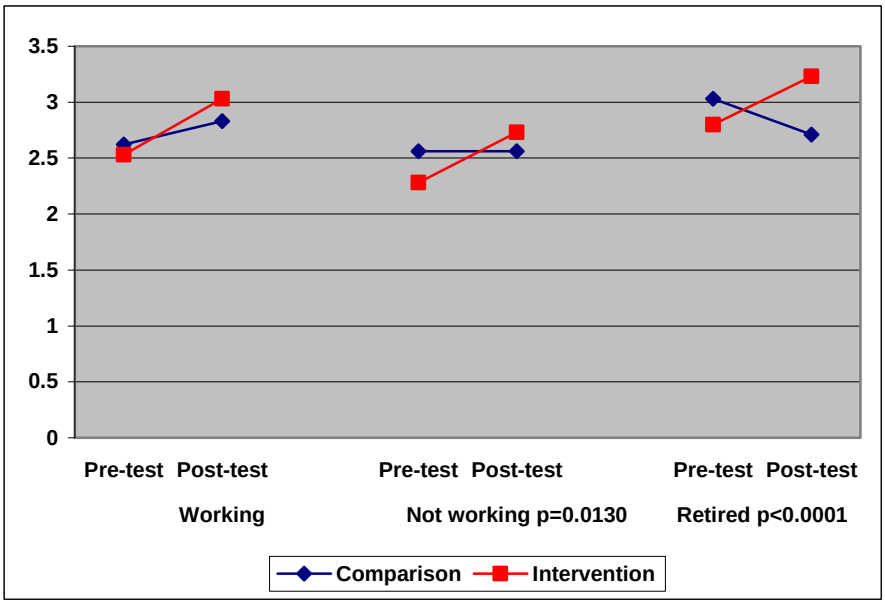


Figure 52 Changes in the number of daily portions fruit and vegetables consumed by employment status; by survey group.

The impact of the DFfA intervention was significantly different among people who were retired ($p<0.0001$) and mariganlly significantly different ($p=0.0130$) among people who were not working. Amongh these groups, consumption of fruit and vegetables increased in the intervention group while decreasing or remaining stable in the comparison group.

In working people, the intervention group showed a larger increase in the daily consumption of fruit and vegetables than the comparison group, but this difference was not statistically significant (see figure 52).

SUMMARY BOX

Prior to the DFfA intervention, the daily consumption of fruit and vegetables was low as only half of the recommended number of portions were consumed. No difference in fruit and vegetable consumption was observed between the comparison and intervention groups at pre-test.

Overall, the impact of the DFfA intervention on the daily consumption of fruit and vegetables was significantly positive. The consumption remained unchanged in the comparison group while it significantly increased in the intervention group.

The impact of the DFfA intervention varied significantly with the level of deprivation in an area. The intervention was associated with a positive impact in “deprived” areas but did not apparear to have a clear impact in other areas.

Consumption of milk or milk products

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys, respondents were asked how often they consume milk or milk products in an average week.

The possible responses were:

- More than once a day
- Once a day
- Most days (3+ a week)
- 1-2 times a week
- Weekly
- Never

The indicator was taken to be the percentage of people who consumed milk or milk products less than once a day, i.e. “Never”, “Weekly”, “1-2 times a week” and “Most days”.

CONSUMPTION OF MILK AND MILK PRODUCTS PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that, in the intervention and comparison groups combined, almost 20% of people consumed milk products less than once a day.

Differences between intervention and comparison groups

In the pre-test community survey, there was no significant difference in the percentage of people who consume dairy products less than once a day between the comparison and intervention groups. (19% and 18% respectively)

DID THE DFFA INTERVENTION IMPROVE THE CONSUMPTION OF DAIRY PRODUCTS?

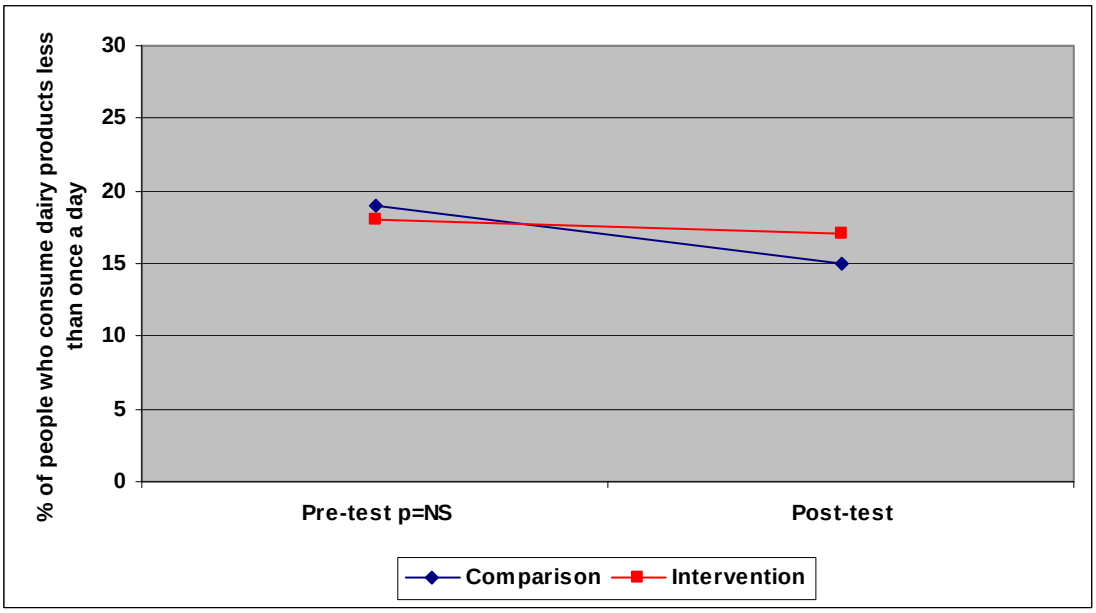


Figure 53 Changes in the percentage of people who consume milk and milk products; by survey group.

There was no significant difference between the changes in the percentage of people who consume dairy products less than once a day within the comparison group and within the intervention group. In the comparison group the proportion of respondents who consume milk and milk products less than once a day did not change significantly during the intervention period (dropping only slightly from 19% to 15%). In the intervention group a similar, non-significant decrease from 18% to 17% was observed.

DID GEOGRAPHY PLAY A ROLE?

Deprived and non-deprived areas

The impact of the DFfA intervention on the percentage of people who consume dairy products less than once a day varied significantly (p=0.0063) with the socio-economic circumstances of the areas (see Figure 54).

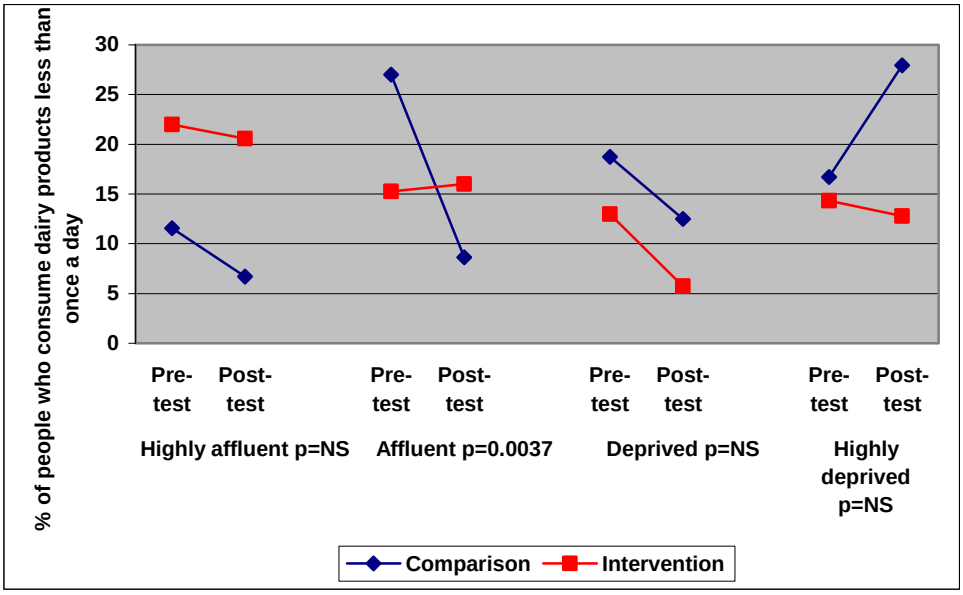


Figure 54 Changes in the percentage of people who consume milk and milk products in deprived and non-deprived areas; by survey group.

In "highly affluent" and "deprived" areas there was no significant difference between the changes in the percentage of people who consume dairy products less than once a day within the comparison and intervention groups as both groups showed similar decreases.

In the "highly deprived" areas, this percentage increased in the comparison group and slightly decreased in the intervention group, but the difference was not statistically significant.

In the "affluent" areas however there was a significant difference in the changes in the consumption of dairy products less than once a day (p=0.0037). The comparison group showed a substantial decrease in dairy consumption, while the intervention group showed a slight increase.

Other geographical features

There was no significant difference between the DFfA's impact in border and non-border areas, and there was no significant difference between its impact in rural and urban areas.

DID ANY INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

There was no evidence that the individual characteristics of age, gender, education and employment status affected the impact of the DFfA intervention.

SUMMARY BOX

At pre-test, almost 20% of people consumed milk and milk products less than once a day. No significant difference in dairy consumption was observed between the comparison and intervention groups at pre-test.

The DFfA intervention had no significant impact on the percentage of people who consumed dairy products less than once a day. Consumption of dairy products decreased similarly in the comparison and intervention groups.

However, the impact of the DFfA intervention varied significantly with the level of deprivation in an area. The intervention was associated with a negative impact in "affluent" areas where the percentage of people who consume dairy products less than once a day decreased substantially in the comparison group while it increased slightly in the intervention group. The intervention did not apparear to have a clear impact in areas with other levels of deprivation.

LIMITATIONS

A limitation of this question was that frequency of consumption was recorded without reference to the number of standard portions. Thus, the responses measure how often the food is consumed rather than how much of the food is consumed.
According to the "Eatwell Plate" recommendations, dairy products should be consumed in reasonable amounts, the most important thing being to reduce the consumption of products high in saturated fats, salt and sugar, essentially cream, butter and had cheeses.
This indicator focused on low consumption of milk and milk products ("less than once a day"). Higher levels of consumption were considered to be in line with dietary recommendations but it was not possible to identify excessive consumption of milk or milk products as the highest daily frequency that could be reported was "more than once a day". Moreover "Milk and milk products" was the only option available in the questionnaire to describe the dairy food group, which does not allow to separate healthy options from thoses that are considered less healthy. This made the interpretation of dietary intake difficult.

Consumption of Fish

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys, respondents were asked how often they eat fish in an average week. The possible responses were:

- More than once a day
- Once a day
- Most days (3+ a week)
- 1-2 times a week
- Weekly
- Never

A specific numeric frequency of fish consumption per week was calculated using the following scheme:

- "More than once a day" was taken to be twice a day which equates to 14 times a week;
- "Once a day" was taken to be a seven times a week;
- Most days (3+ a week) was taken to be four times a week;
- 1-2 times a week was taken to be two times a week;
- Weekly was taken to be one time a week;
- Never was taken to be zero times a week.

CONSUMPTION OF FISH PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that the comparison and intervention groups combined, on average, consumed fish 1.2 times a week.

In the pre-test community survey, the average number of times per week that fish was consumed was not significantly different between the comparison and intervention groups.

DID THE DFFA INTERVENTION INCREASE CONSUMPTION OF FISH?

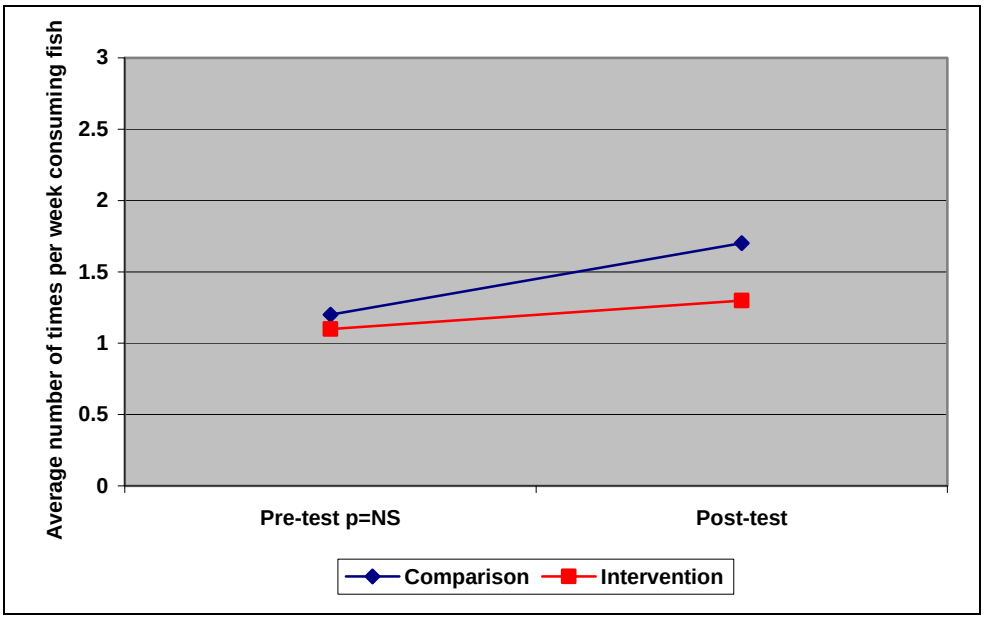


Figure 55 Changes in number of times per week that fish was consumed; by survey group.

There was a significant difference between the changes in the number of times per week that fish was consumed within the comparison group and within the intervention group ($p=0.0009$). In the comparison group, the average number of times per week that fish was consumed increased significantly ($p<0.0001$) during the intervention period from 1.2 to 1.7. There was no significant difference in the number of times per week that fish was consumed in the intervention group which only increased slightly from 1.1 to 1.3.

DID GEOGRAPHY PLAY A ROLE?

Border and non-border areas

The impact of the DFfA intervention on the number of times per week that fish was consumed in border areas was not statistically different than its impact in non-border areas (see Figure 56).

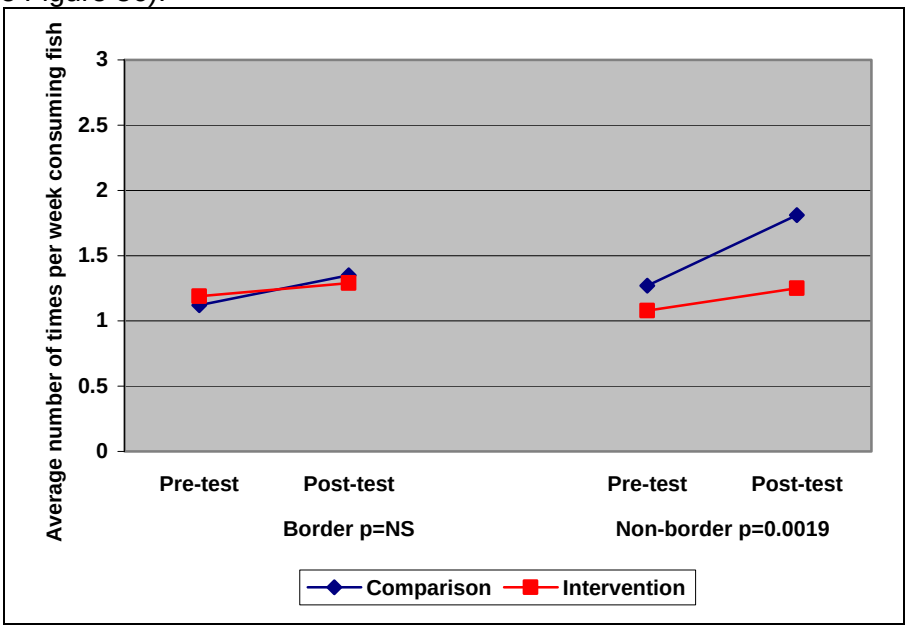


Figure 56 Changes in number of times per week that fish was consumed in border and non-border areas; by survey group.

In border areas there was no significant difference between the changes in the number of times per week that fish was consumed within the comparison and within the intervention groups as both groups showed slight increases. In non-border areas there was a significant difference between the changes in the number of times per week that fish was consumed within the comparison and within the intervention groups (p=0.0019) as the increase observed in non-border comparison areas was greater than the increase observed in non-border intervention areas.

Rural and urban areas

The impact of the DFfA intervention on the number of times per week that fish was consumed in rural areas was statistically different (p=0.0093) than its impact in urban areas (see Figure 57).

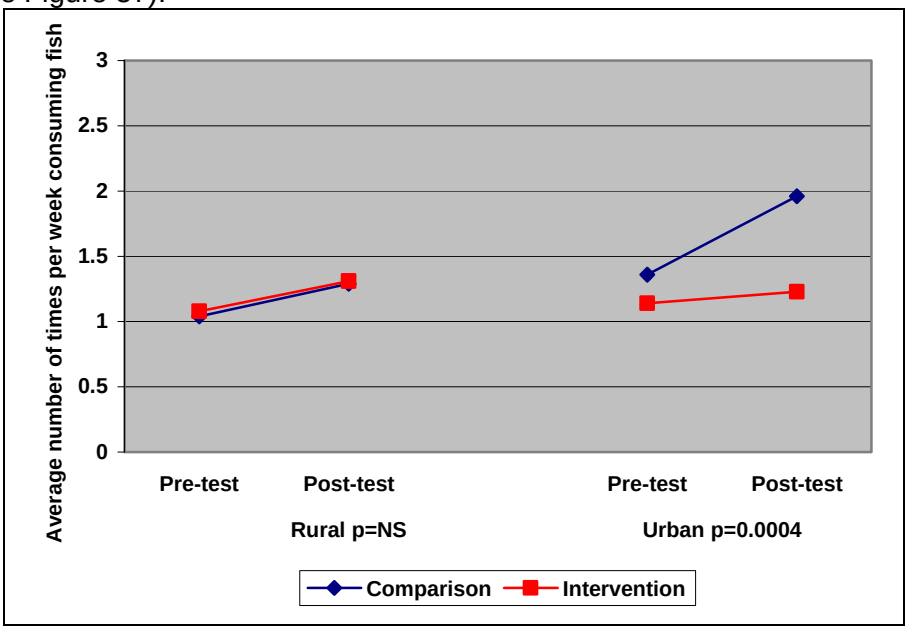


Figure 57 Changes in number of times per week that fish was consumed in rural and urban areas; by survey group.

In rural areas there was no significant difference between the changes in the number of portions of fish consumed weekly within the comparison and within the intervention groups as both groups show similar, small increases. In urban areas there was a significant difference between the changes in the number of times per week that fish was consumed within the comparison and within the intervention groups (p=0.0004) as the increase observed in urban comparison areas was greater than the increase observed in urban intervention areas.

Deprived and non-deprived areas

The impact of the DFfA intervention on the number of times per week that fish was consumed did not vary significantly with the socio-economic circumstances in an area (see Figure 58).

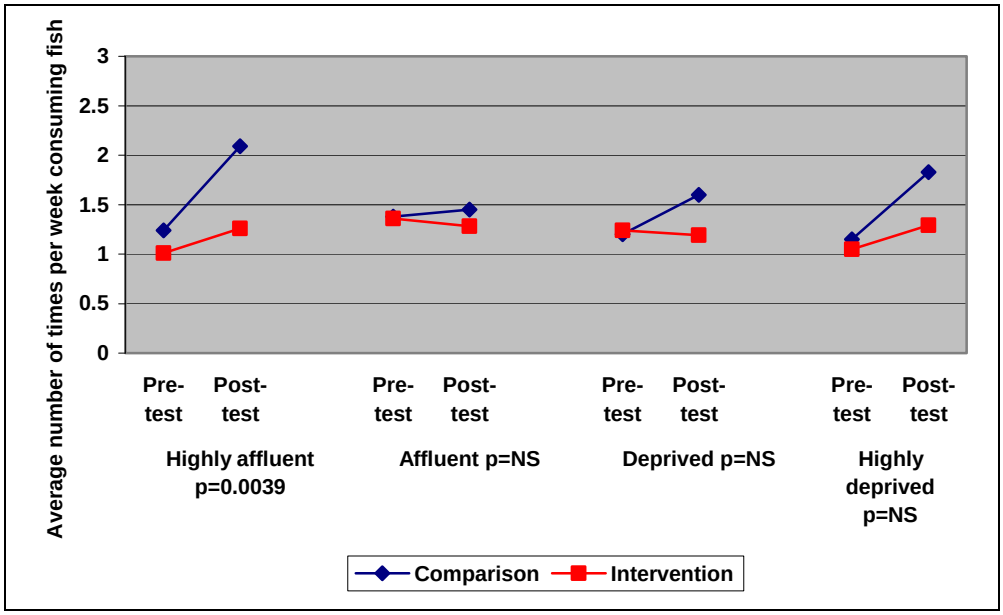


Figure 58 Changes in the number of times per week that fish was consumed in deprived and non-deprived areas; by survey group.

The comparison group showed increases in the number of times per week that fish was consumed at all levels of deprivation though the increase in “affluent” areas was very slight. The intervention group showed small increases in the “highly affluent” and “highly deprived” areas and slight decreases in “affluent” and “deprived areas”. In “highly affluent” areas, fish consumption increased significantly more in the comparison group than in the intervention group (p=0.0039).

DID INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

Gender

The impact of the DFfA intervention on the number of times per week that fish was consumed amongst males was not statistically different than its impact amongst females (see Figure 59).

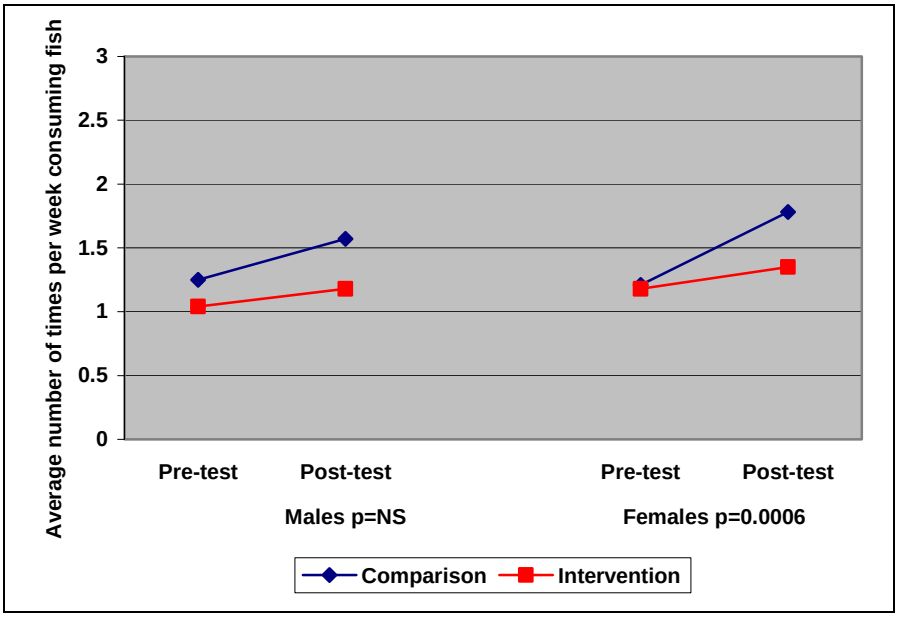


Figure 59 Changes in the number of times per week that fish was consumed amongst males and females; by survey group.

Amongst males there was no significant difference between the changes in the number of times per week that fish was consumed within the comparison and within the intervention groups as both groups showed similar increases. Amongst females there was a significant difference between the changes in the number of times per week that fish was consumed within the comparison and within the intervention groups (p=0.0006) as the increase observed in the female comparison group was greater than the increase observed in the female intervention group.

Age

The impact of the DFfA intervention on the number of times per week that fish was consumed did not vary significantly with age (see Figure 60).

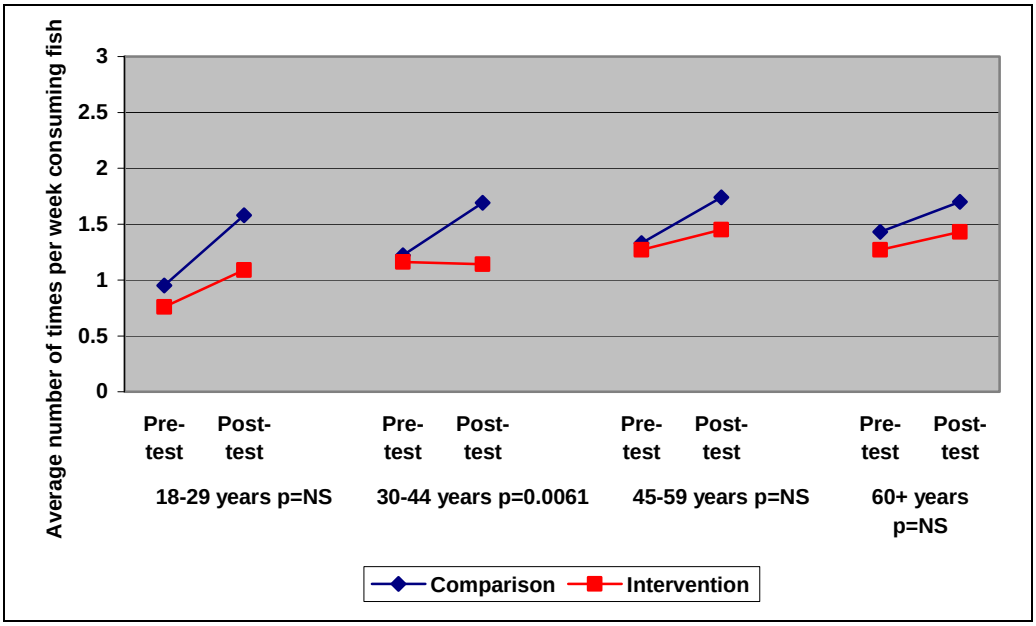


Figure 60 Changes in the number of times per week that fish was consumed amongst age groups; by survey group.

The impact of the DFfA intervention was similar in the 18-29 years, 45-59 years and 60+ years age groups where increases in fish consumption were observed in both the comparison and intervention groups. The impact was significantly different in the 30-44 years age group where an increase in fish consumption in the comparison group contrasted with a slight decrease in the intervention group (p=0.0061).

Education

The impact of the DFfA intervention on the number of times per week that fish was consumed did not vary significantly with education level (see Figure 61).

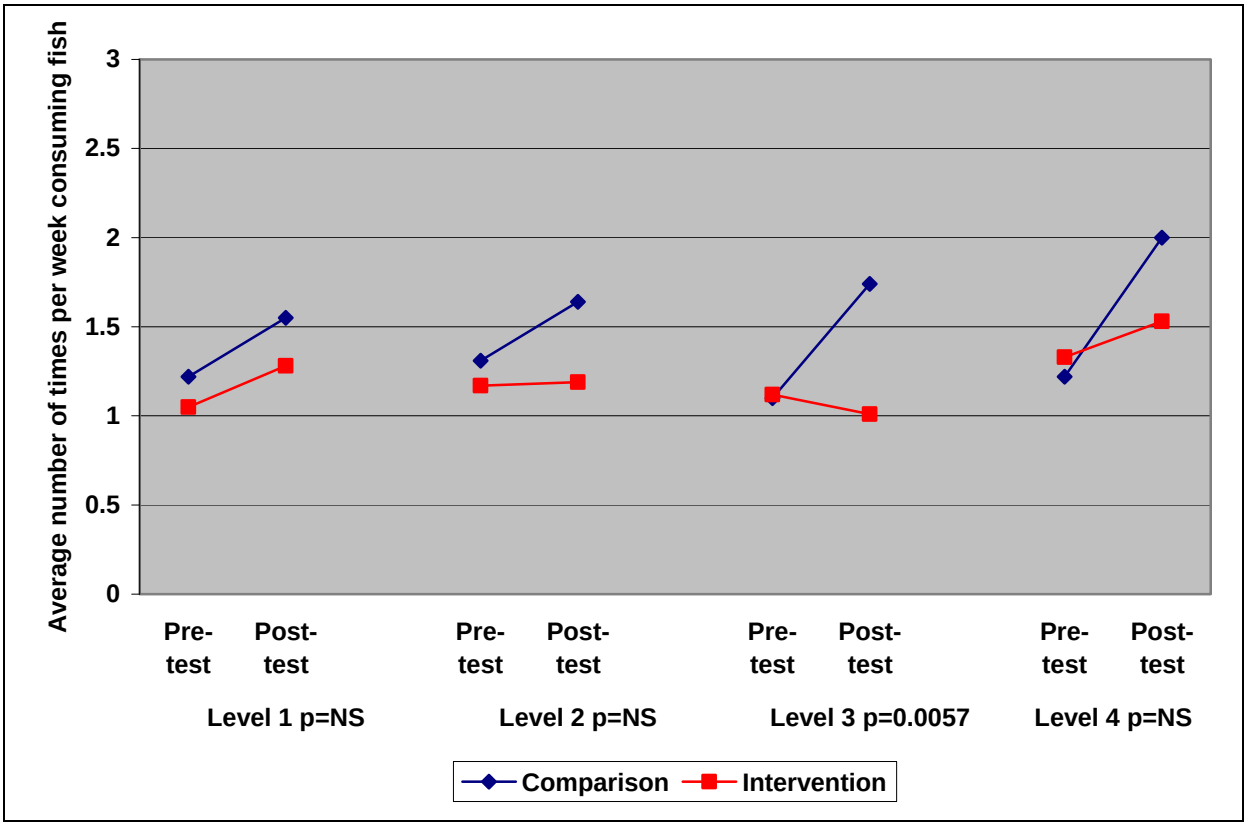


Figure 61 Changes in the number of times per week that fish was consumed by level of education; by survey group.

There was a significant difference in fish consumption amongst people who had attained educational Level 3 where a decrease in the intervention group contrasted with an increase in the comparison group (p=0.0057). In the other three levels of ecudation, smaller increases in fish consumption were observed in the intervention group than in the comparison group but none of these differences were statistically significant.

Employment

The impact of the DFfA intervention on the number of times per week that fish was consumed did not vary significantly with employment status (see Figure 62).

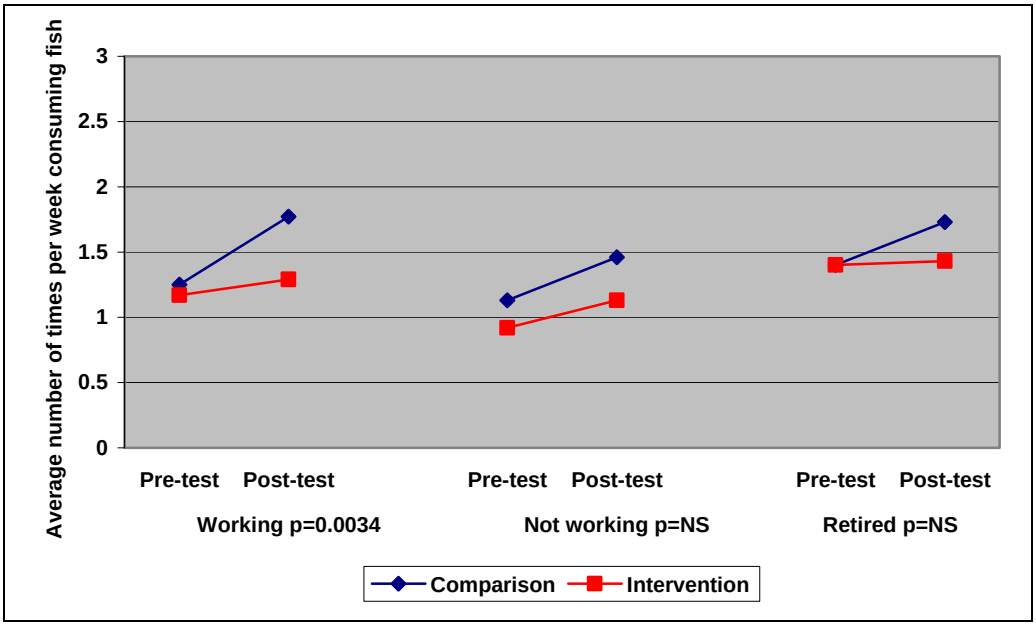


Figure 62 Changes in the number of times per week that fish was consumed by employment status; by survey group.

Consumption of fish increased in all employment categories in both the comparison and intervention groups apart from retired people in the intervention group whose fish consumption remained unchanged. The impact of the DFfA intervention was significantly different among people who were working where a greater increase in fish consumption was observed in the comparison group than in the intervention group (p=0.0034). No significant impact was observed among people who were not working or people who were retired.

SUMMARY BOX

At pre-test, people consumed fish 1.2 times a week on average in both the comparison and intervention groups. There were no significant differences in the number of times per week that fish was consumed between the comparison and intervention groups at pre-test.

Overall, the impact of the DFfA intervention on the level of fish consumption was significantly negative. From having similar levels of fish consumption at pre-test, the comparison group showed a significant increase during the intervention period while the smaller increase observed in the intervention group was not significant.

The impact of the DFfA intervention's on fish consumption was statistically different in rural and urban areas. The DFfA intervention did not appear to have any clear impact in rural areas but was associated with a negative impact in urban areas where a smaller increase in fish consumption was observed in the intervention group than in the comparison group.

LIMITATIONS

A limitation of this question was that frequency of consumption was recorded without reference to the number of standard portions. Thus, the responses measure how often the food is consumed rather than how much of the food is consumed. The upper limit of "more than once a day" was not a major issue for the consumption of fish as only two people indicated that they consumed fish more than once a day.

DEFINITION OF INDICATOR

In both the pre-test and post-test community surveys, respondents were asked how often they eat the following food and drinks high in fat and/or sugar in an average week:

- Biscuits
- Confectionary
- Cakes
- Savoury snacks
- Fizzy drinks and squashes
- Chips
- Fried foods (excluding chips)
- Ready made meals

The possible responses were:

- More than once a day
- Once a day
- Most days (3+ a week)
- 1-2 times a week
- Weekly
- Never

The weekly frequencies for each of the eight foods were converted into daily frequencies. The individual daily frequencies for each food were summed to give a total daily frequency for the prescribed food and drinks high in fat and/or sugar. The indicator was taken to be the percentage of people who consumed the prescribed food and drinks high in fat and/or sugar three or more times a day.

CONSUMPTION OF FOOD AND DRINKS HIGH IN FAT AND/OR SUGAR PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that in the comparison and intervention groups combined more than one third of people (35%) consumed food and drinks high in fat and/or sugar three or more times a day.

There was no significant difference in the percentage of people in the comparison (32%) and intervention (38%) groups who consumed food and drinks high in fat and/or sugar three or more times a day.

DID THE DFFA INTERVENTION REDUCE CONSUMPTION OF FOOD AND DRINKS HIGH IN FAT AND/OR SUGAR?

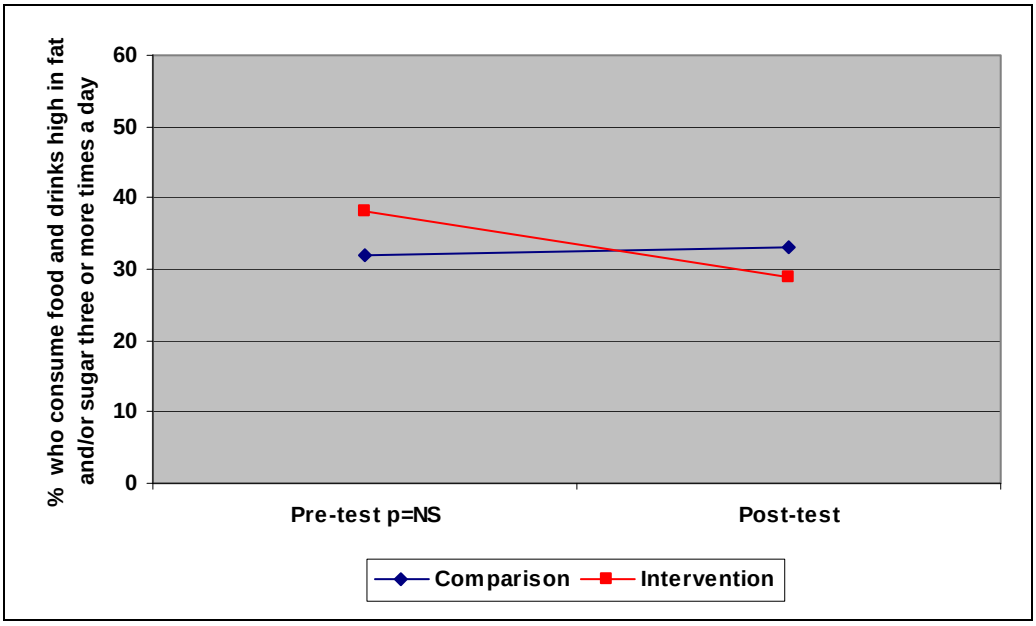


Figure 63 Changes in the percentage of people who consume food and drinks high in fat and/or sugar three or more times a day; by survey group.

There was a significant difference between the changes in the consumption of food and drinks high in fat and/or sugar within the comparison group and within the intervention group (p=0.0053). This was only marginally significant when adjusted for differences in education level (p=0.0134). This suggests that some of the difference between changes may be due to differences in education level between the groups at pre-test and post-test.

In the comparison group, there was a slight increase during the intervention period from 32% to 33% in the percentage of people who consumed food and drinks high in fat and/or sugar three or more times a day but this increase was not statistically significant. In the intervention group, the percentage of people who consumed food and drinks high in fat and/or sugar three or more times a day significantly decreased from 38% to 29% during the intervention period (p=0.0040). This significant decrease was not explained by differences in education level, employment status, or border area within the intervention group at pre-test and post-test.

DID GEOGRAPHY PLAY A ROLE?

There was no evidence that the impact of the DFfA intervention on the level of consumption of food and drinks high in fat and/or sugar was significantly different in border and non-border areas or urban and rural areas. Similarly, the impact of the DFfA intervention on the level of consumption of food and drinks high in fat and/or sugar did not vary with the socio-economic circumstances in an area.

DID INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

Education level

The impact of the DFfA intervention on the percentage of people who consumed food and drinks high in fat and/or sugar three or more times a day varied significantly (p=0.0022) with level of education (see Figure 64).

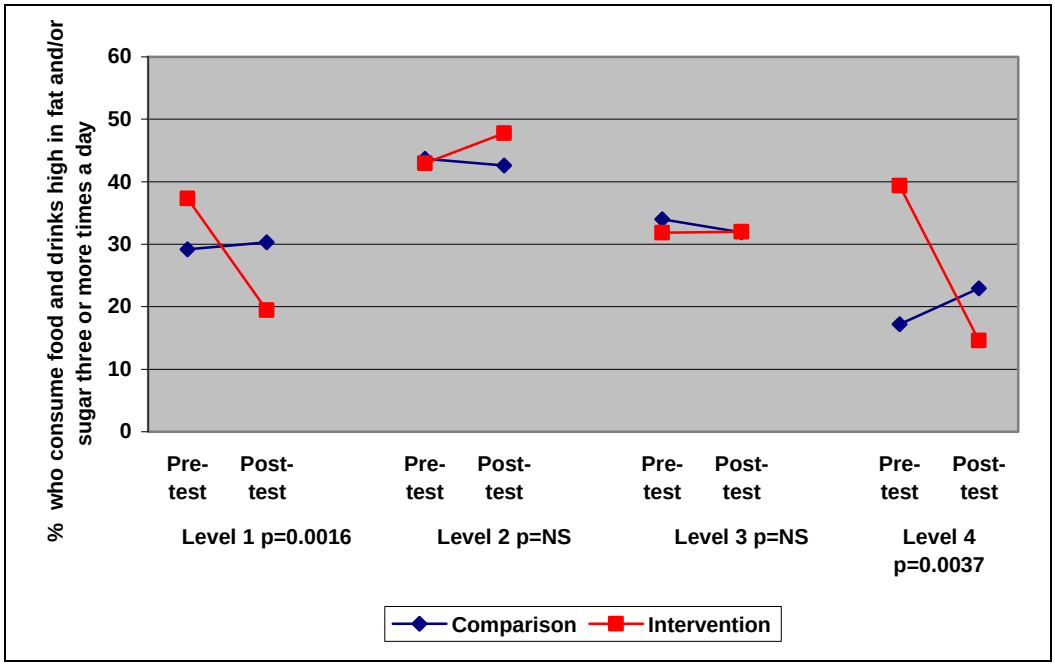


Figure 64 Changes in the percentage of people who consume food and drinks high in fat and/or sugar three or more times a day by level of education; by survey group.

The impact of the DFfA intervention on the level of consumption of food and drinks high in fat and/or sugar was not significantly different amongst people who had attained education levels 2 and 3. The DFfA intervention was associated with a significantly positive impact amongst people who had no educational qualifications (Level 1; p=0.0166) and people who had the highest level of educational attainment (Level 4; p=0.0037). Amongst people at these education levels, consumption of food and drinks high in fat and/or sugar reduced substantially in the intervention group while increasing slightly in the comparison group.

Other individual characteristics

There was no evidence that individual characteristics of gender, age or employment status affected the impact of the DFfA intervention on the level of consumption of food and drinks high in fat and/or sugar.

SUMMARY BOX

At pre-test, more than one third of people consumed food and drinks high in fat and/or sugar three or more times a day. The level of consumption of these types of foods was not significantly different between the comparison and intervention groups.

Overall, the impact of the DFfA intervention on the level of consumption of food and drinks high in fat and/or sugar was marginally positive. Consumption of high-fat or high-sugar foods significantly decreased in the intervention group while consumption remained unchanged in the comparison group.

The impact of the DFfA intervention on consumption of foods high in fat or high in sugar varied significantly with level of education. The DFfA intervention had a significantly positive effect amongst people with the lowest and highest levels of educational attainment.

LIMITATIONS

As for other dietary indicators, a limitation of this question was that frequency of consumption of these foods was recorded without reference to the number of standard portions. Thus, the responses measure how often the food is consumed rather than how much of the food is consumed. Furthermore, the highest frequency a person could indicate for each of the eight foods was “more than once a day”. A conservative assumption of twice a day was made for these responses which may underestimate frequency of consumption. This made the interpretation of dietary intake difficult.

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys respondents were read out a list of ten food safety behaviours that people may exhibit when dealing with food. The behaviours comprised:

- Follow manufacturers' instructions for preparation and cooking of food
- Wash your hands with soap and water before handling food
- Keep raw food below cooked food in the fridge
- Keep kitchen utensils and chopping boards clean
- Eat food that is past its "best before" date
- Ensure that food in your fridge is in covered containers or is properly wrapped
- Ensure that pets cannot come into contact with food
- Store perishable foods in a fridge at home within two hours of buying them
- Wash utensils (e.g. chopping boards), between preparing raw meat and cooked food
- Check that your fridges and freezers are at the right temperature.

For each action, respondents were asked how often they exhibited that behaviour and the possible responses were:

- Always
- Usually
- Sometimes
- Rarely
- Never
- Don't know

The indicator was taken to be the percentage of people who stated that they "Always" complied with all ten food safety practices.

COMPLIANCE WITH FOOD SAFETY PRACTICES PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that 15% of people always complied with the ten food safety practices when dealing with food.

In the pre-test community survey, the average percentage of people who always complied with the ten food safety practices when dealing with food was significantly higher ($p=0.0005$) in the comparison group (18%) than it was in the intervention group (11%).

DID THE DFFA INTERVENTION IMPROVE COMPLIANCE WITH FOOD SAFETY PRACTICES?

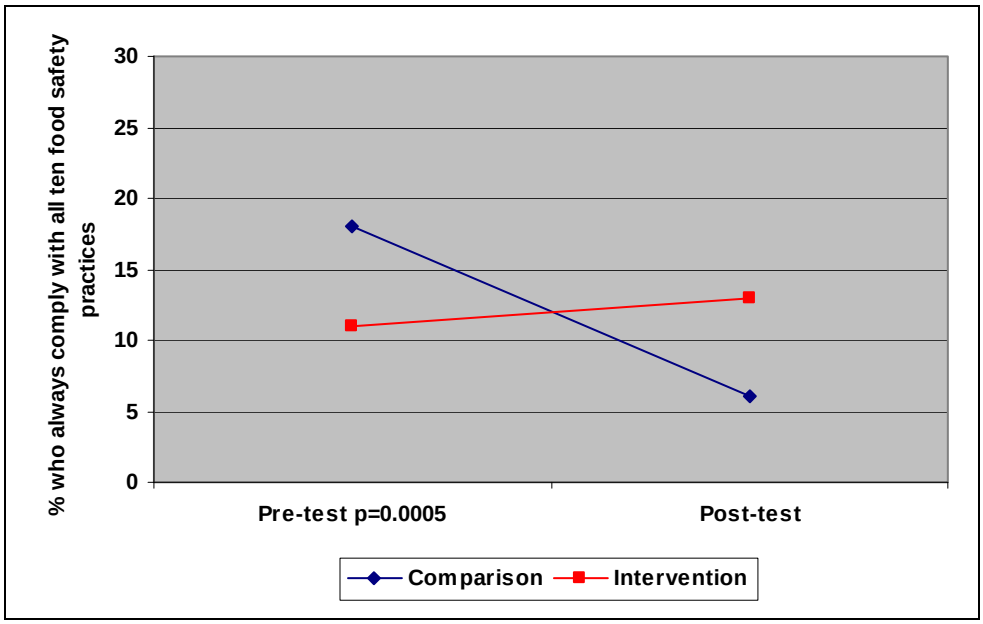


Figure 65 Changes in compliance with food safety practices; by survey group

There was a significant difference between the changes in compliance with food safety practices within the comparison group and within the intervention group ($p<0.0001$). While no significant difference was observed in the intervention group, the comparison group's compliance with food safety practices decreased significantly during the intervention period ($p<0.0001$).

DID GEOGRAPHY PLAY A ROLE?

Border and non-border areas

The impact of the DFfA intervention on compliance with food safety practices in border areas was not statistically different than its impact in non-border areas (see Figure 66).

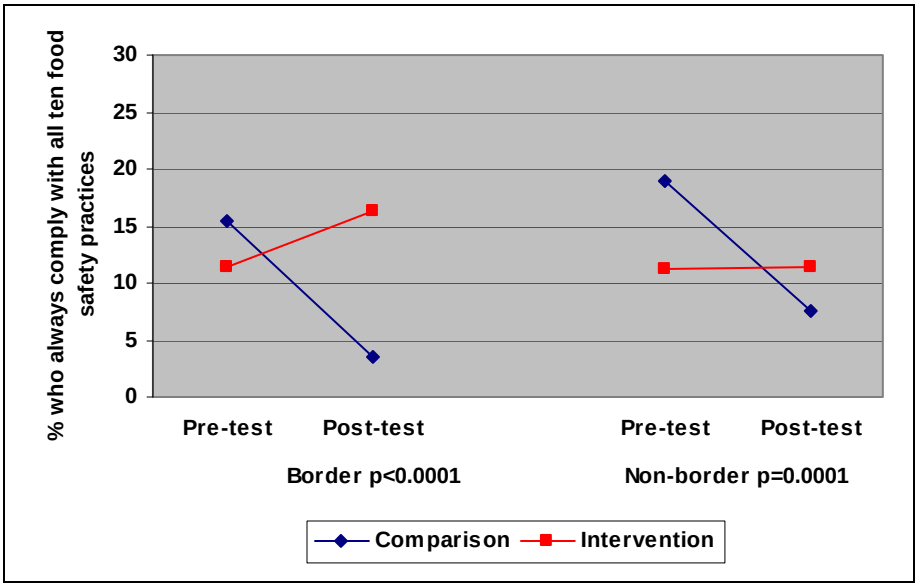


Figure 66 Changes in compliance with food safety practices in border and non-border areas; by survey group.

In border areas, compliance with food safety practices decreased substantially in the comparison group while it increased in the intervention group. The difference between the changes within the groups in border areas was statistically significant (p<0.0001). In non-border areas, compliance with food safety practices decreased substantially in the comparison group while remaining relative stable in the intervention group. The difference between the changes within the groups in non-border areas was statistically significant (p=0.0001).

Rural and urban areas

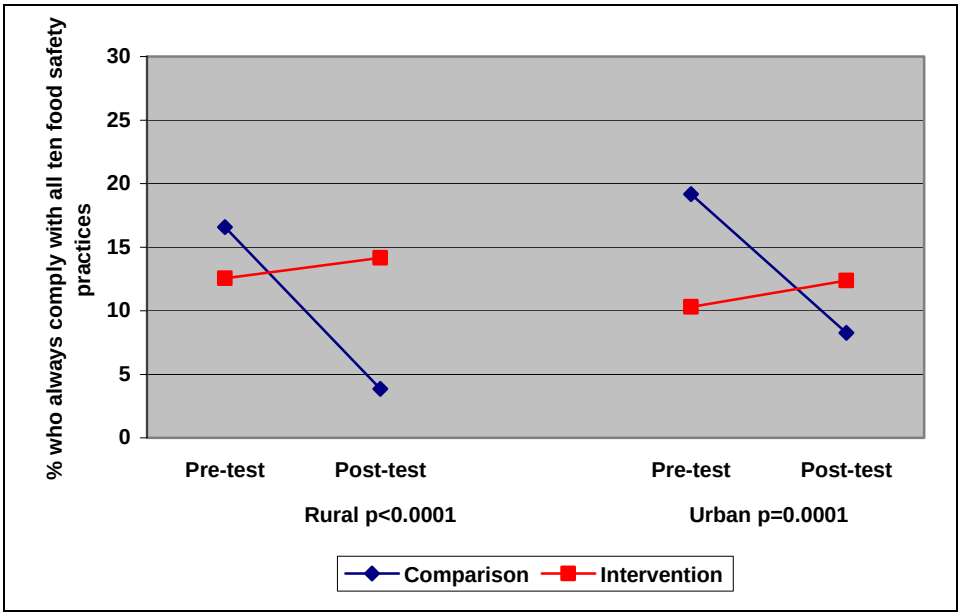


Figure 67 Changes in compliance with food safety practices in rural and urban areas; by survey group

The impact of the DFfA intervention on compliance with food safety practices was very similar in rural and urban areas. In both areas, compliance with food safety practices in the comparison group decreased substantially while compliance with food safety practices in the intervention group increased slightly. The impact was statistically significant in both rural (p<0.0001) and urban (p=0.0001) areas.

Deprived and non-deprived areas

The impact of the DFfA intervention on compliance with food safety practices did not vary significantly with the socio-economic circumstances in an area (see Figure 68).

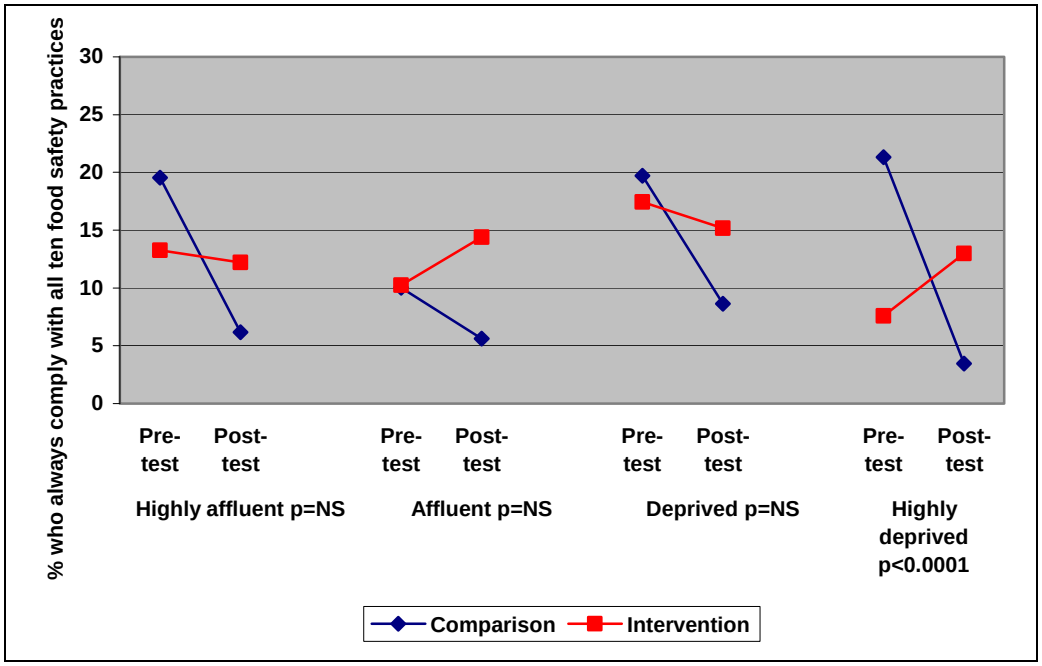


Figure 68 Changes in compliance with food safety practices in deprived and non-deprived areas; by survey group.

In “highly affluent”, and “deprived” areas, the comparison group’s compliance with food safety practices decreased substantially while compliance in the intervention group decreased to a much lesser extent. In “affluent” areas, a decrease in compliance in the comparison group contrasted with an increase in compliance in the intervention group.

However, none of these differences between the changes in within the groups was statistically significant. In “highly deprived” areas, there was a statistically significant difference between the substantial decrease in compliance in the comparison group and the increase in compliance in the intervention group ($p<0.0001$).

DID INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

Gender

The impact of the DFfA intervention on compliance with food safety practices amongst males was not statistically different than its impact amongst females (see Figure 69).

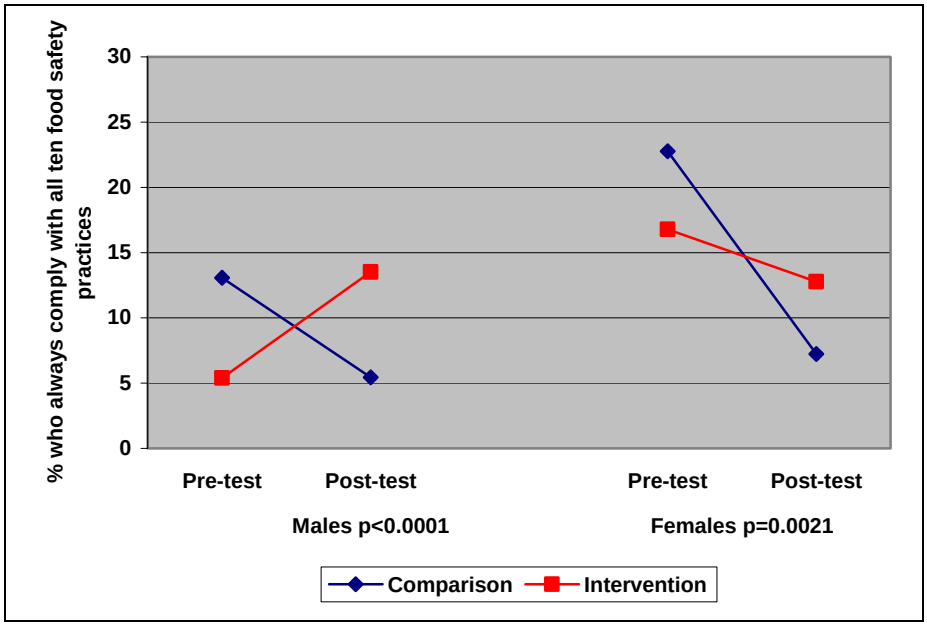


Figure 69 Changes in compliance with food safety practices amongst males and females; by survey group.

Amongst males, compliance with food safety practices decreased substantially in the comparison group while it increased substantially in the intervention group. The difference between the changes within the groups was statistically significant ($p<0.0001$). Amongst females, compliance with food safety practices decreased substantially in the comparison group while decreasing to a lesser extent in the intervention group. The difference between the changes within the groups was statistically significant ($p=0.0021$).

Age

The impact of the DFfA intervention on compliance with food safety practices did not vary significantly with age (see Figure 70).

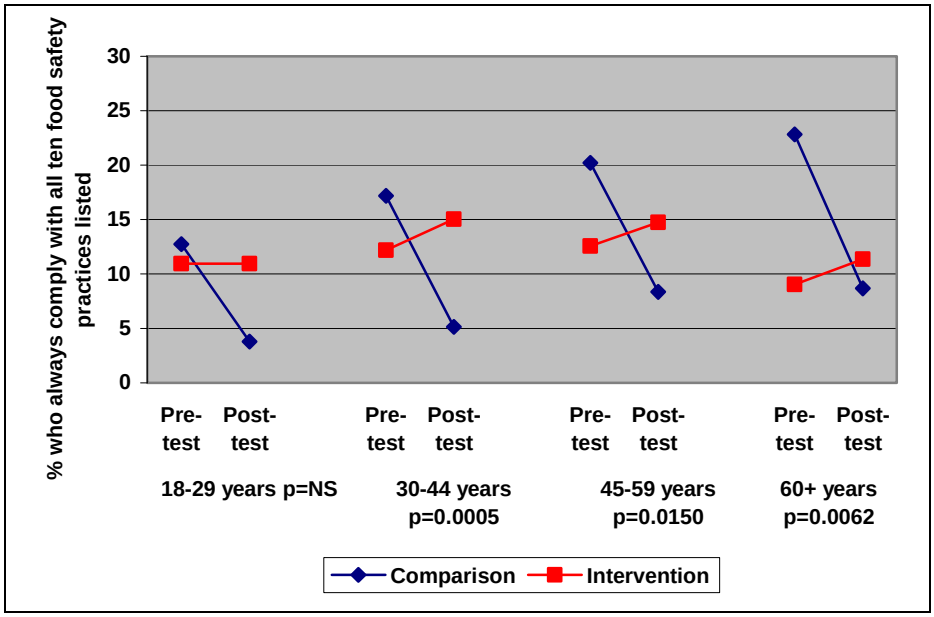


Figure 70 Changes in compliance with food safety practices amongst age groups; by survey group.

The impact of the DFfA intervention was similar in all but the youngest age group. For the three older age groups, substantial decreases in compliance with food safety practices in the comparison group contrasted with increases in the intervention group. These differences between the changes within the comparison and within the intervention groups was significant in the 30-44 years age group (p=0.0005), marginally significant in the 45-59 year age group (p=0.0150) and significant in the 60+ years age group (p=0.062).

Amongst people aged 18-29 years, compliance with food safety practices decreased in the comparison group while remaining unchanged in the intervention group. This difference between the changes within the comparison and within the intervention groups was not statistically significant.

Education

The impact of the DFfA intervention on compliance with food safety practices did not vary significantly with education (see Figure 71).

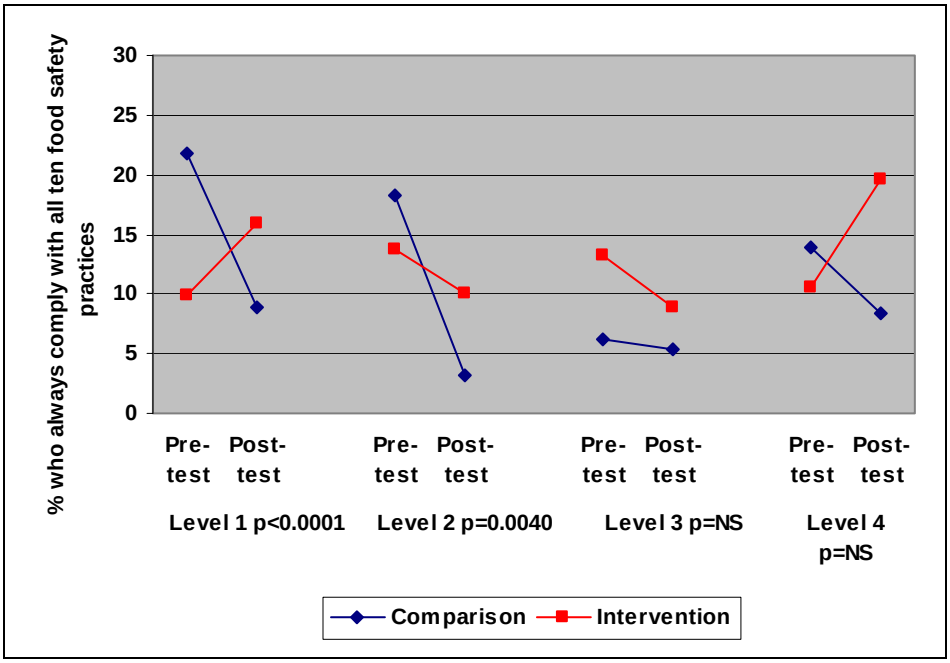


Figure 71 Changes in compliance with food safety practices by level of education; by survey group.

Among people who had no educational qualifications (Level 1) and people who had attained educational level 4, compliance with food safety practices decreased in the comparison group while it increased in the intervention group. This difference between the changes within the groups was significant for educational Level 1 ($p<0.0001$) but not significant for educational Level 4. Among people who had attained educational Level 2, compliance with food safety practices decreased in both the comparison and intervention groups but the decrease observed in the intervention group was significantly smaller ($p=0.0040$). Compliance with food safety practices decreased similarly among people who had attained educational Level 3.

Employment

The impact of the DFfA intervention on compliance with food safety practices did not vary significantly with employment status (see Figure 72).

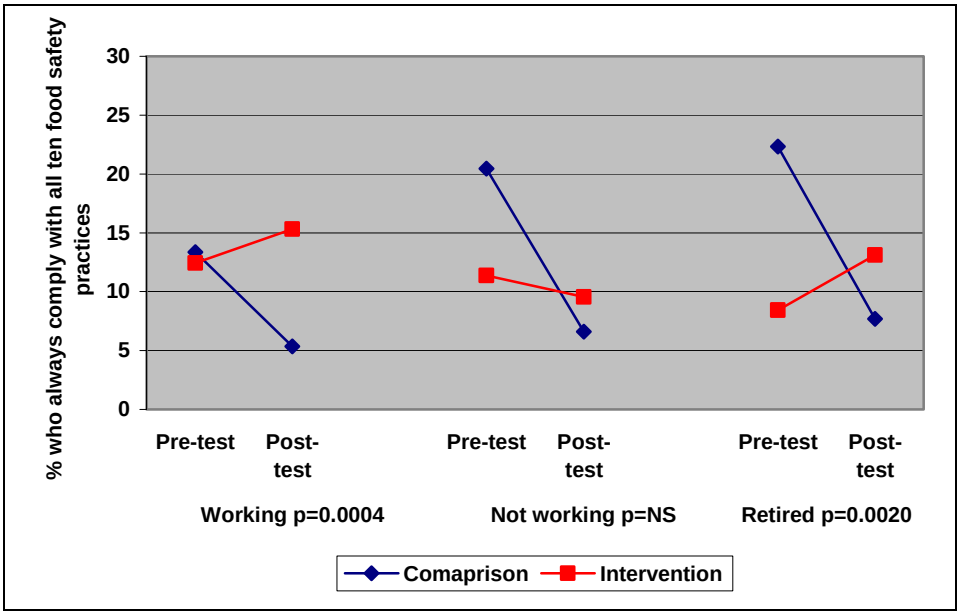


Figure 72 Changes in compliance with food safety practices by employment status; by survey group.

Among working and retired people, compliance with food safety practices increased in the intervention group while decreasing in the comparison group. These differences between the changes in compliance within the intervention and within the comparison groups were statistically significant for both working people (p=0.0004) and retired people (p=0.0020). Among those not working, compliance with food safety practices decreased more in the comparison group than it did in the intervention group but this difference between these decreases was not statistically significant.

SUMMARY BOX

At pre-test, 15% of people always complied with the ten listed food safety practices. The level of compliance with food safety practices was significantly higher in the comparison group than it was in the intervention group at pre-test.

Overall, the impact of the DFfA intervention on the level of compliance with food safety practices was significantly positive. Although compliance was significantly higher in the comparison group at pre-test, it decreased substantially during the intervention period while compliance remained stable in the intervention group.

LIMITATIONS

A limitation of this question may be that only the ten prescribed items, with which the respondent was prompted, counted as demonstrating compliance with food safety practices. The ten specific examples that were used in the survey item were developed with the help of a nutritionist and could be considered to provide a broad range of behaviours that demonstrate compliance with food safety practices.

A second limitation may be that compliance with all ten food safety practices was required. This strict measure of compliance with food safety practices may underestimate the general level of compliance with this type of behaviour.

Regular physical activity

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys respondents were read out a definition of "regular physical exercise":

"Regular physical exercise is considered as taking part in exercise or sport two-three times per week for a minimum of 20 minutes at a time, or more general activities like walking, cycling or dancing four-five times a week accumulating to at least 30 minutes per day.".

Respondents were asked, with this definition in mind, which of the following statements best described how physically active they had been over the previous six months

- I am not regularly physically active and do not intend to be so in the next six months;
- I am not regularly physically active but am thinking about starting to do so in the next 6 months;
- I do some physical activity but not enough to meet the description of regular physical activity stated by the interviewer;
- I am regularly physically active but only began in the last six months;
- I am regularly physically active & have been doing so for longer than six months.

To indicate physical activity, the percentage of people who had begun to be physically active within the previous six months or had been physically active for longer than six months was used.

PHYSICAL ACTIVITY PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that one third (34%) of people in the comparison and intervention groups combined had begun to be physically active within the previous six months or had been physically active for longer than six months.

In the pre-test community survey, physical activity was significantly higher (p=0.0038) in the comparison group (38%) than it was in the intervention group (30%).

DID THE DFfA INTERVENTION IMPROVE PHYSICAL ACTIVITY?

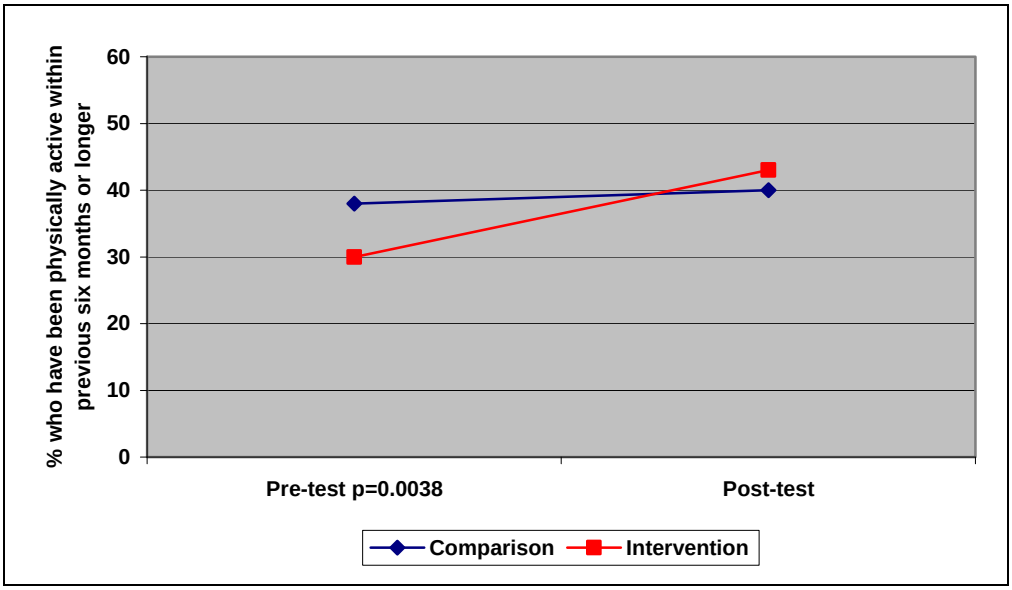


Figure 73 Changes in level of physical activity; by survey group

There was a significant difference between the changes in level of physical activity within the comparison group and within the intervention group (p=0.0039). While no significant difference was observed in the comparison group, the intervention group's level of physical activity increased significantly during the intervention period (p<0.0001).

DID GEOGRAPHY PLAY A ROLE?

Border and non-border areas

The impact of the DFfA intervention on level of physical activity in border areas was not statistically different than its impact in non-border areas (see Figure 74).

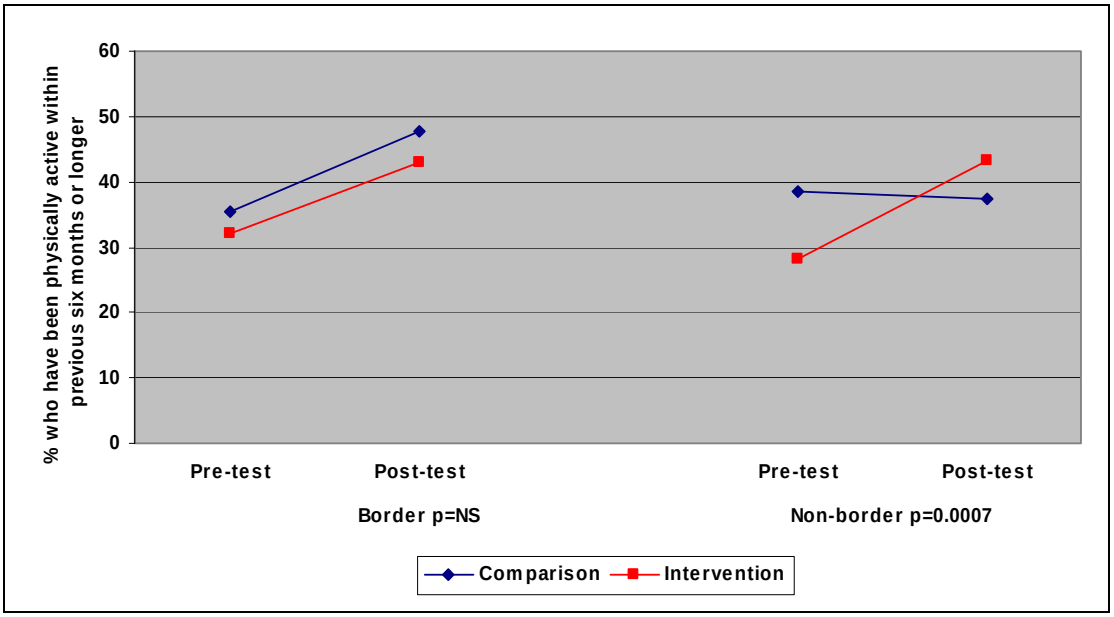


Figure 74 Changes in level of physical activity in border and non-border areas; by survey group.

In border areas, level of physical activity increased similarly in both the comparison and intervention groups. In non-border areas, level of physical activity remained relatively stable in the comparison group while it increased in the intervention group. The difference between the changes within the groups in non-border areas was statistically significant (p=0.0007).

Rural and urban areas

The impact of the DFfA intervention on level of physical activity in rural areas was not statistically different than its impact in urban areas (see Figure 75).

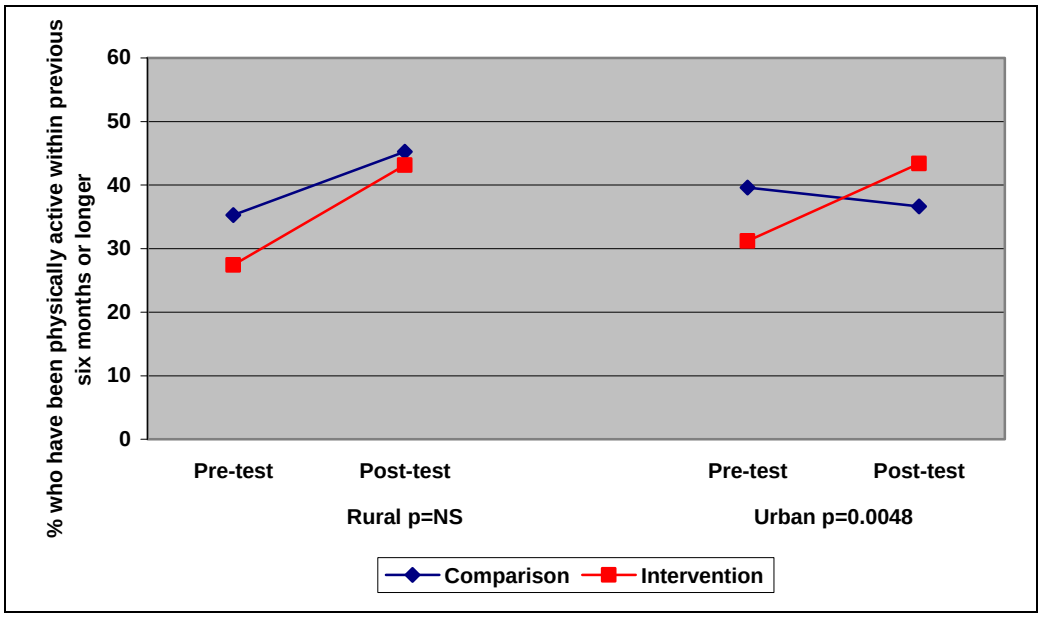


Figure 75 Changes in level of physical activity in rural and urban areas; by survey group.

In rural areas, level of physical activity increased similarly in both the comparison and intervention groups. In urban areas, level of physical activity decreased slightly in the comparison group while it increased in the intervention group. The difference between the changes within the groups in urban areas was statistically significant (p=0.0048).

Deprived and non-deprived areas

The impact of the DFfA intervention on level of physical activity varied significantly (p=0.0009) with the socio-economic circumstances in an area (see Figure 76).

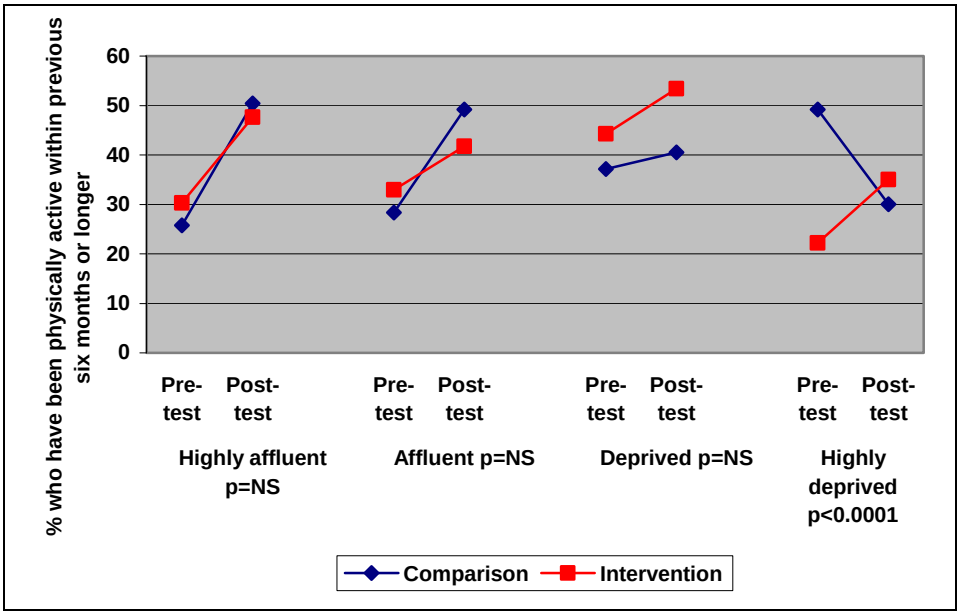


Figure 76 Changes in level of physical activity in deprived and non-deprived areas; by survey group.

In “highly affluent”, and “deprived” areas, level of physical activity increased similarly in both the comparison and intervention groups. Increases were also observed in both groups in “affluent” areas but the comparison group showed a larger (though not statistically significant) increase than the intervention group.

In “highly deprived” areas, level of physical activity decreased in the comparison group while it increased in the intervention group. This difference between the changes within the groups in “highly deprived” areas was statistically significant (p<0.0001).

DID INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

Employment

The impact of the DFfA intervention on level of physical activity did not vary significantly with employment status (see Figure 77).

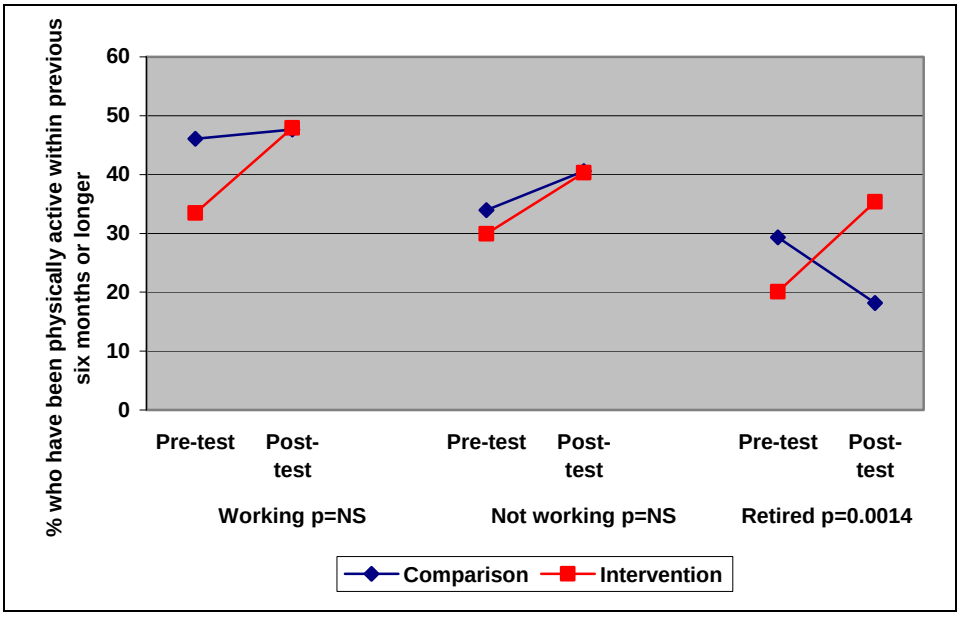


Figure 77 Changes in the level of physical activity by employment status; by survey group

Among working people, the level of physical activity remained relatively stable in the comparison group while it increased in the intervention group though this difference was not statistically significant. Among people who were not working, a greater increase in physical activity was observed in the intervention group than in the comparison group though, again, this difference was not statistically significant. Among retired people, a decrease in physical activity was observed in the comparison group while an increase was observed in the intervention group. This difference between the changes within the groups among retired people was statistically significant (p=0.0014).

Other individual characteristics

There was no evidence that gender, age, or level of education affected the impact of the DFfA intervention on level of physical activity.

SUMMARY BOX

At pre-test, one third (34%) of people had begun to be physically active within the previous six months or had been physically active for longer than six months. The level of level of physical activity was significantly higher in the comparison group than it was in the intervention group at pre-test.

Overall, the impact of the DFfA intervention on the level of physical activity was significantly positive. Although level of physical activity was significantly higher in the comparison group at pre-test, it remained relatively stable during the intervention period while physical activity increased significantly in the intervention group.

The impact of the DFfA intervention varied significantly with the level of deprivation in an area. The intervention was associated with a positive impact in “highly deprived” areas but did not apparear to have a clear impact in other areas.

Body Mass Index – Percentage of People Who Are Overweight or Obese

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys respondents were asked their height and weight. Respondents' body mass index (BMI) was calculated by dividing weight in kilograms by squared height in metres. People with a BMI value of 25 kg/m^2 or more were considered overweight or obese.

BODY MASS INDEX PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that 54% of people in the comparison and intervention groups combined were overweight or obese.

In the pre-test community survey, there was no significant difference between the percentage of people who were overweight or obese in the comparison group (55%) and the intervention group (52%).

DID THE DFFA INTERVENTION IMPROVE BODY MASS INDEX?

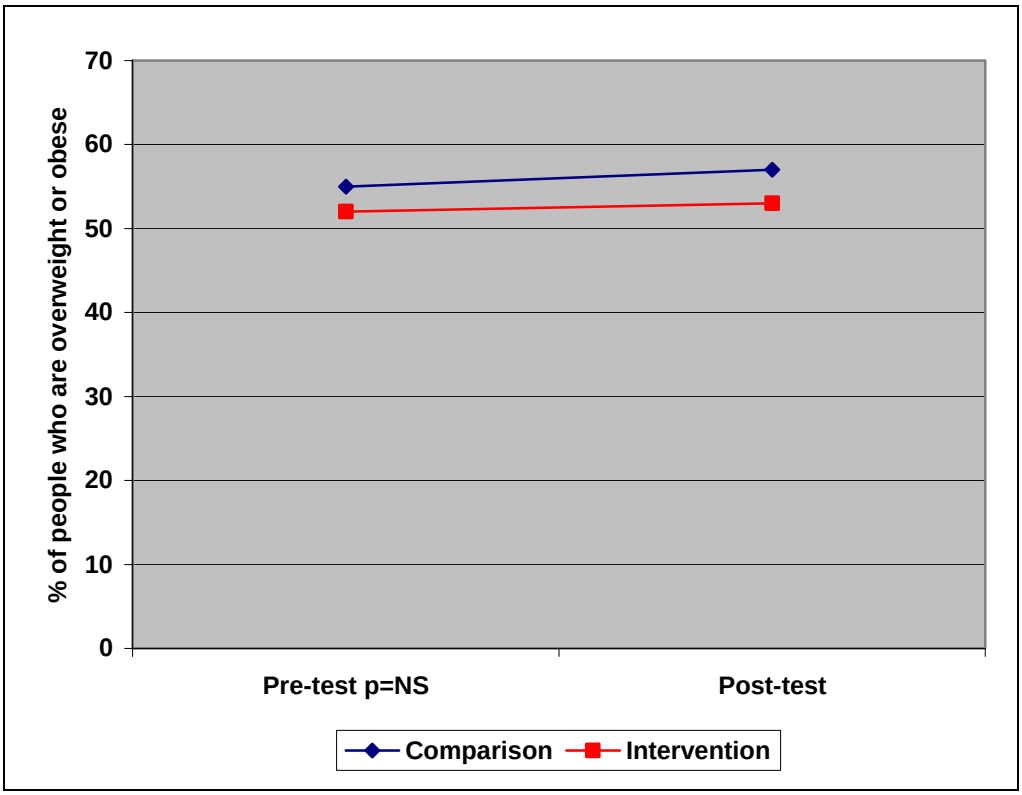


Figure 78 Changes in percentage of people who are overweight or obese; by survey group

The percentage of people who were overweight or obese remained relatively stable in both the comparison and intervention groups. No significant impact of the DFA intervention was observed.

DID GEOGRAPHY PLAY A ROLE?

There was no evidence that the impact of the DFfA intervention on the percentage of people who were overweight or obese was different in border and non-border areas, or rural and urban areas, or that the impact of the intervention varied with an area's socio-economic circumstances.

DID INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

There was no evidence that gender, age, or level of education or employment status affected the impact of the DFfA intervention on the percentage of people who were overweight or obese.

SUMMARY BOX

At pre-test, 54% of people were overweight or obese. There was no significant difference in the percentage of people who were overweight or obese in the comparison and intervention groups at pre-test.

The DFfA intervention had no significant impact on the percentage of people who were overweight or obese. The proportion remined unchanged in bot the comparison and intervention groups.

1.15 Greater social inclusion

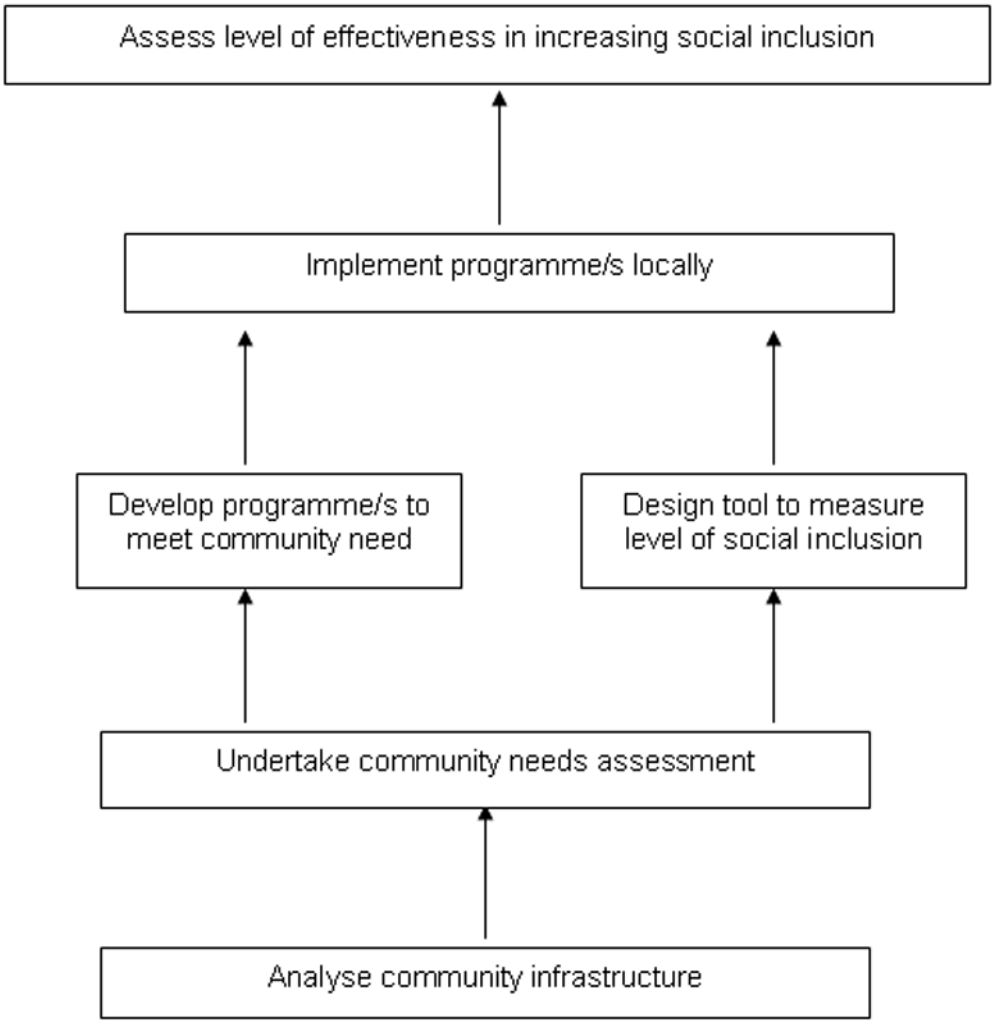


Figure 79 Outcomes hierarchy for greater social inclusion

Social Contact

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys respondents were asked which, if any, of the following activities they had done in the previous two weeks:

- Visited relatives / been visited by relatives
- Spoke to relatives on the phone
- Visited friends / been visited by friends
- Spoke to friends on the phone
- Spoke to neighbours
- Spoke to a health professional (e.g. home help, meals on wheels, social worker, health visitor).

The total number of activities experienced in the previous two weeks was taken to be an indicator of social contact.

SOCIAL CONTACT PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that the average number of the prescribed social contacts in the previous two weeks in the comparison and intervention groups combined was 4.4 out of a possible 6.

In the pre-test community survey, the average number of social contacts was not significantly different between the comparison (4.3) and intervention (4.5) groups.

DID THE DFFA INTERVENTION IMPROVE SOCIAL CONTACT?

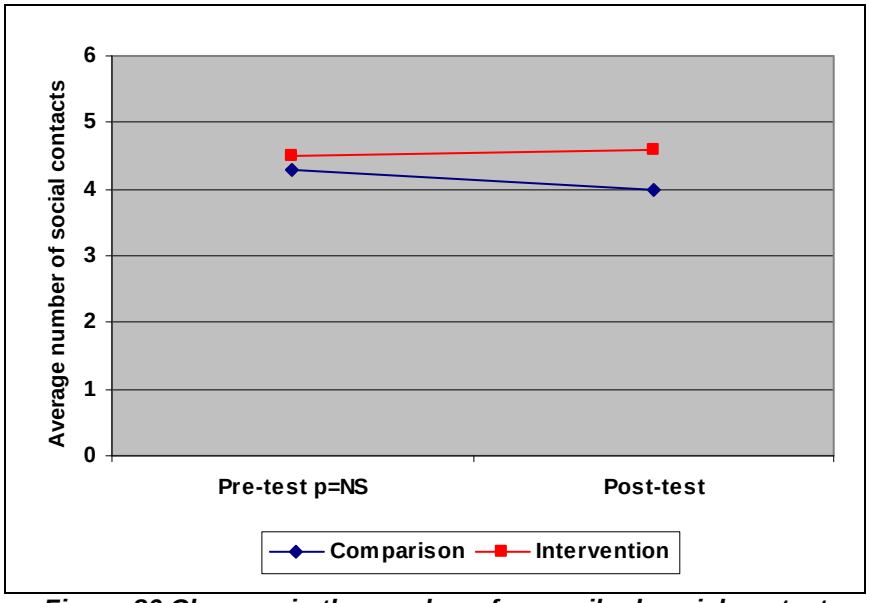


Figure 80 Changes in the number of prescribed social contacts within the previous two weeks; by survey group

There was a significant difference between the changes in the number of social contacts within the comparison group and within the intervention group (p=0.0006). While no significant difference was observed in the intervention group, the comparison group's number of social contacts decreased significantly during the intervention period from 4.3 to 4.0 (p=0.0001).

DID GEOGRAPHY PLAY A ROLE?

Border and non-border areas

The impact of the DFfA intervention on the number of social contacts in border areas was statistically different than its impact in non-border areas (p<0.0001).

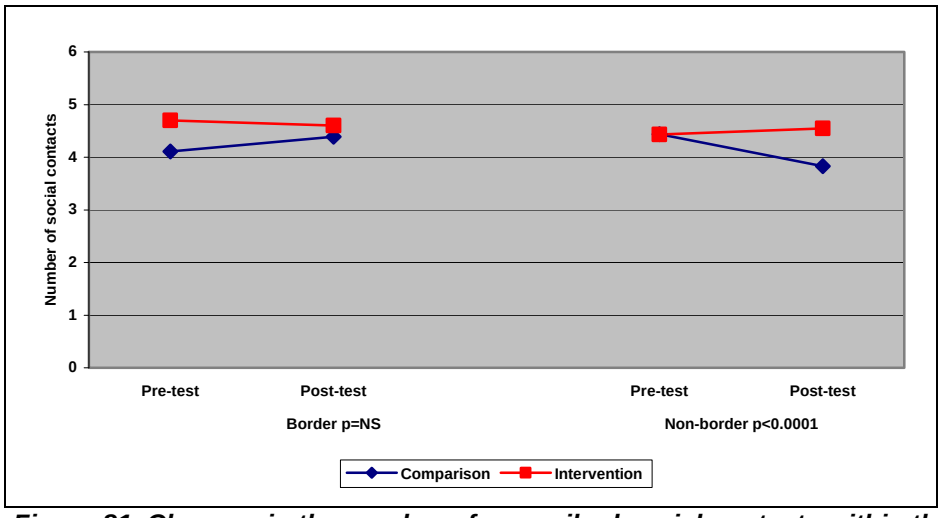


Figure 81 Changes in the number of prescribed social contacts within the previous two weeks; by survey group.

In border areas, the number of social contacts was relatively stable during the intervention period (see Figure 81). In non-border areas, the number of social contacts decreased in the comparison group while it remained relatively stable in the intervention group. The difference between the changes within the groups in non-border areas was statistically significant (p<0.0001).

Rural and urban areas

The impact of the DFfA intervention on the number of social contacts in rural areas was statistically different than its impact in urban areas (p<0.0001)

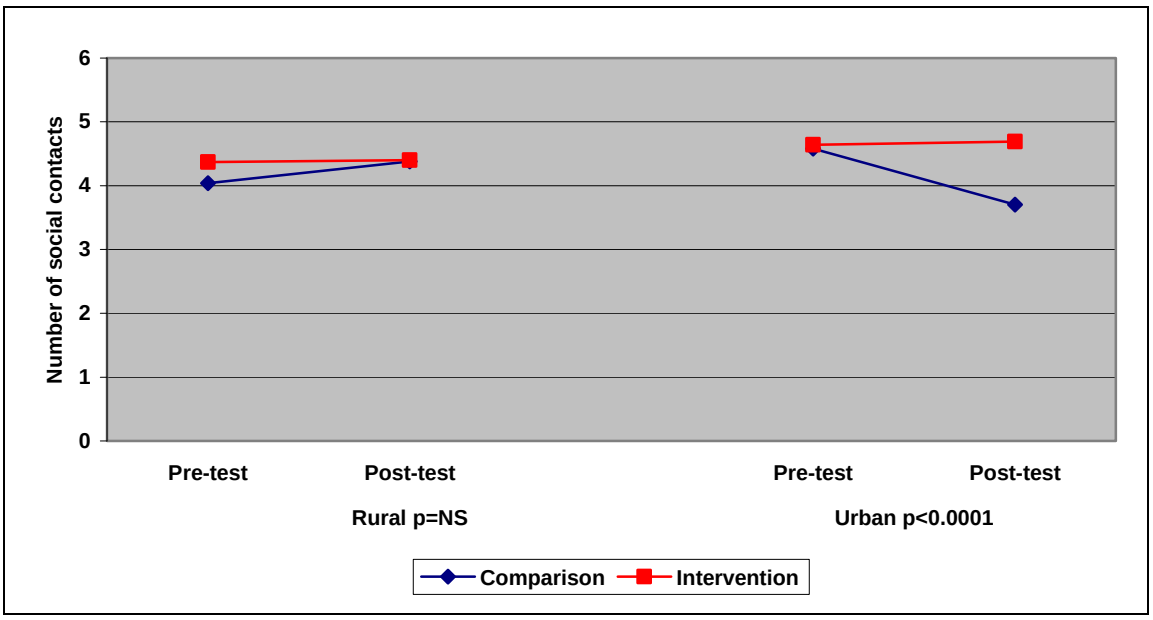


Figure 82 Changes in the number of prescribed social contacts within the previous two weeks in rural and urban areas; by survey group.

Similar to the pattern that was observed in border and non-border areas, the number of social contacts in rural areas was relatively stable during the intervention period (see Figure 82). In urban areas, the number of social contacts decreased in the comparison group while it remained relatively stable in the intervention group. The difference between the changes within the groups in urban areas was statistically significant (p<0.0001).

Deprived and non-deprived areas

The impact of the DFfA intervention the number of social contacts varied significantly with the socio-economic circumstances in an area (p<0.0001).

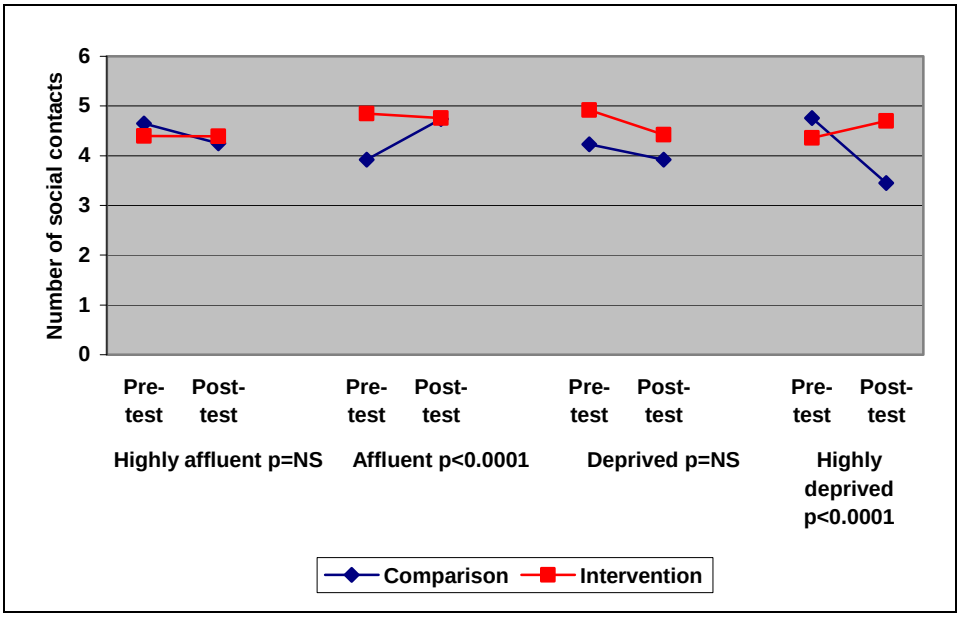


Figure 83 Changes in the number of prescribed social contacts within the previous two weeks in deprived and non-deprived areas; by survey group.

In “highly affluent”, and “deprived” areas, the impact of the DFfA intervention was not significantly different (see Figure 83). The impact of the DFfA intervention was significantly different in “affluent” areas and “highly deprived” areas. In “affluent” areas, an increase in the number of social contacts in the comparison group contrasted with a slight decrease in the intervention group (p<0.0001). In “highly deprived” areas, a decrease in the number of social contacts in the comparison group contrasted with a slight increase in the intervention group (p<0.0001).

DID INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

Gender

The impact of the DFfA intervention on the number of social contacts amongst males was statistically different than its impact amongst females (p=0.0005).

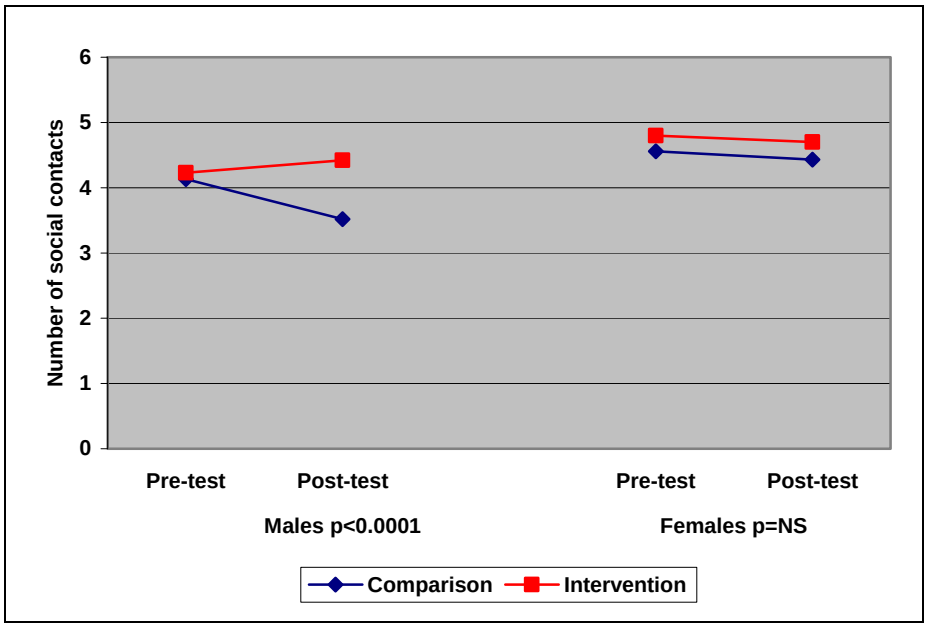


Figure 84 Changes in the number of prescribed social contacts within the previous two weeks amongst males and females; by survey group.

Amongst males, the number of social contacts decreased in the comparison group while it increased slightly in the intervention group (see Figure 84). The difference between the changes within the male groups was statistically significant (p<0.0001).

Amongst females, there was no significant difference between the changes in the number of social contacts within the comparison and within the intervention groups - the number of social contacts remained relatively stable in both groups during the intervention period.

Education

The impact of the DFfA intervention on the number of social contacts did not vary significantly with education (see Figure 85).

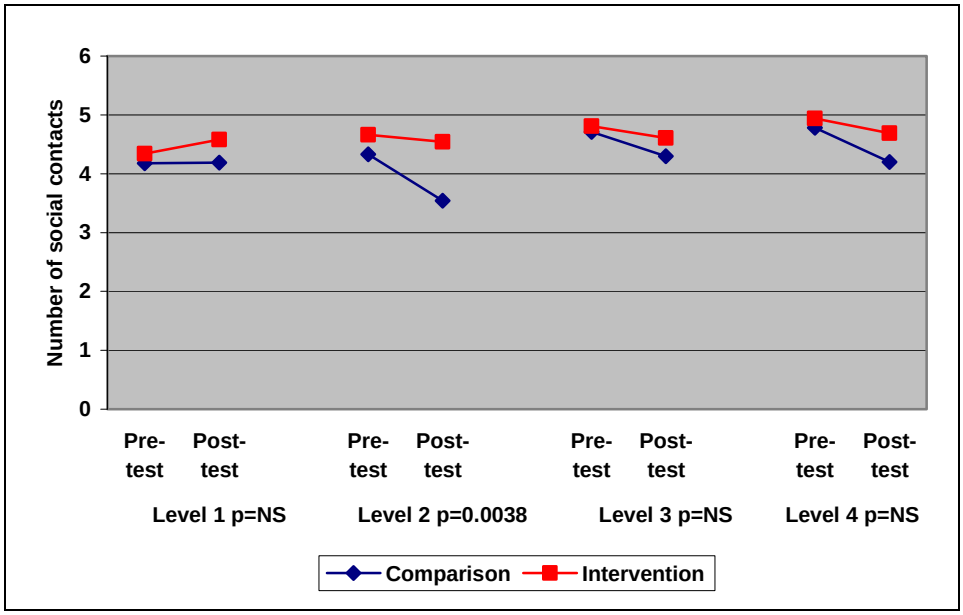


Figure 85 Changes in the number of prescribed social contacts within the previous two weeks by level of education; by survey group.

Among people who had no educational qualifications (Level 1), the number of social contacts remained stable in the comparison group while increasing slightly in the intervention group though this difference in the impact of the DFfA intervention was not statistically significant.

Among the other three levels of education, slight decreases in the number of social contacts in the intervention group coincided with larger decreases in the comparison group although these differences in the impact of the DFfA intervention were statistically significant only in education Level 2 (p=0.0038).

Employment

The impact of the DFfA intervention on the number of social contacts did not vary significantly with employment status (see Figure 86).

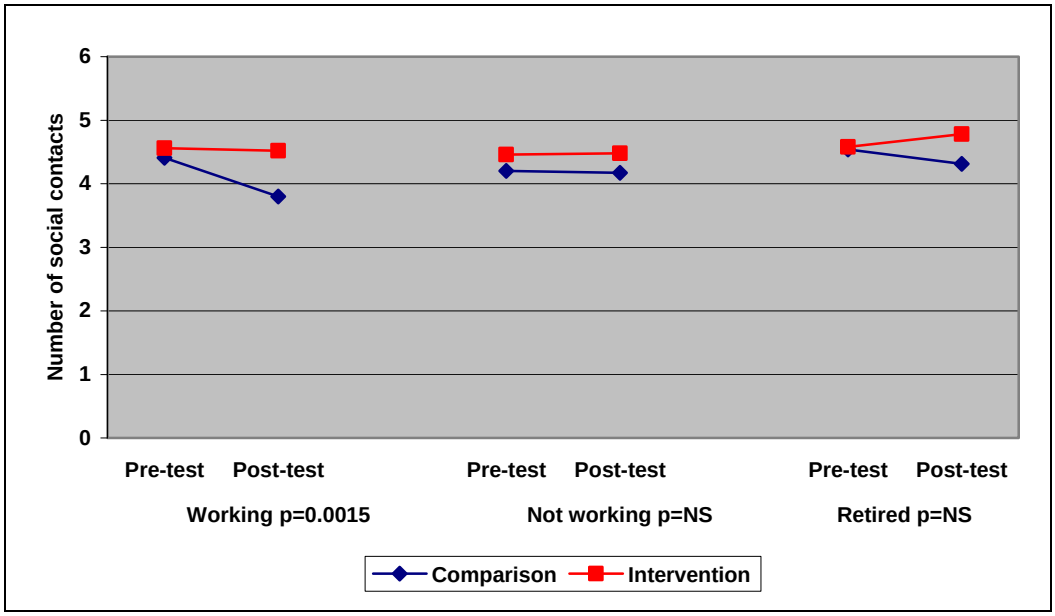


Figure 86 Changes in the number of prescribed social contacts within the previous two weeks by employment status; by survey group

The impact of the DFfA intervention was not statistically significant among people who were not working and people who were retired. Among working people, the number of social contacts decreased in the comparison group while remaining stable in the intervention group and this impact of the DFfA intervention was significantly positive (p=0.0015)

Other individual characteristics

There was no evidence that the impact of the DFfA intervention on the level of social contact varied with age.

SUMMARY BOX

At pre-test, the average number of the prescribed social contacts that people in the comparison and intervention groups experienced within the previous two weeks was 4.4 out of a possible 6. The level of social contact was not significantly different between the comparison and the intervention groups.

Overall, the impact of the DFfA intervention on the number of social contacts was significantly positive. While no significant difference was observed in the intervention group, the comparison group's number of social contacts decreased significantly during the intervention period.

Geographical attributes played a role in the impact of the DFfA intervention on the number of social contacts:

- The impact of the intervention was statistically different in border and non-border areas. The intervention appeared to have no clear impact in border areas but was associated with a positive impact in non-border areas where social contact in the intervention group remained stable while social contact in the comparison group decreased.

- The impact of the intervention was statistically different in in rural and urban areas. The intervention appeared to have no clear impact in rural areas but was associated with a positive impact in urban areas where social contact in the intervention group remained stable while social contact in the comparison group decreased. If we identify rural areas with border areas and urban areas with non-border areas, the same pattern is observed in both areas.

- The impact of the DFfA intervention varied significantly with the level of deprivation in an area. The intervention appeared to have no clear impact in "highly affluent" and "deprived" areas. The intervention was associated with a negative impact in "affluent" areas and a positive impact in "highly deprived" areas.

Although the DFfA intervention was not specifically targeted at males or females, it is worth noting that intervention's impact was significantly different amongst males and females. The intervention was associated with a positive impact in males where social contact in the intervention group remained stable while social contact in the comparison group decreased. The intervention appeared to have no clear impact on the level of social contacts amongst females.

LIMITATIONS

A limitation of this question may be that only the six prescribed items, with which the respondent was prompted, counted as experiencing social contact. However, the six items were quite general examples of a broad range of social contacts

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys respondents were asked which, if any, of the following activities they had done in the previous two weeks:

- Attended an adult education / night school class
- Participated in a voluntary group / local community group
- Participated in community or religious activities
- Went to a leisure centre
- Went on a social outing.

The total number of prescribed activities attended was taken to be an indicator of community participation.

COMMUNITY PARTICIPATION PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that the average number of the prescribed community events attended by the comparison and intervention groups combined was 1.2 out of a possible five.

In the pre-test community survey, there was no significant difference in the average number of the prescribed community events attended in the comparison (1.3) and the intervention groups (1.2).

DID THE DFFA INTERVENTION IMPROVE COMMUNITY PARTICIPATION?

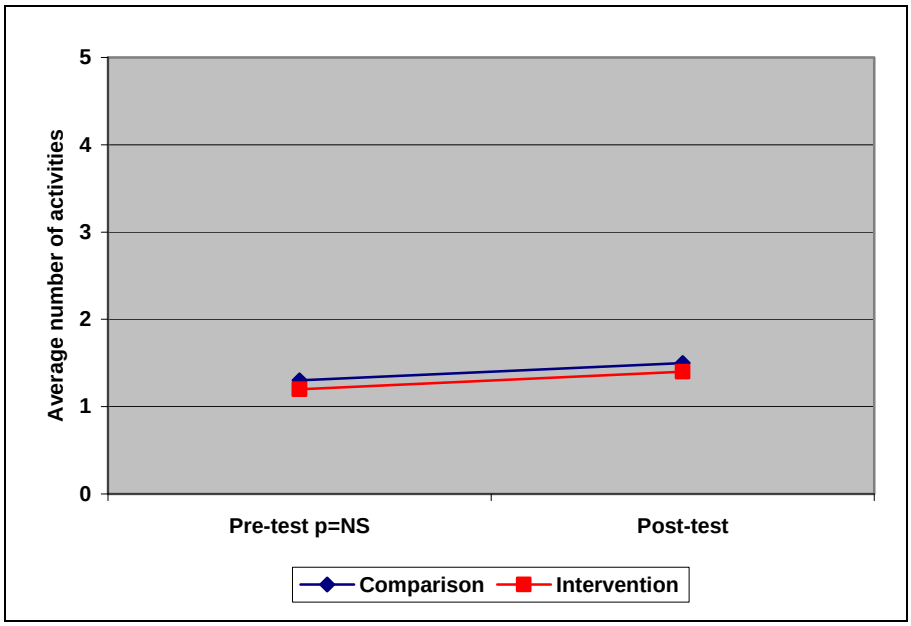


Figure 87 Changes in number of the prescribed community events attended in the previous two weeks; by survey group

There was no significant difference between the changes in number of the prescribed community events attended within the comparison group and within the intervention group. In the comparison group, the number of activities attended increased from 1.3 to 1.5.

This increase was not statistically significant when adjusted for differences in education or employment status (or both), suggesting that the increase was largely due to differences in the educational level and/or employment status of the comparison group at pre-test and post-test. In the intervention group, the number of activities attended increased from 1.2 to 1.4 during the intervention period.

This increase was not statistically significant.

DID GEOGRAPHY PLAY A ROLE?

Deprived and non-deprived areas

The impact of the DFfA intervention on community participation varied significantly ($p<0.0001$) with the socio-economic circumstances in an area (see Figure 88).

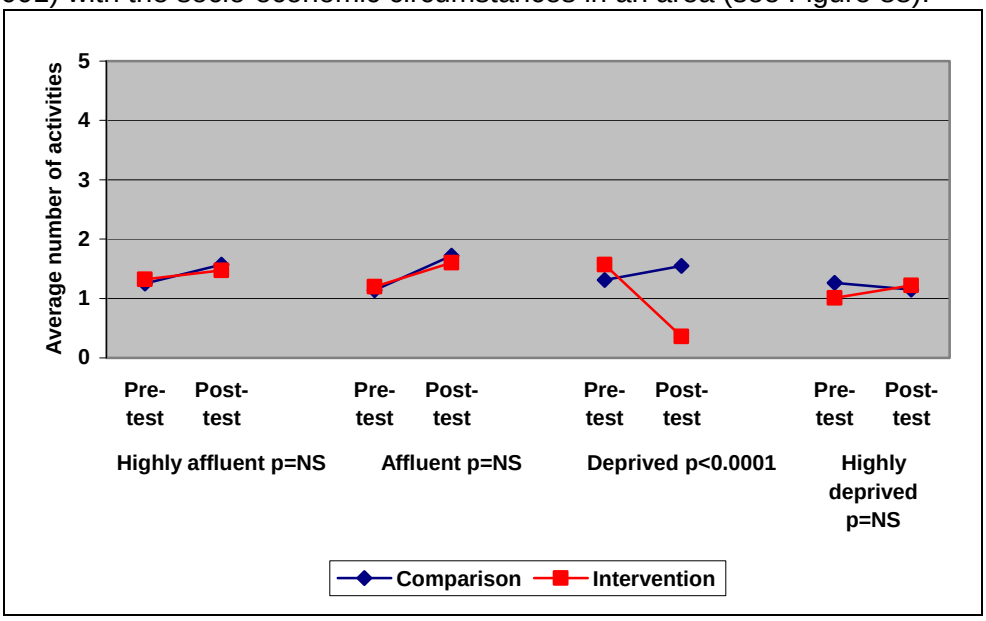


Figure 88 Changes in number of the prescribed community events attended in deprived and non-deprived areas; by survey group.

In "highly affluent", and "affluent" areas, the number of the prescribed community events attended increased similarly in both the comparison and intervention groups. In "highly deprived" areas, a slight decrease the comparison group contrasted with an increase in the intervention group though this difference was not statistically significant. In "deprived" areas, the number of the prescribed community events attended increased in the comparison group while it decreased in the intervention group. This difference between the changes within the groups in "deprived" areas was statistically significant ($p<0.0001$).

Other geographical characteristics

There was no evidence that the impact of the DFfA intervention on the number of the prescribed community events attended was different in border and non-border areas or rural and urban areas.

DID INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

Gender

The impact of the DFfA intervention on community participation amongst males was statistically different than its impact amongst females (p=0.0066).

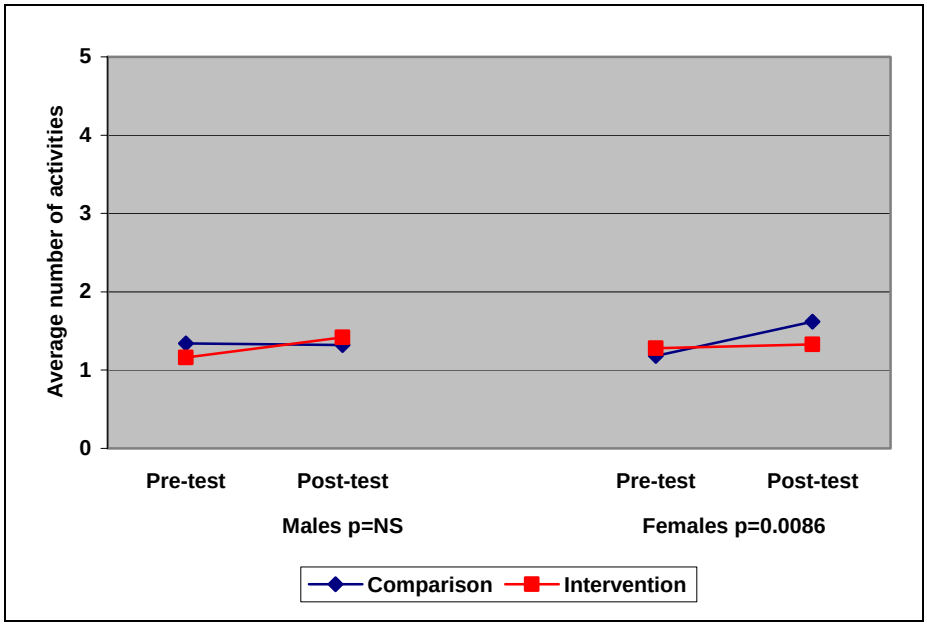


Figure 89 The impact of the DFfA intervention on community participation

Amongst males, community participation was relatively stable in the comparison group while it increased slightly in the intervention group though this difference was not statistically significant. Amongst females, community participation increased in the comparison group while it was relatively stable in the intervention group. This difference in change within the females of the groups was statistically significant (p=0.0086).

Other individual characteristics

There was no evidence that age, level of education, or employment status affected the impact of the DFfA intervention on the number of the prescribed community events attended.

SUMMARY BOX

At pre-test, the average number of the prescribed community events attended by the comparison and intervention groups was 1.2 out of a possible five. The average number of community events attended was the same in the comparison and the intervention groups.

The DFfA intervention had no significant impact on community participation. Participation in the prescribed community events increased slightly in both the comparison and intervention groups

The impact of the DFfA intervention varied significantly with the level of deprivation in an area. The intervention was associated with a negative impact in “deprived” areas but did not apparear to have a clear impact in other areas.

Although the DFfA intervention was not specifically targeted at males or females, it is worth noting that the impact of the intervention was statistically different among males and females. The intervention appeared to have no clear impact amonst males but was associated with a negative impact amongst females.

LIMITATIONS

A limitation of this question may be that only the five prescribed items, with which the respondent was prompted, counted as examples of community participation. However, the five items were quite general examples of a broad range of community activities.

Perceived ability to influence decisions that affect the neighbourhood

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys respondents were asked:

"Do you agree or disagree that, by working together, people in your neighbourhood could influence decisions that affect the neighbourhood?"

The possible responses were:

- Strongly agree
- Agree
- No opinion
- Disagree
- Strongly disagree

The percentage of people who agreed or strongly agreed that their community could influence decisions that affect the neighbourhood was taken to be an indicator of community efficacy.

COMMUNITY EFFICACY PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that one half (50%) of people in the comparison and intervention groups combined agreed or strongly agreed that, by working together, people in their neighbourhood could influence decisions that affect the neighbourhood.

In the pre-test community survey, the average percentage of people who agreed or strongly agreed that their community could influence decisions that affect the neighbourhood was significantly higher ($p=0.0035$) in the comparison group (55%) than it was in the intervention group (44%).

DID THE DFFA INTERVENTION IMPROVE COMMUNITY EFFICACY?

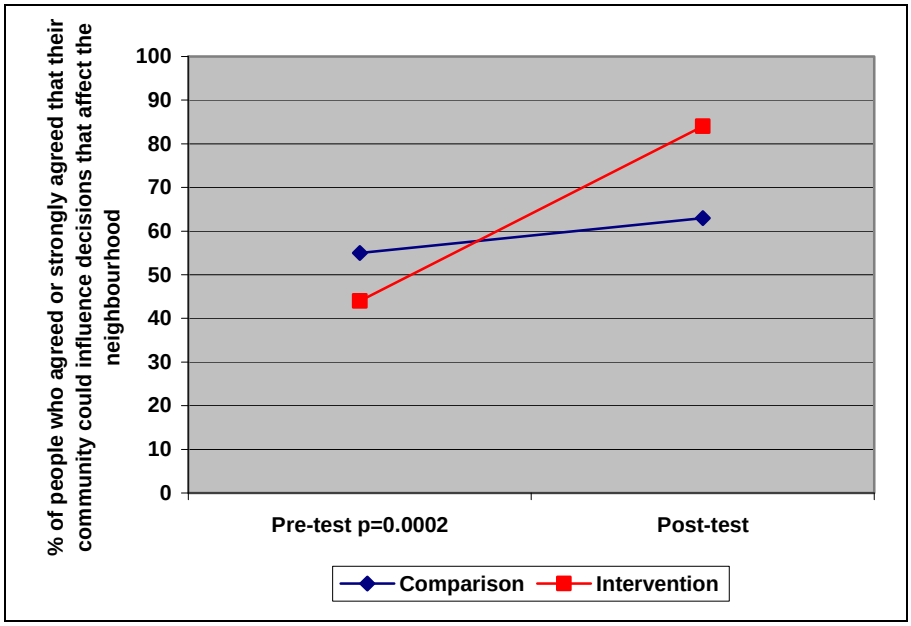


Figure 90 Changes in perception of community efficacy; by survey group

There was a significant difference between the changes in perception of community efficacy within the comparison group and within the intervention group ($p<0.0001$). In the comparison group, perceived community efficacy increased from 55% to 63%. This increase was not statistically significant when adjusted for differences in education, suggesting that the increase was largely due to differences in the education level of the comparison group at pre-test and post-test.

In the intervention group, perceived community efficacy increased substantially from 44% to 84% during the intervention period. This increase was statistically significant ($p<0.0001$).

DID GEOGRAPHY PLAY A ROLE?

Border and non-border areas

The impact of the DFfA intervention on perceived community efficacy in border areas was not statistically different than its impact in non-border areas (see Figure 91).

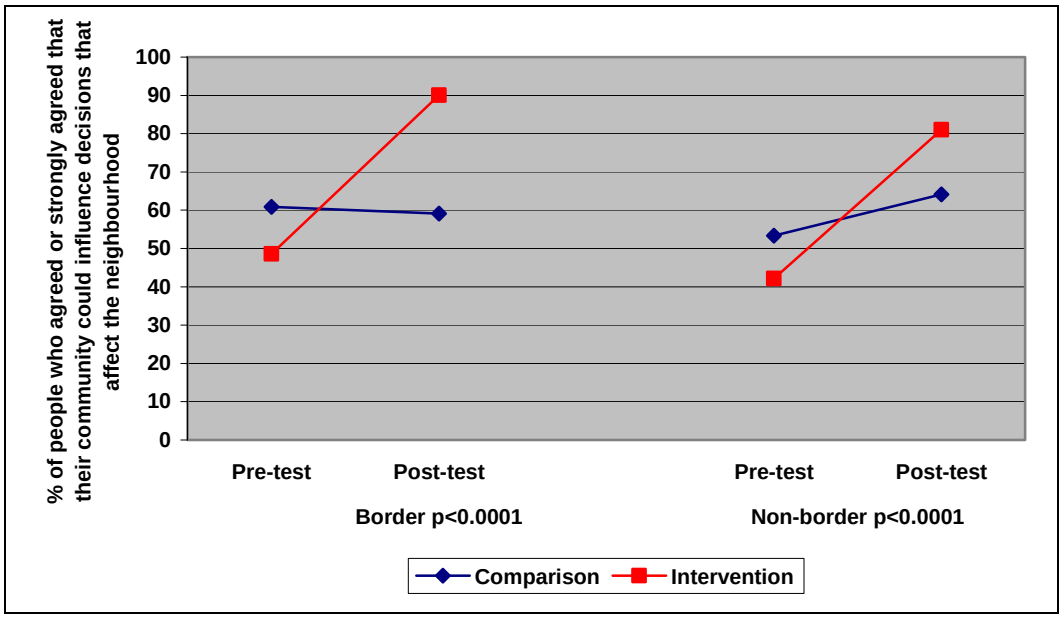


Figure 91 Changes in perception of community efficacy in border and non-border areas; by survey group.

The impact of the DFfA intervention on perceived community efficacy was significantly positive in both border ($p<0.0001$) and non-border ($p<0.0001$) areas. Substantial increases in perceived community efficacy in the intervention group in both border and non-border areas contrasted with a relatively stable perception of community efficacy in the border comparison group and a smaller increase in perceived community efficacy in the non-border comparison group.

Rural and urban areas

The impact of the DFfA intervention on perceived community efficacy was very similar in rural and urban areas (see Figure 92). In both areas, substantial increases in perceived community efficacy in the intervention group contrasted with smaller increases in perceived community efficacy in the comparison group. The impact was statistically significant in both rural ($p<0.0001$) and urban ($p<0.0001$) areas.

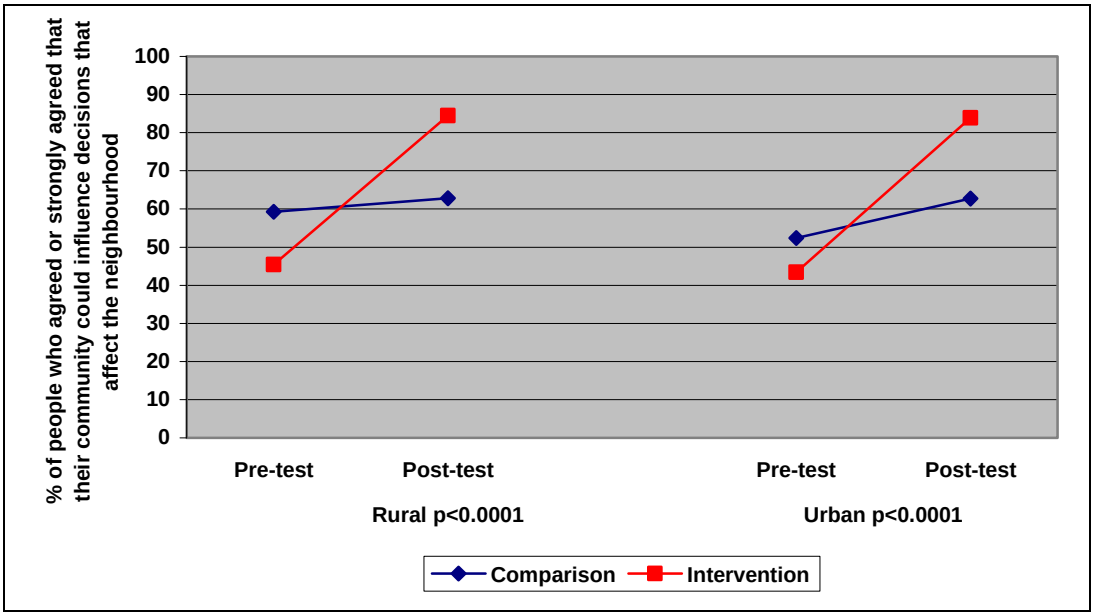


Figure 92 Changes in perception of community efficacy in rural and urban areas; by survey group.

Deprived and non-deprived areas

The impact of the DFfA intervention on perception of community efficacy varied significantly (p=0.0038) with the socio-economic circumstances in an area (see Figure 93).

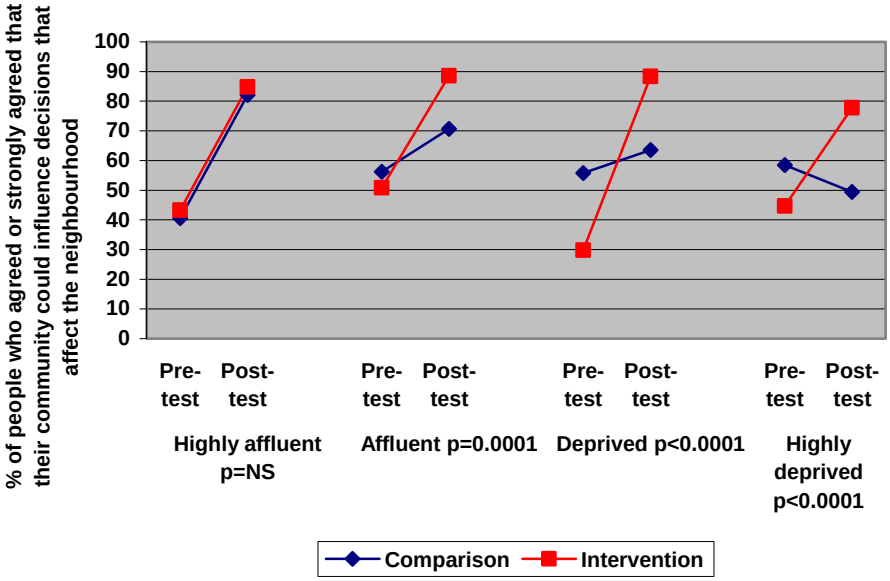


Figure 93 Changes in perception of community efficacy in deprived and non-deprived areas; by survey group.

Substantial increases in perceived community efficacy were observed in the intervention group at all levels of areas' socio-economic circumstances (see Figure 93). A similar increase in perceived community efficacy was observed in the comparison group in "highly affluent" areas but this gain reduced as affluence decreased and deprivation increased and a decrease in perceived community efficacy was observed in comparison group in "highly deprived" areas.

The impact of the DFfA intervention was found to be significant in "affluent" (p=0.0001), "deprived" (p<0.0001), and "highly deprived" (p<0.0001) areas.

DID INDIVIDUAL CHARACTERISTICS PLAY A ROLE?

Gender

The impact of the DFfA intervention on perceived community efficacy amongst males was not statistically different than its impact amongst females (see Figure 94).

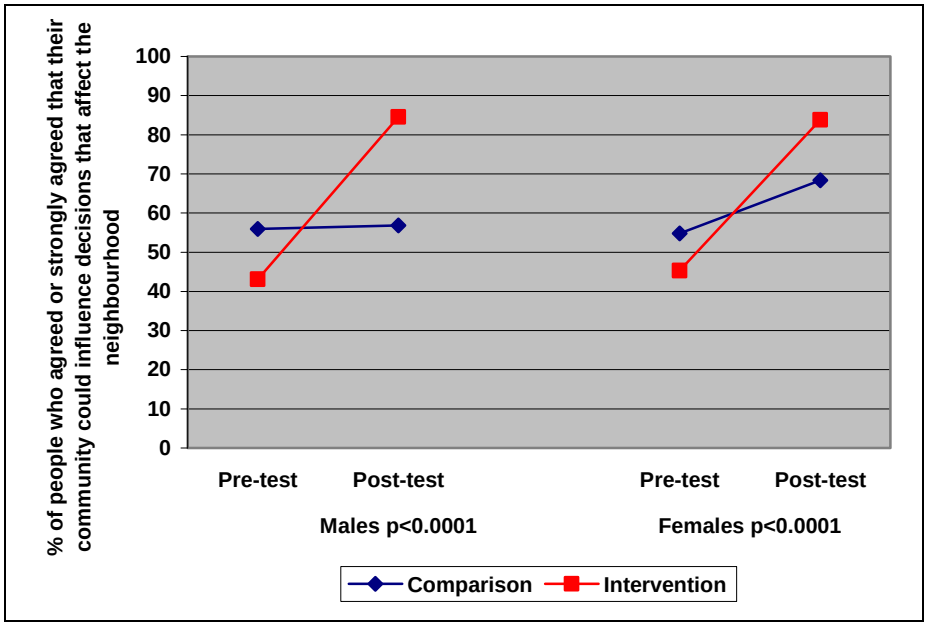


Figure 94 Changes in perception of community efficacy amongst males and females; by survey group.

The impact of the DFfA intervention on perceived community efficacy was significantly positive amongst both males and females ($p<0.0001$). Substantial increases in perceived community efficacy in the intervention group amongst both males and females contrasted with a relatively stable perception of community efficacy in the male comparison group and a smaller increase in perceived community efficacy in the female comparison group.

Age

The impact of the DFfA intervention on perceived community efficacy was very similar across different age groups (see Figure 95). In all age groups, substantial increases in perceived community efficacy in the intervention group contrasted significantly with smaller increases in perceived community efficacy in the comparison group.

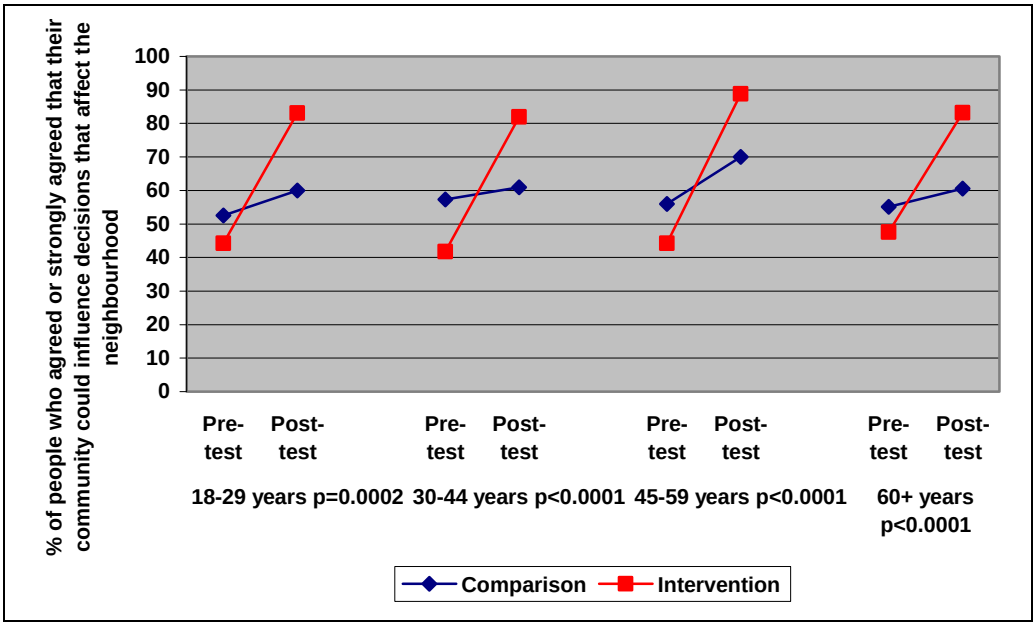


Figure 95 Changes in perception of community efficacy by age group; by survey group.

Education

The impact of the DFfA intervention on perceived community efficacy did not vary significantly with education (see Figure 96).

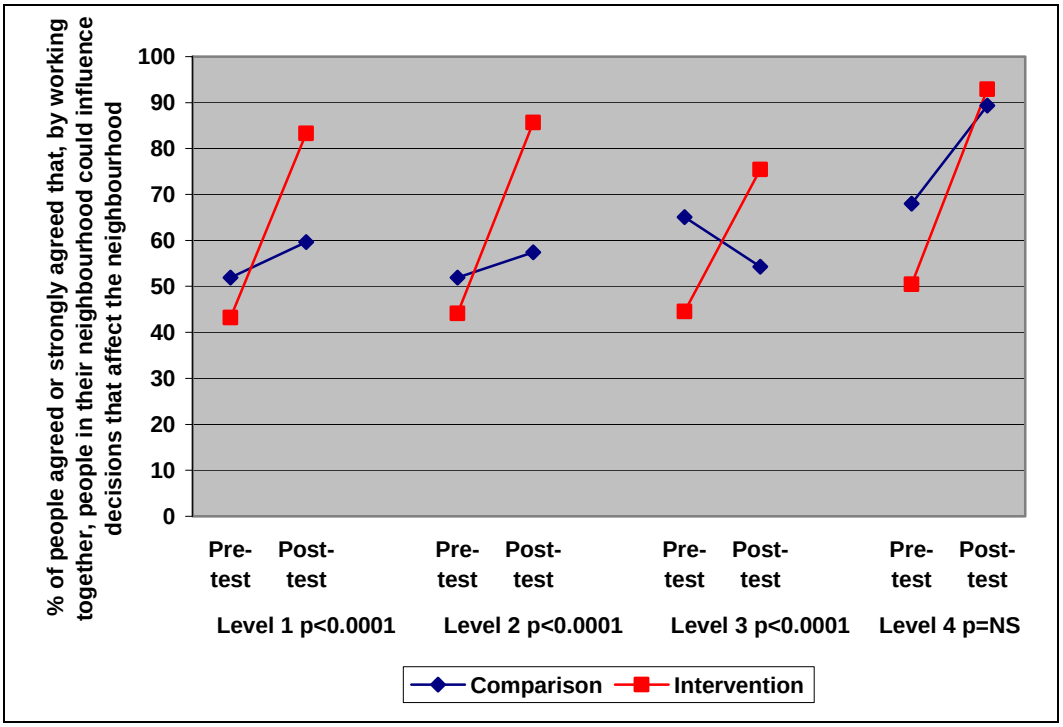


Figure 96 Changes in perception of community efficacy by level of education; by survey group.

Again, substantial increases in perceived community efficacy were observed in the intervention group across all levels of education. Smaller gains were observed in the comparison group across levels of education except for educational Level 3 where a decrease in perceived community efficacy was observed. The impact of the DFfA intervention was significant among education Level 1 ($p<0.0001$), Level 2 ($p<0.0001$) and Level 3 ($p<0.0001$)

Employment

The impact of the DFfA intervention on perceived community efficacy was very similar across different levels of employment status (see Figure 97). In all levels of employment status, substantial increases in perceived community efficacy in the intervention group contrasted significantly with smaller increases in perceived community efficacy in the comparison group

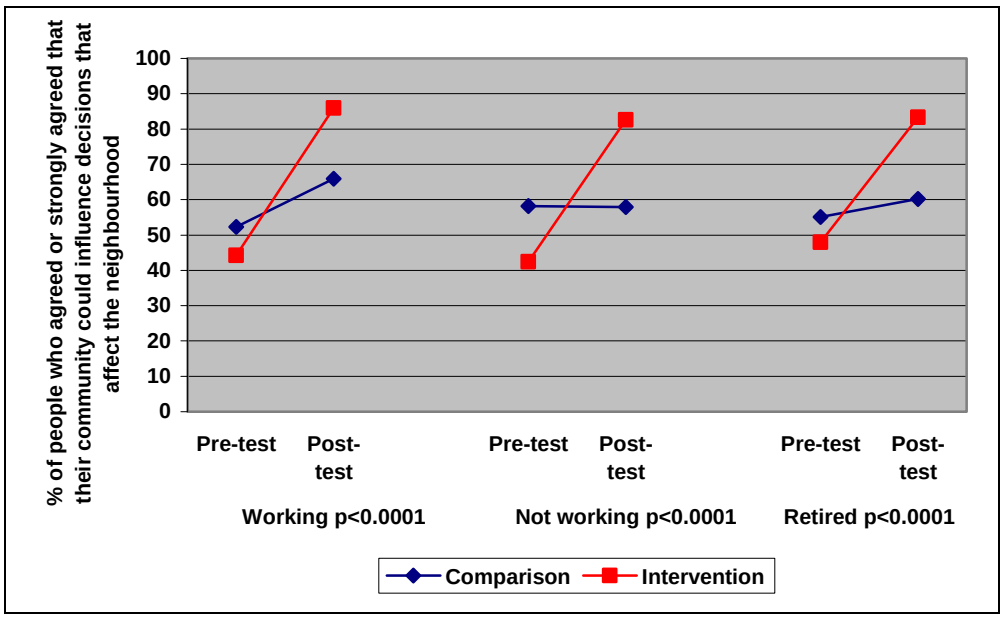


Figure 97 Changes in perception of community efficacy by employment status; by survey group

SUMMARY BOX

At pre-test, one half (50%) of people who agreed or strongly agreed that, by working together, people in their neighbourhood could influence decisions that affect the neighbourhood. The perception of community efficacy was significantly higher in the comparison group (55%) than in the intervention group (44%).

Overall, the impact of the DFfA intervention on perceived community efficacy was significantly positive. While no significant difference was observed in the comparison group, the intervention group's perception of community efficacy increased significantly during the intervention period.

The impact of the DFfA intervention varied significantly with the level of deprivation in an area. The intervention had no clear impact in "highly affluent" areas but was associated with a positive impact in "affluent", "deprived" and "highly deprived" areas. The intervention group showed substantial increases in perceived community efficacy across all levels of areas' deprivation. The comparison group's change in perception of community efficacy became less positive with increasing deprivation.

1.16 Greater individual development: increased self-esteem and greater recognition of the value of education, training & employment

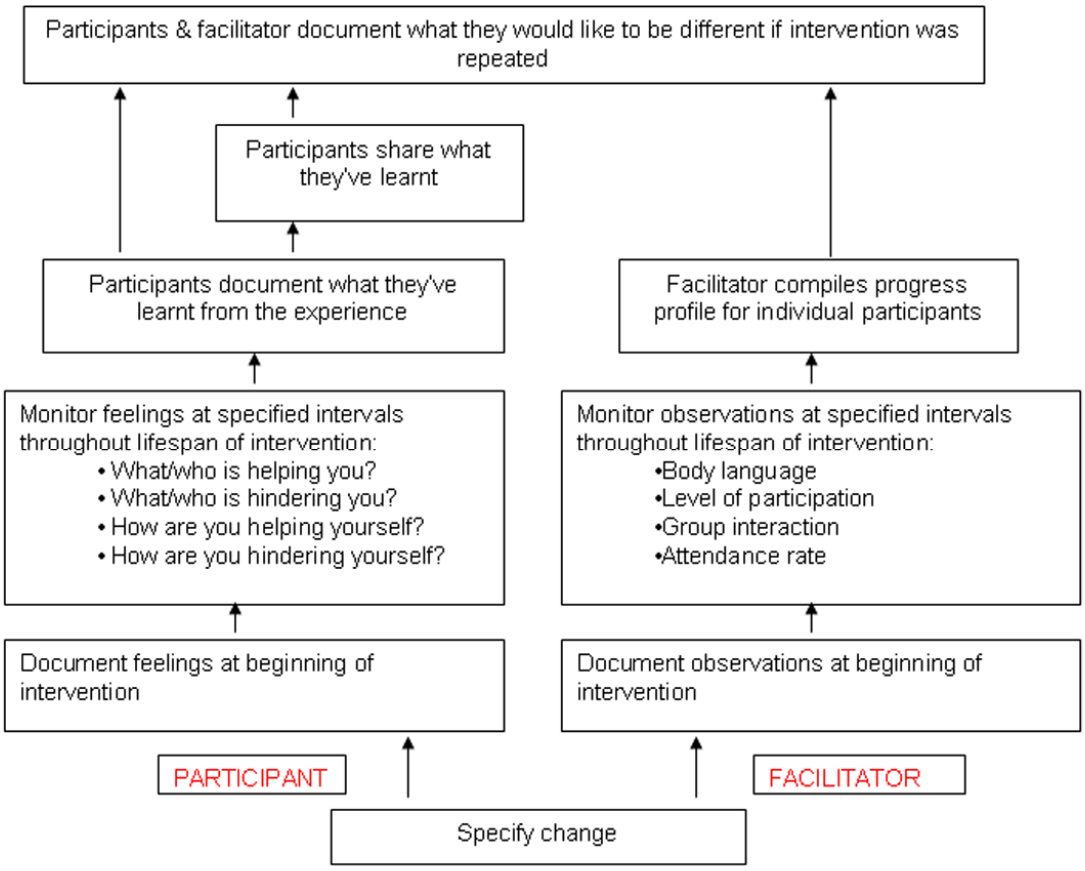


Figure 98 Outcomes hierarchy for greater individual development

DEFINITION OF THE INDICATOR

In both the pre-test and post-test community surveys respondents were asked to rate their confidence in the following:

- Your ability to prepare safe food
- Your ability to prepare healthy food
- Your knowledge of what a healthy diet should be
- Your ability to keep food safe in the home

The responses to each of the four items were scored:

- Not confident at all=0
- Not very confident=1
- Neither=2
- Confident=3
- Very confident=4

The mean confidence score of the four responses was calculated. The percentage of people with an average score corresponding to “confident” or “very confident” (i.e. an average score of 3 or higher) was taken as an indicator of self-confidence in food matters.

SELF-CONFIDENCE IN FOOD MATTERS PRIOR TO THE DFFA INTERVENTION

The pre-test community survey indicated that the average percentage of people in the comparison and intervention groups who were confident or very confident in relation to the prescribed food matters was 79%.

In the pre-test community survey, the percentage of people who were confident or very confident about the prescribed food matters was not significantly different between the comparison (80%) and intervention (79%) groups.

DID THE DFFA INTERVENTION IMPROVE SELF-CONFIDENCE IN FOOD MATTERS?

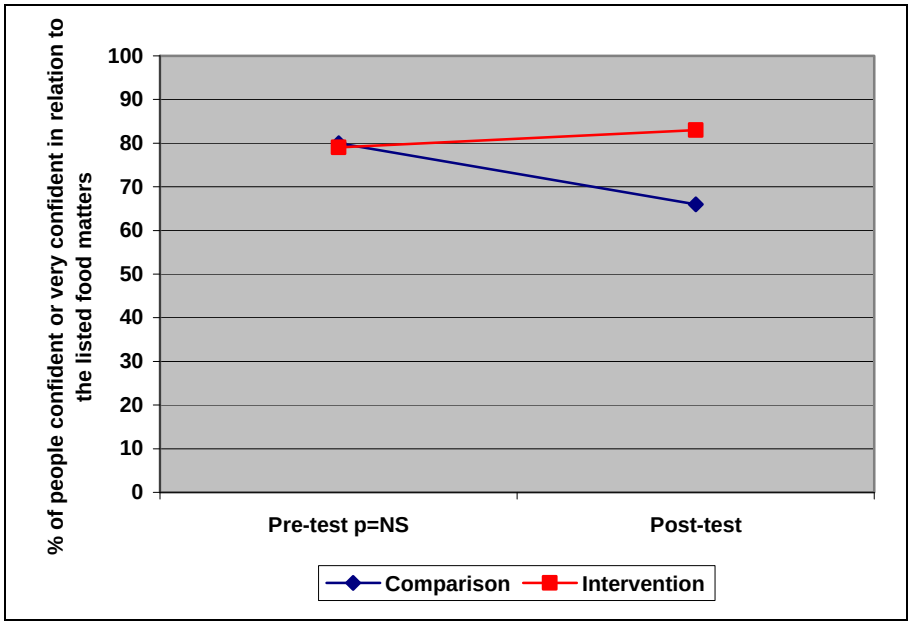


Figure 99 Changes in confidence in relation to the prescribed food matters; by survey group

There was a significant difference between the changes in the level of self-confidence in food matters within the comparison group and within the intervention group ($p<0.0001$). While no significant difference was observed in the intervention group, the percentage of people in the comparison group who reported that they were confident or very confident in relation to food matters decreased significantly during the intervention period from 80% to 66% ($p<0.0001$).

DID GEOGRAPHY PLAY A ROLE?

Border and non-border areas

The impact of the DFfA intervention on the level of self-confidence in food matters in border areas was not statistically different than its impact in non-border areas (see Figure 100).

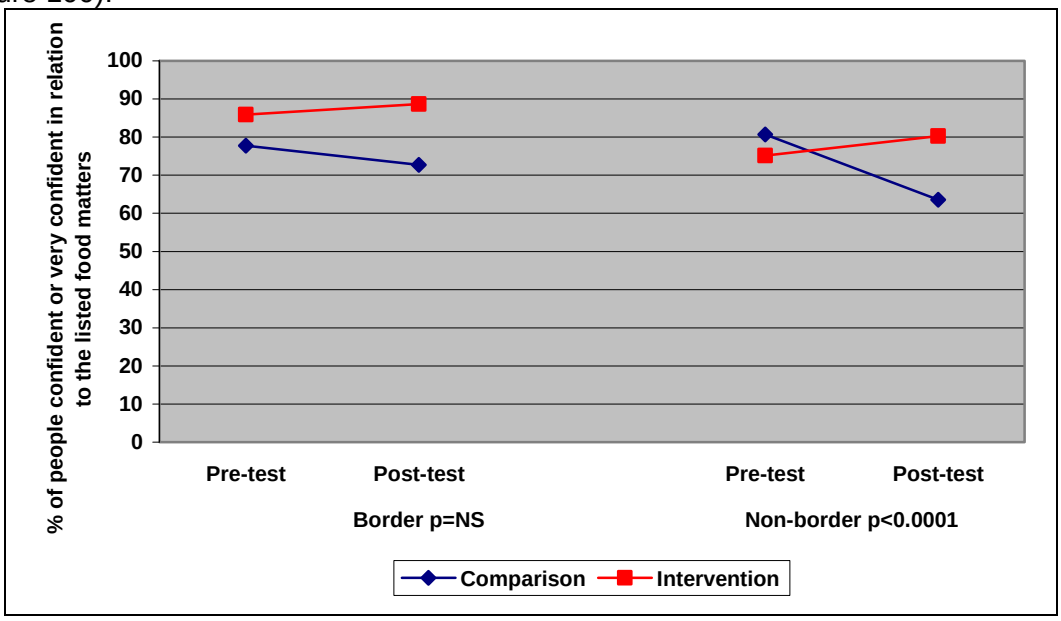


Figure 100 Changes in confidence in relation to the prescribed food matters; by survey group.

In both border and non-border areas, the level of self-confidence in food matters increased slightly in the intervention group while it decreased in the comparison group. This difference in impact of the DFfA intervention was not statistically significant in border areas but was statistically significant in non-border areas ($p<0.0001$).

Rural and urban areas

The impact of the DFfA intervention on the level of self-confidence in food matters in rural areas was not statistically different than its impact in urban areas (see Figure 101).

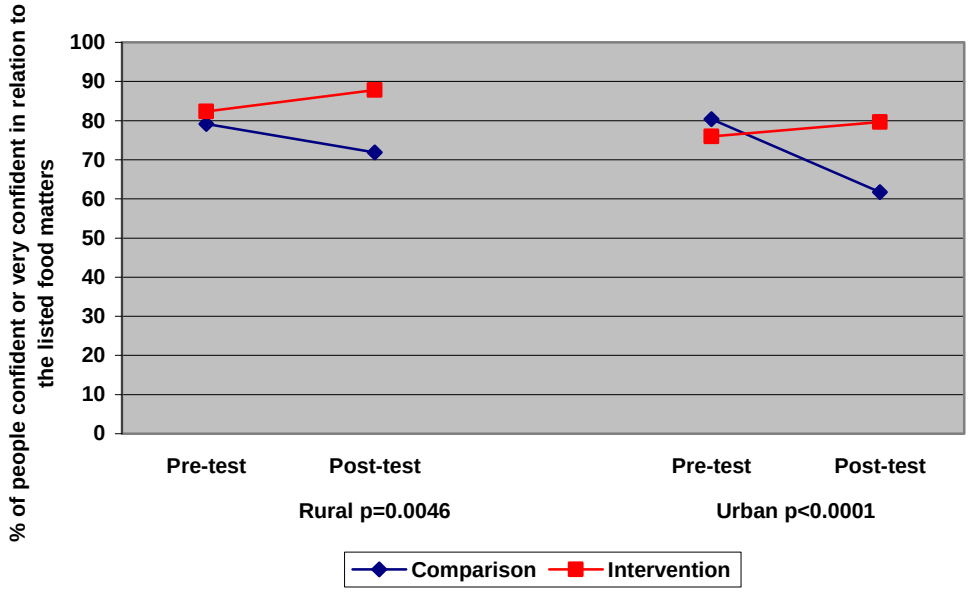


***Figure 101 Changes in confidence in relation to the prescribed food matters in rural and urban areas; by survey group*.**

In both rural and urban areas, the level of self-confidence in food matters increased slightly in the intervention group while it decreased in the comparison group. This difference in impact of the DFfA intervention was statistically significant in rural areas ($p=0.0046$) and in urban areas ($p<0.0001$).

Deprived and non-deprived areas

The impact of the DFfA intervention the level of self-confidence in food matters varied significantly (p=0.0005) with the socio-economic circumstances in an area (see Figure 102).

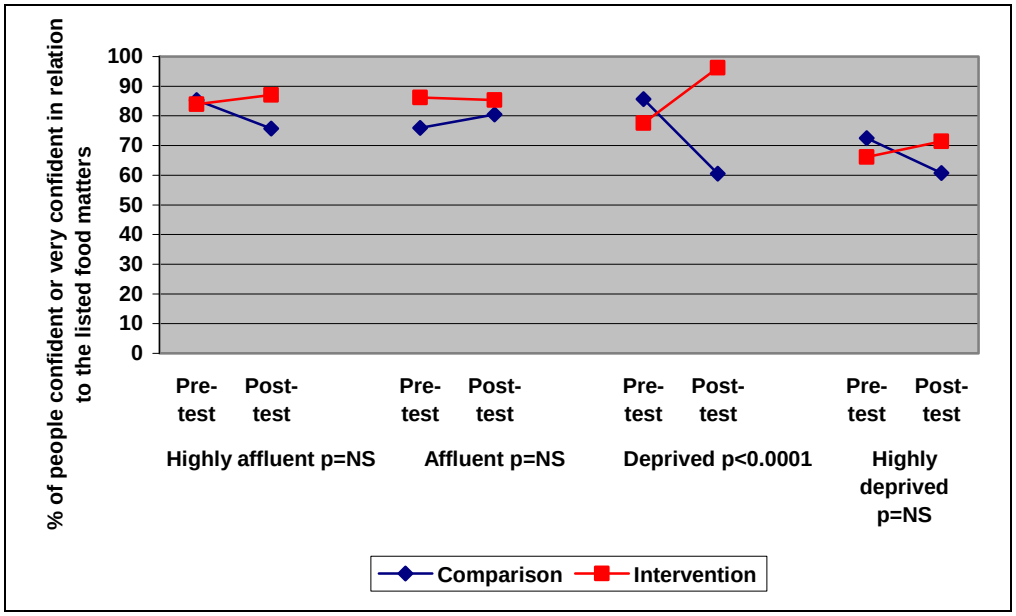


Figure 102 Changes in confidence in relation to the prescribed food matters in deprived and non-deprived areas; by survey group.

The impact of the DFfA intervention was not significantly different in “highly affluent”, “affluent” and “highly deprived” areas (see Figure 100). The impact of the DFfA intervention was significantly different in “deprived” areas where a decrease in the level of self-confidence in food matters in the comparison group contrasted with an increase in the intervention group (p<0.0001).

DID INDIVIDUAL CHARACTERISTICES PLAY A ROLE?

Gender

The impact of the DFfA intervention on the level of self-confidence in food matters amongst males was statistically different (p=0.0022) than its impact amongst females (see Figure 103).

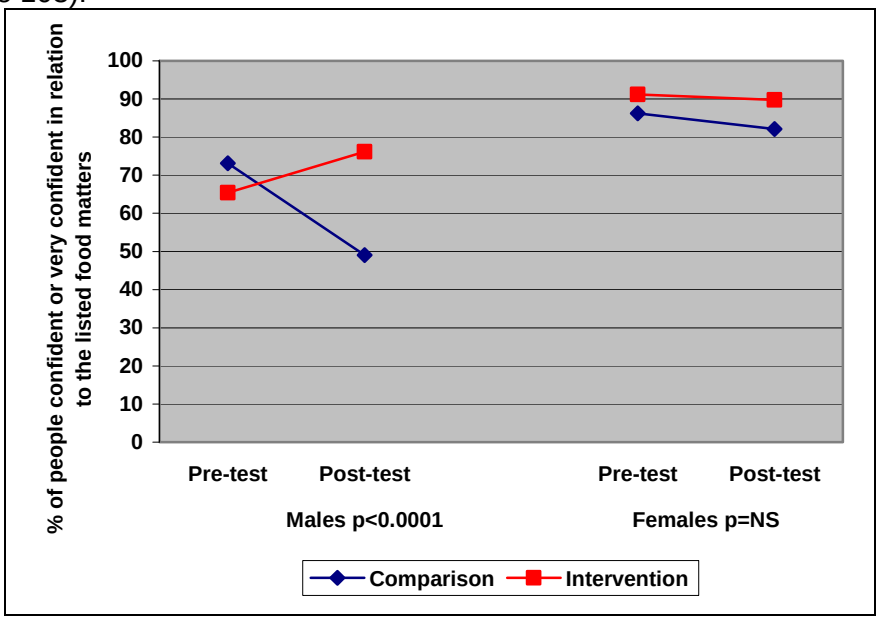


Figure 103 Changes in confidence in relation to the prescribed food matters amongst males and females; by survey group.

Amongst males, the level of self-confidence in food matters decreased in the comparison group while it increased in the intervention group. The difference between the changes within the groups was statistically significant (p<0.0001). Amongst females, there was no significant difference between the changes in the level of self-confidence in food matters within the comparison and within the intervention groups – self-confidence remained relatively stable in both groups during the intervention period.

Age

The impact of the DFfA intervention on the level of self-confidence in food matters did not vary significantly with age (see Figure 104).

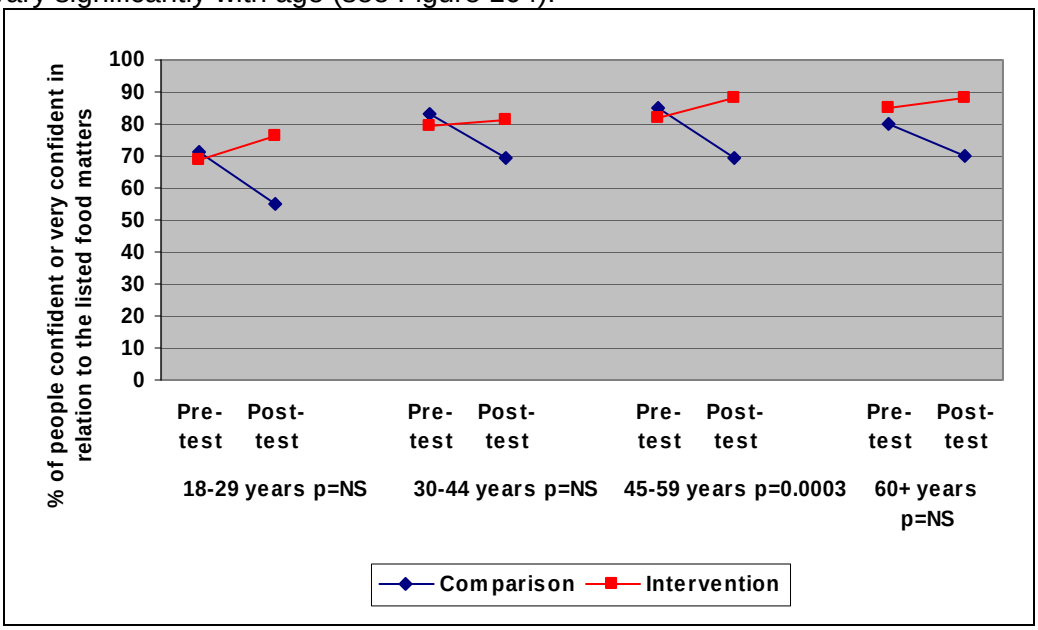


Figure 104 Changes in confidence in relation to the prescribed food matters by level of education; by survey group.

The general trend observed across the four age groups was slight increases or stability in the level of self-confidence in food matters in the intervention group coinciding with decreases of larger magnitudes in the comparison group. The differential impact of the DFfA intervention was significant only among people aged 45-59 years (p=0.0003).

Education

The impact of the DFfA intervention on the level of self-confidence in food matters did not vary significantly with education (see Figure 105).

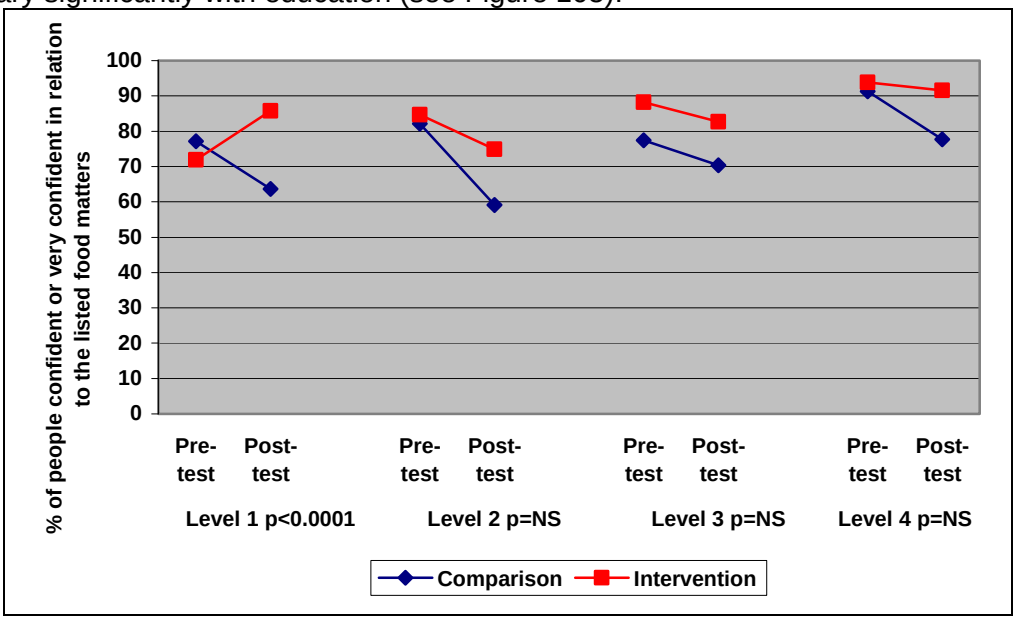


Figure 105 Changes in confidence in relation to the prescribed food matters by level of education; by survey group.

Among people who had no educational qualifications (Level 1), the level of self-confidence in food matters decreased in the comparison group while it increased in the intervention group. This difference in the impact of the DFfA intervention was statistically significant ($p<0.0001$). Among the other three levels of education, decreases in the level of self-confidence in food matters in the intervention group coincided with decreases of larger magnitudes in the comparison group although these differences in the impact of the DFfA intervention were not statistically significant.

Employment

The impact of the DFfA intervention on the level of self-confidence in food matters did not vary significantly with employment status (see Figure 106).

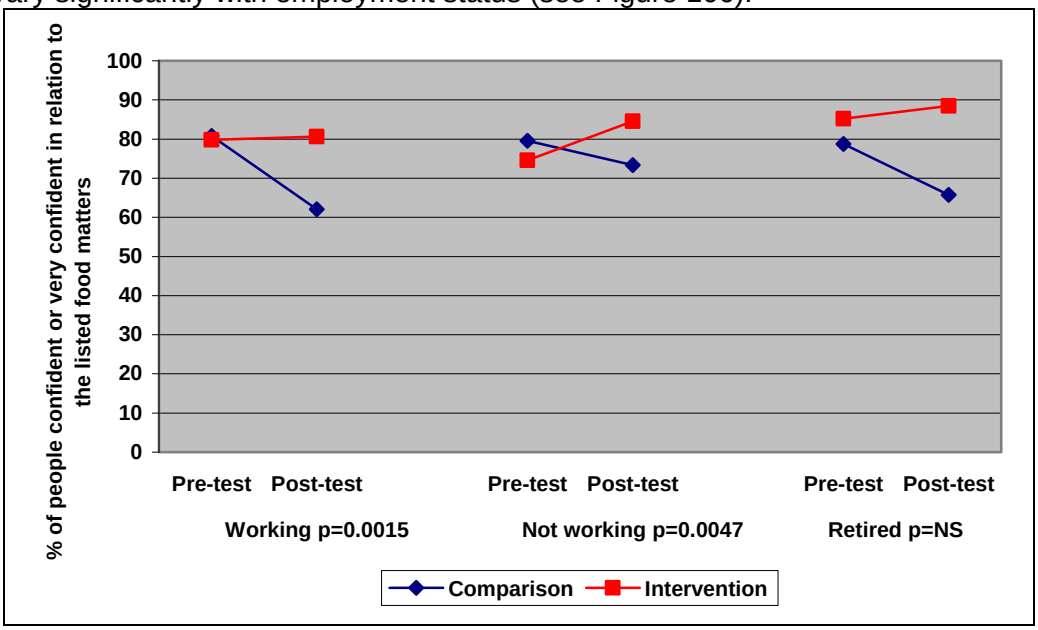


Figure 106 Changes in confidence in relation to the prescribed food matters by employment status; by survey group.

The general trend observed across the three levels of employment status was slight increases or stability in the level of self-confidence in food matters in the intervention group coinciding with larger decreases of larger magnitude in the comparison group. The differential impact of the DFfA intervention was significant among people who were working (p=0.0015) and people who were not working (p=0.0047) but not significant among people who were retired.

SUMMARY BOX

At pre-test, the average percentage of people in the comparison and intervention groups who were confident or very confident in relation to the prescribed food matters was 79%. The level of self-confidence in food matters was not significantly different between the comparison and the intervention groups.

Overall, the impact of the DFfA intervention on the level of self-confidence in food matters was significantly positive. While no significant difference was observed in the intervention group, the comparison group's level of self-confidence in food matters decreased significantly during the intervention period.

The impact of the DFfA intervention varied significantly with the level of deprivation in an area. The intervention was associated with a positive impact in "deprived" areas but appeared to have no clear impact in other areas.

Although the DFfA intervention was not specifically targeted at males or females, it is worth noting that intervention's impact on the level of self-confidence in food matters was statistically different amongst males and females. The intervention had a significantly positive impact in males where self-confidence in food matters in the intervention group increased while it decreased in the comparison group. The intervention appeared to have no significant impact on the level self-confidence in food matters amongst females.

Summary

1.17 DFfA community survey – population estimates

The pre- and post-test data of the comparison and intervention groups were weighted post-hoc by age, gender, and rural/urban profile of the combined comparison and intervention areas as per mid-2005 population data.

Table 10 DFfA indicator values at pre-test and post-test by survey group.

Indicator (Survey item)	Comparison		Intervention	
	Pre-test	Post-test	Pre-test	Post-test
Percentage of people who had, in the past six months, substantially reduced the amount of money spent on food in order to pay other household bills or expenses (A10)	16%	15%	23%	19%
Average distance in miles travelled to main food shop (A8)	4.8	4.4	4.0	4.6
The number of unprompted examples provided that display understanding of the term “healthy eating” (E1)	1.8	1.7	2.4	1.8
Percentage of people who had heard of the term “food poverty” (D1)	22%	30%	23%	33%
Percentage of people who consider at least one healthy option when shopping for food (A11)	54%	54%	55%	60%
Number of times bread, rice, potatoes, pasta and other starchy foods are consumed daily (B1)	3.1	3.0	3.2	3.1
Number of portions of fruit and vegetables consumed daily (B6)	2.7	2.7	2.5	3.0
Percentage of people who consume milk or milk products less than once a day (B1)	19%	15%	18%	17%
Number of times fish is consumed weekly (B1)	1.2	1.7	1.1	1.3

Indicator (Survey item)	Comparison		Intervention	
	Pre-test	Post-test	Pre-test	Post-test
Percentage of people who consume foods high in fat or high in sugar three times or more a day (B1)	32%	33%	38%	29%
Percentage of people who always comply with the ten prompted food safety practices when dealing with food (F3)	18%	6%	11%	13%
Percentage of people that have been regularly physically active within the previous six months or longer (C1)	38%	40%	30%	43%
BMI	26.0	26.1	25.9	25.9
Percentage of people who are overweight only	37%	40%	37%	36%
Percentage of people who are obese only	18%	17%	15%	17%
Percentage of people who are overweight and obese	55%	57%	52%	53%
Number of community activities participated in within the previous two weeks (H2)	1.3	1.5	1.2	1.4
Number of social contacts with other people within the previous two weeks (H1)	4.3	4.0	4.5	4.6
Percentage of people who agree or strongly agree with their ability to influence decisions that affect their neighbourhood (H4)	55%	63%	44%	84%
Percentage of people who are confident or very confident in their ability/knowledge of food safety and nutrition (H5)	80%	66%	79%	83%
Percentage of people who are aware of local food-related activities/initiatives (G2)	16%	19%	10%	16%

1.18 DFfA Community Survey – comparison of unadjusted results with adjusted results

"Unadjusted" results are based on data weighted post-hoc by age, gender, and rural/urban profile of the combined comparison and intervention areas as per mid-2005 population data. Thus there are no differences between groups or over time in the age, gender, or rural/urban profiles.

An indicator's "adjusted" results are adjusted for differences in the education, deprivation, employment, and border/non-border profiles if these attributes were found to be significant confounders of the association between that indicator and the exposure of group (comparison and intervention) and time (pre-test and post-test).

Table 11 DFfA indicators: p-values of pre-test differences between the comparison and intervention groups, differences between pre-test and post-test within the comparison and intervention groups, and differences between the change from pre-test to post-test within the comparison group and the change from pre-test to post-test within the intervention group

Indicator (Survey item)	Comparison / Intervention pre-test difference		Comparison group difference over time		Intervention group difference over time		Significance of any difference in changes observed in each group	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Percentage of people who had, in the past six months, substantially reduced the amount of money spent on food in order to pay other household bills or expenses (A10)	p=0.0017	NS	NS	NS	NS	NS	NS	NS
Average distance in miles travelled to main food shop (A8)	p=0.0022	p<0.0001	NS	NS	NS (p=0.0106)	NS	p=0.0058	p=0.0016
The number of unprompted examples provided that	p<0.0001	p<0.0001	NS	NS	p<0.0001	p<0.0001	p=0.0003	p<0.0001

Indicator (Survey item)	Comparison / Intervention pre-test difference		Comparison group difference over time		Intervention group difference over time		Significance of any difference in changes observed in each group	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
display understanding of the term “healthy eating” (E1)								
Percentage of people who had heard of the term “food poverty” (D1)	NS	NS	p=0.0020	NS	p<0.0001	p=0.0016	NS	NS
Percentage of people who consider at least one healthy option when shopping for food (A11)	NS	NS	NS	NS	NS	NS	NS	NS
Number of times bread, rice, potatoes, pasta and other starchy foods are consumed daily (B1)	NS	NS	NS	NS	NS	NS	NS	NS
Number of portions of fruit and vegetables consumed daily (B6)	NS	NS	NS	NS	p<0.0001	p<0.0001	p<0.0001	p<0.0001
Percentage of people who consume milk or milk products less than once a day (B1)	NS	NS	NS	NS	NS	NS	NS	NS
Number of times fish is consumed weekly (B1)	NS	NS	p<0.0001	p<0.0001	NS	NS	p=0.0012	p=0.0009
Percentage of people who consume foods high in fat or high in sugar three times	NS	NS	NS	NS	p=0.0006	p=0.0040	p=0.0053	NS (p=0.0180)

Indicator (Survey item)	Comparison / Intervention pre-test difference		Comparison group difference over time		Intervention group difference over time		Significance of any difference in changes observed in each group	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
or more a day (B1)								
Percentage of people who always comply with the ten prompted food safety practices when dealing with food (F3)	p=0.0008	p=0.0005	p<0.0001	p<0.0001	NS	NS	p<0.0001	p<0.0001
Percentage of people that have been regularly physically active within the previous six months or longer (C1)	p=0.0027	p=0.0038	NS	NS	p<0.0001	p<0.0001	p=0.0039	p=0.0039
BMI	NS	NS	NS	NS	NS	NS	NS	NS
Percentage of people who are overweight only	NS	NS	NS	NS	NS	NS	NS	NS
Percentage of people who are obese only	NS	NS	NS	NS	NS	NS	NS	NS
Percentage of people who are overweight and obese	NS	NS	NS	NS	NS	NS	NS	NS
Number of community activities participated in within the previous two weeks (H2)	NS	NS	p=0.0007	NS	NS	NS	NS	NS
Number of social contacts with other people within the previous two weeks (H1)	NS	NS	p<0.0001	p=0.0001	NS	NS	p=0.0004	p=0.0006

Indicator (Survey item)	Comparison / Intervention pre-test difference		Comparison group difference over time		Intervention group difference over time		Significance of any difference in changes observed in each group	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Percentage of people who agree or strongly agree with their ability to influence decisions that affect their neighbourhood (H4)	p=0.0001	p=0.0035	p=0.0091	NS	p<0.0001	p<0.0001	p<0.0001	p<0.0001
Percentage of people who are confident or very confident in their ability/knowledge of food safety and nutrition (H5)	NS	NS	p<0.0001	p<0.0001	NS	NS	p<0.0001	p<0.0001
Percentage of people who are aware of local food-related activities/initiatives (G2)	p=0.0005	p=0.0006	NS	NS	p=0.0005	NS (p=0.0109)	NS	NS

Notes
NS= "Not significant"
Cells shaded in green suggest that the difference favours the intervention group.
Cells shaded in blue suggest that the difference favours the comparison group.
Cells shaded grey show a difference in significance between the unadjusted and adjusted data.

1.19 DFfA community survey – subgroup analysis

Table 12 shows whether the effect of the DFfA intervention was different among different levels of the attributes of gender, rural/urban, border status, employment, age, education and deprivation. An indicator's results are adjusted for differences in the education, deprivation, employment, and border/non-border profiles if these attributes were found to be significant confounders of the association between that indicator and the exposure of group (comparison and intervention) and time (pre-test and post-test).

Table12. P-values for the modification of the effect of the DFfA intervention by gender, rural/urban, border status, employment, age, education and deprivation.

Indicator(Survey item)	Gender	Rural	Border status	Employment	Age	Education	Deprivation
Percentage of people who had, in the past six months, substantially reduced the amount of money spent on food in order to pay other household bills or expenses (A10)	NS	<0.0001	<0.0001 (<0.0001)	NS	NS	NS	NS
Average distance in miles travelled to main food shop (A8)	NS	NS	NS	NS	NS	NS	NS
The number of unprompted examples provided that display understanding of the term "healthy eating" (E1)	<0.0001	=0.0013	=0.0091	NS	NS	NS	<0.0001
Percentage of people who had heard of the term "food poverty" (D1)	NS	NS	NS	NS	NS	NS	NS
Percentage of people who consider at least one healthy option when shopping for food (A11)	NS	NS	=0.0045	NS	NS	NS	<0.0001
Number of times bread, rice, potatoes, pasta and other starchy foods are consumed daily (B1)	NS	NS	NS	NS	NS (p=0.0105)	NS	=0.0035
Number of portions of fruit and vegetables consumed daily (B6)	NS	NS	NS	NS	NS	NS	=.0081
Percentage of people who consume milk or milk products less than once a day (B1)	NS	NS	NS	NS	NS	NS	=0.0063

Indicator(Survey item)	Gender	Rural	Border status	Employment	Age	Education	Deprivation
Number of times fish is consumed weekly (B1)	NS	=0.0093	NS	NS	NS	NS	NS
Percentage of people who consume foods high in fat or high in sugar three times or more a day (B1)	NS	NS	NS	NS	NS	=0.0022	NS
Percentage of people who always comply with the ten prompted food safety practices when dealing with food (F3)	NS	NS	NS	NS	NS	NS	NS
Percentage of people that have been regularly physically active within the previous six months or longer (C1)	NS	NS	NS	NS	NS	NS	=0.0009
BMI	NS	NS	NS	NS	NS	NS	NS
Percentage of people who are overweight only	NS	NS	NS	NS	NS	NS	NS
Percentage of people who are obese only	NS	NS	NS	NS	NS	NS	NS
Percentage of people who are overweight and obese	NS	NS	NS	NS	NS	NS	NS
Number of community activities participated in within the previous two weeks (H2)	=0.0066	NS	NS	NS	NS	NS	<0.0001
Number of social contacts with other people within the previous two weeks (H1)	=0.0005	<0.0001	<0.0001	NS	NS	NS	<0.0001
Percentage of people who agree or strongly agree with their ability to influence decisions that affect their neighbourhood (H4)	NS	NS	NS	NS	NS	NS	=0.0038
Percentage of people who are confident or very confident in their ability/knowledge of food safety and nutrition (H5)	=0.0022	NS	NS	NS	NS	NS	=0.0005
Percentage of people who are aware of local food-related activities/initiatives (G2)	NS	NS	=0.0016	=0.0018	NS	NS	<0.0001

Table 13 shows the impact of the DFfA Programme at each level of the attributes of gender, rural/urban, border status, employment, age, education and deprivation.The colours suggest whether the difference favours the comparison group or favours the intervention group.

Table 13 P-values for the differences between the change from pre-test to post-test within the comparison group and the change from pre-test to post-test within the intervention group at each level of the attributes of gender, rural/urban, border status, employment, age, education and deprivation.

	Gender		Rural		Border status		Employment			Age				Education				Deprivation			
Indicator	**Male**	**Female**	**Rural**	**Urban**	**Border**	**Non-Border**	**Work**	**No work**	**Retired**	**18-29**	**30-44**	**45-59**	**60+**	**1**	**2**	**3**	**4**	**HA**	**A**	**D**	**HD**
Percentage of people who had, in the past six months, substantially reduced the amount of money spent on food in order to pay other household bills or expenses (A10)	NS	NS	<0.0001	.0038	<0.0001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	.0018	NS	NS	NS	NS	NS
Average distance in miles travelled to main food shop (A8)	NS (.0116)	NS	.0067	NS	.0006	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	.0069	NS	.0001
The number of unprompted examples provided that display understanding of the term “healthy eating” (E1)	NS	<0.0001	NS	<0.0001	NS	<0.0001	.0016	.0057	NS	NS	NS	.0067	NS	NS	NS (.0135)	NS	NS	<0.0001	NS	NS	NS
Percentage of people who had heard of the term “food poverty” (D1)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Percentage of people who consider at least one healthy option when shopping for food (A11)	NS	NS	NS	NS	NS	.0095	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	.0040	.0035	NS	.0024
Number of times bread, rice, potatoes, pasta	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS (.0176)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

	Gender		Rural		Border status		Employment			Age				Education				Deprivation			
Indicator	**Male**	**Female**	**Rural**	**Urban**	**Border**	**Non-Border**	**Work**	**No work**	**Retired**	**18-29**	**30-44**	**45-59**	**60+**	**1**	**2**	**3**	**4**	**HA**	**A**	**D**	**HD**
and other starchy foods are consumed daily (B1)																					
Number of portions of fruit and vegetables consumed daily (B6)	.0043	.0012	0.0002	NS	.0049	.0021	NS	NS (.0130)	<.0001	NS	NS	NS	.0007	<0.0001	NS	NS	NS	NS	NS	<0.0001	NS
Percentage of people who consume milk or milk products less than once a day (B1)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	.0037	NS	NS
Number of times fish is consumed weekly (B1)	NS	.0006	NS	.0004	NS	.00019	.0034	NS	NS	NS	.0061	NS	NS	NS	NS	.0057	NS	.0039	NS	NS	NS
Percentage of people who consume foods high in fat or high in sugar three times or more a day (B1)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	.0016	NS	NS	.0037	NS	NS	NS	NS
Percentage of people who always comply with the ten prompted food safety practices when dealing with food (F3)	<0.0001	.0021	<0.0001	.0001	<.0001	.0001	.0004	NS	.0020	NS	.0005	NS (.0150)	.0062	<.0001	.0040	NS	NS	NS	NS	NS	<0.0001
Percentage of people that have been regularly physically active within the previous six months or longer (C1)	NS	NS	NS	.0048	NS	.0007	NS	NS	.0014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.0001
BMI	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Percentage of people who are overweight only	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	.0061	NS	NS	NS	NS	NS	NS
Percentage of people who are obese only	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Percentage of	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

	Gender		Rural		Border status		Employment			Age				Education				Deprivation			
Indicator	**Male**	**Female**	**Rural**	**Urban**	**Border**	**Non-Border**	**Work**	**No work**	**Retired**	**18-29**	**30-44**	**45-59**	**60+**	**1**	**2**	**3**	**4**	**HA**	**A**	**D**	**HD**
people who are overweight and obese																					
Number of community activities participated in within the previous two weeks (H2)	NS	.00086	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.0001	NS
Number of social contacts with other people within the previous two weeks (H1)	<.0001	NS	NS	<0.0001	NS	<0.0001	.0015	NS	NS	NS	NS	NS	NS	NS	.0038	NS	NS	NS	<0.0001	NS	<0.0001
Percentage of people who agree or strongly agree with their ability to influence decisions that affect their neighbourhood (H4)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<.0001	.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<.0001	NS	NS	.0001	<0.0001	<0.0001
Percentage of people who are confident or very confident in their ability/knowledge of food safety and nutrition (H5)	<0.0001	NS	.0046	<0.0001	NS	<0.0001	.0015	.0047	NS	NS	NS	.0003	NS	<0.0001	NS	NS	NS	NS	NS	<0.0001	NS
Percentage of people who are aware of local food-related activities/initiatives (G2)	NS	NS	NS	.0001	NS	.0013	.0008	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	.0003	NS	<0.0001

What does this mean?

1.20 Local regeneration

Local Food production and distribution

DFfA recognizes that efforts to tackle food poverty need to be part of wider efforts to address local regeneration. Local production and distribution of food is an important component of local regeneration. While it is difficult to effect these outcomes solely through an intervention such as DFfA, and no specific measures were made of changes in local food production and distribution, the ADHAZ Partnership attracted additional funding of £225,000 for other supporting programmes which focused on the local production and distribution of food. These supporting programes consisted of community and school gardens and food co-operatives. Details of these programmes can be found in the DFfA supporting document *Lessons from the Decent Food for All (DFfA) intervention. Supporting Document Part II: Description of the Decent Food for All (DFfA) intervention*.

Physical and financial accessibility

People's access to healthy food depends on the availability, affordability and types of foods in shops.

In terms of the availability and price of food, the DFfA intervention had limited success:

- The proportion of well-stocked/lower-priced shops in more deprived wards did not change during the intervention period.

- The availability of food products – both "unhealthy" and "healthy" - increased. The availability of fruit and vegetables did not change.

- The price of the food basket increased in the ADHAZ area. This increase applied to both "healthy" and "unhealthy" food products.

These observed changes could not be easily attributed to the DFfA intervention. This is perhaps not surprising given that the supporting programmes comprised a number of pilot projects of food gardens and food co-op initiatives. While they were well received, they were unlikely to have strongly affected the local food industry. Given the limited reach of the DFfA intervention at the community-level, the lack of other supply-driven strategies to improve the availability and price of safe healthy food becomes even more critical.
As noted in other research[5,8,12], the least expensive shops in this study were multiples. When shoping in independent grocers, affiliated independents and specialist stores, the cost was respectively 16.6%, 17.7% and 34.5% higher than in the multiples. Furey et al.[8] demonstrated that it was on average 39.4% more expensive to buy in independents stores than in multiples. The range and number of products available was also high in those large supermarkets compared to all other types of shops. Finally, in line with

results from a mapping study of food [4], the food basket study indicated that the most commonly available products are the less healthy options, energy, fat and sugar-dense food products, whereas the least available products are often healthy options such as low-fat or wholemeal products. The ethnographic study on food culture in ADHAZ undertaken by the Institute in 2006[13] also pointed out the high accessibility of take-away food, pre-prepared meals and snacks in every shop near home, encouraging unhealthy eating habits. Moreover, Monsivais and Drewnowski demonstrated that the cost of low-energy density foods were rising dramatically compared to the most energy-dense foods[14].

These results suggest that preventive strategies such as education of food retailers, caterers and other food handlers is needed in order to improve the access to healthy food products.

It is important to note that the availability and price of food products in local shops are only two aspects of "physical and financial access". For example, the calculations presented in this report do not include the cost of travel needed to fill the food basket. Also, food basket studies do not take into account that people may need to visit different stores to fill the basket. The ethnographic study on food culture[13] showed that shopping is mainly seen as a chore, and people buy in several outlets on a regular basis. Furey et al.[8] also pointed out that only 65% of of households had access to a car in Northern Ireland, which may limit their physical access to food shops and the quantity of food with wich they can return.

Several factors are known to contribute to physical and financial access to food, including disposable income, car ownership, consumer mobility and reliance on walking and public transport, frequency and volume of shopping, home food-storage facilities and the use of edge-of-town supermarkets or local convenience stores[12]. More studies focusing on these wider 'environmental' determinants should be undertaken and evidence-based recommendations drawn up at local and national levels in order to reduce the occurence of the so-called "food deserts". More research is also needed to clarify the role and importance of prepared food purchased and consumed outside the home in fast-food and other restaurants.

Financial access to food is not only affected by the cost of food but also by the amount of money available to be spent on food.

The ethnographic study on food culture reported that the reality of living in areas of social deprivation (often associated with a lack of housing, fuel poverty and inadequate benefits) may impact on the money and energy people have to input on health issues, including food consumption.

On average 18% of people in the study population had reduced the amount of money spent on food in order to pay other household bills. A restriction on food expenditure in favour of other household expenditure is often observed where there is pressure on household finances[3,15]. Focus groups for the Public Health Alliance's report Food poverty: Fact or Fiction[16] stated that "Household bills such as rent, heat and electricity "came first" and therefore impact on the amount of money available to spend on food. For low income households, paying the main household bills was considered a priority and whatever was left was spent on food" (p 54). This is further highlighted by the finding of the Low Income Diet and Nutrition Survey[17] that 39% of people on low incomes in the

previous year “had been worried that their food would run out before they got money for more”. The Survey of Lifestyles, Attitude and Nutrition[18] in the Republic of Ireland found that 16% of people could not “always” buy enough food for their household.
It has been reported that buying healthy foods can cost up to 50% more than low cost, nutritionally poor alternatives[19]. In this context, unhealthy energy-dense options are often chosen over healthy food products[13].

Alarmingly, food basket studies showed that a healthy food basket would cost more than could possibly be spent from benefit income[17].

The DFfA intervention did not have a significant impact on the percentage of adults who had recently cut their weekly food spending in order to pay other household bills. This is perhaps not surprising given that efforts to improve financial resources of disadvantaged groups through budget/benefit maximization were limited to an educational session entitled “Budgeting and Money Management”. Again, this was unlikely to have a large impact at the community-level.

The findings highlight the need to link efforts to tackle food poverty and obesity to efforts to address poverty and social exclusion. Most immediate is the need to provide adequate income support for poorer households. In many poorer households, food expenditure is the only “discretionary” budget item and is often reduced to avoid debt or to pay other household bills such as rent, electricity, and gas. Rising food prices, fuel prices, rents and mortgages are likely to aggravate the level of food poverty amongst disadvantaged groups.

Conclusion

Recently, the focus of research interest in food and health has shifted to the potential environmental causes of observed inequlities in diet The DFfA theme of “Local regeneration” attempted to address some of the wider environmental issues influencing food poverty, specifically local food production and distribution, and access to food.

As noted previously, it is difficult for a food intervention programme to influence the local production and distribution of food. The DFfA intervention had limited success in influencing the availability and price of local food. Such complex changes would require the comprehensive and co-ordinated effort of the community alongside local producers, suppliers and retailers.

1.21 Individual, Household and Community change

Improved awareness/knowledge of nutrition, safety and hygiene, and food poverty

While the wider environmental determinants resulting in a poor diet are important, the individual dietary knowledge, skills and preferences also significantly influence the healthiness and safety of a diet and should not be ignored.

The ethnographic study of food culture in ADHAZ[13] suggested that people think their diet is healthier than in the past due to a reduction of fat consumption, less deep cooked foods and the positive impact of national nutrition campaigns such as "Five a day". However they are also conscious that the consumption of unhealthy products like ready-to-eat meals and snacks has increased. People who are aware of healthy diet messages often don't have the knowledge and skills to fully put them into practice, even if all other economic or cultural conditions are met. For instance "five fruit and vegetables a day" became a target in many households, but people often don't know what corresponds exactly to one portion of fruit or vegetables, they don't know how to cook them or they are unaware that tinned or frozen fruits could contribute to these portions.

Children's diet is also a specific issue, as many parents don't know the hidden sugar content of many products directly directed at children such as carbonated drinks and cereals bars, and are confused by healthy messages like "high fibre content".

The study also highlighted widespread confusion about the dietary guidelines and conflicting nutrition messages, confusion about food labels and food marketing, and vague terms like "servings" and "portions".

Prior to the DFfA intervention period, understanding of the term "healthy eating" was very low, as people mentioned on average two unprompted examples of healthy eating out of eight. The DFfA intervention had a negative impact on understanding of the term "healthy eating". While understanding of healthy eating remained relatively stable in the comparison group it decreased in the intervention group.

Likewise, the awareness of the term "food poverty" was low before and after the intervention. Despite an increase from 23% to 33% of people who had heard of this term in the intervention group, only one third of the population had heard of "food poverty" at the end of the DFfA intervention.

Participants in DFfA core activities reported a better knowledge of nutrition issues such as the hidden fat and sugar content of some products. They also learned cooking tips and how to use information labels. However these positive individual impacts on people's awareness and knowledge were not translated into community-level impacts.
These findings demonstrate that individual-based health promotion still needs to be strengthened in order to increase awareness and knowledge of nutrition, food safety and food poverty.

The results also emphasise the need to ensure that food packaging and food labeling is accurate, not misleading and easy to understand. The Food Standard Agency stated aims for 2001-2006 included a series of initiatives to promote best practice within the food industry, and the Agency issued Guidance on Clear Food Labelling in 2002. In the

meantime the Traffic Lights labelling was introduced in Northern Ireland and the main food industries adopted this system in 2007. The front-of-pack signpost labelling proposed by the FSA is supported by a large number of consumers, health, medical and other groups (for more information see http://www.food.gov.uk/foodlabelling/signposting/supportfsasignp).

In 2007 the FSA also launched the 'Eatwell Plate', a visual tool that illustrates the types and proportions of foods that make up a balanced diet, thus updating the "Balance of Good Health Plate" in use previously. This plate constitutes the national dietary guideline and should be recognised and used by all professional workers. However discrepancies and conflicting dietary recommendations with other European or international countries may still be confusing for the consumer. The development of a common easily accessible tool could be explored (e.g. in Northern Ireland the Eatwell Plate is used whilst in Republic of Ireland the nutritional guideline is the Food Pyramid).

Greater demand for (affordable) safe and healthy food

An early sign of increased demand for healthy food occurs when adults look for so-called "healthy options" when they do their food shopping.
The study of food culture[13] found that many people living in deprivation live in fear of violence, burglary and rioting and experience high levels of daily stress. In this situation, many felt that a safe healthy diet was not one of their highest priorities. The environmental factors, such as the high availability of unhealthy products and the improper food labeling are not encouraging healthy eating either.
In line with these findings, consideration of at least one "healthy option" when shopping for food was quite low in the study population. Nearly a half of people did not consider a healthy option when they were shopping for food. During the intervention period, the percentage of people considering healthy options did not change significantly in either the comparison (54% to 54%) or intervention (55% to 60%) areas.

This is similar to the finding of the Health Promotion Agency[20] that 49% of people identified health as a factor influencing food purchasing. In the North/South Ireland Food Consumption Survey[11], 62% of people reported that they made "conscious efforts to eat a healthy diet". Though not explicitly stated, it is not unreasonable to assume that these "conscious efforts" would include consideration of health options when shopping for food.

Clearly, broader determinants of food poverty, poverty and social exclusion need to be addressed before the most disadvantaged people can consider healthy food shopping.
On another level, these findings also suggest that attention is needed to help move people from this pre-contemplative stage to a contemplative stage where they would be more actively considering the nutritional value of the food they purchase.

In order to increase each individual's underlying understanding of "healthy eating", dietary guidelines need to use more accessible language to describe what changes need to be made to maintain a healthy lifestyle. Aids could be designed to help people plan more nutritious food shopping.

Consumers gather information about the foods they purchase from a wide variety of sources. Family knowledge, education, the media and advertising all convey messages about different food characteristics; information may also be found on the food product label.

Food labels enable contemplative customers to make informed choices about the foods they purchase. Food packaging can also serve as a prompt at point of purchase to those who may be in a pre-contemplative stage. The results emphasise the need to ensure that food packaging and food labeling is accurate, not misleading and easy to understand.

They also emphasise the priority that needs to be placed on improving the overall nutritional value of the foods available in retail outlets, so that the burden of identifying safe healthy food does not completely fall on the purchaser. Here again, partnership and education of the food retailers, work with the food industry and regulation of advertising need to be prioritized.

Improved health behaviours: healthier eating choices, healthier lifestyles, improved food and hygiene and safety

In Europe today, six out of the seven most important risk factors for premature death (blood pressure, cholesterol, Body Mass Index, inadequate fruit and vegetable intake, physical inactivity, excessive alcohol consumption) relate to how people eat, drink and move (the other one being tobacco).
(http://ec.europa.eu/health/ph_determinants/life_style/nutrition/nutrition_en.htm)

Healthier eating choices

National nutritional guidelines provide recommendations on the consumption of foods from each of the five identified groups to ensure a healthy diet.
The FSA Eatwell Plate shows how much of what people eat should come from each food group. It is split into five segments to represent the five food groups as follows[7]:

- Bread, rice, potatoes, pasta and other starchy foods 33%
- Fruit and vegetables 33%
- Milk and dairy foods 15%
- Meat, fish, eggs, beans and other non-dairy sources of protein 12%
- Foods and drinks high in fat and/or sugar 8%

The ethnographic study indicated that bread, rice, potatoes, pasta and other starchy foods were consumed on a daily basis, and that bread and pasta were classified amongst the favourite foods in the study population[13]. However, the community survey showed, in line with the findings from the North/South Ireland Food Consumption Survey[11], that the consumption of starchy food products was quite low. Adults consumed, on average, such starchy foods three times a day compared to the recommended number of daily portions of six, which corresponds approximately to 33% of the diet. The DFfA intervention had no significant impact on daily consumption of starchy foods. It might be possible that the DFfA programmes and workshops were more

focused on the consumption of fruits and vegetables, minimising the importance of starchy food products in people's daily food intake.

These findings suggest that attention is needed to improve people's knowledge about healthy diets and their compliance with dietary guidelines regarding cereal based products. It's worth noting wholemeal products should be emphasised when promoting the consumption of this food group.

The fruit and vegetables group is a significant component of the recommended daily intakes. Most people are aware of the five-a-day message but on the whole, people do not consume that amount. Participants in the ethnographic study of culture of food also emphasized the difficulties to get their children eat fruit and vegetables.

Prior to the DFfA intervention, adults in both the comparison and intervention areas consumed less than half the recommended daily number of portions of fruit and vegetables: an average of 2.6 per day. This is similar to a number of other surveys. The Periscope survey found that the majority of people eat between two and three a day[21]. The Low Income Diet and Nutrition Survey found that men eat an average of 2.4 portions a day and women eat an average of 2.5 portions a day[17]. The North/South Ireland Food Consumption Survey shows that people consume and average of 228g of fruit and vegetables a day, which equates to 2.9 standard portions a day[11].

Overall, the DFfA intervention had a statistically significant positive impact: daily consumption increased significantly in the intervention area (from 2.5 to 3.0 portions per day) while it remained unchanged (at 2.7 portions per day) in the comparison area. The DFfA intervention also had significantly positive impact in "more deprived" wards.
The DFfA activities monitoring, which studied the types of activities that were delivered, who they reached and the level of participation, indicated that the workshops and programmes often focused on the consumption of fruit and vegetables, which might explained the positive impact of the intervention compared with the mixed results observed with other types of foods.

The strength of evidence for the association between increased intake of fruit and vegetables and reduced risk of chronic diseases such as diabetes, cardiovascular diseases or cancers is variable and depends on the specific pathology. But an array of evidence points to beneficial effects of fruit and vegetables consumption and the link with obesity is clear. If people's awareness and knowledge increased over the past few years, it seems this knowledge was not translated into a widespread positive change in behaviour. An average of three portions a day is still insufficient and the consumption of such food products should still be promoted. Different settings have to be explored and the recent fruit schemes in schools reinforced. Collaboration with producers, industries, advertisers and retailers is essential.

On the consumption of milk and dairy foods, the national recommendations advise that such products are great sources of protein and vitamins and should be eaten in reasonable amounts. They highlight the intake of healthy products favouring non-saturated fats, and the importance of milk and dairy products in children's diet.
Prior to the DFfA intervention, almost 1 in 5 adults in both the comparison and intervention areas consumed "Milk and milk products" less than once a day. Similarly, the Consumer Attitudes to Food Standards report (2007) found that 19% of people

consumed dairy products less often than “daily/most days”. The DFfA survey questionnaire did not distinguish between products that were low or high in saturated fats. Therefore, 1 in 5 is probably an underestimate of the percentage of adults who do not comply with current nutritional recommendation of at least one portion per day while avoiding saturated fats.

The DFfA intervention had no significant impact on the percentage of adults who consumed dairy products less than once a day - it decreased similarly in both the comparison (from 18% to 17%) and intervention (from 19% to 15%) areas.

In conclusion, the study population is probably not meeting the national recommendations in terms of milk and dairy foods, despite the increasing number of low-fat and low-salt products on the market. Increasing awareness and knowledge on this food groups would be beneficial to deliver a clear message and contribute to people’s healthier eating habits. As dairy foods are essential to children’s diet, marketing and advertising should be moving towards a better promotion of the healthiest options.

Among the “Meat, fish, eggs, beans and other non-dairy sources of protein”, fish and shellfish are not consumed in sufficient amounts on the island of Ireland[17], despite their excellent nutritional values and promotion of their consumption through nutritional recommendations.

The current recommendation is to increase consumption with at least two portions of fish per week, including one portion of oily fish. The DFfA survey questionnaire did not distinguish between oily and non-oily fish. Prior to the DFfA intervention, adults in both the comparison and intervention areas consumed fish an average of 1.2 times a week.

The DFfA intervention appeared to have a significant negative impact on fish consumption: it increased significantly in the comparison area (from 1.2 to 1.7 times per week) while a smaller increase (from 1.1 to 1.3) observed in the intervention area that was not significant. Mostly, this negative impact occurred in urban areas, in non-border areas and less deprived wards.

The ethnographic study pointed out that fish is often seen as too expensive and less tasty than meat. During the DFfA cooking educational sessions people learned how to cook in healthier ways, using less fat or enjoying new recipes putting forward fruit and vegetables. The consumption of fish could be stimulated the same way and the production and promotion of fish consumption should be encouraged throughout the food supply chain.

Finally, while the dietary guidelines recommend eating “foods and drinks high in fat and/or sugar” sparingly, many different studies have shown that those products are still hugely popular. Such foods are often snacks, ready-to-eat meals appreciated for their taste, their high energy value and convenience by the consumers, but also critized for their high-fat, sugar and salt content. A significant consumption of products from this food goup is associated with the risks of obesity andd other diet-related diseases, particularly amongst more disadvantaged populations.

In the culture of food survey, the high availability of such “junk food” through vending machines and the abundance of take-aways was pointed out by the participants, increasing the risk of overconsumption , especially in the young people[13].

Interestingly, the SLÁN survey in the Republic of Ireland found that 86% of people had at least three servings of food high in fats and sugar a day[18]. This is considerably higher than the 33% found on average during the DFfA survey. The highest reportable frequency in the DFfA survey for the consumption of these foods was "more than once a day". This was conservatively interpreted as twice a day and therefore may underestimate consumption of these foods.

The DFfA intervention had a marginally significant positive impact on the consumption of these types of foods: the percentage of adults consuming such foods three or more times a day decreased significantly (from 38% to 29%) in the intervention area but remained unchanged (32% to 33%) in the comparison area. The DFfA intervention had a significantly positive impact amongst adults with the lowest levels of education.

While these results are encouraging, they confirm that too many people are consuming too much foods and drinks high in fat, sugar and salt. Only a sensible reduction in the consumption of these products and an increase in the consumption of fruit and vegetables will lead to an effective improvement of people's diet. This means trying to regulate the production and availability of "junk foods" in the food supply, despite a highly profitable market. It also means educating people on the hidden fats and sugar of several products, particularly those targeting at children, and increasing people's knowledge on how to create healthy meals and enjoy a healthy diet without "giving up all the foods that taste good"[13].

In a context of rising cost of low-energy-dense products, the issue of access to healthy food becomes crucial, especially for the more disadvantaged people who often buy cheaper, less healthy and more "filling"options.

Again, the legislation on products formulation and supplementation, regulation of advertising and marketing and work with food retailers are necessary to reduce the consumption of these foods and fight obesity.

Healthier lifestyles

Since researchers identified that an obesogenic environment it is likely to be a major factor in recent trends in obesity and its inequalities, governments and public health organisations are developing strategies to fight against those environmental factors that encourage the overconsumption of energy-dense foods and inversely do not promte physical activity.

In an increasingly sedentary world, nutritional recommendations are meaningless without recommendations on physical activity. In developed countries, many efforts are put in encouraging people to exercice more, in their everyday life as well as through vigorous physical activity on a regular basis.

Prior to the DFfA intervention, 1 in 3 adults in the study areas reported that they were physically active as per the definition provided. Significantly more adults in the comparison area reported they were physically active than in the intervention area (38% vs 30%).

The Northern Ireland Health and Social Wellbeing Survey used a similar definition of physical activity and found that 30% of people are physically active for at least 30 minutes per day on five days a week[22]. The SLÁN survey used the same definition as DFfA and found a higher percentage of people who reported that they were physically active (55%)[18].

The DFfA intervention had a statistically significant positive impact on the level of physical activity: while no significant change in the percentage of adults who were physically active occurred in the comparison area (38% to 40%), the percentage increased significantly (from 30% to 43%) in the intervention area.

These results are encouraging, providing evidence that health promotion programmes might be effective in increasing the level of physical activity in the study population. However, a similar proportion of people reported to be physically inactive, indicating that more health promotion activities should be developed, probably targeting sub-groups of the population for a greater impact.

Prior to the DFfA intervention, approximately 1 in 6 (17%) adults in the intervention and comparison areas were obese (based on self-reported height and weight).

Overall, 54% of people were overweight or obese. The Northern Ireland Health and Social Wellbeing Survey found a similar percentage to be overweight or obese (59%)[22].

The SLÁN survey found that 50% of people in the Republic of Ireland were overweight or obese based on self-reported height and weight[18]. However, independently measured height and weight data on a representative sub-sample of SLÁN respondents found that 64% of people were overweight or obese. Studies have shown that BMI figures derived from self-reported data tend to underestimate levels of overweight and obesity.

The All-Ireland Social Capital and Health Survey, based on self-reported measures, found that 40% of people on the island were obese or overweigh[23].

While there was some evidence that the DFfA intervention improved diets and increased levels of physical activity, it had no significant impact on the percentage of adults who were overweight or obese.

All these figures illustrate why the World Health Organisation describes obesity as a “global epidemic”. The last three decades have seen the levels of obesity in the European population rise dramatically, in parallel to the growing population of overweight people. This is particularly worrying in children, as childhood obesity has become the most prevalent childhood disease in Europe. It is estimated that over 300,000 children on the island of Ireland are overweight or obese and this is projected to increase annually by 10,000[24].

Improved food safety and hygiene practices

The study of food culture in Northern Ireland reported that food safety was an important issue for consumers, particularly in relation to washing hands when preparing food, not consuming food that is past the sell-by-date, knowing the source of meat products and concern about additives and preservatives in food[13]. The Consumer Attitudes to Food

Standards also indicated that 63 % of the respondents claimed to be concerned over food safety issues, with food poisoning, safety of foods given to children and the salt, fat and sugar content of products being key concerns[25].

Prior to the DFfA intervention, just over 1 in 6 (15%) of all adults reported that they always complied with all the ten food safety practices listed in the community survey questionnaire. The percentage was significantly higher in the comparison area than it was in the intervention area (18% vs 11%).

The DFfA intervention had a positive impact on the percentage of adults who always complied with food safety practices: no significant difference was observed in the intervention area (slight increase from 11% to 13%) while it decreased significantly (from 18% to 6%) in the comparison area.

These findings indicate that if people express genuine concerns about food safety issues and seem to be aware of key rules in food hygiene; their actual behaviour does not reflect their considerations. Only a small proportion of this study population complied with the ten prompted food safety practices.

However, this indicator had some limitations: only the ten prescribed items, with which the respondent was prompted, counted as demonstrating compliance with food safety practices, and compliance with all ten food safety practices was required.
This strict measure of compliance with food safety practices may underestimate the general level of safe behaviour.

Greater social inclusion

As research has suggested, social exclusion is an integral part of food poverty, as those affected are forced to adopt food consumption patterns and food acquisition strategies that fall outside the societal norms[6, 16].

Food poverty and social exclusion are closely linked within a context of food inadequacy and cultural norms where an individual or family may be well-nourished in a nutritional sense but experience deprivation in other ways. It is just not health that is compromised in food-poor households, so too is social behaviour.

Prior to the DFfA intervention adults in both comparison and intervention areas had an average of 4.4 social contacts (out of a possible 6) in the previous two weeks. Although no information was collected on the quality or nature of these contacts, it would appear to compare favourably with findings from the the Northern Ireland Health and Social Wellbeing Survey (2005/2006) that 39% of people aged 16 years or over experienced a lack of social support. From the DFfA community survey, 76% of people experienced four or more of the six prescribed social contact examples.

The DFfA intervention had a significant positive impact on the average number of social contacts: while this number decreased significantly in the comparison area, no significant change was observed in the intervention area.

It also had a positive impact on people's perceived ability to influence decisions that affect their neighbourhood. The percentage of people who agree that, by working together, adults in your neighbourhood could influence decisions that affect the neighbourhood increased significantly from 44% to 84% in the intervention area.
Overall, 62% of people perceived their neighbourhood to be efficacious. This finding is similar to that of the All-Ireland Social Capital and Health Survey (2003) which found that 67% of people in Northern Ireland felt that their neighbourhood was efficacious.

However, the DFfA intervention did not have a significant impact on community participation. Prior to the DFfA intervention, adults in both the comparison and intervention areas had participated in an average of 1.2 (out of a possible five) prescribed community activities and this didn't change during the intervention.

In conclusion it seems that people had good social contacts with their friends, relatives and neighbours, and believed in their neighbourhood efficacy. However their participation was quite low when it came to community activities. It might be that a stronger "feeling of belonging" to a community needs to be developed. Community programmes such as food gardens, food co-ops, breakfast clubs etc were very well received[26-30]. They represent good opportunities to reduce food poverty and social exclusion and should be developed.

Greater individual development: increased self-esteem and greater Recognition of the value of education, training and employment

An increased individual empowerment, including a better self-esteem, may be the first step towards social inclusion and a reduction in food poverty.

On food issues, the community surveys respondents were asked to rate their confidence in their knowledge and abilities about four food matters.

Prior to the DFfA intervention, nearly 4 in 5 adults (79%), in both the comparison and intervention areas, reported they were confident or very confident about food matters.
The DFfA intervention had a significant positive impact on self-confidence in food matters: while the percentage of adults who reported they were confident or very confident about food matters decreased significantly (from 80% to 66%) in the comparison area, a slight increase was observed in the intervention area (79% to 83%).
Even if the level of confidence was quite high in this population before the intervention, it seems that the DFfA intervention had a positive impact on people's empowerment.

DFfA educational activities have been developed in order to increase people's awareness and knowledge, to give them the opportunity to take control over their diet and to change their behaviour towards healthier eating choices and lifestyles. Empowerment is one of the first steps towards a change in behaviour.

These workshops and programmes need to be strengthened and local action embedded in a broader approach to achieve wider community impact on people's behaviour.

Conclusion

Looking at the fifteen key performance indicators relating to Individual, household, and community change; seven exhibited a positive impact, two exhibited a negative impact, and six exhibited no impact at all.

While there were positive impacts - for example, on the self-reported consumption of fruit and vegetables, and foods high in fat or sugar (marginally significant), the level of physical activity, and safer food safety practices – the intervention can best be described as a limited and mixed success:

- Contrary to expectations, these behavioural changes were not accompanied by positive impacts on awareness and knowledge

- Contrary to hopes, these behavioural changes were not accompanied by any impact on the levels of obesity/overweight. This would have required a sustained change in diet and physical activity at an individual-level amongst those in the post-test survey compared to those in the pre-test surveys.

- There was no clear relationship between changes in consumption of different foods and changes in their availability or price. For example; the availability of

foods high in fat and sugar increased but their self-reported consumption appeared to decrease.

- Some of the positive impacts (in the area of greater social inclusion) are difficult to directly attribute to the DFfA intervention.

- Some of these significant positive impacts are based on deteriorations in the comparison area rather than improvements in the DFfA intervention area.

There was some evidence that the DFfA intervention achieved some success in its target wards and disadvantaged groups. But again, it was a somewhat limited and mixed success, and there was no clear relationship between these impacts and the way in which the DFfA core activities had been targeted.

The evaluation confirmed that it was often where adults lived and where they shopped, rather than their individual characteristics, that determined the food they ate. These also influenced the effectiveness of community-based interventions like DFfA.

In a context of food poverty and rising levels of obesity and overweight, it is essential to enable people to make the right choices and adopt healthier eating habits and healthier lifestyles to protect their health.

The longer-term effects of wider societal factors are accumulated over a person's lifecourse. Many aspects of the obesogenic environment affect everyone but it is the poor and disadvantaged who are least able to cope

We should be moving towards addressing poverty in the context of the wider poverty agenda as well as within the food and nutrition agenda.

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APPENDICES

APPENDIX 1:
PRE-TEST COMMUNITY SURVEY QUESTIONNAIRE

SERIAL NO: | | | | | **LETTER:** |

WARD NAME: (FROM ADDRESS SHEET)

SMR

SOCIAL & MARKET RESEARCH

on behalf of

INSTITUTE OF PUBLIC HEALTH IN IRELAND
&
ARMAGH AND DUNGANNON HEALTH ACTION ZONE

COMMUNITY SURVEY

RESPONDENT NAME:	
RESPONDENT ADDRESS:	
RESPONDENT TELEPHONE NO.:	
INTERVIEWER'S NAME:	

CONTACT DETAILS:	**Day**		**Month**		**Time**	
1st Call						
2nd Call						
3rd Call						

CONTACT:

Full Interview	**1**	**No Longer Lives At This Address**	**6**
Refused	**2**	**Language Problem**	**7**
Ill / In Hospital	**3**	**Demolished / Vacant**	**8**
Away / On Holiday	**4**	**Other (specify)**	**9**
Occupied No Reply	**5**		

SECTION A : SHOPPING PATTERNS

A1. Who normally shops for food in this household? **(CIRCLE ONE ONLY)**

Self	1
Partner	2
Other adult in household	3
Child	4
Other (Specify)	5

A2A. Thinking about the different types of outlets where you can buy food, from which of the following do you buy food REGULARLY (at least two days per week), either for yourself or for someone else? **CIRCLE ALL MENTIONED - SHOWCARD 1**

A2B. And from which do you buy food OCCASIONALLY (about two or three times per month)? **CIRCLE ALL MENTIONED - SHOWCARD 1**

A2C. And from which do you NEVER buy food? **CIRCLE ALL MENTIONED - SHOWCARD 1**

	A2A	A2B	A2C
Takeaway	1	1	1
Fast food	1	1	1
Sandwich bar	1	1	1
Coffee shop	1	1	1
Cafes	1	1	1
Restaurant	1	1	1
Pub/wine bar	1	1	1
Mobile food outlet (e.g. hot dog stand)	1	1	1
Social club/ health club/ sports club	1	1	1
None	1	1	1

A3. Where do you do the MAIN food shopping for the household?
(PLEASE WRITE IN – ONE ONLY)

NAME OF SHOP	
LOCATION	

A4. Is the shopping for your household mainly done at this shop?

UNPROMPTED – CIRCLE ALL MENTIONED

	Mentioned
Within walking distance	1
Good public transport to & from	1
Closest to home address	1
Provides value for money (i.e. cheap/inexpensive)	1
Good variety of food items	1
Good special offers	1
Friendly/helpful staff	1
Habit	1
Other, please specify	1
Don't know	77

A5. And how often does your household shop there? SHOWCARD 2 **(CIRCLE ONE ONLY)**

Daily	1
More than once a week	2
Weekly	3
Fortnightly	4
Other (specify)	5

A6. And how does the person who normally does the shopping travel to this food store? **(CIRCLE ONE ONLY)**

Family car	1	-> go to A8
Friend/neighbour/relatives car	2	-> go to A8
Public transport (i.e. bus)	3	-> go to A7A
Taxi	4	-> go to A7B
Shared taxi (with friend/neighbour/relative)	5	-> go to A7C
Walk	6	-> go to A8
Other specify (e.g. Community transport)	7	-> go to A8

A7. If travel by public transport, taxi or shared taxi, what is the total cost of the journey. **RECORD COST FOR SHOPPER AND THOSE WHO NORMALLY ACCOMPANY SHOPPER E.G. CHILDREN, CARER ETC.**

		£ Cost for Shopper	**£ Cost for Others**	**£ TOTAL COST**
A7A	Public transport (i.e. bus)			
A7B	Taxi			
A7C	Shared taxi (with friend/neighbour/relative)			

A8. What is the distance that you travel to this shop? **(PLEASE WRITE IN NUMBER OF MILES)**

Miles			

A9. In the last 6 months on average how much of your household income is spent on food per week (excluding transport)? **(PLEASE WRITE IN AMOUNT)**

£			

A10. Have you ever substantially reduced the amount of money you spend on food weekly to allow the payment of other household bills or expenses in the last 6 months (e.g. rent/mortgage, heating, electricity, holiday etc)? **(CIRCLE ONE ONLY)**

Yes	No	Don't know
1	2	3

A11. Which of the following issues do you consider when shopping for food? **(CIRCLE FOR EACH) SHOWCARD 3**

ISSUE	**A11**			**A12**
	Yes	No		
Advertised – wanted to try	1	2		1
What it says on the label	1	2		2
Help with weight control	1	2		3
Produced locally	1	2		4
Special offers	1	2		5
Fat content of item	1	2		6
Convenient – easy to prepare	1	2		7
What partner will like	1	2		8
What children will like	1	2		9
Habit – usually buy item	1	2		10
Organic	1	2		11
Healthy option	1	2		12
Cost of food item	1	2		13
Other (Specify)	1	2		14

A12. And of the issues that you mentioned, which would be the MAIN issue that you would consider when you shop for food? **SHOWCARD 3** - **(CIRCLE ONE ONLY ABOVE)**

A13. Before you go shopping do you (SHOWCARD 4): **(CIRCLE FOR EACH)**

	Yes	No	Sometimes
Write a shopping list	1	2	3
Meal plan for the week ahead	1	2	3
Have an idea in your head what's needed	1	2	3

SECTION B: FOOD & NUTRITION:

B1. How often do you eat each of the following food items in an average week?
SHOWCARD 5 (CIRCLE FOR EACH)

	More than once a day	Once a day	Most Days (3 + a week)	1-2 Times a week	Weekly	Never
Fruit	1	2	3	4	5	6
Vegetables	1	2	3	4	5	6
Bread	1	2	3	4	5	6
Potatoes	1	2	3	4	5	6
Breakfast Cereal	1	2	3	4	5	6
Biscuits	1	2	3	4	5	6
Confectionery	1	2	3	4	5	6
Cakes	1	2	3	4	5	6
Savoury Snacks	1	2	3	4	5	6
Fizzy Drinks & Squashes	1	2	3	4	5	6
Sugar-Free Drinks	1	2	3	4	5	6
Milk & milk products	1	2	3	4	5	6
Rice / Pasta	1	2	3	4	5	6
Red meat	1	2	3	4	5	6
White meat	1	2	3	4	5	6
Meat products	1	2	3	4	5	6
Fish	1	2	3	4	5	6
Chips	1	2	3	4	5	6
Fried foods (excl chips)	1	2	3	4	5	6
Ready made meals	1	2	3	4	5	6

B2. What type of bread do you normally eat? **SHOWCARD 6 (CIRCLE ONE ONLY)**

White	1
Wholemeal/Multigrain	2
Brown/Granary	3
No regular preference	4
Other (specify)	5
Don't eat bread	6

B3. What type of milk do you normally use? **SHOWCARD 7 (CIRCLE ONE ONLY)**

Whole	1
Semi-skimmed	2
Skimmed	3
Goats milk	4
Soya milk	5
None	6
Other (specify)	7

B4. Which one of the following best describes your attitude to eating & drinking?
SHOWCARD 8 (CIRCLE ONE ONLY)

I only eat & drink things that are good for me	1
I don't worry too much as long as I consume some healthy things such as fruit & vegetables	2
I can eat & drink anything as long as I take plenty of exercise	3
I eat & drink the things I enjoy & don't worry about it	4
I am not interested in food and will eat anything	5

B5. How healthy do you consider your eating habits to be? **(CIRCLE ONE ONLY)**

Very healthy	Fairly healthy	Unhealthy
1	2	3

B6. How many portions of fruit & vegetables do you eat in an average day?
SEE SHOWCARD 9 FOR DEFINITION OF PORTION (CIRCLE ONE ONLY)

None	1 portion	2 portions	3 portions	4 portions	5 or more
0	1	2	3	4	5

B7. Have you TRIED any of the following dietary changes in the last year (even if only for a short time)? **(CIRCLE FOR EACH)**

	B7(Tried?)			**B8 (Maintained?)**		
	Yes	No		Yes	No	N/A
Eating more	1	2		1	2	8
Eating less	1	2		1	2	8
Less processed or convenience foods	1	2		1	2	8
More processed or convenience foods	1	2		1	2	8
Using low fat foods	1	2		1	2	8
Eating more fibre	1	2		1	2	8
Less sugar, confectionery & soft drinks	1	2		1	2	8
Eating more fruit & vegetables	1	2		1	2	8
Less fatty or fried foods	1	2		1	2	8
Other (specify)	1	2		1	2	8

B8. Of the dietary changes that you made in the past year, are you still MAINTAINING them?
(CIRCLE FOR EACH ABOVE)

B9. If you have TRIED any of the above dietary changes, what was your MAIN reason for wanting to change? **UNPROMPTED (CIRCLE ONE ONLY)**

To lose weight	1
To improve overall health	2
To feel better or fitter	3
To help reduce risk of disease	4
Suggested by doctor or health professional	5
Other, please specify	6

B10. Which of the following factors discourage or prevent you from eating more healthy foods? **SHOWCARD 10 (CIRCLE FOR EACH)**

FACTORS	**B10**			**B11**
	Yes	No		
Lack of information available	1	2		1
Information available is not user friendly	1	2		2
Confused about what is & isn't healthy	1	2		3
Not sure how to read nutritional information labels	1	2		4
Do not know how to cook healthy foods	1	2		5
Healthy foods are too expensive (where I shop)	1	2		6
Poor choice of healthy food (where I shop)	1	2		7
Poor quality of healthy food (where I shop)	1	2		8
Fruit and vegetables are heavy to carry	1	2		9
Transport problems accessing shops where affordable, safe, healthy food is available (Specify):	1	2		10
Other (specify):	1	2		11

B11. Which of the above factors is the MAIN factor, which discourages or prevents you from eating more healthy foods**?** SHOWCARD 10 - (CIRCLE ONE ONLY)

SECTION C: LIFESTYLE:

INTERVIEWER READ OUT:

"Regular physical exercise is considered as taking part in exercise or sport 2-3 times per week for a minimum of 20 minutes at a time, or more general activities like walking, cycling or dancing 4-5 times a week accumulating to at least 30 minutes per day."

C1. With this definition in mind, which of the following statements best describes how physically active you have been over the last 6 months? **SHOWCARD 11** **(CIRCLE ONE ONLY)**

I am not regularly physically active and do not intend to be so in the next six months	1
I am not regularly physically active but am thinking about starting to do so in the next 6 months	2
I do some physical activity but not enough to meet the description of regular physical activity stated by the interviewer	3
I am regularly physically active but only began in the last 6 months	4
I am regularly physically active & have been doing so for longer than 6 months	5

SECTION D: FOOD POVERTY

D1. Have you ever heard of the term 'Food Poverty'? **(CIRCLE ONE ONLY)**

Yes	1	-> go to D2
No	2	-> go to D3
Don't know	3	-> go to D3

D2. What do you think the term 'Food Poverty' means?
UNPROMPTED – CIRCLE ALL MENTIONED

Not having enough money to be able to eat a healthy balanced diet	1
Inadequate shopping facilities	1
Poor access to shops	1
Poor quality & high cost of food locally	1
Lack of right equipment for cooking & storage	1
Conflicting information about food and health	1
Lack of information – not sure what makes up a healthy balanced diet	1
Poor transport to shopping facilities	1
Other, please specify	1
Don't know	1

D3. Can you think of any things which might limit people's access to healthy food choices?
UNPROMPTED – CIRCLE ALL MENTIONED

Lack of awareness / knowledge of healthy food choices	1
Money or cost	1
Where people live / distance to certain shops	1
Other 1 (specify)	1
Don't know	7

SECTION E: EATING / NUTRITION; KNOWLEDGE AND AWARENESS

E1. What is your understanding of the term 'healthy eating'? UNPROMPTED
(CIRCLE ALL MENTIONED BY RESPONDENT)

	Mentioned?
Reduce fat or fried foods	1
Eat fruit & vegetables	1
Reduce sugar & confectionery	1
Eat plenty of fibre	1
Eat plenty of starch & carbohydrates	1
Reduce salt	1
Drink water & fruit juice	1
Avoid red meat/or eat white meat or fish	1
Don't know	1
Other, please specify	1

E2. How many portions of fruit and vegetables per day do health professionals recommend we eat?
UNPROMPTED – **SHOWCARD 9 – INTERVIEWER SEE DEFINITION OF PORTION**. **(CIRCLE ONE ONLY)**

1 portion	2 portions	3 portions	4 portions	5 portions	6 portions	7-10 portions	Don't know
1	2	3	4	5	6	7	77

E3. Please list the 5 main food groups? **UNPROMPTED –CIRCLE ALL MENTIONED**

	Mentioned?
FRUIT & VEGETABLES All fruit and vegetables including fresh, frozen, canned, dried. Potatoes are not included.	1
BREAD, OTHER CEREALS & POTATOES All bread, e.g. white, wholemeal, wheaten, soda bread, Potatoes. Rice, pasta, noodles, couscous. Breakfast cereals, porridge oats. Other grains, such as barley, buckwheat, millet.	1
MEAT, FISH & ALTERNATIVES Meat. Poultry. Fish. Eggs. Pulses, e.g. peas, beans, lentils. Nuts. TVP, soy protein. Quorn. Meat includes beef, pork, lamb and products made from them. Poultry includes chicken and turkey. Fish included fresh, frozen and canned fish (e.g. sardines and tuna) and fish products.	1
MILK & MILK PRODUCTS Milk.Cheese. Yoghurt. Fromage frais. Buttermilk. This group does not include butter,eggs or cream.	1
FOODS CONTAINING FAT & FOODS CONTAINING SUGAR Cooking oil, butter, margarine, low fat spread, other spreading fats. Mayonnaise, salad cream and oily salad dressings. Creamy sauces, fatty gravies. Cream. Chocolate, sweets, sugar. Crisps, corn chips, corn snacks. Biscuits, cakes, pastries. Puddings, jelly, ice cream. Sugar, jam, honey. Sugary fizzy drinks and squashes.	1

E4. What is your understanding of the term the 'Balance of Good Health'? **(PLEASE WRITE IN)**

Don't know	99

SECTION F: FOOD SAFETY & HYGIENE

F1. Do you regularly cook for yourself & the rest of the household? **(CIRCLE ONE ONLY)**

Yes	1
No	2

F2. What do you think is the thing MOST likely to cause food poisoning in the home?
UNPROMPTED – RECORD ONE CAUSE ONLY

F3. I am going to read out some things which people may do when they are dealing with food. Can you tell me how often you personally do each.
(SHOWCARD 12) (CIRCLE FOR EACH)

	1.1.21.1.1.1.1.1 F3					
	Always	Usually	Some-times	Rarely	Never	Don't know
Follow manufacturers' instructions for preparation & cooking of food	1	2	3	4	5	6
Wash your hands with soap & water before handling food	1	2	3	4	5	6
Keep raw food below cooked food in the fridge	1	2	3	4	5	6
Keep kitchen utensils & chopping boards clean	1	2	3	4	5	6
Eat food that is past its "best before" date	1	2	3	4	5	6
Ensure that food in your fridge is in covered containers or is properly wrapped	1	2	3	4	5	6
Ensure that pets cannot come into contact with food	1	2	3	4	5	6
Store perishable foods in a fridge at home within two hours of buying them	1	2	3	4	5	6
Wash utensils (e.g. chopping boards), between preparing raw meat & cooked food	1	2	3	4	5	6
Check that your fridges and freezers are at the right temperature	1	2	3	4	5	6

F4 Now thinking about good hygiene, are you concerned about hygiene in any of the following places? **CIRCLE ALL MENTIONED** – **SHOWCARD 13**

Supermarkets	1
Local/corner grocery shops	1
Local Butchers	1

Market stalls selling fruit and veg	1
Market Stalls Selling Fish	1
In the home	1
Other place (specify)	1
None of these places	1

F5 Generally speaking which of these statements best describes your attitude to food safety issues? **(CIRCLE ONE ONLY) - SHOWCARD 14**

I am **very** concerned about food safety issues	1
I am **quite** concerned about food safety issues	2
I am **neither** concerned / nor unconcerned about food safety issues	3
I am **not very** concerned about food safety issues	4
I am **not at all** concerned about food safety issues	5

SECTION G: INFORMATION ACCESS

G1 When thinking about advertising in the form of TV, radio, newspapers, magazines, outdoor billboards or other forms, which organisations/companies/bodies have you seen or heard advertising to consumers in the past 6 months about food safety and nutrition?
UNPROMPTED – **CIRCLE ALL MENTIONED**

Food Safety Promotion Board	1
Department of Health, Social Services and Public Safety	1
Ministry of Agriculture Fisheries and Food	1
Department of Environment, Food and Rural Affairs	1
The Food Standards Agency	1
Health Promotion Agency	1
Local Retailers	1
Local Newspapers	1
Community Newsletters	1
Local District Council	1
Armagh and Dungannon Health Action Zone	1
Other: Specify	1
None/Don't Know	1

G2. Are you aware of any food-related activities / initiatives that are currently available locally? (e.g. basic food hygiene courses, cooking skills courses, breakfast clubs, food growing projects, etc.)
(CIRCLE ONE ONLY)

Yes	1	-> go to G3
No	2	-> go to SECTION H

G3. Please list the name and venue for each activity or initiative?
(PLEASE WRITE IN ACTIVITY AND VENUE NAMES – UP TO A MAXIMUM OF 2)

ACTIVITY NAME: VENUE:
ACTIVITY NAME: VENUE:

SECTION H: SOCIAL INCLUSION

H1. Which if any of the following have you done in the past two weeks? **(CIRCLE FOR EACH)**

	Yes	No
Visited relatives / been visited by relatives	1	2
Spoke to relatives on the phone	1	2
Visited friends / been visited by friends	1	2
Spoke to friends on the phone	1	2
Spoke to neighbours	1	2
Spoke to a health professional (e.g. home help, meals on wheels, social worker, health visitor)	1	2
None of these	1	2

H2. Which if any of these have you done in the past 2 weeks? **(CIRCLE FOR EACH)**

	Yes	No
Attended an adult education / night school class	1	2
Participated in a voluntary group / local community group	1	2
Participated in community or religious activities	1	2
Went to a leisure centre	1	2
Went on a social outing	1	2
None of these	1	2

H3. How strongly do you agree or disagree with the following statements? **SHOWCARD 15**
(CIRCLE FOR EACH)

	Strongly Agree	**Agree**	**Neither agree nor disagree**	**Disagree**	**Strongly disagree**
I can influence decisions that affect my neighbourhood	1	2	3	4	5
I am satisfied with the amount of control I have over decisions that affect my life	1	2	3	4	5

H4. Do you agree or disagree that, by working together, people in your neighbourhood could influence decisions that affect the neighbourhood'? **CIRCLE ONE ONLY - SHOWCARD 16**

Strongly agree	1
Agree	2
No opinion	3
Disagree	4
Strongly disagree	5

H5. How confident are you in the following: **(CIRCLE FOR EACH) - SHOWCARD 17**

	Very confident	Confident	Neither	Not very confident	Not confident at all
Your ability to prepare safe food	1	2	3	4	5
Your ability to prepare healthy food	1	2	3	4	5
Your knowledge of what a healthy diet should be	1	2	3	4	5
Your ability to keep food safe in the home	1	2	3	4	5

SECTION I: BACKGROUND SECTION

I1. INTERVIEWER PLEASE RECORD DATE OF INTERVIEW

DAY		MONTH		YEAR	
				0	3

I2. INTERVIEWER PLEASE RECORD POSTCODE FROM ADDRESS SHEET

EXAMPLE	B	T	0	7		3	F	P

	B	T						

I3. INTERVIEWER PLEASE RECORD RESPONDENT SEX (CIRCLE ONE ONLY)

Male	**1**
Female	**2**

I4. What age are you?

I5. How tall are you (inches or cm)?

(PLEASE WRITE EITHER FEET/INCHES OR METRES/CMS)

Feet	Inches		Metres	Centimetres
Don't know	77			
Refusal	99			

I6. What do you weigh: (pounds or kg)?

(PLEASE WRITE IN STONES / POUNDS OR KILOGRAMS)

Stone	Pounds		Kilograms
Don't know	77		
Refusal	99		

I7. Are you? **CIRCLE <u>ONE</u> ONLY** - SHOWCARD 18

Single (never married)	1
Married	2
Cohabiting	3
Widowed	4
Separated	5
Divorced	6

I8. How many persons <u>aged 18+</u> live in your household? **(PLEASE WRITE IN)**

I9. How many persons <u>aged under 18</u> live in your household? **(PLEASE WRITE IN)**

I10. What is your current employment status? **CIRCLE ONE ONLY -** SHOWCARD 19

Self-employed	1	go to I13
Working full-time	2	
Working part-time	3	
Not working (seeking work)	4	go to I11
Not working (Not seeking work)	5	
On a Government Training Scheme	6	
On ACE (Action for Community Employment)	7	
Retired	8	go to I12
Student (Further Education)	9	go to I1I
Other (please specify)	10	

I11. Have you ever worked? **CIRCLE ONE ONLY**

Yes	**1**	**-> go to I12**
No	**2**	**-> go to I15**

I12. In what year did you last work? **(PLEASE WRITE IN YEAR)**

I13. What is / was the full title of your main job? **(PLEASE WRITE IN)**

_____ | | | |

I14. Describe what you do (did) in your main job**. (PLEASE WRITE IN)**

GO TO I17

I15. What is the occupation of the Chief Wage Earner in your household**? (PLEASE WRITE IN)**

_____ | | | |

I16. Describe what they do (did) in their main job**. (PLEASE WRITE IN)**

I17. How many cars or vans are owned, or available for use, by one or more members of your household? Include any company car or can if available for private use. **CIRCLE ONE ONLY**

None	1
One	2
Two	3
Three	4
Four or more (please write in)	

I18. Now I would like to ask you about your income. Please be assured that these responses will be treated with the strictest confidence. What is the total income before tax of your household? Please include all income from benefits**. CIRCLE ONE ONLY** - SHOWCARD 20

Per Annum	Per Week	
<£3000	**£58 or less**	**1**
£3,000 - £4,999	**£58 - £96**	**2**
£5,000 - £6,999	**£96 - £134**	**3**
£7,000 - £9,999	**£134 - 192**	**4**
£10,000 - £14,999	**£192 - £288**	**5**
£15,000 - £19,999	**£288 - £384**	**6**
£20,000 - £29,999	**£384 - £576**	**7**
£30,000 - £39,999	**£576 - £769**	**8**
£40,000 - £49,999	**£769 - £961**	**9**
£50,000 or more	**£961**	**10**
Refused		**11**
Don't know		**12**

I19A. What religion, religious denomination or body do you belong to**?**
(CIRCLE ONE ONLY) SHOWCARD 21

Roman Catholic	**1**
Presbyterian Church in Ireland	**2**
Church of Ireland	**3**
Methodist Church in Ireland	**4**
Other please write in	**5**

I19B. What religion, religious denomination or body were you brought up in? **(CIRCLE ONE ONLY)** SHOWCARD 21

Roman Catholic	**1**
Presbyterian Church in Ireland	**2**
Church of Ireland	**3**
Methodist Church in Ireland	**4**
Other please write in	**5**
None	**6**

I20. Which of the following qualifications do you have? **CIRCLE ALL** of the qualifications that apply. **SHOWCARD 22**

GCSE (grades D-G), CSE (grades 2-5)	1
1-4 CSEs (grade 1), 1-4 GCSEs (grades A-C), 1-4 'O' Level Passes	1
5+ CSEs (grade 1), 5+ GCSE (grades A-C), 5+ 'O' Level passes, Senior Certificate	1
1 'A' Level, 1-3 AS Levels, Advanced Senior Certificate	1
2+ 'A' Levels 4+ AS Levels	1
First Degree	1
Higher Degree	1
NVQ Level, GNVQ Foundation	1
NVQ Level 2, GNVQ Intermediate	1
NVQ Level 3, GNVQ Advanced	1
NVQ Level 4, HNC, HND	1
NVQ Level 5	1
No Qualifications	1

I21. Which local newspapers do you read regularly? **(CIRCLE FOR EACH)**

	Yes	No
Armagh Observer	1	2
Ulster Gazette	1	2
Democrat	1	2
Dungannon Observer	1	2
Tyrone Courier	1	2
Tyrone Times	1	2

I22. Finally, we may wish to follow up some of the participants in the survey at a later stage. Would you be willing to participate in further research? **(CIRCLE ONE ONLY)**

Yes	1	-> go to I23
No	2	-> END INTERVIEW

I23. INTERVIEWER RECORD CONTACT DETAILS: **(PLEASE WRITE IN)**

NAME	
ADDRESS	
TELEPHONE NUMBER	

END INTERVIEW AND THANK RESPONDENT

APPENDIX 2:
POST-TEST COMMUNITY SURVEY QUESTIONNAIRE

SERIAL NO: | | | | | **LETTER:** |

WARD NAME: (FROM ADDRESS SHEET)

SMR
SOCIAL & MARKET RESEARCH

on behalf of

THE INSTITUTE OF PUBLIC HEALTH IN IRELAND
&
ARMAGH AND DUNGANNON HEALTH ACTION ZONE

COMMUNITY SURVEY

RESPONDENT NAME:	
RESPONDENT ADDRESS:	
RESPONDENT TELEPHONE NO.:	
INTERVIEWER'S NAME:	

CONTACT DETAILS:	**Day**		**Month**		**Time**	
1st Call						
2nd Call						
3rd Call						

CONTACT:

Full Interview	**1**	**No Longer Lives At This Address**	**6**
Refused	**2**	**Language Problem**	**7**
Ill / In Hospital	**3**	**Demolished / Vacant**	**8**
Away / On Holiday	**4**	**Other (specify)**	**9**
Occupied No Reply	**5**		

SECTION A : SHOPPING PATTERNS

A1. Who normally shops for food in this household? (**CIRCLE ONE ONLY**)

Self	1
Partner	2
Other adult in household	3
Child	4
Other (Specify)	5

A2A. Thinking about the different types of outlets where you can buy food, from which of the following do you buy food REGULARLY (at least two days per week), either for yourself or for someone else? **CIRCLE ALL MENTIONED IN THE GRID BELOW** - SHOWCARD 1

A2B. And from which do you buy food OCCASIONALLY (about two or three times per month)? **CIRCLE ALL MENTIONED IN THE GRID BELOW**- SHOWCARD 1

A2C. And from which do you NEVER buy food**? CIRCLE ALL MENTIONED IN GRID BELOW** - SHOWCARD 1

	A2A	A2B	A2C
Takeaway	1	1	1
Fast food	1	1	1
Sandwich bar	1	1	1
Coffee shop	1	1	1
Restaurant	1	1	1
Pub/wine bar	1	1	1
Mobile food outlet (e.g. hot dog stand)	1	1	1
Social club/ health club/ sports club	1	1	1

A3. Where do you do the MAIN food shopping for the household?
(**PLEASE WRITE IN NAME OF SHOP AND LOCATION)**
(ONLY RECORD DETAILS OF ONE SHOP)

NAME OF SHOP	
LOCATION	

A4. Why is the shopping for your household mainly done at this shop?
DO NOT PROMPT RESPONDENT – CIRCLE ALL MENTIONED

	Mentioned
Within walking distance	1
Good public transport to & from	1
Closest to home address	1
Provides value for money (i.e. cheap/inexpensive)	1
Good variety of food items	1
Good special offers	1
Friendly/helpful staff	1
Habit	1
Other, please specify	1
Don't know	77

A5. And how often does your household shop there? SHOWCARD 2 (**CIRCLE ONE ONLY**)

Daily	1
More than once a week	2
Weekly	3
Fortnightly	4
Other (specify)	5

A6. And how does the person who normally does the shopping travel to this shop?
(**CIRCLE ONE ONLY**)

Family car	1	-> go to A8
Friend/neighbour/relatives car	2	-> go to A8
Public transport (i.e. bus)	3	-> go to A7
Taxi	4	
Shared taxi (with friend/neighbour/relative)	5	
Walk	6	-> go to A8
Other specify (e.g. Community transport)	7	-> go to A7

A7. If travel by public transport, taxi or shared taxi, what is the total cost of the journey.
RECORD COST FOR SHOPPER AND THOSE WHO NORMALLY ACCOMPANY SHOPPER E.G. CHILDREN, CARER ETC.

TOTAL COST (£) ____

A8 What is the distance that you travel to this shop?
(**PLEASE WRITE IN NUMBER OF MILES**)

MILES ____

A9. Thinking about the last 6 month period, ON AVERAGE how much of your household income was spent on food PER WEEK (excluding transport)? (**PLEASE WRITE IN AMOUNT**)

AVERAGE AMOUNT SPENT ON FOOD PER WEEK (£) | |

A10. Have you ever substantially reduced the amount of money you spend on food weekly to allow the payment of other household bills or expenses in the last 6 months (e.g. rent/mortgage, heating, electricity, holiday etc)? (**CIRCLE ONE ONLY**)

Yes	No	Don't know
1	2	3

A11. Which of the following issues do you consider when shopping for food? (**CIRCLE FOR EACH**) SHOWCARD 3

ISSUE	A11 (considered)		A12 (maintained)
Advertised – wanted to try	1		1
What it says on the label	1		2
Help with weight control	1		3
Produced locally	1		4
Special offers	1		5
Fat content of item	1		6
Convenient – easy to prepare	1		7
What partner will like	1		8
What children will like	1		9
Habit – usually buy item	1		10
Organic	1		11
Healthy option	1		12
Cost of food item	1		13
Other (Specify)	1		14

A12. And of the issues that you mentioned, which would be the MAIN issue that you would consider when you shop for food? SHOWCARD 3 - (**CIRCLE ONE ONLY ABOVE**)

A13. Before you go shopping do you (SHOWCARD 4): (**CIRCLE FOR EACH**)

	Yes	No	Sometimes
Write a shopping list	1	2	3
Meal plan for the week ahead	1	2	3
Have an idea in your head what's needed	1	2	3

SECTION B: FOOD & NUTRITION:

B1. How often do you eat each of the following food items in an average week? SHOWCARD 5 (**CIRCLE FOR EACH**)

	More than once a day	Once a day	Most Days (3+ a week)	1-2 Times a week	Weekly	Never
Fruit	1	2	3	4	5	6
Vegetables	1	2	3	4	5	6
Bread	1	2	3	4	5	6
Potatoes	1	2	3	4	5	6
Breakfast Cereal	1	2	3	4	5	6
Biscuits	1	2	3	4	5	6
Confectionery	1	2	3	4	5	6
Cakes	1	2	3	4	5	6
Savoury Snacks	1	2	3	4	5	6
Fizzy Drinks & Squashes	1	2	3	4	5	6
Sugar-Free Drinks	1	2	3	4	5	6
Milk & milk products	1	2	3	4	5	6
Rice/pasta	1	2	3	4	5	6
Red meat	1	2	3	4	5	6
White meat	1	2	3	4	5	6
Meat products	1	2	3	4	5	6
Fish	1	2	3	4	5	6
Chips	1	2	3	4	5	6
Fried foods (excluding chips)	1	2	3	4	5	6
Ready made meals	1	2	3	4	5	6

B2. What type of bread do you normally eat? SHOWCARD 6 (**CIRCLE ONE ONLY**)

White	1
Wholemeal/Multigrain	2
Brown/Granary	3
No regular preference	4
Other (specify)	5
Don't eat bread	6

B3. What type of milk do you normally use? SHOWCARD 7 (**CIRCLE ONE ONLY**)

Whole	1
Semi-skimmed	2
Skimmed	3
Goats milk	4
Soya milk	5
None	6
Other (specify)	7

B4. Which one of the following best describes your attitude to eating & drinking? SHOWCARD 8 (**CIRCLE ONE ONLY**)

I only eat & drink things that are good for me	1
I don't worry too much as long as I consume some healthy things such as fruit & vegetables	2
I can eat & drink anything as long as I take plenty of exercise	3
I eat & drink the things I enjoy & don't worry about it	4
I am not interested in food and will eat anything	5

B5. How healthy do you consider your eating habits to be? (**CIRCLE ONE ONLY**)

Very healthy	Fairly healthy	Unhealthy
1	2	3

B6. How many portions of fruit & vegetables do you eat in an average day? SEE SHOWCARD 9 FOR DEFINITION OF PORTION (**CIRCLE ONE ONLY**)

None	1 portion	2 portions	3 portions	4 portions	5 or more
0	1	2	3	4	5

B7. Have you TRIED any of the following dietary changes in the last year (even if only for a short time)? (**CIRCLE FOR EACH**)

	B7 (Tried?)			B8 (Maintained?)		
	Yes	No		Yes	No	N/A
Eating more	1	2		1	2	8
Eating less	1	2		1	2	8
Less processed or convenience foods	1	2		1	2	8
More processed or convenience foods	1	2		1	2	8
Using low fat foods	1	2		1	2	8
Eating more fibre	1	2		1	2	8
Less sugar, confectionery & soft drinks	1	2		1	2	8
Eating more fruit & vegetables	1	2		1	2	8
Less fatty or fried foods	1	2		1	2	8
Other (specify)	1	2		1	2	8

B8. Of the dietary changes that you made in the past year, are you still MAINTAINING them? (**CIRCLE FOR EACH ABOVE**)

B9. If you have TRIED any of the above dietary changes, what was your MAIN reason for wanting to change? **DO NOT PROMPT RESPONDENT (CIRCLE ONE ONLY)**

To lose weight	1
To improve overall health	2
To feel better or fitter	3
To help reduce risk of disease	4
Suggested by doctor or health professional	5

Other, please specify	6

B10. Which of the following factors discourage or prevent you from eating more healthy foods? SHOWCARD 10 (**CIRCLE ALL MENTIONED**)

FACTORS	B10		B11 (main factor)
	Yes	No	
Lack of information available	1	2	1
Lack of time	1	2	2
Information available is not user friendly	1	2	3
Confused about what is & isn't healthy	1	2	4
Not sure how to read nutritional information labels	1	2	5
Do not know how to cook healthy foods	1	2	6
Healthy foods are too expensive (where I shop)	1	2	7
Poor choice of healthy food (where I shop)	1	2	8
Poor quality of healthy food (where I shop)	1	2	9
Fruit and vegetables are heavy to carry	1	2	10
Transport problems accessing shops where affordable, safe, healthy food is available (Specify):	1	2	11
Any other factors? (specify):	1	2	12

B11. Which of the above factors is the MAIN factor, which discourages or prevents you from eating more healthy foods? SHOWCARD 10 – (**CIRCLE ONE ONLY**)

SECTION C: LIFESTYLE

INTERVIEWER READ OUT:

"Regular physical exercise is considered as taking part in exercise or sport 2-3 times per week for a minimum of 20 minutes at a time, or more general activities like walking, cycling or dancing 4-5 times a week accumulating to at least 30 minutes per day."

C1. With this definition in mind, which of the following statements best describes how physically active you have been over the last 6 months? SHOWCARD 11 (**CIRCLE ONE ONLY**)

I am not regularly physically active and do not intend to be so in the next six months	1
I am not regularly physically active but am thinking about starting to do so in the next 6 months	2
I do some physical activity but not enough to meet the description of regular physical activity stated by the interviewer	3
I am regularly physically active but only began in the last 6 months	4
I am regularly physically active & have been doing so for longer than 6 months	5

SECTION D: FOOD POVERTY

D1. Have you ever heard of the term 'Food Poverty'? (**CIRCLE ONE ONLY**)

Yes	1	-> go to D2
No	2	-> go to D3
Don't know	3	-> go to D3

D2. What do you think the term 'Food Poverty' means? **UNPROMPTED – CIRCLE ALL MENTIONED**

	Mentioned
Not having enough money to be able to eat a healthy balanced diet	1
Inadequate shopping facilities	1
Poor access to shops	1
Poor quality & high cost of food locally	1
Lack of right equipment for cooking & storage	1
Conflicting information about food and health	1
Lack of information – not sure what makes up a healthy balanced diet	1
Poor transport to shopping facilities	1
Third World	1
Bad eating habits	1
Food shortage	1
Under nourished	1
Other, please specify	1
Don't know	1

D3. Can you think of any things which might limit people's access to healthy food choices? **DO NOT PROMPT RESPONDENT – CIRCLE ALL MENTIONED**

	Mentioned
Lack of awareness / knowledge of healthy food choices	1
Money or cost	1
Where people live / distance to certain shops	1
Other (please specify)	1
Don't know	1

SECTION E: EATING / NUTRITION; KNOWLEDGE AND AWARENESS

E1. What is your understanding of the term 'healthy eating'? **DO NOT PROMPT RESPONDENT** (**CIRCLE ALL MENTIONED**)

	Mentioned
Reduce fat or fried foods	1
Eat fruit & vegetables	1
Reduce sugar & confectionery	1
Eat plenty of fibre	1
Eat plenty of starch & carbohydrates	1
Reduce salt	1
Drink water & fruit juice	1
Avoid red meat/or eat white meat or fish	1
Eating a balanced diet	1
Grilled food	1
Other, please specify	1
Don't know	1

E2. How many portions of fruit and vegetables per day do health professionals recommend we eat? **DO NOT PROMPT RESPONDENT** – SHOWCARD 9 – INTERVIEWER SEE DEFINITION OF PORTION (SHOWCARD 9A). (**CIRCLE ONE ONLY**)

1 portion	2 portions	3 portions	4 portions	5 portions	6 portions	7-10 portions	Don't know
1	2	3	4	5	6	7	77

E3. Please list the 5 main food groups? **DO NOT PROMPT RESPONDENT – CIRCLE ALL MENTIONED**

	Mentioned
FRUIT & VEGETABLES All fruit and vegetables including fresh, frozen, canned, dried. Potatoes are not included.	1
BREAD, OTHER CEREALS & POTATOES All bread, e.g. white, wholemeal, wheaten, soda bread, Potatoes. Rice, pasta, noodles, couscous. Breakfast cereals, porridge oats. Other grains, such as barley, buckwheat, millet.	1
MEAT, FISH & ALTERNATIVES Meat. Poultry. Fish. Eggs. Pulses, e.g. peas, beans, lentils. Nuts. TVP, soy protein. Quorn. Meat includes beef, pork, lamb and products made from them. Poultry includes chicken and turkey. Fish included fresh, frozen and canned fish (e.g. sardines and tuna) and fish products.	1
MILK & MILK PRODUCTS Milk.Cheese. Yoghurt. Fromage frais. Buttermilk. This group does not include butter,eggs or cream.	1
FOODS CONTAINING FAT & FOODS CONTAINING SUGAR Cooking oil, butter, margarine, low fat spread, other spreading fats. Mayonnaise, salad cream and oily salad dressings. Creamy sauces, fatty gravies. Cream. Chocolate, sweets, sugar. Crisps, corn chips, corn snacks. Biscuits, cakes, pastries. Puddings, jelly, ice cream. Sugar, jam, honey. Sugary fizzy drinks and squashes.	1

E4. What is your understanding of the term the 'Balance of Good Health'? (**PLEASE WRITE IN**)

Don't know	99

SECTION F: FOOD SAFETY & HYGIENE;

F1. Do you regularly cook for yourself & the rest of the household?
(**CIRCLE ONE ONLY**)

Yes	1
No	2

F2. What do you think is the thing MOST likely to cause food poisoning in the home?
DO NOT PROMPT RESPONDENT – RECORD ONE CAUSE ONLY

F3. I am going to read out some things which people may do when they are dealing with food. Can you tell me how often you personally do each.
(SHOWCARD 12) (**CIRCLE FOR EACH**)

	Always	**Usually**	**Some-times**	**Rarely**	**Never**	**Don't know**
Follow manufacturers' instructions for preparation & cooking of food	1	2	3	4	5	6
Wash your hands with soap & water before handling food	1	2	3	4	5	6
Keep raw food below cooked food in the fridge	1	2	3	4	5	6
Keep kitchen utensils & chopping boards clean	1	2	3	4	5	6
Eat food that is past its "best before" date	1	2	3	4	5	6
Ensure that food in your fridge is in covered containers or is properly wrapped	1	2	3	4	5	6
Ensure that pets cannot come into contact with food	1	2	3	4	5	6
Store perishable foods in a fridge at home within two hours of buying them	1	2	3	4	5	6
Wash utensils (e.g. chopping boards), between preparing raw meat & cooked food	1	2	3	4	5	6
Check that your fridges and freezers are at the right temperature	1	2	3	4	5	6

F4 Now thinking about good hygiene, are you concerned about hygiene in any of the following places? **CIRCLE ALL MENTIONED** – SHOWCARD 13

	Mentioned
Supermarkets	1
Local/corner grocery shops	1
Local Butchers	1
Market stalls selling fruit and veg	1
Market Stalls Selling Fish	1
In the home	1
Eating Out	1
Take Aways	1
Other place (specify)	1
None of these places	1

F5 Generally speaking which of these statements best describes your attitude to food safety issues? (**CIRCLE ONE ONLY**) – SHOWCARD 14

I am very concerned about food safety issues	1
I am quite concerned about food safety issues	2
I am neither concerned / nor unconcerned about food safety issues	3
I am not very concerned about food safety issues	4
I am not at all concerned about food safety issues	5

SECTION G: INFORMATION ACCESS

G1 When thinking about advertising in the form of TV, radio, newspapers, magazines, outdoor billboards or other forms, which organizations / companies / bodies have you seen or heard advertising to consumers in the past 6 months about food safety and nutrition?

DO NOT PROMPT RESPONDENT – CIRCLE ALL MENTIONED

	Mentioned
Food Safety Promotion Board	1
Department of Health, Social Services and Public Safety	1
Ministry of Agriculture Fisheries and Food	1
Department of Environment, Food and Rural Affairs	1
The Food Standards Agency	1
Health Promotion Agency	1
Local Retailers	1
Local Newspapers	1
Community Newsletters	1
Local District Council	1
Armagh and Dungannon Health Action Zone	1
Other, please specify	1
None/Don't Know	1

G2. Are you aware of any food-related activities / initiatives that are currently running locally? (e.g. basic food hygiene courses, cooking skills courses, breakfast clubs, food growing projects, etc.) (**CIRCLE ONE ONLY**)

Yes	1	-> go to G3
No	2	-> go to G4

G3. Please list the name and venue for each activity or initiative?
(**PLEASE WRITE IN ACTIVITY AND VENUE NAMES – UP TO A MAXIMUM OF 2**)

ACTIVITY NAME: VENUE:
ACTIVITY NAME: VENUE:

G4. Have you heard of the Decent Food for All programme? (**CIRCLE ONE ONLY**)

Yes	1
No	2

G5. Have you HEARD of any of the following health programmes or initiatives? (**CIRCLE ALL MENTIONED**) SHOWCARD 15

	G5 (Heard of)		G6 (Participated)
Cook it	1		1
Balanced Beginnings	1		1
My Body	1		1
Looking Good Feeling Better	1		1
Fresh fruit in schools	1		1
RI:SE & Shine Breakfast clubs	1		1
Community food gardens	1		1
Community food co-op	1		1

G6. Have you PARTICIPATED in any of the programmes/initiatives outlined above? SHOWCARD 16? (**CIRCLE ALL MENTIONED ABOVE**)

SECTION H: SOCIAL INCLUSION

H1. Which if any of the following have you done in the past two weeks? (**CIRCLE FOR EACH**)

	Yes	No
Visited relatives / been visited by relatives	1	2
Spoke to relatives on the phone	1	2
Visited friends / been visited by friends	1	2
Spoke to friends on the phone	1	2
Spoke to neighbours	1	2
Spoke to a health professional (e.g. home help, meals on wheels, social worker, health visitor)	1	2
None of these	1	2

H2. Which if any of these have you done in the past 2 weeks? (**CIRCLE FOR EACH**)

	Yes	No
Attended an adult education / night school class	1	2
Participated in a voluntary group / local community group	1	2
Participated in community or religious activities	1	2
Went to a leisure centre	1	2
Went on a social outing	1	2
None of these	1	2

H3. How strongly do you agree or disagree with the following statements? SHOWCARD 17 (**CIRCLE FOR EACH**)

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
I can influence decisions that affect my neighbourhood	1	2	3	4	5
I am satisfied with the amount of control I have over decisions that affect my life	1	2	3	4	5

H4. Do you agree or disagree that, by working together, people in your neighbourhood could influence decisions that affect the neighbourhood'? **CIRCLE ONE ONLY**) – SHOWCARD 18

Strongly agree	1
Agree	2
No opinion	3
Disagree	4
Strongly disagree	5

H5. How confident are you in the following: (**CIRCLE FOR EACH)** – SHOWCARD 19

	Very confident	Confident	Neither	Not very confident	Not at all
Your ability to prepare safe food	1	2	3	4	5
Your ability to prepare healthy food	1	2	3	4	5
Your knowledge of what a healthy diet should be	1	2	3	4	5
Your ability to keep food safe in the home	1	2	3	4	5

SECTION I: BACKGROUND SECTION

I1. **INTERVIEWER PLEASE RECORD DATE OF INTERVIEW**

DAY		MONTH		YEAR	
				0	6

I2. **INTERVIEWER PLEASE RECORD POSTCODE FROM ADDRESS SHEET**

EXAMPLE	B	T	0	7		3	F	P
	B	T						

I3. **INTERVIEWER PLEASE RECORD RESPONDENT SEX (CIRCLE ONE ONLY)**

Male	1
Female	2

I4. What age are you?

I5. How tall are you (feet and inches or metres and centimetres)?
(**PLEASE WRITE EITHER FEET/INCHES OR METRES/CMS**)

Feet	Inches		Metres	Centimetres
Don't know	77			
Refusal	99			

I6. What do you weigh: (pounds or kg)?
(**PLEASE WRITE IN STONES / POUNDS OR KILOGRAMS**)

Stone	Pounds		Kilograms
Don't know	77		
Refusal	99		

I7. Are you? **CIRCLE ONE ONLY** - SHOWCARD 20

Single (never married)	1
Married	2
Cohabiting	3
Widowed	4
Separated	5
Divorced	6

I8. How many persons aged 18+ live in your household? (**PLEASE WRITE IN**)

I9. How many persons aged under 18 live in your household? (**PLEASE WRITE IN**)

I10. What is your current employment status? **CIRCLE ONE ONLY** – SHOWCARD 21

Self-employed	1	-> go to I13
Working full-time	2	
Working part-time	3	
Not working (seeking work)	4	-> go to I11
Not working (Not seeking work)	5	
On a Government Training Scheme	6	
On ACE (Action for Community Employment)	7	
Retired	8	-> go to I12
Student (Further Education)	9	-> go to I1I
Other (please specify)	10	

I11. Have you ever worked? **CIRCLE ONE ONLY**

Yes	1	-> go to I12
No	2	-> go to I15

I12. In what year did you last work? (**PLEASE WRITE IN YEAR**)

I13. What is / was the full title of your main job? (**PLEASE WRITE IN**)

_____ | | | |

I14. Describe what you do (did) in your main job. (**PLEASE WRITE IN**)

go to I17

I15. What is/was the occupation of the Chief Wage Earner in your household? (**PLEASE WRITE IN**)

_____ | | | |

I16. Describe what they do (did) in their main job. (**PLEASE WRITE IN**)

I17. How many cars or vans are owned, or available for use, by one or more members of your household? Include any company car or van if available for private use. **CIRCLE ONE ONLY**

None	1
One	2
Two	3
Three	4
Four or more (please write in)	

I18. Now I would like to ask you about your income. Please be assured that these responses will be treated with the strictest confidence. What is the total income before tax of your household? Please include all income from benefits. **CIRCLE ONE ONLY – ASK RESPONDENT TO LOOK AT SHOWCARD 22 AND GIVE YOU A NUMBER FROM 1 TO 10.**

Per Annum	Per Week	
<£3000	£58 or less	1
£3,000 - £4,999	£58 - £96	2
£5,000 - £6,999	£96 - £134	3
£7,000 - £9,999	£134 – 192	4
£10,000 - £14,999	£192 - £288	5
£15,000 - £19,999	£288 - £384	6
£20,000 - £29,999	£384 - £576	7
£30,000 - £39,999	£576 - £769	8
£40,000 - £49,999	£769 - £961	9
£50,000 or more	£961	10
Refused		11
Don't know		12

I19A. What religion, religious denomination or body do you belong to? (**CIRCLE ONE ONLY**) SHOWCARD 23

Roman Catholic	1
Presbyterian Church in Ireland	2
Church of Ireland	3
Methodist Church in Ireland	4
Other, please specify	5
None	6

I19B. What religion, religious denomination or body were you brought up in? (**CIRCLE ONE ONLY**) SHOWCARD 23

Roman Catholic	1
Presbyterian Church in Ireland	2
Church of Ireland	3
Methodist Church in Ireland	4
Other, please specify	5
None	6

I20. Which of the following qualifications do you have? **CIRCLE ALL** of the qualifications that apply. SHOWCARD 24

GCSE (grades D-G), CSE (grades 2-5)	1	
1-4 CSEs (grade 1), 1-4 GCSEs (grades A-C), 1-4 'O' Level Passes	1	
5+ CSEs (grade 1), 5+ GCSE (grades A-C), 5+ 'O' Level passes, Senior Certificate	1	
1 'A' Level, 1-3 AS Levels, Advanced Senior Certificate	1	
2+ 'A' Levels 4+ AS Levels	1	
First Degree	1	-> go to I24
Higher Degree	1	
NVQ Level, GNVQ Foundation	1	
NVQ Level 2, GNVQ Intermediate	1	
NVQ Level 3, GNVQ Advanced	1	
NVQ Level 4, HNC, HND	1	
NVQ Level 5	1	
No Qualifications	1	
Educated outside Northern Ireland	1	-> go to I22

I22. In which country were you educated?

I23. And what is your highest level of educational attainment?

I24. Which local newspapers do you read regularly? (**CIRCLE FOR EACH**)

	Yes	No
Armagh Observer	1	2
Ulster Gazette	1	2
Democrat	1	2
Dungannon Observer	1	2
Tyrone Courier	1	2
Tyrone Times	1	2

I25. **INTERVIEWER RECORD CONTACT DETAILS: (PLEASE WRITE IN)**

NAME	
ADDRESS	
TELEPHONE NUMBER	

END INTERVIEW AND THANK RESPONDENT

APPENDIX 3:
FOOD BASKET ITEMS

Food Item	Unit	Brand
Apple	Each	
Bananas	Per lb	
Mandarin Oranges (nat. Juice)	312g	Valley Gold
Tinned Fruit (in syrup)	312g	Valley Gold
Pure Orange Juice (100%)	Per litre	Del Monte/ Just Juice
Frozen Peas	Per 2lb	Bird's Eye
Carrots (fresh)	Per lb	
Tomatoes	Per lb	
Lettuce	Each	
Potatoes (washed)	Per lb	Whites (not washed)
Frozen Chips	1.5kg	McCain's
Shredded Wheat	27 pack	Weetabix
Weetabix	24 pack	Weetabix
Cornflakes	500g	Kellogg's
Frosties	750g	Kellogg's
Full Milk	2 litre	Linwoods/Own Brand
Semi - skimmed milk	2 litres	Linwoods/Own brand
Yoghurt (non low fat)	175g	Muller fruit corner
Yoghurt (low fat, fruit)	125g	Spelga
Cottage cheese	125g	Spelga
Low Fat Cheddar Cheese	Per kg	Coleraine Light
Cheddar Cheese (full fat)	Per kg	Coleraine
Eggs (Medium)	Half dozen	
Butter	500g	Golden Cow
Margarine	500g	Flora Light/Golden Olive
Olive Oil	500ml	Carbonell
Vegetable Oil	2 litre	Crisp & Dry
Beef (mince)	Per lb	
Steak Mince (Lean)	Per lb	

Chicken Breast Fillets (Lean)	Per lb	
Bacon (Lean back)	Per 8 slices	Denny/Cookstown
Bacon (rashers)	6 slices	Denny/Cookstown
Hamburgers (frozen)	227g (4)	Bird's Eye
Sausages	1lb (8)	Denny/Cookstown
Frozen Cod (Breadcrumbs)	450g	Donegal Catch
Frozen Cod (Battered)	450g	Donegal Catch
Fish Fingers	Pack 10	Bird's Eye
Salmon (tinned)	213g	John West
Tuna (tinned, in brine)	213g	John West
Wholemeal bread	800g	Kingsmill
White bread (sliced)	800g	Linwoods/Sunblest
Pasta (wholemeal)	500g	Buitoni
Pasta (white)	500g	Buitoni
Rice (brown)	375g	Uncle Ben's
Rice (white)	375g	Uncle Ben's
Baked Beans	415g	Heinz
Bottled water	2 litre	Ballygowan
Food Item	**Unit**	**Brand**
Coke	2 litre	Coca-cola
Mars Bar	Each	Masterfoods UK
Crisps	55g bag	Walkers
Sugar	Per kg	Tyte & Lyle/Silver Spoon
Digestives (chocolate)	400g	McVities
Jam	454g	Hartley's

APPENDIX 4:
FOOD GROUPS

Fruit and vegetables

Apple
Baked beans
Banana
Carrots (fresh)
Frozen peas
Lettuce
Mandarin oranges (nat. juice)
Pure Orange Juice (100%)
Tinned fruits
Tomatoes

Bread, other cereal and potatoes

Cornflakes
Frosties
Pasta (white)
Pasta (wholemeal)
Potatoes
Rice (brown)
Rice (white)
Shredded Wheat
Weetabix
White bread (sliced)
Wholemeal bread

Milk and dairy foods

Cheddar Cheese (full fat)
Cottage Cheese
Full milk
Low Fat Cheddar Cheese
Semi-skimmed milk
Yoghurt (low fat, fruit)
Yoghurt (non low fat)

Meat, fish and alternatives

Bacon (lean back)
Bacon (rashers)
Beef (mince)
Chicken Breast Fillets (lean)
Eggs
Fish Fingers
Frozen Cod (battered)
Frozen Cod (breadcrumbs)
Hamburgers (frozen)
Salmon (tinned)
Sausages

Steak Mince (lean)
Tuna (tinned, in brine)

Foods containing fat & foods and drinks containing sugar
Butter
Coke
Crisps
Digestives (chocolate)
Frozen chips
Jam
Margarine
Mars bar
Olive Oil
Sugar
Vegetable Oil

APPENDIX 5:
MEMBERSHIP OF THE 'DECENT FOOD FOR ALL' RESEARCH GROUP

Present members

Kevin P Balanda (Chair)	Institute of Public Health in Ireland
Audrey Hochart	Institute of Public Health in Ireland
Steve Barron	Institute of Public Health in Ireland
Lorraine Fahy	Institute of Public Health in Ireland

Past members

Orla Walsh	Institute of Public Health in Ireland
Yuki Kobayashi	Institute of Public Health in Ireland
Jorun Rugkasa	Institute of Public Health in Ireland
Niamh Shortt	Institute of Public Health in Ireland
Lyndsey McCann	Armagh and Dungannon Health Action Zone
Aodhann O' Donnell	Armagh and Dungannon Health Action Zone
Alison Crawford	Armagh and Dungannon Health Action Zone
Tracey Powell	Armagh and Dungannon Health Action Zone
Tracy O' Neill	Armagh and Dungannon Health Action Zone
Jennifer McBratney	Armagh and Dungannon Health Action Zone
Shirley Hawkes	Armagh and Dungannon Health Action Zone

APPENDIX 6:
MEMBERSHIP OF THE 'DECENT FOOD FOR ALL' LOCAL EVALUATION SUBGROUP

Paula Tally (Chair)	
Shirley Hawkes (Chair)	Armagh and Dungannon Health Action Zone
Adrian Gibson	Food Safety Promotion Board
Andrea Clarke	Armagh Confederation of Voluntary Groups
Anni Chambers	Food Standards Agency
Audrey McClune	Southern Group Environmental Health Committee
Claire McEvilly	Food Safety Promotion Board
Fred Cooper	Help the Aged
Jennifer McBratney	Armagh and Dungannon Health Action Zone
Kevin Balanda	Institute of Public Health
Paula Fegan	Armagh and Dungannon Health Action Zone
Tracey Powell	Armagh and Dungannon Health Action Zone

APPENDIX 7: CODING OF SOCIO-DEMOGRAPHIC VARIABLES

Employment status and education were used as proxies to describe socio-economic status. It was not possible to use data relating to the occupation of the chief wage earner of the household due to the poor response to this question.

The educational classification system used in the analysis differs slightly to that of the Northern Ireland Statistics and Research Agency (NISRA).

The published educational classification system used by NISRA is as follows:

I. None
II. Level 1: GCSE (grades D-G), CSE (grades 2-5), 1-4 CSEs (grade 1), 1-4 GCSEs (grades A-C), 1-4 'O' level passes, NVQ level 1, GNVQ Foundation or equivalents.
III. Level 2: 5+ CSEs (grade 1), 5+ GCSEs (grades A-C), 5+ 'O' level passes, Senior Certificate, 1 'A' level, 1-3 AS levels, Advanced Senior Certificate, NVQ level 2, GNVQ Intermediate or equivalents.
IV. Level 3: 2+ 'A' levels, 4+ AS levels, NVQ level 3, GNVQ Advanced or equivalents.
V. Level 4: First degree, NVQ level 4, HNC, HND or equivalents.
VI. Level 5: Higher degree, NVQ level 5 or equivalents.

The above NISRA classifications were subsequently collapsed as follows in order to compare the population with the weighted sample:

NISRA education level 1 = Level I
NISRA education level 2 = Levels II and III
NISRA education level 3 = Level IV
NISRA education level 4 = Levels V and VI

For the purpose of the analysis the following classification system was used to describe the level of educational attainment reported by respondents:

DFfA education level 1 = None
DFfA education level 2 = GCSE / O Levels / NVQ Levels 1, 2
DFfA education level 3 = A Levels / NVQ Level 3
DFfA education level 4 = Third Level / NVQ Level 4, 5

Respondent's employment status was classified as "employed" (self-employed, full-time employed or part time employed), "not working" (individuals who are seeking work, individuals who are not seeking work, individuals on training schemes and students) or "retired".