GoWell
GLASGOW COMMUNITY HEALTH AND WELLBEING RESEARCH AND LEARNING PROGRAMME

Briefing Paper 30

GoWell is a collaborative partnership between the Glasgow Centre for Population Health, and Urban Studies and the MRC/CSO Social and Public Health Sciences Unit at the University of Glasgow, sponsored by Glasgow Housing Association, the Scottish Government, NHS Health Scotland and NHS Greater Glasgow and Clyde.

Food insecurity among residents of Glasgow's deprived neighbourhoods

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GoWell is a planned ten-year research and learning programme that aims to investigate the impact of investment in housing, regeneration and neighbourhood renewal on the health and wellbeing of individuals, families and communities. It commenced in February 2006 and has several research components. This paper is part of a series of Briefing Papers which the GoWell team has developed in order to summarise key findings and policy and practice recommendations from the research. Further information on the GoWell Programme and the full series of Briefing Papers is available from the GoWell website at: www.gowellonline.com

Key findings

- Levels of food insecurity in GoWell areas have remained broadly steady since 2006 at around 18%. However, some groups, particularly single adults and those out of work due to illness or disability, have experienced trends towards increased food insecurity, while older adults appear to have become more food secure over time.

- Entering food insecurity between 2011 and 2015 was strongly associated with the impact of welfare reforms. Participants whose income had been affected by any welfare reforms were more than three times as likely to enter food affordability difficulties as those who had not, while 41% of those affected by two or more welfare reforms had become food insecure between 2011 and 2015.

- Entering food insecurity bore a strong association with deteriorating health. Those whose self-reported health was worse in 2015 than in 2011 were twice as likely to have entered food affordability difficulties as those who reported no change in their general health. Furthermore, those who developed mental health problems between 2011 and 2015 were two-and-a-half times more likely to enter food affordability difficulties than those whose mental health was unchanged.

- Participants often reported complex strategies adopted in order to manage a restricted food budget, as well as a desire to be able to eat well.

- Participants strongly identified feelings of stress, anxiety and shame associated with struggling to afford food, as well as its negative impacts on their sense of identity, belonging and family life.

INTRODUCTION

The rapid expansion of food banks over the past decade has prompted widespread discussion and debate about food insecurity in the UK. Food insecurity is recognised as the inability to access adequate quality or sufficient quantity of food in socially acceptable ways or the anxiety that one will not be able to do so in the future[1]. Food insecurity is important because it is recognised as a powerful indicator of material deprivation[2]. It captures the experience of having insufficient and insecure financial resources to meet basic needs.

In North America where food insecurity is routinely measured, it has been found to be strongly associated with key socio-demographic, financial and health factors. Low income is a consistent predictor of food insecurity, and households headed by lone mothers, families living in rented accommodation, and those reliant on social security, all have increased vulnerability to food insecurity[3-5]. Food insecurity is also widely reported to be associated with a range of diet- and non-diet-related health conditions. Food insecure adults have difficulty managing chronic health conditions and are more likely to develop mental health problems than those who have access to adequate quality or sufficient quantity of food[6,7].

In the absence of a systematic measurement of household levels of food insecurity in the UK, available data on food bank use is often used as an indicator of the scale of the problem of food insecurity. Yet doing so is likely to underestimate the scale of food insecurity and mask problems of precariousness related to difficulties affording food[8]. There is a clear need for better understanding of the scale, drivers and experiences of food insecurity in the UK.

The findings presented in this paper are part of a larger study – a mixed-methods, international comparative PhD project (funded by the Economic and Social Research Council (ESRC)) looking at household food insecurity, the growth of food banks, and their implications for the welfare state.

In this study, both cross-sectional and longitudinal analyses of survey data from the GoWell research and learning programme allow examination of aggregate level changes in the scale of the problem of food insecurity, as well as consideration of factors associated with increased difficulties affording food over time for individuals. These quantitative findings provide unique evidence regarding demographic, socioeconomic, and health drivers of entering food affordability difficulties using a self-reported measure. In addition, qualitative findings from interviews with a sample of survey participants who reported difficulty affording food provide insights into the experience and impacts of food insecurity from those directly affected.

RESEARCH OBJECTIVES

Our aim was to understand the nature and extent of food insecurity among residents of Glasgow's deprived communities.

We sought to answer the following questions:

- How many people struggle to afford food, how has this changed over time, and who does this affect?
- What factors are associated with entering food insecurity between 2011 and 2015?
- How is food insecurity described by people who report difficulty affording food?

METHODS

We analysed cross-sectional data from the four waves of the GoWell Community Health and Wellbeing Survey carried out in 2006 (n=6,003), 2008 (n=4,688), 2011 (n=4,175) and 2015 (n=3,614). The survey also includes a nested longitudinal cohort which allows for changes at an individual level to be analysed. For this research we analysed the longitudinal dataset for the 2011-2015 surveys. Given our interest in the changing role of the welfare state, the 2011 to 2015 time period was considered of particular importance because of the potential for the impacts of UK government welfare reforms introduced over this time to have been felt at an individual level.

The survey considered the level of financial difficulty experienced by survey participants in relation to food, alongside difficulties paying for a number of different items. At all four survey waves participants were asked: *'How often do you find it difficult to meet the costs of the following things? Rent or mortgage; repairs, maintenance or factor charges for your home; gas, electricity or other fuel bills; food; council tax'.* Response categories were: *often; quite often; sometimes; never; don't know;* and *prefer not to say*. Given that food insecurity is recognised as an experiential phenomenon driven by financial constraints, this measure was considered valuable as a proxy indicator of food insecurity.

For the cross-sectional analysis, a binary variable was created which denotes whether or not participants report ever experiencing difficulties affording food. For the longitudinal analysis which examined changes in food affordability difficulties between 2011 and 2015 within one cohort, a variable for movement into and out of food affordability difficulties was created. This allowed rates of entering, leaving, staying in, and staying out of food affordability difficulties between the two survey waves to be measured.

Eleven semi-structured qualitative interviews were also carried out with a sample of wave 4 participants who had reported difficulty affording food in 2015. Interviews covered a range of issues including experiences of financial difficulties, food shopping, budgeting and cooking, and experiences and perceptions of food banks. Findings presented in this paper focus specifically on participants' experiences of food insecurity, its impacts and the strategies they used to cope. All interviewees have been given pseudonyms.

SURVEY FINDINGS

Changes in food affordability difficulties: cross-sectional results

The change in rate of food affordability difficulties at the population level across the four survey waves is presented in Table 1. The results suggest a slight decrease in the level of difficulty over time, although the survey wave is not a significant predictor of the odds of reporting difficult (OR=0.9, 0.743, 1.102), suggesting that the change between waves is not significant.

Table 1. Percentage of participants reporting affordability difficulties at each survey wave.

Survey wave	Percentage of participants reporting difficulties
2006	18.5
2008	15.4
2011	18.9
2015	17.0

While cross-sectional analysis does not reveal a significant change in food affordability difficulties at the population level, examining the data according to particular sub-groups identifies some interesting trends. The increases in reporting of food affordability difficulty over time for people out of work due to long term illness/ disability (Figure 1), and also for single adults (Figure 2), appear particularly striking. Regression analyses on the relationship between food affordability difficulties [difficulty versus no difficulty] and survey wave for each of these sub-groups showed that both single adult households and those out of work due to long-term illness or disability did experience a significant increase in food affordability difficulties over time. For single adult households, in comparison with 2006, participants in 2011 (OR= 1.326, $p<0.00$) and 2015 (OR= 1.465, $p<0.00$) were more likely to report difficulties affording food (2008 results were not significant). Focusing only on those reporting being out of work due to long-term illness or disability, the trend towards increased difficulty afford food is even greater (2011: OR= 1.385, $p<0.02$; 2015: OR=1.549, $p<0.00$) (again, the results for 2008 were insignificant).

Figure 1: Percentage of participants reporting difficulties affording food at each survey wave by employment status.

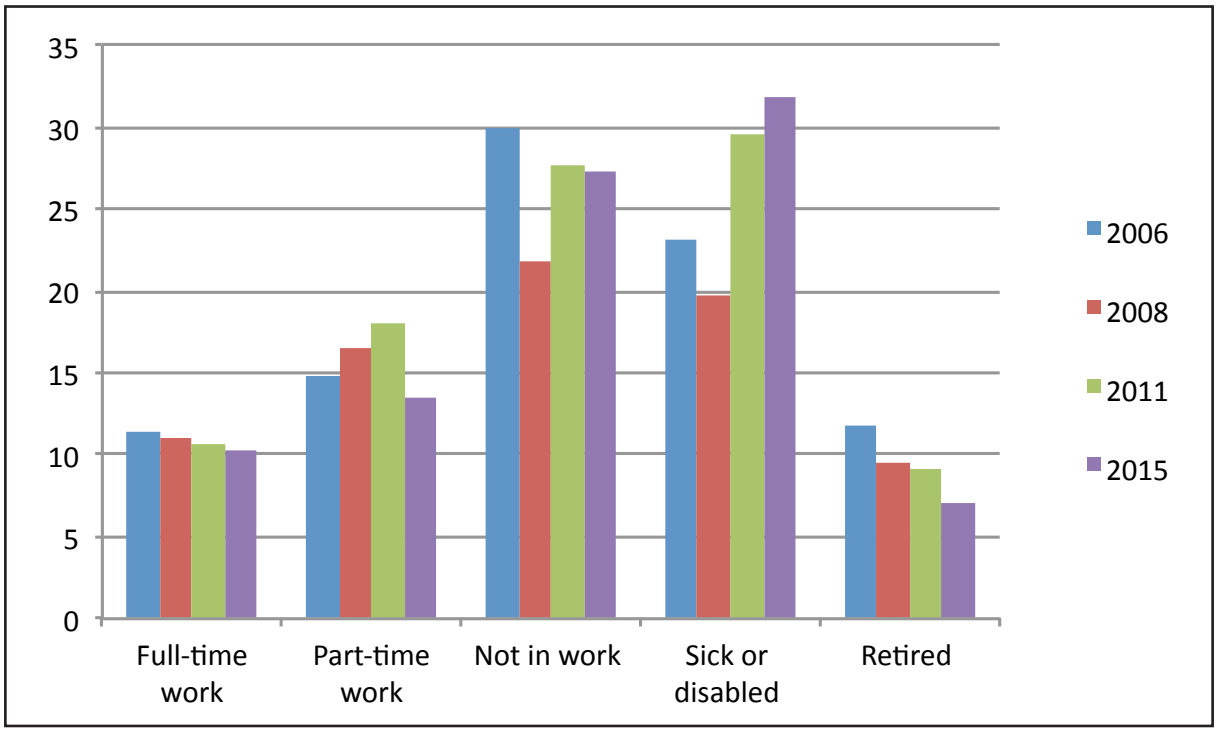
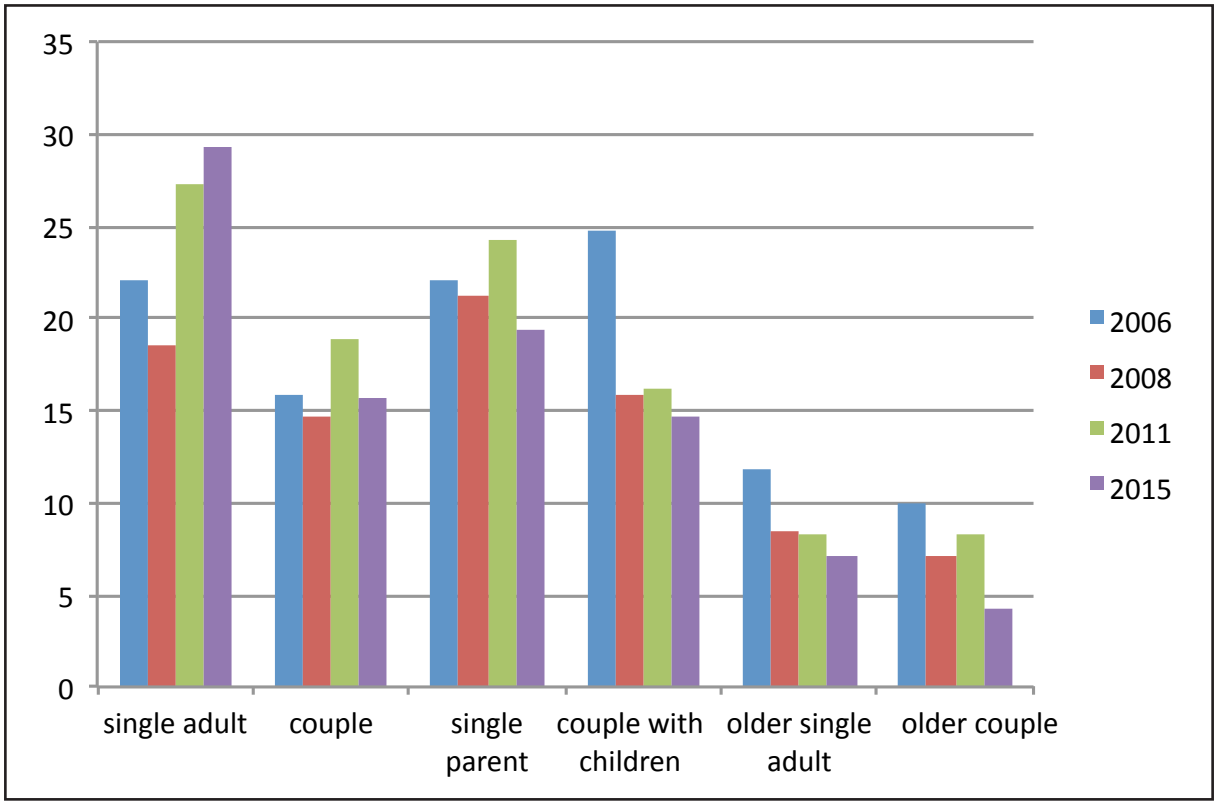


Figure 2: Percentage of participants reporting difficulties affording food at each survey wave by household type.



Changes in food affordability difficulties: longitudinal results

The cross-sectional analysis presented above suggests there has not been a significant change in food affordability over time, but that certain sub-groups of the population have experienced a significant increase in difficulty, while for others these difficulties appear to have lessened. However, it is not possible to draw conclusions from this analysis as to individual level changes in food affordability difficulties. In order to understand the factors associated with changes in food affordability, it is necessary to examine the longitudinal sample within the dataset, containing data collected from the same households at different time points. Table 2 indicates that 11.4% of participants in the longitudinal sample reported an increase in difficulty affording food between 2011 and 2015. This change is identified through a repeated measure whereby participants were asked at each survey wave about the frequency of their experiences of difficulties affording food.

Table 3 looks at movement into and out of difficulty affording food. It shows that 130 people (12.6% of the sample) stopped having difficulty affording food, while 103 (10.0%) moved into difficulties affording food between 2011 and 2015. Therefore, while at an aggregate level, food poverty appears to have "got better", this masks the experiences of things getting worse for particular sub-groups which are investigated here and in the qualitative findings discussed below.

Table 2. Rate of change in difficulty affording food between 2011 and 2015.

	Frequency	Percent
No change	769	74.2
Less difficulty	149	14.4
More difficulty	118	11.4
Total	1,036	100

Table 3. Rate of entering and leaving food affordability difficulties between 2011 and 2015.

	Frequency	Percent
Stayed out of difficulty	740	71.6
Entered difficulty	103	10.0
Left difficulty	130	12.6
Stayed in difficulty	61	5.9
Total	1,034	100

Table 4 presents movement into and out of food affordability difficulties according to different socio-demographic variables. The findings indicate particular movement between food affordability difficulty statuses for single adult and single parent households, while older adult households appear most likely to have remained without difficulties over time. According to change in employment status, over one fifth of those who moved out of work between 2011 and 2015 entered food affordability difficulties.

Table 4. Movement into and out of food affordability difficulties according to different demographic variables (%).

	Stayed out of difficulty	Entered difficulty	Left difficulty	Stayed in difficulty	χ^2, (p)	n
Gender					3.9 (<0.5)	
Male	69.2	11.4	12	7.4		367
Female	72.9	9.1	12.9	5.1		667
Age					73.2(<0.01)	
16-24	66.7	33.3	0.0	0.0		6
25-39	65.2	14.0	14.0	6.7		164
40-54	61.9	13.2	14.7	10.3		273
55-64	64.2	9.9	17.0	9.0		212
65+	85.5	5.5	8.2	0.8		379
Household type					111.9(<0.01)	
Single adult	51.5	17.2	17.6	13.7		233
Multiple adult	70.3	7.7	13.8	8.2		195
Single parent family	59.1	15.5	18.2	7.3		110
Multiple adult family	78.1	9.6	9.6	2.6		114
Older single adult	85.4	6.3	7.5	0.8		240
Older multiple adult	87.3	3.5	9.2	0.0		142
Tenure					39.8(<0.01)	
Owner-occupier	89.3	2.8	7.9	0.0		178
Social renter	68.2	11.4	13.1	7.2		830
Private renter	60.0	12.0	24.0	4.0		25
Citizenship					32.3(<1.0)	
British citizen	71.9	9.8	12.6	5.8		972
Refugee/asylum seeker	68.6	14.3	8.6	8.6		35
Other migrant	65.2	13.0	13.0	8.7		23
Change in employment status					111.3(<0.01)	
Stayed in work	81.9	9.7	5.6	2.8		144
Stayed out of work	55.0	13.7	17.9	13.4		329
Stayed in retirement	84.9	5.9	8.4	0.8		371
Moved into retirement	68.2	8.2	17.6	5.9		85
Moved out of work	64.5	22.6	9.7	3.2		31
Moved into work	65.6	9.8	19.7	4.9		61

Table 5 shows the percentage of participants who entered food affordability difficulties according to the number of welfare reforms they reported having been affected by. While only 7.2% of those not affected by welfare reforms entered food affordability difficulties, this was the case for 11.6% of those affected by one welfare reform, rising considerably to 41.3% of those affected to two or more welfare reforms. Thus, where multiple welfare reforms affected a household, the impact on food affordability difficulties was greater.

Table 5. Rate entering food affordability difficulties by experience of welfare reforms (%).

	Number of welfare reforms (%)		
	0	1	2 or more
Entered difficulties	7.2	11.6	41.3
N	(834)	(86)	(63)

* χ^2 (p) = 116.9 (<0.01)

Regression results: factors associated with entering food affordability difficulty

Table 6 presents the results of logistic regression analysis which sought to identify factors associated with entering food affordability difficulty between the 2011 and 2015 survey waves. The results show that those under 55 years of age had over twice the odds of entering food affordability difficulties than older people, controlling for gender and household type, although this association became insignificant once health variables were added to the model. In terms of household type, adults living alone had almost three times the odds of entering food affordability difficulties compared with other households, and the odds of single parents having increased difficulty was found to have near significance at more than twice the odds for older persons (OR 2.479, 0.989 – 6.216). The relationship between household type and entering food affordability difficulties was weakened by the inclusion of status variables in the model. In this study, those whose self-reported general health was worse in 2015 than in 2011, had almost twice the odds of entering difficulties than those who experienced no change in their general health (OR 1.858, 1.023-3.375). This relationship was attenuated, but remained close to significance, on the inclusion of the welfare reforms variable.

Participants who developed mental health problems between 2011 and 2015 were two-and-a-half times more likely to (OR 2.551, 1.430 – 4.548) enter food affordability difficulties than those whose mental health remained stable, all other factors considered. This relationship between deteriorating mental health and entering food affordability difficulties was significant, even after controlling for employment status and the impact of welfare reforms.

Controlling for all other variables in the model, participants whose income had been affected by any welfare reforms were just over three times more likely to enter food affordability difficulties than those unaffected by the reforms (OR 3.014, 1.730-5.251).

Table 6. Odds ratio (95% confidence intervals) of entering food affordability difficulty between 2011 and 2015 using logistic regression (bold values = p<0.05).

	Model 1	Model 2	Model 3	Model 4
Demographic variables				
Gender (at 2015): (female)	1.499 (0.894 – 2.513)	1.602 (0.903 – 2.929)	1.583 (0.930-2.695)	1.583 (0.922 – 2.719)
Age (at 2015): (>55)	**2.032 (1.005 – 4.109)**	1.999 (0.970 –4.120)	1.836 (0.871-3.874)	1.917 (0.891 - 4.124)
Household type (at W4): (older person(s))				
Single adult	**2.972 (1.569 – 5.630)**	**2.983 (1.563– 5.690)**	1.732 (0.670 – 4.481)	1.439 (0.560 – 3.698)
Couple/multiple adult	1.653 (0.761 – 3.595)	1.793 (0.816 - 3.940)	1.047 (0.365 – 3.005)	0.953 (0.333 – 2.730)
Single parent with children	2.479 (0.989 – 6.216)	2.271 (0.884 – 5.829)	1.212 (0.359 – 4.089)	1.167 (0.345 – 3.950)
Couple/multiple adult with children	1.626 (0.601 – 4.396)	1.617 (0.584 – 4.475)	0.879 (0.245 - 3.153)	0.735 (0.200 – 2.699)
Health variables				
Change in mental health: (no change)				
Mental health improved		0.828 (0.373-1.842)	0.843 (0.374 – 1.897)	0.825 (0.361 – 1.886)
Mental health got worse		**2.578(1.463-4.544)**	**2.565 (1.451 - 4.532)**	**2.551 (1.430 – 4.548)**
Change in self-reported general health: (no change)				
General health got better		1.626(0.903-2.929)	1.650 (0.911 – 2.990)	1.579 (0.865 - 2.880)
General health got worse		**1.858(1.023-3.375)**	**1.829 (1.002 - 3.338)**	1.660 (0.900 – 3.061)
Status variables				
Employment status (at 2015): (retired)				
Working			1.912 (0.677 – 5.405)	1.818 (0.644 – 5.136)
Not working			2.272 (0.804 – 6.421)	2.087 (0.741 – 5.881)
Long-term sick/disabled			1.970 (0.775 – 5.003)	1.741 (0.691 – 4.387)
Citizenship status (at 2015): (British Citizen)				
Asylum seeker/refugee			1.158 (0.349 – 3.841)	1.447 (0.418 – 5.009)
Other migrant			0.828 (0.165 – 4.157)	0.866 (0.164 – 4.576)
Financial factors				
Impacted by welfare reforms (at 2015): (not impacted)				**3.014 (1.730-5.251)**
Constant	0.052	0.03	0.029	0.027
R^2	0.063	0.104	0.112	0.148
n=1,065				

Note: The reference categories for the variables are the items in brackets.

Findings from in-depth interviews

Qualitative findings from interviews with GoWell participants who reported difficulties affording food highlight the particular contexts and sets of circumstances which may have led an individual to struggle to afford food, enhancing and enriching the quantitative results discussed above. The findings also reveal the different ways in which people respond to this experience and the various coping strategies adopted. The implications of food affordability difficulties for health, family life, and sense of identity are each examined.

Household contexts of food insecurity

Several of the interviewees were people living alone, including Arthur, a single man claiming Employment and Support Allowance (ESA), who commented on the cost of cooking for one:

> *"They don't sell food for single people really, and if you do get single people's stuff it's they wee tins and they're just as dear as the big tins"* (Arthur, GoWell participant)

Families with children were also a group that seemed to particularly struggle, and many described feeling under constant financial pressure to meet household costs and were concerned about being able to feed their children adequately. Prioritising children when it came to food budgeting was mentioned by all of the families.

While the quantitative analysis did not identify a significant relationship between citizenship status and food insecurity (this may well be because of the low numbers of refugees, asylum, seekers and those with other migrant status in the sample), several of the interviewees in the qualitative sample had experience of living as asylum seekers and this was recognised to involve chronic experiences of food poverty.

Low-paid work, inadequacy of benefit levels, as well as the high cost of food and other household costs, were identified as reasons why affording food was a struggle. Sudden changes in circumstances such as job loss or moving house where also noted by interviewees as having particular impact on the ability to afford food.

Strategies for coping with food insecurity

Food insecurity meant having reduced and restricted choice in the sorts of foods that interviewees were able to buy and the sorts of shops they were able to use. Some interviewees described a loss of enjoyment in food and eating as a result of this lack of choice and variety, as Jim, a man who had recently had to stop work due to ill health and was claiming ESA, articulated:

> *"Now I just buy anything cos you're just filling your stomach to be honest. It's no' as if you can be fussy when you're on 70 pound a week"* (Jim, GoWell participant)

As well as changing where people shopped, trading down to cheaper own-brand products was also described as a strategy for coping on a limited food budget.

Managing food budgets generally appeared to be the role of women within the households interviewed. Women interviewed often described complex food budget management strategies. They had detailed knowledge of the prices of specific items in different supermarkets; the different special offers available in different stores; and when particular foods, such as expensive items like fresh meat, might become reduced. It was apparent that such practices of the different supermarkets played an important role in shaping the diets and food choices of those interviewed. The work of managing a limited food budget in this context appeared tremendously time consuming, requiring significant planning and money management skills.

The impact of food insecurity on health

Households interviewed often described how restricted food budgets made it difficult to make the sorts of healthy food choices they wanted, and knew they were supposed to make. At its most acute, food poverty also meant an inability to make food choices which were necessary in order to keep healthy.

Interviewees articulated awareness of dietary guidelines and recommendations regarding how to eat healthily, but identified the pressures of being able to meet these expectations while living on a very limited budget. Moira described how the challenge of eating healthily was driven by financial barriers rather than a lack of skills or knowledge:

> *"Sometimes you're talking about 10, 12 pound for a bit of meat, which is ridiculous, sort of thing, when they're wanting you to eat fresh meat. You know how, and try to make homemade meals, but the price of that is sometimes..."* (Moira, GoWell participant)

Jim and his wife Karen also reflected upon the price of food and the difficulty of meeting guidelines for healthy eating:

> *"Take five a day, you cannae afford a bit of fruit."* (Karen) *"And then they complain about hospitals getting filled up with people – it's down to them isn't it? They're the ones that price the food."* (Jim, GoWell participant).

Jim recognised how his limited income made it very difficult to afford to eat healthily or to meet the dietary requirements dictated by the particular health conditions which both he and his wife Karen suffered from:

> *"She's* [Karen] *no supposed to eat a lot of dairy food but sometimes that's what you buy because that's the easiest to get, you know what I mean. What do you dae noo? The health diet is out the window, to put it that way. I used to go and buy the low fat cheese…all the different butters and what have you, but now it's whatever you get."* (Jim, GoWell participant)

Parents interviewed expressed a desire to be able to feed their families well. However, restricted food budgets meant for some that they were not always able to feed their families the sorts of foods they felt were important for good health:

> *"Well this week has sort of been a struggle, but then I said right well we'll empty the freezer… Cos I've got no like fruit for them this week… normally I've got like apples, bananas, so I know they are getting something fresh."* (Moira, GoWell participant)

The psychological and emotional impacts of being unable to afford food were also apparent from the interviews. Participants had chronic difficulties which clearly involved constant worry about having enough food to feed themselves and their family. Jennifer spoke about the distressing experience of not having money for food while living as a lone parent, and particularly her feelings about the impact this had on her ability to look after her daughter:

> *"I struggled all the time. Actually when I was on that* [Job Seeker's Allowance] *quite a lot I was in tears because I couldnae afford to put food in the cupboards for my wean, it was horrible. Especially when you know she's needing something and you couldnae get it."* (Jennifer, GoWell participant)

The impact of food insecurity on family, social and cultural life

Food clearly plays an important role within the family and therefore food insecurity had a big impact on family life. For the interviewees with dependent children, their children were their priority when food shopping and deciding what to spend on food. The extended family was where the majority of residents suggested they would turn to for help if they were struggling to afford food, although they often expressed feelings of shame and embarrassment in having to ask for such help. Arthur described the essential role which his brother played in meeting his food needs:

> *"Well I think I'd be into food banks and all that… if it wasn't for him."* (Arthur, GoWell participant)

For Moira, a restricted food budget also meant not being able to enjoy regular family meals like a weekly roast:

> *"You see we used to always have a roast, you know how on a Sunday. But that's just every now and again now. So we do, we have cut back."* (Moira, GoWell participant)

Food is deeply personal and connected to feelings about self-identity, and belonging to families, cultures and communities. For many interviewees, it was clear that social isolation was a significant impact of food insecurity. Several described not being able to enjoy sharing meals with family or friends for special occasions such as birthday parties, meals out or barbeques because they were not able to afford to participate. The refugees interviewed described the importance for them of buying foods from specialist shops and being able to prepare traditional and culturally appropriate meals. From this perspective, food insecurity meant an inability to shop in these places or to prepare such meals and thus resulted in a loss of connection to home through food.

IMPLICATIONS OF THE FINDINGS

This study provides evidence of the relationship between financial factors, specifically the impact of recent UK government welfare reforms, and food insecurity among residents of Glasgow's deprived communities. Given the forthcoming roll-out of Universal Credit in the city, which has been reported elsewhere to have led to considerable increases in financial hardship and food bank use, food insecurity in Glasgow's deprived areas is likely to increase.

The strong relationship between the changes in health variables and entering food affordability difficulties is a particularly striking finding of this study which echoes international evidence. It is also important to recognise, as highlighted in other studies, that poor health may also be an outcome, as well as a driver of food insecurity. Indeed, the qualitative findings presented here suggest that, for some, food affordability difficulties can make it very difficult to eat a diet necessary to maintain good health, particularly for those with existing health conditions. Interview data also provides examples of where the deterioration of health led to financial difficulties because of having to give up paid employment.

The evidence of the scale and drivers of food insecurity in deprived areas of Glasgow is of particular relevance to those involved in developing local services and targeted anti-poverty interventions. The experience of food poverty among people with chronic health conditions and disabilities – a group historically better protected by the social security system – adds to the growing body of evidence of the detrimental impacts that the roll-back of the safety net function of the welfare state is having for people with disabilities in particular[9]. The strength of the association between mental health problems and food bank use should be of particular concern to social and public health policy-makers and practitioners, raising questions as to the adequacy of mental health services available to people facing destitution and thus expanding existing national concerns about the ability of mental health services to cope with those in crisis[10].

Given the recent publication of Scotland's first national data on food insecurity as contained in the 2017 *Scottish Health Survey*, the findings from this study identify key factors which should inform the analysis of this data. Levels of food insecurity reported in our study are similar to those identified in the *Scottish Health Survey* data which found that 18% of people living in the most deprived areas of Scotland were food insecure. While our findings show that the aggregate level of food insecurity has stayed broadly steady at between 17 and 18% for over a decade, our results also show that there is a lot of instability and fluctuation within this, with a fifth of participants in the deprived areas we studied moving in or out of food insecurity over a four-year period.

Our study points to the need for more research on the relationship between food insecurity and ill health, and with mental health in particular. This study also highlights the value of longitudinal data in order to better understand the dynamics of the relationships between food insecurity and other factors, and to identify particularly vulnerable groups, such as single adults. Systematic, longitudinal data on household food insecurity at a national level is required for the development of effective policies to address food insecurity.

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