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Participation for Health and Wellbeing: Factors Associated with Older People's Participation in Remote and Rural Communities

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Participation in volunteering is associated anecdotally with maintaining good health - being a way of keeping mind and body active, engaged and thereby healthier. It is commonly assumed that involvement in community activities and organisations benefits both individuals and society.

Research shows associations between health and volunteering, but the use of self-reporting health surveys amongst volunteers cannot show a causal relationship. Recent study, largely from North America, is exploring the connection between participation and health more definitively. Longitudinal studies have suggested that mental and physical health can be maintained and even improved through voluntary activity. There is increasing government interest in promoting volunteering, recognising volunteers as a valuable community resource. Around a third of adults (1.3 million) in Scotland volunteered in 2007/08, giving over 142 million hours, with economic value of £2.2 billion per annum. In the face of economic crisis, the perceived 'burden' of growing numbers of retirees and cuts to statutory services, voluntary organisations appear to be a solution in supporting the public sector with value-added for individual as well as community well-being. This might be especially relevant to remote rural areas where public services are challenging and expensive to deliver.

Background

The evidence base for associations between health and participation is growing. Longitudinal studies reveal associations between health and

volunteering (Lum and Lightfoot, 2005) related to reduced mortality, increased functional ability (Luoh and Herzog, 2002; Sabin, 1993), improved immune system function (Growald and Luks, 1988), stress reduction (Luks, 1988), chronic pain (Arnstein et al, 2002) and depression (Musick and Wilson, 2003). Community belonging and social networks engender feelings of wellbeing which are related to improved health (Berkman et al, 2000; Rowe and Kahn, 1998). Participation can provide psychological benefits, including self–confidence and control (Vizza, 1986; Lord and Falow, 1990) providing life satisfaction (Herzog et al, 1998), as Adler (2004) claims: 'Staying connected and engaged in helping others is apparently a good way to stay alive.'

Older volunteers appear to benefit most (Van Willigen, 2000; Li and Ferraro, 2006). Their health is more at risk therefore the potential to benefit from voluntary work is greater and changes easier to measure. Older volunteers may find renewed purpose through participation following the loss of work and/or family roles (Greenfield and Marks, 2004). Nonetheless, rates of volunteering decline with increasing age (McCormick et al, 2009:19): 'As a general rule, the percentage of people who volunteer reaches a peak in mid-life—not in retirement—and then gradually declines' (Gerteis, 2004).

Prisuta (2003) showed good health, being married, having children, being employed, attending church and previous voluntary activity were associated with volunteering; participation being affected by income, membership of clubs/organisations, using computers/Internet and gender. The Re-Inventing Aging (Gerteis, 2004) report suggests people get involved through invitation by someone they know, rather than more formal means. Prisuta (2003) believes 'baby boomers' are less likely to volunteer from a sense of duty or obligation, but are motivated by self-interest. He claims if society wants to encourage volunteers, this should be promoted as an opportunity for self-development.

Evidence shows a volunteering 'threshold', beyond which too much voluntary work adversely affects health (Schwartz et al, 2003). Conversely, studies suggest a certain number of hours volunteering before health benefits are experienced (Lum and Lightfoot, 2005; Musick et al, 1999).

The Scottish Government's Volunteering Strategy (2004-2009) aims to 'embed a robust culture of volunteering in Scotland' (p14) and states that volunteering can contribute to 'growth in the economy, delivering excellence in public services and supporting strong communities' (p12). The strategy claims that volunteering develops social capital and helps to achieve key policy goals in areas like health, crime, education, transport and employment. With current demographic forecasts of an increasing ageing population, the Scottish Government is concerned about the impact of a 22% decline amongst the main volunteering age group currently 30-44 years. This will deplete the numbers available in the prime age group for volunteering. For older people particularly, volunteering is seen as a means to stay physically and mentally active, as well as aiding transfer from employment to retirement: 'For older volunteers in particular, volunteering can improve physical health and mental well-being, providing a means to keep active and contribute to communities' (Scottish Executive, 2004, p12).

Methodology and Research Design

Study Design

This paper presents findings from the O4O Project: Older People for Older People, funded under the EU Northern Periphery Programme, from 2007-2010. In Scotland, O4O tested the concept of social enterprise as a rural service provider; the aim was to harness the energies of older people to address service needs. Within the research stream of O4O, mixed methods including quantitative (survey) and qualitative (interviews) data collection methods were used to gather information on general health and wellbeing from communities and in-depth opinions about participation. The study was approved by the North of Scotland NHS Research Ethics Committees.

Why Older People?

Europe's population is ageing (EC, 2008). Older people may be portrayed as a burden to society, not as social, cultural, intellectual and economic assets. O4O challenges negative stereotypes and conceptualises older people as assets, who can help to keep communities sustained and vibrant, through supporting the active participation of older people. In the study, older people were defined as those aged 55 and over (Scottish Executive, 2007).

Context and Sample

In O4O, older people were defined as those aged 55 and over (Scottish Executive, 2007). The study took place in the Scottish Highlands; a region with an expanse of 39,050 km2, population of 373,000, one of the most sparsely populated areas of the European Union characterised by increasing proportions of older people (HIE, 2008) containing remote and rural communities. 'Rural' and 'remote', have distinct implications (Hugo, 2005). Rurality comprises a set of social living conditions and remoteness is about inaccessibility (Smailes et al, 2002). For service delivery, remote and rural communities experience challenges of small, widely dispersed clientele, limited human resources, physical, technical and economic barriers (Bryant and Joseph, 2001) and distance from service centres (Scottish Government, 2004).

Four Highland communities participated in O4O, including in the process of developing social organisations for older people's service provision. Community selection was based on factors including current service delivery issues and O4O's potential beneficial impact on older people and the community. A community is defined as a group of people living in a common geographical location. Each community participated in the survey and interviewing. Three communities (1, 2 and 3) are sparsely populated and have small populations; the communities are based 60 to 100 miles and a drive time of over 60 minutes to the nearest city. One community, with a population exceeding 5000 inhabitants (4), is close to a settlement of 10,000 people (14 miles). As such three of the communities could be regarded as remote and one

as rural. As shown in Table 1, the communities have high proportions of older residents.

Table 1. *Characteristics of the O4O Communities*

	Community1	Community2	Community3	Community4
GP practice list size	564	1623	1050	5350
Proportion of those aged 55 and over	42.9%	44.7%	37.2%	20.6%

Source: Based on the data provided by the local medical practices.

Community Survey

A structured O4O Rural Communities Health and Wellbeing Questionnaire collected data on the socio-economic characteristics, health status and participation behaviours of older people in each community. The questionnaire included SF12 health questions (QualityMetric, 2009) and General Household Survey social capital questions (the interview topic guide can be seen, on request).

The questionnaire was sent by local medical practices to all registered patients aged 55 and over (2,462 questionnaires, via post). An information sheet was supplied. Participation was voluntary, with consent indicated by return of the questionnaire. Data gathered were anonymous.

The survey was distributed in February 2009. A reminder was sent in April 2009 to the entire sample asking for a reply from those who had not already completed. The benefit of this process was that participants remained anonymous throughout; a limitation was the potential for some people to respond twice, even though specifically asked not to do so via an enclosed letter and note on the questionnaire. To exclude potential repetitions (that could appear due to sending reminders to the entire study sample), a duplication test was run using SPSS; this identified 69 potential duplicates. These were removed leaving 1428 participants. Excluding duplicates the overall response rate was 58% (1428/2462).

Participation and Covariates

'Participation' in community activities can be variously defined (Thurston et al, 2005). Here, it is characterised by ten 'participative factors' (five informal and five formal activities) that we have categorised as showing high to low levels of 'commitment', associated with participation activities (see Table 2).

To discover associations with participation, a range of demographic and socioeconomic participation-related covariates were used: gender, self assessed health, age, origins (born in the area vs. not-born in the area), length of stay in the area (<9 years, > 9 years), employment status, education level, access to a vehicle (yes or no) and household income.

Table 2. *Informal and Formal Participation Factors*

Informal participation factors	High commitment	Formal participation factors
Unpaid personal care provision		Organisation of new services
Dealing with an emergency in the community	↕	Taking part in community projects
Doing a favour for a neighbour		Membership of a management committee
Willingness to use personal skills to help others		Active membership of local organisations
Receiving a favour from a neighbour		Attendance at community events
	Low commitment	

Data Analysis

Data were analysed using SPSS 16.0 software. To discover associations with, a two-stage analysis was conducted. Initially, a chi-square test was performed for each of ten participation factors and each individual-level demographic and socio-economic factor. Depending on the data type, continuity correction, linear by linear or Pearson's chi-squared tests were used. Following this univariate analysis, those variables which were shown to be associated with participation were entered into a binary logistic regression model. A 'forward conditional' model was used to identify the significant variables and an 'enter' model to obtain the adjusted odds ratios.

Community Interviews

Twenty-six semi-structured interviews were conducted with people aged 55 and over in O4O communities. Interviewees were asked about their history of volunteering, impacts of O4O on the local community, the benefits and impacts of community participation and how people felt about having an active community role (the interview topic guide can be seen, on request). Four people involved in each local O4O initiative were asked for interview. They were also asked to suggest two other community members who might be recipients of voluntary services who might be willing to be interviewed. In total there were 17 people in the first category and 9 in the second. Mean interview length was 34 minutes. Interviews were recorded and transcribed. NVivo was used to code the transcriptions by theme and these themes were then analysed in detail and grouped into seven broad categories, including rurality, older people's services, volunteering histories/attitudes. Interview data generated reflected the range of experiences and backgrounds of the individuals. Inevitably they represented the views of some individuals most actively involved in the community.

Findings

Survey Data Analysis

Table 3 summarises the findings of cross-tabulations and indicates which were statistically significant ($p < 0.05$). This shows that self-assessed health, age, education, household income and access to a vehicle were associated with

the participation factors more often than gender, origins, length of stay in area and employment.

As shown (Table 3), health, age, education, access to a vehicle and household income tend to be associated with both informal and formal aspects of participation. No variables are obviously linked with only informal or formal participation.

Table 3. *Summary of Cross-tabulation Results*

		Gender	Health	Age	Origins	Length of stay in the area	Employment	Education	Access to a vehicle	Income
INFORMAL PARTICIPATION	Doing a favour[1]		<0.001	<0.001			0.04	0.015	<0.001	0.024
	Receiving a favour[2]		0.045					0.047		0.004
	Providing unpaid personal care[3]			0.003					0.038	
	Using your skills[4]	0.007	<0.001	<0.001	0.004	0.019	<0.001	<0.001	<0.001	<0.001
	Dealt with an emergency[5]		0.001	0.003			0.001	<0.001	0.01	0.001
FORMAL PARTICIPATION	Management committee membership[6]		<0.001	<0.001			0.008	<0.001	<0.001	<0.001
	Community projects[7]	0.046	<0.001	0.001				<0.001	<0.001	0.003
	Attended a community event[8]	<0.001	<0.001	0.024	0.018			<0.001	0.003	0.045
	Organised a new service[9]		<0.001	0.032		0.004	0.002	<0.001	<0.001	0.003
	Active member local organisations[10]		<0.001		0.02			<0.001	<0.001	<0.001

[1] Have you done a favour for a neighbour in past 6 months?
[2] Have a neighbour done a favour for you?
[3] Do you provide unpaid personal care to someone?
[4] Would you be willing to use your skills to help other people in your community?
[5] In the past 3 years have you dealt with an emergency in your community?
[6] Are you on the management committee for any local groups?
[7] In the past 3 years have you taken part in community projects?
[8] Have you attended a community event in the past 6 months?
[9] Have you ever organised a new service in your community?
[10] Are you an active member of any local organisations?

Access to a vehicle is associated with all participative factors, except receiving a favour from a neighbour. This suggests that, in remote rural communities, access to a vehicle enables participation.

Educational attainment, self-reported health and household income are associated with all participative factors, apart from provision of unpaid personal care. Similarly, age is associated with all participative factors apart from 'receiving a favour from a neighbour' (which is likely based more on need and social 'connectedness' rather than age) and 'being an active member of a local organisation' (which is based on physical and social ability to be active).

Socio-demographic variables with fewest instances of an association with the participative factors were gender, origins and length of stay in community.

Socio-demographic Factors associated with Participation

A second stage of analysis was conducted for each participation factor using only those variables shown to be statistically significant in chi-square tests (Table 3). Appendices 1-3 present adjusted odds ratios and their 95% confidence intervals from the logistic regression models for each of the ten participation questions. As shown in Table 4, different aspects of formal and informal participation are associated with different socio-economic factors. Overall, education levels, self assessed health and access to a vehicle appear in a majority (at least in half) of models relating to participation. The data indicates that those higher educated are more likely to participate; the highest level of participation was found amongst those with professional skills and university degree and the lowest level of participation amongst those with no qualifications. Also, those in better health are more likely to participate and there is a gradient as health improves. Further, those with access to a vehicle are associated with higher participation. Age appeared in 3 of 10 logistic models indicating that the youngest age group were most likely to participate and the oldest age group least likely.

As shown (Table 4), self assessed health, educational level and access to a vehicle appear in all (5/5) logistic models for formal participation. In addition, length of stay in an area (1/5) and gender (2/5) relate to formal participation. No clear pattern with regards to 'commitment' level was revealed.

Table 4. *Socio-demographic Factors associated with Formal and Informal Participation*

Formal participation factors		Socio-demographic factor - Indicator
	High commitment	
Organisation of new services	↑	Education, Health, Vehicle, Length of stay
Taking part in community projects		Education, Health, Vehicle, Gender
Membership of a management committee		Education, Health, Vehicle, Gender
Active membership of local organisations	↓	Education, Health, Vehicle
Attendance at community events		Education, Health, Vehicle
	Low commitment	
Informal participation factors		
	High commitment	
Unpaid personal care provision	↑	Age
Dealing with an emergency in the community		Education, Employment, Income
Doing a favour for a neighbour		Age, Health
Willingness to use personal skills to help others	↓	Education, Age, Health, Gender
Receiving a favour from a neighbour		Education
	Low commitment	

Level of education and age emerged in the majority (3/5) of logistic models for informal participation. A health aspect was significant in 2/5 and employment status and household income in 1/5 informal participation indicators. Consequently, overall data indicate that informal participation is

frequently associated with age and education. No clear pattern with regards to 'commitment' level was revealed.

Interestingly, access to a vehicle is not similarly linked with informal participation. This emphasises the importance of transport to enable older people's wellbeing in rural areas. To achieve particular kinds of participative activities (that facilitate social interaction and sense of belonging), transport is needed to access 'beyond spaces' (Wiles et. al., 2009) outside the home. Moreover, age does not appear as associated with formal participative factors within the regression analyses. For the informal factors, age influenced the likelihood of participation, with the younger people more likely to participate.

Interview Data Analysis

The qualitative data collected through semi-structured interviewing, provide insights into the motivations underlying older people's participative behaviours. The majority of interviewees were active volunteers and believed in the benefits of volunteering for themselves and their communities. They thought voluntary work kept them active and involved in community life and therefore healthier: 'It keeps me going, it keeps me alive' (Interviewee 24). Other benefits included getting out into the community, seeing new places, meeting new people, acquiring new interests, using old skills or developing new ones, feeling useful and valued, a sense of satisfaction and using their mind and imagination. One volunteer described getting a 'buzz' from helping and another referred to acquiring a 'sort of wellbeing factor' (Interviewees 24 and 3). People did not claim health was a main motivation for participation; they just enjoyed contributing: 'I just like to help that's all'. For some it was a duty: 'I do feel that if you've got your health and strength when you retire … then you should be able to give something back to your community' (Interviewee 9).

Several envisaged participation as a lifelong activity, which depended only on their continued good health. Generally people expected their health and energy levels would naturally decline with age and therefore limit the amount and type of future voluntary activity. Commenting on their own future as volunteers, some thought they would choose to do less voluntary work so they could enjoy retirement: 'I'm planning on giving up things this year … it's a tie really, you're tied. I don't have much time to myself and I thought when I retired I would get plenty of time to do my own thing but I can't' (Interviewee 10).

The questionnaire findings reveal a stronger negative association between age and participation for informal participation, although a similar association is seen between health and formal participation: 'I think when they get to a certain age that they're quite happy to get something done for them and not so much of the get up and doing, because they're not so fit to get up and do it. I'm absolutely frustrated because I can't do things. I just can't do things and I don't see me getting any better and I'm not the only person like that' (Interviewee 2).

Several interviewees reported no longer being able to undertake particular domestic tasks and other activities because of health problems and declining

physical and sometimes mental capacity: 'I find that doing things now are rather difficult with my back and everything and the brain isn't what it used to be either' (Interviewee 4).

Many interviewees had a long history of voluntary work, suggesting that previous involvement in participative activities can influence current participative behaviour. The activities included involvement in Community Councils, helping with older people's groups/outings, developing community facilities, organising events and fundraising. In the three remote communities, interviewees discussed the decline of the traditional crofting culture in which interdependence and co-operation were embedded: 'every family helped every other family with things like peat cutting, clipping the sheep … it was assumed that people would help one another. Now that's disappeared. Now they'll say it's not my job, it's the social workers job, it's the doctor's job, it's the nurse's job, it's the home carer's job' (Interviewee 14).

Some saw a decline in community capacity and self-sufficiency resulting in an increasing reliance on externally provided services which it was feared would be cut in the current economic climate. Many felt most community work was undertaken by the same small number of older volunteers – contrasting with the survey findings that show younger people are more likely to participate. Doubts were expressed over the future of volunteering capacity due to social change and a perceived decline in 'community spirit'. Many were pessimistic about the willingness of younger people to get involved in projects and the consequent impact on community sustainability. Several felt frustrated and disillusioned because it always seemed to be the same people getting involved with little help from the wider community. The fact that younger people often leave communities to find employment was also seen as undermining both volunteering capacity and the local workforce providing vital services for the community. Some believed that the lack of funding for projects and the length of time required to set up something new meant people lost interest and enthusiasm without more immediate results. Others feared a more fundamental decline in a sense of personal and community responsibility caused by generational and social change, a 'realignment of values', the replacement of 'community responsibility by personal responsibility' (Interviewees 15 and 14) in a world where people no longer looked after their own families.

Some did believe there were skills and experience within the community, but did not necessarily know how to harness them productively. Social networks were essential and a few said it was important to ask people to do things directly rather than advertise for volunteers: 'the best way of getting people is just to go to somebody and say 'look, I need somebody to do this and will you help me out' but advertising is no use, I think you need that person to person contact' (Interviewee 25).

A few interviewees identified a difference between 'incomers' and 'locals' in the older population. There was some resentment about those coming into the area to retire but who did not apparently wish to contribute to community

life and development. Others did not see such a clear distinction but attributed varying levels of involvement to differences in 'human nature'. Several thought 'incomers' were less self-sufficient and more likely to be reliant on their cars to access shops and services outside the area. It was feared this perceived failure to support local businesses undermined community sustainability. However, on the whole people simply recognised that incoming retirees might need greater formal support because they had not had time to build up social networks which could help both 'locals' and those 'incomers' who had been resident longer. Some thought incoming retirees could find it difficult to integrate into the community and be accepted even when they wished to contribute. Alternatively others identified the fundamental problem as the loss of young people, the community's future volunteers, due to lack of employment and affordable housing: 'when the youth leave a place and it's left with elderly folk, something dies in it, the heart goes out of it' (Interviewee 24).

Some favoured formal help so they could 'take' without feeling they had to reciprocate. Others thought rural communities depended on informal mutual favour-giving and that unnecessary formal schemes undermined the 'natural' helping culture within the community. It was often felt that older people do not ask for informal help because they want to remain independent. They do not want to feel indebted or to be a 'burden' to friends, family and neighbours. These individuals would rather pay for assistance and not involve their personal relationships. Conversely for others having such a social network to call upon was essential for maintaining independence and well-being. It was a 'natural' benefit of living in a small community and an important feature characterising a rural area, where interviewees felt people were more ready to help each other than in a more anonymous urban area.

Conclusions

The quantitative findings presented in this paper reveal a consistent story; that younger and healthier older people are more likely to participate. Overall findings suggest that those who participate the most are more highly educated, have better health and access to a vehicle. A key difference between 'informal' and 'formal' participation is that access to a vehicle is stronger associated with higher levels of formal participation.

Qualitative data provided information on the motivations underlying older people's participation in remote and rural areas and revealed the complexity of participating within small, rural communities, as well as the place-based cultural influences associated with participation. This highlighted that older people generally perceive health benefits as associated with participation but health improvement is not a conscious motivation for participating. The interviewees often confirmed the association seen within the survey between increasing age, deteriorating health and lower levels of participation. The qualitative work also highlighted a perceived 'fear' within the older population

that they sustain many of the informal and formal participative behaviours within their communities and that younger generations lack willing to 'get involved'.

If participation increases wellbeing then study is required into how to increase participation for those with poor health, lack of transport and lower educational levels in rural areas. It may be possible to derive strategies to harness some of the 'willingness to use skills to help community' reported in our survey. Further research could explore how such 'willingness' can be harnessed to derive benefits for both participants and their communities. Policy is interested in how participative behaviours can be used within co-produced services and further work must explore the capacity within remote and rural communities to engage in such processes. This will involve understanding the rates and types of participation within the 'older' old age groups. In this study, our definition of 'older people' was broad. Findings have shown that older people's participation declines with age and poorer health and it might be useful to study participation more finely, within narrower bands of older age, to discover more about actual and perceived impacts of different types of participation on health and wellbeing across older age. This further work will also involve understanding more about those who say they are 'willing' to use their skills to help their community but are not actually engaged in informal or formal participative behaviours. Such a group of people may provide a pool of potential future participants.

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Appendix 1

	1. Doing a favour		2. Receiving a favour		3. Unpaid personal care		4. Use Personal Skills	
	OR (95% CI)	p-value	OR (95% CI)	p-value	OR (95% CI)	p-value	OR (95% CI)	p-value
Health (poor health)		<0.001						<0.001
Fair	3.13 (1.62, 6.03)	<0.001					2.02 (0.83, 4.89)	0.12
Good	3.35 (1.84, 6.11)	<0.001					5.09 (2.19, 11.81)	<0.001
Very Good/Excellent	4.28 (2.35, 7.80)	0.001					6.43 (2.8, 14.78)	<0.001
Age group (85+)		<0.001				0.021		<0.001
75-84 years	3.55 (1.94, 6.50)	<0.001			8.65 (1.16, 64.5)	0.035	2.74 (1.30, 5.79)	0.008
65-74 years	4.65 (2.58, 8.37)	<0.001			10.71 (1.46, 78.9)	0.02	5.71 (2.73, 11.95)	<0.001
55-64 years	6.17 (3.47, 11.0)	<0.001			13.08 (1.80, 95.2)	0.011	16.29 (7.62, 34.84)	<0.001
Education (No qualifications)				0.05				<0.001
O-levels/Standard Grades			1.39 (0.86, 2.22)	0.18			1.66 (0.92, 2.99)	0.09
Highers			0.76 (0.45, 1.29)	0.31			3.45 (1.48, 8.05)	0.004
HND/HNC			1.38 (0.67, 2.82)	0.38			2.42 (0.88, 6.67)	0.09
Professional/University Degree			1.52 (1.04, 2.23)	0.03			3.10 (1.9, 5.05)	<0.001
Gender (Males)								
Females							0.58 (0.38, 0.88)	0.01

Appendix 2

	5. Dealt with emergency		6. Management Committees		7. Community projects		8. Community Events	
	OR (95% CI)	p-value	OR (95% CI)	p-value	OR (95% CI)	p-value	OR (95% CI)	p-value
Health (poor health)				<0.001		<0.001		<0.001
Fair			1.72 (0.63, 4.72)	0.30	1.44 (0.65, 3.20)	0.37	1.76 (0.97, 3.18)	0.06
Good			4.10 (1.59, 10.58)	0.004	2.48 (1.18, 5.24)	0.017	2.77 (1.58, 4.86)	<0.001
Very Good/Excellent			5.06 (1.98, 12.96)	0.001	3.42 (1.63, 7.15)	0.001	3.35 (1.92, 5.83)	<0.001
Education (No qualifications)		0.001		<0.001		<0.001		<0.001
O-levels/Standard Grades	1.37 (0.62, 2.99)	0.44	1.48 (0.97, 2.26)	0.72	1.11 (0.75, 1.66)	0.60	1.38 (0.97, 1.95)	0.07
Highers	1.63 (0.66, 4.02)	0.29	1.54 (0.93, 2.58)	0.10	1.38 (0.85, 2.22)	0.19	1.65 (1.06, 2.57)	0.026
HND/HNC	1.04 (0.33, 3.31)	0.94	1.81 (1.04, 3.21)	0.041	1.81 (1.06, 3.09)	0.03	1.41 (0.86, 2.33)	0.17
Professional/University Degree	3.09 (1.13, 5.75)	<0.001	2.67 (1.89, 3.75)	<0.001	2.46 (1.79, 3.37)	<0.001	2.31 (1.72, 3.09)	<0.001
Gender (Males)								
Females					1.35 (1.06, 1.73)	0.016	1.73 (1.37, 2.19)	<0.001
Vehicle (no access)								
Access to a vehicle			2.55 (1.52, 4.29)	<0.001	1.94 (1.26, 3.02)	0.003	1.44 (1.01, 2.06)	0.042
Employment (retired)		0.0034						
Full time	1.55 (0.92, 2.59)	0.10						
Part time	1.98 (1.13, 3.45)	0.016						
Income (Less than £119)		0.062						
£120-£299	2.20 (0.65, 7.40)	0.20						
£300-£399	2.40 (0.68, 8.50)	0.17						
£400-£599	1.19 (0.33, 4.31)	0.79						
£600-£769	1.70 (0.44, 6.55)	0.44						
£770 and more	3.29 (0.91, 11.82)	0.06						

Appendix 3

	9. Organising New Service		10. Local Organisations	
	OR (95% CI)	p-value	OR (95% CI)	p-value
Health (poor health)		0.041		<0.001
Fair	1.20 (0.55, 2.62)	0.64	1.37 (0.66, 2.82)	0.40
Good	1.41 (0.68, 2.91)	0.36	2.21 (1.12, 4.35)	0.022
Very Good/Excellent	1.88 (0.92, 3.86)	0.08	3.30 (1.69, 6.44)	<0.001
Education (No qualifications)		<0.001		<0.001
O-levels/Standard Grades	1.46 (0.94, 2.26)	0.09	1.36 (0.93, 1.99)	0.11
Highers	1.37 (0.80, 2.36)	0.25	1.64 (1..04, 2.61)	0.034
HND/HNC	1.71 (0.95, 3.07)	0.07	2.15 (1.29, 3.60)	0.004
Professional/University Degree	2.69 (1.89, 3.83)	<0.001	3.37 (2.48, 4.59)	<0.001
Length of Stay (< 9 years)				
> 9 years	1.35 (1.14, 1.59)	0.001		
Vehicle (no access)				
Access to a vehicle	1.74 (1.08, 2.83)	0.024	1.91 (1.26, 2.90)	0.002