Workshop: The residential context of health

"My own front and back door"; impacts on well-being of moving to new-build social housing

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The health and social impacts of moving into new-build social housing in Scotland were evaluated using a quasi-experimental study design. Scotland's Health, Housing and Regeneration Project (SHARP) followed 250 people who moved, and a comparison group who did not move, for 2 years. Qualitative interviews were also conducted with a sub-sample of 22 respondents. The qualitative data suggested that many of those who moved experienced increased quality of life as a result, reporting greater feelings of happiness, relaxation and well-being. Those who moved from 'flats' to a more traditional style of house seemed to benefit particularly from this move. Features of new housing such as private entrances, private gardens, and increased visibility afforded respondents greater feelings of privacy, security, control and increased opportunities for restoration and social interaction. These data suggest ways in which specific aspects of the built environment may impact on well-being and quality of life, with potential implications for mental health. They also point to the utility of qualitative research within larger quantitative evaluations for illuminating mechanisms whereby interventions impact on outcomes.

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Background

Health inequalities persist in developed countries, despite improvements in health outcomes across the population. It is recognised that structural determinants have a strong influence on health inequalities, and that 'upstream' interventions are therefore required to tackle them. Housing and neighbourhood conditions are such an upstream determinant, and it has long been recognised that poor housing is strongly associated with poor health. Area conditions are also independently associated with health. Housing-led regeneration is thus seen as an upstream intervention with the potential to tackle health inequalities, and as such is an important component of the UK government's health inequalities strategy. However, surprisingly few intervention studies have sought to evaluate the impact on health outcomes of attempts to improve either housing or area conditions. Those which have done so have found little evidence of effect, though this is largely due to an absence of evidence rather than evidence of absence. There is some robust evidence that housing improvements can have a positive impact on mental health; however, little is understood about the mechanisms whereby such impacts deliver these improvements (Acevedo-Garcia et al 2004, Thomson et al 2009, Thomson et al 2005).

Developing greater understanding of these mechanisms is important if we are to develop more effective interventions. However, evaluation of social interventions such as housing-led regeneration is extremely challenging, as these interventions are generally highly complex and multi-faceted, delivered at a number of levels, often multi-site and also at times tailored to individual needs. As a result, it is extremely difficult to identify which components of a given intervention have delivered (or not delivered) any observed outcomes, and crucially, to understand how these outcomes have been delivered.

Quantitative evaluation of interventions is helpful in providing information about outcomes, but less so for understanding context and process. This hampers understanding of the causal pathways or mechanisms linking interventions to outcomes. Mixed methods evaluations which incorporate qualitative methods are increasingly favoured as a means of investigating process, outcomes and mechanisms

(Oakley et al 2006). Qualitative methods can be particularly useful where outcomes such as mental health or well-being are concerned, since these necessarily involve a high degree of subjectivity on the part of the respondent. Indeed there is some evidence to suggest that standardised quantitative measures such as the SF-36 or GHQ 12 fail to capture subtle changes in such outcomes (Adams, White, Moffat et al 2006), which are more effectively investigated using qualitative methods. Qualitative work can also identify emergent themes which may not have been anticipated in the *a priori* categories or constructs created for use in quantitative survey instruments.

There is evidence to link processes such as control, restoration and stress with mental health outcomes (Johansson, Hartig et al 2003); for instance it is suggested that a decrease in ability to control one's circumstances can lead to depression (Brown et al 1995). Factors associated with such processes are often referred to as 'psychosocial'; however, it is acknowledged that this term is often rather loosely defined and used interchangeably with 'psychological' in much literature (Egan et al 2008). Methods of operationalising the construct vary, and it is often used to refer to either causal factors, processes or outcomes. Based on the OED's definition of psychosocial as pertaining to the interaction of the social with the psychological, 'psychosocial' is conceptualised here as relating to the processes which link external causal factors to psychological or affective outcomes. The manner in which some aspects of housing may influence such processes is discussed below.

The role of dwelling type

Some authors have hypothesised that features of housing such as dwelling type may have an impact on mental health. Evans et al's review of evidence on links between housing and mental health (2003) hypothesised that high-rise or multi-unit housing may have negative impacts on mental health through psychosocial processes such as those outlined above. For instance, lack of territorial control over shared space, or lack of opportunity for social interaction in such housing may contribute to worse mental health outcomes. Cross-sectional studies provide evidence of association between such factors and mental health, but few intervention studies have considered the role of dwelling type, and those that do have tended to be small and/or to focus on unusual populations (although they do support the hypothesis that dwelling type

influences mental health). A number of qualitative studies exploring respondents' perceptions of their environments have also found that people identify features of high-rise or multi-unit dwellings such as lack of opportunity for social interaction and lack of territorial control as inimical to mental health (e.g. Day 2008, Warr, Tacticos et al 2008, O'Campo, Salmon et al 2008). These are generally 'cross-sectional' studies, in which respondents are describing their current feelings about the place in which they currently live. Asking people about their experience of change in the aftermath of an intervention introduces a retrospective or longitudinal element to qualitative research (Neale and Flowerdew 2003), which can help to illuminate processes of change. However, there are very few housing intervention studies which have employed this methodology.

The SHARP study

Scotland's Health, Housing and Regeneration Project (SHARP) was a quasi-experimental evaluation of the impact of moving social housing tenants into newly built social housing. In some cases, the intervention also involved large scale regeneration of previously run-down areas. An intervention group (final wave n= 262) and matched comparison group (n=285) were surveyed via face to face interviews once before moving, and once 2 years after moving. In addition, the Intervention group completed a postal questionnaire one year after moving. Two waves of qualitative interviews were also conducted; Wave 1 (n=28) was conducted 1-3 years post-intervention, and Wave 2 (n=22) was conducted 3-5 years after respondents had moved. Each wave involved a different sub-sample of survey respondents. All data were collected between 2002 and 2008 (Petticrew et al 2008). A very wide range of health, social and community outcomes were collected across the study. The SHARP study had the advantage of employing a mixed methods approach to evaluating a housing intervention, and also of conducting qualitative interviews some time after the intervention, thus permitting exploration of experiences of change over time.

The focus here is on the second wave of qualitative interviews, in particular on the impact of changes in dwelling type on affective outcomes such as mood or well-being.

Prior to the intervention, there were high levels of housing problems among the intervention group. Rehousing substantially reduced the incidence of such problems – for instance, dampness fell from 35% to 3% and problems with heating homes fell from 40% to 12% (Kearns et al 2008)). Many intervention group respondents were moved from flats to more 'traditional' styles of house with private entrances and access to private gardens. 'House' as used here includes detached, semi-detached and terraced houses, and also so-called cottage flats since they have private entrances and gardens. The proportion of intervention group respondents occupying such dwellings increased from 38% to 78% following the intervention.

Methods

The qualitative interviews aimed to capture explore the impacts of housing and area change on health, social and community outcomes from the perspective of the respondents. The data were gathered by the author between August 2007 and January 2008. The sample was drawn from the larger survey sample and recruited by means of a mailing and follow up phone-call. One-to-one, in-depth, semi-structured interviews were conducted and recorded using digital recording equipment. The respondents predominantly lived in urban areas within Greater Glasgow. The demographic characteristics of the sample are displayed in Table 1.

Respondent ID	Age	Gender	Employment status	Household type
1	33	male	FT	family
2	33	female	PT	family
3	38	female	housewife	family
4	46	female	FT	adult
5	46	female	FT	adult
6	48	female	sick	adult
7	49	female	FT	family
8	50	female	FT	family
9	51	female	sick	family
10	53	female	sick	adult
11	54	male	sick	adult
12	55	female	PT	adult
13	55	female	sick	family
14	56	female	sick	family
15	56	female	PT	adult
16	60	female	sick	adult
17	64	female	PT	older
18	66	female	retired	older
19	72	female	retired	older
20	78	male	retired	older
21	78	female	retired	older
22	81	female	retired	older

Table 1: Socio-demographic characteristics of the sample

The interview schedule did not introduce the topic of health impacts until the end of the interview, to avoid leading respondents in this direction, and to assess whether they referred to such issues spontaneously. Prompts and probing questions were used to explore interesting topics further. The interviews were transcribed by a professional transcription company in preparation for analysis. NVivo 7 was used to facilitate the analysis, which was conducted using Seale's qualitative content analysis approach (2004). This involved identifying the overarching themes of interest in the research context, then coding text in the interview transcripts which corresponded to these themes. The coded text was then examined in detail to identify emergent and recurring themes and patterns within the data, which were then sub-coded in a further round of analysis. When this process was completed, connections between emergent themes and respondent characteristics were investigated in some depth.

Findings

The following sections report the findings of the qualitative interviews, focusing particularly on the manner in which respondents attributed changes in their mood, quality of life, well-being and mental or physical health to changes in their housing environment. Reflecting the findings of the survey, many of the qualitative respondents had experienced substantial improvements in housing conditions. Virtually all of the respondents were extremely positive about their new homes, citing factors such as improved warmth, gains in available space and having a home which had not previously been occupied as contributing to their satisfaction with new housing. However, since the impact of moving from a flat to a house is the topic of interest in this context, the focus is on those respondents whose move was of that nature. It should be noted that the issue of housing type was not an *a priori* focus of the qualitative study; rather it emerged from the data as the research was in progress.

Respondents who took part in the second wave of qualitative interviews had moved or been transferred to their new homes for a variety of reasons. Seven respondents were rehoused as a result of wholesale regeneration, and twelve had applied to be transferred into new housing due to health reasons (5), anti-social behaviour (3), overcrowding or under-occupation (2) and relocating closer to family (2). Three respondents had not previously been social housing tenants; of these two had been homeless following the breakdown of their marriages (one of whom was resident in a women's refuge, and the other who was staying with family), and one had been an owner-occupier in accommodation which was unsuitable for her daughter who had special needs.

In all, thirteen participants who had previously lived in flats had moved into houses following the intervention. Those who moved into flats also reported improved affective outcomes arising from the move, but these were often connected with changes in their life circumstances occasioned by moving rather than changes to the physical structure of the housing. For instance, escaping from ASB, moving closer to one's social network, or moving for the first time into a home that was entirely their own were factors cited as impacting on state of mind by those who moved into flats. By contrast, for many of those who moved from flats into houses, it seemed to be

factors associated with the physical structure of the building which were directly linked to improvements in mood and well-being. People used terms such as 'more relaxed', 'happier', 'secure', 'cheerful', 'better quality of life' and 'just feel better' to describe the impacts of these changes. Comments such as those below illustrate some of the ways respondents described the impact of moving into a house:

> *Well I'm better at, I feel better in myself. But you know on the whole, and I feel it's just a better way of living and I've got a better quality of life from when I've moved in here from what I did round the corner, aye and I like it, I wouldn't go back to a tenement. And it's just a lot better. (respondent 14)*

> *Not my physical health. Mentally, I feel a lot better… Yeah. I think, as I was saying earlier, the previous tenement building that I was in, that was just a hellish place to be in – not a very nice place, and you did feel, you know, God, is this what I'm living in? And it did get you down, but now, not a problem. (respondent 1)*

Themes which emerged from the data regarding the impact of dwelling type on affective outcomes related to acquiring a private entrance, acquiring a private garden and changes to the appearance of local neighbourhoods attendant upon regeneration and the provision of new housing. Respondents describing the impact of these changes used terms such as 'happier', more relaxed' and 'better quality of life'. Although not every respondent explicitly linked changes in dwelling type to affective outcomes, some respondents clearly articulated a sense of 'feeling better' which was common across the sample. The focus here will be on the impact of private entrances and gardens; the manner in which each of these structural changes affected respondents is described in the following sections.

Private entrances

The majority of the respondents had previously lived in Victorian tenements or post-war low-rise housing. In such housing, each unit is reached from a central stairwell, and there are typically 7 or 8 apartments over 4 floors (this stairwell is commonly referred to as a 'close' in Glasgow). Although many of these had been fitted with secure doors at the foot of the stairs, it was the experience of many respondents that these were damaged or broken. Since this space was neither fully public nor fully private, it was difficult to control the entrance of strangers, who frequently

congregated there to drink or take drugs. Walls were often covered in graffiti, and stairwells were often dirty. Unwanted users of the space made noise late at night, and people who wished to gain access simply pressed any door entry buzzer, regardless of whether the resident was known to them.

Moving to housing with a private entrance increased respondents' feelings of privacy and security, which in turn increased their sense of control over their immediate environment. One woman described her increased feeling of control, contrasting her new home to conditions in her 'close' prior to moving:

> *You've more control on what comes in and out your front, back door, you've not really got any control what comes up and down a close, if you've not got a good area. There wasn't a bit of wall in the close or in the backcourt that didn't have any graffiti on it. We didn't have any back door, we didn't have any front door. Kicked in with drunks and people hanging about the stairs, down the back stairs and things. (respondent 5)*

The respondent went on to describe how she and her sister had attempted to exercise control over the situation by painting over the graffiti, only to find it had all been replaced within a month. Later in the interview, she commented on how she would now react if someone attempted to graffiti her home, illustrating the impact of acquiring a private entrance:

> *… I feel better in my own house, more control… If somebody was to walk up and start graffiti-ing on my front door right now, I would be out there, "what do you think you're doing? How dare you. Beat it. Get away from here!", you know? Aye, that's mine, that's my private place. They can't just walk in and do what they like with it. (respondent 5)*

For another respondent, escaping from the stresses of living in a flat had led to an improvement in her state of mind:

> *Flats are, you're living on top of everybody in flats, you know? And things like that. Folk are living above you and living next door to you and making all sorts of rackets and there's even junkies come in the close …It has made a difference. As I said, obviously, you're a bit more happier, you know, 'cause you're not living with, you know, kids and all these kind of problems. It has, certainly, made me a bit, you*

> *know, happier, you know, that I'm more secure, you know, and you have got everything on your doorstep, you know, it's safer and you know, it has made a difference. (respondent 6)*

Having a private entrance provided respondents with defensible space which appeared to be recognised and respected as such. Respondents reported that the issues of strangers congregating to drink or take drugs, litter, noise and graffiti had abated considerably. These had previously caused extreme stress, the reduction of which had increased the restorative capacity of respondents' homes, a change which some explicitly linked to health improvements:

> *I think it's [my health] actually better. That's how I'm saying. It's different from the close, you know? You're not up during the night with doors banging and people running in and out all night and you can't get asleep. (respondent 13)*

Other aspects of the built environment associated with the change in dwelling type also appeared to have contributed to a reduction in the frequency or impact of anti-social behaviour (ASB). Since entrances and stairwells were no longer communal, anyone moving about in the street was highly visible to everyone. Additionally, much of the external space (i.e. gardens) was demarcated territory. This seemed to lead to an increase in informal social control and act as a deterrent to people hanging about:

> *And you know you're coming out the front door and… this is in the top flat in [street] and you're coming out the door and you are sort of a frightened to come down the stair because you don't know what you are going to see, you know? But here you just come out the front door and you've got your drive and there's nothing else there…if it's out in the street, people will see them. If you're up a close you don't know what's going on. (respondent 7)*

Further, where ASB did continue to occur, it appeared not to have so much of an impact on some respondents, since the street layout had the effect of distancing them from it:

> *That doesn't bother me, but. It's off the close. In the close, it's different. Outside, it doesn't bother me. I shut my door and my windows and that's it, I don't bother. (respondent 13)*

Increases in privacy and security provided by private entrances impacted on affective outcomes such as well-being, quality of life, stress levels and mood through the psychosocial process of control.

Private gardens

The housing previously occupied by respondents who moved from a flat to a house rarely provided access to a private garden. Generally such housing has a communal area to the rear of the building (known as the 'backcourt') which contains bin shelters and drying areas. While children often play in these areas, it is less common for adults to use them for leisure. Respondents recounted that these areas were often dirty, and, since they were communal play areas, also noisy. Like private entrances, private gardens provided respondents with greater privacy and security, and consequently increased control. They also provided a pleasant space in which to relax outdoors, and for some respondents altered the degree to which they socialised with their neighbours. Each of these factors was linked by respondents to improved mood or quality of life.

The demarcated outside space provided by gardens had an effect similar to that of private entrances, in that it was a defensible space that was not 'invaded' by strangers. Again, this led to an increase in privacy and security:

> *I like having my back, because in the last place, it was a situation if you put your washing out, someone else took it in. Whereas in this situation you've got your back garden, you know your own privacy, a lot better. (respondent 12)*

Having an outdoor space in which to relax was also described as contributing to increased well-being. For one woman, who reported that having a garden also helped her to manage a respiratory health condition, acquiring a garden had a substantial impact on her quality of life:

> *As I say you can go out and sit in the garden and read your book or whatever. I get more fresh air if you know what I mean. You've got a better quality of life. Before I would have been stuck up the close. (respondent 14)*

Another female respondent reported that the ability to sit outdoors in her garden had led to an improvement in her general well-being:

> *Oh, aye I've got a back and a front garden. Oh great, it's like a front and back door, although it's a … you've got a back door. You can go out and sit in your garden …I just … feel a lot better. Oh aye, it's a good effect, aye. (respondent 13)*

It seemed that for some respondents, gardens provided opportunities for restoration in nature, which in turn impacted positively on affective outcomes.

Gardens also influenced respondents' social interaction with their neighbours, although the direction of change and respondents' reactions to these changes varied. Some respondents found that they socialised considerably more with neighbours than previously, including one woman who reported that she did not get to know the neighbours among whom she had lived for many years until they were all moved from tenements flats to houses. She attributed this to the increased visibility provided by gardens:

> *And you see people more than what you did when you were up because when you there up there you just maybe got in the motor or the taxi and went up the stairs. Whereas up here you're out watering your garden, or cutting the grass, tidying it up and the lassie [Scots term for woman or girl] next door that way she stayed in [street name] and I didn't know. She stayed in [street name] and I didn't even know she stayed in there and I was there for eight years. (respondent 14)*

This respondent was very happy about the increase in sociability engendered by having a garden, and again linked it to an improvement in her quality of life. By contrast, some respondents found that their gardens enabled them to exert increased control over social interaction with neighbours, so that they did not have to interact unless they wished to. This was a change which was also welcomed. For others, a decrease in neighbourly interaction was regretted, and the friendliness of their previous tenement housing was viewed with nostalgia:

> *It used to be when you stayed in the closes, if it was sunny you could be sat out the back … a crowd'll sit out in the back together. Whereas if it's sunny and I sit in my garden, [neighbour] will sit out in her garden, [neighbour] sit out in her garden, and right up, [neighbour] will sit out in her garden…Sometimes you do miss it because you*

> *could get a lot of, like… it's gossip. I know it's all gossip, but you knew what everybody was… I miss that bit of it. That's about the only thing I would really miss." (Respondent 5)*

It seemed that very specific features of garden layout influenced such changes in sociability. Where sociability increased, the layout was relatively 'porous', allowing visibility of people moving around outside. Divisions between front and back gardens were not so clearly demarcated, and front gardens were large enough to permit their use for leisure. Where sociability decreased, front and back gardens were entirely separate, front gardens were small and essentially decorative, and back gardens were enclosed by high fences, which hampered visibility.

Three pathways linked acquisition of a private garden to improved well-being; greater privacy and security led to an increase in control; for some, increased visibility promoted sociability, which enhanced social support, and access to outdoor space provided opportunities for restoration.

However, not everyone who moved from a flat to a house was happy about the move. One woman was extremely unhappy in her new home, and felt that the move from tenements to houses had destroyed the previously strong sense of community. Despite the fact that many of her old neighbours had moved into the same street, relations between them were no longer cordial, a change which she attributed to the new style of housing:

> *They're more snooty you know? "Oh, I've got better than you, I've got this, I've got that."…they're competing against each other…they never used to. See, they've all got their own back and front doors now, whereas down there it was up the tenement close. (respondent 9)*

Although the interview was conducted 4 years after she moved to her new house, the respondent reported that she did not feel 'at home'. Her ongoing mental health condition had worsened since moving, although it was not clear whether this was a result of the move. It was difficult to discern why her experience differed so markedly from that of the other participants. Further probing revealed that she was also puzzled as to why she felt this way. One possibility is that the process of settling in is more protracted for some people than for others; although she was extremely attached to her old home, she had not liked it at first either. Although it is difficult to identify why

moving to a house was such a negative experience for this respondent, it serves as a salutary reminder that there is always a complex interplay between individual characteristics and changing environments.

Discussion

The data gathered in this study suggest that very specific aspects of the built environment such as housing design and street layout can impact on mental well-being and quality of life by altering key psychosocial process. Being rehoused into 'traditional' style housing seemed to increase respondents' sense of wellbeing, in ways that some respondents linked explicitly to improvements in mental and sometimes physical health. In particular, features of 'traditional' style housing such as having a private entrance and access to a private garden appeared to promote control, restoration and sociability. Gaining an increased sense of control emerged as particularly salient in mental well-being.

These findings have particular utility in the context of the wider study of which the research was a part. The survey data also showed that respondents who moved from a flat to a house experienced a significant increase in psychosocial benefits derived from the home (albeit conceptualised and operationalised differently; for an outline of the approach taken in the survey, see Kearns, Hiscock et al 2000). Similarly, SF-36 social functioning increased significantly for those who acquired a garden, and loneliness decreased significantly. Surprisingly, given the increase in control reported by the qualitative respondents, there was a lower increase in Mastery scores for those who moved from a flat to a house compared to the rest of the Intervention group. Similarly, on most SF-36 mental health dimensions there was no significant change for those who moved from a flat to a house. Given the hypothesised links between psychosocial processes and mental health, this is somewhat counter-intuitive, although it is possible that such impacts had not yet manifested within the 2 year follow up time of Wave 3 of the survey. Nonetheless, the qualitative data help to illuminate the manner in which this housing intervention impacted on its recipients, and in particular drew attention to the processes whereby moving from a flat to a house impacted on psychosocial benefits, social functioning and loneliness.

However, these findings also highlight the importance of area effects. It is clear that for these respondents much of the improvement in quality of life was associated with escaping from 'closes' which had become extremely stressful. Tenements are one of the predominant styles of housing in Glasgow, and they are not restricted to deprived areas. Many people who live in more affluent areas also live in tenement flats accessed by a close, but experience few of the problems described by the members of this sample. It is clear that is not solely the physical structure of housing which has a bearing on quality of life, but also the wider context in which the housing is situated. Nonetheless, the alteration in housing type and street layout experienced by these respondents appeared to mitigate some of the effects of area deprivation. This was also reflected in the quantitative data in terms of increases in collective efficacy and feelings of safety for those who moved from flats to houses. To some extent this echoes Mitchell et al's recent findings on the apparently protective effects on health of green space in deprived areas (2008).

Research and policy implications – points for discussion

Clearly, these findings are derived from a small sample and as such cannot with confidence be extrapolated to the wider population. However, they do suggest further avenues for future research and also for policy or interventions related to housing. I have listed some possibilities below, and would be grateful for participants' thoughts on these or other possibilities.

- Housing intervention research which explicitly considers the role of dwelling type (i.e. comparing the experiences of a group moved to multi-unit dwellings with that of a group moved to houses);
- Further cross-sectional work on associations between health, well-being etc. and housing type;
- Further research on the effects of green space/outdoor space – does the type of space matter, and in particular, does private outdoor space confer greater benefits than public space?
- If the findings presented here were supported by further research, what would be the implications for planning/housing policy, given that it seems unlikely

that the majority of people can be rehoused in the 'traditional' style of house described here, particularly in built-up urban areas.

- Could aspects of such housing, or of their impacts on the underlying processes, be incorporated into the design of new multi-unit housing or the refurbishment of existing housing?
- In particular, what type of interventions could help to give people a greater sense of control over their environment, provide more opportunities for restoration or promote opportunities for informal social interaction if people wish to so engage?
- Do interventions which promote control, restoration or access to green space have the potential to assist in tackling health inequalities?

Limitations

As a small qualitative study, clearly the findings of this study are not generalisable to the wider population. Although qualitative research clearly does not aim to attain statistical generalisability, 'representational generalisability' is desirable, and can be achieved by recruiting a sample which is representative of the parent population in terms of its diversity (Ritchie and Lewis 2003). In this regard, there are several other features of the sample which may also limit the generalisability of the findings. Firstly, the sample is almost entirely female. While it is not uncommon in social research to find that women are over-represented in samples, this sample is particularly strongly skewed in terms of gender, with 19 women and only 3 men. Secondly, it seems unlikely that the sample reflects the parent population in terms of socio-economic characteristics – none of the respondents were unemployed for example, although 11% of the wider survey sample described themselves as such. Thirdly, there is also potentially an issue of selection bias in a study of this type. Where a qualitative sample is drawn from a wider longitudinal survey sample, it is possible that those who agree to take part in a further round of research may have a predisposition towards positive affect. Indeed, a number of respondents commented on the importance of doing one's 'civic duty' by participating in research of this type. Given that a number of the key findings accord with the findings of the survey however, it seems that we can place a fairly high degree of confidence in the findings.

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