The psychosocial pathway to mental well-being at the local level: investigating the effects of perceived relative position in a deprived area context

Ade Kearns,1 Elise Whitley,1 Lyndal Bond,2 Matt Egan,2 Carol Tannahill3

ABSTRACT

Background The study investigated whether perceived relative position was associated with mental well-being for people living in deprived areas, as a contribution to debates about income inequality, relative deprivation and health.

Methods A survey of 4615 residents of deprived areas of Glasgow measured mental well-being using the WEMWBS scale. Perceived relative position was assessed locally and across wider society in relation to housing, neighbourhood and standard of living. Personal and dwelling characteristics were controlled for.

Results Mental well-being was found to be positively associated with: perceived relative quality (RR 4.1, 95% CI 2.4 to 6.8) and status (RR 7.1, 95% CI 4.5 to 11.1) of the home; perceived internal reputation of the neighbourhood (RR 4.9, 95% CI 2.9 to 8.2), though not external reputation; and perceived relative standard of living (RR 5.2, 95% CI 3.2 to 8.4). Furthermore, respondents who thought they lived in an area where some people had higher incomes than others also reported higher mental well-being (RR 4.5, 95% CI 2.2 to 9.1), controlling for the effects of their own income.

Conclusion Studies of inequality and health could give more consideration to the importance of the residential domain of housing and neighbourhood to mental well-being outcomes, via the psychosocial pathway. The local spatial scale may be more important to issues of relative deprivation than previously thought, as people make local as well as broader comparisons. The ability to make upward comparisons of income within deprived areas may be beneficial to residents rather than detrimental, possibly as an indicator of area progress and ‘normality’.

INTRODUCTION

Pathways from inequality to health and well-being

Poor health is more common in societies with greater income inequality.1 In a review of 155 studies conducted over the past 25 years throughout the world, Wilkinson and Pickett2 reported that 70% of analyses were ‘wholly supportive’ of an association between greater income inequality and worse population health. In the recent strategic review of health inequalities in the UK,3 it was reported that the relationship between income and health ‘is a graded one (and) consistent with the fact that a person’s relative position on the social hierarchy is important for health’; that is, there was an inequality issue, not simply a low-income problem. However, an earlier review of multilevel studies concluded that research had yet to answer the question ‘for whom is inequality most harmful, and why?’4

Several mechanisms have been proposed to explain the link between inequality and health,5 6 divided into material pathways, social pathways and psychosocial pathways. The material pathway posits that in situations of greater inequality, there is pressure from the rich to reduce public spending on services from which the poor benefit the most, together with low political participation from the poor enabling policies to be introduced that are detrimental to them. This is applied to welfare support, education and human capital services and to investment in other local services and infrastructure in deprived communities. This latter ‘context of community infrastructure’ has been called the neo-material pathway from income inequality to health.7

The social pathway entails the erosion of social capital in circumstances of inequality such that there is less reciprocity, social support and social contact between people, all of which are considered protective of health. Another dimension to the social pathway is that there may be mistrust, hostility and antagonistic relations between people.8 Lynch et al9 have argued that social capital has to be considered in terms of both horizontal and vertical relations since the latter influence how knowledge, resources and power can be deployed to shape civil society and also, in our view, to improve material conditions.

The psychosocial pathway, in which we are most interested here, has at least two dimensions. The first is where people of low-social status in a hierarchical society suffer dominance, subordination and subservience, causing them to feel stress and a low sense of control.3 The second dimension, less often researched in relation to health, is that of ‘invidious social comparisons’ and ‘social evaluation anxieties’.5 6 Runciman’s10 account of relative deprivation suggests that there can be a psychological effect of discontent resulting from comparisons people make with others who possess things that they do not and that they desire and believe to be attainable for themselves (sometimes it is also said that people feel entitled to them).

Understanding and investigating pathways at the local level

In their review of income inequality and health studies, Wilkinson and Pickett2 found that studies conducted at smaller spatial scales (below regional level) were the least likely to report an association between income inequality and health. They argued that this was because the measurement of income inequalities at smaller scales cannot...
adequately reflect the extent of social class differentiation in society at large. This may be true, although national- and state-level income inequalities seem more relevant to the structural/ material and low-social status psychosocial pathways to health than to the relative deprivation psychosocial pathway. It is also worth noting that only one of the 155 studies reviewed by Wilkinson and Pickett was conducted at the subnational scale in the UK, and that at the regional rather than local level.

As Subramanian and Kawachi observe, much research has focused on ‘the contextual effects of “aggregate” income inequality’ rather than on the relative positioning effects or processes operating underneath this. Yet, it is important in research on psychosocial pathways to distinguish between pressures placed upon people by those above them in the hierarchy (top-down processes) and pressures people place upon themselves through the comparisons they make with others or through the anticipated stigma or disrespect they anticipate from others given their relative social position (bottom-up processes).

Kawachi and Kennedy argued that the variety of pathways from income inequality to health justified analysis at different scales, with the local scale pertinent for social and psychosocial pathways, to which we should add the neo-material (services) pathway. In fact, psychosocial relative deprivation can be conceptualised as operating at both the wider societal level (through comparisons made via media representations of others) and at a more local level (through direct experience and observation of others). However, Runciman’s original conceptualisation was that people tend to make narrow rather than wider comparisons, that is, with people who are socially and spatially close to them. Recent UK qualitative research reported that people tend to make comparisons on the basis of consumption and material lifestyle rather than on occupations or income levels, a process highly relevant to the local spatial scale. By local spatial scale, we mean geographic areas within which people function on a daily basis and through which they gather such observations and experiences. For the purposes of this paper, we interpret the local scale as people’s neighbourhood and city.

Once we focus on the local scale, we also realise the importance of the ‘fundamental question’ Subramanian and Kawachi posed, namely ‘inequality of what?’, suggesting we need to consider the distribution of other elements of wealth and also social and cultural assets. In this regard, we can consider the local scale having neo-material importance as well as providing a modifying context for the effects of low social status, as argued by Lynch in relation to wider society.

If we accept the possibility, as Pickett and Wilkinson do, that theories of ‘afluenza’ and ‘status anxiety’ may apply to advanced societies and that there is a high value placed on ‘acquiring money and possessions (and) looking good in the eyes of others’, then there is a strong case for including the local residential realm within studies of inequality and health on the grounds that our homes and neighbourhoods are key positional goods in meritocratic societies, from which we derive the status, self-respect and respect from others that enables us ‘to feel tolerable to ourselves’. Studies of income inequality and health have tended to focus mostly on two outcomes, self-rated health and mortality. Only two of the 15 multilevel studies reviewed by Subramanian and Kawachi included indicators of mental health: one supportive of an income inequality effect and the other not. These were both conducted in the USA, as was a more recent third study that failed to find a relationship between income inequality and depression at the state level. More recently, a ‘strong relationship’ between income inequality and adult mental illness rates has been reported across 12 rich countries, particularly for anxiety disorders, impulse control disorders and severe mental illness. The relative paucity of studies examining income inequalities and mental health is a weakness in the evidence base, given the theoretical prominence of the psychosocial pathway.

In the light of past research, and the observations made on the evidence base as reported above, our aim was to investigate whether perceived relative position was associated with mental well-being for people living in deprived areas. In doing so, we took an alternative perspective on three key issues. First, rather than examining income inequality per se, we consider the psychosocial pathway and the potential effects of social comparisons that are underpinned by inequality. In terms of comparisons, we focus both on income and on residential attributes of the home and neighbourhood. Second, rather than conduct analysis at the aggregate or societal scale alone, we pay particular attention to people’s perceptions of their position within their neighbourhood and city; we consider local comparisons to be the more likely and more important for people of limited circumstances living in deprived areas. Third, our outcome of interest is mental well-being rather than self-rated health or mental (ill)health; mental well-being being more sensitive, we would argue to psychosocial influences. Positive mental health (which we measure here—see below) has also been recognised by the WHO as the foundation for the effective functioning of individuals and communities.

METHODS

Data and study population

Our data come from a survey of 15 communities in Glasgow conducted in 2008. All the study communities are relatively deprived, falling within the 15% most deprived in Scotland (the target group for regeneration policy). However, within this, there is variation: in 2006, the level of income deprivation across the communities (based on the number of adults and children in receipt of income-related benefits) ranged from 25% to 54%, and the level of social rented housing varies from 43% to 95%. The study areas reflect the range of social housing areas within the city, including inner city mass housing estates; inner suburbs of low-rise flats and cottage-style properties and large peripheral estates.

A total of 4657 adult householders were interviewed in their homes across the 15 communities in the period June to September 2008. Participant addresses were randomly selected from the Royal Mail’s Postal Address File of all dwellings in use in the study areas. Letters were sent to all selected addresses a week before the survey, with a contact phone number for those who wished to ‘opt-out’ of having anyone visit them. Written informed consent was obtained from all those who were visited and agreed to take part. The response rate was 47.5%, overall, ranging from 34.2% to 53.0% per area. Four-fifths of the respondents lived in social rented housing, with an under-representation of owner occupiers, males and adults aged under 25 years in the achieved sample. Further characteristics of the sample are given in table 1. The survey investigated people’s views of their home and neighbourhood, their sense of community and their physical and mental health.

Measures

Most studies of neighbourhoods and mental health have used measures of poor mental health or mental illness (depression,
anxiety and stress being the most common23–27 or used single items asking about happiness or vitality.28 Given our interest in the psychosocial pathway from perceived relative position to mental health, we have focused on mental well-being as the outcome of interest. Mental well-being was assessed using the Warwick-Edinburgh Mental Well-being Scale (WEMWBS),29–31 which has good psychometric properties.32 It has 14 items covering positive affect (feelings of optimism, cheerfulness, relaxation), positive functioning (energy, clear thinking, self-acceptance, personal development, competence and authority) and relationships with others. Respondents are asked to what extent they have been feeling that way over the past 2 weeks. Responses are summed to a scale from 14 to 70, with higher scores indicating higher well-being. In our sample, the mean (SD) score was 50.9 (9.9).

Perceived relative position was investigated in respect of three domains—housing, neighbourhood and income/quality of life—using two questions each, as follows:

| Housing | 1. ‘How much do you agree or disagree with the following statement: ‘Most people would like a home like mine?’ (strongly agree → strongly disagree, 5-point scale). |
| Neighbourhood | 2. ‘Which of the following statements best describes how your house/flat compares with others around here?’ (better than many others → worse than many others, 5-point scale). |
| Income/Quality of Life | 3. ‘People who live in this neighbourhood think highly of it’ |
| | 4. ‘Many people in Glasgow think this neighbourhood has a bad reputation’ (strongly agree → strongly disagree, 5-point scale). |

Table 1 Percentage of respondents reporting positive perceived relative position by personal characteristics

<table>
<thead>
<tr>
<th>Gender</th>
<th>Sample breakdown</th>
<th>Home desired by others</th>
<th>House/flat better than others</th>
<th>Local people think highly of neighbourhood</th>
<th>Neighbourhood does not have a bad reputation</th>
<th>Some local people have much higher incomes</th>
<th>Quality of life high compared with others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1967 (42.6)</td>
<td>60.2</td>
<td>20.7</td>
<td>49.4</td>
<td>23.7</td>
<td>11.0</td>
<td>26.4</td>
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<tr>
<td>Female</td>
<td>2648 (57.4)</td>
<td>60.3</td>
<td>23.2</td>
<td>50.9</td>
<td>23.2</td>
<td>10.1</td>
<td>27.8</td>
</tr>
<tr>
<td>Age, years</td>
<td></td>
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<tr>
<td>16–39</td>
<td>1687 (36.6)</td>
<td>50.9</td>
<td>20.2</td>
<td>44.2</td>
<td>18.1</td>
<td>13.0</td>
<td>20.8</td>
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<tr>
<td>40–64</td>
<td>1885 (40.9)</td>
<td>61.7</td>
<td>22.4</td>
<td>51.1</td>
<td>22.9</td>
<td>9.7</td>
<td>26.3</td>
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<tr>
<td>65+</td>
<td>1043 (22.6)</td>
<td>72.9</td>
<td>24.8</td>
<td>61.7</td>
<td>32.8</td>
<td>7.9</td>
<td>39.0</td>
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<td>Citizenship</td>
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<td>British</td>
<td>3597 (77.9)</td>
<td>64.7</td>
<td>23.6</td>
<td>55.0</td>
<td>24.6</td>
<td>10.9</td>
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<td>Non-British</td>
<td>1016 (22.1)</td>
<td>44.5</td>
<td>16.3</td>
<td>33.8</td>
<td>19.3</td>
<td>8.6</td>
<td>17.3</td>
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<td>Household structure</td>
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<tr>
<td>Adult-only household</td>
<td>2173 (47.1)</td>
<td>60.8</td>
<td>22.5</td>
<td>48.8</td>
<td>22.0</td>
<td>11.0</td>
<td>25.7</td>
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<td>Single-parent family</td>
<td>799 (17.3)</td>
<td>50.7</td>
<td>19.9</td>
<td>43.7</td>
<td>17.5</td>
<td>10.3</td>
<td>18.2</td>
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<td>Two-parent family</td>
<td>655 (14.2)</td>
<td>53.2</td>
<td>20.6</td>
<td>47.1</td>
<td>21.5</td>
<td>12.7</td>
<td>25.5</td>
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<tr>
<td>Older person(s) household</td>
<td>988 (21.4)</td>
<td>71.5</td>
<td>24.1</td>
<td>61.3</td>
<td>32.4</td>
<td>7.9</td>
<td>38.8</td>
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<td>Educational qualification</td>
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<tr>
<td>No qualifications</td>
<td>2659 (57.6)</td>
<td>61.4</td>
<td>21.5</td>
<td>51.9</td>
<td>25.5</td>
<td>10.6</td>
<td>28.5</td>
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<td>School level</td>
<td>876 (19.0)</td>
<td>58.6</td>
<td>20.7</td>
<td>48.8</td>
<td>20.1</td>
<td>11.7</td>
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<tr>
<td>Post-school</td>
<td>1076 (23.4)</td>
<td>59.0</td>
<td>25.0</td>
<td>47.5</td>
<td>21.0</td>
<td>9.4</td>
<td>26.2</td>
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<td>Self-rated health</td>
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<tr>
<td>Fair/poor</td>
<td>1425 (30.9)</td>
<td>59.9</td>
<td>19.1</td>
<td>50.4</td>
<td>24.0</td>
<td>7.5</td>
<td>23.9</td>
</tr>
<tr>
<td>Good, v good, excellent</td>
<td>3190 (69.1)</td>
<td>60.5</td>
<td>23.5</td>
<td>50.2</td>
<td>23.1</td>
<td>11.7</td>
<td>28.7</td>
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<tr>
<td>Illness</td>
<td>3219 (68.8)</td>
<td>59.4</td>
<td>23.5</td>
<td>49.0</td>
<td>22.4</td>
<td>11.7</td>
<td>26.5</td>
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<tr>
<td>No long-term illness</td>
<td>1396 (30.3)</td>
<td>62.3</td>
<td>19.1</td>
<td>53.4</td>
<td>25.6</td>
<td>7.6</td>
<td>28.8</td>
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<td>Long-standing illness</td>
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<tr>
<td>Employment</td>
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<tr>
<td>Not working</td>
<td>1928 (41.8)</td>
<td>51.1</td>
<td>18.4</td>
<td>42.8</td>
<td>20.0</td>
<td>9.6</td>
<td>20.8</td>
</tr>
<tr>
<td>Working</td>
<td>1420 (30.8)</td>
<td>61.9</td>
<td>24.4</td>
<td>50.7</td>
<td>20.5</td>
<td>12.8</td>
<td>26.6</td>
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<tr>
<td>Retired</td>
<td>1267 (27.5)</td>
<td>72.3</td>
<td>25.1</td>
<td>61.4</td>
<td>31.8</td>
<td>9.0</td>
<td>37.5</td>
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<td>Housing tenure</td>
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<tr>
<td>Rented housing</td>
<td>3831 (83.0)</td>
<td>56.6</td>
<td>20.6</td>
<td>46.6</td>
<td>21.7</td>
<td>10.0</td>
<td>24.5</td>
</tr>
<tr>
<td>Owner occupied</td>
<td>784 (17.0)</td>
<td>77.9</td>
<td>29.1</td>
<td>68.4</td>
<td>31.6</td>
<td>12.7</td>
<td>40.1</td>
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<td>Dwelling type</td>
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<td></td>
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<tr>
<td>High-rise flat</td>
<td>2081 (45.1)</td>
<td>48.0</td>
<td>18.1</td>
<td>39.0</td>
<td>22.4</td>
<td>7.9</td>
<td>21.4</td>
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<tr>
<td>Low-rise flat</td>
<td>992 (21.5)</td>
<td>59.7</td>
<td>26.0</td>
<td>49.5</td>
<td>19.7</td>
<td>14.6</td>
<td>25.0</td>
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<tr>
<td>4-in-a-block flat</td>
<td>688 (14.9)</td>
<td>71.0</td>
<td>21.9</td>
<td>61.9</td>
<td>29.1</td>
<td>9.5</td>
<td>33.7</td>
</tr>
<tr>
<td>House</td>
<td>854 (18.5)</td>
<td>82.1</td>
<td>27.1</td>
<td>69.5</td>
<td>25.6</td>
<td>12.0</td>
<td>38.0</td>
</tr>
<tr>
<td>Economic difficulties</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No difficulty with bills</td>
<td>3941 (85.4)</td>
<td>61.2</td>
<td>21.4</td>
<td>51.0</td>
<td>24.1</td>
<td>10.4</td>
<td>28.7</td>
</tr>
<tr>
<td>Difficulty with 1+ bills</td>
<td>674 (14.6)</td>
<td>54.9</td>
<td>26.7</td>
<td>46.3</td>
<td>19.4</td>
<td>11.1</td>
<td>18.4</td>
</tr>
</tbody>
</table>


incomes than others; most people have a very similar level of income; some people have much lower incomes than others; don’t know’

6. ‘Compared to other people, how would you rate your quality of life and standard of living, 1= very low and 10= very high?’

Three of the questions (1, 3 and 4) had been used in a prior survey wave in the same study.33 Of these, the question on the desirability of one’s home was previously used in a study of the psychosocial benefits of the home,34 and the question on bad external reputation is very similar to one used in Dutch research on area reputation.35 The other three questions (2, 5 and 6) were newly developed for the present study and tested in a pilot survey, for example, for respondent comprehension.36

All but the first of the six questions were included in a section of the survey questionnaire about ‘your neighbourhood’, which was defined for the interviewees as ‘the local area within a 5–10 min walk from your home’. Three of the questions (one from each group: 2, 5 and 5) refer specifically to the local area (ie, ‘around here’, ‘this neighbourhood’ and ‘this area’). One question (4) asks people about the relative position of their area within the city as a whole. The remaining two questions (1 and 6), relating to the desirability of one’s home and one’s relative standard of living, are non-specific about the spatial scale concerned.

Analyses
In examining the relationship between perceived relative position and mental well-being, we controlled for the following personal characteristics: gender, age (16–39, 40–64, 65+), citizenship/ethnicity (British vs non-British), household structure (adult, single-parent family, two-parent family, older person), educational qualifications (none, school qualifications, post-school), self-rated health from the SF12 module (fair/poor, good or better), long-standing illness (which includes mental illness as well as physical), employment (not working, working, retired) and economic hardship (whether or not experienced difficulties meeting the costs of one or more of rent/mortgage, home repairs, fuel bills, food, council tax). We also controlled for two housing variables likely to affect perceptions of one’s home: housing tenure (renter, owner) and dwelling type (high-rise flat, low-rise flat, 4-in-a-block flat, house).

Appropriate regression models were used to explore associations between relative position and well-being. The RR of respondents reporting high or average versus low mental well-being according to their responses to the relative positioning questions were calculated using multinomial (polytomous) logistic regression, with high and low mental well-being defined as being more than 0.5 SD above or below the Scottish mean WEMWBS score (national mean 51.05, SD 8.54),37 and other scores defined as ‘average’ well-being; this divided the sample approximately into thirds. Least squares regression was used to explore the absolute change in WEMWBS score associated with each response category of the relative positioning variables. Analyses were carried out based on the 4615 respondents for whom complete information on all variables was available. 95% CIs are based on robust standard errors which take account of the non-independence of respondents from the same area.

RESULTS
A description of the sample according to the personal characteristics of respondents is given in table 1, along with the percentage giving positive responses to the six relative position questions by the same covariates. Summarising, we can see that more positive views of one’s relative position are held by older people, owner occupiers and those living in houses; more negative views of relative position are held by non-British respondents, single parents, those not working, those living in high-rise flats and those with difficulties paying bills. There was little difference in responses by gender, health status and education levels.

Table 2 shows the distribution of mental well-being according to responses to the relative positioning questions. Mental well-being scores were generally higher among respondents who had a positive view of their relative position; the exception to this was external area reputation, where mental well-being scores show no clear patterning. High levels of mental well-being were most prevalent among those who thought they lived in an area where some people had much higher incomes than others (58.9%) and among those who strongly thought they lived in a home that most people would like (56.0%). We checked to see whether the responses to the question about local incomes merely reflected the respondent’s own economic position. The patterns in responses were not clear: while more of those with financial difficulties (25.7%) than without (17.5%) said ‘some people have much lower incomes’, the proportions of the two groups who said ‘some people have much higher incomes’ were very similar (11.1% and 10.4%, respectively, as shown in table 1).

Table 3 shows the RR for average and high mental well-being (compared with low), first adjusted for all confounders (‘Model 1’) and then further adjusted for all other relative positioning variables (‘Model 2’); attenuation due to the latter adjustment was very small. There were strong associations between well-being and all relative positioning variables apart from good external reputation.

Table 2 Mental well-being by perceived relative position

<table>
<thead>
<tr>
<th>Mental well-being (row %)</th>
<th>Low</th>
<th>Average</th>
<th>High</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most people would like a home like mine</td>
<td>Disagree</td>
<td>46.9</td>
<td>29.4</td>
<td>23.7</td>
</tr>
<tr>
<td></td>
<td>Neither</td>
<td>31.2</td>
<td>36.4</td>
<td>32.4</td>
</tr>
<tr>
<td></td>
<td>Agree</td>
<td>25.8</td>
<td>38.5</td>
<td>35.7</td>
</tr>
<tr>
<td></td>
<td>Strongly agree</td>
<td>17.2</td>
<td>26.8</td>
<td>56.0</td>
</tr>
<tr>
<td>House compared with others round here</td>
<td>Worse</td>
<td>40.9</td>
<td>34.1</td>
<td>25.0</td>
</tr>
<tr>
<td></td>
<td>Same</td>
<td>29.4</td>
<td>36.2</td>
<td>34.4</td>
</tr>
<tr>
<td></td>
<td>Better</td>
<td>17.2</td>
<td>31.7</td>
<td>51.2</td>
</tr>
<tr>
<td>People in the neighbourhood think highly of it</td>
<td>Disagree</td>
<td>42.5</td>
<td>32.2</td>
<td>25.3</td>
</tr>
<tr>
<td></td>
<td>Neither</td>
<td>32.5</td>
<td>38.1</td>
<td>29.4</td>
</tr>
<tr>
<td></td>
<td>Agree</td>
<td>23.7</td>
<td>36.3</td>
<td>40.0</td>
</tr>
<tr>
<td></td>
<td>Strongly agree</td>
<td>18.8</td>
<td>31.3</td>
<td>49.9</td>
</tr>
<tr>
<td>Many people in Glasgow think the neighbourhood has a bad reputation</td>
<td>Disagree</td>
<td>30.5</td>
<td>31.0</td>
<td>38.5</td>
</tr>
<tr>
<td></td>
<td>Neither</td>
<td>27.2</td>
<td>36.9</td>
<td>36.0</td>
</tr>
<tr>
<td></td>
<td>Agree</td>
<td>28.5</td>
<td>41.3</td>
<td>30.3</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>31.3</td>
<td>32.0</td>
<td>36.7</td>
</tr>
<tr>
<td>Income levels in the area</td>
<td>Same much lower</td>
<td>30.6</td>
<td>40.6</td>
<td>28.8</td>
</tr>
<tr>
<td></td>
<td>Most very similar</td>
<td>27.8</td>
<td>30.4</td>
<td>41.8</td>
</tr>
<tr>
<td></td>
<td>Some much higher</td>
<td>13.2</td>
<td>27.9</td>
<td>59.0</td>
</tr>
<tr>
<td>Quality of life and standard of living compared with other people</td>
<td>Low (1–4)</td>
<td>48.6</td>
<td>27.7</td>
<td>23.6</td>
</tr>
<tr>
<td></td>
<td>Similar (5–7)</td>
<td>29.7</td>
<td>36.1</td>
<td>34.3</td>
</tr>
<tr>
<td></td>
<td>High (8–10)</td>
<td>17.2</td>
<td>35.0</td>
<td>47.9</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>29.2</td>
<td>34.8</td>
<td>36.1</td>
</tr>
</tbody>
</table>
from external area reputation, where the pattern was not clear—comparing the RR for average with that for high mental well-being and looking at the CIs. For all other relative position variables—covering home, neighbourhood and income—RRs for high mental well-being were four or more times higher for those with the most positive view of their relative position compared with those with the most negative view. The biggest effect was for the perceived desirability of one’s home, whereby respondents who thought they lived in a home that most people would like were seven times (95% CI 4.5 to 11.1) more likely to report high mental well-being than those who thought they lived in a home that other people would like compared with others locally was associated with much higher mental well-being (2.14 (1.52 to 3.02) for average or high mental well-being by perceived relative position

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Average versus low RR (95% CI)</th>
<th>High versus low RR (95% CI)</th>
<th>p Value</th>
<th>Model 2</th>
<th>Average versus low RR (95% CI)</th>
<th>High versus low RR (95% CI)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most people would like a home like mine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Neither</td>
<td>1.83 (1.38 to 2.42)</td>
<td>1.76 (1.29 to 2.39)</td>
<td>1.63 (1.23 to 2.18)</td>
<td>1.67 (1.14 to 2.44)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>2.39 (1.88 to 3.03)</td>
<td>2.75 (2.00 to 3.78)</td>
<td>2.06 (1.58 to 2.68)</td>
<td>2.86 (1.83 to 3.88)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly agree</td>
<td>2.49 (1.69 to 3.89)</td>
<td>6.47 (4.17 to 10.05)</td>
<td>&lt;0.001</td>
<td>2.14 (1.52 to 3.02)</td>
<td>7.09 (4.51 to 11.12)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>House compared with others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worse</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td>1.00</td>
<td>1.00</td>
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<tr>
<td>Same</td>
<td>1.49 (1.11 to 1.97)</td>
<td>1.91 (1.30 to 2.82)</td>
<td>1.23 (0.91 to 1.66)</td>
<td>1.55 (1.05 to 2.30)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Better</td>
<td>2.22 (1.56 to 3.15)</td>
<td>4.88 (3.05 to 7.82)</td>
<td>&lt;0.001</td>
<td>1.81 (1.24 to 2.64)</td>
<td>4.06 (2.43 to 6.81)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>People in neighbourhood think highly of it</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Neither</td>
<td>1.55 (1.24 to 1.94)</td>
<td>1.52 (1.07 to 2.17)</td>
<td>1.43 (1.12 to 1.83)</td>
<td>1.45 (0.92 to 2.31)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>2.02 (1.60 to 2.55)</td>
<td>2.84 (2.02 to 3.99)</td>
<td>1.84 (1.41 to 2.40)</td>
<td>2.88 (1.88 to 4.40)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly agree</td>
<td>2.21 (1.49 to 3.26)</td>
<td>4.47 (2.74 to 7.29)</td>
<td>&lt;0.001</td>
<td>2.03 (1.44 to 2.87)</td>
<td>4.92 (2.88 to 8.42)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>People in Glasgow think this area has a bad reputation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly agree</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Agree</td>
<td>1.33 (1.04 to 1.71)</td>
<td>1.05 (0.79 to 1.38)</td>
<td>1.28 (0.99 to 1.64)</td>
<td>1.00 (0.74 to 1.36)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neither</td>
<td>1.46 (1.06 to 1.93)</td>
<td>0.84 (0.66 to 1.08)</td>
<td>1.33 (1.00 to 1.77)</td>
<td>0.79 (0.58 to 1.06)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>1.00 (0.69 to 1.46)</td>
<td>0.93 (0.65 to 1.33)</td>
<td>0.002</td>
<td>0.92 (0.62 to 1.36)</td>
<td>0.88 (0.60 to 1.29)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Income levels in area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some less</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Most same</td>
<td>0.83 (0.61 to 1.12)</td>
<td>1.60 (1.18 to 2.18)</td>
<td>0.88 (0.66 to 1.19)</td>
<td>1.72 (1.21 to 2.45)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some more</td>
<td>1.60 (0.90 to 2.84)</td>
<td>4.75 (2.65 to 8.51)</td>
<td>&lt;0.001</td>
<td>1.59 (0.95 to 2.66)</td>
<td>4.48 (2.22 to 9.07)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Comparative quality of life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Similar</td>
<td>2.13 (1.51 to 3.01)</td>
<td>2.38 (1.61 to 3.50)</td>
<td>1.82 (1.23 to 2.69)</td>
<td>1.88 (1.23 to 2.88)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>3.57 (2.37 to 5.39)</td>
<td>5.74 (3.50 to 9.39)</td>
<td>&lt;0.001</td>
<td>3.22 (2.11 to 4.92)</td>
<td>5.15 (3.15 to 8.43)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
</tbody>
</table>

All models adjust for gender, age, citizenship, household structure, education, general health, long-standing illness, employment, economic hardship, housing tenure and dwelling type. Model 2 also adjusts for responses to the other relative positioning variables.

**DISCUSSION**

Our findings show that for people living in deprived areas, perceptions of relative position are important for mental well-being. However, it is not just income that matters, nor simply one’s own circumstances, but also the relative position of one’s home and neighbourhood. Indeed, further analysis showed that the associations between socio-economic status variables and mental well-being were largely unchanged by the inclusion of the relative positioning variables (eg, the RR for being in employment changed from 5.4 to 4.9), indicating that the two sets of variables are operating independently on mental well-being. Furthermore, our findings suggest that different spatial scales may be important for different aspects of relative position, although the local spatial scale of the neighbourhood received particular attention here.

Our finding that viewing one’s home as better than those around it is associated with much higher mental well-being echoes an earlier report that the perceived relative value of one’s home compared with others in the same street is important for levels of self-esteem and mastery.38 We have found that, for people in deprived areas, the importance of the relative position of one’s home also reflects its subjective quality (being ‘better’) and that the effect operates locally but also extends to the perceived desirability of the home in the wider urban area (or society at large). Compared with the effects reported earlier on self-esteem and mastery,38 the relative quality of the home...
appears to have an even stronger association with a broad measure of mental well-being (encompassing feelings, mental functioning and relationships). It is important to note that these effects were found after controlling for dwelling type, since other research has shown negative mental health effects of living in high-rise flats, for which a large proportion of our respondents did. Our findings on the perceived desirability of the home more generally also suggest that people may experience lower mental well-being if they are aware that they live in dwelling types that are considered unpopular or of low status by the general public, due, for example, to design or construction methods. We would suggest that the more social housing is considered ‘mainstream’ in type, the better.

We also found neighbourhood reputations to be associated with residents’ mental well-being, but not in the ways expected. For some time, it has been held that there is a ‘considerable emotional impact’ from living in an area subject to external stigma. However, past quantitative studies have tended to focus on the effects of a negative reputation upon neighbourhood satisfaction, area housing demand and mobility intentions, with the negative psychological impacts taken for granted or inferred. However, we found that residents’ perceptions of the external reputation of their areas had little systematic association with their mental well-being, although their perception of what their co-residents thought of their area was strongly positively associated with mental well-being. Although it is possible that reputation questions worded differently may produce alternative results, we believe that our research adds important indicative evidence to an emerging finding in qualitative research with people in deprived areas that their self-esteem is mostly affected by their own self-assessments and self-criticism and that the effects of stigma and neighbourhood are ‘more limited than previous research suggested’, that is, how your neighbours think and talk about your area (internal reputation) matters more than how those elsewhere do (external reputation).

In relation to relative income position, we found different effects at different spatial scales. In a broad comparison with standards of living in general, we found as expected that those who considered they had a relatively high quality of life and standard of living also had higher mental well-being, with much lower mental well-being among those who thought they had a relatively low standard of living. On the other hand, when considering their own neighbourhood, people who thought they lived in an area where there were some people with much higher incomes than others also reported higher mental well-being (after controlling for their own income level).

This is an important finding as it suggests that the notion that positive affect comes from downward social comparisons and negative affect from upward comparisons does not necessarily apply in the same way to people in deprived areas. This may be because having people on higher incomes in one’s residential midt is a sign of area progress and part of the desire to live in ‘normal’ neighbourhoods rather than in deprived and stigmatised areas, whereas being aware of people on much lower incomes than others locally may be read as a sign of area decline or low area status. It is interesting to note the similarity with a previous UK study that reported that for those on higher incomes, mental disorders were higher among those living in regions with more income inequality (‘high-Gini’ regions), while the reverse was true for those on low incomes, that is, mental disorders among the low-income group were lower in the ‘high-Gini’ regions. No real explanation was offered for that finding, yet our research offers a possible avenue of enquiry, namely that those in low social positions may gain psychologically from living in areas where people in relatively better circumstances also reside.

The finding on local incomes may also lend support to the policy of developing mixed-tenure communities within deprived areas, if the mixed tenure mechanism can deliver a degree of income and social mix and through that, as has been reported for mature mixed-tenure communities, support the development of ‘ordinary’ and ‘civilised’ communities that contribute to a positive internal reputation, which we found to be important for mental well-being.

Limitations and future directions

There are two main limitations of our study. First, the evidence is cross-sectional and so we cannot conclude that perceived relative position impacts upon mental well-being, and not the other way round. Though both routes are plausible, we consider the former pathway to be likely to be the stronger for several reasons. The growth of inequality and of the importance of status and respect in societies make it more likely that the psychosocial pathway from inequality to health will function and influence how people feel. Moreover, the home and neighbourhood are major signifiers of material lifestyles upon which
social comparisons are made, and recent longitudinal research has shown that house moves to newer and better dwellings do result in higher psychosocial benefits and improved mental health.

Second, there is undoubtedly scope to expand and improve upon the measures of perceived relative position. Although it is not certain how broadly (across spatial areas and social groups) people in our study made their comparisons, all but one of the questions was in a section of the survey about the respondent’s neighbourhood. In response to the two questions that made no mention of the spatial scale or area concerned, we believe that our respondents are likely to have made their relative assessments of their dwelling and standard of living in comparison to others from their social group and place of residence. This is because of their low residential and transport mobility (car ownership is relatively low in Glasgow and in deprived areas in particular) and also in accord with more general arguments that people make ‘narrow social comparisons’ on the basis of material lifestyle (especially possessions and place of residence) and with those ‘geographically and socially close to them’.

Runciman’s concept of relative deprivation extends beyond the feeling that one does not have something (relative disadvantage) to include feelings of desire, entitlement and injustice; our questions did not cover these other aspects (though neither do many other studies), and so we refer to ‘perceived relative position’ rather than ‘relative deprivation’. Future studies could investigate both people’s perceived relative position and also how they interpret that. This would take research in a different direction from some existing studies where ‘social comparison’ consists of the measurement of incomes in relative terms, without any subject response to that circumstance; in such cases, the effect of ‘relative deprivation is attenuated by the impact of low absolute income levels.

Our survey achieved a good response rate for such work in deprived areas, but within this, there was an over-representation of women and those aged over 55 years, when compared with recent population estimates for the communities. While the results are, we believe, generalisable to other deprived western populations, they may not be generalisable to more affluent population groups as people who have lived a long time in (stigmatised) social housing may have relatively negative views of their relative position and/or atypical views of what constitutes a relatively advantageous position.

Lastly, we sought to investigate the role that social comparisons play at the local scale of the neighbourhood, and argued that where we asked questions that were non-specific about scale, respondents were likely to make local comparisons (on homes and standards of living). We applied this local focus because we felt that past research on inequality, psychosocial pathways and health had largely ignored spatial scales below the region. However, this is just a start, and we recognise that future research could proceed to investigate more specifically the importance and influence of social comparisons made at different spatial scales (neighbourhood, city, region, nation, international) by people with different amounts of resources, different degrees of mobility and different levels of awareness of inequalities.

CONCLUSIONS
This study contributes to the debate about inequality, relative deprivation and mental health in several respects. First, it indicates that the effects of perceived relative position are important for mental well-being, so that research on inequality should not be limited to studies of ill-health or mental disorders. We have also shown that the local spatial scale of the neighbourhood can be an important arena within which perceived relative position operates, so that subnational scales should not be downplayed due to mixed or inconclusive evidence about the relationship between income inequality and ill-health at the regional or county levels. Third, in response to Stewart’s argument that the assessment of relative deprivation should extend beyond income to other goods, the study shows that the residential domain of housing is an important signifier of relative status and personal progress that matters for well-being.

However, we also recognise that we have studied deprived communities, and as such, it is difficult to disentangle the material and psychosocial pathways. Rather than seeing them as competing explanations and alternative routes forward for tackling the effects of inequality, we would argue that they cannot be separated: improving the perceived relative status of people’s homes and neighbourhoods for social sector tenants in deprived areas requires both improved residential conditions and broader attempts to remove the stigma of social housing, tower blocks and ‘estates’. Furthermore, and echoing Lynch, just as social capital effects should not be restricted to the community level, we would contend that while the psychosocial pathway of relative position (especially in residential terms) operates at...
a local level, it derives much of its power from the wider societal context and needs to be tackled at that scale too.

Lastly, the study offers pointers for public policy. For example, the Scottish government has an objective of increasing the average score of adults on the WEMWBS scale by 0.4 points, on an annual basis. Our findings indicate that a possible means to achieve this may be through enhancing the quality and relative status of housing in deprived areas; they also lend some support to the Scottish government’s new policy to increase quality and choice in social housing for those in less advantaged circumstances, although further research will be needed to evaluate the impacts of those policies.

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Contributors AK conceived the study, led the study design, contributed to the analytical approach and led the writing of the article. EW contributed to the analytical approach, conducted the analysis and contributed to writing the article. LB contributed to the analytical approach and to the writing of the article. ME and CT contributed to the study design and to the writing of the article.

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Competing interests None.

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Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

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