RESEARCH REPORT

The psychosocial versus material hypothesis to explain observed inequality in disability among older adults: data from the West of Scotland Twenty-07 Study

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Objectives: The possible mechanisms for explaining health inequality are subject to debate. This study considers the roles of psychosocial and material mechanisms in observed inequalities in disability among older people.

Design: Cross-sectional analysis of cohort study.

Participants: 723 respondents aged 63 years from the West of Scotland Twenty-07 Study.

Main outcome measure: The Office of Population Census and Surveys Multidimensional Disability Severity Score. Respondents were dichotomised to the highest scoring tertile, and compared with the lowest and mid-tertiles combined.

Explanatory measures: Socioeconomic position across adulthood was measured in three ways. Respondents reported perceptions of their own financial position (perceived financial hardship) across four decades of adult life. Data on possession of several indicators of material wealth (eg, ownership of television and washing machine; material conditions) during the same periods were also ascertained. Standard occupational classification was also recorded, based on longest held occupation. The relationship between the measures of socioeconomic position and disability was examined using logistic regression, adjusting for sex, morbidity and lifestyle factors.

Results: Perceived financial hardship and material conditions in earlier decades of life were found to be associated with reported disability. However, in the fully adjusted model, there was stronger evidence for material conditions as a predictor of disability: across four decades they remained an independent risk factor for disability after adjustment for sex, morbidity, lifestyle factors and perceived financial hardship. Those in the most deprived material conditions group had 2½ times the odds of reporting severe disability than those in the reference group. After adjustment, evidence for an association between perceived financial hardship and reported disability was not convincing.

Conclusion: The data provide evidence to support the “material” explanation for observed inequalities in reported disability among older people.

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Onset of disability in older age is a complex phenomenon, undoubtedly of multifactorial aetiology and heavily influenced by the presence of chronic diseases, in particular, musculoskeletal conditions and cardiovascular disease.¹ The frequency of pain from these conditions² and the way comorbidities interact³ also play important parts, yet still do not explain much of the observed variation in disability rates.⁴ Although many studies have considered the relationship between socioeconomic position and mortality and other chronic illness, less attention has been paid to the relationship with measures of disability; however, there is a growing body of literature on this topic. Despite debates surrounding the best ways in which to measure socioeconomic position among older people,^{5–7} there is empirical evidence of relationships of mobility disability with education⁸ and social class according to longest held occupation⁹; overall disability with social class, educational qualifications and housing tenure¹⁰; and activities of daily living with sustained economic hardship across adulthood.¹¹

One explanation for observed inequalities in health is the “psychosocial hypothesis”, which in short implies that inequalities are due to the direct or indirect effects of stress stemming from being in a socioeconomic hierarchy.¹² An alternative view is that material factors—that is, access to tangible material goods and conditions (including, food, housing, access to amenities, etc)—are associated with

exposures that are damaging and protective to health, which provide the explanation for social inequalities in health.¹³ Although the usefulness of this dichotomy has been questioned,¹⁴ the debate remains crucial in terms of the choice of interventions intended to reduce inequalities in health.¹⁵ Macleod *et al*¹⁶ have recently provided an excellent summary of this debate and have extended the evidence by showing that both subjective and objective measures of socioeconomic position were similarly related to health outcomes, and that adjustment for psychological stress did not influence these associations. Moreover, men in positions of work status advantage (ie, foremen v employees) did not experience lower morbidity or mortality than other men, whereas better health outcomes would be predicted by the psychosocial hypothesis.¹⁶

In this paper, we compare the explanatory power of different measures of socioeconomic position across adulthood in relation to disability. The first, a subjective measure drawing on the psychosocial hypothesis, relies on individual perceptions of financial hardship over four decades. The second, a more objective measure drawing on the material hypothesis, assesses material wealth over the same period.

Abbreviations: OPCS, Office of Population Census and Surveys; SEP, socioeconomic position; SOC, standard occupational class

Figure 1 Participants of the Twenty-07 Study.^{3,4}

METHODS

The data are from the West of Scotland Twenty-07 Study, a longitudinal study that aims to investigate the social patterning of health among three age cohorts, aged around 15, 35 and 55 years when first contacted. Respondents were first interviewed in 1987–8 and were asked to participate in periodic interviews over a 20-year period—that is, until 2007. Respondents were sampled from residents in the Central Clydeside Conurbation, a socially varied but mainly urban area centred on the city of Glasgow. Initial ethical approval for the study was obtained in 1987 from the ethical subcommittee of the West of Scotland Medical Committee. Each subsequent set of contacts has been approved by the ethics committee for non-clinical research involving human subjects, University of Glasgow, Glasgow, UK.

The samples were representative of the populations from which they were drawn, using comparison data from the 1991 census.¹⁷ Figure 1 is a flow chart of the number of participants of the Twenty-07 Study. Further details on the sample and methods are available elsewhere.^{18,19}

This analysis is limited to data from the oldest cohort, which were collected on subsequently contacting the respondents in 1995, when 723 people were reinterviewed when they were approximately 63 years. This wave of data collection included a wide range of measures of disability, socioeconomic indicators, and other measures of health and lifestyle.

Disability

The questionnaire developed by the Office of Population Census and Surveys (OPCS) Surveys of Disability²⁰ was included in an adapted form (the OPCS survey had a prior postal screening instrument, which was not used in Twenty-07); all questions were asked in an interview conducted by nurses. This questionnaire provides an overall score of severity of disability, measured across several domains, including locomotion, dexterity, reaching and stretching, sensory impairment, and continence. The questions are based on a person's reported physical performance across these domains. For example, within the locomotion domain, respondents are asked about several tasks including "What is the furthest you can walk on your own without stopping and without severe discomfort?" and "Could you walk up and down one step on your own?". For each area, a severity score is recorded, the minimum score for each dimension is 0 (ie, no disability). The highest achievable score differed across the dimensions; the maximum ranged from 9.5 to 13.0. An overall severity score for disability was also generated using the following equation, as recommended by the original investigators²⁰:

Highest score+0.4×2nd highest score+0.3×3rd highest score

Examples in the appendix give an impression of the disability associated with the overall severity scores.

Respondents were dichotomised to the highest scoring third compared with the lowest and mid-thirds combined.

Socioeconomic position

The 1995 questionnaire included several retrospective questions designed to ascertain socioeconomic position across the adult life course. On a 5-point scale, respondents were asked to consider separately how well-off they had been in each decade of their adult life (20s, 30s, 40s and 50s) compared with other people in Britain at the time. Ratings for each decade were dichotomised to compare those who were financially well-off, quite well-off or had just enough money with those who were sometimes short of money or very often short of money, the second group being classified as that in financial hardship. A score ranging from 0 to 4 summarised the number of decades they perceived themselves to be in relative financial hardship.

Data on the age at which people acquired any of 10 specific material goods and facilities in adult life (inside toilet, fixed supply of hot water, bath or shower, television, washing machine, refrigerator, deep freezer, telephone, holiday abroad, a car or van) were also ascertained. This enabled us to calculate the number of material goods possessed in each decade of adult life. For each decade, respondents were dichotomised into those who had ≤2 items (materially deprived) compared with those who had ≥3 items (materially advantaged). This cut-off point was selected to reflect a distinction between being in possession of "more essential" compared with "less essential" items. Respondents were then categorized into number of decades they had been materially disadvantaged (0–4) to correspond with the scores relating to their perceptions of financial hardship.

As a more conventional measure of socioeconomic position, standard occupational class (SOC) was also examined. SOC was based on the longest held occupation of the head of house. We attempted to avoid issues of reverse causality—that is, disability itself causing downward social drift, for example, having to change occupation—by using social class data collected in the previous wave of the study (in 1991). This was reinforced through the use of longest held occupation rather than current occupation to calculate SOC. Data were categorized into five categories (social classes I and II were combined as these categories produced similar odds ratios (Ors) for the relationship with disability).

Potential confounding or intermediary factors in the analysis included self-report data on the frequency of reported symptoms from a range of chronic illnesses. A series of structured prompts (see Macintyre *et al*²¹ for more detail) was used to ensure that all longstanding conditions (up to a maximum of seven) were recorded, and a series of further questions (see Hunt *et al*²² for more details) elicited information on each condition. Each condition was coded to an International Classification of Diseases chapter heading according to the British Royal College of General Practitioners coding scheme²³; this analysis incorporated only the five most common condition groups (musculoskeletal, cardiovascular, respiratory and digestive disorders, and other conditions). Self-report data on smoking (never, ex smoker or current smoker) and drinking behaviour (never, ex drinker or current drinker) were also included.

Statistical analysis

The relationships between the two measures of socioeconomic position and disability were examined using logistic regression. Initially, analysis was carried out for each sex

separately; then tests for interaction were conducted between the measures of socioeconomic position and sex. As there was no evidence of an interaction, the data were pooled. In a final analysis, the relationship between the measures of socioeconomic position and disability was examined, adjusting for sex, morbidity and lifestyle factors. All data were analysed using Stata V.8 and complete data were used.

RESULTS

In all, 241 of 723 (33.3%) participants were classified (as outlined earlier) as having disability, and just over half (55%) were women. Disability severity scores ranged from 0 to 18.55. The range of those falling within the top tertile was 4–18.55 (mean 9.58, standard deviation (SD) 3.72). Table 1 shows a breakdown of markers of perceived social disadvantage and material disadvantage, together with conventional occupational social class, and health and behavioural indicators by top tertile of disability and the remainder. Perceived and material disadvantages were correlated with each other (Spearman's $r = 0.26$; $p < 0.001$), and also with social occupational class (Spearman's $r = 0.14$; $p < 0.001$ for perceived disadvantage and $r = 0.22$, $p < 0.0001$ for material disadvantage).

Table 2 shows the relationship between disability and different measures of socioeconomic position. A similar pattern is observed for perceived financial hardship, material conditions and SOC. In general, those in worse-off positions were more likely to be the highest-scoring tertile of the disability measure. However, the strength of associations

varied according to the measure used. The greatest difference between the highest-scoring and lowest-scoring categories was found for the index of material conditions (sex-adjusted OR 3.73, 95% confidence interval (CI) 1.97 to 7.08) and SOC (OR 3.85, 95% CI 1.95 to 7.60).

The effects of adjustment for factors that might be considered as on a causal pathway between socioeconomic position (SEP) and disability were examined by inclusion into logistic regression models (table 3). Taking perceived financial hardship in adult life first, all ORs for disability were attenuated after adjusting for morbidity (model B) and further adjustment for lifestyle factors (model C), and additionally for the other measures of SEP (model D) diminished the OR further. When examining the successive models for periods of material disadvantage in adult life, a stronger relationship with disability was seen in each model, and the OR for having ≥ 4 periods of material disadvantage remained significant in all the models. Evidence suggested that the observed relationship between periods of material disadvantage and disability was linear (test for trend, $p = 0.003$, in the fully adjusted model). Finally, for SOC, the raised ORs for disability seen for social classes IV and V (in comparison with social class I) remained significant after adjustment for morbidity (model B), and lifestyle factors (model C) and the other measures of SEP (model D), although each successive adjustment attenuated the OR. The relationship between SOC and disability was also linear (test for trend, $p = 0.021$, in the fully adjusted model).

A sensitivity analysis was carried out whereby the cut-off point for financial hardship included those who reported they

Table 1 Description of data on outcome, explanatory variables and covariates

	Overall distribution percentages (95% CI)	Disability N1 (%)	No disability N2 (%)	Difference in percentages (N1%–N2%)
Periods of perceived financial hardship in adult life				
0	70.4 (66.9 to 73.7)	149 (61.8)	360 (74.7)	–12.9
1	14.5 (12.0 to 17.3)	44 (18.3)	61 (12.7)	5.6
2	9.4 (7.4 to 11.8)	28 (11.6)	40 (8.3)	3.3
3	2.1 (1.2 to 3.4)	8 (3.3)	7 (1.5)	1.8
4	3.6 (2.4 to 5.2)	12 (5.0)	14 (2.9)	2.1
Periods of material disadvantage in adult life				
0	13.0 (10.6 to 15.7)	22 (9.7)	72 (14.9)	–5.2
1	43.6 (39.9 to 47.3)	86 (35.7)	229 (47.5)	–11.8
2	20.3 (17.5 to 23.5)	55 (22.8)	92 (19.1)	3.7
3	10.9 (8.7 to 13.4)	32 (13.3)	47 (9.8)	3.5
4	12.2 (9.9 to 14.8)	46 (19.1)	42 (8.7)	10.4
Occupational social class				
I and II	28.5 (25.2 to 31.9)	12 (5.6)	34 (7.3)	–1.7
III/IV	16.3 (13.7 to 19.2)	39 (18.1)	121 (26.1)	–8.0
III/IV	34.2 (30.7 to 37.7)	31 (14.4)	87 (18.8)	–4.4
IV	14.9 (12.4 to 17.7)	86 (39.8)	161 (34.8)	5.0
V	6.1 (4.5 to 8.1)	48 (22.2)	60 (13.0)	9.2
Longstanding conditions				
Musculoskeletal	33.9 (30.4 to 37.5)	121 (50.2)	124 (25.7)	24.5
Respiratory	9.8 (7.7 to 12.2)	35 (14.5)	36 (7.5)	7.0
Digestive	8.8 (6.9 to 11.2)	39 (16.2)	25 (5.2)	11.0
Cardiovascular	6.1 (4.5 to 8.1)	27 (11.2)	17 (3.5)	7.7
Other	20.2 (17.3 to 23.3)	74 (30.7)	72 (14.9)	15.8
Drinking				
Never	12.8 (10.4 to 15.4)	40 (16.7)	52 (10.8)	5.9
Ex drinker	4.6 (3.2 to 6.4)	15 (6.3)	18 (3.7)	2.6
Current	82.7 (79.7 to 85.4)	184 (77.0)	412 (85.5)	–8.5
Smoking				
Never	34.5 (31.1 to 38.1)	63 (26.4)	186 (38.6)	–12.2
Ex smoker	33.0 (29.6 to 36.6)	83 (34.7)	155 (32.2)	2.5
Current	32.5 (29.0 to 36.0)	93 (38.9)	141 (29.3)	9.6

Table 2 Relationship between measures of socioeconomic position and disability (n=723)

	n (%) overall	% In highest tertile of Disability Score	OR (95% CI), p value for reported disability (adjusted for sex)
Periods of perceived financial hardship in adult life			
0	509 (70.4)	29.3	1
1	105 (14.5)	41.9	1.70 (1.10 to 2.62), 0.017
2	68 (9.4)	41.2	1.67 (0.99 to 2.81), 0.053
3	15 (2.1)	53.3	2.64 (0.94 to 7.46), 0.066
4	26 (3.6)	46.2	2.04 (0.92 to 4.55), 0.078
Periods of material disadvantage in adult life			
0	94 (13.0)	23.4	1
1	315 (43.6)	27.3	1.23 (0.72 to 2.11), 0.451
2	147 (20.3)	37.4	1.99 (1.11 to 3.57), 0.021
3	79 (10.9)	40.5	2.26 (1.17 to 4.36), 0.016
4	88 (12.2)	52.3	3.73 (1.97 to 7.08), <0.001
Occupational social class			
I and II	46 (28.5)	24.8	1
IIINM	160 (16.3)	26.3	1.03 (0.61 to 1.73), 0.921
IIIM	118 (34.2)	34.8	1.72 (1.13 to 2.60), 0.011
IV	247 (14.9)	44.4	2.49 (1.52 to 4.10), <0.001
V	108 (6.1)	56.8	3.85 (1.95 to 7.60), <0.001

had “just enough money”. Although this resulted in the numbers of respondents falling into each category more evenly spread, it had little effect on the size of the associations observed between number of periods in financial hardship and disability, and is therefore not reported.

DISCUSSION

Perceived financial hardship, material wealth and occupational social class in adult life were all found to be predictors of reporting severe disability in this cohort of men and women in their early 60s. The strongest associations were found with material disadvantage and occupational social class, showing a strong linear trend of increasing disability risk for each social class category. The relationship between perceived financial conditions and disability was the weakest of the three. These findings support those presented by

Macleod *et al.*¹⁶ who observed that objective material circumstances were a more important determinant of health than perceptions of relative status.

We had expected to see a strong relationship between the substantially subjective measure of perceived financial hardship and this self-reported disability outcome, as some other studies that compared objective and subjective measures of SEP have observed stronger relationships between health outcomes and subjective measures.²⁴ Some authors have dismissed observed associations between subjective measures as being due to negative affectivity—the tendency for those who feel more miserable¹ to also report feeling more sick without any greater actual physical differences.¹⁵ It is claimed

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¹Using the term as previous investigators have, to characterise the various indices of psychosocial exposure.¹³

Table 3 Relationship between measures of socioeconomic position and disability with adjustment for age, morbidity and lifestyle factors

	Model A OR (95% CI) for reported disability (adjusted for sex)	Model B OR (95% CI) for reported disability adjusted for sex and morbidity	Model C OR (95% CI) for reported disability adjusted as model B + lifestyle	Model D OR (95% CI) for reported disability adjusted as Model C + other measure of SEP*
Periods of perceived financial hardship in adult life				
0	1.00	1.00	1.00	1.00
1	1.70 (1.10 to 2.62)	1.47 (0.92 to 2.35)	1.39 (0.86 to 2.23)	1.25 (0.77 to 2.03)
2	1.67 (0.99 to 2.81)	1.42 (0.81 to 2.48)	1.30 (0.73 to 2.30)	1.08 (0.60 to 1.96)
3	2.64 (0.94 to 7.46)	2.19 (0.72 to 6.72)	1.76 (0.57 to 5.46)	1.51 (0.48 to 4.78)
4	2.04 (0.92 to 4.55)	1.75 (0.75 to 4.06)	1.55 (0.66 to 3.64)	1.16 (0.48 to 2.80)
Periods of material disadvantage in adult life				
0	1.00	1.00	1.00	1.00
1	1.23 (0.72 to 2.11)	1.29 (0.72 to 2.29)	1.29 (0.72 to 2.32)	1.27 (0.71 to 2.27)
2	1.99 (1.11 to 3.57)	1.96 (1.05 to 3.66)	1.90 (1.01 to 3.59)	1.82 (0.96 to 3.45)
3	2.26 (1.17 to 4.36)	1.99 (0.99 to 4.02)	1.84 (0.90 to 3.77)	1.73 (0.83 to 3.63)
4	3.73 (1.97 to 7.08)	3.15 (1.59 to 6.22)	2.70 (1.35 to 5.41)	2.54 (1.24 to 5.20)
Standard occupational class				
I and II	1.00	1.00	1.00	1.00
IIINM	1.03 (0.61 to 1.73)	0.99 (0.57 to 1.71)	0.97 (0.55 to 1.68)	0.91 (0.52 to 1.61)
IIIM	1.72 (1.13 to 2.60)	1.50 (0.96 to 2.34)	1.34 (0.85 to 2.10)	1.20 (0.75 to 1.91)
IV	2.49 (1.52 to 4.10)	2.20 (1.30 to 3.73)	1.97 (1.15 to 3.37)	1.75 (1.00 to 3.07)
V	3.85 (1.95 to 7.60)	3.58 (1.74 to 7.35)	3.23 (1.54 to 6.79)	2.46 (1.10 to 5.51)

SEP, socioeconomic position; SOC, standard occupational class.

*Perceived hardship model adjusted for SOC and material disadvantage; material disadvantage model adjusted for SOC and perceived hardship; and social occupational class model adjusted for both perceived and material measures.

that the effect of negative affectivity may be underestimated in epidemiological studies.¹⁵ However, this phenomenon may not explain all the observed associations between subjective measures.²⁴ Yet, in this analysis, we did not see convincing evidence for a strong or linear relationship between perceived financial hardship and self-reported disability to support the notion of subjective indicators of SEP, leading to greater reported ill-health (nor indeed the effect of negative affectivity). It is, of course, possible that negative affectivity varies with time and age of the respondent. It is evident that although 70% of people stated they had never experienced financial hardship, as defined here, 87% had experienced at least one period of material disadvantage. Therefore, negative affectivity may not be widespread in this population.

It has been suggested that previously observed associations between psychosocial exposures and disease may be the product of bias²⁵ or confounding²⁶ in observational studies. The observed relationships between misery and illness may largely reflect that misery is a marker for material disadvantage.¹⁵ This is supported by the fact that psychosocial interventions have little effect on objective health outcomes.²⁷ In our study, we relied on reported disability elicited using a standardised measure, which is popularly used in British national surveys of disability, and it was recommended by the World Health Organization in its recommendations for the international harmonisation of instruments.²⁸ The measure has been largely accepted by the research community on grounds of face and content validity and its theoretical underpinning. It has often been compared with other indicators of disability and quality of life, indicating construct validity.²⁹ It is possible that this disability outcome, focused on performance, is less liable to be prone to reporting bias than other subjective health status indicators.

In future work, it would be valuable to evaluate measures of impairment, such as walking speed and muscle strength, to examine the extent to which they are socially patterned and related to reported disability.

Measurement of SEP

Both measures of material disadvantage and perceived financial hardship were based on respondents' recall of their circumstances in earlier decades of their lives. Therefore, both these measures could have been potentially affected by recall bias. However, the measure of perceived financial hardship may have probably been more greatly affected, as asking people to recall their perceptions at a particular time would be more prone to inaccuracies than asking people to recall when they acquired actual material possessions.

This bias may have taken the form of optimism bias—that is, older people tending to rate previous life satisfaction more highly than would be expected, given their actual circumstances. This form of non-differential misclassification could possibly have led to any evidence of an association between perceived financial hardship and reported disability moving towards the null. However, as the respondents already had disability when data on perceived financial hardship were collected, there is also the potential for differential misclassification according to outcome status. As suggested by the earlier discussion on negative affectivity, it is perhaps more likely that respondents who have greater disability are also more likely to recall their previous financial hardship as worse than it actually was, which would lead to the size of the associations observed in this analysis being overestimated, which was not observed in comparisons with the other SEP markers. Although it is possible that older people misremembered when they acquired certain material possessions, given the important nature of the goods they were asked to consider (including television, washing machine or telephone) they will probably have anchored these memories

to particular periods in their own lives, enhancing the accuracy of these data.¹⁹ However, the measure we have used is based on the assumption that once they have acquired any of the specified material goods, they continued to have it afterwards. As people can move in and out of poverty over time, our score may be underestimating material deprivation, and hence the relationship between poverty and disability.

Some have suggested that, in reality, the material and psychosocial explanations for health inequalities are not mutually exclusive and are difficult to disentangle (see Bartley³⁰ for discussion). They argue that when exploring the underlying pathways by which different factors produce health inequalities, low social status or lack of prestige that tend to be labelled as psychosocial determinants are actually triggered by a lack of material factors.¹⁴ Some qualitative data support this argument.³¹ Many of the scales that are used to assess the negative feelings evoked by psychosocial factors, when used to assess the effects of perceived disadvantage on health outcomes, will inevitably be confounded by the social circumstances that tend to be an intrinsic part of the measurement.³² We argue that our measure of perceived financial hardship is an appropriate one with which to examine at least one aspect of the psychosocial hypothesis, which is based on respondents' own perceptions of relative wealth compared with other people in Britain at that time and is independent of employment, housing or education. Of course, we will not have captured all aspects of the psychosocial hypothesis with the measure used here—for example, the potential imbalance between rewards and demands. Given the way in which the question was phrased and the cut-off points used, there is also the possibility that the hardship experienced by the respondents was not sufficiently prolonged to arouse the chronic stress necessary to have an effect on health outcomes. For example, we may have diluted the ability to see an effect of perceived financial hardship by including both those who stated they were sometimes short of money and very often short of money in our variable. However, it was not possible to consider only the second group, as the numbers falling into this category were too small on which to base robust estimates.

The onset of disability in early old age is socially patterned across all measures of SEP. However, this relationship was stronger for the measures based on material deprivation and occupational social class. These data do not support the hypothesis that the perception of relative social status, as measured by perceived financial hardship, is a more important determinant of disability than material conditions. Cumulative material deprivation might be expected to lead to disability through its effect on increased risk for chronic diseases, caused partly by adoption of common adverse lifestyle behaviours. However, the observed associations were not attenuated by adjustment for these factors, implying other pathways by which material deprivation and disability are linked. Alternatively, the lack of material resources may make any potentially disabling condition more difficult to cope with and consequently increase the reporting of disability for any given level of impairment or disease. Finally, it is also a possibility that both access to and quality of health and social services received by people living in disadvantaged circumstances will be poorer, and result in both increasing duration and severity of disability compared with more affluent groups. However, this would have to be confirmed through further research.

In conclusion, the patterning of disability by material disadvantage points to the need to confirm these findings in different settings, perhaps where disadvantage is rather less extreme, and to the need to evaluate poverty-reducing interventions for their effect on reported disability levels.

What this paper adds

- The possible mechanisms for explaining health inequality are subject to debate around two major hypotheses: the psychosocial hypothesis and the material hypothesis.
- We compared the relationship between disability and socioeconomic position measured in different ways to reflect the competing hypotheses.
- Perceived financial hardship (psychosocial hypothesis) and material conditions (material hypothesis) in earlier decades of life were found to be associated with reported disability.
- After adjusting for sex, morbidity, standard occupational class and lifestyle factors, there was stronger evidence for material conditions as a predictor of disability.
- The data provide evidence to support the "material" explanation for observed inequalities in reported disability among older people.

Policy implications

The debate surrounding the possible mechanisms underlying observed inequalities in health remains crucial in terms of the choice of interventions intended to reduce these inequalities. By comparing the explanatory power of two different measures of socioeconomic position across adulthood, which reflect the psychosocial and material hypotheses, respectively, we observed a stronger association between disability and material disadvantage. The relationship between perceived financial conditions (psychosocial hypothesis) and disability was found to be weaker. Therefore, our data provide evidence to support the "material" explanation for observed inequalities in reported disability among older people. These data would not support the argument to design interventions based around the psychological effect of being lower in the social hierarchy. There is a strong need to design and evaluate poverty-reducing interventions for their effect on reported disability levels.

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**APPENDIX: EXAMPLES OF THE OFFICE OF
POPULATION CENSUS AND SURVEYS SEVERITY
SCORES OF DISABILITY²⁰****Severity score 1.50**

Cannot see well enough to recognise a friend across the road; has difficulty reading ordinary newspaper print; has difficulty following a conversation against background noise.

Severity score 19.05

Cannot walk at all; cannot feed self without help; cannot carry out the following activities without help: get in and

out of bed, wash all over, get in and out of chair, wash hands and face, dress and undress, get to toilet and use toilet; cannot carry out any activities that require holding, gripping and turning; cannot put either arm behind back to put jacket on or tuck shirt in; has difficulty holding either arm in front to shake hands with someone; is very difficult for strangers to understand; loses control of bladder at least once a month; cannot see well enough to recognise a friend across the road; has difficulty reading ordinary newspaper print.