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Which households are most likely to be in material deprivation? (Future Generations Indicator 19)

The National Survey for Wales 2014-15 results are used here to investigate what factors make a household more likely to be in material deprivation. We have controlled for a range of factors, so that even when factors are related (e.g. age and overall life satisfaction) the link between each factor and being in material deprivation can be explored independently.

Key findings

When other factors are held constant, the strongest predictors of being in material deprivation are:

- Living in social housing (compared with owner-occupied);
- Having low to very low life satisfaction (compared with medium to high life satisfaction);
- Being separated or divorced (compared with being married¹ or widowed);
- Being 16-59 (compared with being 70+).

People with these characteristics are around 10 percentage points more likely to be in material deprivation.

More detailed analysis also found that women with children are more likely to be in material deprivation, in particular those who are divorced or separated.

We did not find a link between the following and being in material deprivation: country of birth; ethnicity; religion; living in an urban or rural area; and local authority area.

1. Background

The [Well-being of Future Generations \(Wales\) Act 2015](#) is designed to improve the social, economic, environmental and cultural well-being of Wales by putting in place seven well-being goals. The Act places a legal requirement on the Welsh Government to set [national indicators](#)

¹ Married or in a civil partnership.

which measure achievement of the well-being goals. This report focuses on indicator 19: 'percentage of people living in households in material deprivation'.

The [National Survey for Wales](#) is used to measure progress against many of these national indicators. It is a large-scale, face-to-face survey collecting detailed information on people's views and well-being. The 2014-15 survey covered 14,285 people. It provides robust information on people's views about a wide range of issues.

2. Definition of material deprivation

Material deprivation is the extent to which people have or do not have certain material things. In order to assess whether a household is in material deprivation, National Survey respondents are asked a series of questions about whether they can afford various items. For each question, the respondent can answer:

1. we / I have this;
2. we / I would like to have this but we cannot afford this at the moment; or
3. we / I do not want or need this at the moment².

There are nine items in total:

1. Do you (and your family/partner)³ have a holiday away from home for at least one week a year, whilst not staying with relatives at their home?
2. Do you (and your family/partner) have enough money to keep your home in a decent state of decoration?
3. Do you (and your family/partner) have household contents insurance?
4. Do you (and your family/partner) make regular savings of £10 a month or more for rainy days or retirement?
5. Do you (and your family/partner) replace any worn out furniture?
6. Do you (and your family/partner) replace or repair major electrical goods, such as a refrigerator or washing machine, when broken?
7. Do you have a small amount of money to spend each week on yourself, not on your family?
8. How well are you keeping up with your bills and credit commitments at the moment?
9. In winter, are you able to keep this accommodation warm enough?

Each household is given a score based on their responses to these questions. The questions are weighted using a prevalence weighted approach. This allows for the fact that lacking some items is considered to represent a greater severity of deprivation than lacking others. The deprivation scale ranges from 0 to 100. Households with scores above 25 are deemed to be in material deprivation.

In 2014-15, 16% of respondents were classed as living in materially deprived households.

² The 2014-15 National Survey questions are taken from the [Family Resources Survey](#).

³ Included where applicable.

3. Analysis method

To get a clear understanding of how each individual factor contributes to material deprivation, we used a technique called regression analysis. Regression analysis allows us to explore the links between particular factors and material deprivation.

For example, we know that urban areas have higher levels of households in material deprivation. However, these areas also have higher levels of unemployment. This can make it difficult to say whether material deprivation is due to unemployment or to living in an urban area. Once other factors are controlled for, using regression analysis, it is clear that living in an urban area does not in itself increase the likelihood of being in material deprivation. But, as might be expected, unemployment does increase the likelihood of being in material deprivation even when other factors are taken into account.

The analysis of each factor presented below controls for a range of other factors, so the link between each factor of interest can be isolated and explored. All factors reported below have a statistically significant link with being in material deprivation (that is we are confident these findings are robust and not just due to some variability in the survey estimates).

Regression analysis can identify relationships between factors, however, it cannot tell us about causality. While for some factors causality is fairly clear based on prior knowledge (e.g. material deprivation does not cause changes in gender; gender is linked to changes in material deprivation), for others the relationship between cause and effect is more blurred (low life satisfaction can cause material deprivation; material deprivation can cause low life satisfaction). Therefore, where prior knowledge does not make the direction of causality clear we have generally noted that causality can operate in either direction (or both).

For a full description of how we carried out the analysis, see the accompanying [technical report](#).

4. Main findings: predictors of material deprivation

When controlling for other factors, the following were found to be predictors of whether a household is in material deprivation⁴.

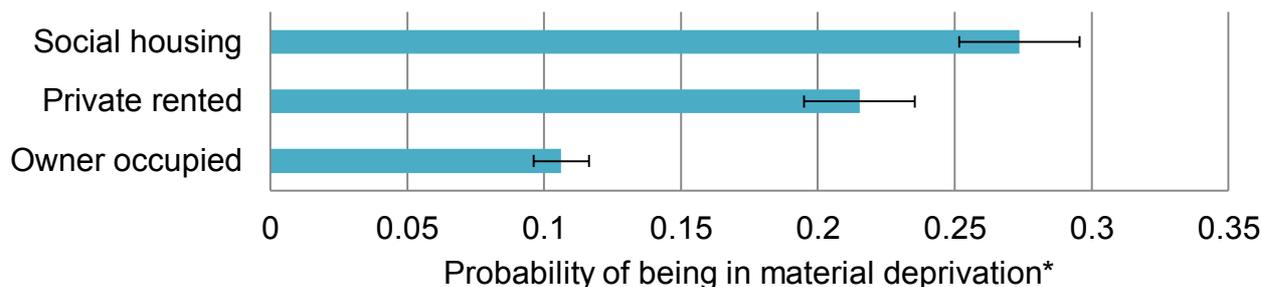
4.1 Household characteristics

Tenure: Holding the other factors constant, those living in social housing have the highest probability of being in material deprivation (0.27)⁵. This is followed by those living in privately rented housing; these individuals have a probability of 0.22. Those with the lowest probability of being in material deprivation are those who live in a house that they own (0.11), as shown in Figure 1:

⁴ If the error bars for each response as shown in the charts do not overlap, the responses are significantly different from one another at the 0.05 confidence interval. These intervals are calculated around a survey estimate and give a range within which the true value is likely to fall. In 95% of survey samples, the 95% confidence interval will contain the 'true' figure for the whole population. This means we can have a high level of confidence that there is a real difference in the general population – the finding is not likely to be due to variability in the survey estimates.

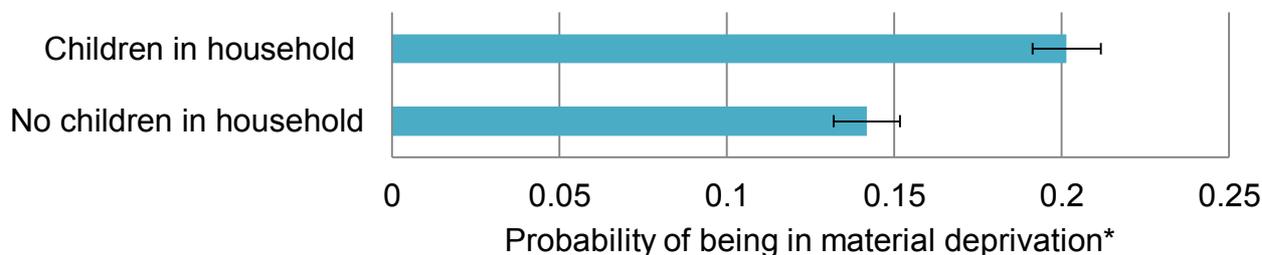
⁵ A probability of 0 would indicate a 0% likelihood of a respondent in this group being in material deprivation. A probability of 1.0 would indicate a 100% likelihood of a respondent in this group being in material deprivation.

Figure 1: The link between tenure and material deprivation



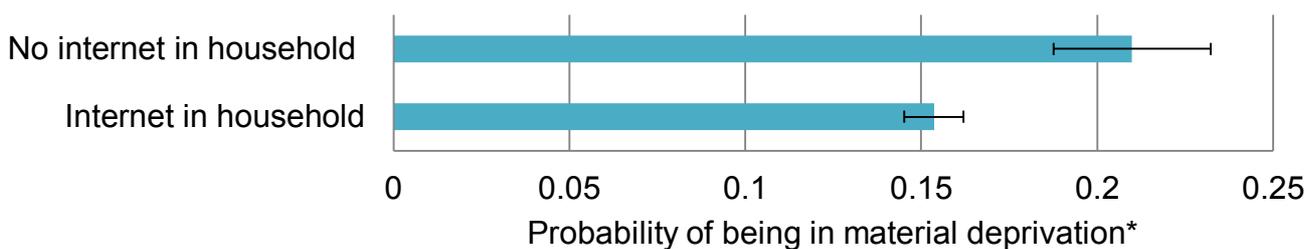
Children in household: Holding the other factors constant, those with children in the household are more likely to be in material deprivation (0.20) than those who do not have children in the household (0.14), as shown in Figure 2:

Figure 2: The link between children in household and material deprivation



Internet in household: Holding the other factors constant, those that do not have access to the internet have a higher probability of being in material deprivation (0.21) than those who have (0.15), as shown in Figure 3⁶.

Figure 3: The link between having access to the internet in household and material deprivation



* Holding the other factors constant.

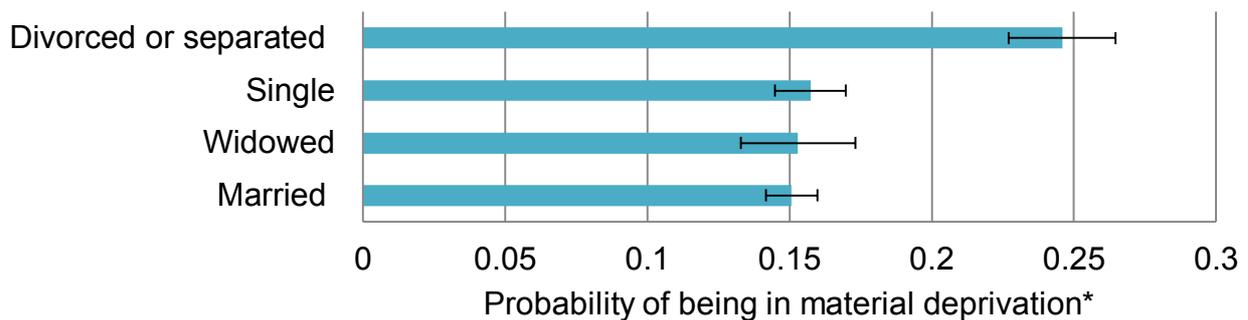
⁶ Causality may operate in either direction (or both): not having access to the internet may cause material deprivation, and/or material deprivation may cause not having access to the internet.

4.2 Respondent characteristics

Although the majority of the material deprivation questions are asked about the household as a unit, it is also useful to consider the demographics and characteristics of particular respondents. Not only does at least one of the questions ask specifically about the respondent's experience of deprivation, it is also reasonable to assume that the characteristics of the respondent may affect the responses they give⁷.

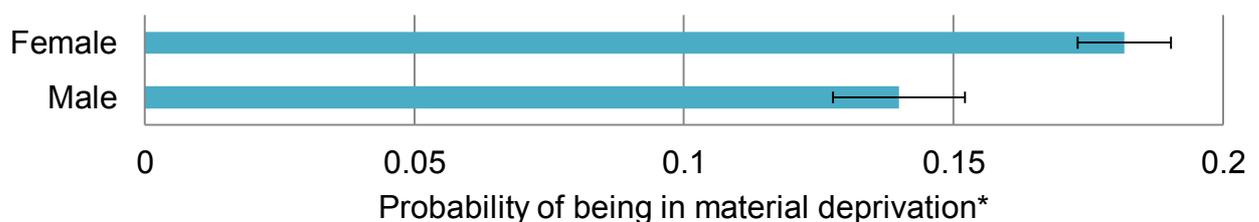
Marital status: Holding the other factors constant, those most likely to be in material deprivation are divorced or separated (0.25)⁸.

Figure 4: The link between marital status and material deprivation



Gender: Holding the other factors constant, the probability of a man being in material deprivation is 0.14. The probability is higher for a woman, at 0.18⁹. See Figure 5:

Figure 5: The link between gender and material deprivation



Age: Holding the other factors constant, the age group most likely to be in material deprivation is those aged 30 to 39, with a probability of 0.24. The probability decreases after this with those aged 70+ having just a 0.05 probability of being in material deprivation, as shown in Figure 6:

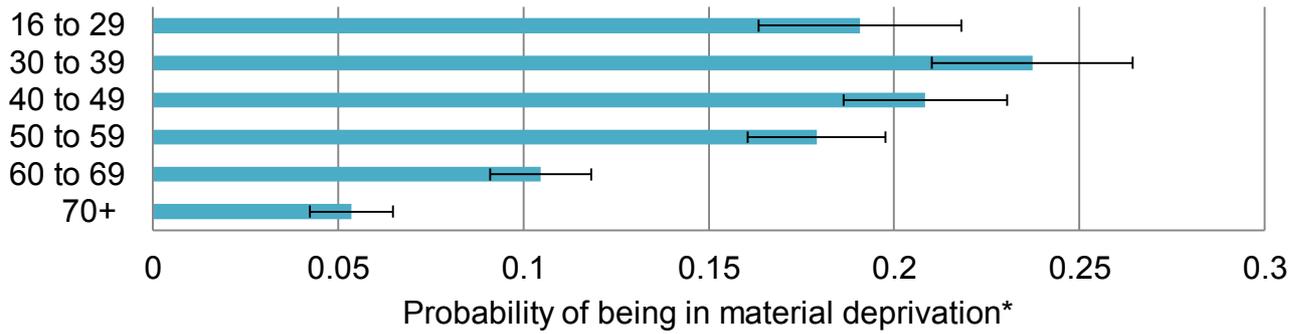
⁷ Furthermore, when controlling for interaction effects, which allow variables at household level to be explored, the respondent characteristics discussed in this section remained significant predictors of material deprivation.

⁸ A 0.24 probability that someone in this group would be in material deprivation. When controlling for the other factors, a probability of 0 would indicate a 0% likelihood of a respondent in this group being in material deprivation. A probability of 1.0 would indicate a 100% likelihood of a respondent in this group being in material deprivation.

* Holding the other factors constant.

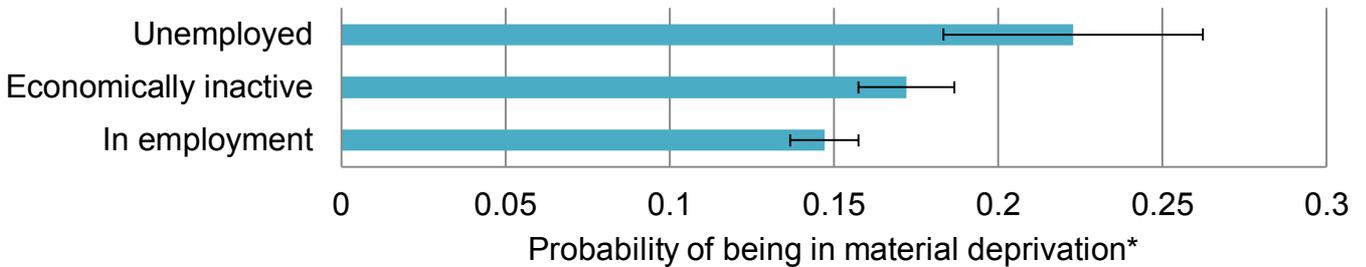
⁹ Differences could be caused by how different genders approach the questions.

Figure 6: The link between age and material deprivation



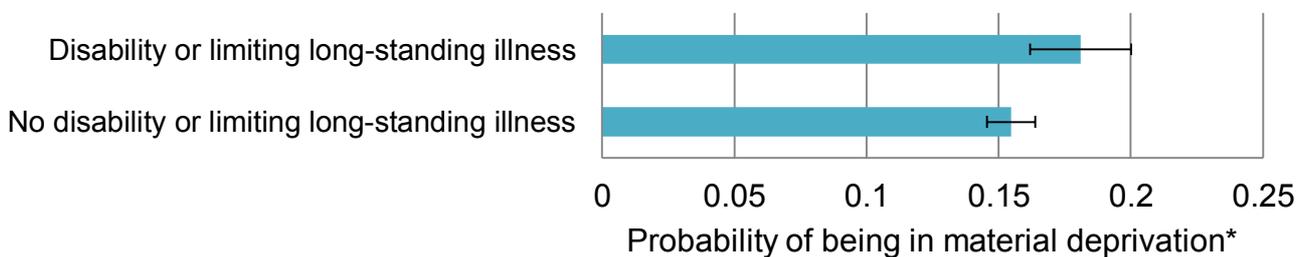
Employment status: Holding the other factors constant, those who are unemployed have the highest probability of being in material deprivation (0.22). Those with the lowest probability of being in material deprivation are those that are employed (0.15), as shown in Figure 7¹⁰:

Figure 7: The link between employment status and material deprivation



Disability: Holding the other factors constant, those with a limiting long-standing illness, disability or infirmity have a slightly higher probability of being in material deprivation (0.18) as shown in Figure 8¹¹:

Figure 8: The link between disability and material deprivation



Highest qualification: Holding the other factors constant, those educated to degree level or higher have the lowest probability of being in material deprivation (0.11). The probability of being in deprivation increases as qualification level decreases. Those with the highest

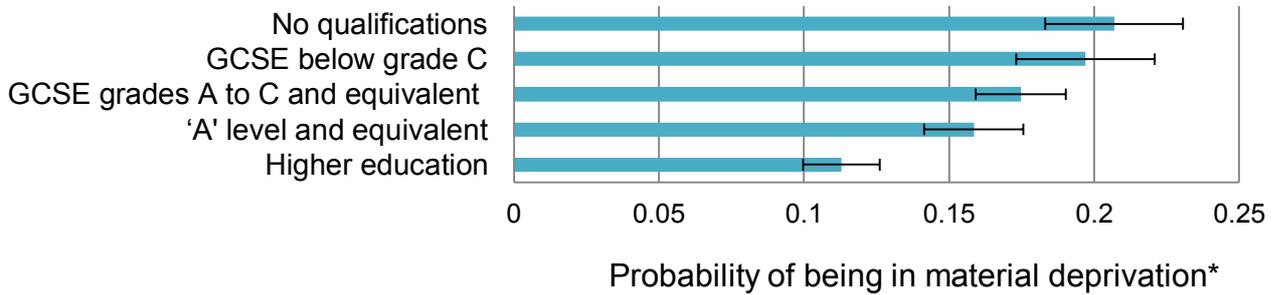
* Holding the other factors constant.

¹⁰ Economically inactive includes those who are students and pensioners.

¹¹ Even though the error bars slightly overlap, further tests showed that the difference is statistically significant.

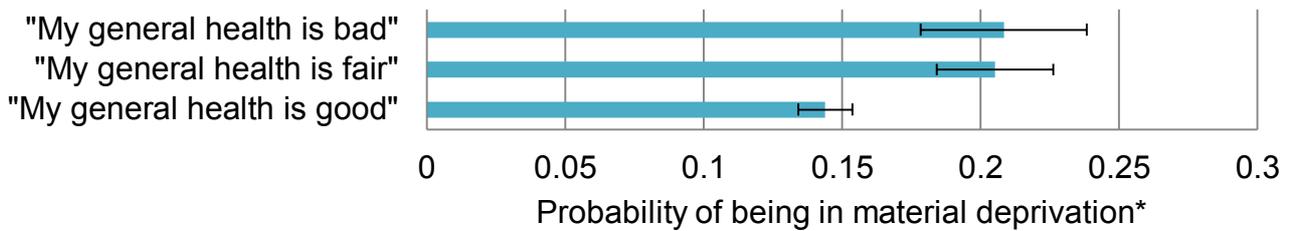
probability of being in material deprivation are those with no qualifications (0.21), as shown in Figure 9:

Figure 9: The link between highest qualification and material deprivation



General health: Holding the other factors constant, those that reported their general health to be 'bad' or 'fair' have a very similar probability of being in material deprivation (0.208 and 0.205 respectively). Those that reported good general health have a lower probability of being in material deprivation (0.14) as shown in Figure 10¹².

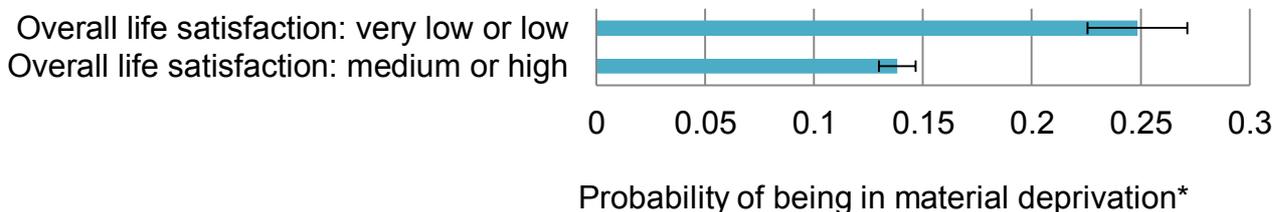
Figure 10: The link between self-reported general health and material deprivation



4.3 Social characteristics

Life satisfaction: Holding the other factors constant, those who rated their life satisfaction as low to very low (0.25) have a higher probability of being in material deprivation than those who rated their life satisfaction as medium to high (0.14), as shown in Figure 11¹³.

Figure 11: The link between overall life satisfaction and material deprivation



¹² Causality may operate in either direction (or both): poor general health may cause material deprivation, and/or material deprivation may cause poor general health.

* Holding the other factors constant.

¹³ Causality may operate in either direction (or both) as low life satisfaction may cause material deprivation, and/or material deprivation may low life satisfaction.

Anxiety: Anxiety was analysed as a continuous variable, due to the fact that in the survey respondents score their anxiety on a scale of 0 to 10. It was found that a one unit increase in anxiety is linked to an increase in the likelihood of being in material deprivation of 0.08¹⁴.

4.4 Combined effects of Gender, Marital Status and Children in household

Females with children are more likely to be in deprivation than their male counterparts. Divorced or separated females with children have the highest probability of being in material deprivation¹⁵, as shown in Figure 12.

Figure 12: The link between the interaction of Gender * Marital Status * Children and material deprivation

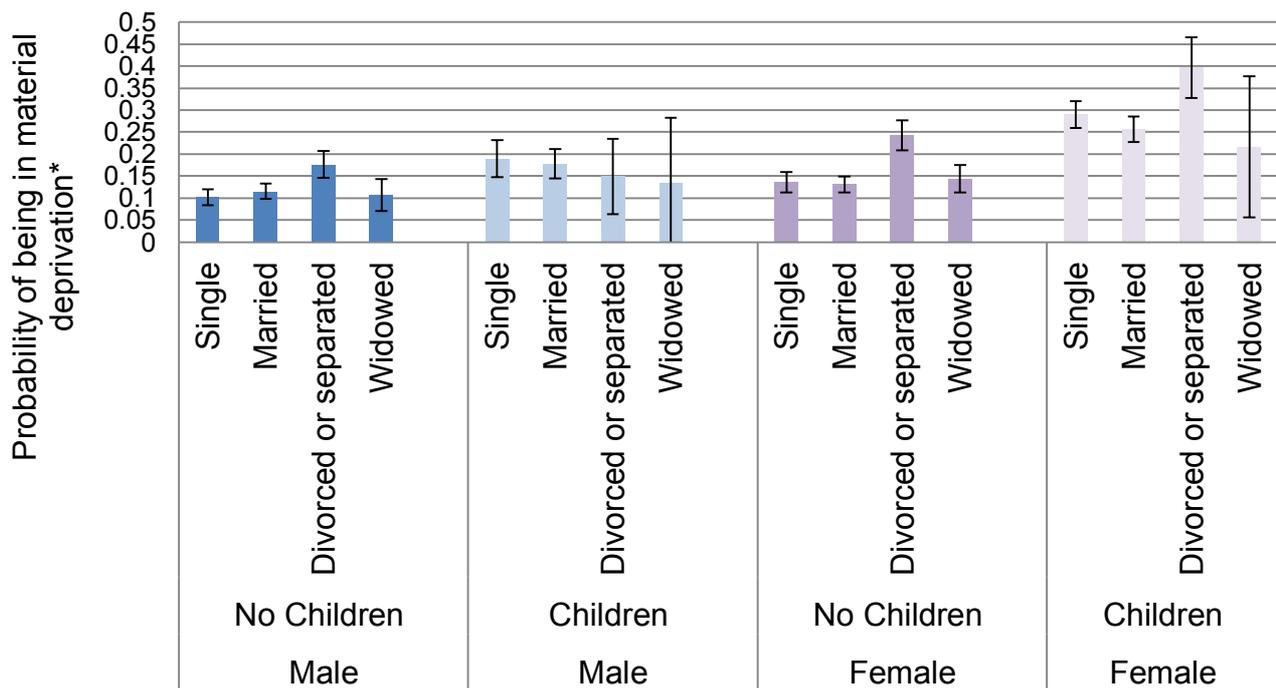


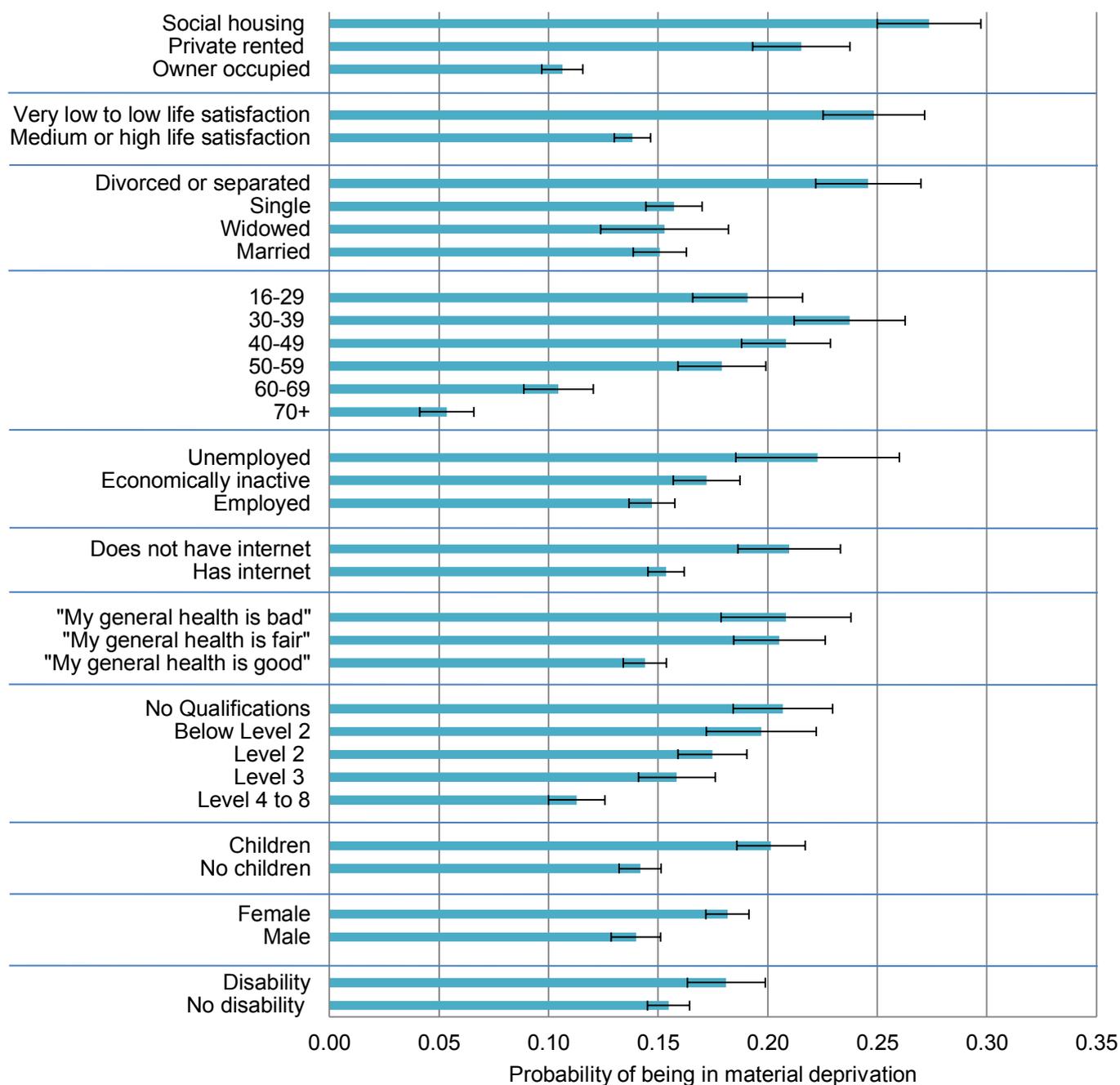
Figure 13 summarises the contribution of each factor of being in material deprivation. Those in social housing have the highest probability of being in material deprivation, followed by having very low to low life satisfaction, being divorced or separated and being younger than 60.

¹⁴ Again, causality may operate in either direction.

¹⁵ Differences could be caused by how different genders approach the questions.

* Holding the other factors constant.

Figure 13: Probability of being in material deprivation¹⁶



4.5 Factors not linked to material deprivation

We did not find a link between the following and material deprivation: country of birth; ethnicity; religion; living in an urban or rural area; and local authority area.

Further details on how we carried out the analysis are available in the accompanying [technical report](#).

¹⁶ As before, the error bars can be used to see where there are statistically significant differences among categories of each variable: if the bars do not overlap, the difference is likely to be 'real'. However, it would not be correct (or meaningful) to conclude that non-overlapping error bars mean that a category of one variable (e.g. people without a disability) predicts a significantly different level of deprivation to a category of another variable (e.g. women).

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