

# Does income inequality cause health and social problems?

Findings  
Informing change

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Inequality grew dramatically in the 1980s and has remained at a high level ever since. But should high levels of inequality concern us? This study provides an independent review of the research in this field, particularly Wilkinson and Pickett's *The Spirit Level* (2009), which placed income inequality firmly within public debate and argued strongly that it should be a matter of concern. It also reviews critiques of *The Spirit Level* since 2009, alongside the evidence and debate in the broader peer-reviewed literature.

## Key points

- The literature shows general agreement about a correlation between income inequality and health/social problems.
- There is less agreement about whether income inequality causes health and social problems independently of other factors, but some rigorous studies have found evidence of this.
- The independent effect of income inequality on health/social problems shown in some studies looks small in statistical terms. But these studies cover whole populations, and hence a significant number of lives.
- Some research suggests that inequality is particularly harmful beyond a certain threshold. Britain was below this threshold in the 1960s, 1970s and early 1980s, but rose past it in 1986–7 and has settled well above it since 1998–9. If the threshold is significant it could provide a target for policy.
- Anxiety about status might explain income inequality's effect on health and social problems. If so, inequality is harmful because it places people in a hierarchy which increases competition for status, causing stress and leading to poor health and other negative outcomes.
- Not all research shows an independent effect of income inequality on health/social problems. Some highlights the role of individual income (poverty/material circumstances), culture/history, ethnicity and welfare state institutions/social policies.
- The author concludes that there is a strong case for further research on income inequality and discussion of the policy implications.

## The research

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# Background

The UK witnessed a dramatic growth in income inequality in the 1980s, and since then the level of inequality has increased further, though at a slower rate (National Equality Panel, 2010, *An Anatomy of Economic Inequality in the UK*). But should we be concerned about this?

Wilkinson and Pickett's *The Spirit Level* (2009) argued strongly that it should indeed be a matter of concern, and has placed income inequality firmly within public debate. This study provides an independent review of the research in this field, paying particular attention to the evidence and arguments put forward in *The Spirit Level*. That book presented a 'big idea' in social science, using data on a wide range of countries and a wide range of variables. It is perhaps not surprising, therefore, that it attracted criticism. This study considers the points made in various critiques, alongside the broader peer-reviewed literature in this field. It is not intended to be the final word on this debate, not least because new research findings are frequently published. It is intended, instead, to contribute to the ongoing debate on this important topic.

## Correlations between income inequality and health and social problems

Evidence from a range of studies suggests that there is a *correlation* between income inequality and health and social problems. For example, Table 1 shows the strength of relationships between income inequality in rich countries and various health and social problems, drawing on data from the United Nations (UN) and the Organisation for Economic Co-operation and Development (OECD).

Table 1 shows correlation coefficients for the relationships, ranging from -1 to 1. A value of 1 implies a direct linear relationship between two variables, with all data points lying on a line for which the value of one variable increases directly as the other variable increases (for example, as inequality increases so does social immobility). In a similar

**Table 1: Strength of relationships between income inequality in rich countries and various health and social problems, comparing UN and OECD data**

	Correlation coefficients	
	UN data quoted in <i>The Spirit Level</i>	OECD data cited on the Equality Trust website
Social immobility	0.93	0.83
Teenage births	0.73	0.64
Imprisonment	0.67	0.51
Trust	-0.66	-0.66
Mental illness	0.59	*
Obesity	0.57	*
Homicides	0.47	0.44
Educational performance	-0.45	-0.46
Life expectancy	-0.44	*
Infant mortality	0.42	0.54
Overall index	0.87	0.7

Sources: Wilkinson and Pickett (2009); <http://www.equalitytrust.org.uk/why/evidence/frequently-asked-questions#oecd>

\*Mental illness, obesity and life expectancy were not statistically significantly associated with income inequality when using OECD data, so the correlation coefficients are not given in the table (they were 0.32, 0.41 and -0.27 respectively).

Note: a negative sign means that as one variable increases, the other decreases.

way, a value of  $-1$  implies that the value of one variable decreases directly as the other increases (for example, as inequality increases, trust declines). A value of  $0$  implies that there is no linear correlation between the two variables. Correlation levels above  $0.5$  (or below  $-0.5$ ) suggest a strong relationship in social science analysis. The correlation coefficients shown in Table 1 using UN data thus show high correlation levels between income inequality and social immobility, teenage births, imprisonment, low trust, mental illness and obesity. Other health and social problems fall below the  $0.5$  (or  $-0.5$ ) threshold, but only just; these are homicides, educational performance, life expectancy and infant mortality.

Some recent high-profile critiques of *The Spirit Level* have, in particular, queried its correlation analysis (Saunders, 2010; Snowden, 2010), but the consensus in the broader academic literature is that a correlation does exist between income inequality and health and social problems. This literature has moved on to discuss whether or not there is a causal relationship (see below). However, the strength of the correlations between income inequality and health and social problems is sensitive to factors such as: different measures of income inequality; different measures of social stratification; variations in the countries selected; and other factors. Therefore, some further 'sensitivity' analysis would be helpful, even though the general conclusion about the existence of a correlation between income inequality and health and social problems is widely accepted.

## Causal relationships

More recent studies have moved away from simple correlation analysis to investigate whether income inequality *causes* such problems, independent of other factors. The literature is less agreed about whether or not there is a causal relationship, but some rigorous studies indicate that income inequality has an independent effect on health and social problems.

In studies which show that income inequality has a negative effect on health and social problems, the size of this effect looks small in statistical terms. However, since these studies cover whole populations, the numbers of lives involved are significant. One study, for example, suggested that the loss of life from income inequality in the US in 1990 was the equivalent of the combined loss of life due to lung cancer, diabetes, motor vehicle accidents, HIV infection, suicide and homicide (Lynch, J., *et al.*, 1998, 'Income inequality and mortality in metropolitan areas of the United States', *American Journal of Public Health*, Vol. 88, pp. 1074–1080).

Some research suggests that income inequality is particularly harmful after it reaches a certain threshold. Britain was below this threshold in the 1960s, 1970s and early 1980s, but rose past it in 1986–7 and has settled well above that threshold since 1998–9. If this threshold is indeed significant it could provide a target for policy.

The most plausible explanation for the apparent effect of income inequality on health and social problems seems to be people's anxiety about their status (*The Spirit Level*, Richard Wilkinson and Kate Pickett, 2009). This suggests that income inequality is harmful because it places people in a hierarchy which increases competition for status and causes stress, leading to poor health and other negative outcomes. Further theorising about 'status anxiety' would be helpful, to consider how it works in practice given that people compare themselves to different groups in different situations, their knowledge (or lack of it) about social stratification and the complex nature of status and self-esteem.

However, not all research studies have shown an independent effect of income inequality on health and social problems. Some have highlighted the causal effect of other factors, such as individual income (poverty/material circumstances), culture/history, ethnicity and welfare state institutions/social policies. Once again, the theorising behind these relationships could be further advanced and further empirical research carried out to test competing hypotheses.

## Effects of income inequality

A key issue is whether inequality affects all groups in society to the same extent, or some groups more than others. Some research comparing different groups in different countries suggests that people in lower socio-economic groups in more equal countries do better than those in lower socio-economic groups in more unequal countries. They may even sometimes do better than people in higher socio-economic groups in more unequal countries. Further studies on this topic would be welcome.

This study focuses on the health and social effects of income inequality, but there may also be economic effects (positive or negative). It is outside the scope of this review to assess in more detail the arguments about the relationship between economic inequality, productivity, growth and financial stability. However, there appears to be remarkably little evidence that income inequality promotes economic growth, so it is difficult to find any positive effects of income inequality. Debate about the financial crash is contentious and continues, but a number of commentators suggest that high levels of economic inequality played a role in the crash in some way.

This is a highly complex issue, both theoretically and methodologically, with disagreement among academics on many related areas. But the main conclusion of this study is that there is some evidence that income inequality has negative effects, and hardly any evidence of positive effects.

## Conclusion and policy implications

The main aim of this study was to review the evidence concerning the impact of income inequality on health and social problems. It also considered a range of policy implications. Given that the study's main conclusion is that both individual income (in terms of poverty/material circumstances) and income inequality (relative income) make a difference to health and social problems, it seems clear that both issues need to be tackled. A range of policy mechanisms could be used to do this, ranging from redistribution through the tax and benefit system to innovative income and wealth policies, stronger public services and a greater focus on equal opportunities.

## About the project

This study is an independent review of research in the field of income inequality. In particular, it looked at *The Spirit Level: Why More Equal Societies Almost Always Do Better* by Richard Wilkinson and Kate Pickett (2009), which placed income inequality firmly within public debate and argued strongly that it should be a matter of concern. *The Spirit Level* was written as an accessible overview of the evidence on the link between income inequality and health and social problems. As such, it presented a 'big idea' in social science, using data on a wide range of countries and a wide range of variables. The data analysis in *The Spirit Level* has been the subject of critique from a number of quarters, including *Beware False Prophets: Equality, the Good Society and the Spirit Level* (Peter Saunders, 2010) and *The Spirit Level Delusion* (Christopher Snowden, 2010). This study also considered these critiques, alongside the broader peer-reviewed literature in the field.

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## Further information

The full report, **Does income inequality cause health and social problems?** by Karen Rowlingson, is available as a free download at [www.jrf.org.uk](http://www.jrf.org.uk)

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