

SOCIOECONOMIC INEQUALITIES IN HEALTH IN THE
UK:
EVIDENCE ON PATTERNS AND DETERMINANTS

A short report for the Disability Rights Commission

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Introduction

The chances of living in good health and without impairment are unequal. The chances are much higher for people in more advantaged circumstances than for those further down the socioeconomic ladder. The report provides an overview of UK evidence on these health inequalities. It begins by briefly considering some key terms before summarising what is known about the patterns and determinants of socioeconomic inequalities in health.

Key terms

When death rates were high, mortality provided the standard measure of the *health* of the British population. Today, attention is also paid to people's experience of ill-health and impairment: to physical ill-health and mental health problems and to physical, sensory and cognitive impairments which make it difficult to undertake everyday activities. Only slowly, however, are research and policy beginning to focus on well-being rather than ill-being.¹

Measuring people's health poses ethical and methodological challenges, particularly for stigmatising health conditions where labels like 'disability' and 'mental illness' can imply that the cause lies within the individual, and not the circumstances in which they live. But while existing measures have their limitations, they highlight how unequally distributed are people's opportunities to live without illness and impairment.

The term *health inequalities* is sometimes used to describe the fact that health varies between individuals: some of us have good health, and some of us do not. However, the term is more usually understood to refer to the systematic differences in the health of groups occupying unequal positions in society. In particular, the term is used as shorthand for inequalities in health between

socioeconomic groups. As a result, studies concerned with other forms of social inequality typically make their focus explicit, by referring to ethnic inequalities in health, gender inequalities in health etc. These new seams of research are highlighting how dimensions of inequality overlap and reinforce each other. For example, socioeconomic disadvantage has been identified as a major reason why African-Caribbeans, Pakistanis and Bangladeshis have higher rates of poor health and chronic illness than white people - and exposure to racism is an important part of why disadvantage is both more prevalent and more severe than in the white population.^{2, 3}

Socioeconomic position refers to an individual's place in the social hierarchies built around education, occupation and income. These three components of socioeconomic position are important because of their determining influence on an individual's life chances and living standards. Each can be used to provide a hierarchical classification of socioeconomic position: from no qualifications to degree-level qualifications, from unskilled manual jobs to professional jobs, and from low income to high income. Housing tenure and household assets (for example, car ownership) provide additional measures of socioeconomic position.

But it is occupation which is the major measure of socioeconomic position in the UK. For unemployed and retired people, most recent occupation is often used. Children are classified by their parent's occupation and, while the practice is dying out, partner's occupation is often used for women living with men.

Occupation, education and income capture important dimensions of people's material and social circumstances. They also serve as proxies for other unmeasured processes which shape an individual's health. This means that associations between socioeconomic position and health – between parental education and child mental health for example - must be cautiously interpreted. It may not be parents' education which is the key influence on a child's wellbeing, but unmeasured factors which vary in line with it (like exposure to stressful family changes).

Because information on people's socioeconomic position is not readily available, area measures of disadvantage are often used instead (like the Townsend deprivation index and the government's

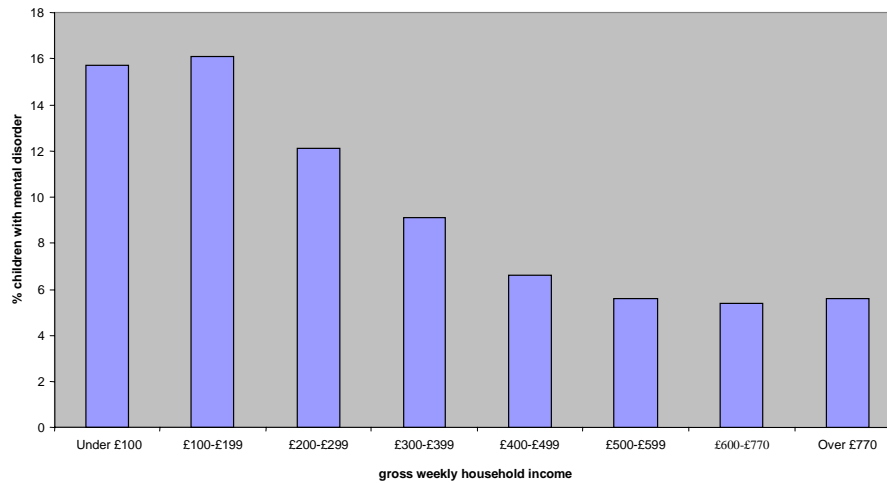
new Indices of Deprivation). But there are drawbacks to these measures. Poor people living in more affluent areas are classified as not disadvantaged, while affluent people living in poor areas are. Area measures also make it hard to separate the health effects of an individual's socioeconomic position from the effects of the wider neighbourhood. This is an important limitation. There is evidence that living in a poor area, with run-down housing, poor local services and high levels of crime, takes an additional toll on health, over and above the poor personal circumstances of the people who live there. For example, 'area effects' have been identified on children's intellectual development and on adult health, with the influence of area characteristics remaining after adjustment is made for socioeconomic position.^{4,5}

Patterns of socioeconomic inequalities in health

Socioeconomic inequalities in ill-health and disability typically take the form of a 'social gradient', in which those in higher socioeconomic groups have better health and fewer disabling conditions than groups below them. For a number of dimensions of health, rates in the poorest groups are particularly high, with the gradient flattening out among better-off groups (Figure 1 below provides an example).

Health inequalities are evident from the start of life. For example, there are gradients in birth weight, an important influence on subsequent cognitive and physical development and on a range of adult diseases. In childhood, there are also socioeconomic gradients in growth and height, in language and cognition as well as in social and emotional adjustment.⁶ As one example of this consistent pattern, Figure 1 describes the socioeconomic patterning of mental disorder among children aged 5 to 15 (based on data collected from children, parents and teachers)⁷. The study concentrated on emotional, hyperactivity and conduct disorders, experienced to a degree that they were associated with considerable distress and interfered with children's lives. Household income was used to measure children's socioeconomic position.

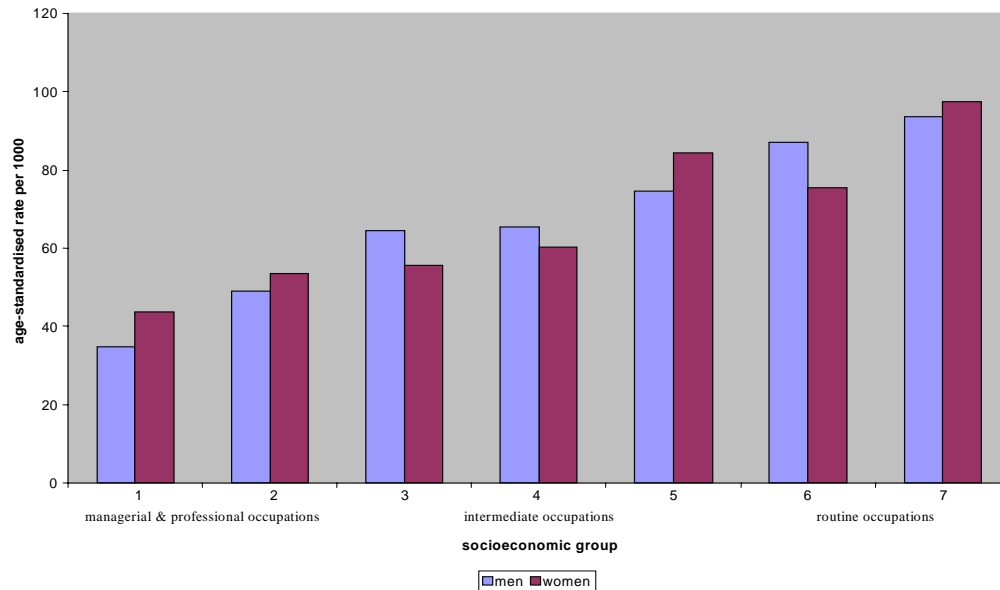
Figure 1: Prevalence of mental disorder in children aged 5-15 by gross weekly household income, Britain, 1999



Source: Meltzer et al, 2000⁷

Health inequalities persist into adulthood. Figure 2 maps the gradient in self-rated health, a key dimension of health in its own right as well as one which predicts mortality risk.⁸ It is based on a question in the 2001 census which asked people to assess their health over the past 12 months as 'good', 'fairly good' or 'not good'. It presents the age-standardised rate of 'not good' health by socioeconomic group, using current occupation (and therefore excluding those who are unemployed or who have never worked).⁹

Figure 2: Age-standardised rate (per 1000) of self-reported 'not good' health by socioeconomic group (National Statistics Socioeconomic Classification), men and women aged 25-64, Britain, 2001



Source: Doran et al, 2004⁹

Figure 2 captures a pattern which is repeated for other measures of people's wellbeing, including the experience of long-term illnesses and impairments which limit performance of everyday tasks.¹⁰ Social gradients emerge, too, in measures of health functioning, like cognitive and physical function, and psychological wellbeing.^{6, 11} Inequalities in these dimensions of health leave those in poorer circumstances more vulnerable to multiple health difficulties (to 'co-morbidity'). Psychological distress is the most common condition experienced alongside other health problems.¹²

As many people know first-hand, living with illness and impairment makes economic hardship much harder to avoid. Persisting health difficulties, and the discrimination with which they are associated, increases the risk of unemployment, dependency on welfare benefits and long-term poverty.^{13, 14} But these risks are not equally shared. Studies suggest that those in higher socioeconomic groups have a better chance of staying in employment in the face of long-term illness and impairment than those in poorer groups.^{15,}

¹⁶

The inequalities evident throughout life continue into death, with marked gradients in premature mortality (deaths before age 65) and life expectancy. The gradients are less steep for women than for men, in part because the conventional occupation-based index, where women living with men are classified by their partner's occupation, provides a less sensitive measure of women's

socioeconomic position. Studies using measures which provide a more direct measure of living circumstances (based on housing tenure and car ownership, for example) often produce steeper gradients in women's health.¹⁷

Mortality-based measures of health provide some of the clearest evidence of widening inequalities in health: in life expectancy among men and women and in male mortality, for example. Widening inequalities in these dimensions of health result from the fact that, while the health of poorer groups has improved across the last 3 decades, the rate of improvement has failed to match that achieved by better-off groups. In consequence, the gap between the highest and lowest socioeconomic groups has increased.^{18, 19}

Taken together, the evidence points to enduring inequalities in health, both across different dimensions of wellbeing and over the lifecourse. This suggests that health inequalities can not be explained by one single set of risk factors, such as smoking or poor diet. There are gradients in the 'big killers' which strike in later life, like lung cancer and coronary heart disease, and where behavioural factors play an important part. But gradients in health are also evident in younger age groups and for health outcomes which are not lifestyle-related, such as accidental injuries in childhood and psychological distress in adulthood.^{18, 20, 21}

Understanding socioeconomic inequalities in health

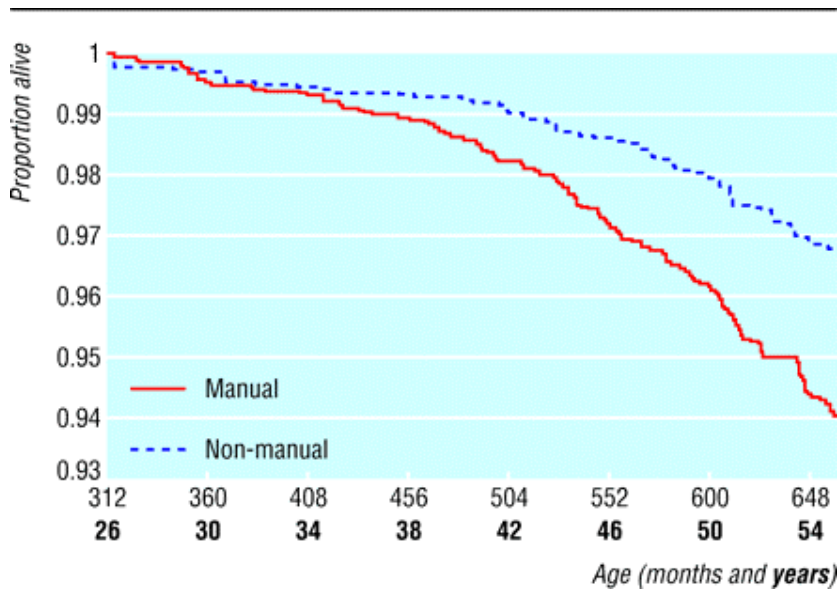
Research provides two important insights into the causes of health inequalities. It suggests, firstly, that socioeconomic position affects health indirectly, by influencing a set of intermediary factors which take a more direct toll on health. These factors include environmental exposures and health-damaging behaviours. Environmental risks can be both physical (e.g. poor housing conditions, work-based hazards and pollutants, traffic danger etc) and psychosocial (e.g. unsupportive family relationships, stressful life events). The mix of health-determining factors varies between health outcomes. For example, the social environment plays a larger role in mental illness than in accidental injuries, where the physical environment, and road traffic in particular, is the determining factor.

Secondly, these intermediary factors are unequally distributed,

with children and adults in poorer circumstances more exposed to health-damaging environments and more likely to engage in health-damaging behaviours. Unequal exposure to health risks starts at conception – and continues throughout life. For example, the effects of poverty are already evident before birth, with the mother’s poor nutritional status leaving the unborn child under-nourished at this key developmental stage – and vulnerable to chronic diseases, including coronary heart disease, stroke and diabetes, in adult life.²² Unequal exposure to health risks continues through childhood. For example, children from poorer families are more likely to live in over-crowded homes with limited amenities and play space; they are more likely, too, to experience disrupted family relationships and other stressful life events.²³

Poorer conditions in early life ‘cast long shadows forward’ over health in adult life. This is graphically illustrated in Figure 3, which draws on a study of children born in 1946 who have been followed up through adulthood. It plots the proportion of these children who were still alive in 2000 according to their socioeconomic position at birth (using their father’s occupation). It is based on deaths from age 26, when almost all were still alive, to age 54. Death rates among those born into manual households are double those growing up in non-manual households, an increased risk of death which remained after taking account of adult socioeconomic position.²⁴

Figure 3: Cumulative death rates age 26 to 54 by father’s social class at birth among men and women in the 1946 British birth cohort study



Source: Kuh et al, 2002²⁴

But health in adulthood is not only influenced by early circumstances. Conditions in adulthood also matter, with poor adult circumstances contributing to the chances of poor health and premature death over and above the effects of childhood disadvantage.⁶ Again, inequalities in health risk appear to play a major role. One important line of inquiry is pointing to the role of the work environment in the development of coronary heart disease, the major cause of death in the UK.²⁵ Professional people and senior managers are more likely to exert control over the pace and content of work and be at lower risk of developing heart disease; the greater risk faced by those in routine jobs is linked to the fact they lack control over these key aspects of their working lives. Like environmental risks, there are also gradients in behavioural risks, including poor nutrition, cigarette smoking, and sedentary lifestyles. The socioeconomic gradient in cigarette smoking has been singled out for its contribution to the higher mortality rates in lower socioeconomic groups.²⁶

The NHS has an important part to play in reducing inequalities in behavioural risks and in health. But there is evidence that those in higher socioeconomic groups are more likely to benefit from interventions – preventive and therapeutic – which are known to be effective.²⁷ For example, campaigns to encourage childhood immunization and cancer screening have been found to widen rather than narrow inequalities in uptake.^{28, 29} A major challenge for the health and social care sector is to reduce barriers to

accessing services which prevent illness and save lives.

Conclusion

This report, like the companion report, addresses key aspects of health equity. Here, the focus has been on inequalities in health between socioeconomic groups; the companion report is primarily concerned with inequalities in health and health care between people with disabilities and the wider population.

While the two aspects have been discussed separately, both are integral to the experience of people with long-term illnesses and impairments. Tackling social inequalities in health and tackling social inequalities between disabled and non-disabled people are therefore not alternative goals for public health policy in Britain. Instead, both are central to an effective equity-oriented health strategy.

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- ¹ Ryff C.D. & Singer B. (1998) The contours of positive health, *Psychological Inquiry*, 9, 1, 1-28
- ² Nazroo J.Y. (1997) *The Health of Britain's Ethnic Minorities: findings from a national survey*, Policy Studies Institute, London.
- ³ Nazroo J.Y. (2003) The structuring of ethnic inequalities in health: economic position, racial discrimination and racism, *American Journal of Public Health*, 93, 2, 277-284.
- ⁴ Leventhal T. & Brooks-Gunn J. (2000) The neighbourhoods they live in: the effects of neighborhood residence on child and adolescent outcomes *Psychological Bulletin* 126(2), 309-37.
- ⁵ Davey Smith G., Hart C., Watt, G., Hole, D. & Hawthorne, V. (1998) Individual social class, area-based deprivation, cardiovascular disease risk factors and mortality, *Journal of Epidemiology and Community Health*, 52, 399-405.
- ⁶ Kuh D., Power C., Blane D. & Bartley M. (2003) Socioeconomic pathways between childhood and adult health. In *A Life Course Approach to Chronic Disease Epidemiology: tracing the origins of ill health from early to adult life* (Eds. D.L. Kuh & Y. Ben-Shlomo), 2nd edition, Oxford University Press, Oxford.
- ⁷ Meltzer H. & Gatward R. with Goodman R. & Ford T. (2000) *The Mental Health of Children and Adolescents in Great Britain*, Office for National Statistics, London.
- ⁸ Power C., Manor O. & Matthews S. (1999) The duration and timing of exposure: effects of socio-economic environment on adult health, *American Journal of Public Health*, 89, 7, 1059-1066.
- ⁹ Doran T., Drever F. & Whitehead M. (2004) Is there a north-south divide in social class inequalities in Great Britain? *British Medical Journal*, 328, 1043-45.
- ¹⁰ Office for National Statistics (ONS) (2002) *Living in Britain: Results from the 2000 General Household Survey*, The Stationery Office, London.
- ¹¹ Hemingway H., Nicholson A., Stafford M., Roberts R. & Marmot M. (1997) The impact of socioeconomic status on health functioning as assessed by the SF-36 questionnaire, *American Journal of Public Health*, 87, 9, 1484-90.
- ¹² Watt G. (2002) The inverse care law today, *The Lancet*, 360, 252-54.
- ¹³ Maughan B., Collishaw S., & Pickles A. (1999). Mild mental retardation: psychosocial functioning in adulthood. *Psychological Medicine* 29, 351-366.
- ¹⁴ Power C., Stansfeld, S.A., Matthews S., Manor O. & Hope S. (2002) Childhood and adult risk factors for socioeconomic differentials in psychological distress, *Social Science and Medicine*, 55, 1989-2004.
- ¹⁵ Bartley M. & Owen C. (1996) Relation between socioeconomic status, employment, and health during economic change, 1973-93, *British Medical Journal*, 313, 445-9.

- ¹⁶ Burstrom B., Whitehead M., Lindholm C. & Diderichsen F. (2000) Inequalities in the social consequences of illness: how do people with longterm illness fare on the labour markets of Britain and Sweden? *International Journal of Health Services*, 30, 435-451.
- ¹⁷ Smith J. & Harding S. (1997) Mortality of women and men using alternative social classifications. In *Health Inequalities* (Eds F. Drever & M. Whitehead), Office for National Statistics, London.
- ¹⁸ Roberts I. & Power C. (1996) Does the decline in child injury mortality vary by social class? *British Medical Journal*, 313, 784-86.
- ¹⁹ White C., van Galen F. & Chow Y.H. (2003) Trends in social class differences in mortality by cause 1986 to 2000, *Health Statistics Quarterly*, 20, 25-37.
- ²⁰ Power C., Matthews S. & Manor O. (1996) Inequalities in self-rated health in the 1958 birth cohort: lifetime social circumstances or social mobility? *British Medical Journal*, 313, 449-53.
- ²¹ Weiss S. & Lewis G. (1998) Material standard of living, social class and the prevalence of the common mental disorders in Great Britain, *Journal of Epidemiology and Community Health*, 52, 8-14.
- ²² Barker D.J.P. (1998) *Mothers, Babies and Health in Later Life*, Churchill Livingstone, Edinburgh.
- ²³ Power C. & Matthews S. (1997) Origins of health inequalities in a national population sample, *The Lancet*, 350, 1584-89.
- ²⁴ Kuh D., Hardy R., Langenberg C., Richards R. & Wadsworth M.E.J. (2002) Mortality in adults aged 26-54 related to socioeconomic conditions in childhood and adulthood: post-war birth cohort study, *British Medical Journal*, 325, 1076-80.
- ²⁵ Marmot M., Siegrist J. & Theorell T. (1999) Health and the psychosocial environment at work. In *Social determinants of Health* (Eds M.Marmot & R.G.Wilkinson), Oxford University Press, Oxford.
- ²⁶ Jarvis M.J. & Wardle J. (1999) Social patterning of health behaviours: the case of cigarette smoking. In *Social Determinants of Health* (Eds M. Marmot M. & R.G. Wilkinson R.G), Oxford University Press, Oxford.
- ²⁷ McKee M. (2002) What can health services contribute to the reduction of inequalities in health? *Scandinavian Journal of Public Health*, 30 (suppl 59), 30, 54-58.
- ²⁸ Reading R., Colver A., Openshaw S. & Jarvis S. (1994) Do interventions that improve immunization uptake also reduce social inequalities in uptake? *British Medical Journal*, 308, 1142-4.
- ²⁹ Adams J., White M. & Forman D. (2004) Are there socioeconomic gradients in stage and grade of breast cancer at diagnosis? *British Medical Journal*, 329, 142-3.

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