

Closing the Health Gap

Michael Marmot
Institute of Health Equity
Department of Epidemiology and Public Health
UCL
m.marmot@ucl.ac.uk

This paper is based on a keynote lecture held June 22, 2016, at the 8th Nordic Health Promotion Research Conference (NHPRC).

A central theme of my book, *The Health Gap*, is that the level of health of a population, and the magnitude of inequalities in health, are strong indicators of the good society (1). It is a simple proposition, one that would seem to ignore complex philosophical discussion on the just society – “justice” being one way to approach “good”. For example, philosopher Stuart Hampshire wrote that “conceptions of the good, ideals of social life ... are infinitely various” (2). There is no one conception of the good society. But, Hampshire then went on to say: “the evils of great poverty, and of sickness and physical suffering, and of the misery of bereavement are immediately felt as evil by any normally responsive person.” One, not the only, criterion of the good society, then, is minimising avoidable sickness, suffering and poverty. Social determinants of health can be expressed as seeking to build the good society through meeting the needs of people in an equitable way. Health equity then becomes the indicator of the degree to which those needs are met. Simply, health equity is a measure of the good society.

With that in mind, I want to start my examination of the good society in an on-line warehouse, from Chapter 6 of *The Health Gap*.

*Alan was a picker. In a vast warehouse. You order goods online. Alan goes to the shelf where they are stored, ‘picks’ them, places them in a trolley and takes them to the packer, who puts them in a box, sticks on a label, and you have them a couple of days later. It’s so neat: you click, he picks, she packs and sticks. It’s convenient for you; less so for Alan. Alan **was** a picker. He was fired for collecting three penalty points.*

When on nights, a typical shift lasted ten and a half hours, punctuated by two fifteen-minute breaks and one half-hour break – i.e. nine and a half hours of work. On arrival for his shift, Alan was handed what was in effect his controller and conscience: a hand-held electronic device that directed him to Row X to pick up item Y and put it in his trolley; then to Row P to pick up item Q, and so on. When his trolley contained about 250 kg his device would direct Alan to the packers. Then he’d be off again for another load. His target was 110 large items an hour (more for smaller items), two a minute. That was the job, for nine and a half hours, plus the hour of breaks.

His hand-held electronic gizmo was not just his controller, it also fed back what he had done, so his performance could be monitored to see how he did against his target. He was warned when he did not keep up the pace. If he fell too far behind he would incur half a penalty point; more, a whole point. ‘Did you ever,’ I asked Alan, ‘in all the time you worked there,

meet your target and finish a shift with a sense of achievement?’ Not once, was his answer. Hour after hour, day after day, and feeling always that he had fallen short.

‘Did you feel that once you got used to it, at least you knew that you had secure employment?’ No, he always felt he was on borrowed time because of the penalty points.

‘How did other employees feel about the job?’ Alan didn’t know. He rarely spoke to anyone but his line manager, whose job it was to warn him about his failure to meet targets. There was no time to talk to other employees while the shift was on. During the break, the walk from one end of this aircraft hangar of a warehouse to the canteen took so long, plus the security going in and out of the warehouse, that there was simply no time to chat with anyone while taking a few minutes to eat and drink. When his shift finished the security was on his time not the company’s.

One day he turned up late for a shift, about three minutes, and added to his penalty points. It took about eight weeks to accumulate the three penalty points, but he did, and was summarily dismissed.

My reaction to Alan’s experiences was that it was as if his employers had taken everything we know about damaging aspects of work, concentrated them in a syringe and injected them into Alan. Added to the heavy physical demands, Alan’s work was characterised by high demand with no control over the work task, by high effort and little reward, by social isolation at work, by job insecurity, by organisational injustice, and by shift work – all of which have been shown to damage health. About the only ‘good’ thing about Alan’s work was that it wasn’t sedentary. That would have been fine had his activity not involved physical strain and heavy lifting.

It is work such as this that is contributing to inequalities in health. All across Europe the lower the status the more likely is work to be characterized by the type of stress at work that I have just laid out: high demand/low control, effort reward imbalance, low organizational justice, social isolation, shift work and job insecurity. Each of these damages health and contributes to the social gradient in health – the lower the social position the worse the health. We have our first insight to the good society: work that enables people to be empowered, that promotes human flourishing and improves health.

Allan’s story is not to imply that all of health inequalities are related to work. People are not randomly allocated into jobs, secure or otherwise, soul-destroying or life-enhancing. We need to take a life-course approach. But first ...

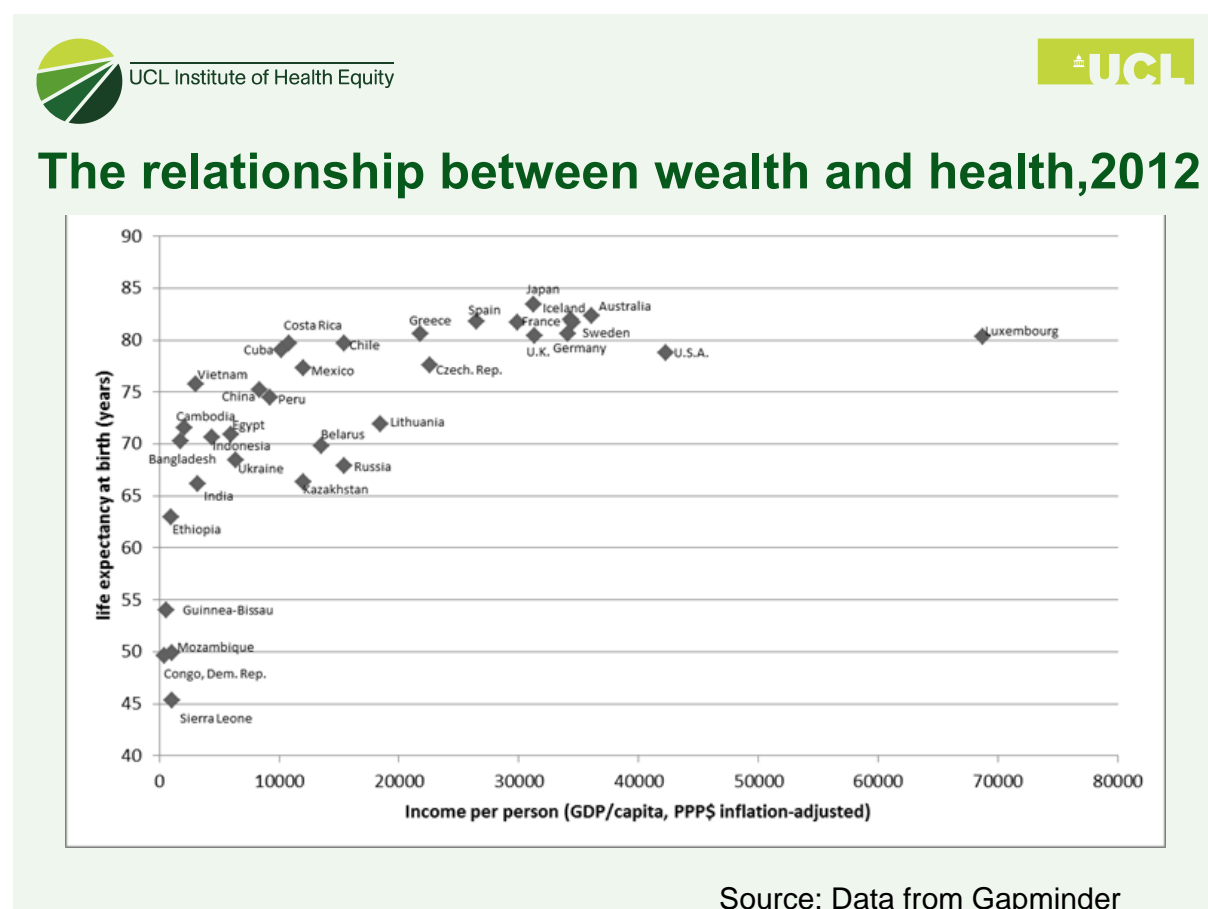
The good society and health equity

Allan works in a rich society. His experience illustrates powerfully that a country’s national income is no guarantee of the conditions for good health. The Preston curve in Figure 1, plotting life expectancy against national income, makes this clear. At low levels of national income there is a strong relation between income and life expectancy – a small increase in national income is associated with a large increase in life expectancy. Much of this will be the result of declines in infant and child mortality. The curve then levels off. In passing, I

note that if you take the log of income, as economists are wont to do, the relation of income to life expectancy is more linear (3). The fact is, though, above a national income of about \$13,000 adjusting for purchasing power, there is little relation between national income and life expectancy. Costa Rica, Cuba and Chile are not so different in life expectancy from richer countries such as UK, Germany, the US and Luxembourg.

At lower levels of national income there is considerable scatter around the line. Russia has about the same national income (at PPP) as Chile but about 12 years shorter life expectancy. In this comparison, the differences do not arise from deaths in children – which are low in both countries – but from adult mortality. Heart disease, violent deaths, and other alcohol-related deaths are high in Russia.

Figure 1



Both comparisons – the fact that for a given level of income, some countries are healthier than others; and that becoming richer than Costa Rica is not the route to better health – suggest that there is more to good health than national income. To be sure, at low levels of income, getting richer, for a country as for a family, allows improvements in the conditions that favour good health. But at higher levels of national income other social features of societies come in to play. Identifying these other social features that lead to health equity, will yield answers to the question, as I posed it at the outset, of what constitutes the good society.

UNDP, the United Nations Development Program, has developed views on these other

social features of society. The Human Development Report 2013 identifies: ‘unwelcome types of growth: jobless growth, which does not increase employment opportunities; ruthless growth, which is accompanied by rising inequality; voiceless growth, which denies the participation of the most vulnerable communities; rootless growth, which uses inappropriate models transplanted from elsewhere; and futureless growth, which is based on unbridled exploitation of environmental resources’ (4). By contrast, development states put emphasis on inclusive growth. UNDP shows a close correlation between *public* expenditure on education and health care and the human development index a dozen years later – the HDI includes, literacy, national income and life expectancy. I would not want to argue that this demonstrates causation. It is a reflection, though, that the kind of society that privileges public expenditure on education and health care is likely to be characterised by good levels of development, as captured by the HDI.

As an example of how a rich society can fail to meet people’s needs, in the paper in this issue on doctors and social determinants of health (5), I cited the report by Case and Deaton on the astonishing rise in mortality in the US among non-Hispanic whites, aged 45-54 (5). The causes of death that made up this increase were: poisonings from drugs and alcohol; suicide; chronic liver disease, alcohol related. Then, of course, there is the tide of violent deaths. I describe this as an epidemic of disempowerment. In no simple way is it lack of money, but is a reflection of lack of life chances, in which money will play a role, to be sure, but so will other features of society.

We see a similar pattern in Glasgow (Figure 2). It has commonly had higher mortality rates than other UK cities. A comparison between Glasgow, Manchester and Liverpool is instructive. All three post-industrial cities have similar levels of poverty and income inequality, but mortality rates are higher in Glasgow (7).

Figure 2

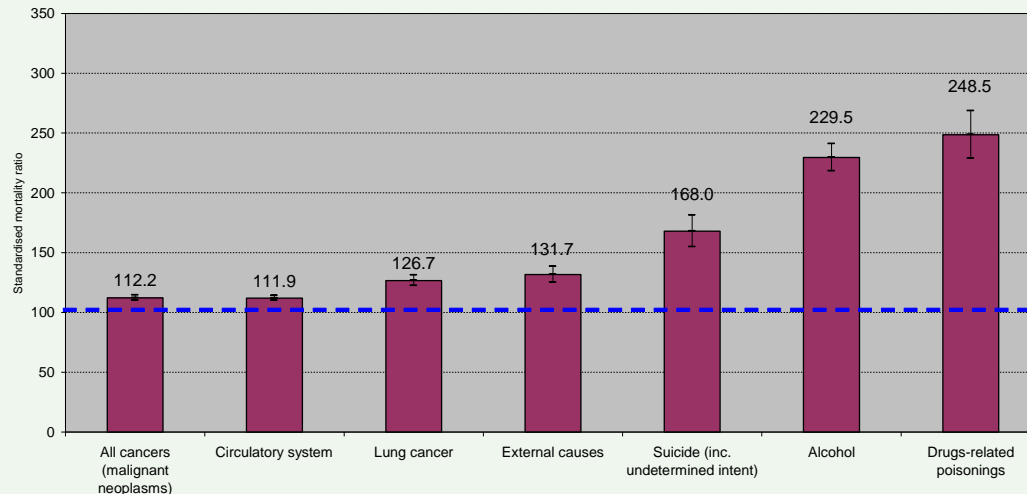


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SMRs by cause, all ages: Glasgow relative to Liverpool & Manchester

All ages, both sexes: cause-specific standardised mortality ratios 2003-07, Glasgow relative to Liverpool & Manchester, standardised by age, sex and deprivation decile
Calculated from various sources



Source: Walsh D, Bendel N., Jones R, Hanlon P. It's not 'just deprivation': why do equally deprived UK cities experience different health outcomes? Public Health, 2010
from H Burns, CMO, Scotland

The similarity with the US figures is striking. The causes contributing most to the relative excess mortality in Glasgow are: drugs-related poisonings, alcohol-related deaths, suicide and external causes.

Both in the case of Glasgow and the rise in mortality in US whites, the causes are psychosocial. Lack of control, disempowerment, will be influenced by material deprivation. But the pathway is through the mind. In fact, a major part of health inequities can be attributed to social determinants affecting the mind, starting in early childhood.

We can see this in Glasgow. When we published the report of the Commission on Social Determinants of Health (CSDH)(8) in 2008, I drew attention to stark inequalities in mortality between local areas of Glasgow: life expectancy of 54 for men in Calton, compared to 82 in Lenzie.

Health Equity and the Life course.

Not only is Calton in Glasgow characterised by poor health, but the crime rates are high. Commonly, we see this link between crime and poor health. In *The Health Gap*, for example, I write about stark inequalities in Baltimore. In the poorest part male life expectancy is 62, twenty years shorter than in the richest part. In the poor part, one third of youngsters aged 10-17 are arrested each year for a juvenile disorder; one in fifty in the rich area. Over a five year period there were 100 non-fatal shootings per 10,000 residents in the poor area; none in the rich area.

In Glasgow, guns are less readily available and shootings are much less common. But crime is rife. The story of “Jimmy” growing up in Calton, is based on a real case history given to me by a detective chief super intendant.

Jimmy was born in Calton in an unstable home. He was raised by a single mother. She had a succession of male partners, each of whom abused Jimmy, physically if not sexually. By the time he went to school, he was labelled as having behaviour problems. As soon as he was old enough he was labelled as having delinquency problems and was involved in gang-related violent activities, which led to trouble with the police. Jimmy was enrolled in an apprenticeship but dropped out; he has never had a ‘proper’ job, but had short term temporary manual work. As with his sub-culture, any money Jimmy gets goes into drink and drugs; his diet, if you could call it that, consists of pub food, fast food, and alcohol. Jimmy has had a series of short-term girlfriends, but there is a question of alcohol-fuelled violent behaviour.

It is men like Jimmy who can expect to live shorter lives than men in India. Average life expectancy for men in India was 62 at the time that it was 54 for men in Calton. Jimmy’s poor health prospects will not be improved by telling the adult Jimmy to pull his socks up and behave better, and listen to health advice on diet, drinking and smoking. Jimmy’s history illustrates two important features of early childhood that are necessary for good child development, and better health in adulthood: presence of good influences and absence of the bad. Because of his disrupted family life, Jimmy did not receive the nurturing necessary for cognitive, linguistic, emotional, social and behavioural development (9). He was also exposed to what has become known as Adverse Child Experiences, ACEs, which increase risk of subsequent physical and mental disease in adulthood, damaging health behaviours, and domestic violence – becoming both a victim and a perpetrator (10, 11).

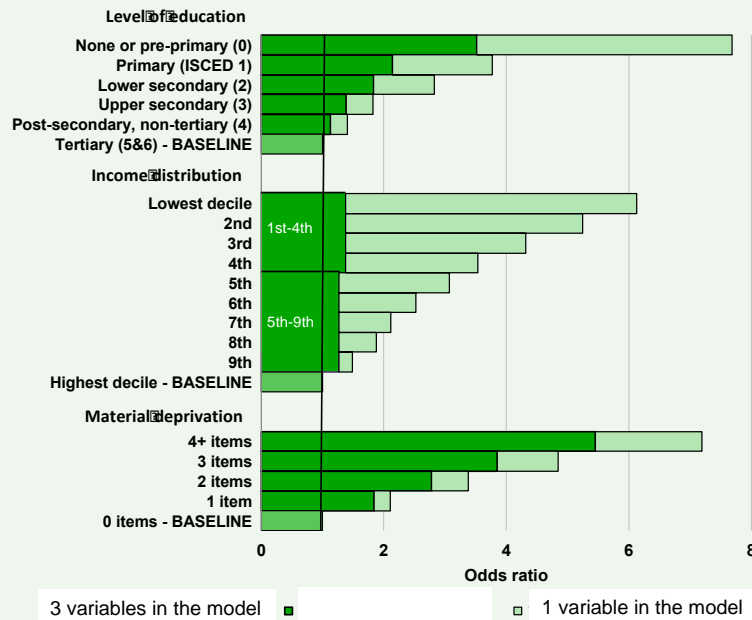
Before going on to discuss evidence for policies, through the life course, that would reduce health inequalities, it is well to remember that Jimmy is one end of a spectrum. Health follows a social gradient, illustrated in Figure 3, with data from 25 Member States of the European Union (12). It shows the odds of reporting poor or very poor health among adults according to education, income, and measures of material deprivation. Taking each variable singly, there is a gradient – it is not only the lowest group that has poor health.

Education, income, and material deprivation are correlated. Not surprisingly, when all three variables are put in the model together, the link of each with ill-health is reduced. In this analysis, though, there remain clear social gradients with education, and material deprivation, but not with income. Not to over-interpret, but an explanation of the findings could be that education is a determinant of income, and material deprivation a consequence. Having taken these two into account, income is no longer an independent predictor of ill-health. It still may be important, of course, if it is an influence on other things that are related to health.

Figure 3



Estimated odds of reporting poor or very poor general health by socioeconomic characteristics, 25 EU Member States*, 2010



Source: Health inequalities in the EU

The contrast between Figures 2 and 3 in the relation of income to health should give us pause. In the univariate analysis of Figure 3, people in the second top decile have slightly worse health than people in the top decile; people in the third top worse than the top – the gradient runs all the way from top to bottom. In Figure 2, examining not poor health but life expectancy, there is little relation between national income and health among richer countries. Above, I referred to short life expectancy in the poor part of Baltimore. Median household income in that neighbourhood was \$17,000. In sheer money terms the poor of Baltimore are richer than the average in Costa Rica, but men in the poor part of Baltimore have life expectancy of 62 compared to a Costa Rican average of around 76. We could say that the men of poor Baltimore are *relatively* poor, compared to the US average. They are. But in any society people at the bottom of the income gradient are relatively poor. The question is what being relatively poor means in a given society. Here, I follow Amartya Sen (13). Relative inequality with respect to income corresponds with absolute inequality with respect to capabilities. Being relatively poor in Baltimore, or Glasgow, deprives one of the possibilities necessary to lead a healthy life – the six domains that I lay out in the next section.

The central point, here, is that health follows a gradient. Jimmy's early childhood experiences, both lack of the positive and presence of the adverse, may be extreme. More generally, both the positive and the negative follow the social gradient: the more deprived the family the lower the nurturing input from parents (14), and the greater the frequency of

adverse child experiences. Indeed, most of the key social determinants of health, through the life course, follow the social gradient.

Challenges to the Marmot Six – the UK as example

The WHO Commission on Social Determinants of Health had a global reach. But that led to important issues. How do you formulate recommendations for Kenya that would be applicable to Kazakhstan, for Guinea that would be applicable to Glasgow, for Peru that would fit Philadelphia? We made a virtue of necessity and recommended that countries should take the principles of the CSDH and develop its practical applications suitable for their own context.

In Britain, the government asked me to lead a Review, answering the question of how we could apply the findings and recommendations of the CSDH to reduce health inequalities in one country, England. We published the Marmot Review, *Fair Society Healthy Lives* in 2010 (15).

The news of what happened next is mixed. On the one hand, the government issued a Public Health White Paper, saying that it was the government's response to the Marmot Review, that reduction of health inequalities had to be at the centre of public health strategy, and that this would require action on the social determinants of health. Very encouraging. Further, many local authorities have used the six domains of recommendations in *Fair Society Healthy Lives* as a template for policies. Coventry, for example, has declared itself a "Marmot City".

On the other hand, there are major challenges in the political and economic environment, which are summarised in Figure 4.

Figure 4

Fair Society: Healthy Lives: some areas for concern

A. Give every child the best start in life

- Funding issues, child poverty

B. Enable all children, young people and adults to maximise their capabilities and have control over their lives

- Skills training, NEETS, whole school approaches

C. Create fair employment and good work for all

- Youth unemployment, contract workers, insecure employment, involuntary part-time working, ALMP policies

D. Ensure healthy standard of living for all

- Minimum income standard, minimum wages, benefit caps

E. Create and develop healthy and sustainable places and communities

- Green policies, social isolation, housing

F. Strengthen the role and impact of ill health prevention

- Cost inflation, resource allocation, demographic pressures

I will use UK experience to illustrate areas where the policy environment shapes actions on social determinants of health.

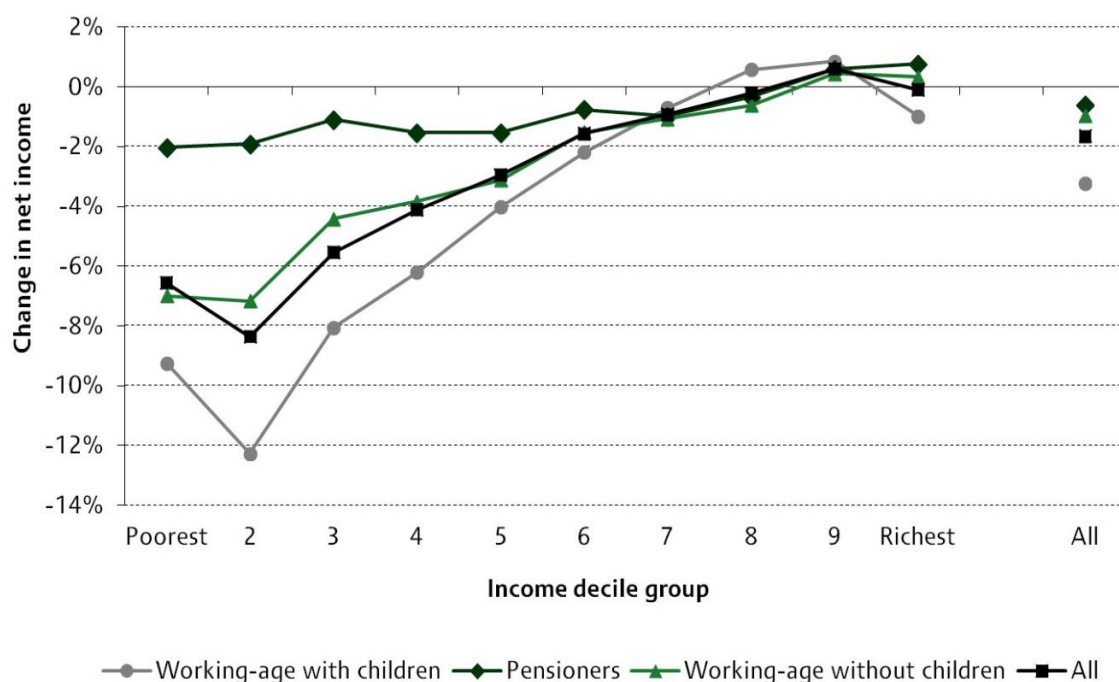
Child poverty

I suggested in the companion paper in this issue (5) that reduction of child poverty would be one route to improving early child development. Child poverty can be reduced by actions of the Minister of Finance. The prospects in Britain do not look promising (Figure 5).

The Institute of Fiscal Studies has estimated the future effects on income of tax and benefit reforms, according to deciles of income. Pensioners are reasonably well protected. It has been government policy to preserve pensioner income. Parenthetically, it has not escaped notice that pensioners are more likely to vote than people of younger ages, and more likely to vote Conservative. By contrast, families with children are projected to sustain big losses in income as a result of changes to taxes and benefits – the lower the income the greater the loss. Such policies will worsen child poverty and increase inequality. Putting health equity at the heart of policy making would not lead to such a policy.

Figure 5

Chart 4: Long-run impact of tax and benefit reforms introduced between May 2015 and April 2019 by income decile and household type (including universal credit) [[Download the data in Excel](#)]



The other strategy to improve early child development is to break the link with deprivation. Services to support families are, in general, funded by local authorities. Their funding has been cut sharply, with the resultant closure of children's centres.

Education

There are clear social gradients in educational performance: the less deprived the neighbourhood in which schools are located the better do young people perform in national exams. Part of this may be down to quality of schools. But the social environment plays a key role. A study of children's cognitive performance at age 7, scores on mathematics and reading tests, demonstrated risk factors for poor performance. The greater the number of risk factors the poorer was the performance: low birth weight, not being breastfed, maternal depression, having a lone parent, family income less than 60% of the median, parental unemployment, low maternal qualifications, damp housing, social housing, living in a deprived area. All of these risk factors follow the social gradient and contribute to inequalities in school performance. Each is potentially remediable.

Employment and working conditions

We are back where we started with Alan in the on-line warehouse. It is not difficult

conceptually to design work places without the psychosocial characteristics that lead to ill-health. That is, workplaces with high control, favourable balance between efforts and rewards, job security, organisational justice, support from managers and co-workers and without shift work. Not difficult conceptually, but we have to find ways to implement what we know is good for health at work.

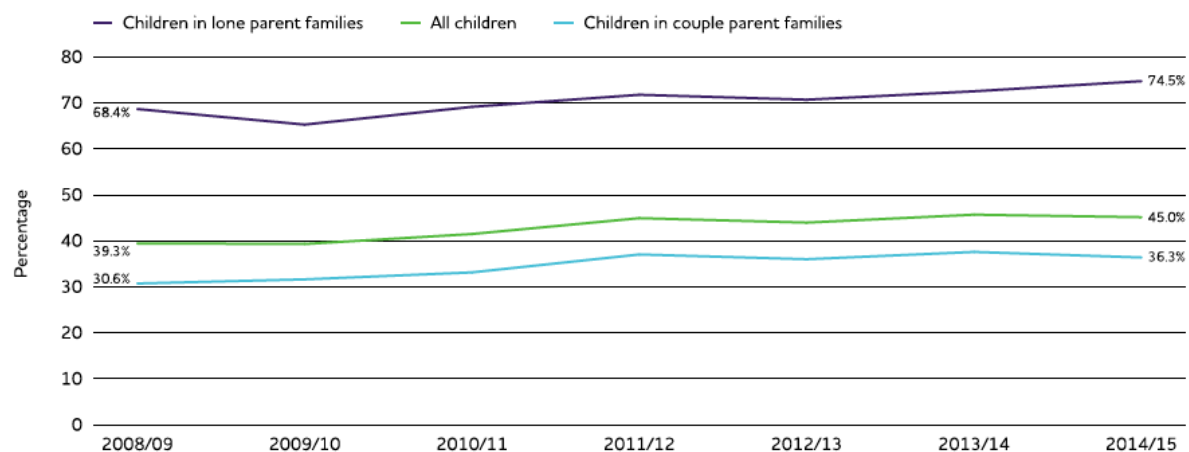
Individuals can be benefited, of course, by having the education and skills that give them the opportunities for more satisfying work. A crisis for European countries is the large number of school leavers not in employment, education or training (NEET). Evidence from Wales suggests that working in schools to identify young people at risk of NEET can reduce the prevalence (16). Such action will help individuals. More generally, reducing the numbers of NEETs must be a task of government policy. Austerity will not be a solution.

Minimum income for healthy living

In the Marmot Review, following Jerry Morris (17), we recommended that everyone should have at least the minimum income necessary for a healthy life. The Joseph Rowntree Foundation does something similar, calculating a Minimum Income Standard (MIS) as an indicator of poverty. Figure 6 shows trends in this measure for families with children (18).

Figure 6

Figure 18: Proportion of children below MIS by family type



In 2008/9, at the onset of the global financial crisis, 39% of all children were in families below MIS. For children in couple parent families it was 31%, for single parent families, 68%. By 2014/15 the proportions below MIS had risen to 45% for all children, to 36% for couple parent families, and to 74.5% for children in lone parent families. The tax and benefit policies illustrated in Figure 5 are set to make this work. A major change in fiscal policy is needed – one that puts health equity at the centre.

Work should be a way out of poverty. No longer. In the UK, in 2014/15 of working-age households below the minimum income threshold, 39% had no adult working, but 61% had at least one adult working, at least part time. People are in poverty not, largely, because

they are unwilling or unable to work, but because they are lowly paid.

Where people are below the Minimum Income Standard, in work or out, welfare payments can make a difference. Olle Lundberg and others have produced a body of work showing that the more generous a country is with its welfare payments the narrower the health inequalities (19).

Healthy communities to live and work

The Marmot Review had much to say about housing, transport, air pollution and environmental quality in general and their impact on health inequalities. Here, in my list of challenges, I will confine myself to funding for local authorities. Between 2009/10 and 2014/15 funding to local authorities in England was characterised by (https://www.ifs.org.uk/uploads/publications/pr/ebn_pr_local%20government.pdf) :

- 23% cuts in the spending power of local authorities - after accounting for inflation and population growth
- Net spending per capita on social care cut by 17% in real terms
- Central government grants cut by 39% per person in real terms
- On average cuts were greatest in areas with a high level of spending need relative to revenue-raising capacity and those with faster population growth.

Each of these is likely to contribute to increase in health inequalities. Together they make the task of local action, particularly in deprived areas, much more difficult.

Social determinants and prevention

This section could be subtitled: the causes of the causes. We know well the proximate causes of ill-health that arise from individual behaviours. What we need now is a better understanding of how the social environment interacts with psychological processes to explain the social gradient in smoking, obesity, lack of physical activity and the like. For example, there is a literature suggesting that poverty cause stress and negative affective states which may lead to short-sighted decision making, possibly by favouring habitual behaviours at the expense of goal-directed ones (20).

It is likely that the life course influences sketched above will lead to adults better able to make the judgements, and have the resources, needed to make healthy choices.

Do Something ...

Making progress on health equity through action on social determinants of health will

require cross-government action and a commitment to social justice. The commitment might be at community and city level, in regions, and in countries. There are encouraging examples from round the world on action on social determinants of health. In the European Review of Social Determinants and The Health Divide (21), we were dealing with countries at different levels of social development. We adopted a formulation from our Swedish colleagues. If a country has made little progress on social policies that would advance health equity, do something. If further along, do more. And if you are Sweden or Norway, do better.

Do something, do more, do better.

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