

## CURRENT TOPIC

## Poverty and the health of children and adolescents

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The links between poverty and child health are extensive, strong, and pervasive. By this I mean that virtually all aspects of health are worse among children living in poverty than among children from affluent families; that the difference in health between poor and well off children poses a substantial public health problem; and that children's health varies closely with even the most subtle of socioeconomic differences. Even in a disorder such as cystic fibrosis, with an equal incidence in different social groups, survival is strongly influenced by social factors.<sup>1</sup>

This paper describes the associations between social disadvantage and various aspects of child health. It then discusses the evidence that poverty and economic factors are central to the causes of social differences in child health. Alternative explanations of the links are then considered. Finally, the implications for policy of the research evidence are outlined. The material in this paper is based on a memorandum requested by the House of Commons Health Committee as part of the evidence they collected for their inquiry into children's health in the UK. This inquiry began in 1996 and the bulk of the memorandum is reproduced here with the permission of the committee.

### Links between social disadvantage and child health

#### MORTALITY

Infant and perinatal mortality has long been known to vary socially. Infant mortality was used to validate the Registrar General's classification of occupations into social classes<sup>2</sup> and is also widely accepted as an accurate indicator of a country's economic and social development.<sup>3</sup> Infant mortality was a key indicator in the Black report<sup>4</sup> and the social differences persist; in 1993 infant mortality in the most affluent class (married, social class I) was 4.3/1000, whereas in the poorest class (unmarried, social class 'other') it was 18.5/1000.<sup>5</sup>

Overall, mortality throughout childhood and adolescence follows this social pattern; the only causes of death which do not show a consistent social gradient are those from cancer.<sup>6</sup> The social gradient in mortality appears to be steeper at younger ages and flattens in adolescence,<sup>7</sup> although this may be an artefact of the small number of deaths<sup>8</sup> and of the standard social class classification; when 'unoccupied' classes are included the social gradients

persist into adolescence.<sup>9</sup> The cause of death with the steepest social gradient is accidental injury.<sup>10</sup> Childhood mortality varies even more steeply with other more direct measures of socioeconomic circumstances—for instance, census based area deprivation measures.<sup>11</sup>

#### HEALTH AT BIRTH

Moving away from mortality, a great deal of work has been performed on birth weight and growth because these are sensitive measures of the overall health and wellbeing of children.<sup>12-13</sup> Average weight at birth and the proportion of infants born with low birth weight or prematurely vary with the social circumstances of the parents.<sup>14-16</sup> These variations have changed little over the years. The long term morbidity and mortality associated with low birth weight extend into old age and contribute to the explanations for social differences in adult mortality.<sup>17-18</sup>

#### GROWTH

Similar considerations apply to height. Children from poor families are around 3 cm shorter than children from affluent families,<sup>19-21</sup> although differences of up to 5 cm have been found with more sensitive measures of social circumstances.<sup>22-23</sup> These may not seem to be large differences compared with the normal genetic variation of around 30 cm, but genetic differences in height have no health implications, whereas a failure to achieve height potential, even by a centimetre or two, indicates a considerable and longstanding impairment of past health and of the outlook for future health and longevity.<sup>24-25</sup>

#### PHYSICAL MORBIDITY

There are social variations in a wide range of other aspects of physical ill health in childhood. The evidence is less accessible—for instance, many studies report social differences in medical disorders as incidental confounding factors which interfere with the primary aim of teasing out the biological mechanism. This seems to miss the point because the social factors may be more amenable to change than the biological factors. Children from poor backgrounds are more commonly affected by infections, particularly respiratory<sup>26-27</sup> and gastrointestinal<sup>26-28-29</sup> infections, wheezing illness in infancy,<sup>30</sup> failure to thrive in infancy,<sup>31</sup> general ill health,<sup>32</sup> anaemia and nutritional

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deficiencies,<sup>33-34</sup> asthma (there is some debate about this, admittedly),<sup>27-35-37</sup> middle ear disease,<sup>38-40</sup> dental caries,<sup>41</sup> and permanent visual loss and squint.<sup>42</sup> Disorders related to poverty affecting adolescents include teenage pregnancy<sup>43</sup> and accidents.<sup>44</sup>

#### ACCIDENTS

Accidents deserve a special mention. They are the major cause of death in children over 1 year and an important cause of long term morbidity and disability.<sup>45</sup> Social variations in accidental injury are wider than any other cause of ill health in childhood.<sup>10</sup> Geographical variations in accident rates between affluent and deprived areas are wider still.<sup>46-47</sup> Because accidents are 'place specific'—that is, they happen in part because of the risks associated with the place they occur—these geographical variations indicate more clearly the links between social disadvantage, environmental risk, and accidental injury.

#### PSYCHOLOGICAL AND DEVELOPMENTAL DISORDERS

Psychological, emotional, and developmental wellbeing are also closely associated with socioeconomic status.<sup>48-49</sup> There is extensive published evidence in the child development and child psychiatry literature about the detrimental effects of chronic family adversity.<sup>50-52</sup> It can be difficult to disentangle exactly what is meant by this term, but it includes material and economic hardship as well as family discord, disruption and dysfunction, parental mental health problems, and difficulties in coping with the day to day demands of family life. Needless to say, all of these latter problems are strongly associated with socioeconomic hardship.

#### PUBLIC HEALTH IMPORTANCE

The public health importance of social differences in child health is considerable. If the health experience of all children in Britain was the same as that of children from more affluent families, then all the Health of the Nation targets relating to children would be easily met.<sup>53</sup> If the death rates in all social classes were the same as in classes I and II combined, then over 2000 lives would be saved among 0–15 year olds each year, a quarter of all deaths in this age group.<sup>6</sup> The public health importance of the emotional, psychological, and developmental problems are equally serious as these have such detrimental consequences on long term mental health.<sup>54</sup>

#### HEALTH AND CHILD POVERTY

In terms of the changing face of poverty, the proportion of children in poor families has risen considerably in recent years. Using figures from the Department of Social Security it has been estimated that a third of all children are living in conditions of poverty.<sup>55</sup> The burden of poverty has also shifted over the past 20 years from being shared between the elderly and families in similar measure,<sup>56-57</sup> to being a problem largely for families with young children,<sup>55</sup> particularly those with single

parents.<sup>9</sup> The associated health problems will compound the disadvantage these children already have.

#### Are social variations in child health caused by poverty?

Definitive proof that poverty causes poor health is unlikely ever to be available because the experimental design (that is, to randomly assign one group of families to poverty and one to affluence) is unethical. However, the evidence points strongly to economic and material factors being at the root of the causes of social differences in child health.

#### CONSISTENCY

The first point is the consistency of the evidence. Social characteristics can be measured in many ways—for example, social class, census characteristics of area of residence, parental level of education, income, or home or car ownership. These methods of classification all result in similar health variations being found. The one (and probably only) variable they all have in common is material and economic factors. As a general rule, methods of social classification which specifically measure material factors result in wider and more distinct health variations.<sup>58-59</sup>

#### INTERNATIONAL COMPARISONS

Social inequalities in child health occur in all countries, but they are narrower in countries with narrower differences in income between the social classes (such as Sweden, the Netherlands, and Denmark), whereas they are wider in countries with wider differences in income (such as the USA).<sup>60-62</sup>

#### HISTORICAL EVIDENCE

Similarly, temporal patterns of child health reflect differences in income and material wealth. Over the past 70 years the differences in infant and child mortality between the social classes have been wider during periods when income and material differences were wider, and narrower during periods of greater social equality.<sup>63-64</sup> During the 1970s postneonatal mortality (deaths aged 1 month to 1 year) in social classes IV and V showed a steep decline, during which time income to mothers in these classes substantially increased, whereas mortality in the higher classes changed only a little, in keeping with the small changes in these families' income.<sup>65</sup>

#### INCREMENTAL RELATION

The relation between material factors and child health is incremental. In other words, the poorer families are, the worse their children's health is. Epidemiologically, this points strongly to an association being causal. Children coming from families living in poverty obviously suffer the worst from this, but there are differences in child health all the way up the social spectrum. These health differences follow extremely closely differences in income and material wealth.<sup>65-66</sup>

## MULTIPLE DEPRIVATION

The consequence of poverty is material and social deprivation.<sup>56 67</sup> Several studies have examined the relation between specific aspects of poverty and deprivation and children's health. These include poor housing,<sup>68 69</sup> homelessness,<sup>70-73</sup> unemployment,<sup>74 75</sup> dependence on benefits,<sup>9 76</sup> living in a deprived area,<sup>32 77</sup> income,<sup>78-81</sup> multiple deprivation, and a lack of material resources.<sup>82 83</sup> These are all structural or material aspects of poverty and all show close and specific relations with children and young people's health.

**Other possible explanations**

## SOCIAL SUPPORT

Many other explanations of social differences in children's health have been suggested. Some of these undoubtedly contribute, but it is important to recognise that they may simply be intermediate steps in the pathway between poverty and health rather than alternative explanations. For instance, social support for mothers (that is, friendship, advice, and having someone to talk to) results in better health in their children.<sup>81</sup> This effect is strongest in families living in poverty. A lack of social support does not, however, explain why children from poor families have worse health. Rather, in these families there is a greater need for social support to overcome the stresses of poverty.

## UNHEALTHY BEHAVIOUR

Another type of explanation of social differences in child health has been described as behavioural or cultural. Examples of this type of explanation are smoking, diet, breast feeding, and parenting style. It is suggested that these aspects of family lifestyle cause the wide social differences in children's health.<sup>36</sup> The attraction of these types of explanations is threefold: they provide a plausible biological explanation for social variations in health; they suggest that health variations are relatively easy to alleviate; and they imply that the poorer health of children in lower socioeconomic groups is a result of free choices made by their parents. All three of these premises are flawed. Firstly, behavioural explanations do not explain the full range of child health inequalities,<sup>84</sup> and behavioural characteristics do not follow socioeconomic status all that closely.<sup>85</sup> Secondly, despite many attempts to change behaviour, children's health inequalities persist. Thirdly, research on smoking has shown that these aspects of behaviour are not the result of free choice in the sense that we understand.<sup>86 87</sup> Socially disadvantaged mothers smoke because they have to, rather than because they want to.<sup>88 89</sup> Furthermore, much of the association between smoking and children's health is explained by socioeconomic factors rather than the other way round.<sup>90</sup> Fourthly, international comparisons with countries where smoking is more common in the higher classes still show the same pattern of social differences in health.<sup>90</sup> Finally, interventions which have been effective in improving the health of children from poor backgrounds have tended to focus on ways of empowering families to improve

their social or environmental circumstances rather than on changing their behaviour.<sup>53 91</sup> Behavioural explanations probably play a small part in the causes of social inequalities in children's health, but are best considered as an intermediate step between economic factors and health.<sup>84 92 93</sup>

## SOCIAL SELECTION

The final broad type of explanation is related to selective social mobility. Put simply, these suggest that factors which lead to poor health also lead to downward social mobility and vice versa. Thus the reasons why poor children have worse health are the same as the reasons why families descend into or remain in poverty. These reasons may be genetic, educational, or to do with culturally determined aspects of lifestyle. The explanations can be complex, particularly if they are applied across two or more generations, but the key point of them all is that they are inexorable. Regardless of social and economic changes, health promotion, health service delivery, etc, the same families will be at the bottom of the pile in terms of both health and economic circumstances because of factors intrinsic to themselves. There is some good evidence in support of these types of explanations; outcomes of pregnancy are related to a mother's social mobility before marriage, and health inequalities flatten in adolescence at a time when social reselection is at its most labile.<sup>94</sup> Critical examination of this evidence suggests, however, that selective social mobility only explains a small part of the social variation in child and adolescent health.<sup>95 96</sup>

**Implications for policy and practice**

## EFFECTS ON HEALTH WORKERS' PRACTICE

Health and social services for children have a large and increasing proportion of their work devoted to dealing with the problems caused or exacerbated by poverty. Arguably, this is an inefficient use of resources as neither agency has the means of combating poverty. Alleviating the consequences of poverty is, of course, one of the traditional roles of the caring agencies, but it is not compatible with their wider role of improving health among the population as a whole. It is easier for affluent families to act on health promotion advice than poor families, and hence this tends to widen health inequalities rather than narrow them.<sup>97-100</sup> It has been stated that poverty is the major bar to health promotion in young children.<sup>53</sup> The first implication therefore is that a service which is overwhelmed by problems it cannot fundamentally alter is incapable of improving the health and wellbeing of the population of children as a whole.

## HOW HEALTH AND WELFARE WORKERS NEED TO CHANGE THEIR APPROACH

The second implication leads on from this. Professionals working with children and families have realised their impotence when working alone or to traditional models. Multiagency work, cooperation with voluntary agencies, and community development work is an approach which has been encouraged by the Department

of Health,<sup>101 102</sup> but it is not easy. Working across these boundaries takes time and effort and patience. There is a need for a shift in the emphasis in training.<sup>103</sup> Methods of evaluating this type of work are poorly developed. If this approach is to be properly funded, research evidence of its effectiveness needs to be stronger, with clearer indications of outcomes in terms of health and wellbeing.

#### PREVENTION: THE ROLE OF HEALTH SERVICES

Several recent documents—for example, the Department of Health report *Variations in Health*<sup>101</sup> and the Kings Fund report *Tackling Inequalities in Health*,<sup>91</sup> discuss prevention in more detail. Considering child and adolescent health specifically, action is required at all levels. This includes making health services more accessible and aware of the problems faced by families living in poverty, more multiagency liaison, work focused on enabling individual families and communities to mobilise their strengths and resources, and a change in the health professional ethos towards advocacy for social and environmental improvements.

#### PREVENTION: THE ROLE OF GOVERNMENT

Governmental responsibility encompasses commercial and environmental legislation and social policy along with health service policy. Notwithstanding my comments about smoking, a much more aggressive approach to tobacco control is needed,<sup>104-106</sup> and transport policy needs to acknowledge that road accidents injure poor children most commonly.<sup>107</sup> Given the strength of the evidence it is impossible to avoid the conclusion that social and economic policy changes are needed. Unemployment, poor education, inadequate social security benefits for mothers and young people, low wages, job insecurity, poor quality housing and homelessness, a lack of affordable child care facilities, social incohesion, racial discrimination, and a lack of long term prospects for the young all contribute to causing poor health in children and young people in ways we are just beginning to understand.<sup>66</sup>

#### PREVENTION: IMPLICATIONS FOR SOCIAL AND ECONOMIC POLICY

Poverty is the extreme end of the social spectrum, however. The health effects are seen at all levels. There is not a neat dividing line below which children suffer and above which health is unaffected. This means that policies to reduce or alleviate poverty are more likely to improve health if they are directed at narrowing social and economic differentials throughout society. This clearly has major political implications and the reason I emphasise it is because the research evidence supports this conclusion. Regardless of political ideology, however, I as a paediatrician want a government to place a high value on the health of children and young people. If they do, they need a coherent social policy addressing the issues discussed in this paper.

#### Addendum

Since submitting the memorandum a major study on poverty and child health has been published.<sup>108</sup> This reached similar conclusions. I have not referred to it in this paper to keep as close as possible to the original material, but readers wishing a more detailed discussion may wish to refer to it.

I am grateful to Dr Robin James, Clerk to the Health Committee for permission, on behalf of the committee, to publish the bulk of my memorandum in this form.

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