Health inequalities and welfare state regimes: theoretical insights on a public health ‘puzzle’

Clare Bambra

ABSTRACT

Welfare states are important determinants of health. Comparative social epidemiology has almost invariably concluded that population health is enhanced by the relatively generous and universal welfare provision of the Scandinavian countries. However, most international studies of socioeconomic inequalities in health have thrown up something of a public health ‘puzzle’ as the Scandinavian welfare states do not, as would generally be expected, have the smallest health inequalities. This essay outlines and interrogates this puzzle by drawing upon existing theories of health inequalities—artefact, selection, cultural—behavioural, materialist, psychosocial and life course—to generate some theoretical insights. It discusses the limits of these theories in respect to cross-national research; it questions the focus and normative paradigm underpinning contemporary comparative health inequalities research; and it considers the future of comparative social epidemiology.

BACKGROUND

It is now widely acknowledged that welfare states are important determinants of health as they mediate the social determinants of health.1 Welfare state provision varies extensively, but typologies have been put forward to categorise them into distinctive types—welfare state regimes.1–3 Welfare state regimes have increasingly been used within social epidemiology to analyse cross-national differences in population health.4–6 These studies have almost invariably concluded that population health is enhanced by the relatively generous and universal welfare provision of the Social Democratic Scandinavian countries, especially when contrasted to the Anglo-Saxon welfare states.4–8 The different types of welfare state and their constituent countries are described in box 1. However, in contrast to their comparatively strong performance in terms of overall health, data from most, but not all, of the recent comparative studies of health inequalities in the general population suggest that the Scandinavian welfare states do not have the smallest health inequalities.9–12 For example, Mackenbach et al9’s Europe wide study of inequalities in mortality found ‘no evidence for systematically smaller inequalities in health in countries in northern Europe (Scandinavia)’. Indeed, relative inequalities in mortality were smaller in the Southern (Italy, Spain, Portugal) and Bismarckian (Netherlands, Belgium, Germany, France) countries.9 Data are provided from three other example studies of health inequalities in Europe in table 1.10–12 Given the higher levels of social expenditure in the Scandinavian welfare states, the smaller income inequalities, and the commitment to equality underpinning the Social Democratic welfare model in Scandinavia, it has long been something of a ‘puzzle’ in public health as to why the Scandinavian countries do not have the smallest health inequalities.13–15 This essay draws upon the theories of health inequalities to scrutinise this puzzle.16–20

THEORETICAL INSIGHTS ON COMPARATIVE HEALTH INEQUALITIES

Box 2 outlines the main theories of health inequalities.16–20 These are commonly used to explain socioeconomic health inequalities within countries. In this paper, they are applied to cross-national differences in the magnitude of socioeconomic health inequalities and used to offer insights into the puzzle as to why health inequalities are not the smallest in the Scandinavian welfare states.

Artefact

The artefact explanation questions the existence of health inequalities, considering them to be a mere artefact of data collection and measurement (box 2). Applying it to the issue of comparative health inequalities leads to the conclusion that the ‘public health puzzle’—of why health inequalities are not the smallest in the Scandinavian countries—is not in fact a real puzzle, but simply the result of the data and methods used. Certainly, the application of different indicators of social inequality (eg, income, occupation and education) and the use of different data sets has produced divergent results (see table 1). Different cross-national patterns also emerge in terms of the different ways in which specific indicators of inequality are calculated. For example, studies of educational inequalities can compare those with average years of education to those with 1SD below the national average12 or the difference between those with no education or only primary education and those with tertiary education (box 2).21 There are also more general issues in terms of making cross-national comparisons of health inequalities as it is not clear whether the bottom groups are the same in each country and whether their composition changes over time.12,22 The use of relative or absolute measures of health inequalities is also an important issue (see ‘Discussion’ section). There is of course another clear measurement problem, which is the use of ‘welfare state regimes’, a concept that assumes a homogeneous approach to welfare provision within and between the countries of any particular regime type.1,23

Comparative studies of educational inequalities in health.23

It is argued, is because the Scandinavian countries are at a very mature stage of the smoking epidemic with the majority of smoking behaviour concentrated in the least educated groups.24

**Health selection**

The health selection approach asserts that health determines socioeconomic class status rather than socioeconomic class determining health (box 2). This would imply that the social consequences of ill health would need to be greater in the Scandinavian countries and that people who have ill health are more likely to be concentrated in the lower socioeconomic groups. Instinctively, such direct selection seems unlikely given the extensive employment protection for people with ill health within the Nordic countries and their comparatively high replacement rates for people out of the labour market due to sickness or disability.16 Selection is also considered to be more influential in respect to income-related inequalities than educational ones and so it is unlikely to explain the results of the comparative studies of educational inequalities in health.23

**Culture and behaviour**

The cultural—behavioural approach asserts that the link between socioeconomic class and health is a result of differences between socioeconomic classes in terms of their health-related behaviour (box 2). In terms of physical activity and diet, there is no evidence of larger inequalities in the Scandinavian countries, at least as measured by educational inequalities in obesity.9 However, socioeconomic inequalities in smoking are much higher in the Nordic countries than in the other welfare state regimes.9 14 Similarly, inequalities in deaths from cardiovascular disease are higher in the Scandinavian countries (except Denmark) as compared with other European countries.2 This, it is argued, is because the Scandinavian countries are at a very mature stage of the smoking epidemic with the majority of smoking behaviour concentrated in the least educated groups.24

**Table 1** Summary findings from three example comparative studies of socioeconomic inequalities in self-reported health (bad/poor vs fair/good/very good) by welfare state regime

<table>
<thead>
<tr>
<th>Study</th>
<th>Measure of inequality</th>
<th>Men Absolute prevalence difference</th>
<th>Relative prevalence, OR (95% CI)</th>
<th>Women Absolute prevalence difference</th>
<th>Relative prevalence, OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eikemo et al12</td>
<td>Education—average education versus 1SD below average</td>
<td>Bismarckian 6.4 1.19 (1.14 to 1.24)</td>
<td>5.7 1.25 (1.20 to 1.30)</td>
<td>9.6 1.35 (1.23 to 1.48)</td>
<td>8.2 1.29 (1.18 to 1.41)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anglo-Saxon 10.5 1.44 (1.35 to 1.53)</td>
<td>12.1 1.54 (1.44 to 1.64)</td>
<td>14.8 1.57 (1.47 to 1.69)</td>
<td>17.3 1.69 (1.58 to 1.81)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scandinavian 18.8 1.67 (1.50 to 1.89)</td>
<td>11.6 1.61 (1.62 to 2.03)</td>
<td>9.8 1.68 (1.50 to 1.89)</td>
<td>11.6 1.61 (1.62 to 2.03)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Southern 10.9 1.79 (1.46 to 2.19)</td>
<td>14.8 2.14 (1.77 to 2.57)</td>
<td>10.9 1.79 (1.46 to 2.19)</td>
<td>14.8 2.14 (1.77 to 2.57)</td>
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<tr>
<td></td>
<td></td>
<td>Bismarckian 13.0 1.97 (1.70 to 2.27)</td>
<td>15.8 2.14 (1.84 to 2.49)</td>
<td>17.4 2.06 (2.12 to 3.70)</td>
<td>17.4 2.06 (2.12 to 3.70)</td>
</tr>
<tr>
<td>Eikemo et al10</td>
<td>Income—top versus bottom income tertiles</td>
<td>Bismarckian 11.2 1.24 (1.12 to 1.37)</td>
<td>12.7 1.31 (1.19 to 1.45)</td>
<td>9.6 1.35 (1.23 to 1.48)</td>
<td>8.2 1.29 (1.18 to 1.41)</td>
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<tr>
<td></td>
<td></td>
<td>Scandinavian 18.9 1.87 (1.45 to 2.42)</td>
<td>24.2 1.75 (1.39 to 2.21)</td>
<td>18.9 1.87 (1.45 to 2.42)</td>
<td>24.2 1.75 (1.39 to 2.21)</td>
</tr>
</tbody>
</table>

*Age-standardised differences between the top and bottom socioeconomic groups in each analysis.
This suggests that one consequence of the Social Democratic welfare states is that the universal health messages and health promotion interventions are taken up primarily by the middle classes. This results in what has been referred to as 'intervention generated inequalities', as while the health of everyone improves, that of the middle classes does so at a faster rate.

Materialist explanations
The (neo)materialist explanation focuses on income and what income enables such as access to goods and services and the limitation of exposures to physical, and psychosocial, risk factors. Materialist approaches give primacy to structure in their explanation of health and health inequalities, looking beyond individual-level factors (agency), in favour of the role of public policy and services such as schools, transport and welfare in the social patterning of inequality.

Psychosocial
Psychosocial explanations focus on how social inequality makes people feel and their biological and health consequences. Social inequality leads to long-term feelings of subordination or inferiority, which in turn stimulate chronic stress responses that have profound consequences for physical and mental health. The socioeconomic class gradient is therefore explained by the unequal social and economic distribution of psychosocial risk factors.

Life course
The life course approach combines aspects of the other explanations, thereby allowing different causal mechanisms and processes to explain the social gradient in different diseases. Health inequality between socioeconomic classes is the result of inequalities in the accumulation of social, psychological and biological advantages and disadvantages over time.

Psychosocial
Psychosocial explanations focus on the biological and health consequences of how social inequality makes people feel. From a psychosocial perspective then, it has been speculated that ‘relative deprivation’ may be a factor behind the larger than expected relative health inequalities in the Scandinavian welfare states. Relative deprivation will occur in all unequal societies, including the Nordic welfare states. Following Dahl and colleagues, it is possible to speculate that the effects of relative deprivation may be more extensive in the Nordic welfare states because of the high levels of expectation of upward social mobility and prosperity that they generate among the less privileged expectations that are seldom met. This may increase health inequalities especially in stress-related conditions, such as heart disease, or indeed self-assessed health.

Life course
Life course epidemiology has highlighted how different causal mechanisms and processes may lie behind the social gradient in different diseases. This may also be the case in terms of the inequalities in different welfare state regimes. For example, a study found that in both Britain and Sweden, lone mothers were more likely to report poor health than couple mothers. However, the pathways leading to the health disadvantage of lone mothers were very different in the two countries: poverty and worklessness were the primary issues in Britain but not in Sweden. Extrapolating from this example, it is possible to suggest that the same outcomes—socioeconomic health inequalities—in different welfare state regimes may have different underlying mechanisms and processes.
The use of absolute or relative measures of health inequality also raises important normative and political issues about whether the role of the welfare state is to improve the status of those at the very bottom of society or whether it is about promoting general equality. Implicitly, cross-national research to date has tended to favour the latter view; however, it is possible to suggest that it should move beyond relative comparisons and focus instead on absolute ones. This would perhaps also enhance the policy relevance of such research, after all, as Rose famously commented, ‘relative risk is not what decision-taking requires … relative risk is only for researchers; decision call for absolute measures’. Future comparative research could therefore benefit from examining the absolute health of the most marginalised, poorest and vulnerable within different types of welfare state.

The limits of the study of the formal welfare state are also perhaps exposed by the puzzle. Comparative social epidemiology has to date largely focused on analysing the influence on health and health inequalities of the formal and the public—the state, the economy, politics, public policies, welfare services and social benefits. In contrast, there has been relatively little attention paid to the potential influence on differences in cross-national health and health inequalities of the informal and the private side of welfare capitalism—unpaid care, the family, community and social support and different constructions of gender roles. For example, some studies have suggested that those countries with a higher proportion of unpaid family care and domestic labour by women have smaller health inequalities. Such social differences in the informal welfare sector could therefore be a factor behind the smaller than expected health inequalities found by some studies in the Southern and Bismarckian welfare states (C Alvarez-Dardet, personal communication, 2011).

The impact of the social—the private and the informal welfare sphere—on comparative health inequalities is under-explored in public health and might provide important insights. However, as Raphael and Bryant’s research has noted, women’s health is more sensitive to public welfare and is improved by high levels of state social welfare, so Bartley’s assertion that analysing the social sphere is challenging and complex is therefore well made. The intersectional nature of inequality—gender, social class and ethnic stratifications—is therefore also something that needs to be considered in future cross-national research on health.

**CONCLUSIONS**

The existence, extent, interpretation and causes of the Scandinavian public health puzzle remain controversial. On the one hand, the puzzle highlights the limitations of existing theories...
of health inequalities and thereby challenges conventional public health thinking. On the other hand, it has been seen to act as a distraction away from the real potential of comparative social epidemiology in providing detailed assessments of the public policies of different welfare states and how the social determinants vary. However, the issue of the puzzle highlights the strong, and often unacknowledged, normative tensions within comparative social epidemiology in terms of whether the welfare state is about creating overall equality or improving the status of those at the very bottom of society (absolute measures of health) or about promoting general equality (relative measures of health). A focus on the absolute health of the most vulnerable as well as an awareness of the social sphere and intersectionality could enhance the policy relevance of comparative health research.

**Acknowledgements** Earlier versions of this paper were presented at the Hertie School of Governance, Berlin; Department of Social Medicine, University of Copenhagen; Department of Sociology, University of Ghent; NOVA, Oslo; Department of Society and Globalisation, Roskilde University; Department of Geography, St Andrews University; and the Centre for Health Equity Studies, University of Stockholm. I am grateful for the informative feedback I received at these events.

**What is already known on this subject**

- Population health is enhanced by the relatively generous and universal welfare provision of the Scandinavian countries.
- However, some international studies of socioeconomic inequalities in health have thrown up a public health ‘puzzle’ as the Scandinavian welfare states do not, as would generally be expected, have the smallest health inequalities.

**What this study adds**

- This paper outlines and interrogates this ‘puzzle’ by drawing upon existing theories of health inequalities—artefact, selection, cultural—behavioural, materialist, psychosocial, and life course.
- It finds that these theories provide little insight into the issue and that while this may be a result of poor theory development in public health, it may also demonstrate the limitations—both methodological and conceptual—of contemporary comparative social epidemiology.

**Policy implications**

- The paper raises normative issues about whether the role of the welfare state and public health policy is about improving the status of those at the very bottom of society (absolute measures of health) or about promoting general equality (relative measures of health).
- A focus on the absolute health of the most vulnerable as well as an awareness of the social sphere and intersectionality could enhance the policy relevance of comparative health research.

**Competing interests** None.

**Provenance and peer review** Not commissioned; externally peer reviewed.

**REFERENCES**


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