Review article: Politics, welfare regimes, and population health: controversies and evidence

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Abstract

In recent years, a research area has emerged within social determinants of health that examines the role of politics, expressed as political traditions/parties and welfare state characteristics, on population health. To better understand and synthesise this growing body of evidence, the present literature review, informed by a political economy of health and welfare regimes framework, located 73 empirical and comparative studies on politics and health, meeting our inclusion criteria in three databases: PubMed (1948-), Sociological Abstracts (1953-), and ISI Web of Science (1900-). We identified two major research programmes, welfare regimes and democracy, and two emerging programmes, political tradition and globalisation. Primary findings include: (1) left and egalitarian political traditions on population health are the most salutary, consistent, and substantial; (2) the health impacts of advanced and liberal democracies are also positive and large; (3) welfare regime studies, primarily conducted among wealthy countries, find that social democratic regimes tend to fare best with absolute health outcomes yet consistently in terms of relative health inequalities; and (4) globalisation defined as dependency indicators such as trade, foreign investment, and national debt is negatively associated with population health. We end by discussing epistemological, theoretical, and methodological issues for consideration for future research.

Keywords: population health, politics, political tradition, welfare state, democracy, globalisation
Introduction

This study aims to describe the emerging area of politically-oriented, empirical studies in the population health literature (Navarro and Shi 2001, Bambra et al. 2005, Beckfield and Krieger 2009). In doing so, we explore the intersection where sociological theory and population health meet, and conduct a systematic literature review on how politics, often expressed as political traditions/parties and welfare state characteristics, shapes population health in a global context. The roots of such contemporary scholarship can be traced back to the mid-19th century with Friedrich Engels’ (1958[1845]) classic treatise *The Condition of the Working Class in England*. In that work, Engels developed the notion of the social production of disease and demonstrated that the politics of industrial capitalism resulted in premature mortality and unnecessary morbidity among the working class. Echoing this idea, Rudolph Virchow’s investigation of a typhus outbreak in Upper Silesia in 1848 led him to famously conclude that ‘disease is not something personal and special, but only a manifestation of life under (pathological) conditions … Medicine is a social science and politics is nothing else but medicine on a large scale’ (Virchow 1985[1948]: 33). Engels’ and Virchow’s perspectives still hold significant influence; however, contemporary research on politics and health has largely advanced without careful consideration of the dynamic connection between theoretical and empirical levels of research.

We use conflict-based theories for direction and adopt a political economy of health and welfare regimes framework to explicitly focus on issues relevant to the sociology of health and illness – democracy, political traditions, globalisation, and welfare states. Though the role and impact of conflict-based theories has been questioned in medical sociology (Cockerham 2001), political economy of health and welfare regime frameworks have been instrumental in highlighting the political context of health inequalities (Navarro and Shi 2001, Navarro et al. 2003), re-engaging with neo-Marxist models of class division (Coburn 2000, 2004), and testing the health effects of working-class power (Muntaner et al. 1999). Originally developed by political scientists and sociologists (Stephens 1979, Korpi 1983, Esping-Andersen 1990, Huber and Stephens 2001), these frameworks are particularly broad, sensitive to historical changes, and sociologically relevant through their explicit focus on inequality-generating mechanisms such as social class relations (i.e. relative power between capital and labour), neo-liberal ideology (i.e. private profits vs. public goods), and varieties of welfare regimes (i.e. social democratic vs. liberal vs. conservative).

Unlike ‘neo-Durkheimian’ approaches (Wilkinson and Pickett 2009), the political economy of health and welfare regime frameworks begin their analysis with politics, and endogenous consequences such as income inequality are treated as fully implicated in society, not as a subsystem that can be understood in isolation. For instance, Navarro et al.’s (2006) political economy of health framework demonstrates how politics (expressed in terms of voting behaviour and trade union characteristics), impact inequalities and population health through the expansion of welfare regimes and labour market policies. Regarding welfare state regimes, Eikemo et al. (2008a) confirmed the importance of politics with their finding that welfare state characteristics explain approximately half of the national-level variation of health inequalities between Scandinavian (Denmark, Finland, Norway, Sweden), and Anglo-Saxon (United Kingdom, Ireland) regimes, who report better health in comparison to Bismarckian (Austria, Belgium, France, Germany, Luxembourg, Netherlands, Switzerland), East European (Czech Republic, Hungary, Poland, Slovenia), and Southern (Greece Italy, Portugal, Spain) countries. Before appraising the literature, we first conceptualise politics as a key substantive theme, and second, make a case for comparative designs as the preferred analytical method for understanding cross-national health differences.
We understand politics at a national level as the ‘practice of the art or science of directing and administrating states’ (McLean and McMillan 2003: 422), and concerned with: (1) civil government, the state and public affairs; (2) human conflict and its resolution; or (3) the sources and exercise of power. Thus, political economy of health and welfare regime approaches attempt to uncover the political forces that shape the development of welfare states and the implementation of social and health policies that, in turn, lead to social and health inequalities within and between nations. An important impetus for this research stream has been the justification for studying politics in addition to policies, which are the province of health policy (Espelt et al. 2008, 2010, Lundberg 2008, 2010, Muntaner et al. 2009). The basic argument is that there is no a priori reason why the effects of politics on health should be confined to social and health policies, themselves exogenous to politics (Navarro 1993). Following the terminology of the World Health Organization’s Commission on Social Determinants of Health (2008), the causes (political systems) of the causes (specific health and social policies) should be an essential part of societal mechanisms and explanations in medical sociology and social epidemiology.

The macro comparative design, common to political sociology, has been adopted by population health researchers because it provides an efficient way to uncover political determinants, typically homogeneous within nations and thus only revealed with studies examining multiple countries (Rose 2001). The strengths of the comparative method in other disciplines such as historical sociology and political sociology lend further impetus to the inclusion of politics within political economy and welfare regimes research (Esping-Andersen 1990). When we compare clusters of nations with common political backgrounds, democratic systems, or welfare regimes, we gain insights into why some countries are more successful than others at improving their countries’ population health or reducing health inequities (Esping-Andersen 1990, Huber and Stephens 2001, Burawoy 2009).

In sum, though politics is a major social determinant of population health, current research has been selective of which political variables receive the most attention. For example, Beckfield and Krieger’s (2009) recent systematic review on linking political systems and health inequalities focused on transitioning to capitalist economies, neoliberal restructuring, welfare state dynamics, and racial/ethnic, indigenous, and gender groups while overlooking the potential impact of major political traditions (e.g. political ideology of party in government), or democratic institutions (e.g. authority characteristics of states in the world system), in explaining cross-national differences in health. To address this knowledge gap and complement existing studies, we review the extant literature devoted to identifying the political origins and traditions of population health and health inequalities among nations by asking two inter-related questions: (1) do politics influence population health?; and (2) if so, which political-sociologic factors, processes, and mechanisms are predictive of better population health outcomes? We end by discussing epistemological, theoretical, and methodological issues for consideration in future studies of politics and population health.

Methods

Sample selection for literature review
Using guidelines outlined by Pope et al. (2007), we used a two-step approach to locate articles that investigated the link between politics and population health: (1) review of electronic databases; and (2) hand search of reference lists.

First, the following three databases were searched for English language studies: CSA Sociological Abstracts (1953-), PubMed (1948-), and ISI Web of Science (1900-) for references
up to 23 April, 2010. The key word search combined two groups of terms using an ‘AND’ strategy: democracy, welfare regime, welfare state, welfare capitalism AND health, health services, population health. Preliminary key word searches yielded a total of 2,790 records. Two reviewers (CB and EN) reviewed the abstracts of these records and independently identified 188 potentially relevant (not mutually exclusive) studies using our study’s inclusion criteria: (1) presented empirical findings related with health or health services outcomes; (2) investigated cross-national political differences in health (e.g. democracy vs. dictatorship; social democratic vs. liberal welfare regimes); and (3) included a direct measure of one political or welfare state variable. To minimise reviewer bias, we assessed inter-rater reliability between the two reviewers using the Kappa coefficient. Agreement results ranged from substantial to outstanding (ISI Web of Science: $k = 0.727, p < .001$; Sociological Abstracts: $k = 0.839, p < .001$; PubMed: $k = 0.838, p < .001$). The full-text of these 188 studies were then reviewed by a larger team (CB, HC, AE, CM, EN and MR), and re-evaluated against our inclusion criteria to determine final eligibility. A total of 59 studies met our full inclusion criteria.

Second, the reference lists of these 59 manuscripts were hand-searched for additional studies, book chapters, and conference papers to capture the full range of politically-oriented, comparative health studies in the extant literature. This process identified an additional 122 potentially relevant studies in which 12 articles and two book chapters met our full inclusion criteria for a final sample of 73 core publications. Of the 310 studies retrieved for full-text review, reasons for exclusion included being non-empirical (31%), non-political (20.6%), non-health outcome (18.4%), non-comparative (4.8%), and other reasons for being editorials and duplicates (1.6%). Figure 1 presents a flow chart on our literature review selection and exclusion and inclusion process. Disagreements among reviewers during this process were resolved by consensus.

Each of these 73 publications was classified along one of four political themes: (1) Democracy: if the hypotheses tested involved democratic institutions or political rights; (2) Globalisation: if the article examined how high, middle, and/or low countries are integrated through global networks of trade, foreign investment, and multinational corporations; (3) Political tradition: if the study included variables referring to the left-right political dimension (e.g. social democratic/egalitarian/left vs. liberal/conservative/right political parties in government); and (4) Welfare State: if the analysis included welfare regimes or welfare state indicators (e.g. universal health coverage), but not measures of political ideology (e.g. along the left-right dimension). These groupings were mutually exclusive. Given the emerging nature of political economy/welfare regime and population health research, we provide a descriptive analysis on whether findings are supportive of political effects, rather than a detailed appraisal of study quality and/or synthesis of findings across studies. A pro forma was developed to ensure the consistent coding and classification of the following information: year of publication (coded into 5-year intervals beginning in 1985); study objectives and hypotheses; study design (cross-sectional or longitudinal/panel/time-series/trend); unit of analysis (individual or ecological); number of countries compared (coded into 25 country-increments); political variables (e.g. democracy measures, indicators of globalisation, political traditions, welfare regime classifications), confounding factors; health outcomes; and main findings. To summarise the empirical findings between politics and health, studies grouped by political theme are also coded to the extent to which statistically significant associations are positive (e.g. advanced levels of democracy, interconnections with global relations, left or egalitarian political traditions, and welfare state generosity are associated with improved health), negative (e.g. low levels of democracy, interconnections of international relations, right or conservative political traditions, low levels of welfare state effort are associated with
worst health), or mixed (e.g. political variable is either unrelated or inconsistently related to health outcome).

All data was entered into SPSS (version 18.0) and analysed using basic descriptive and cross-tabulated statistics. A formal meta-analysis was not conducted owing to the heterogeneity of studies in terms of design, study populations, and political and outcome measures, which limits options to aggregate findings into combined estimates.

**Results**

Table 1 presents the key characteristics of the 73 studies selected for this review. The most frequent comparative question addressed was the link between welfare states and population health or social inequalities in health (31 studies, 42.5%), followed by an
interest in the beneficial health effects of democracy (26 studies, 35.6%). Less interest has been devoted to understanding how political traditions function as a determinant of population health (10 studies, 13.7%) and only six studies (8.2%) investigated the health effects of globalisation.

Table 1  Descriptive characteristics of 73 empirical studies on politics and health

<table>
<thead>
<tr>
<th>Political Themes</th>
<th>Number of studies</th>
<th>Percentage of total studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democracy</td>
<td>26</td>
<td>35.6</td>
</tr>
<tr>
<td>Globalisation</td>
<td>6</td>
<td>8.2</td>
</tr>
<tr>
<td>Political Tradition</td>
<td>10</td>
<td>13.7</td>
</tr>
<tr>
<td>Welfare State</td>
<td>31</td>
<td>42.5</td>
</tr>
<tr>
<td>Year of Publication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1985–89</td>
<td>2</td>
<td>2.7</td>
</tr>
<tr>
<td>1990–94</td>
<td>5</td>
<td>6.8</td>
</tr>
<tr>
<td>1995–99</td>
<td>5</td>
<td>6.8</td>
</tr>
<tr>
<td>2000–04</td>
<td>21</td>
<td>28.8</td>
</tr>
<tr>
<td>2005–10</td>
<td>40</td>
<td>54.8</td>
</tr>
<tr>
<td>Study Design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-sectional</td>
<td>49</td>
<td>53.4</td>
</tr>
<tr>
<td>Longitudinal/Panel/Time-series/Trend</td>
<td>34</td>
<td>46.6</td>
</tr>
<tr>
<td>Unit of Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>Ecological</td>
<td>56</td>
<td>80</td>
</tr>
<tr>
<td>Number of Countries Compared</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2–24</td>
<td>36</td>
<td>49.3</td>
</tr>
<tr>
<td>25–49</td>
<td>6</td>
<td>8.2</td>
</tr>
<tr>
<td>50–74</td>
<td>4</td>
<td>5.5</td>
</tr>
<tr>
<td>75–99</td>
<td>5</td>
<td>6.8</td>
</tr>
<tr>
<td>100+</td>
<td>22</td>
<td>30.1</td>
</tr>
<tr>
<td>Health Outcomes(^a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant and child mortality</td>
<td>35</td>
<td>47.9</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>24</td>
<td>32.9</td>
</tr>
<tr>
<td>Longstanding Illness</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Public health/health care needs/spending</td>
<td>4</td>
<td>5.5</td>
</tr>
<tr>
<td>Self-reported health</td>
<td>7</td>
<td>9.6</td>
</tr>
<tr>
<td>Other(^b)</td>
<td>25</td>
<td>34.2</td>
</tr>
</tbody>
</table>

\(^a\)Many articles examined multiple outcomes and, hence, the number of health outcomes (103) is greater than the number of studies. For this reason, percentages do add up to 100% and represent the proportion of health outcomes in relation to our final of 73 studies.

\(^b\)Other health outcomes included: absolute and relative health inequalities (Dahl et al. 2006, Muntaner et al. 2006); AIDS/HIV (Gizelis 2009, Menon-Johansson 2005); health care index (Bambra 2005); health conditions index (Correa and Namkoong 1992); immunisation programmes (Gauri and Khaleghian 2002); maternal mortality (Alvarez-Dardet and Franco-Giraldo 2006; Franco et al. 2004); mental health (Nordenmark et al. 2006, Zambon et al. 2006); mortality rate (Correa and Namkoong 1992; Lundberg et al. 2008; Safaei 2006); national health indicators (Klomp and de Hann 2008, 2009); oral health (Sanders et al. 2009); Physical Quality of Life Index (Cereseto and Waitzkin 1986; Moon and Dixon 1985); probability of dying between 15 & 65 (Adeyi et al. 1997); The Short-Form 36 (Sekine et al. 2009); women’s reproductive health (Pillai and Gupta 2006, Weinert 2008); years of potential lost life (Elola et al. 1995).
Most reviewed studies used a cross-sectional study design (49 studies, 53.4%) with an ecological focus on countries as the unit of analysis (56 studies, 76.7%). The number of countries compared ranged from 2 to 208 with a primary focus on Organisation for Economic Cooperation and Development (OECD) nations. Such a focus on wealthy countries often limits the number of countries compared to less than 24. Our review found 36 studies (49.3%) falling into this category while 22 studies (30.1%) broadened their focus to include non-wealthy countries with country sample sizes over 100. Health outcomes tend to gravitate toward child health indicators such as infant mortality, low birth weight, and under-five mortality (35 studies, 47.9%), life expectancy (24 studies, 32.9%), longstanding illness (8 studies, 11.0%), and self-perceived health (7 studies, 9.6%). The vast majority of the 73 studies were published since the turn of the century (2000–2010: 61 studies, 83.6%), with almost half of these contributions involving welfare state analyses (2000–2010: 28 studies, 45.9%), suggesting that politically-oriented approaches to medical sociology and social epidemiology are heuristic research programmes. Almost half (15 studies, 48.4%) of the 31 welfare state studies relied on individual-level survey data from nationally representative surveys with self-perceived health as the preferred dependent variable (25 studies, 81%). Conceptualising and measuring the health effects of welfare states clustered around three dominant indicators: (1) welfare regimes (Lahelema and Arber 1994, Conley and Springer 2001, Bambra 2005, 2006, Dahl et al 2006, Muntaner et al 2006, Nordenmark et al 2006, Chung and Muntaner 2007, Rostila 2007, Bambra and Eikemo 2009, Eikemo et al 2008a, Eikemo et al 2008b, Farfan-Portet et al 2008, Avendano et al 2009, Bambra et al 2009, Sanders et al 2009, Sekine et al 2009, Zambon et al 2006, Grosse et al 2010, Karim 2010); (2) welfare state effort, policies, and spending (Elola et al 1995, Veehoven and Ouweneel 1995, Veenhoven 2000, Whitehead et al 2000, Fayissa 2001, Ouweneel 2002, Raphael and Bryant 2004, Lundberg et al 2008, Burstrom et al 2010); and (3) welfare governance (Menon-Johansson 2005, Klomp and de Haan 2008). All 26 studies on democracy are ecological in focus and 16 are longitudinal in design (61.5%). To measure the presence, depth, and breadth of democracy, these studies tend to use ‘Polity Scores’ (e.g. concomitant qualities of democratic and autocratic authorities; Lake and Baum 2001, Gauri and Khaleghian 2002, Baum and Lake 2003, Ghohebam et al 2004, Besley and Kudamatsu 2005, Houweling et al 2005, Ross 2006, Safaei 2006, Tsai 2006, Wejnert 2008, Gizelis 2009, Shandra et al 2010); ‘Freedom House Ratings’ (e.g. degree of democracy and political freedom in nations; Franco et al 2004, Alvarez-Dardet and Franco-Giraldo 2006, Pillai and Gupta 2006, Stroup 2006, Klomp and de Haan 2009); democracy indexes (e.g. freedom of group opposition, political rights, and legislative effectiveness; Moon and Dixon 1985, Kick et al 1990, London and Williams 1990, Lena and London 1993, Frey and Al-Roumi 1999); and discrete classifications (e.g. country has system in which parties lose elections; Adeyi et al 1997, Zweifel and Navia 2000, Navia and Zweifel 2003, Huber et al 2008). Nevertheless, single indicators predominate, which do not allow for drawing important empirical distinctions between different notions of democracy (e.g. constitutional, substantive, procedural, process-oriented). Regarding the six studies classified under globalisation, all were ecological and most investigated infant mortality (5 studies, 83.3%) over time (5 studies, 83.3%) among less-developed countries (5 studies, 83.3%). Though small in the number, globalisation studies tested for a relatively wide range of political variables: exposure and openness to international markets (Kaufman and Segura-Ubergo 2001); capital-intensive exchange and world-system role (Moore et al 2006); private capital flows (Rudra and Haggard 2005); commodity concentration, multinational corporate penetration, International Monetary Fund conditionality (Shandra et al 2004); and dependency indicators such as foreign
investment and debt increase (Shen and Williamson 1997, 2001). Given the small sample size it is difficult to make useful generalisations. A literature review explicitly dedicated to ‘globalisation and health’ might have retrieved a larger number of empirical studies.

The 10 studies testing political tradition primarily use cross-sectional designs (8 studies, 80%) and used countries (8 studies, 80%) as units of analysis. The remaining two individual-level studies used national representative surveys (Espelt et al. 2008, Borrell et al. 2009). Ecological studies favoured child health (6 studies, 60%) and life expectancy (4 studies, 40%) as health outcomes while the health surveys concentrated on self-perceived health and long-term illness. Political variables ranged from political-economic conditions and systems (Cereseto and Waitzkin 1996, Correa and Namkoong 1992), and left-right political dimensions (Moene and Wallerstein 2003, Chung and Muntaner 2006, Navarro et al. 2006), to power resources (Muntaner et al. 2002, Navarro et al. 2003), and political regimes and traditions (Navarro et al. 2001, Espelt et al. 2008, Borrell et al. 2009).

**Associations between politics and health**

Table 2 shows the associations found between politics and population health outcomes in the 73 studies included in this review. These outcomes, grouped by political theme, are coded along whether politics has a positive, negative, or mixed association with population health and health inequalities. Overall, representative democracies, globalisation, egalitarian political traditions, and generous welfare states had positive associations with good health in 68.5 per cent of the studies reviewed. Positive associations were observed most often for the effects of political tradition (9 studies, 90%). The strength of power resources (Navarro et al. 2003) and working class power (Muntaner et al. 2002), expressed in terms of union density, left vote, and egalitarian political parties, appear to lead to strong welfare states, which implement redistributive policies, reduce social inequalities, and improve population health. The lone study where such regimes negatively impacted health involved public health expenditures being reduced by strong conservative parties in government and high levels of voter turnout (Moene and Wallerstein 2003).

Democracy was the second most consistent finding with 21 studies (80.8%) reporting a positive association, all in the expected direction (i.e. advanced levels of democracy improves population well-being), even after adjustment for national income, education, and income inequality. The health effects of democracy are both direct through individual income

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Table 2  
**Findings of 73 empirical studies on politics and health grouped by political theme**

<table>
<thead>
<tr>
<th>Political theme</th>
<th>Positive association&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Negative association&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Mixed Results&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Total N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democracy</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N</td>
</tr>
<tr>
<td>Globalisation</td>
<td>21 (80.8)</td>
<td>3 (11.5)</td>
<td>2 (7.7)</td>
<td>26</td>
</tr>
<tr>
<td>Egalitarian political tradition</td>
<td>1 (16.7)</td>
<td>4 (66.7)</td>
<td>1 (16.7)</td>
<td>6</td>
</tr>
<tr>
<td>Welfare State generosity</td>
<td>9 (90.0)</td>
<td>1 (10.0)</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Total: N (%)</td>
<td>50 (68.5)</td>
<td>9 (13.7)</td>
<td>14 (19.2)</td>
<td>73 (100)</td>
</tr>
</tbody>
</table>

<sup>a</sup>Political variable exerts a positive, direct or indirect effect on the population health-related outcome.

<sup>b</sup>Political variable exerts a negative, direct or indirect effect on the population health-related outcome.

<sup>c</sup>Political variable is either unrelated or inconsistently related to population health-related outcome.

<sup>d</sup>Number of studies and row percentages are organised by direction of association.

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(Klomp and de Haan 2009), and the provision of basic needs (London and Williams 1990), and indirect through economic growth (Baum and Lake 2003), and strong political institutions (Besley and Kudamatsu 2005). Negative health outcomes were reported among formerly-socialist countries transitioning toward democracy (Adeyi et al. 1997), middle-income countries implementing immunisation programmes (Gauri and Khaleghian 2002), and low-income groups in democratic countries with respect to infant and child mortality rates (Ross 2006). Studies reporting on the non-health effect of democracy found stronger empirical support for higher national incomes (Houweling et al. 2005) and expanding economic freedoms (Stroup 2006).

Population health differences across welfare state regimes found a positive association between welfare generosity and better population health (19 studies, 61.3%). Studies primarily used Esping-Andersen’s (1990) original country classification of liberal/residual, conservative/corporatist/Bismarckian, and social democratic and Ferrera’s (1996) addition of Southern regimes. Social Democratic regimes appear to have a salutary effect on population health through the generous provision of universal welfare policies and labour market decommodification (Bambra 2005, 2006, Raphael and Bryant 2004, Nordenmark et al. 2006, Zambon et al. 2006, Chung and Muntaner 2007, Eikemo et al. 2008b, Lundberg et al. 2008, Avendano et al. 2009, Burstrom et al. 2010). However, more than any other political theme, approximately a third of welfare state studies (11 studies, 35.5%) reported inconclusive and contradictory associations regarding its effect on reducing of social class inequalities in health (Dahl et al. 2006, Muntaner et al. 2006), gender and socioeconomic differences in health (Bambra et al. 2009), and government effort and health spending (Veenhoven and Ouweneel 1995, Veenhoven 2000, Ouweneel 2002). Among the limited number of globalisation studies, the most common finding was that international capitalism appears to be structurally detrimental to the health of less developed countries (Shen and Williamson 1997, Shen and Williamson 2001, Shandra et al. 2004, Moore et al. 2006).

Discussion

The main conclusion of our review is that politics appears to have a positive effect on population health with left and egalitarian political traditions producing the most affirmative results. Advanced levels of democracy are consistently related to better population health, mirroring Sen’s (1999) finding that democratic governments, on average, are more accountable to their populations than non-democratic governments. Welfare regimes with long periods of social democratic tenure seem to have strong effects on population health and moderate effects on health inequalities. Research focused on globalisation as a determinant of population health is in its infancy though some evidence hints at deleterious effects. Taken together, these review findings are encouraging; however, given its nascent nature, limitations do exist and warrant deeper exploration.

In terms of specific political themes, political tradition research assumes an ‘upstream’ model of population health and tends to adopt class analytic power resources frameworks. Such approaches acknowledge that political power is unequally distributed in capitalist democracies and working class pressure and political parties are effective means to improve population health and to narrow health inequalities. Our review finds evidential support for this; however, results should be viewed with caution due to small sample sizes. More work is needed to investigate the effects of voter turnout and political parties (time in government, number of cabinet members) on population health since these institutional indicators have been tested and proven to be objective and consistent predictors of distributive outcomes in
the political science literature (Huber and Stephens 2001). Furthermore, less attention has been devoted to understanding if labour market institutions such as wage coordination, unionisation, and collective bargaining arrangements trigger welfare state expansion or combines with welfare regimes to improve population health.

Democracy and population health studies tend to narrowly focus on single indicators of democracy suggesting that crucial elements such as the role of private campaign contributions or proportional representation are being overlooked. Large differences in health effects are likely to be found between: (1) the indirect representation and dual party systems that characterise liberal parliamentary democracies; and (2) the direct participatory democracy or the local participatory budgeting of, for example, the Brazilian city of Porto Alegre (Cortes 2009). Institutional indicators such as ‘constitutional veto points’ (e.g. the US supreme court) that make it difficult to implement major policy changes at the national level are also likely to have an influence on population health (Huber and Stephens 2001). New and multi-dimensional democracy measures are needed since current indicators, ‘Polity Scores’ and ‘Freedom House Ratings’, do not correspond to a priori socio-epidemiologic models but are often selected based on convenience and preconceived notions held by academics and non-government organisations.

Among the 26 democracy studies, it is worth noting that two studies (Adeyi et al. 1997, Alvarez-Dardet and Franco-Giraldo 2006) used natural experimental methods and examined the health trends of Central and Eastern European countries during their transition toward capitalist economies and democratic governments. The experience of these post-socialist countries are revealing, in that, population health deteriorates during the early phase of transition (Adeyi et al. 1997); however, improves over time with advancing levels of democratisation (Alvarez-Dardet and Franco-Giraldo 2006). To further understand the crucial role of political and democratic regimes on health, future studies should take advantage of similar naturally occurring experiments in the field.

Welfare state research is at the core of contemporary debates in capitalist economies on the role of the state versus the market. To date, welfare state studies have demonstrated both positive and mixed health results. On the one hand, social democratic welfare regimes committed to more egalitarian policies exhibited better population health outcomes when compared to other regime types. This finding is consistent with the well-known capacity of social democracies to reduce social inequities (Esping-Andersen 1990, Kenworthy 2004) through the provision of universal and redistributive policies. On the other hand, relative health inequalities are not consistently smaller in social democratic countries and do not systematically differ among welfare regimes. Potential explanations for these mixed findings include variability of countries analysed (exclusive focus on OECD countries), period-effects (post-Second World War ‘golden age’ vs. retrenchment period), units of analysis (individuals vs. countries), limited measurement of socioeconomic position (education, occupation, income), and type of health outcomes examined (no disease-specific models, over-reliance on self-reported health).

Testing the political aspects of international relations remains the most underdeveloped set of studies perhaps because of the elaborate social modelling that these studies require. Despite this, encouraging developments were observed among three reviewed studies which tested for competing macro-social hypotheses involving dependency theory, developmental state perspectives and various of forms of modernisation (e.g. economic, social, and political) (Shen and Williamson 1997, 2001, Shandra et al. 2004). These studies not only advance globalisation research in particular but also politics and health scholarship in general by providing guidance on how to best conduct comparative health studies. For example, in political science and related disciplines, ecologic studies using time-series data with panel
regression is commonly used to study comparative politics and international relations (Beck 2001). These methods, however, are seldom used among political economy of health and welfare regime researchers. Panel regression analysis is the proper technique for estimating the effects of independent variables on change in the dependent variable between two time points and should be adopted by researchers interested in making causal inferences with non-experimental data (Finkel 1995).

Our systematic review’s methodology contains its own limitations. First, our narrow definition of politics at a national level excludes other potentially relevant studies, which focus on micro- and meso-level politics. This includes research studies investigating the health impact of individual attributes such as political ideology (Cockerham et al. 2002), electoral behaviour (Davey Smith and Dorling 1996), and partisanship politics (Subramanian et al. 2010) and US-based political variables such as institutional and political actors (Marwell 2004), political attitudes (Kikuzawa et al. 2008), and optimal political opportunities (Reeher 2003, Tuohy 2003). Second, our focus on comparative methods means that studies investigating within-country political variables such as sub-national welfare states and competing political parties (Rodriguez-Sanz et al. 2003), were excluded. Our rationale to focus on comparative methods was a theoretical one – to potentially identify political variables that lead to more equalitarian health outcomes. If population health is better in one country when compared to another, this may reveal what political forces are responsible for the observed differences and which public policies may improve the health of the latter country.

Considerations regarding macro-comparative quantitative studies

As revealed in our literature review, conducting macro-level, comparative quantitative studies presents some unique challenges to advancing political of economy of health and welfare regimes approaches including a-historicism, the small-N problem, omitted variables, and missing data.

The problem of a-historicism in time-series analyses of historical processes

Because of the specific ontological features of this field (i.e. the universe of countries contains approximately 200 country units), macro-comparative political and policy analyses have always been at risk of lacking statistical power. In recent years though, high quality datasets of multiple time-series have become available for quantitative, comparative, political and policy research. Consequently, sample sizes have expanded from traditionally tens of observations to hundreds. During its early years, the field of comparative politics and in particular the study of welfare states was approached using descriptive and prescriptive study designs, while empirical social scientists treated welfare states as a convenient source of data for testing abstract theoretical claims. Following Shalev (2007: 262):

Earlier works in comparative political economy tended to focus on explaining enduring cross-national differences … The standard tools of the trade were scatter-plots, correlations and primitive cross-sectional regressions (e.g. Tuft 1978, Cameron 1984) … The turning point was a controversial cross-national regression study by Lange and Garrett (1985). In a final response to their critics (Garrett and Lange 1989) suggested that the debate would only be resolved by the use of a pooled cross-sectional time series design, which in addition to furnishing a much larger number of observations would enable
researchers to directly study whether the effects of changes in government composition are conditioned by national institutional contexts ... Two years later Alvarez, Garrett, and Lange (1991) published their seminal article “Government Partisanship, Labor Organization, and Macroeconomic Performance” which turned pooled regression into the design of choice for quantitative comparative political economists.

While alternative qualitative approaches in comparative political studies such as those of Ragin (1987) had very little impact, the pooled cross-sectional approach has become the analytical method of choice in this field.

Nevertheless the mismatch between ontology and epistemology introduced by the use of the pooled cross-sectional regression method is a problem that medical sociology and social epidemiology cannot ignore (e.g. Verba 1967, Ragin 1987, Hall 2002). While various regression methods remain effective tools for hypothesis testing in comparative studies they rarely provide explanations and mechanisms (Hall 2002). In Freedman’s (1991: 292) own words, ‘regression may provide helpful summaries of the data. However, I do not think regression can carry much of the burden in a causal argument’.

Another problem of politically-oriented population health studies relates to the characteristics of social events as opposed to experiments. Social processes occur in sequences of actions located within constraining or enabling socio-historical structures. They are often impossible to control or reproduce. It is a matter of particular social actors, in particular social places, at particular social times (Abbot 1992: 428):

‘It is … the portrayal of social phenomena as temporally ordered, sequential, unfolding, and open-ended ‘stories’ (Griffin 1992). The occasions we usually encounter in comparative historical analyses are where what we have are ‘instances’ where similar processes are apparently operating, but aside from that differ in all manner of other relevant respects – rather than ‘cases’ – considered comparable (the same set of properties is used to describe each of the elements). ‘Put sharply, the cases necessary for the statistical portion of inquiry must be presumed essentially homogeneous (members of a sample of a universe); the instances necessary for the historical portion must be presumed essentially heterogeneous (members respectively of universes of one’) (Hopkins 1982: 30–31).

For example, social democracies are Northern European countries and late democracies are Southern European countries. As a consequence of their different historical trajectory these countries are characterised by different patterns of risk factors: less smoking in the south, protection via the traditional ‘Mediterranean diet’, and less stressful lifestyles. In addition they have different historical trajectories in spite of their relative geographical proximity. In the post-Second World War period, late democracies suffered from non-democratic, right-wing or fascist regimes while social democracies enjoyed stable democracies. That is, countries with different political and welfare state traditions are extremely difficult to compare due to the confounding effect of cultural and economic factors or historical trajectories on population health.

In this situation, comparing empirical results is insufficient. We need to explain different initial conditions and the same process in different contexts. Because of these dilemmas and the inferential limitations of quantitative analyses, the best we can hope for from comparative political and policy processes is what Hempel (1965) called a ‘narrative sketch’. Logical positivist Hempel used the terms ‘narrative sketch’ and ‘explanation sketch’ to convey the notion of a ‘covering law’ type in historical scientific explanations. We suggest its use in medical sociology and social epidemiology but in a slightly looser
way. While not against the concept of general laws in comparative political and policy research, the quantitative analysis of pooled countries can only present a partial answer in medical sociology and social epidemiology. As the ‘path dependence’ school (Huber and Stephens 2001, Shalev 2007) suggests, all countries experience an irreducible unique historical path, which can only be discovered and analysed using qualitative methods such as case studies. Therefore, while acknowledging the necessity of the empirical quantitative approach we recommend the use of the term ‘narrative sketch’ as an acknowledgement of its limitations within this emerging area of research, and leave room for further social-historical investigations to complement the use of quantitative techniques such as pooled regression.

Political and policy processes (e.g. increasing social security or medical expenditures), are typically considered similar in the countries that are grouped together, but the effect of these processes has the potential to vary across grouped countries because the initial conditions are different in these countries (degree of social participation, social movements, supporting policies). The ‘sketch’ should provide historical explanations for what happens at the aggregate level, instead of presenting mere associations among relevant factors. ‘Carrying out the burden in a causal argument’ (Freedman 1991), or accounting for ‘historical proportions’ (Hopkins 1982), need to be conducted through qualitative case studies or quantitative investigations aware of these shortcomings.

At best, the presentation of simple associations is insufficient, and at worst, it can be misleading. According to Isaac and Griffin (1989: 873), ‘much conventional quantitative time-series research is ‘a-historical,’ ... that critical contingencies of social change, understood as the sudden or gradual temporal conditioning of historical-structural relationships (Duncan 1975) are for the most part ignored in quantitative explorations of historical processes’ (Hernes 1976). Thus, using the same data and measures as examined in previous studies (Ashenfelter and Pencavel 1969, Edwards 1981, Hannan and Freeman 1988), these researchers conducted a ‘correlational’ variant of the ‘moving regression’ (Brown et al. 1975) or ‘moving covariance’ method (Isaac and Griffin 1989), to analyse the relationship between changes in strike frequency and three indicators of union strength for the period from 1882 to 1980. They found sudden structural changes in the relationship, namely, the change in the direction of the association in early 1920s, mid to late 1930s, mid 1940s, and mid 1950s, with the most dramatic change in mid to late 1930s. These breakpoints correspond to historical changes in labour institutions and regulations, and the resulting change in labour militancy or the growth in membership of the US labour movement that had not been identified in previous analyses. These findings, again, point to the need for historical specific analyses in comparative health research. At the same time, the study is a good example of using quantitative analyses to confirm historical events and processes. To remedy the intrinsic problems associated with comparative political and policy analysis in medical sociology and social epidemiology, future quantitative studies must incorporate appropriate amendments.

The small-N problem, statistical power, omitted variables and sensitivity analyses
The small-N problem stems from the fact that the phenomenon we have at hand is a set of complex social processes occurring among a limited number of countries, less than 200 and usually much less due to a lack of quality datasets in low- and middle-income countries. The number of cases is too small to permit multivariate analyses which would include all potentially relevant explanatory factors (Kenworthy 2004). Analyses therefore run the risk of omitted-variable bias. In epidemiology, it is well-known that if a variable is correlated with both the independent and dependent variable it should not be included
in the regression since the coefficient for the independent variable may overestimate its true effect (Kenworthy 2004). It is empirically unfeasible to include all explanatory variables, and even if we could, we would not be able to test for their effects in a single model because of multi-collinearity. Consequently, researchers using macro-comparative political and policy analyses use various types of sensitivity tests to assess the stability of hypothetical models. First, ‘extreme bound analysis’ (Deravi et al. 1990, Leamer 1983) can be performed using one explanatory variable and all possible combinations of other variables with less than four explanatory variables. Also useful is the variety of jackknife tests generating a number of bivariate regressions equal to the number of countries by using subsets of datasets. Only seven studies (Conley and Springer 2001, Baum and Lake 2003, Chung and Muntaner 2006, Avendano et al. 2009, Eikemo et al. 2008a, Bambra and Eikemo 2009, Klomp and de Hann 2009), in our literature review conducted such sensitivity analyses. Political economy of health and welfare regime researchers engaged in comparative population health research would be well-served to become acquainted with these analytical methods.

Conclusion

Guided by a political economy of health and welfare state regime framework, this review of 73 studies suggests that there is an association between politics expressed in terms of democracy, globalisation, political traditions, or welfare states and population health and health inequalities after adjustment for a common range of confounders. The strongest and most consistent associations with improved population health are advanced levels of democracy and egalitarian political traditions while the health effects of welfare states are inconsistent. This emerging field of study is limited by a dearth of globalisation studies, over-reliance on high-income core countries, infrequent use of longitudinal and time-series designs, few sensitivity analyses, and limited conceptualisations of political variables. Research on the empirical relations between politics and health represents an interesting development and opportunity for medical sociology and social epidemiology to better integrate complementary theories and methods. Given its emergent nature as a systematic research agenda, it is clear that further investigation drawing from both disciplines is warranted. Informed theory, rigorous methods, and conceptual clarity will be needed to reveal how political forces function as a macro-determinant of population health.

Lewontin, in his critical analyses of the standards of social sciences, noted that equating the status of experimental sciences and sociology was a self-defeating strategy. Instead he recommended the use of data simultaneously with explanatory narratives to ‘fill in’ where the data cannot go (Lewontin 2001). The emerging field of politically-oriented, empirical, and comparative studies is providing promising avenues of inquiry for medical sociology and social epidemiology and reminds us of the health-defining role of political and other macro-social factors.

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Note

1 See Appendix S1: Tables 3–6 (Summary characteristics of 73 studies on politics and health grouped by political theme) for review studies and references in the online version of this article.

References


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Supporting Information

Additional Supporting Information may be found in the Appendix appearing in the online version of this article:

Appendix S1. Tables 3–6 (Summary characteristics of 73 studies on politics and health grouped by political theme) for review studies and references.

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