## 1224 words, 12 references

## Class and health in changing societies: the need for novel approaches

Eero Lahelma https://orcid.org/0000-0002-1064-1333<sup>1</sup>, Ossi Rahkonen https://orcid.org/0000-0002-7202-3274<sup>1</sup>

<sup>1</sup>Department of Public Health, University of Helsinki, Helsinki, Finland

## Footnotes

CORE

**Contributors:** EL and OR drafted the manuscript and contributed to the final version. **Funding:** This study is funded by the Academy of Finland, Grant 2016/1294514. **Competing interests:** None declared. **Patient consent for publication:** Not required.

Surprisingly little attention has been devoted to the theories, concepts and measurement of social class and socioeconomic position in social epidemiology. This is particularly surprising as the number studies on health inequalities has increased exponentially over the decades.[1] Guidelines have though been proposed for the use of socioeconomic position in health research and we have learned a lot about the nature, measurement and use of various socioeconomic indicators [2-4]. However, the suggested socioeconomic classifications have often been pragmatic, based on occupation, education and income, grouped hierarchically following statistical authorities or ad hoc principles.

So far, theoretical and conceptual issues and their integration to empirical analysis of health inequalities have remained largely a white spot. The theoretical work within the sociology of class has had almost non-existent consequences for research on health inequalities. Similarly, research on socioeconomic inequalities in health has seldom been considered in the sociology of class. Cross-fertilisation between theoretical and empirical work as well as between sociology of class and social epidemiology would deepen our understanding of social class and socioeconomic position in the production of health inequalities.

The Marxian and the Weberian theories are the dominant social class traditions and these have influenced some subsequent class schemes and classifications. Wright's neo-Marxian class theory draws on the Marxian tradition in its emphasis on people's location in the occupational hierarchy based on production relations as well as power and control over access to economic and productive resources.[5] Additionally, Wright's theory draws on the Weberian tradition in its emphasis on skill and expertise, rendering the theory a hybrid construct.

The Marxian and the Weberian class theories are relational in nature as classes are seen in their relations to each other. Following these traditions, Wright[5] emphasises that when using class or socioeconomic position to explain inequalities, classifications should not be understood just as gradational constructs, but rather as relationships of people to income-generating resources and assets. Both major class theories can help strengthen the theoretical and conceptual basis of studies examining socioeconomic inequalities in health.

Within the vast number of studies on health inequalities, those using theoretically based class classifications remain a small minority. An example drawing on Wright's class theory is provided by Kokkinen et al.[6] who study class inequalities in mortality among Finnish men. They first identified five occupational classes and then dichotomised each class based on access to investment income above the average wage (15720  $\in$  per year), yielding 10 class locations. The capitalist

location, i.e. those with investment income, represents access to organisational power resources and options to exit the labour market. The study showed that the "capitalist class advantage" increases the chances of survival at each class level. After adjusting for age, marital status and education, the "capitalist class advantage" was consistent. The study lacked causes of death, examined only men and relative inequalities. The amount of investment income providing the "capitalist class advantage" was relatively low. Nevertheless, the study is an illuminating and pedagogical example showing that more nuanced approaches to health inequalities are feasible and useful.

Broader aspects of theoretically based social class approaches to further advance the study of health inequalities were recently discussed by McCartney at al.[7] In addition to theoretical reasons, concepts and measurement of class inequalities need to be developed for empirical reasons, since occupational, economic and ownership structures are changing. For example, ownership is camouflaged as investors act within invisible capital syndicates, production is accumulating and looking for cheaper labour in poorer countries, digitalisation leads to transformations within labour markets and work environments. As a result, class structures undergo transformations, like changes in the number of men and women occupying different classes. However, these transformations encompass not just class divisions, but also the societal power balance between labour and capital and markets and state.

Overall, the ongoing transformations impose challenges on social class concepts and classifications, and on the analysis of socioeconomic inequalities in health. For further discussion, we identified areas where theoretical and conceptual work may help improve future empirical studies:

First, people's locations in the social structure generate hierarchies along various socioeconomic subdomains.[2-4] Social class and socioeconomic position are umbrella concepts that cannot be directly measured and conventional indicators include occupational class, educational attainment and individual and household income. While these are correlated each subdomain reflects both common impacts of a general hierarchical ranking as well as particular impacts according to the specific nature of each subdomain. Health inequalities are typically found for each socioeconomic subdomain, and there are pathways from education to occupational class to income.[8]

Second, power resources, like financial capital, wealth, control over work and means of production are further important socioeconomic subdomains in social epidemiology.[7,9] Such subdomains are raised within the neo-Marxian class analysis and their inclusion is likely to lead to a more nuanced analysis of health inequalities as shown in the above-mentioned example complementing occupational class by investment capital.[6]

Third, considering intersectionality suggests where interactions can be found. Characteristics interacting with socioeconomic position include e.g. age, gender, ethnicity, disability, exclusion and discrimination. Analyses of class disadvantage due to multiple social processes help identify subgroups with particular health risks.[7] A key area of intersectionality concerns women and men's class position and health inequalities.[10] Using occupational classifications may be complicated as women and men work in different jobs.

Fourth, the social processes producing health inequalities are also dependent on life course and generation impacts. Proxies for socioeconomic position across the life course include parental social class for childhood position, education for early adulthood and occupational class for working age.[8] Socioeconomic position may change over the life course as well as generations. Analysing inter- and intragenerational social mobility further enriches the study of socioeconomic inequalities in health.[7,11]

Fifth, the production of health inequalities is materialised through pathways and mediating mechanisms between socioeconomic position and health outcomes. Key factors, in addition to the intersectional ones, include social and psychosocial factors, such as marital status, social support and stress, living and working conditions, such as housing and workload, health behaviours, and health care. The temporal order of these factors vary and they may be operative simultaneously. The socioeconomic pathways through mediating mechanisms to health inequalities are usually thought as causal ones. In addition to social causation, reverse causation, i.e. selection, should be considered, as poor health may affect class position over the life course.[7,11]

Sixth, global and macrosocial environments vary in time and place. In the rich countries, this has been discussed within the framework of welfare state regimes. While welfare states have been successful in promoting overall health, health inequalities persist equally in modern welfare states.[11,12] In any case, macro level influences, like wealth, unemployment, income inequalities and social policies need to be considered in the analysis of health inequalities.

Seventh, thus far the concepts and measures of social class and socioeconomic position as well as intersectional and mediating factors have been considered. Health, in contrast, has often been treated as an abstraction whereas the specific pathways from class to specific class-related health outcomes have been omitted. A comprehensive analysis considering the etiological processes would help unravel how social class and related exposures lead to inequalities in various symptoms, mental and physical illnesses, diseases and disabilities, and eventually death due to various causes.

Finally, improving the conceptual and empirical analysis of social class and health would help design more efficient measures for combatting the scourge of persistent health inequalities.

## References

1. Bouchard L, Albertini M, Batista R, et al. Research on health inequalities: A bibliometric analysis (1966-2014). *Soc Sci Med* 2015;141:100-108. doi: 10.1016/j.socscimed.2015.07.022.

2. Lynch J, Kaplan G. Socioeconomic position. In: Berkman L, Kawachi I, eds. *Social Epidemiology*. New York: Oxford University Press 2000:13-35.

3. Braveman P, Cubbin C, Egerter S, et al. Socioeconomic status in health research: One size does not fit all. *JAMA* 2005;294:2879-2888.

4. Galobardes B, Shaw M, Lawlor D, et al. Indicators of socioeconomic position (Part 1). *J Epidemiol Community Health* 2006;60:7-12.

5. Wright EO. Foundations of a neo-Marxist class analysis. In *Approaches to Class Analysis*, ed. EO Wright. Cambridge: Cambridge University Press, Cambridge 2005:4-30.

6. Kokkinen L, Muntaner C, Koskinen A, et al. Occupational class, capitalist class advantage, and mortality among Finnish working-age men. *J Epidemiol Community Health* 2019 (forthcoming)

7. McCartney G, Bartley M, Dundas R, et al. Theorising social class and its application to the study of health inequalities. *SSM Popul Health* 2018;7:015-15. doi: 10.1016/j.ssmph.2018.10.015.

8. Lahelma E, Martikainen P, Laaksonen M, et al. Pathways between socioeconomic determinants of health. *J Epidemiol Community Health* 2004;58:327-332

9. Aittomäki A, Martikainen P, Laaksonen M, et al. The associations of household wealth and income with self-rated health - A study on economic advantage in middle-aged Finnish men and women. *Soc Sci Med* 2010;71:1018-1026. doi: 10.1016/j.socscimed.2010.05.040.

10. Bartley M, Sacker A, Firth D, et al. Understanding social variation in cardiovascular risk factors in women and men: The advantage of theoretically based measures. *Soc Sci Med* 1999;49:831-845.

11. Bambra C. Health inequalities and welfare state regimes: theoretical insights on a public health "puzzle." *J Epidemiol Community Health* 2011;55:740-745.

12. Mackenbach J. The persistence of health inequalities in modern welfare states: the explanation of a paradox. *Soc Sci Med* 2012;75:761-769.