THEORY AND METHODS

Social determinants of health: a veil that hides socioeconomic position and its relation with health

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The emergence of theoretical models of social determinants of health has added conceptual ambiguity to the understanding of social inequalities in health, as it is often not possible to clearly distinguish between socioeconomic position and these determinants. Whether the existence of social inequalities in health is based on differences in health or on differences in social determinants of health that are systematically associated with socioeconomic position, policymakers should be clearly informed of the importance of socioeconomic position for health. Thus, the following three basic requirements are proposed: to reach a consensus about the dimensions that reflect socioeconomic position; to agree about what are to be considered the social determinants of health and whether or not these determinants are a construct that can be distinguished from socioeconomic position; and finally, to establish which dimensions and measures of socioeconomic position are most appropriate for the evaluation of interventions that aim to reduce these inequalities.

A recent paper presented reasons given by a group of policymakers to justify the limited influence on public health policymaking of research evidence related with the production and reduction of social inequalities in health.[1] This group noted that lack of clarity in the messages of researchers is one of the reasons that limits the impact of their research on public health policymaking. The objective of this work is to show that the ambiguous interpretation of socioeconomic position (SEP) and of the social determinants of health and the conceptual overlap between both are examples of this lack of clearly defined messages.

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SEP: FROM THE SIMILAR INTERPRETATION OF DIFFERENT MEASURES TO THE DIFFERENT INTERPRETATION OF SIMILAR MEASURES

After the publication of the Black Report, Blaxter and Wilkinson warned of the limited predictive or explanatory power of social class based on the registrar general's (RG) occupational classification.[2 3] In their opinion, ''social class serves simply as an undefined proxy for the effects of unknown socio-economic differences'',[2] as ''it is not known what aspect of economic advantage, education, culture, norms, power, etc, is more significant for any given outcome''.[3] Bartley *et al* also noted the limitation of this classification for public health interventions because of its ambiguous meaning; these authors were surprised that the Black Report had proposed competing explanations—selection, artefact, behaviour/culture, and materialist—for social inequalities in health, as it is not possible to distinguish between these alternatives using the RG classification of social class.[4] Subsequently, Berkman and Macintyre,[5] Davey Smith *et al*,[6] Bartley,[7] and Blane[8] cautioned that many investigations made with other measures of SEP also rarely clearly state hypotheses about which aspect of each measure studied involves a risk to health.

It is not surprising that, given this lack of theoretical foundation of SEP in empirical investigation, most proposals to reduce social inequalities in health have assumed that the meaning of these measures is interchangeable. Many proposals refer generically to high or low socioeconomic groups, without justifying whether it is reasonable to expect reduced health inequalities by education and/or income and/or social class. An example is one of the most frequently recommended interventions: reduced income inequality. There is evidence of the parallel evolution of health inequalities and income inequality and it is assumed that these changes are probably related.[9–11] However, we still do not know what measure or measures of SEP should be used to evaluate whether the intervention is successful in reducing social inequalities in health. For some, the most appropriate measure could be the difference in health between the top and bottom of the income distribution, while for others, income inequality can reflect several elements of social inequality, and the evidence of an effect of reduced income inequality on reduced health inequalities would not depend on a particular SEP measure.

In contrast, on other occasions different conceptions of the same measure of SEP coexist, and are transferred to the proposals for action. An example is the contrast between proposals to reduce social inequalities in health in Great Britain and in Holland. For many British authors education is an indicator of the ''life course accumulation'' of advantages and disadvantages[4]: the material and cultural resources of the family of origin have an important influence on a child's educational attainment, and education is a strong predictor of the kind of occupation a person can enter and, consequently, of their income. The health gradient by adult

social class would be nothing more than the result of cumulative material advantages and disadvantages throughout life.[12] For others, education is considered a pathway between early social circumstances and health[13]: educational level may influence receptivity to health promotion messages and may also affect health by permitting more informed use of health services.[13 14] However, Dutch authors use education as a fundamental measure of adult SEP, and this is how they classify people when identifying the part played by material and behavioural factors in explaining social inequalities in health.[15 16] This different conception of the meaning of education probably explains why the proposals for intervention refer to decreased differences in the prevalence of material and behavioural factors between manual and non-manual groups in Great Britain,[17] and between persons with lower and higher education in Holland.[18]

THE EMERGENCE OF SOCIAL DETERMINANTS OF HEALTH: ADDITIONAL CONFUSION

The emergence in the last years of the 20th century of theoretical models related with what have been called ''social determinants of health'' has produced considerable conceptual ambiguity, which has limited the definition of objectives in the interventions recommended to reduce social inequalities in health.[19–22] This ambiguity is attributable, not so much to the multitude of theoretical models proposed, as to the impossibility of defining in many of the proposed theories whether or not SEP is a construct that is different from these social determinants.

One example is the 1998 publication ''*Social Determinants of Health—The Solid Facts*'',[23] or the expanded version published one year later.[24] In their introduction, Wilkinson and Marmot note that the purpose of the work was to summarise the evidence about 10 social determinants of health in the developed countries, so that policymakers at all levels would keep them in mind in their efforts to create healthier societies. But this led to a heterogeneous presentation of the evidence: the first ''solid fact'' gives the evidence for the relation between SEP and health as an example of the first social determinant—the social gradient—; eight ''solid facts'' show the evidence for the relation with health of eight other social determinants—stress, early life, social exclusion, work, unemployment, social support, food, and transport—while only one of the ''solid facts'', with regard to addiction, moves away from the previous scheme by showing the strong relation of individual SEP with health risk behaviour. Thus, after reading the publication, the reader is left in doubt as to whether the authors intended to provide evidence to support the creation of healthier societies, to support reduced social inequalities in health, or both at the same time.

Another example is the Acheson Report, which contains a similar conceptual ambiguity in its presentation of the evidence.[25] However the confusion becomes even greater when the report notes that the reduction of social inequalities in health requires policies that improve the level of health and of its principal determinants—such as income, education, and employment—in persons who are less well off in terms of socioeconomic status, sex, or ethnicity. In making this affirmation, the Acheson Report considers socioeconomic status to be something different from income or education, even though it had previously defined education and income as measures of socioeconomic status. Given this lack of theoretical clarity, it is exceedingly difficult to identify the objective of the proposed interventions, and it is impossible to imagine how to measure individual position in the socioeconomic structure when evaluating whether particular interventions successfully reduce social inequalities in health.

A NEW DEFINITION OF SOCIAL INEQUALITIES IN HEALTH: A FAILED ATTEMPT TO SOLVE THIS CONFUSION

Graham and Kelly have warned that the use of a single theoretical model to explain health and social inequalities in health may obscure the distinction between the social determinants of health and the social process that determines the unequal social distribution of these determinants.[26 27] The same underlying idea is found in Braveman and Gruskin, who modified the frequently used definition of social inequalities in health—differences in the frequency of health problems between people of higher and lower socioeconomic status—for another that incorporates the social determinants of health: differences in health or in its social determinants that are systematically associated with different levels of underlying social advantage or position in a social hierarchy.[28 29]

Based on this reasoning, social determinants of health are incorporated into these authors' proposals for evaluating the

Box 1 Generic terms used to name the social and economic factors that influence what positions persons or groups hold within the structure of a society (the references consulted are in superscript)

- The term social class is used. The term is used arbitrarily, although the authors recognise the use of other terms, such as social status, social inequality, social stratification and socioeconomic status, depending on the theoretical concept.[38]
- The term socioeconomic status is used[44 57]
- Socioeconomic status and social position are used interchangeably.[58]
- Social class and socioeconomic status are used interchangeably, although the authors note that each term has a different theoretical basis.[5]
- Social class and SEP are used, but the authors note that the two terms are not identical. The authors reject the term socioeconomic status because it does not permit distinction between two aspects of SEP: resource based and prestige based characteristics.[39 59]
- The term social position is used[7 40 41 49]
- Authors note that different terms used in the epidemiological literature—social class, social stratification, social inequality, social status, and socioeconomic status—reflect different historical, conceptual, and disciplinary roots. They use SEP because they believe this term incorporates features from many of these traditions.[36 37]
- Author refers to SEP to reflect social hierarchies in which persons or groups can be arranged along a ranked order of some attribute—as income or educational level. In contrast with stratification social class indicates the employment relations and conditions of each occupation.[47]
- SEP encompasses both social class and socioeconomic status[48]
- The term social position is used to refer to both position in the socioeconomic hierarchy and position in other dimensions of the social structure, such as sex, race/ethnicity, age, geography, political or religious affiliation, disability, sexual orientation, etc.[26 28]

impact of policies that aim to achieve equity in health. Thus, Braveman has noted that monitoring health equity requires identification of the most appropriate social groups, as well as of the health measures and the prevalence of the social determinants of health in each group to evaluate the differential impact of each intervention in these groups.[30] Likewise, Graham and Kelly have suggested that an effective policy to reduce the health socioeconomic gradient is one that achieves health improvements (or positive change in its underlying determinants) for all socioeconomic groups until they reach the level of the highest socioeconomic group.[27]

However, these authors are also victims of a conceptual overlap when they mention certain factors—poverty, unemployment, education, or living conditions—as examples of both social determinants and indicators of SEP.[29] Or when they attribute increased social differences in health in the wealthier countries in the last three decades of the 20th century to increased social differences in standards of living, in real income and in the average level of education without realising that they define indicators of material wellbeing, income, and education—together with social class based on occupation—as the key components of SEP. They recognise in theory that different characteristics reflect individual position in the socioeconomic structure, but implicitly the only social inequalities in health that they recognise are health inequalities by social class.[26 27]

THE NEED TO CLOSE THE THEORETICAL GAP BETWEEN SEP AND SOCIAL DETERMINANTS OF HEALTH

The abundant evidence of differences in health associated with SEP offers little support to policymakers if it is not made clear that SEP is a generic term used to refer to a large variety of concepts and measures. Although many of these concepts and measures are interrelated, each reflects a dimension of SEP whose relation with health is not necessarily based on similar pathways. Various authors have noted the need to theoretically conceptualise the SEP measures used and to explicitly formulate the hypothetical pathways between social circumstances and particular health outcomes.[7 8 30] Blane notes that, in the same way that physicians are familiar with the idea that height and weight are different dimensions of physical size, we should assume that SEP has different dimensions and that the measurement of each can help to identify different aetiological pathways.[8] Bartley *et al*[7] note that the use of different SEP measures helps us to understand why, in the Whitehall I study, behavioural risk factors explained only a moderate amount of the social variance in cardiovascular disease,[31] whereas in the British regional heart study, class differences in cardiovascular events were entirely accounted for by adjustment for health behaviours.[32] Likewise, the use of different SEP indicators can explain why, in the Whitehall II study, current rather than childhood socioeconomic disadvantage has a stronger influence on some components of the metabolic syndrome,[33] whereas other studies show the opposite.[34 35]

But it is difficult to convey the importance of using appropriate measures of SEP to policymakers for evaluating and redressing social inequalities in health without previously agreeing on the dimensions that reflect SEP. Although we may first need to reach a consensus on the generic term that should be used to refer to these dimensions, as various terms have been used despite their different theoretical bases and, therefore, their different meaning. In this paper, the term ''socioeconomic position'' has been used, as suggested by Lynch and Kaplan and Galobardes *et al*,[36 37] but others terms have been also used (box 1).

A number of previous studies have provided abundant information about the use and meaning of each measure of SEP in epidemiological and health research.[36–39] The most frequently used dimensions of SEP are education, social class, occupation, income, housing characteristics, and wealth. Other less used dimensions are prestige based measures, unemployment, and other work related indicators, and proxy indicators of SEP such as number of siblings. However, some authors have found that employment status and work related indicators, like job strain, are mediators between some measures of SEP and ill health.[40 41] Likewise, there are different opinions as to whether or not education is a measure of SEP. There is wide agreement that education shapes the kind of job a person can get, income, and living conditions. But whereas British authors believe that education is not itself a measure of position in the social structure or of adult socioeconomic circumstances,[41 42] American authors consider that education is the aspect of SEP that is most important to health.[43] For the former, education is an indicator of the route to adult socioeconomic destination, whereas for the latter, education is the key to one's position in the stratification system, and location in the stratification system shapes the ongoing stressors to which people are exposed, the resources available to help them cope with stressors, and lifestyle. Both ideas are supported by the empirical evidence: in the UK occupational social class is a stronger predictor of health outcomes than education,[6] whereas in the USA the opposite has been found.[44]

Nor is it clear whether social class constitutes a dimension of SEP. Although some reviews include it as an indicator of SEP,[36 45] it is widely agreed that social class and SEP are different concepts.[39 46–48] Krieger *et al* note that social class is not an a priori property of individual human beings,[39] but a social relationship created by societies, and as such, social

Box 2 Concepts related with social class (the references consulted are in superscript)

- The British registrar general's (RG) social class is used. The authors note that this is a classification that lacks a theoretical basis, in which persons are grouped based on the type of work they do.[4]
- Social class is assumed to be a multidimensional concept based on Weberian sociological theory. The authors state that occupation, education, and income are the basic measures of social class.[38]
- The Erickson-Goldthorpe classification of social class, based on employment relations and conditions, is used.[4 7 55 60]
- The Cambridge scale as indicator of general social advantage is used. Social distance between occupations—defined by similarities in lifestyle and resources—reflects differences in general social advantage.[7 40 41 49 55]
- The measure of social class position of the neo-Marxist Wright, based on social relations of ownership and control over productive assets, is used.[39 46 50 51]
- A measure of social class based on Marx's theories is used. Similar to the Wright scheme, it emphasises the contradictory categories of people working in service and of skilled people who may be both exploiters and exploited.[61 62]
- The Office for National Statistics socioeconomic classification based on employment characteristics—similar to the Erickson-Goldthorpe class scheme—is used.[41 49]

Box 3 Examples of concepts that have been identified as social determinants of health (the references consulted are in superscript)

- Layers of influences on health surrounding the persons that theoretically could be modified: personal behaviour, social and community influences, living and working conditions, food supplies and access to essential facilities and services, and finally, cultural and environmental conditions.[19]
- Reverse causality, differential susceptibility, individual lifestyle, physical environment, social environment, and differential access to care services.[63]
- Exposures that can be changed by public-policy decisions: risk factors—like smoking—living and working conditions, poverty and income inequalities, or the proportion of people able to access affordable nutritious food.[21]
- Individual social position—education, occupation, income—as well as characteristics of the broader social context such as place of residence, work environment, or wider social and economic policies of society.[22]
- The social gradient, stress, early life, social exclusion, work, unemployment, social support, addiction, food, and transport.[23 24]
- A society's past and present economic, political, and legal system, its material and technological resources, and its adherence to norms and practices consistent with international human rights norms and standards; and its external political and economic relationships to other countries, as implemented through interactions among governments, international political and economic organisations, and non-governmental organisations.[64]
- Freedom, including equal access to participation in the political process, equal opportunity, safe jobs, health care, and the social bases of self respect.[65 66]
- Household living conditions, conditions in communities and workplaces, and health care, along with policies and programmes affecting any of these factors.[28]
- Wealth, education, status of women, supply of clean water, sanitation, food security, housing, and health care.[29]
- Societal level influences on health—living and working conditions and the broader social structures in which they are embedded, such as education, employment opportunities, and political influence—and individual risk factors, such as health behaviours.[26]
- Income, education, employment, housing and the environment, as well as their effect on lifestyle.[27]
- *Social* institutions—cultural and religious institutions, economic systems, and political structures; *surroundings*—neighbourhoods, workplaces, towns, cities, and built environments; and *social relationships*—position in the social hierarchy, differential treatment of social groups, and social networks.[67]
- Poverty, inequalities in income distribution, and the social conditions that give rise to high risk of non-communicable disease and that influence both the onset and response to treatment of the major infectious diseases.[68]

class is logically and materially prior to its expression in distributions of occupations income, wealth, education, and social status. To refer to these components of social well-being, the term ''socioeconomic position'' is used. Another point of view, expressed by Bartley,[47] notes that most used measures of SEP have been indicators of position in the social hierarchies in accordance with education, income, or prestige, whereas social class indicates the employment relations and conditions of each occupation; that is, class is not defined according to hierarchy, but according to relations of power over the work of others and control over one's own work. Not just one, but various measures of social class reflect different theoretical conceptions about this construct (box 2).[45] A number of studies that have used these measures have provided important information about the different pathways by which social inequalities may be generated.[7 40 41 50 51]

On the other hand, there are some measures of SEP with no theoretical basis that merely reflect the information available in each specific investigation, which raises serious doubt about whether they are appropriate measures of SEP. This is the case, for example, with the use of large occupational groups in national classifications of occupations. And other measures are both indicators of SEP and direct measures of exposure. For example, household amenities and overcrowding are housing related indicators of material circumstances,[45 52] and larger numbers of children in contemporary industrialised societies are associated with poorer SEP[53] because of being a member of a large family means a higher risk of fewer resources per head. But lack of running water and of a household toilet limit hygiene practices and may be associated with increased risk of infection, overcrowding may have a direct effect on health through facilitation of the spread of infectious diseases, and people who have more siblings could have more exposure to infectious agents.[45 54]

It is also necessary to agree about what we understand by social determinants of health, and whether these determinants constitute a different construct from SEP. This is not an easy task, given the many different concepts to which the term social determinant refers: from societal level influences on health to risk factors—like health behaviours, psychosocial factors, poverty, or living and working conditions—in addition to different dimensions of SEP (box 3). Even though the common denominator of authors who use these concepts is their conviction that the social distribution of these determinants can be changed by public policy decisions, the lack of a clear conceptual delimitation between social determinants and the dimensions of SEP gives rise to serious uncertainty when planning political action.

Summary points

- Many proposals to reduce social inequalities in health assume that the meaning of the measures of socioeconomic position is interchangeable, whereas at other times different proposals reflect different conceptions of the same measure.
- The emergence of social determinants of health has added conceptual ambiguity, as it is often not possible to identify whether or not socioeconomic position is a construct that is different from these determinants.
- A conceptual overlap is evident in some analyses that aim to clarify this distinction, since they mention some factors as examples of both social determinants and indicators of socioeconomic position.

Policy implications

- To clarify this matter, researchers need to agree on the dimensions that reflect socioeconomic position, on what should be considered as social determinants of health, and on the conceptual distinction between the two.
- We also need to agree on which measures of socioeconomic position are most appropriate to evaluate each intervention that aims to reduce differences in health that are systematically associated with socioeconomic position.

To begin with, it would be a great help if we tried to keep SEP separate from all these other concepts. SEP is predictive of many risk exposures considered as social determinants of health. For example, education reflects the long term influences of early life circumstances on adult health, as well as the influence of adult resources—such as economic resources, health lifestyle, and social and psychological resources—on health.[6 43] Income can influence health by providing access to material resources and to services, such as health care or leisure activities. And the differences in health outcomes between groups defined according to measures of occupational based social class can be attributed to differences in social and material advantage,[49 55] in employment,[41] in health behaviours,[7] in work based stress, work control and autonomy,[40 56] and in power relations within the labour process.[50] Perhaps the term ''social'' should be reserved for the distribution of material hazards, health behaviours, and psychosocial factors among socioeconomic groups.

Finally, we need to identify the most appropriate dimensions and measures of SEP to evaluate the impact of interventions that aim to reduce these inequalities, whether they are ''upstream'', ''midstream'', or ''downstream'' actions. If we agree that each dimension of SEP may influence health through different pathways and so may be more or less relevant to different health outcomes, can any SEP dimension be used to evaluate the result of an intervention that reduces economic inequality, or does the SEP dimension needed depend on the type of intervention? And when we evaluate interventions targeting lower income population groups that aim to reduce their exposure to unfavourable specific material living conditions, psychological factors, or behavioural risk factors, which SEP dimension should be used? Income? Education? Some measure of social class? Any of these? These questions are not easy, but we need to be able to answer them to evaluate whether interventions have failed or succeeded.

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