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Socioeconomic status and health: a discussion of two paradigms

ABSTRACT

Socioeconomic status and its impact on health are in the mainstream of public health thinking. This text discusses two paradigms utilized in assessing socioeconomic status in epidemiologic studies. One paradigm refers to prestige-based measurements and positive differentiation among social strata. This paradigm is characterized by classifications assessing social capital and the access to goods and services. The other paradigm refers to the classification of social deprivation and negative differentiation among social strata. The proposal of State-funded reposition to the mostly deprived social strata is acknowledged as characteristic of this paradigm. The contrast between these paradigms, and their potential interaction and debate are discussed. Fostering reflection on methodological strategies to assess socioeconomic status in epidemiologic studies can contribute to the promotion of health and social justice

DESCRIPTORS: Health Inequalities. Socioeconomic Factors. Socioeconomic Analysis. Social Inequity.

INTRODUCTION

A contemporary influential definition of public health states that it is “the science and art of preventing disease, prolonging life and promoting health through the organized efforts and informed choices of society, organizations, public and private, communities and individuals”.²⁰ Public health is portrayed as a dynamic process that demands the conjoining of individual and institutional efforts. In order to make the different interests at play compatible, thus assuring the viability of social action, it is necessary to promote the debate of ideas and conjoin demands; public health is, therefore founded on politics.

Politics entails discussions and conflicts of interests. It may result in personal abrasion and erosion of the social fabric. However, this process leads to the organization of initiatives and the aggregation of social agents. Politics is the resource utilized in the construction of possible consensus, contributing toward the effectiveness of health programs and interventions.

When studying the causes and the distribution of health status or of health related events in specific populations, epidemiology contributes toward public health providing knowledge and data that instruct the creation of consensus and decision making. For this purpose, epidemiological studies frequently must classify individuals and groups according to socioeconomic status – a dimension recognized as a very important factor in the modification of risks with respect to specific diseases, restricting or facilitating access to health services.

Socioeconomic conditions may be assessed by income, schooling and occupation; indexes that aggregate data related to different dimensions of

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socioeconomic status may also be employed. At any rate, resources utilized in constructing social classifications are permeated by different ideologies, values and concepts. Measuring and comparing socioeconomic conditions in epidemiological studies has a prominent political dimension, which makes the overlap between public health and politics even more complex.

The objective of the present text was to describe two paradigms on which forms of measuring socioeconomic status are based, and that have been utilized in recent epidemiological studies, particularly in the Brazilian context. Hopefully, this will contribute to a reflection with respect to the methodological options available and the consequences of employing them, and thus to studies in this field.

“DIFFERENCES AMONGST US ”

These comments are not based on a systematic review of the literature. Rather, an attempt was made to gather indications that could clarify contrasting positions. The ideological confrontation between these analytical perspectives is not recent, nor is it exclusive of the Brazilian reality. “The difference amongst us” refers to the contrast between two paradigms which will be discussed below in more detail. In order to introduce the theme, an excerpt from a statement by Leeder (2003)⁹ synthesizes the ideas being debated:

In 1988, I attended a workshop of healthcare service managers sponsored by the King’s Fund of London. Participants included such managers and the odd academic from the United Kingdom, the United States, Canada, Australia and New Zealand. We were discussing resource allocation, and frustration mounted during the first two days. Ideologically, participants had divided into two teams — the US and the Rest.

On the third day, the leader of the US team said, “The difference between us is that you guys believe in equity and we don’t. In the US, people are less interested in making sure everyone gets care than that those who can get it get great care. They accept not getting care now if they can see the opportunity to improve their position and succeed, so that, when they get the money, they will be able to buy great care the minute they want it. It is all about opportunity. People in the US want opportunity, not equity. That’s what they think is fair.”

It was important that the US delegate said what he did. It cleared the air. It reminded us that not all societies, and not all people within a society, share a common view of what is fair. In the US, fairness means that you will be encouraged to seek personal success without having to worry much about anyone else. In the UK,

Canada, New Zealand and Australia, there is a general interest in the well-being of others.

FIRST PARADIGM: LIBERTY AND OPPORTUNITY

The first paradigm for social classification involves the perspective that socioeconomic differentiation among human beings may be associated with fundamental human values such as liberty and the fulfillment of individual potentials. A prominent positive aspect is attributed to socioeconomic inequality resulting from this differentiation; taking full advantage of opportunities may be a cause or a consequence of access to improved health status.

According to this perspective, “social justice” would consist in making it possible for each individual to dispose of the necessary conditions to fulfill his/her vocations and opportunities, even if this implies some differentiation between human beings. Even so, “disparities” in health would not always be justified, and the study of socioeconomic conditions would make it possible to identify strategies for increasing opportunities, and for enhancing means of divulging existing resources and social benefits. Studies that evaluate the relation between socioeconomic status and health according to this paradigm, stratify population in terms of the quantification of individual acquisitions and of opportunities that were met, attempting to reflect access to better health status.

Access to goods and services

A resource frequently utilized in the assessment of socioeconomic status consists of quantifying the differential access to goods and services in the market. The *Associação Brasileira de Anunciantes* (Brazilian Association of Advertisers) proposed in 1970 a former criterium for social stratification of family nuclei according to characteristics of their consumer habits. In the following decades, the *Associação Brasileira dos Institutos de Pesquisa de Mercado* (Brazilian Association of Market Research Institutes) associated itself to this initiative and different reformulations of this methodology were presented, proposing the inclusion of additional items and new scoring systems. Supported by the *Associação Brasileira de Empresas de Pesquisa* (ABEP – The Brazilian Association of Research Enterprises), the most recent version (2003) of the questionnaire may be consulted on-line.^a

This classification is based on items such as the possession of goods (television, radio, automobile, vacuum cleaner, videocassette player and/or DVD, refrigerator, freezer and washing machine), the access to services

^a Associação Brasileira de Empresas de Pesquisas. Critério de Classificação Econômica Brasil. Disponível em: http://www.abep.org/codigosguias/ABEP_CCEB.pdf [Acesso em 28 Fev 2008]

(housemaids), characteristics of the home (number of bathrooms) and years of schooling of the head of the household. The total score with respect to each item results in the classification of the respondents in seven strata identified as “social classes” A1, A2, B1, B2, C, D and E.

The main purpose of this system of classification is to estimate the buying capacity of participants in market research, in order to guide the activity of producers and announcers. Its proponents reiterate that the questionnaire should be restricted to measuring potential markets, not intending to infer social classes for broader population studies. Even within this dimension, the methodology was criticized as being outdated, insensitive to the more dynamic modifications in consumption habits, and for including unstable items with low discriminatory power.¹¹

Despite these considerations, the ease with which this data is obtained seems to have captivated researchers within the field of health that often utilize these criteria for classifying populations. Boing et al⁵ revised 86 studies undertaken in Brazil and in the international context that discussed socioeconomic differentiation with respect to the prevalence of dental caries and periodontal conditions from 1990 to 2001, and identified three studies that adopted this methodology. Almeida-Filho et al¹ utilized the score obtained in the ABEP questionnaire to infer social class, according to the categories “high”, “middle”, “workers” and “poor”, and explored the interactions between social inequalities and mental health conditions in Bahia.

Although it is easily applied, this index was not developed for the purpose of addressing concerns related to health and social well being. Consumer habits do not necessarily reflect patterns of behavior in health, differential levels of access to medical services or risks of disease. There is a relative incongruence between the object being measured by this index and the more common motives that lead health research to stratify population. When reflecting upon whether or not to utilize this index, it should also be considered that this classification criterion was not validated in Brazil and that no such instrument exists in the international context.

Social capital

The concept of “social capital” is another analytical resource utilized to assess the potential for accomplishing opportunities by individuals and collectivities. Intuitively, this concept involves the idea that the family, friends and colleagues, persons and groups with which one interacts socially, constitute relevant patrimony for the satisfaction of human necessities. Social capital would be indicative cohesion among individuals, a measurable dimension of something that qualifies them for more effective joint actions aimed at common

objectives.²¹ A historical synthesis of the concept, its capacity to infer health differentials and measurement tools were recently presented to the professional field of public health in Brazil.^{15,18}

Exemplifying the application of this concept, Pattussi et al¹⁴ studied dental injuries among adolescents residing in two satellite cities of Brasilia. An extensive questionnaire and a complex statistical procedure were used to characterize social capital as an attribute of residential areas. Neighborhoods with more favorable indices of social capital had a lower prevalence of dental injuries among adolescents. This study also utilized the ABEP questionnaire to infer social class (higher, medium and lower) and to describe prevalence differentials. The conjunction of both procedures in the same study may be interpreted as a sign of their ideological affinity and adhesion to this first paradigm for measuring socioeconomic status.

Despite the great interest it has roused and its increasing use in health research, the concept of social capital has been criticized for its virtual ideological association to neoliberalism. Navarro¹³ reconstituted the genealogy of the concept and synthesized parameters for a critical appraisal. In his evaluation, the importance of the concept has been exaggerated in epidemiological studies, and its use eluded power relations and political factors related to class struggle. In order to test this hypothesis, Muntaner et al¹² studied mortality coefficients from various countries and assessed their association to different indicators, organized in two blocks. The first evaluated political factors related to the power of workers (unequal income distribution, unemployment, poverty, social security expenditures, votes for the “left”); the second gathered conventional measures of social capital (voluntary work, corruption, insertion in organizations). The authors concluded that the variables of the first block had greater predictive power to health-related conditions than the second block.

SECOND PARADIGM: EQUALITY AND EQUITY

The second paradigm of social classification involves the perspective that socioeconomic differentiation between human beings may be associated to exploration and social injustice. A prominently negative aspect is attributed to socioeconomic inequality resulting from this differentiation: material deprivation may be the cause and consequence of difficulties in accessing better health conditions.

According to this directive, “social justice” would demand propitiating communitarian or state resources to individuals and groups that have been impaired as to the possible attainable level of human development in general, of health in particular. “Inequalities” in health would not always be unjust, and the study of socioeconomic conditions would make it possible to

identify discrepancies that require the intervention of organized efforts within society. Studies evaluating the relation between socioeconomic conditions and health according to this paradigm have sought to stratify population, to quantify inequalities and to qualify those that are considered unjust.

Social justice of the healthcare programs

Health differentials according to socioeconomic conditions may be described and explored analytically in the attempt to identify social injustice in the distribution of the burden of disease or the results of health programs. The common forms of measuring socioeconomic conditions have been the object of several reviews.^{4,7,8} In addition to synthesizing measures of interest and critically appraising their advantages and disadvantages, these reviews stressed the need for a better comprehension of the close relation between socioeconomic conditions and health. Studies described below exemplify the application of this directive.

Victoria et al¹⁹ evaluated the implementation of a program of child health care in Brazilian cities according to categories of variation of the human development index, per capita income, rate of literacy, population size, distance from the State capital, percentage of urban population and of the extension of the tap water and sewage systems. Based on this evaluation, authors concluded that the program was implemented in a lower proportion in smaller, poorer towns that were farther away from the metropolitan centers. Authors thus pointed out an aspect of social injustice that should be taken into consideration by the health authority so that poorer cities may be benefited when planning expansion strategies.

The reduction of mortality due to Aids in Sao Paulo after introducing a program of anti-retroviral medication distribution was evaluated according to differentials in socioeconomic conditions in the city's districts.² The human development index, per capita income, the Gini coefficient (inequality in the distribution of income), rate of illiteracy, years of schooling, proportion of heads of households with high school degrees, percentage of households located in shantytowns, household agglomeration and household ownership were assessed. This study concluded that the intervention was successful, both from the point of view of improvements in the global health indicator, and with respect to the absence of a socioeconomic bias.

Peres et al¹⁶ studied the addition of fluoride to public water supply, a preventive measure for dental caries, with respect to its potential effect on the reduction of the prevalence of caries, and its impact on socioeconomic differentials of the disease. Data were collected on coverage of the water supply network, the human development index, differentials between urban and rural

areas, schooling indicators and income in Brazilian cities. Since not all cities were able to fluoridate their water supplies and even those that did could not provide universal access to tap water, the preventive resource resulted simultaneously in a global reduction in the rates of caries and in a broader gap and increased inequality in the prevalence of this disease. Authors concluded that targeting resources towards the expansion of access to fluoridated water may result in an even greater reduction of the global levels of caries.

Social class in the Marxist approach

Structural aspects in the division of classes in capitalist society, contemplated by Marxist analyses, may be integrated into the schemes of social stratification in epidemiological studies? Social injustice that permeates socioeconomic differences in health may be discussed within the perspective of exploitation and class struggle? These questions are complex and motivated researchers in Brazil¹⁰ and in the international context^{6,22} to propose operational schemes that make it possible to recognize individuals' allocation within different social classes according to attributes with respect to their insertion in the work force. Although the validity of these initiatives is difficult to evaluate, this effort obtained favorable results in terms of responsiveness; i.e., discriminatory power in identifying significant associations in terms of health differentials.

Exemplifying, a study identified the social class of parents as a distal factor of the prevalence of caries in children with deciduous dentition.¹⁷ The categories "traditional petit bourgeoisie" and "proletariat" presented higher odds ratios than the reference category ("bourgeoisie" and "new petit bourgeoisie"). However, this association was not selected for multivariate models because other socioeconomic indices (family income and mother's schooling) presented a better goodness of fit.

DIALOGUE BETWEEN THE PARADIGMS

One of the paradigms for measuring socioeconomic conditions emphasizes state intervention and presupposes the strengthening of normative initiatives, capable of propitiating replenishment for individuals and groups that are impaired by social inequalities. The other paradigm highlights individual liberty and the human capacity for positive differentiation.

Describing this contrast in terms of positions on the right or left does not contribute to the comprehension of the complexity of this theme. There is no immediate correspondence between the paradigms described and consolidated political positions associated with broader ideological conceptions. By employing one paradigm or the other, researchers are not obliged to adhere to

the ideological labels and, frequently, they enlarge the scope of their approaches by shifting between strategies aligned to the different paradigms.

As strategies of social stratification, the paradigms described are not mutually exclusive; some intersection may be established between them and this may be explored analytically in order to aggregate explanatory value to epidemiological studies. Characterizing unequal socioeconomic conditions as mere “disparities” does not necessarily entail that the injustice inherent to the differentiation among social strata is not being considered. Characterizing “inequalities” in health as “inequitable” or as representing “lack of equity” does not necessarily imply that socioeconomic conditions will not be classified as positive differentiation. The “liberty” strategy is not insensible to material privation; the “equality” strategy may incorporate measures of social prestige in the assessment of socioeconomic status.

Traditionally employed in studies on lack of equity, the Townsend (*Townsend Material Deprivation Score*) and Carstairs (*Carstairs and Morris Scottish Deprivation Score*) indexes conjugate information on social prestige (car and household ownership) to data on work and habitation.⁴ These indexes, however, are based on data

collected by British censuses, which makes it difficult to transpose them to the Brazilian context. Researchers associated to the “equality” paradigm, with several pro-equity interventions, have also proposed forms of measuring socioeconomic conditions based on social prestige and positive differentiation.³

CONCLUSIONS

Socioeconomic conditions and their impact on health deserve and in fact receive considerable attention from researchers and health administrators. This theme is approached with even greater complexity when considering how socioeconomic, gender and ethnic group differentials overlap and intertwine.

The two paradigms discussed above are neither mutually exclusive nor reducible, and the dialogue between them will surely continue to animate health studies. It is important to be aware that the choice of methodological resources utilized in measuring the impact of socioeconomic conditions on health may influence the results of the study and may make it more difficult to compare results with data from other regions or other time periods.

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