



Methods in Social Epidemiology J. Michael Oakes, Jay S. Kaufman (Editors)

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Reviewed by Ernie Drucker

On the face of it all of epidemiology would seem to be “social”; epidemiology always involves groups of people and is not meant to apply to individuals. Its analytical methods and predictive value apply not to single people but to populations. Yet, paradoxically, epidemiology (as traditionally practiced) has tended to be prejudiced against giving due credit to the very social forces and behavioral variables which most often shape its subject matter: the patterns and determinants of disease. While all important epidemics depend on a complex ecology of biological and social realities, the very term “ecology” has, in the history of epidemiology, been most often associated with a basic logical and empirical error – the “ecological fallacy” – mistaking association for causation. This apparent contradiction is most evident in clinical epidemiology, where important social and behavioral variables are often

treated as “confounders” – mere noise in a system of biological risk factors which seem to be taken more seriously. Those pesky quirks of human individuality such as sexual behavior and drug use need to be “controlled out” of the statistical models - despite the fact that these may be the most important features driving the incidence and prevalence of a clinical syndrome (e.g. AIDS) and far more vital than any biological determinants for preventing the epidemic spread of that condition.

Communicable diseases always result from some biological agent or pathogen (TB , HIV) , but the nexus of causality is to be found in the interaction of that pathogen with a host of complex social and environmental situations. Thus the HIV epidemic is not only about a virus and its transmission from person to person by blood or bodily fluids - but also about the social situation of women and the state of

human rights. In some cases these social factors are the sole causes that are subject to intervention; e.g. in the effects of domestic violence or trauma on children’s mental health – even of suicide.

The traditional bias of epidemiology against social factors may be due to the preeminence of clinical epidemiology, and especially of the randomized controlled trial (RCT), as the “gold standard” of evidence based medicine. It may also be arise from the close alliance of the RCT’s highly controlled (but also highly restrictive) methodology to the modern advances in the development and validation of more effective pharmaceutical therapeutics. Indeed, medications now account for a larger portion of the US health budget than all hospital care and accordingly get the lion’s share of research support. Judging from the solicitations my colleagues and I regularly receive from headhunters associ-

ated with Big Pharma, I suspect there are more epidemiologists working directly in that industry and its academic dependents than in all of “social” epidemiology. Social epidemiology still relies on government funding that, in these years of ultra-conservative rule in Washington and the politicization of so much of science, shuns as “too controversial” many of the most important risk factors associated with urban and international health.

In this context *Methods in Social Epidemiology* edited by J. Michael Oakes and Jay S. Kaufman is a welcome addition to the library. It should become the standard teaching text because its premises are exactly the opposite of those of traditional clinical epidemiology. The authors define “Social Epidemiology” as the “study of how social interactions—social norms, laws, institutions, conventions, social conditions and behavior—affect the health of populations”. The book offers a very detailed and comprehensive overview of the field. Yet it remains practical, covering all the territory so often squeezed between the methodological emphases of most of the usual epidemiology texts. The publication of *Meth-*

ods in Social Epidemiology is well timed. There is a growing interest in the epidemiology of many conditions in which social factors play a pre-eminent role and are the framework for needed interventions—e.g. within the practice of public health, community health, preventive medicine, but also in traditional sociology, political science, social work, and other areas of social research. These disciplines now consider public health phenomena and outcomes as an integral part of their own fields. This book should therefore be useful not only to epidemiology students, and teachers, but also to medical practitioners and public health researchers concerned with health policy and the translation of epidemiologic findings into public health practice, as well as to the broadening interests of the

traditional social scientist. *Methods in Social Epidemiology* is a hefty volume (504 pages) and its chapters cover the broad spectrum of social issues and epidemiological methods that today constitute the field. The range and depth of these areas of concern (and details of the methods for studying them) can be seen in the chapter titles:

- The History of Methods of Social Epidemiology
- Indicators of Socioeconomic Position
- Measuring and Analyzing 'Race'
- Racism and Racial Discrimination
- Measuring Poverty
- Measuring Health Inequalities
- A Conceptual Framework for Measuring Segregation and its Association with Population Outcomes

- Measures of Residential Community Contexts
- Using Census Data to Approximate Neighborhood Effects
- Community-based Participatory Research: Rationale and Relevance for Social Epidemiology
- Network Methods in Social Epidemiology
- Identifying Social Interactions in Multilevel Studies
- Experimental Social Epidemiology and Controlled Community Trials
- Propensity Score Matching Methods
- Natural Experiments and Instrumental Variable Analyses

The book's detailed discussion of topics such as poverty, race, inequalities, and community and the use of these topics

the focus of examples meant to explain research methods and theory signal the sea change in the subject matter of epidemiology to more social dimensions. It also signifies the growing rigor of social epidemiology and assures its more substantial role in contemporary public health. Moyses Szklo of Johns Hopkins spoke of this work as representing the "coming of age of many social epidemiology methods – a step on the way to 'achieving a 'more complete' epidemiology.'" I agree completely and welcome the availability of this new text as an important step in providing methodological support and legitimization of the work that we do in social medicine.

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