

## Book Reviews

**Methods in Social Epidemiology.** J. Michael Oakes and Jay S. Kaufman, editors. San Francisco: Jossey-Bass (Wiley), 2006, pp. 504, £50. ISBN-13: 978-0-7879-7989-8.

Being interviewed for a job quite a few years ago, I was asked to deliver a short presentation on the ‘role of epidemiology in the new public health’. I took this to mean the public health that extends well beyond clinical epidemiological studies of individual subjects and treatment efficacy to one that incorporates human behaviour, health education and promotion, and assesses social and economic rather than just biological risk factors, with neighbourhoods and communities at its core. The techniques supporting this effort had to manage the difficulties of measuring social concepts such as economic position, support, inequality, relationships and group membership, as well as the challenge of implementing (and interpreting) intervention trials in real groups of socially interacting people. The editors of this book vigorously articulate the need for a specialized methodological reference source for social epidemiology and draw on the tools and approaches of sociology, social psychology (even moral philosophy), anthropology and, especially, econometrics, to inform the study of human conditions within the context of groups (integrated and segregated), networks, neighbourhoods and populations. Written mostly by US academics the book is introduced in a chronological historical context, addressing environmental and moral factors affecting population health, germ theorists’ reductionism towards individual susceptibilities and curative medicine, the introduction of advanced statistical procedures, to the ‘golden age’ of academic social medicine’s interest in chronic non-fatal conditions.

The approach taken is to go much further than discussing clustered data and multi-level models, committing special effort and space to developments in measurement and in causation. In Part 2, different authors cover the measuring of social status, race, poverty, inequalities, segregation and neighbourhood. Together these form a very useful summary of existing instruments, tools and approaches from both UK and US perspectives, but most chapters go further than this, offering brief historical critiques of the different measures and recommendations for their use in particular circumstances. The first chapter on socioeconomic position evolved from previously published journal glossaries and, as

it contains a very useful review of area-based measures, will prove a valuable resource to researchers and analysts to have in a single place, despite unaccountably failing to cover the widely employed (UK) ‘Index of Multiple Deprivation’. The pattern of authors adopting generally a UK- or US-focussed approach is rarely equitable with derived independent variables (the social factors) varying according to the source data (often national censuses). The chapter on measuring poverty, for example, is almost exclusively US-specific, not that this reduces interest in the account of the development (and argument over) the US government’s choice of index. The battle of the issue of including or excluding healthcare costs in poverty determination and the political consequences of the current position (they are excluded), which artificially exaggerates the risk of being labelled ‘poor’ if you are either healthy or very sick, are well made.

The chapters on inequalities and segregation are well structured and conform to the editors’ (apparent) instructions to authors to cover definitions and history, review the measures and comment on their use. These chapters include very well-explained statistical formulae in their accounts which here at least are accessible to non-statisticians and will increase their value as a reference source. In addition, important points are emphasized: for example, within social group variation in health inequalities usually being far greater than those between groups, meaning that we need to question group-specific public health interventions in favour of need-specific ones across groups to maximize impact. The final two chapters in Part 2 discuss community and neighbourhood effects, a topic of increasing prominence in the wider social public health arena. The first is a descriptive, largely sociological chapter of theoretical interest, the second a detailed analysis of neighbourhood indices as used in the USA. To this reader, the logic of creating weighted indices through sophisticated statistical procedures so as to establish a continuous numerical measure that is then analysed by means of quartiles and quintiles in relation to outcome is unclear. Perhaps, an essentially non-parametric approach would be simpler and just as meaningful in many practical analytical situations, avoiding conveying false impressions of accuracy.

Part 3 focuses on methods applicable to social epidemiology ranging from familiar topics well grounded in research practice, such as multi-level approaches, to complex

statistical procedures overflowing from academic econometrics such as propensity score matching and instrumental variable analyses. The first chapter on community participation gently guides the reader through some useful review areas such as the value of identifying the most appropriate exposures and outcomes for research that leads to the application of workable, acceptable policies, by means of an action research approach. The importance of using epidemiological approaches to implement acceptable interventions is well made, but the dangers of subjectivity and bias, although mentioned, take a low profile. This and the following two chapters (network methods and social interaction identification) demonstrate strong anthropological, sociological and econometric orientations of particular value, perhaps, to communicable disease. However, the relevance to epidemiology is sometimes obscure and, mixing it with a highly mathematical style (one of the chapters has 38 statistical formulae to digest), hardly aids reading comfort. Contributions on multi-level studies and community trials provide thoughtful accounts of bias and confounding specific to these situations, and interestingly, widen conventional interpretations to cover repeated measures and social group membership change. The introduction (to this reviewer) of the *possible* application of economic theory to health studies in the form of propensity score matching (an alternative technique to regression for covariate adjustment) was both interesting and pertinent. The last chapters on the use of diagrammatic representations of causality (these aid interpretation of confounding) and instrumental variable analysis (a magical method to estimate treatment effects even without knowledge of possible confounders) were both hard going but a case was presented that these approaches were highly relevant to social epidemiology (especially in the area of attributing causality in observational studies and in natural experiments of intervention).

At whom is this book aimed? The stated target is 'second-year epidemiology doctoral students', but I think this is too narrow. It is most definitely a choice for the active and academically minded researcher, ideally with some knowledge of statistics, and for those wanting a reference source for research design in this conceptually challenging and important area. The refreshing inter-disciplinary and free-thinking (might I say 'American') angle that typifies content and structure is another value. As for the alternative 'value', at just £24.41 from Amazon, it is a 478-page bargain.

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**Mastering Public Health**, by Geraint H. Lewis, Jessica Sheringham, Kanwal Kalim and Tim J. B. Crayford. Published by the Royal Society of Medicine Press Ltd., ISBN-13 978-1-85315-781-3

After a long wait, the much anticipated book 'Mastering Public Health, A guide to examinations and revalidation' was finally available at the end of the summer 2008. Within weeks of its release almost all prospective candidates who planned to sit Part A in January 2009 for the first time, or the *n*th time, purchased the book, hoping for a comprehensive review of all topics of the Faculty of Public Health syllabus in an easy to understand manner and with sufficient depth to allow candidates a fair attempt at the Part A examinations. In large part, their expectations were fulfilled.

The book was developed by the authors while revising for the Part A examinations, with the objective to provide a single volume revision guide containing the key elements of knowledge required to pass the examinations. The book strictly follows the structure of the Faculty of Public Health Part A examination syllabus and consists of six sections, covering the following topics: (i) research methods; (ii) disease causation, prevention and health promotion; (iii) health information; (iv) medical sociology, social policy and health economics; (v) organization and management of health care and health-care programmes; (vi) skills tested at Part A. The book is completed with three appendices containing revision tips, answer frameworks and a reference section with some of the most influential or important examples, and essential documents that can be referred to during the examinations to strengthen the answers. There is also a section on suggested further reading, a list of further references and a (not so) complete index. Overall, the book is clearly set out and easily understandable. Statistics, a topic that usually causes at least mild headache in most candidates, is particularly well laid out, with clear and easily understandable examples and without unnecessary formulae.

The structure followed in the book leads to some duplication of topics discussed between the different sections, but this was kept to a minimum using cross-referencing. On the other hand, the cross-referencing and the lack of an extensive index is the biggest shortcoming of the book. The cross