Book Reviews

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My first impressions of this book were that while the topic seemed important, the text was perhaps too wordy to be easily accessible. By the end, however, I was convinced that this is a book every epidemiologist should read, or at least use as a reference text when designing and analysing studies. My initial judgement that it would be heavy-going for a new student of epidemiology remains unchanged, but the author states from the outset that this was not intended to be yet another standard text on epidemiology. Rather, the aim is to offer a comprehensive strategy for assessing the results of epidemiological studies.

The book focuses on the potential sources of bias in any study. For example, what are the most likely magnitude and direction of bias due to non-response, confounding, measurement error in the exposure variable, and misclassification of the outcome of interest? This text provides the knowledge and tools necessary to answer these questions, and many more, so that a researcher can make the most of limited resources when planning a study and learn as much as possible from existing data. The author draws heavily on the published literature (particularly in the fields of environmental and occupational epidemiology) to illustrate each point, which makes the text much easier to understand and digest. There are also plenty of methodological references for those wishing to study the issues raised in more detail.

The 12 chapters are quite long, but they are broken down into clearly labelled sections listed in the Contents. This, and the detailed index, should ensure that researchers find the sections of most interest to them quite quickly. Also, each of the central chapters (4–11) ends with a summary of the proposed strategies, referred to as an integrated assessment. To those who have the time, however, I would recommend reading the book cover to cover as the chapters form a logical sequence and cover a range of important issues barely touched on in most taught courses in epidemiology.

The Introduction provides a clear justification for the book and introduces the major themes of bias and confounding. The key message is that just because we cannot quantify these potential problems in our study, we should not fail to attempt to assess their impact. Chapter 2 (The Nature of Epidemiologic Evidence) begins by elucidating the differences between public health and epidemiology. Though this chapter is not a clear introduction to epidemiology for a novice, it makes many important points (e.g. evidence of no association between two variables is equally valid as evidence for a positive association). Chapter 3 (Strategies for Drawing Inferences from Epidemiologic Evidence) sets out the goal of making evaluation of epidemiological evidence more objective. To this end, we should concentrate on the most likely sources of error rather than those that are easiest to measure. There follow substantial chapters on each of the following major themes—selection bias in both cohort and case-control studies, bias due to loss of study participants, confounding, measurement and classification of both exposure and disease, and random error. Chapter 11 (Integration of Evidence Across Studies) introduces the concepts of comparative analysis, meta-regression and narrative review. The final chapter discusses issues such as how epidemiologists should present their results to those who are interested (e.g. policy makers) but may not have the time or inclination to consider the complex assessments of bias described in this book, and how we should interpret conflicting evidence. It also revisits Hill’s criteria for causality, setting them in a wider context which involves scrutinizing possible sources of error for all studies conducted, not just those which provide evidence of an association.

In conclusion, this book raises many important points that, currently, are largely overlooked in the interpretation of epidemiological data. In this age of data overload, Savitz encourages us to scrutinize the quality of these data in as objective a way as possible. I will certainly be referring to this text in the future, and would recommend it as highly relevant to any practising epidemiologist.

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Reference


Mixing methods, that is using both qualitative and quantitative techniques within the same research project or programme of research, has a relatively long history. However, more recently the concept of merging qualitative and quantitative methods has become increasingly popular, in particular, in areas of applied research. The publication of this handbook is, therefore, rather timely in response to this increased trend in what the editors refer to as a ‘mixed method’ approach.

Before the publication of this text there were very few resources available that focused on a mixed methods approach to research. This may be due to the fact that this remains a controversial issue with many researchers still asking the fundamental question of should we be mixing methods at all? The editors in their opening chapter attempt to outline the purpose of the collection based around several questions which they feel remain unanswered: the utility of mixed methods research, the paradigmatic foundations for this type of approach, design issues, what inferences can be drawn, and the actual logistics of this approach.
The rather large text provides an overview (albeit with a North American bias), of the field of mixed methods research and is divided into four sections. The first includes chapters that discuss both historical and contemporary issues in mixed methods, including a useful overview of the field and the main paradigmatic issues. The following section covers more methodological and analytical topics, outlining several different typologies for mixed methods research designs. Chapters in this section also include useful practical topics such as sampling strategies, data collection strategies, methods of data analysis, and making inferences. The third section, and in my view the weakest, is dedicated to applications and examples of mixed methods research across disciplines, including management and organizational research, health sciences, nursing and education. The book ends with a section on conclusions and future directions for mixed methods research.

As might be expected with a volume of this size, the chapters vary in quality.

There is some repetition across the chapters, however, as most of the chapters are probably intended as stand alone pieces, this is inevitable to a point. The benefit of this is that for each chapter the definitions being used are made clear and the standpoint of the author made explicit, however, a more negative aspect is the resultant inconsistencies. The book does attempt to cover a range of viewpoints relating to the issue of mixed methods. Because of this there are inevitable contradictions across the chapters, in particular, in the ways in which some authors feel ‘mixing’ of methods is appropriate. For those using the text as a first port of call, this could be rather confusing. For example, in chapter 7 Janice Morse sets out her view that mixing methods is only appropriate if the methodological congruence of each component method is maintained and not ‘mix and match’ research in which strategies can be liberally selected and combined. However, this view can be contrasted with that, for example, of Johnson & Turner (chapter 11) who argue that using both open and closed questions within a questionnaire survey would be one way to mixed methods and others who suggest that data can be ‘transformed’, that is they can be either ‘quantitized’ or ‘qualitized’ accordingly (Onwueghuzie & Teddlie, chapter 13). In this sense the novice reader could select to read only one or two chapters and be left with a biased and perhaps uncritical view of the mixed method approach. Whilst a range of standpoints are represented I was still left with a feeling that the book was slightly biased towards the more mix and match approach to mixed methods. Some key writers were missing from the list of contributors, notably Julia Brannen, Alan Bryman and Martin Hammersley—who have written excellent pieces on mixed methods in the past and I feel could have produced very good chapters perhaps resulting in a more balanced collection overall.

A further criticism of the book is the overemphasis on ‘institutional arrangements’ rather than a history of ideas. Sam Bloom has been a well-placed insider in American medical sociological circles for 50 years: his first job was at Columbia University’s Bureau of Applied Social Research, on the project that eventually led to Robert Merton et al.’s Student Physician (Cambridge, MA: Harvard University Press, 1957); he joined the teaching staff of a medical school in 1956 and has been a medical educator ever since, and for many years he was the principal administrative officer of the Section on Medical Sociology of the American Sociological Association (ASA).

The book contains a number of surprises for the casual reader. Thus, the first book entitled Medical Sociology was published back in 1909, and its author, James Warbasse, started a Section on Sociology in the American Public Health Association. Bloom also convincingly champions the cause of Bernhard Stern, a Marxist scholar at Columbia of whom this reviewer had never heard, as an alternative Father of Medical Sociology to the patrician Harvard physiologist L. J. Henderson. And he documents a surprising debate within the American Sociological Association in the 1950s about whether or not sociologists should have certification, like psychologists. More conventionally, he charts the critical and proactive role of, first, the Russell Sage Foundation (set up in 1907 by the widow of congressman and financier Sage with a gift of ten million dollars, the largest gift to philanthropy in the history of the world at that time) and, second, the National Institute of Mental Health in providing both training and research monies for medical sociology.

Non-American readers will notice the limited coverage of medical sociology outside America and occasional slip-ups: Sociology of Health & Illness is misnamed the British Journal of Medical Sociology. But these are small faults when America remains the fountainhead of the subdiscipline. Where Bloom attempts to chart the relationships between academic institutional arrangements and theoretical and policy developments, the book is rather uneven. Bloom is instructive on how the early fertile research collaboration between sociology and psychiatry withered with the advance of new pharmacological treatments but is a less valuable guide to more recent puzzling failures of sociological influence: for example, why is it that, with 1100 members in the Medical Sociology Section of ASA, syringe exchange schemes failed to get established in the USA? There is more to be written here from the perspective of the sociology of scientific knowledge.

But it would be wholly inappropriate to end this review on a critical note. In what has clearly been a labour of love, Sam Bloom has done a great deal of original research both in archives and in interviews with key figures in the emergence of...