

Health Measurement Scales. *A Practical Guide to their Development and Use.* D L Streiner, G R Norman (Pp 175; £25.) Oxford Medical Publications, Oxford, 1989. ISBN 019 2617737.

This is an interesting and useful short book, which acts as a sound introduction to the development of measures for those states for which no clear objective criteria are available. Examples given include arthritic pain, return to function after a myocardial infarction and clinical competence of junior medical students. In the development of scales to measure such items, major difficulties can arise—eg, how can one be sure the scale is measuring what is intended? This book provides a comprehensive overview of the techniques which can help answer such questions.

Although devised primarily by educators and psychologists, the authors focus on those aspects which will be of most interest to health researchers. The early chapters give a very clear and useful overview of some of the basic concepts, and are full of very practical advice, such as to do a broad literature review and use an existing scale if at all possible, rather than develop a new one. The later chapters go through the process of designing a scale in more detail—from deciding on the appropriate items to include, through to the ways of measuring the scale's reliability and validity. In particular, the chapter on reducing biases in responses is so clear and helpful that it could usefully be read by anyone who may ever have to design a questionnaire for whatever reason. The authors describe the theory behind the necessary statistical techniques and their practical application, without delving too deeply into the mathematics. However a prior understanding of some basic concepts, such as factor analysis, would make these parts of the book more easily understandable.

In order to achieve a comprehensive coverage of the field, the later chapters deal with difficult concepts, such as generalisability theory, or discuss current controversies, such as measuring changes in health status. Some of this may well be above the needs or interest of the potential readership, even though some of the conclusions are of crucial relevance—for example, that the use of change scores to compensate for baseline differences between two groups can rarely be justified. The book concludes with a very useful list of further reading material, including collections of previously validated scales. Overall, a good buy for anyone who wants a broad understanding of this field, without getting too bogged down in the detail.

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Child Health in a Multicultural Society. John Black (Pp 75; £5.95.) BMJ Publications, 1990 (2nd edition). ISBN 0 7279 0266 0.

In seven short chapters totalling only 70 pages, John Black surveys some of the cultural, social, and religious characteristics of the "main ethnic minority groups" in Britain and their most important health problems. He emphasises the need for NHS doctors and nurses not only to take an interest

in the particular racial groups in their area but also to cultivate patience, tolerance, and sensitivity towards the ways in which their religious beliefs, lifestyle, and customs may differ from those traditionally associated with Britain.

Although the description of the various religions—Hinduism, Sikhism, Islam, Rastafarianism etc—are necessarily sketchy, they provide practical tips and warnings to avoid giving unnecessary offence or distress, eg, in such matters as diet, medical examination, request for necropsy.

A proper understanding of the naming systems, particularly in the various Asian groups, helps not only in addressing patients in a way which is perceived to be polite and acceptable, but also enables Medical Records departments to avoid confusion. Several helpful tables provide such information. There are useful summaries of the clinical presentation and management of many diseases seldom seen in the indigenous children, for example sickle cell disease, thalassaemia, G6PD deficiency, lactose deficiency, kala-azar, hookworm, and malaria. A knowledge of some of the particular stresses such families and children may experience may provide a better understanding of the resulting emotional and educational problems to which they are prone.

Most districts in Britain now have such ethnic minorities. This informative, sympathetic, and essentially practical little book should be read and referred to, not only by clinical medical and nursing staff but also by managers. Health visitors, community doctors, school nurses, psychologists, social workers, and school teachers should all find it well worth dipping into. There are a number of useful addresses and also references for further study.

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Review of Nutritional Epidemiology. Walter Willett (Pp 396; £40.) Oxford University Press, 1990. ISBN 019 504501 7

This is a substantial volume of 396 pages and 16 chapters. The main theme is dietary assessment, although a chapter on anthropometry is included, together with summaries of the epidemiology of vitamin A and lung cancer, fat and breast cancer, and diet and coronary heart disease. Recommendations for future work are made in the closing chapter. Most of the material for the book was developed while the author was teaching courses of nutritional epidemiology at the Harvard School of Public Health and the book would have benefited from a more liberal use of SI units. Nevertheless, there is no doubt that it will be essential reading for students of nutritional epidemiology worldwide.

The book contains much useful, well written information, but its major practical contribution is in the development and use of questionnaires for large scale prospective studies. These largely fell into disuse following their failure to show individual relations between lipid intake and serum cholesterol or risk of coronary heart disease.

Willett argues that the expectations of these questionnaires were unrealistically high and presents some evidence that they are better able to document change in dietary habits than absolute values. Willett has led the way in attempting to validate dietary questionnaires and in setting up prospective studies that are sufficiently large to study the relationship between diet and cancer. Information gained from these validation studies can be used to correct estimates of risk, although it is always assumed that the errors involved are random. This is an open question. Missing from the present book are ways to demonstrate absence of systematic error on an individual basis in dietary validation studies, but no doubt this will be remedied in future editions.

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Lecture Notes in Biomathematics. Vol 81: **Mathematical Approaches to Problems in Resource Management and Epidemiology.** Ed C Castillo-Chavez, S A Levin, C A Shoemaker (Pp 327; DM61.) Springer-Verlag Heidelberg, 1989. ISBN 33-540-51820-7.

This is the Proceedings of a Conference held at Ithaca in October, 1987. As such, many of the papers contained in the book will interest specialists in those particular fields. It is more debatable whether the book as a whole will arouse wide interest, however. The editors remark in their introduction that, for this volume, heterogeneity is the rule. The common thread linking the papers is mathematics, but few applied mathematicians will sustain an interest in all of the diverse areas touched on in this book.

There are 23 papers, arranged in six sections. These are titled Cell population dynamics (two papers), Resource management (5), Infectious diseases (5), Acquired immunodeficiency syndrome (4), Fitting models to data (3), and Dynamic properties of population models (4). The levels at which the papers are pitched vary as much as the topics covered. Some have a substantial element of review, while others are more closely focused on detailed models for a specific application. Timing of publication of conference proceedings is vital and for fast moving subjects like AIDS research, there is, of course, the likelihood that papers presented in 1987 will be of reduced importance by the time they are read in book form in the 1990s.

For this book to have wider appeal, it would have needed a more systematic introduction of background material for the various subject areas. This is lacking, understandably, in a publication which has no pretensions to being more than conference proceedings. Viewed as such, the book is perfectly satisfactory, and indeed may be helpful to teachers of applied mathematics as a source of examples. In general, though, it seems more likely that it will be referred to for the occasional relevant paper, rather than forming a part of most readers' book collection.

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