Book Reviews

The healing sun: Sunlight and health in the 21st century

Surely we all know that excessive exposure to sunlight causes skin cancer and skin ageing and that sunlight is thus bad for us and we should avoid it at all costs? And anyway this is just a book written by some crank who believes in herbal remedies and who probably has a beard and wears open-toed sandals. Isn’t it?

Though this is perhaps the knee jerk response that we can expect from those who have supported campaigns encouraging us ‘to sit under a tree from 11 to three’ or ‘to slip (on a shirt), slap (on a hat), slop (on some sun block), this book deserves better than that. Richard Hobday sets out to challenge the current orthodox view of the relationship between sunlight and health. Though he is an engineer with no background in medicine or medical research he has read widely in compiling this book. He has also attempted to synthesise this complex body of scientific evidence and to place our current views in a historic context, for which he is to be commended.

The book is 175 pages long, reads reasonably well and costs £9.95. It is divided into seven chapters. The early chapters discuss the evidence that exposure to sunlight has harmful effects on health and the evidence that it also has beneficial effects. The later chapters consider changes in medical attitudes to sun exposure and sunbathing, discuss approaches to sunbathing and look at how views about sunlight have affected building design.

I would take issue with a number of aspects of this book. In places there are errors in interpretation of the literature and a lack of critical discussion. For instance, on page 52 the author appears to advocate the use of antioxidants and in particular β-carotene. He says ‘Moreover, beta-carotene is known to have anti-cancer properties, …’ a statement that does not acknowledge the disappointing results of β-carotene cancer prevention trials. Also in the review of the evidence that increased exposure to sunlight reduces the risk of certain cancers (from pages 66 to 76) the possibility that confounding might explain the observed ecological associations is not discussed. Finally, the author invokes the wisdom of the ancients alongside his summaries of the current scientific evidence a little too often for my liking.

In conclusion, this book serves to illustrate that the health effects of exposures, such as sunlight, are likely to be complex (and not uniformly distributed) and perhaps serves to remind us that the simpler the health promotion message the less likely it is to be true. The issues Hobday has raised are pertinent and call for considered refutation rather than high-handed dismissal. The UK Committee for Medical Aspects of Food Policy (not what one would think of as a particularly radical body) has also recommended that the potential benefits of sunlight needed to be formally weighed against the risks. In the meantime colleagues embarking on sunshine holidays might enjoy reading this on the beach.

ANDY NESS

The healing sun: Sunlight and health in the 21st century

Dr Richard Hobday is not a medical doctor but has an MSc and PhD. He is also a member of the British Register of Complementary Practitioners. He is obviously an enthusiast for using sunlight as a means of therapy for a variety of conditions and has produced what is, overall, an interesting book. His enthusiasm is transferred to the page, although sometimes his obsession with sunlight becomes over-enthusiastic and he loses his sense of perspective as to the balance of the good effects and the bad effects of sun exposure. The book itself is easy to read. It is written in a semi-scientific style with multiple references given for each chapter. Some of the references are very old, however, and when there is insufficient evidence to support some of his wilder assertions he falls back on the stand-by of all complementary practitioners that their methods cannot be measured by what he calls ‘western reductionist method of analysis’. The author does not identify his audience but the style suggests that it is not really aimed at a medical audience and is probably more suited to interested members of the public.

Some of what is said relating to the adverse effects of the sun on the skin is perfectly reasonable. He recognises that ultraviolet can have a damaging effect on the skin, causing premature ageing and is also the main cause of skin cancer, and that there is a direct relationship between sun exposure and basal cell carcinoma and squamous cell carcinoma. The relationship between sunlight and malignant melanoma is less clear and both he and dermatologists recognise this, although sunlight exposure is considered to be one of the main factors in the causation of melanoma. Hobday expresses his concerns about the use of sunscreens and again most dermatologists with an interest in this field would agree that sunscreen use is less important in the prevention of skin cancer than seeking shade, wearing a hat, and simply using common sense to avoid sunburn by reducing exposure on sunny days. There are many areas relating to skin cancer discussed which have little or no scientific backing. This is particularly the case in relation to diet and skin cancer where there is no proven link. The risk of Vitamin D deficiency is also overplayed. Ricketts is rare in the UK and occurs primarily in children with pigmented skin living in inner cities in poor social conditions.

Dermatologists have long recognised that exposure to sun and ultraviolet light can be beneficial for a variety of skin
conditions and the use of ultraviolet light for treatment of skin conditions such as eczema and psoriasis is well established. What is much more contentious is the use of sunlight for the prevention and cure of internal conditions. Hobday gives a list of illnesses which can be cured by sunlight and these include such conditions as breast cancer, colon cancer, diabetes and tooth decay. The evidence for these assertions is poor and is presented uncritically in this book. By overplaying some of the apparent beneficial affects of the sun on internal conditions he does himself a disservice, as some of the assertions made are farcical.

Overall, I have no problems with anyone wishing to read this book, but I would strongly suggest that they read it critically and do not accept all of the statements made in the book as true. I would particularly draw the attention of any reader to the disclaimer at the beginning of the book, which states ‘the author and publisher cannot accept any responsibility for ill-effects of exposure to ultraviolet light or any of the therapies described herein’ in other words reader, beware!

DL ROBERTS


In a brave and unprecedented decision, in mid-1999 the World Health Organization appointed a committee of external experts to examine records of cigarette manufacturers made public as a consequence of legal action in the United States to determine whether and in what way the tobacco industry had tried to blunt the impact of WHO's tobacco control activities. Given the amount of dirty linen that the enquiry was able to find within just a few months, the decision by WHO to release the ensuing report could be regarded as braver still.

The report itself is scholarly, lucid, well structured, lastidiously referenced, and, notwithstanding its uninspiring title, eminently readable. Indeed, at least parts of it should be read by all epidemiologists because, no matter whether they work in non-communicable or communicable disease, in government, academia, non-government organizations or for commercial interests, sooner or later most practitioners in the discipline are going to have to take smoking into account as a causal or confounding factor of whatever phenomenon they are studying. Above all else, what the report and the Philip Morris website (www.pmdocs.com) show is that once a scientist’s name becomes linked with smoking in any way, this will be detected by the tobacco companies’ intelligence networks and someone somewhere in that industry will give thought to whether the scientific results need to be neutralized, and whether they or the individual investigator can be turned to tobacco’s advantage.

Working from formerly confidential tobacco industry documents that are now available in Minnesota or England, and in some cases on the worldwide web as well, the inquiry reveals that, perceiving the tobacco control activities of WHO to pose a significant threat to their continuing success, the major international tobacco companies have, for several decades, acted in concert to develop and execute a truly global effort to have their views and interests prevail. The evidence cost and extent of their network, and the forward planning and exhaustiveness of the tactics are of a scale that the CIA and KGB would be truly proud. Indeed, the report of the Expert Committee is reminiscent of nothing so much as Peter Wright’s Spycatcher except that, while Wright felt able to point the finger at a specific individual within British Intelligence, the Expert Committee did not do the same thing for WHO, not least because WHO apparently was regularly unable to locate its own records pertaining to events falling within the purview of the Committee.

As commodities as different as pharmaceuticals and pornography illustrate, there is wide agreement that permission to make and sell a certain product in a community should not necessarily bring with it an unfettered, or indeed any, right to advertise that product. At the same time, in a democracy it is difficult to argue that the manufacturers of a product that is sold legally should not be able to advocate on their own and that product’s behalf. However, in six very detailed case studies the Expert Committee has carefully documented that, in opposing the WHO, the tobacco companies have gone well beyond overt advocacy. Over a period of two decades the companies have created and run a series of organizations and agents to promulgate their views without declaring from whence and whom they were receiving their pay and instructions. Historically, prostitution of the human mind probably lags very few steps behind prostitution of the human body, but it is the scope and ruthlessness of a programme of deceit and double agents spanning all continents that is so sickening and so frightening.

Despite its best efforts, it was not always possible for the Expert Committee to discern the extent of implementation or the impact of individual elements of the industry’s strategy. But it is still very clear that seemingly complete naivety on the part of epidemiologists and other scientists did contribute to the companies’ success. A moment of reflection shows that while epidemiologists invest considerable time and energy in avoiding or mitigating the influence of their work of random and systematic errors, in a sense these are ‘passive’ opponents to good science. Faced with active, if covert, opposition, many investigators involved in the International Agency for Research on Cancer’s study of passive smoking and lung cancer failed to perceive the threat. Every detail of the project that was revealed in the course of conversations with interested ‘colleagues’ was duly reported back to the tobacco industry, affording the companies an unprecedented opportunity to plan their response to the study and its findings. In addition, at least one investigator accepted funds from the industry to conduct other research that the companies hoped would further weaken the impact of IARC’s work.

While the Expert Committee has recommended that WHO pursue further investigations of some matters and that it press for equivalent enquiries in other United Nations agencies, such as the Food and Agricultural Organization, whose remit touches on tobacco in any way, in many instances the most that this could achieve is to root out further individual stooges in a structure that has already been shown to be thoroughly penetrated. In tobacco control, the main game—to end the needless epidemic of death and disease caused by smoking—remains
unchanged. It is time now for reputable scientists and the WHO to re-focus their efforts on that aim, albeit with greater vigilance regarding the vested interests that are going to oppose this work.

KONRAD JAMROZIK

References

1 Wright P. Spycatcher.

Declaration of interest:
In order that he regularly receives their Annual Reports, Professor Jamrozik, who is a Life Member of the Australian Council on Smoking and Health, holds two shares in the Australian subsidiaries of two multinational tobacco companies.


This is a heretical book. The sacred cows of health promotion are dispatched with greater zeal than that with which the British beef herd was slaughtered at the height of the BSE crises. Breast and cervical screening, smoking cessation, ‘safe’ sex, ‘healthy’ eating, ‘sensible’ drinking, exercise on prescription, men’s health, and health inequalities policies are all put to the sword, not just because the evidence on which they are based is slender (in many instances non-existent), but because they entail recasting the role of the general practitioner as quasi-priest or moral policeman, responsible for disciplining healthy patients, rather than concentrating on the needs of the ill.

That the new public health and health promotion strategies pose a threat to personal freedom, and that medical intervention is expanding into ever broader spheres of personal life and behaviour, are familiar arguments, but this account differs from others by offering a penetrating sociological and political analysis of the ‘medicalization’ phenomenon, linked to first-hand observations of their consequences for doctor and patient, derived from the author’s experiences as an inner city general practitioner. The government’s agenda of using an increasingly regulated and managerialized medical profession to extend the scope of governance and boost legitimacy is thoroughly explored, but the book’s real strength lies in its explanation of why the public not only tolerate this imposition, but actively clamour for it.

The bones of the thesis are as follows. Western society is experiencing an age of anxiety characterized by irrational fears (particularly about health), lack of trust (both of individuals and institutions), and a lowering of expectations about human agency, not just in terms of the individual’s ability to act autonomously, but also our collective potential to use science and rationality to achieve desired aims. The origins of this malaise are located in structural factors, including the fragmentation of social relations that accompanied the unleashing of market forces in the 1980s, and ideological changes, particularly the retreat from notions of social development that has characterized capitalist and old left thought in the post cold-war period. The resulting age of anxiety has served to both heighten our sense of vulnerability to illness and undermine trust in the traditional remedies of medical science administered by a benign profession. We want more health (even when we are not ill), but less clinical intervention (even when we are ill)—providing fertile ground for ever more intrusive public health and health promotion strategies.

Having explored the origins of the phenomenon Fitzpatrick turns to its consequences for patient, doctor and society. The first casualty is efficiency, as resources are directed away from treatment of the sick towards surveillance and regulation of the healthy. The second is the doctor–patient relationship, as medical science is increasingly disparaged in favour of sanctimonious moralizing and the vacuity of the ‘holistic approach’. The status of autonomy of the medical profession is also at stake, not just because realization of the government’s health strategy depends upon subordinating the doctor to managerial control, but also because the power of the medical profession is dependent upon the utilization of scientific method to alleviate suffering, a model of practice which is increasingly brought into question by the ‘social’ model of health. Most important of all are the consequences for the patient, not just in terms of heightened anxiety, but also through a diminished sense of resilience and agency as social and political problems are reduced to the personal idiom of health promotion, and personal feelings and relationships become a legitimate domain for medical practice.

Although the book is primarily about general medical practice the role of epidemiology in stimulating health scares and providing spurious evidence for health promotion measures is also scrutinized, with particular reference to HIV/AIDS, cot death, skin cancer, oral contraceptive pills, BSE/CJD, the MMR vaccination, as well as health-related behaviours such as tobacco smoking, alcohol consumption, diet and exercise. The intention is not to provide a detailed meta-analysis of all the above, and epidemiologists will probably quibble over what is included and omitted, however, the conclusion that many health scares (with the notable exception of tobacco smoking) and the public health and health promotion initiatives designed to address them, are based on questionable scientific evidence, is adequately substantiated. Much of the problem stems from governmental and professional bodies ignoring contrary evidence, or mistaking statistical significance for clinical significance, but epidemiologists themselves must take part of the blame for making exaggerated predictions of prevalence, and Fitzpatrick engages in a bit of ‘told-you-so-ing’ comparing his own published forecasts of the spread of AIDS among heterosexuals in the West, with the gross overestimates of government epidemiologists.

This is a wide-ranging book which draws together many of the key issues in contemporary health policy and general medical practice, placing them in the context of broader social and political changes. The main focus is on recent developments in British health policy, although the themes of medicalization, health scares and the politics of health promotion are relevant to the Antipodean, North American and European contexts. The argument is informed by an eclectic mix of sources combined into a very persuasive and enjoyable text. Fitzpatrick’s
conclusion is that doctors who want to practice politics should do so in the public sphere rather than in their consulting rooms, his book is a first class example of how this can be done.

DAVID WAINWRIGHT


Against a backdrop of affluent high-rise buildings, the cover photograph invites us to consider the life of a little girl living in a garbage dump created from ‘other people’s more privileged existence’. This and many other vivid examples of individuals and communities struggling to combat poverty and ill health around the world demonstrate the sense of outrage that drove the authors of Dying for Growth to attempt an exposition of the assumption that economic growth is good for all. This collection of case studies provides ample illustration for the rush of academic papers that have begun to observe that, whilst health, on the average, has improved during the twentieth century, disparities between population groups are increasing at the expense of the poor. Despite extraordinary wealth and technological developments, millions of poor people die unnecessarily.

Written collectively, Dying for Growth is the second in a series of ‘books with attitude’ produced by the Institute of Health and Social Justice. The argument lacks the familiarity of the quantitative format but the carefully reasoned country studies demonstrate that economic growth, far from being a panacea, on the average, has improved during the twentieth century, disparities between population groups are increasing at the expense of the poor. Despite extraordinary wealth and technological developments, millions of poor people die unnecessarily.

The lively debate about social versus scientific responsibilities, about priority setting, and the future of epidemiology is well covered. But another challenge would be to ensure that the range of views expressed is reflected in the range of papers published by seeking out, for example, more: reviews bringing together epidemiological work already undertaken but which when presented collectively better highlight demographic and social inequalities in health (perhaps along the lines of Shaw et al3 reviewed enthusiastically by Lynch4); papers in which investigators have used epidemiological methods to find public health solutions for poor people; critiques of methodologies used by public health professionals to promote equity in health; and ground-breaking research that responds to the call by the authors of Dying for Growth for more reliable international data about economic strategies and health outcomes. The debate about the nature of epidemiology might then be based more on evidence than on rhetoric, the next version of this book might better balance analysis and passion, and, just possibly, there might be a glimmer of hope in the eyes of the little girl on the front cover.

SARAH MACFARLANE

References
1 Beaglehole R, Bonita R. Public health at the crossroads: achievements and prospects. New York: Cambridge University Press, 1997, p.120.


This is an unusual epidemiological textbook. Not one chapter is organized around a clinical disease and more attention is paid to conceptual and theoretical frameworks and the measurement of social factors than to the details of methodological techniques and study designs. The result is provocative and stimulating and, not surprisingly, begs a few questions.

The chapters are organized around aspects of social organization or social structure that have implications for the health of populations. For example, the first set of chapters deals with individual and area based measures for studying socioeconomic inequalities in health and the impact of discrimination on health, and a second set examines the influence of the work
environment and the labour market on health. The third set considers the relation of health to social integration, social networks, social support and social capital, and the fourth set looks at psychological factors such as depression and other emotional states on cardiovascular and other outcomes. The miscellaneous final set of rather interesting chapters has little to connect them except a multidisciplinary perspective. It covers the social context of health behaviours, psychosocial models of intervention, biological mechanisms that mediate the health impact of the social structure, ecological approaches to the study of ‘place’ and the integration of different levels of analysis for understanding the social determinants of health. With this kind of grouping there was bound to be some overlap and there are numerous mentions of the concept of social capital and the need to study the characteristics of areas and communities as well as the individual characteristics.

This book is a great resource because most of the chapters offer clear and helpful reviews which bring the reader up-to-date with theoretical and empirical developments in the field, ask interesting questions or attempt to clarify conceptual confusions. To pick just two examples. Macintyre and Ellaway’s chapter on ecological approaches has a good discussion of compositional and contextual explanations for spatial variations in health outcomes. In Thomas Glass’s excellent review of psychosocial intervention studies he makes the obvious but salient point that most of these studies have focused on trying to change one or more individual characteristics while few have aimed to modify the environment (such as a nursing home or coronary care unit) to improve people’s sense of mastery and control and ultimately their health outcomes. Trials of behavioural change produced disappointing results because they were ‘outrun by the pace of social change’ (Susser 1995, quoted by Glass).

My main concern is the book’s lack of a temporal perspective to population health despite several contributors acknowledging the importance of factors acting throughout the life course on individual variation in health risk. Hardly any attention is paid to health and disease trends. Omran’s recently updated theory1 of the epidemiological transition was designed to show how different stages of social and economic development and industrialization brought with them changing patterns of health and disease. Within this context a detailed examination of the social and economic forces and the associated underlying biological mechanisms driving changes in population health would be a central question for social epidemiology.

I was also somewhat concerned by the overemphasis on psychosocial explanations for social gradients in health. For example, while Theorell’s chapter on working conditions and health is an excellent review of the relationship between the psychosocial work environment and health, surely some discussion of the social patterning of occupational exposure to physical hazards and the role of health and safety is warranted in a book on social epidemiology? The social distribution of health, like its distribution by age and sex, gives clues to the aetiology of specific diseases. Conceptual frameworks can sharpen but they can also obscure the view and they may be time and place dependent. Take for example the early studies of cultural change in the US that Berkman and Kawachi in their historical chapter and other contributors refer to, and which produced novel but inconsistent findings. Some of these studies showed that coronary disease is seemingly homogenous groups (such as Harvard alumni2 or a group of monks3) differed depending on their origins. The poorer cardiovascular health of those from more humble origins was attributed to the psychosocial costs associated with upward social mobility, or status inconsistency. In some of these studies comparisons could not be made with the health of those who were born and remained in poor conditions, and never went to Harvard or joined a monastery. In the apparently brave new socially mobile US of the early post-war period this would not have been seen as a major omission. In the more polarized social context observed today (despite the evidence that even a poor boy from Arkansas can become President) and with increasing documentation of striking social gradients in cardiovascular health, researchers are paying more attention to the health risks of those who remain in the lowest social groups. Investigating whether the health risks of this group are similar to or different from the health risks experienced by the upward socially mobile can provide clues to the importance of timing and duration of physical as well as psychosocial environmental hazards.

Lynch and Kaplan try to redress this overemphasis on psychosocial factors by their discussion of ‘neo-material’ conditions by which they mean (I think!) that seemingly small differences in exposure to risk or protective factors can lead, over the life course, to significant cumulative health effects via physiological mechanisms. Thus a psychosocial mechanism does not have to be invoked every time we observe a gradient across the whole social distribution. While such an argument is convincing, I find the addition of ‘neo’ to the ‘materialist’ category an unhelpful development, serving to confuse rather than elucidate the various factors (and categories of factors) involved. It may encourage rather than discourage the continuation of sterile debates about terminology and the polarization of views that have at times impeded progress in the field of social inequalities in health. Recent and ongoing research on both sides of the Atlantic that utilize the life course perspective hold considerable promise for understanding social inequalities in health, the underlying processes that produce them, and their changing patterns over time.4

There is an inherent tension in social epidemiology, as Thomas Glass observes, between the need to understand humans both as biological entities and as sentient human actors operating within a social context which can have independent influences on disease processes. How best to integrate these approaches will continue to be challenging and motivating and, in my view, both would benefit from more attention to a temporal perspective.

DIANA KUH

References


A lack of sufficient resources to provide a vast majority of the population with essential health services has been witnessed, particularly in many developing countries. Therefore, health planning has become increasingly important and imperative in an attempt to enable limited resources to be used more efficiently and effectively. Eight years ago Andrew Green published the first edition of this book, trying to offer a textbook on health planning in developing countries to those who are interested to learn how to plan the health sector. Since the publication there have been many changes in the international context which have implications for health planning. The new edition of the book tried to reflect and address some of the major changes, such as Health Sector Reform (HSR) as the policy agenda over the past decade.

The basic chapter structure remains the same as the first edition. The first half looks at a number of background issues to health planning. The first two chapters present the rationale for planning and different approaches to, and theories of, planning. Chapter 3 has been significantly expanded to include not only Primary Health Care (PHC) and HSR, but also the relationship between PHC and HSR and their implications for planning. Chapter 4 and 5 examine how a framework for health planning can be developed with a view that many organizations (i.e. the State, NGO) are involved in health care, and discuss different approaches to the financing of health care, strategies concerning increase of the available resources and their potential for, and the problems of such strategies.

The second half of the book introduces and discusses in detail each of different conceptual stages of the planning spiral illustrated in Chapter 2. Chapter 6 looks at the needs for information and the planning information that helps to provide appropriate information. Chapter 7 and 8 discuss the first two steps in the planning process: situational analysis and priority setting. Chapter 9 looks at cost concepts and different techniques of costing and Chapter 10 introduces approaches to option appraisal and evaluation. The following two chapters discuss, respectively, resource allocation process and budgeting, and the common causes of poor implementation and how they can be improved. The book allocates one entire chapter (Chapter 13) to illustrate different approaches to human resource planning, one of the most important issues in planning the health sector. The final chapter brings together the various elements of the planning spiral.

While it keeps many useful and up-dated information on reference and suggested introductory reading, as well as short exercises at the end of each chapter, the second edition of the book provides a list of websites providing information of interest to the readers at the end of the first chapter. In addition, many boxes and figures have been revised and are now better presented and self-explained.


Medical practice is moving steadily from a cultural tradition based essentially on priestly authority to a new tradition based on sound research evidence and full accountability to the patient and the taxpayer. The academic skills of accessing, sorting, summarizing, critically evaluating, interpreting and synthesizing information are increasingly required as core competencies in the health professions. The dozens—perhaps hundreds—of books and journals on evidence-based health care published over the past 15 years have exhorted and empowered us to move from ‘doing what seems the best’ to ‘knowing what is the best’.

What, if anything, has another ‘essentials’ book on the subject to offer? I have to say I got a sinking feeling when the book (with accompanying CD ROM) landed on my doormat. The ‘PDQ’ (pretty darned quick) series, published in Canada, is marketed to students and non-experts as a set of nuts-and-bolts introductory guides to topics such as statistics, epidemiology, and now—evidence-based practice. Under that banner, the book spectacularly misses its mark. It is neither basic nor particularly accessible to the novice.

But do not be put off by this error of presentation and marketing. Ann McKibbon’s book is arguably the one the evidence-based medicine movement has been waiting for for ten years. It is a scholarly, indeed many would say the definitive, text on how to construct such strategies for approaching electronic databases such as Medline, Cinahl, and EMBASE. McKibbon’s standing as one of the world’s leading medical informaticists (along with Brian Haynes, she produced and refined the search strategies used by the international Cochrane Collaboration and offered as an ‘Advanced Search’ option on the PubMed version of Medline) is evident in her detailed exploration of the finer points of retrieving papers on therapy, prognosis, causation, and so on. The accompanying CD ROM provides these complex search strings as a searchable resource—and this alone makes the book a worthwhile investment for anyone who wishes to go beyond the basics in approaching the medical literature.

The tiny font size, dense blocks of texts and illustrations that are largely limited to boxed lists of MeSH headings make this important book an extremely hard read. McKibbon has done an excellent job on the content. My advice to the publisher is to drop the ‘PDQ’ flag, season liberally with pictures and white space, and repackage this text as an authoritative reference book for the aspiring systematic reviewer.

TRISH GREENHALGH

Multivariable Analysis. A Practical Guide for Clinicians

This book is designed to correct the absence of an easy to read text on ‘multivariable analysis’, by which the author means techniques that use multiple variables to predict a single outcome. It succeeds in this respect, and I would recommend it...
highly to clinicians for whom such analyses are key to their research aims. The book is easy to read; it is well structured, and it has a good layout, with effective use of boxes in the margins, which emphasize definitions and tips. It is also good humoured!

The approach taken by the author is to take the clinician through the issues faced when confronted with a number of potential explanatory variables and a single outcome of interest. This is done in logical order, starting with the question of why multivariable analysis is needed at all. The reader is then taken through well structured chapters, dealing with the type of multivariable analysis to use, issues of sample size, how to deal with correlated explanatory variables, details of performing and interpreting the analysis, and model validation. There is also a chapter on the publication of studies, although this issue is kept in mind throughout. All the problems faced are considered with respect to three types of multivariable analysis: multiple linear regression, multiple logistic regression, and proportional hazards for survival analysis. Illustrative examples from the medical literature are used effectively throughout.

The author is successful in focusing on conceptual explanations of models and computer output, while avoiding any requirement of a mathematical background from the reader. One consequence of this is that there are limits to the technical understanding of the procedures being described that can be gleaned from the book. However, the author is careful to identify the aspects of modelling which may become tricky without a more sophisticated understanding, and in these instances he is conscientious about recommending the reader to seek the help of a medical statistician. The boundaries between what the clinician might be expected to achieve alone and where advice should be sought are, in my view, well judged.

My criticisms are minor, although with the discussion of how to get your study published, I would like to have seen more constructive criticism of the medical literature; for example the harmful bias in favour of significant results, and the low importance given to statistical issues by some journals. It is also unfortunate that the book is not cheaper, but having read the (just under) 200 pages, I would say the book is of great value. However at almost £50, the new researcher or postgraduate student who would perhaps most benefit from owning such a book may well be put off.

As stated in the promotion on the reverse cover, multivariable analysis is confusing. However, understanding it is essential to many aspects of clinical research. With this book, the author has drawn on his experience in Medicine, Epidemiology and Biostatistics to produce a text which effectively communicates this understanding to the practising clinician.

DAVID WALSHAW

---

**Book News**


