Book review


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This is a refreshing change from the standard textbook on statistics. Rather than presenting statistics as a dry mathematical endeavour with the objective authority of an oracle, the author casts it as a useful decision aid in the context of making subjective and complex judgements in medicine.

The particular strength of the book is the explanation of the conceptual framework surrounding the ‘frequentist’ school of statistics and hypothesis testing, given in chapters 1 and 6. For anyone who has ever wondered what a p-value or a 95% confidence interval really mean, this is the section to read. There is also a good introduction to Bayesian statistics.

The author takes an unorthodox approach to explaining the principles behind various statistical tests that, by and large, works well. In chapters 3, 4, 5, 8 and 9 the author communicates an intuitive understanding of the principles behind t-tests, chi-square, ANOVA, regression, and various non-parametric tests. This is challenging and demanding; although those who are math-phobic will not find this easy, the educated practitioner who is not afraid to tackle the text and follow the logic will be rewarded. In some cases though, the unorthodox approach does not quite succeed; I found myself confused by the order in which the various tests are presented, and the relation between them, for example regression and correlation are presented together in chapter 8. Chapter 7 presents an absolutely first-rate discussion of causality, one that every clinician reading papers should know.

The book is very readable; the author uses accessible examples that do not require a medical background and builds his explanation like a narrative. This is both a strength and a weakness, in that it makes it a little more difficult to use the book as a reference (although there is a good index). The author also provides a free statistics software program on his web site which is useful.

In summary, this book has much to recommend it, and although it is neither a quick nor simple read, it lives up to its title as an excellent synthesis of statistics and common sense, a rare book that will give the persistent reader a better understanding of the uses (and misuses!) of statistics.

* available from DA Information Services
(03) 9210 7717 or e-mail service@dadirect.com

Conflict of interest: none declared

Self-test questions

The following statements are either true or false (answers on page 79)

3. Children bruise easily because they have a shorter partial thromboplastin time than adults do.
4. Microcytosis in a neonate is usually a sign of iron deficiency.

References

4. Ignjatovic V, Barnes C, Newall F, Campbell J, Savoia H, Monagle P. The importance of age appropriate haemostasis reference ranges [poster, abstract P0055, presented at HSANZ meeting; 2002; Adelaide, Australia].

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