

**FEATURES
SECTION**

Book review

Critical Thinking: Understanding and Evaluating Dental Research, 2nd Edn

Donald Maxwell Brunette
Quintessence Publishing, Chicago, 2007
320 pp., pb, £25.00
ISBN 9780867154269

The ability to think and appraise critically is a key skill whether conducting research, assessing others research or simply attempting to interpret evidence in the hope of delivering effective and efficient dental care. There is a vast amount of information out there, even just in the field of dentistry. Much of it is useless. To be able to think critically and 'sort the wheat from the chaff' has never been more significant. The importance of the topic is recognized by its increasing prominence in both undergraduate and postgraduate teaching and research programmes. A book on critical thinking in dentistry is therefore a potentially helpful addition to library shelves.

This book is an interesting potpourri, and I found some parts more useful than others. It begins by explaining the reasons for studying critical thinking before going on to discuss the principles of the scientific method. Much of the details covered should be self-evident to experienced researchers. Somewhat erudite in places it then expands on rhetoric and the five canons thereof. The next chapter is an exposition on searching the dental literature. This is very clear and well written, but probably of value only to a novice researcher. It however seemed somewhat out of place, lodged between the chapter on rhetoric and the next three chapters which deal in great depth with the basics of logic, abductive and inductive logic and then a chapter on

quacks, cranks and abuses of logic. I found these tough going and they seemed to be written at a much higher level than some of the preceding chapters.

The second half of the book turns to statistics and the interpretation of data. Beginning with a description of probability and the principles of statistical inference, working with discrete and continuous variables is then described. There are very useful chapters on the importance of measurement in dentistry and on the presentation of results. This expounds the various tricks employed by researchers to display their wares to best effect and will enable the reader to avoid being 'persuaded with pap'. Subsequent chapters deal with diagnostic tests and measurements in clinical practice, research strategies and threats to validity. The final chapters deal with experimentation and experimental design. A series of exercises based on excerpts from the dental literature allows readers to test their knowledge of concepts introduced in the book.

The preface indicates that the intent of the book is to enable dentists, dental students, and graduate students, as well as allied oral health care professionals, to become sophisticated consumers of dental research. In my view, this book will be beyond the interest of all but the keenest dental undergraduate. For those preparing for postgraduate examinations in the UK and hoping to enhance their critical appraisal skills, there are other texts available which service this purpose better. I suspect that this book is best placed in the context of postgraduate research and will make a useful addition to the reading list of any course in research methods.

I. G. Chestnutt