Introduction to research in the health sciences (6th ed)

Polgar S and Thomas SA (2013). Churchill Livingston/Elsevier, Edinburgh. ISBN: 978-0-7020-4194-5.(Softcover book, RRP $59.95 – Fishpond.co.nz

This is the 6th edition of a text designed to support clinicians working in health sciences. Equally the book would be of value to students within health science courses also. The authors' state (in the Preface) that the intention of this book is to provide an understanding of health related research so that clinicians can interpret relevant research to inform and guide their clinical practice. The aim is to bridge the gap between health research methods and evidence-based clinical practice. This aim is a worthy one. In order to allow research evidence to inform clinical practice, clinicians must be able to understand and interpret research correctly.

The sections/chapters in the book cover the broader concepts of health research, for example methodology, research planning and design, data collection, descriptive statistics and data analysis and evaluation. Each chapter provides a basic summary of the key concept of interest. The textbook is written in easily digestible language, without too much statistical, mathematical and research jargon to disrupt the flow. Where appropriate references are used to support the text. It would have been nice to have included a reference list at the end of each chapter (as is now often seen in contemporary textbooks). This would have avoided having to track to the back of the book for the overall bibliography.

Where appropriate, the textbook utilises real case and practical scenarios to highlight key concepts. This enables the fundamental principles of research methodology to be explained and contextualised with solving problems in everyday health care. This new edition is also supported with a suite of online learning and multi-choice tests for ongoing reflection and self-assessment.

What this book is not (and nor does it pretend to be) is a grunty statistical and research methods text. For those clinicians/students that are not gifted statisticians or mathematicians, then this text provides a nice easy-to-read support for understanding research design in health sciences. You would need to accompany this text with a statistics textbook in order to delve deeper into appropriate statistics and interpretation, irrespective of whether qualitative or quantitative research.

This textbook would be of interest and value both to under-graduate and post-graduate students also. As for the clinician, under-graduate students are required to understand health research in order to inform their growing practice and learning. For post-graduate students, this textbook would be a nice "starter" to provide good, basic detail about health research which would be useful for the planning phases of post-graduate research.

Dr Richard Ellis (PhD, PGDipHSc, BPhty, MPNZ)
Senior Lecturer, School of Physiotherapy, AUT University, Auckland.

Respiratory muscle training: theory and practice

McConnell, Alison, 2013, Churchill Livingstone Elsevier, Edinburgh Hard cover book with code access to a series of video clips of exercise portrayed in the book. Recommended retail price: (online purchase). Hardcover $80.00 Kindle: $74.00 ISBN number: 978-0-7020-5020-6

The book is focussed on exercise physiology and the author's interest in the function of respiratory musculature. It provides a comprehensive account of the evidence base for respiratory muscle training. The title of the book *Respiratory Muscle Training: Theory and Practice* states the theme exactly. The author, a respected exercise physiologist, has targeted this book at health professionals working in the clinical field with patients who have pathophysiological changes limiting cardiopulmonary function.

Part I, Chapters 1-4, covers the theoretical basis of respiratory muscle training. It discusses the influence of factors contributing to dyspnoea, principles of training and detraining and provides a strong evidence base for respiratory muscle training as well as literature pertaining to different training devices. Part II, Chapters 5-7, covers the practical application. Recently there has been an intensive focus on respiratory muscle training. There is clear evidence that respiratory muscle dysfunction plays a role in limiting function in a variety of conditions and the author has provided a comprehensive range of references which support the theoretical basis for and clinical application of the use of respiratory muscle training in the patient and the athlete.

Parts I and II are divided into chapters which have a logical flow, but it is content heavy in Part 1. As a physiology textbook the layout is not reader friendly, which limits the ability to make quick references back to content. Chapter subsections are not numbered nor listed on the content page so getting an overview of the detail is difficult. Furthermore, it would have been helpful if the glossary contained more of the abbreviations and the index was more comprehensive.

Although the chapters are well illustrated with figures and tables, physiology comes alive in colour, so the fact that over 200 pages of detailed text and illustrations are in shades of grey does make it harder to focus on the excellent content about respiratory physiology. Through a linked software company *PhysioTec* the reader is able to access a free three month trial of the video clips demonstrating each of the 150 exercises that are illustrated in Chapter 7. These video clips are in colour and the animation is good but the limited time period for free access is potentially a disincentive for the potential purchaser of the text. The author is the inventor of the POWERbreathe® inspiratory muscle trainers that are used in Part II for the resistance in the respiratory exercises – a conflict of interest statement was noted in Chapter 5. From a physiotherapy perspective I would have hesitation in prescribing some of the exercises with the device continuously held in the mouth.

The book provides a comprehensive overview of respiratory physiology which will challenge those with superficial knowledge. More importantly it provides an evidence base for the incorporation of respiratory muscle training for a variety of conditions. Like all exercise to optimise outcomes the exercise prescription needs to be patient specific.

Margot Skinner PhD, MPhEd, Dip Phty, FNZCP, FPNZ (Hon)
Senior Lecturer, Cardiopulmonary Team Leader
School of Physiotherapy, University of Otago