

## **Book review**

### **Merging science and practice in treating pediatric chronic pain**

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**McClain BC, Suresh S, editors (2011). *Handbook of pediatric chronic pain: current science and integrative practice*. New York: Springer, 418 pp. ISBN 978-1-4419-0349-5 (Hardcover \$169.00 USD). [www.springer.com/medicine/pediatrics/book/978-1-4419-0349-5](http://www.springer.com/medicine/pediatrics/book/978-1-4419-0349-5)**

Chronic pain is a common problem in children and adolescents that, historically, was under-recognized and consequently, often undertreated. There has fortunately been a growth of research and clinical expertise in this important area in recent years. With this growth has come an increase in evidence related to epidemiological, assessment, and treatment issues pertinent to this clinical problem. Children and teens who experience chronic pain commonly report negative physical effects, decreased function, cognitive and school disruption, social losses, and poorer quality of life. The families of these children also frequently report negative effects from the child's pain including stress, disrupted family activity, negative psychological effects, and increased financial and psychological burden. This is a problem that sometimes requires comprehensive treatment and education for all affected. While the number of chronic pain programs for children and teens across the world continues to grow, the distribution of those programs remains sparse and they are generally located in larger urban centers. Further, given that this field is still relatively young, many of these programs are fairly new and are in the process of development. The availability of reference materials that provide a broad range of information in a comprehensive but concise manner holds

tremendous potential benefit for children and teens affected by chronic pain as well as their families and health care providers.

The *Handbook of pediatric chronic pain: current science and integrative practice* provides readers with a broad range of information that is very relevant to this clinical population. It provides a text full of updated research findings that will complement and extend information shared in similar existing texts. Chapters cover a wide range of topics that include valuable theoretical, epidemiological, and demographic information as well as a wealth of information on assessment and treatment. The authors appear to have strong backgrounds in their respective content areas. A number of the authors have published important studies in this field. The list of authors includes both experienced leaders as well as rising stars. Several of the chapters appear to be written by highly experienced clinicians.

The editors state that the purpose of this book is to present the science and current knowledge of pediatric pain management as well as the rationale for intervention. It appears that this handbook has the potential to benefit a broad audience. While there is some potential benefit for lay people affected by or interested in this topic, the book appears to primarily target health care providers including physicians, nurses, physiotherapists, psychiatrists, psychologists, and other professionals who provide mental health and other services to this population. While the book is described by the authors as a work largely co-written by physicians and psychologists, there appears to be quite a heavy emphasis on medical content including both

physical assessment and treatment, perhaps making it particularly useful as a resource book for physicians.

This handbook has several clear strengths. It provides a host of practical and sensible strategies to be employed during the assessment and treatment of young people with chronic, including complex, pain. Several of the chapters include tables and images that contain excellent summaries of the corresponding comprehensive discussions. The contents of the chapters are generally up to date and cover many of the key studies associated with the authors' conclusions.

The handbook begins with discussions of several general topics. Chapters 1 and 2 are, in my opinion, absolute gems that have the potential to be source material for practitioners and their trainees. In Chapter 1, Vetter provides an outstanding discussion of the history of chronic pain research and management in children and teens and includes valuable epidemiological information in a thorough and meaningful way. It is very well written and provides a broad perspective on this topic with a large compilation of helpful references. This chapter would make a tremendous primer for trainees and other professionals new to this field. As well, in Chapter 2, Fitzgerald shares an insightful discussion that presents highly detailed and technical neurobiological information in a way that is easily accessible to the non-neuroscientist. Fitzgerald provides a discussion of several relevant animal and human studies that is carefully constructed in such a way that readers will be able to usefully interpret the broad scope of these studies. The discussion in this chapter of the plastic nature of the nervous system, highlighting the unique traits of the developing nervous system, is excellent. These two chapters will likely become required reading for my future trainees.

The next cluster of four chapters provides a strong discussion of theoretical and psychological issues related to pain syndromes in children and adolescents, demographic factors associated with chronic pain, and the psychometric properties of commonly used assessment measures. These chapters are composed by authors with strong backgrounds in psychology, psychiatry, and statistics. They are clearly written, practical, and

user friendly. For example, Chorney and colleagues provide a very helpful discussion of bidirectional influences that may occur between pain and temperament/personality. Ryee also provides an excellent discussion of the prevalence and effects of anxiety and other emotional factors in this population along with a strong and balanced discussion of the complexity of the interactions between these factors and the pain experience. This group of chapters is written such that they have the potential to benefit other experts as well as non-experts who require information and guidance in these areas.

The next group of seven chapters discusses specific pain syndromes including musculoskeletal, sickle cell, functional abdominal, pelvic, and headache pain as well as pain in children receiving palliative care. While space does not permit a complete discussion of the very detailed contents of these chapters, there are several pearls in these chapters that have the potential to be very valuable to a broad range of readers. Highlights of these chapters include Saps and Dhroove's discussion of how to work with and support children with functional abdominal pain and their families. This chapter also includes valuable treatment suggestions for this population including a helpful discussion of relevant medication studies. These chapters often emphasize the importance of and how to provide family centered care in these populations from a biopsychosocial perspective.

The final major group of chapters is made up of nine chapters that specifically deal with medical and physical aspects of pain assessment and management. These chapters are highly technical in places and contain considerable detail that will likely be very relevant to a range of specialists but of lesser interest in the practice of other readers. Some of the chapters contain extremely detailed discussions of procedures with images that provide additional visual details. In several places, these chapters contain an excellent discussion of clinical features and pathophysiology associated with various painful medical disorders. The chapter on physical therapy by Marchese and colleagues contains a strong review of a number of common pain conditions, several helpful tables and an interesting case study that captures messages

provided globally in the chapter in an interesting and practical way. Wang's chapter on the use of acupuncture and other complementary therapies in this population provides an excellent discussion of several studies that are relevant to this emerging and potentially important treatment modality. Saadat provides a fascinating and concise discussion of the practical application of hypnosis for pain management that includes several interesting suggestions and addresses key developmental issues in the use of hypnosis in this population. Lee's chapter on pharmacological management of chronic pain in children includes valuable discussion of key developmental, pharmacokinetic, metabolic, and other physiological processes relevant to the use of medication in managing pain in children and teens.

Despite the many strengths of this handbook, there are also some weaknesses that readers would benefit from being aware of. At times, given the strong biological perspective of the text, the tremendous importance of social and contextual factors appears glossed over or missed. For example, it is unfortunate that the impact of socioeconomic factors on chronic pain received very little reference. I also expected more discussion of the small but relevant literature on the effect of pain on school attendance and function. There is also a relative lack of information on the reciprocal effects of pain and sleep in children and the marked effects that this may have on the developing child. Also, while an excellent discussion of medical treatments takes place in some chapters, there is an unfortunate lack of discussion in some places of empirically-supported behavioral treatments, most notably in the discussion of headache management.

An issue that has long been endemic to pediatric chronic pain is the lack of research on chronic pain in children and teens. Consequently, it is not uncommon historically for adult data in many published articles and books to be cited with the potential implications for children implicitly or explicitly stated. This handbook understandably evinces this problem in places, particularly in some of the discussions of medication treatment for pain management. Unfortunately, in a few places, authors do not clearly note that adult data is being discussed, potentially leading readers to believe the evidence available for pediatric treatments to be

established when it is not. As well, in places, comments on key topics (such as the influences of family factors on pain in one chapter) are included that are sufficiently vague to leave readers open to a broad range of interpretations, some of which may not be completely appropriate.

An area of marked concern for me is the nature of discussion in several places regarding somatoform and psychosomatic issues in this population. Some of the discussion on this topic is very well presented. However, this is an area where the arguments are often polarized and divisive. It is also an area that can easily be misconstrued. While much of the material shared in more than one chapter dealing with somatization provides a generally balanced discussion of this issue, it appeared that two key topics that are very relevant to this general topic were ignored or at least not clearly delineated. First, the excellent neurobiological data (such as relevant information in Fitzgerald's chapter on neurobiology in this handbook) was not sufficiently referenced when scenarios were discussed where routine medical assessment techniques are unable to identify a clear organic etiology for a chronic pain problem. Second, there was also an unfortunate absence of data contrasting the epidemiology of psychosomatic disorders and the epidemiology of chronic pain disorders in the general population. While the existence of the body's response to stress, including the perception of pain, has been outlined in several studies, it is considered by many experts to be a significant error to attribute, or to leave a reader open to attributing, pain to a psychogenic cause when standard diagnostic testing fails to locate a specific cause for pain. Unfortunately, in a few places, the discussion of this topic in this handbook falls short in this respect, potentially providing the opportunity for the text to be misconstrued, and lead uninformed readers to suppose that a large number of children with chronic pain are primary somatizers.

Another area of concern for me is the discussion in more than one chapter related to interventional medicine for a variety of complex chronic pain conditions. In sharing this concern, it is important to note that while I provide treatment to children and teens with chronic pain and carry out

research in this area, I am a psychologist and not an expert in physical medicine. However, I do work closely with experts in this area who were contacted regarding this concern and I also searched the relevant literature to ensure that the following critical comments are supported. In a number of locations in this handbook, authors who are clearly highly experienced and expert in the area of interventional medicine have written what appears to be anecdotal evidence regarding their experience with techniques that have provided marked benefit to several individuals that they have treated during their careers. Unfortunately, very little data is provided regarding the benefits and potential pitfalls of these procedures. This is highly relevant given findings in the published literature that appear not to support the use of some of these procedures in some of the clinical contexts discussed. While an experienced and discerning clinician may be able to recognize caveats inherent in what is recommended by some of the authors, it would appear that this could be an area of concern for inexperienced practitioners who might take some of the recommendations at face value as they are included in the text.

Notwithstanding these areas of concern, it is my conclusion that, overall, the *Handbook of pediatric chronic pain: current science and integrative practice* contains a wealth of relevant and well organized information that is of considerable value to a broad range of readers. It addresses a very important clinical problem that affects a large number of children and adolescents. The information it contains has far-reaching implications and applications for a broad audience. It appears especially relevant to health care providers with an interest in physical medicine but is also relevant to a broader range of individuals involved in pain research and management. Several portions of this handbook have the potential to be used as key resources for continuing education and training purposes.

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