

Book review

Psychological Medicine, 39 (2009).

doi:10.1017/S0033291709006059

First published online 29 May 2009

Psychiatric Genetics: Applications in Clinical Practice.

Edited by W. Jordan, M. D. Smoller, B. R. Sheidley and M. T. Tsuang. (Pp. 337, \$60.00, ISBN-13: 978-1585622061.) American Psychiatric Publishing Inc. 2008.

This book has the stated goal of providing ‘a practical resource that will help mental health clinicians: (1) interpret the exponentially growing amount of information about genetics; (2) respond to patients’ requests for genetic counselling, risk prediction, and counselling about reproductive and pregnancy-related issues; and (3) enhance their sophistication about the nature and implications of genetics for their practice’. It does an excellent job of living up to that lofty goal. With increased attention to the role of genetics in psychiatric disorders by the public and the media, clinicians are faced with a growing number of patients who pose questions to them about the implications of psychiatric genetics for their own health-related outcomes and those of their family members. As reviewed in the book, the majority of clinicians and genetic counsellors feel ill-prepared to address these questions, although they believe it is their responsibility and duty to do so. This book provides a critical step forward in addressing this important gap. The book strikes a beautiful balance between enthusiastically explaining the promise and potential future implications of psychiatric genetics, with cautiously emphasizing the reality of the limited clinical utility of the current knowledge base in psychiatric genetics.

The book is organized into three parts, each consisting of a series of independent chapters. The first part of the book provides a primer on relevant topics, providing a foundation in critical introductory material for clinicians. The first chapter is a primer on psychiatric genetics, explaining the different methods used in psychiatric genetic research (family, twin and adoption studies; linkage and association studies) and the different questions that are addressed by each of these methods. It is a user-friendly, readable, and balanced coverage of the material. The second chapter provides a similarly excellent introduction to the practice of genetic counselling. The third chapter provides an invaluable discussion of the difficulty of assessing risk, interpreting statistics, and using this information in clinical practice; it is an outstanding chapter that should be required reading for all clinicians!

The second part of the book consists of five chapters that each provide an overview of the current state of knowledge of genetic influence for that particular disorder, covering clinical description of the disorder(s), basic genetic epidemiology, molecular genetics and implications for clinical practice. There is a chapter each devoted to childhood-onset psychiatric disorders, schizophrenia, mood and anxiety disorders, and Alzheimer’s disease. The information is likely to be a useful introduction for the clinician, although the laundry list of genes that have been associated with each disorder and the emphasis on the limited clinical utility of this information may make these sections less engaging for the clinician audience. Nonetheless, the repeated emphasis on the fact that this information is not yet ‘ready for prime time’, and the descriptions of how family information *can* be used in the present to provide some information for patients provides a consistent take-home message. In short, the chapters provide a useful summary of the research literature for each disorder, although there is some inconsistency about the depth of information provided from one chapter to the next (although this is in part a reflection of different issues specific to the different psychiatric disorders covered), and the information is likely to become outdated at a pace that will exceed the other parts of the book. The final chapter in this section discusses Mendelian disorders that present with psychiatric symptoms, providing helpful tips for the clinician to appropriately differentiate the small percentage of cases where psychiatric problems may result from rare genetic syndromes, which necessitate different clinical recommendations.

The third part of the book covers ‘special topics’ and includes chapters on making decisions about medication use during pregnancy for mothers affected with psychiatric disorders; ethical, legal, and social implications of genetic research; and a concluding chapter on future directions. The chapter on perinatal psychiatry provides an excellent guide to making difficult decisions about risk to the fetus and mother associated with psychiatric medication use (or discontinuation) during pregnancy. The chapter on ethical, legal, and social issues provides an introduction to the many issues raised by psychiatric research, including a review of unethical practices associated with genetic research across different historical periods, issues surrounding genetic testing in adults and children, premarital testing, prenatal testing, testing of adoptive children, pharmacogenetics, and discrimination that could be associated with genetic testing,

at the level of insurance companies and employers. The final chapter provides summary and context for integrating the information contained throughout the text, and introduces key concepts such as environmental moderation of genetic effects, that will be necessary areas for future research to help further the potential use of genetic information in clinical practice.

In short, this book serves as an excellent resource for clinicians, providing them with a useful introduction to psychiatric genetics research and genetic counselling, practical information about the state of knowledge for a variety of psychiatric disorders, and guidelines for how to implement this knowledge in their practice. Psychiatric genetic researchers might

quibble with the specifics of some of the pieces of information presented (or omitted) in the book – for example, the first chapter presents heritability point estimates for a list of psychiatric disorders without any range or references reported, and chapters covering some classes of major psychiatric conditions, such as substance use disorders and eating disorders are notably absent. However, for that majority of clinicians and genetics counsellors who report that they feel ill-equipped to provide guidance about psychiatric genetics in their practice – this is the book they have been waiting for.

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