Textbook of Psychiatric Epidemiology, 3rd ed

edited by Ming T. Tsuang, Mauricio Tohen, and Peter B. Jones.
Wiley-Blackwell, Chichester, UK, 2011, 646 pages, $263.00 (hardcover).

The *Textbook of Psychiatric Epidemiology* is a timely, up-to-date, and comprehensive book covering all aspects of the science of epidemiology as related to psychiatric disorders. The editors are eminent psychiatrists who have recruited a total of 75 authors to contribute a total of 33 chapters.

The chapters address 3 main topics. The first topic covers basics of psychiatric epidemiology such as research methods, analysis of categorical data, genetic epidemiology, role of gene-environment factors, reliability and validity of research methods, use of register data in epidemiology, pharmacoepidemiology, natural history of psychopathology, use of symptom scales and diagnostic schedules, national comorbidity surveys, and, finally, experimental epidemiology.

The second general topic concerns epidemiology of various psychiatric disorders such as schizophrenia, depressive disorders, anxiety disorders, bipolar disorder, eating disorders, alcohol and illicit substance use disorders, personality disorders, suicide, and disorders of children and adolescents, including those involving depression, anxiety, attention-deficit/hyperactivity disorder, and autism.

The third smaller general topic covers chapters dealing with mental illness in women and in mothers and their children, geriatric psychiatry, psychiatric epidemiology trends in Japan, epidemiology of migrants from Europe and Latin American countries, and preventive approaches in schizophrenia.

While all of the chapters in this highly readable book are written by international experts in epidemiology and are of great interest, I will briefly discuss some of the chapters that I personally found of particular interest. In the chapter that covers analysis of categorical data and odds ratio, Drs Fitzmaurice and Ravichandran present an overview of applications of odds ratio, logistic regression, and contingency tables in psychiatric epidemiology. In the chapter entitled "Genetic Epidemiology," Drs Faraone, Glatt, and Tsuang masterfully discuss the basic elements of family, twin, and adoption studies and also provide definitions for topics such as segregation, linkage, and association analyses and the application of the lod score method in linkage analysis. In the chapter focusing on definitions and applications of validity, Drs Goldstein, Cherkerzian, and Simpson discuss the 3 important ways of assessing validity, that is, content validity, criterion or predictive validity, and construct validity. These concepts are especially important as they are used to measure the validity of constantly evolving animal models of psychopathology, psychometric tests, and psychiatric diagnoses. Additionally, these authors also define and discuss the concept of endophenotype as a quantitative or continuous trait present in psychiatric subjects and their unaffected family members.

The chapter on epidemiology of schizophrenia, authored by Drs Eaton, Chen, and Bromet, reviews the prevalence, incidence, natural history, demography, risk factors, and prevention of schizophrenia in great detail. While many of the references are quite current, more recent reviews on neurodevelopmental theories of schizophrenia are missing, and those included date back to 1987. However, this is a well-organized chapter on the epidemiology of schizophrenia.

The chapter on the epidemiology of autism, written by Dr Liptak, reviews the definition, diagnosis, natural history, prevalence, risk factors, genetic factors, public health impact, associations, and causal factors related to this disorder. The chapter is highly readable. It would have been beneficial to explain the rising incidence and gene-environmental origins of autism in greater detail as the number of brain genes contributing to this disorder is now rapidly increasing.

The chapter entitled "Mental Illness, Women, Mothers and Their Children," authored by Drs Abel and Morgan, is compelling. These authors describe the etiology of various psychiatric disorders in children of mothers who also have mental illness. They review a large body of literature related to this area expertly and discuss the impact of fetal exposure to various genetic and environmental risk factors as well as maternal psychiatric illnesses.

In the chapter entitled "Early Detection and Intervention as Approaches for Preventing Schizophrenia," Drs Tsuang, Stone, Genderson, and Lyons present an excellent review of the use of neuropsychological profiles and brain and peripheral blood lymphocyte–based microarray technology to study genes involved in schizophrenia-related liability. This chapter provides a plethora of supportive evidence for the role of newer genes responsible for the genesis of schizophrenia.

Overall, this is a well-written, well-organized book that I highly recommend to all psychiatrists and neuroscientists who are interested in the underpinnings of psychiatric epidemiology. The editors should be congratulated on an excellent job done in editing.

S. Hossein Fatemi, MD, PhD
fatem002@umn.edu