

CHILD
AND
ADOLESCENT
PSYCHOPATHOLOGY

SECOND EDITION

EDITED BY
THEODORE P. BEAUCHAINE
STEPHEN P. HINSHAW



Child and Adolescent Psychopathology

Second Edition

Edited by

Theodore P. Beauchaine
Stephen P. Hinshaw

John Wiley & Sons, Inc.

This book is printed on acid-free paper. ☺

Copyright © 2013 by John Wiley & Sons, Inc. All rights reserved.

Published by John Wiley & Sons, Inc., Hoboken, New Jersey.

Published simultaneously in Canada.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning, or otherwise, except as permitted under Section 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 646-8600, or on the web at www.copyright.com. Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, (201) 748-6011, fax (201) 748-6008.

Limit of Liability/Disclaimer of Warranty: While the publisher and author have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by sales representatives or written sales materials. The advice and strategies contained herein may not be suitable for your situation. You should consult with a professional where appropriate. Neither the publisher nor author shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages.

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold with the understanding that the publisher is not engaged in rendering professional services. If legal, accounting, medical, psychological or any other expert assistance is required, the services of a competent professional person should be sought.

Designations used by companies to distinguish their products are often claimed as trademarks. In all instances where John Wiley & Sons, Inc. is aware of a claim, the product names appear in initial capital or all capital letters. Readers, however, should contact the appropriate companies for more complete information regarding trademarks and registration.

For general information on our other products and services please contact our Customer Care Department within the United States at (800) 762-2974, outside the United States at (317) 572-3993 or fax (317) 572-4002.

Wiley publishes in a variety of print and electronic formats and by print-on-demand. Some material included with standard print versions of this book may not be included in e-books or in print-on-demand. If this book refers to media such as a CD or DVD that is not included in the version you purchased, you may download this material at <http://booksupport.wiley.com>. For more information about Wiley products, visit www.wiley.com.

Library of Congress Cataloging-in-Publication Data:

Child and adolescent psychopathology / edited by Theodore P. Beauchaine, Stephen P. Hinshaw.— 2nd ed.
p. cm.

Includes bibliographical references and index.

ISBN 978-1-118-12094-1 (cloth)

ISBN 978-1-118-43167-2 (e-bk)

ISBN 978-1-118-41636-5 (e-bk)

ISBN 978-1-118-41914-4 (e-bk)

1. Child psychopathology. 2. Adolescent psychopathology. I. Beauchaine, Theodore P. II. Hinshaw, Stephen P.

RJ499.C48237 2012

618.92'8905—dc23

2012027165

Printed in the United States of America

10 9 8 7 6 5 4 3 2

Child and Adolescent Psychopathology

Foreword

THE FIELD OF DEVELOPMENTAL psychopathology first came into ascendance during the 1970s, predominantly by being highlighted as an important perspective by researchers conducting prospective longitudinal studies of children at risk for developing schizophrenia. Epidemiological investigations of families exhibiting discord and disruption (but where there was no parental mental disorder), studies of links between cumulative risk factors and developmental outcome, investigations of children with handicapping conditions, and research on cognitive and socio-emotional development in children with autism were among those areas that were influential in the field's emergence. Conceptualizations of the nature of mental disorder, etiological models of risk and resilience, scientific questions that were posed, and research designs and data analytic strategies were all reexamined, challenged, and cast in a new light by developmental psychopathologists.

The belief that the study of typical developmental processes informs understanding of pathological development and, conversely, that the study of pathological development informs the understanding of normative development, is one of the central tenets of developmental psychopathology—an interdisciplinary science that strives to reduce the schisms that so often separate scientific research from the application of knowledge to clinical populations. The field of developmental psychopathology owes its emergence and coalescence to a number of historically based endeavors in a variety of disciplines, including embryology, genetics, and the neurosciences, as well as psychoanalysis, psychiatry, and psychology. As such, developmental psychopathology provides an example of the synergistic contributions of previously disparate fields that result in the emergence of a new discipline. Somewhat surprisingly, given its historical roots, most of the research conducted on both the development of psychopathology and the processes contributing to resilience focused on relatively narrow domains of variables until the late 1990s and early years of the present millennium.

Over the past several decades, there has been a veritable explosion in our knowledge of developmental neurobiology, that area of neuroscience that focuses on factors regulating the development of neurons, neuronal circuitry, and complex neuronal organization systems, including the brain. Additionally, technological advances in the fields of neuroimaging and molecular genetics have contributed to progress in our understanding of normality, psychopathology, and resilience. Consequently, it has become increasingly acknowledged that the investigation of developmental processes, both normal and abnormal, is an inherently interdisciplinary enterprise.

It is now apparent from the nature of the questions addressed by developmental psychopathologists that progress toward a process-level understanding of mental disorders will require research designs and strategies that call for the assessment of multiple domains and multiple levels of variables, both within and outside the developing person. Likewise, research on the developmental pathways to resilience, the achievement of positive adaptation in the face of significant adversity, must follow these interdisciplinary multiple-levels-of-analysis perspectives. To comprehend typical development, psychopathology, and resilience fully, all levels of analysis must be examined and integrated. Multiple levels of analysis are necessary because no one level is sufficient to explain the complexity inherent in the study of development and psychopathology.

Developmental psychopathology is an exciting and complex field. A major goal of graduate and postdoctoral training in developmental psychopathology is to develop the next generation of scholars so that they can go on and launch their own research careers. An important early step in this process is student access to scholarly volumes that demonstrate the depth and breadth of the field in a clear and accessible way. Thus, this edited volume is a long-awaited, much needed, unique and innovative contribution to the field. It is organized around highlighting the principles and major tenets of developmental psychopathology into a work that does not shy away from presenting students, scholars, and clinicians with our current knowledge regarding the multilevel complexity of typical and atypical development.

The editors of this volume, Ted Beauchaine and Steve Hinshaw, are each leading theorists and researchers in developmental psychopathology. They both subscribe to multilevel research and also have engaged in impressive translational research through developing and implementing preventive interventions for high-risk youth that were influenced by basic research findings.

Ted Beauchaine has made seminal contributions to the understanding of the biological underpinnings of a number of mental and personality disorders in children and adolescents and has conducted exemplary research on the prevention of these conditions. Beauchaine also has utilized numerous psychophysiological measures in his research on attention deficit hyperactivity disorder, conduct problems, disinhibitory psychopathology, depression, and teen self-injury. Importantly, Ted also possesses superb quantitative skills that enable him to conduct data analyses across multiple levels of analysis.

Steve Hinshaw has made classic contributions on the role of the family and peer relationships to typical and atypical development. He also has completed impressive multilevel research on externalizing problems (i.e., conduct disorder, attention deficit disorder) and on behavior problems and psychopathology in girls. Furthermore, Hinshaw has implemented combinations of psychosocial and pharmacologic intervention for children with externalizing expressions of dysfunction. Finally, Steve has been a major advocate and contributor to the importance of destigmatizing mental illness. He has written two powerful volumes on this topic—one a personal account of his father's lifelong struggle with bipolar disorder (*The Years of Silence Are Past: My Father's Life with Bipolar Disorder*, 2002), the other a scholarly account of the history of the stigmatizing treatment of persons with mental illness

that also reviews the extant research on stigma from various scientific perspectives and provides recommendations for future research, intervention, and social policy (*The Mark of Shame: Stigma of Mental Illness and an Agenda for Change*, 2007).

In order to have this volume adhere to the tenets of developmental psychopathology, Beauchaine and Hinshaw instructed the contributors to take a multiple-levels-of-analysis approach to their assigned chapter topic. All of the authors in this volume are world-class scholars in their area of expertise. Importantly, each contributor communicates clearly, thus enabling graduate students and professionals from a variety of disciplines to develop a firm grasp of psychopathology and resilience in their multi-system entirety.

Major high-risk conditions and mental disorders are given excellent coverage, as are processes contributing to the development of resilient functioning in individuals experiencing significant adverse experiences. The breadth and depth of each chapter's content provides the reader with a deep appreciation of the complex nature of normality, psychopathology, and resilience. The topics and issues addressed in these chapters are immensely important – not only for the developmental sciences, but also for a number of other scientific fields.

I have been teaching graduate courses in developmental psychopathology for over 30 years. I have often searched for appropriate textbooks on psychopathology to assign to students that were undergirded by the principles of developmental psychopathology. Although there were a number of good textbooks available, few were truly developmental in their organization and content. One of the books that was guided by the tenets of developmental psychopathology was a multi-volume set that Donald Cohen and I co-edited on *Developmental Psychopathology*. These extensive volumes were not practical to assign to graduate students for a semester-long course. Thus, I have never assigned a required textbook for my courses on developmental psychopathology. My course syllabus was composed solely of journal articles and book chapters that the students were required to read.

Now that I have read this excellent volume edited by Ted Beauchaine and Steve Hinshaw, I believe that I have finally found the answer to my 30-plus-year search for a developmental psychopathology textbook. The volume is full of rich and exciting ideas that will help students develop a passion for the field of developmental psychopathology. I fully anticipate that my colleagues across the country will feel similarly and that the Beauchaine and Hinshaw text will play an important role in the training of future generations of developmental psychopathologists.

Dante Cicchetti, Ph.D.
McKnight Presidential Chair
William Harris Professor
and Professor of Child Psychology and Psychiatry
Institute of Child Development
University of Minnesota

Preface

SOCIETAL COSTS OF mental illness—in terms of both morbidity and mortality—are staggering. In 2002, the most recent year for which data are available, 154 million people worldwide suffered from depression, 106 million suffered an alcohol or drug use disorder, 25 million suffered from schizophrenia, and nearly 1 million died by suicide (World Health Organization, 2012). In low- and middle-income countries, mental disorders account for 25% and 34%, respectively, of total years lived with disability, yet the large majority of those affected receive no form of treatment (WHO World Mental Health Survey Consortium, 2004). Although treatment rates are slightly higher in wealthy countries, mental disorders continue to carry significant stigma. As a result, many avoid seeking help, and a lack of treatment parity remains for mental disorders vs. other health-related conditions (Hinshaw, 2007).

When we wrote the preface to the first edition of this book, we noted how important it is to elucidate the causes of mental illness. After all, the better we understand etiology across all relevant levels of analysis, including genetic, neural, familial, and cultural (to name a few), the better position we are in to formulate effective prevention and intervention programs (Beauchaine, Neuhaus, Brenner, & Gatzke-Kopp, 2008). Thus, even though this is not a text about treatment, we hope readers will keep in mind while digesting each chapter how important it is to identify the causes of mental illness in our efforts to reduce human suffering. In this regard, we live in an exciting and promising time. The Human Genome Project, completed only 10 years ago, sequenced 3 billion chemical base pairs that comprise human DNA. Following from this and major advances in psychiatric genetics, our understanding of molecular genetic vulnerabilities to mental illness continues to improve, even though new paradigms are constantly emerging. Similarly, the application of modern neuroimaging techniques—particularly fMRI—has advanced our understanding of neural vulnerabilities to psychopathology. Especially exciting is recent research demonstrating how neural functioning mediates links between genetic vulnerability and high risk personality traits that predispose individuals to psychopathology (e.g., Buckholtz et al., 2008).

Traditionally, most of what we learned about mental illness was obtained through observation and classification of symptoms (see Chapter 2). Although useful in the early stages of identifying different forms of mental illness, symptom classification often tells us little if anything about underlying causal processes—be they biological or environmental—that lead to a particular disorder. Accordingly, in editing

this book we sought authors with expertise in the *developmental psychopathology* perspective, which emerged only about 30 years ago (see Chapter 1). This perspective follows from the observation that human behavioral traits—including those that predispose to psychopathology—almost always arise from complex transactions between biological vulnerabilities and exposure to environmental risks across development. For example, heritable disorders such as depression, schizophrenia, and substance dependence are affected strongly by environmental experiences, and the effects of environmentally-transmitted risks such as child maltreatment are moderated by genes and other biological predispositions. Furthermore, through epigenetic mechanisms, the expression of several genes implicated in behavior regulation can be altered by experience including exposure to stress and trauma—findings that defy anachronistic distinctions between nature and nurture.

This shift in the scientific landscape—from a relatively static view of psychopathology based on specific clusters of behavior to a dynamic view of disorders emerging from complex transactions between vulnerabilities and risks across time—served as the impetus for the first edition of this book. It continues to drive the current second edition, which includes considerable new material. Before the first edition was published, most graduate-level psychopathology texts were organized around symptom-based approaches to classifying mental illness, with limited consideration of the genetic and neural underpinnings of behavior, or of unfolding of interactions between biological vulnerabilities and environmental risk across time. However, in the five years since the first edition was published, appreciation for the complexity of such transactions in the development of psychopathology has increased, and many new and exciting findings have emerged. The timing was therefore right for a second edition.

Some readers will likely note that a few disorders often covered in psychopathology texts are not included in this book. For example, we do not address developmental disabilities or mental retardation. In omitting these disorders, we are not implying that they are unimportant. Rather, the ever expanding literature addressing developmental disabilities makes it difficult to cover the topic adequately in a text that already includes 22 chapters. Thus, we were left with a difficult choice, and we decided not to limit coverage of the conditions contained herein. We refer interested readers to other sources (e.g., Jacobson, Mulick, & Rojahn, 2007) for excellent coverage of developmental disabilities and mental retardation.

We now invite you to join us in the quest for a deepened understanding of mental disorders and conditions that originate in childhood and adolescence. We hope that our emphases on genetic and other biological vulnerabilities, and how these interact with environmental risk factors and contexts, will challenge your preconceived notions as to what is “biological” and what is “environmental” in relation to normal and atypical development and psychopathology. We hope as well that our coverage will prompt a new generation of investigators, clinicians, and policymakers to pursue the daunting but essential goal of explaining, treating, and preventing the devastation that so often accompanies psychopathology.

Theodore P. Beauchaine
Stephen P. Hinshaw

REFERENCES

- Jacobson, J. W., Mulick, J. A., & Rojahn, J. (Eds.) (2007). *Handbook of intellectual and developmental disabilities*. New York: Springer.
- Beauchaine, T. P., Neuhaus, E., Brenner, S. L., & Gatzke-Kopp, L. (2008). Ten good reasons to consider biological processes in prevention and intervention research. *Development and Psychopathology*, 20, 745–774.
- Buckholtz, J. W., Callicott, J. H., Kolachana, B. K., Hariri, A. R., Goldberg, T. E., Genderson, M., . . . Meyer-Lindenberg, A. (2008). Genetic variation in MAOA modulates ventromedial prefrontal circuitry mediating individual differences in human personality. *Molecular Psychiatry*, 13, 313–324.
- Hinshaw, S. P. (2007). *The mark of shame: Stigma of mental illness and an agenda for change*. New York: Oxford University Press.
- WHO World Mental Health Survey Consortium (2004). Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. *Journal of the American Medical Association*, 291, 2581–2590.
- World Health Organization (2012). *Mental health*. Retrieved April 17, 2012, www.who.int/en/

List of Contributors

Charissa Andreotti

Vanderbilt University, TN

Robert F. Asarnow

UCLA School of Medicine

Theodore P. Beauchaine

Washington State University

Sarah R. Black

University at Stony Brook, NY

Joseph C. Blader

Stony Brook University School of
Medicine, NY

Cara Bohon

University of California, Los Angeles

Katherine Shannon Bowen

University of Wisconsin

Sandra A. Brown

Veterans Affairs San Diego Healthcare
System, CA

Gabrielle A. Carlson

Stony Brook University School of
Medicine, NY

Pamela M. Cole

Pennsylvania State University

Bruce E. Compas

Vanderbilt University, TN

Nicole A. Crocker

SDSU/UCSD Joint Doctoral Program
in Clinical Psychology, CA

Sheila E. Crowell

University of Utah

Geraldine Dawson

Autism Speaks, NY

Marco Del Giudice

Center for Cognitive Science,
Department of Psychology, University
of Turin, Italy

Thomas J. Dishion

Arizona State University

Bruce J. Ellis

John and Doris Norton School of
Family and Consumer Sciences, AZ

Nora L. Erickson

Washington State University

Susan Faja

University of Washington

Susanna L. Fryer

University of California, San Francisco

Lisa M. Gatzke-Kopp

Pennsylvania State University

Nastassia J. Hajal

Pennsylvania State University

Sarah E. Hall

Wheaton College, IL

Stephen P. Hinshaw

University of California, Berkeley

Sara R. Jaffee

Institute of Psychiatry, London

Jerome Kagan

Harvard University

Erin A. Kaufman

University of Utah

Daniel N. Klein

University at Stony Brook, NY

Autumn J. Kujawa

University at Stony Brook, NY

Benjamin B. Lahey

University of Chicago

Mark F. Lenzenweger

State University of New York at
Binghamton

Andrea Kohn Maikovich-Fong

Colorado Blood Cancer Institute at
Presbyterian/St. Luke's Hospital

Sarah N. Mattson

San Diego State University, CA

Emily Neuhaus

University of Colorado School of
Medicine

Joel Nigg

Oregon Health and Science University

Alyssa L. Norris

Washington State University

Allison T. Pennock

University at Stony Brook, NY

Kristina Hiatt Racer

University of Oregon

Elizabeth A. Shirtcliff

University of New Orleans, LA

Wendy K. Silverman

Florida International University

Eric Stice

Oregon Research Institute

Kristin Tomlinson

University of California, San Diego

Irwin D. Waldman

Emory University, GA

Carl F. Weems

University of New Orleans, LA

Jennifer Winward

University of California, San Diego

Contents

Foreword	vii
Preface	xi
List of Contributors	xv
PART I THE DEVELOPMENTAL PSYCHOPATHOLOGY APPROACH TO UNDERSTANDING MENTAL ILLNESS	
1 Developmental Psychopathology as a Scientific Discipline <i>Stephen P. Hinshaw</i>	3
2 Developmental Psychopathology and the Diagnostic and Statistical Manual of Mental Disorders <i>Theodore P. Beauchaine, Daniel N. Klein, Nora L. Erickson, and Alyssa L. Norris</i>	29
3 Genetic and Environmental Influences on Behavior <i>Theodore P. Beauchaine and Lisa M. Gatzke-Kopp</i>	111
PART II VULNERABILITIES AND RISK FACTORS FOR PSYCHOPATHOLOGY	
4 Risk and Resilience in Child and Adolescent Psychopathology <i>Bruce E. Compas and Charissa L. Thurm</i>	143
5 Child Maltreatment and Risk for Psychopathology <i>Sara R. Jaffee and Andrea Kohn Maikovich-Fong</i>	171
6 Impulsivity and Vulnerability to Psychopathology <i>Emily Neuhaus and Theodore P. Beauchaine</i>	197
7 Behavioral Inhibition as a Temperamental Vulnerability to Psychopathology <i>Jerome Kagan</i>	227
8 Beyond Allostatic Load <i>Bruce J. Ellis, Marco Del Giudice, and Elizabeth A. Shirtcliff</i>	251
9 Exposure to Teratogens as a Risk Factor for Psychopathology <i>Nicole A. Crocker, Susanna L. Fryer, and Sarah N. Mattson</i>	285

10	Brain Injury as a Risk Factor for Psychopathology <i>Katherine E. Shannon Bowen and Lisa M. Gatzke-Kopp</i>	317
11	Emotion Dysregulation as a Risk Factor for Psychopathology <i>Pamela M. Cole, Sarah E. Hall, and Nastassia J. Hajal</i>	341
PART III EXTERNALIZING BEHAVIOR DISORDERS		
12	Attention-Deficit/Hyperactivity Disorder <i>Joel Nigg</i>	377
13	Oppositional Defiant Disorder, Conduct Disorder, and Juvenile Delinquency <i>Irwin D. Waldman and Benjamin B. Lahey</i>	411
14	Development of Adult Antisocial Behavior <i>Thomas J. Dishion and Kristina Hiatt Racer</i>	453
15	Substance Use Disorders in Adolescence <i>Sandra A. Brown, Kristin Tomlinson, and Jennifer Winward</i>	489
PART IV INTERNALIZING BEHAVIOR DISORDERS		
16	Anxiety Disorders <i>Carl F. Weems and Wendy K. Silverman</i>	513
17	Depressive Disorders <i>Daniel N. Klein, Autumn J. Kujawa, Sarah R. Black, and Allison T. Pennock</i>	543
18	The Development of Borderline Personality and Self-Inflicted Injury <i>Sheila E. Crowell, Erin A. Kaufman, and Mark F. Lenzenweger</i>	577
PART V OTHER DISORDERS		
19	Bipolar Disorder <i>Joseph C. Blader and Gabrielle A. Carlson</i>	613
20	Autism Spectrum Disorders <i>Susan Faja and Geraldine Dawson</i>	649
21	Childhood Schizophrenia <i>Robert F. Asarnow</i>	685
22	Eating Disorders <i>Eric Stice and Cara Bohon</i>	715
Author Index		739
Subject Index		765

PART I

THE DEVELOPMENTAL
PSYCHOPATHOLOGY
APPROACH TO
UNDERSTANDING
MENTAL ILLNESS

CHAPTER 1

Developmental Psychopathology as a Scientific Discipline

Rationale, Principles, and Advances

STEPHEN P. HINSHAW

FROM ITS "LAUNCH" BETWEEN three and four decades ago (see Achenbach, 1974; Cicchetti, 1984; Sroufe & Rutter, 1984), developmental psychopathology (DP) has become a force to be reckoned with. DP is at once a perspective on the origins of mental disorders that begin during childhood and adolescence, a multidisciplinary conceptual approach linking normative development to psychopathology, and a scientific discipline closely tied to clinical child/adolescent psychology and psychiatry but transcending the usual diagnosis-based emphasis of these fields (Cicchetti & Cohen, 2006; Cicchetti & Toth, 2009). Through its focus on the dynamic interplay of biology and context, genes and environments, and "inner" versus "outer" influences on the development of healthy and atypical functioning, it has come to dominate current thinking and research on psychopathology. Some of its core ideas are not new, having emerged in the context of embryology, systems theory, philosophy, and genetics long ago (see Cicchetti, 2006; Gottlieb & Willoughby, 2006, for elaboration). Yet the syntheses represented in this volume, reflecting DP's continuing growth, are truly cutting edge, given the relatively recent emergence of DP and given the knowledge explosion in recent years related to psychobiological influences as they transact with contextual forces. Today, scientists from diverse disciplines contribute to ever-expanding knowledge of this enterprise while clinicians benefit from and utilize its core principles. The underlying perspectives are no longer revolutionary; instead, they have come to comprise the dominant paradigm.

In this, our second edition of a graduate-level compendium on core aspects of this vast topic, we continue our tradition of providing current, conceptually based, clinically relevant, and developmentally informed information on causal mechanisms underlying child and adolescent psychopathology. Leading scientists across the entire field have contributed state-of-the-art summations of their particular