William D. Spaulding Steven M. Silverstein Anthony A. Menditto

## The Schizophrenia Spectrum

2nd edition



The Schizophrenia Spectrum

#### **About the Authors**

Will D. Spaulding, PhD, is a professor of psychology in the doctoral clinical psychology program of the University of Nebraska - Lincoln. His entire career has been devoted to understanding and treating serious mental illness, from psychopathology to treatment outcome to mental health services policy and administration. For over 20 years he was the senior psychologist in a state hospital-based psychiatric rehabilitation program in Nebraska, and has consulted nationally and internationally on development of services for people with schizophrenia spectrum disorders.

Steven M. Silverstein, PhD, is Director of Research, and Director of the Division of Schizophrenia Research at Rutgers University Behavioral Health Care (UBHC), and Professor of Psychiatry at Rutgers - Robert Wood Johnson Medical School. He is the former Chair of the American Psychological Association's Task Force on Serious Mental Illness, and the 2017 President of the Society for Research in Psychopathology. He has over 25 years of experience in treating people with serious mental illness, and has directed inpatient units and outpatient programs for this population. This includes work with both chronically ill and first episode patients. Dr. Silverstein's research interests are in the development of schizophrenia, perceptual and cognitive changes found in schizophrenia, and prediction of treatment response and relapse. He has over 190 publications related to schizophrenia and is currently Principal Investigator (PI) on multiple NIMH or foundation grants involving assessment and treatment. Dr. Silverstein is the recipient of many national and state awards, including the New Jersey Psychological Association's Distinguished Researcher Award in 2009, the American Psychological Foundation Alexander Gralnick Research Award in 2010, and the Trailblazer Award from the Schizophrenia Special Interest Group of the Association for the Advancement of Behavioral and Cognitive Therapy in 2016.

**Anthony A. Menditto, PhD**, is the Director of Treatment Services at Fulton State Hospital in Missouri. He has spent the past 30 years as a clinician, administrator, researcher, and consultant dedicated to improving our understanding of serious mental disorders. His work has focused on the implementation and evaluation of evidence-based approaches to assessment and treatment for individuals with serious mental disorders.

## Advances in Psychotherapy – Evidence-Based Practice

#### **Series Editor**

**Danny Wedding,** PhD, MPH, School of Medicine, American University of Antigua, St. Georges, Antigua

#### **Associate Editors**

**Larry Beutler**, PhD, Professor, Palo Alto University / Pacific Graduate School of Psychology, Palo Alto, CA

**Kenneth E. Freedland**, PhD, Professor of Psychiatry and Psychology, Washington University School of Medicine, St. Louis, MO

**Linda C. Sobell**, PhD, ABPP, Professor, Center for Psychological Studies, Nova Southeastern University, Ft. Lauderdale, FL

**David A. Wolfe**, PhD, RBC Chair in Children's Mental Health, Centre for Addiction and Mental Health, University of Toronto, ON

The basic objective of this series is to provide therapists with practical, evidence-based treatment guidance for the most common disorders seen in clinical practice – and to do so in a reader-friendly manner. Each book in the series is both a compact "how-to" reference on a particular disorder for use by professional clinicians in their daily work and an ideal educational resource for students as well as for practice-oriented continuing education.

The most important feature of the books is that they are practical and easy to use: All are structured similarly and all provide a compact and easy-to-follow guide to all aspects that are relevant in real-life practice. Tables, boxed clinical "pearls," marginal notes, and summary boxes assist orientation, while checklists provide tools for use in daily practice.

# The Schizophrenia Spectrum

## 2nd edition

## William D. Spaulding

University of Nebraska-Lincoln, Lincoln, NE

## Steven M. Silverstein

Rutgers University Behavioral Health Care (UBHC), Robert Wood Johnson Medical School, Piscataway Township, NJ

## Anthony A. Menditto

Fulton State Hospital, Fulton, MO



**Library of Congress Cataloging in Publication** information for the print version of this book is available via the Library of Congress Marc Database under the Library of Congress Control Number 2016956064

#### Library and Archives Canada Cataloguing in Publication

Silverstein, Steven M.

[Schizophrenia]

The schizophrenia spectrum / William D. Spaulding (University of Nebraska-Lincoln, Lincoln, NE),

Steven M. Silverstein (Rutgers University Behavioral Health Care (UBHC), Robert Wood Johnson (Medical School, Piscataway Township, NJ), Anthony A. Menditto (Fulton State Hospital, Fulton, MO). -- 2nd edition.

(Advances in psychotherapy--evidence-based practice; v. 5)

Revision of: Schizophrenia / Steven M. Silverstein, William D. Spaulding, and Anthony A. Menditto. -- Cambridge, MA;

Toronto: Hogrefe & Huber, ©2006.

Includes bibliographical references.

Issued in print and electronic formats.

ISBN 978-0-88937-504-8 (paperback).--ISBN 978-1-61676-504-0 (pdf).--ISBN 978-1-61334-504-7 (epub)

1. Schizophrenia--Treatment. 2. Schizophrenia. I. Spaulding, William D. (William Delbert), 1950-, author II. Menditto, Anthony A., author III. Title. IV. Title: Schizophrenia V. Series: Advances in psychotherapy--evidence-based practice; v. 5

RC514.S544 2016

616.89'8

C2016-906774-2 C2016-906775-0

Cover image © Olivier Tabary/fotolia.com

© 2017 by Hogrefe Publishing http://www.hogrefe.com

#### PUBLISHING OFFICES

USA: Hogrefe Publishing Corporation, 7 Bulfinch Place, Suite 202, Boston, MA 02114

Phone (866) 823-4726, Fax (617) 354-6875; E-mail customerservice@hogrefe.com

EUROPE: Hogrefe Publishing GmbH, Merkelstr. 3, 37085 Göttingen, Germany

Phone +49 551 99950-0, Fax +49 551 99950-111; E-mail publishing@hogrefe.com

#### **SALES & DISTRIBUTION**

USA: Hogrefe Publishing, Customer Services Department,

30 Amberwood Parkway, Ashland, OH 44805

Phone (800) 228-3749, Fax (419) 281-6883; E-mail customerservice@hogrefe.com

UK: Hogrefe Publishing, c/o Marston Book Services Ltd., 160 Eastern Ave.,

Milton Park, Abingdon, OX14 4SB, UK

Phone +44 1235 465577, Fax +44 1235 465556; E-mail direct.orders@marston.co.uk

EUROPE: Hogrefe Publishing, Merkelstr. 3, 37085 Göttingen, Germany

Phone +49 551 99950-0, Fax +49 551 99950-111; E-mail publishing@hogrefe.com

OTHER OFFICES

CANADA: Hogrefe Publishing, 660 Eglinton Ave. East, Suite 119-514, Toronto, Ontario, M4G 2K2

SWITZERLAND: Hogrefe Publishing, Länggass-Strasse 76, CH-3000 Bern 9

#### **Copyright Information**

The e-book, including all its individual chapters, is protected under international copyright law. The unauthorized use or distribution of copyrighted or proprietary content is illegal and could subject the purchaser to substantial damages. The user agrees to recognize and uphold the copyright.

#### License Agreement

The purchaser is granted a single, nontransferable license for the personal use of the e-book and all related files.

Making copies or printouts and storing a backup copy of the e-book on another device is permitted for private, personal use only.

Other than as stated in this License Agreement, you may not copy, print, modify, remove, delete, augment, add to, publish, transmit, sell, resell, create derivative works from, or in any way exploit any of the e-book's content, in whole or in part, and you may not aid or permit others to do so. You shall not: (1) rent, assign, timeshare, distribute, or transfer all or part of the e-book or any rights granted by this License Agreement to any other person; (2) duplicate the e-book, except for reasonable backup copies; (3) remove any proprietary or copyright notices, digital watermarks, labels, or other marks from the e-book or its contents; (4) transfer or sublicense title to the e-book to any other party.

These conditions are also applicable to any audio or other files belonging to the e-book. Should the print edition of this book include electronic supplementary material then all this material (e.g., audio, video, pdf files) is also available in the e-book-edition.

Format: PDF

ISBN 978-0-88937-504-8 (print) • ISBN 978-1-61676-504-0 (PDF) • ISBN 978-1-61334-504-7 (EPUB) http://doi.org/10.1027/00504-000

This document is for personal use only. Reproduction or distribution is not permitted.

## Preface to the Second Edition

The intent of this book is to provide an overview of current conceptualizations of, and treatments for, schizophrenia spectrum disorders. There is an emphasis on psychological treatments. These interventions are usually neglected in graduate and medical training about schizophrenia, even though the evidence for their effectiveness is comparable to that of pharmacologic treatment, with the combination of the two typically producing the best treatment outcomes. However, schizophrenia spectrum disorders are complex conditions with expressions at all levels of a person's biological, psychological, and social functioning. Modern treatment incorporates, integrates, and coordinates modalities that operate at all those levels. Pharmacological treatment addresses the neurophysiological level of the disorders and some of the direct cognitive and behavioral consequences, but this is just one part of the picture. We hope to provide the reader a reasonably complete overall picture of assessment, treatment, and rehabilitation.

Since the first edition, the major developments that required the most attention for the second are:

- Publication of the fifth edition of the American Psychiatric Association's
   *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5). The
   fifth edition introduces the *schizophrenia spectrum* and *neurodevelop- mental disorders*, reflecting advances in our scientific understanding of
   mental illness in general and schizophrenia in particular;
- 2. Evolution of the idea of *recovery* as central to treatment and rehabilitation, and to the subjective experience of the person affected;
- Advances in the psychopathology of schizophrenia and other disorders that transform our basic understanding of mental illness as noncategorical, multidimensional processes with indistinct boundaries and multiple interacting etiological factors that are inseparable from the process of human development;
- 4. A proliferation of psychological and psychosocial modalities for treatment and rehabilitation and their subsequent consolidation into the integrated multimodal arrays and organizational models that characterize modern psychiatric rehabilitation;
- The continuing failure to disseminate, implement, and effectively regulate modern treatment and rehabilitation methods in our mental health service systems, despite overwhelming evidence for improving outcomes.

We hope this book is useful to a wide range of people, from students first learning about the schizophrenia spectrum to advanced clinicians and researchers looking for a compact review of current conceptualizations and clinical tools. The schizophrenia spectrum represents one of the greatest scientific challenges of our time and also one of the most disenfranchised, undertreated populations in our society. Our hope is that this book will inspire all readers to address the social, political, and humanitarian issues as well as the scientific ones.

## **Acknowledgments**

The authors would like to thank Danny Wedding for providing the opportunity to write this book and for his guidance during the writing process. Will Spaulding would like to thank Rue Cromwell and the late Gordon Paul for guiding his early work in schizophrenia and all the teachers and mentors named by this volume's co-authors, and Mary Sullivan for ongoing love, support, and teamwork. Steve Silverstein would like to thank his mentors and teachers who taught him about schizophrenia and its treatment, including Ray Knight, Michael Raulin, Frank Miller, Jim Bowman, Robert Liberman, Chuck Wallace, and Rich Hunter. He would also like to thank his parents and Judy Thompson for their love and support. Anthony Menditto adds his thanks to Gordon Paul for his pioneering work that laid the groundwork for applying rigorous standards of practice to developing services and properly evaluating them for individuals with severe mental disorders, and for the personal support and guidance he has provided to each of us over the years. He would also like to thank Lynn Geeson and Theresa Menditto for their love and support. All the authors wish to thank all the students from whom we have learned, and, most especially, the people we've been privileged to accompany on their journeys of recovery. We also thank the Hogrefe editorial and production staff for their helpful and professional collaboration and assistance.

## **Contents**

	e to the Second Edition	v vi
1	Description	1
1.1	Terminology.	. 1
1.1.1	Schizophrenia as a Mental Health Policy Construct	1
1.1.2	Schizophrenia as a Psychiatric Diagnosis	3
1.1.3	Dimensions of the Schizophrenia Spectrum	6
1.1.4	The Medical Model	9
1.1.5	Psychiatric Rehabilitation	10
1.1.6	Recovery	11
1.1.7	Evidence-Based Practice	13
1.2	Definition	14
1.3	Epidemiology.	15
1.4	Course and Prognosis	16
1.4.1	Short-Term Outcomes	16
1.4.2	Long-Term Outcomes	18
1.5	Differential Diagnosis	20
1.6	Co-Occurring Conditions.	20
1.6.1	Psychiatric Conditions.	21
1.6.2	Medical Conditions	25
1.7	Diagnostic and Other Assessment Procedures	26
	6	
2	Theories and Models of the Schizophrenia	20
_	Spectrum	
2.1	Spectrum	28
2.1 2.2	Spectrum The Concept of Vulnerability Genetics	28 29
2.1 2.2 2.3	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology.	28 29 31
2.1 2.2 2.3 2.4	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications	28 29 31 32
2.1 2.2 2.3 2.4 2.5	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications Neuroanatomy	28 29 31 32 32
2.1 2.2 2.3 2.4 2.5 2.6	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications Neuroanatomy Neurophysiology	28 29 31 32 32 33
2.1 2.2 2.3 2.4 2.5 2.6 2.7	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications Neuroanatomy Neurophysiology Neurodevelopmental Factors	28 29 31 32 32 33 35
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications. Neuroanatomy Neurophysiology Neurodevelopmental Factors Cognitive Factors.	28 29 31 32 32 33 35 35
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications Neuroanatomy Neurophysiology Neurodevelopmental Factors Cognitive Factors Social Learning Theory	28 29 31 32 32 33 35 35
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications. Neuroanatomy Neurophysiology Neurodevelopmental Factors Cognitive Factors.	28 29 31 32 32 33 35 35
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications Neuroanatomy Neurophysiology Neurodevelopmental Factors Cognitive Factors Social Learning Theory Environmental Factors	28 29 31 32 32 33 35 35 38 39
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications Neuroanatomy Neurophysiology Neurodevelopmental Factors Cognitive Factors Social Learning Theory	28 29 31 32 32 33 35 35 38 39
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications Neuroanatomy Neurophysiology Neurodevelopmental Factors Cognitive Factors Social Learning Theory Environmental Factors  Diagnosis and Treatment Indications	28 29 31 32 32 33 35 35 38 39
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications Neuroanatomy Neurophysiology Neurodevelopmental Factors Cognitive Factors Social Learning Theory Environmental Factors  Diagnosis and Treatment Indications Assessment Neurophysiological and Symptom Assessment.	28 29 31 32 32 33 35 35 38 39
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10 3.1 3.1.1	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications. Neuroanatomy Neurophysiology Neurodevelopmental Factors Cognitive Factors. Social Learning Theory Environmental Factors.  Diagnosis and Treatment Indications Assessment. Neurophysiological and Symptom Assessment. Cognitive Assessment	28 29 31 32 32 33 35 35 38 39
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10 <b>3</b> 3.1 3.1.1 3.1.2	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications Neuroanatomy Neurophysiology Neurodevelopmental Factors Cognitive Factors Social Learning Theory Environmental Factors  Diagnosis and Treatment Indications Assessment Neurophysiological and Symptom Assessment.	28 29 31 32 32 33 35 35 38 39 . 41 41 41
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10 <b>3</b> 3.1 3.1.1 3.1.2 3.1.3	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications Neuroanatomy Neurophysiology Neurodevelopmental Factors Cognitive Factors Social Learning Theory Environmental Factors  Diagnosis and Treatment Indications Assessment Neurophysiological and Symptom Assessment Cognitive Assessment Dynamic Assessment Functional Assessment	28 29 31 32 32 33 35 35 38 39 . 41 41 41 42
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10 <b>3</b> 3.1 3.1.1 3.1.2 3.1.3 3.1.4	Spectrum The Concept of Vulnerability Genetics Theories Involving Viruses or Immunopathology Birth Complications Neuroanatomy Neurophysiology Neurodevelopmental Factors Cognitive Factors Social Learning Theory Environmental Factors  Diagnosis and Treatment Indications Assessment Neurophysiological and Symptom Assessment Cognitive Assessment Dynamic Assessment	28 29 31 32 33 35 35 38 39 . 41 41 41 42 43

4	Treatment	49
4.1	Descriptions of Treatment Modalities	49
4.1.1	Rehabilitation Counseling and Related Modalities	49
4.1.2	Collaborative Psychopharmacotherapy	51
4.1.3	Neurocognitive Therapy	52
4.1.4	Contingency Management	53
4.1.5	Individual Psychotherapy	54
4.1.6	Social Skills Training	56
4.1.7	Problem Solving Skills Training	58
4.1.8	Illness/Wellness Management Skills Training	58
4.1.9	Independent Living Skills Training	59
4.1.10	Specialized Integrated Treatment for Co-Occurring	
	Substance Abuse	60
4.1.11	Supported Employment and Occupational Skills Training	60
4.1.12	Family Therapy	62
4.1.13	Peer Support and Self-Help Groups	63
4.1.14	Acute Treatment, Crisis Intervention, and Related Services	63
4.1.15	Specialized Models for Service Integration and Provision	64
4.1.16	Supported Housing	67
4.2	Mechanisms of Action	68
4.2.1	Recovery-Oriented Perspectives	70
4.3	Efficacy and Effectiveness.	70
4.4	Variations and Combinations of Methods	72
4.5	Problems in Carrying Out the Treatment	72
4.5.1	The Domain of Research Review and Meta-Analysis	72
4.5.2	Mental Health Policy, Funding, and Regulation	73
4.5.3	Education and Training of Practitioners	74
4.5.4	The Economics of the Mental Health Provider Industry	74
4.6	Multicultural Issues	75
5	Case Vignettes	77
6	Further Reading	79
7	References	81
8	Appendix: Tools and Resources	91



## Description

## 1.1 Terminology

### 1.1.1 Schizophrenia as a Mental Health Policy Construct

Schizophrenia refers to a type of severe and disabling mental illness that affects between .5% and 1.5% of the population worldwide, with a current global prevalence calculated at over 20 million people. It is typically first recognized in late adolescence or early adulthood, and is often associated with lifelong disability, especially when appropriate services are not provided. It has been estimated that as many as ten percent of all disabled persons in the US are diagnosed with schizophrenia.

Schizophrenia is a specific psychiatric diagnosis, but for the purposes of social policy and healthcare administration it is often grouped together with schizoaffective disorder, bipolar disorder, severe chronic depression, and sometimes other conditions. Such grouping is convenient because treatment and service needs are similar within the group. The diagnoses usually grouped with schizophrenia have in common an onset in late adolescence or adulthood, an *episodic course* (periods of better and poorer functioning), a high risk of severe disability, and in most cases (traditionally) a lifelong need for treatment and support services.

#### **Psychiatric Disability**

Psychiatric disability resulting from schizophrenia extends to multiple domains of personal and social functioning. People with the diagnosis are vulnerable to institutionalization, to being found legally incompetent and requiring a guardian, and to needing assisted living situations. As a group they have very high unemployment and poor quality of life. The economic costs of schizophrenia, including direct treatment costs and lost productivity, are enormous (Insel, 2008), among the highest of all health conditions, ranking with cancer and heart disease. The diagnosis accounts for 75% of all mental health expenditures and approximately 40% of all Medicaid reimbursements, although the greatest part of the economic burden comes not from treatment but from the disability, i.e., from the lost productivity of those affected (Insel, 2008).

#### Serious Mental Illness

The term *serious mental illness* (SMI) has been in use for several decades, especially in federal mental health policy, to refer to schizophrenia and the other diagnoses with which it is usually grouped. However, in recent years the

Schizophrenia affects over 20 million people around the world