

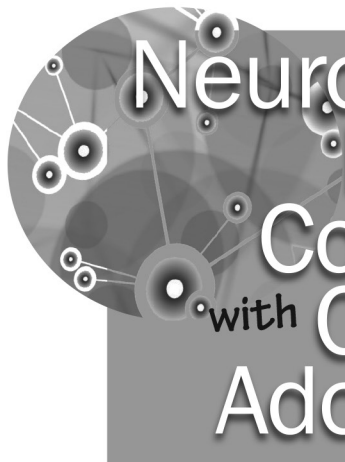
Thomas A. Field
Michelle R. Ghoston

Neuroscience- Informed Counseling with Children and Adolescents



AMERICAN COUNSELING
ASSOCIATION

6101 Stevenson Avenue • Suite 600
Alexandria, VA 22304
www.counseling.org



Neuroscience- Informed Counseling with Children and Adolescents

Copyright © 2020 by the American Counseling Association. All rights reserved.
Printed in the United States of America. Except as permitted under the United
States Copyright Act of 1976, no part of this publication may be reproduced
or distributed in any form or by any means, or stored in a database or retrieval
system, without the written permission of the publisher.

American Counseling Association

6101 Stevenson Avenue, Suite 600 • Alexandria, VA 22304

Associate Publisher • Carolyn C. Baker

Digital and Print Development Editor • Nancy Driver

Senior Production Manager • Bonny E. Gaston

Copy Editor • Beth Ciha

Cover and text design by Bonny E. Gaston

Library of Congress Cataloging-in-Publication Data

Names: Field, Thomas A., author. | Ghoston, Michelle R., author.

Title: Neuroscience-informed counseling with children and
adolescents / Thomas A. Field and Michelle R. Ghoston.

Description: Alexandria : American Counseling Association, 2020. |
Includes bibliographical references and index.

Identifiers: LCCN 2019053760 | ISBN 9781556203862 (paperback)

Subjects: LCSH: Children—Counseling of. | Youth—Counseling of. |
Neurosciences.

Classification: LCC BF636.6 F54 2020 | DDC 158.3083—dc23

LC record available at <https://lcn.loc.gov/2019053760>

Dedication

*This text is dedicated to our shared mentor,
Professor Steve Nielsen.*

Many years ago, both of us attended the master's-level counseling program at Lynchburg College (now the University of Lynchburg). We were in cohorts a few years apart. Steve served as our mentor throughout our master's program, during our doctoral studies, and beyond. Well known to the Virginia counseling community, Steve is well respected for his intelligence, humor, and commitment to serving the community. Both of us learned from Steve the importance of being involved professionally, remaining curious, and constantly seeking to improve as counselors. We hope to embody the warmth, professional commitment, and seemingly boundless wisdom that Steve epitomized. Although Steve did not contribute to this book formally, his spirit is felt throughout.

Table of

Contents

Preface	vii
About the Authors	xi
Acknowledgments	xiii



Section I • Foundations

Chapter 1	General Principles for Counseling Children and Adolescents	3
Chapter 2	Structure and Function of the Nervous System	25
Chapter 3	Cellular Function and Epigenetics	51



Section II • Childhood

Chapter 4	Neurophysiological and Social Development During Childhood	73
Chapter 5	Problems of Childhood	91

Chapter 6
Counseling Approaches I:
Behavior Modification and Behavior Analysis 111

Chapter 7
Counseling Approaches II:
Play Therapy and the Creative Arts 129



Section III • Adolescence

Chapter 8
Neurophysiological and Social Development
During Adolescence 145

Chapter 9
Problems of Adolescence 165

Chapter 10
Counseling Approaches III:
Cognitive Behavior Therapies 187

Chapter 11
Counseling Approaches IV:
Biofeedback, Neurofeedback, and
Therapeutic Lifestyle Change 205



Section IV • Conclusion

Chapter 12
Delivering Neuroeducation to
Children and Adolescents 225

Neuroscience Glossary 239

Answer Key to Quiz Questions 249

Index 251

Preface

We wrote this text with the intention of appealing broadly to new counselors and experienced practitioners. We also intended for this text to be useful to counselors in a variety of settings, such as schools, hospitals and residential facilities, and outpatient clinics. We cover general principles for counseling children and adolescents before moving into more technical information about neurophysiological development across childhood and adolescence and in-depth information about counseling approaches for different developmental stages. We divide the chapters into three sections. The first section provides a background of neuroanatomy and physiology. The second section focuses on neurophysiological development during childhood and relevant counseling approaches. The third section focuses on counseling adolescents. The concluding chapter explores the delivery of neuroscience education to clients utilizing information that is introduced throughout the text. Our intent for each chapter is to present a neuroscience-informed approach to counseling children and adolescents, and thus we often draw from neuroscience findings when presenting information about child and adolescent development and counseling approaches at different developmental stages.

We recognize that terms such as *childhood* and *adolescence* are difficult to define with regard to age, as children may mature earlier or later than others (e.g., secondary sex development). For the sake of clarity, we loosely define *childhood* as ages 0 to 11 and *adolescence* as ages 12 to 18. These are loose definitions, as experts such as Adriana Galván estimate that the range for pubertal onset is 9 to 16 years. We also recognize that adolescence often ends beyond age 18. We have decided not to differentiate middle childhood (i.e., preadolescence) from late childhood in this text because we see clearer distinctions between early childhood (0–11) and adolescence (12–18) when providing counseling. For example, we have led insight-oriented groups

with adolescents in which 12 or 13 is the cutoff age for inclusion. We have also successfully used insight-oriented approaches such as cognitive behavior therapy with youth ages 12 and older and have observed that play therapy is less useful with youth after approximately 10 years of age.

Text Features

Each chapter includes several text features that we hope will help you to better comprehend the content. **Key concepts** and **aligned Council for Accreditation of Counseling and Related Educational Programs standards** are identified at the beginning of the chapter to assist you in understanding the content and learning objectives of each chapter. **Quiz questions** are provided at the end of each chapter so you can test your knowledge of key concepts explored in each chapter. **Reflection questions** are embedded at different points in the chapter to prompt your own deep reflection on and processing of the content. **Case vignettes** are used throughout the text to demonstrate how to apply concepts to counseling work. Finally, we have included a comprehensive **neuroscience glossary** at the back of the textbook for you to review when you come across unfamiliar terminology.

Case Vignettes

We use pseudonyms for all of the cases in this text, and we sought to intentionally mask identifying information to preserve the identities of former clients. Often we merge the narratives of several former clients into one composite case. Although we have blinded the identities of the children, adolescents, and families we have previously helped, the specific details of the case information are mostly factually accurate. Most case vignettes are brief, although two cases (those of Brooke and Wayne) are more extended and are explored across several chapters. We wanted to use these elaborated cases to describe an in-depth application of key concepts to case conceptualization and treatment planning.

Integrating Neuroscience Into Counseling Practice

The counseling field is increasingly applying neuroscience to counseling practice and is increasingly in need of training opportunities for learning how to integrate complex information into work with clients. A large concern of ours is overreliance on applied models. These are treated as primary sources by some professionals, yet they are in fact interpretations of basic neuroscience anatomy and physiology. We felt that if we summarized these applied models to counseling practice,

we ran the risk of summarizing existing summarizations of neuroscience, which would have led us even further away from the primary source material of neural anatomy and physiology. Thus, you might be surprised to find that we rarely cite commonly known authors such as Daniel Siegel, Louis Cozolino, Allen Schore, and Stephen Porges in the text. We took seriously our charge of using primary sources (i.e., actual neuroscience studies) to provide accurate information about neuroscience and refrained from relying on applied models. We hope this text will increase your knowledge of basic neuroanatomy and physiology, which we believe is fundamental to applying neuroscience in your work.

In our own journeys, we have found that neuroscience has not only supported how we think about counseling but also changed our perspectives entirely. As you read through this text, we encourage you to be open to neuroscience concepts that could change the way you conceptualize and practice counseling. For example, in the text we review the impact of chronic stress and traumatic stress on neurophysiological functioning and its relationship to a host of mental health diagnoses. We also identify strategies for reducing child and adolescent stress, which can be challenging because many of these stressors are not easily reduced and often cannot be removed (e.g., academic requirements, the social environment at school, relationships with parents or guardians). We recognize that the technical nature of the neuroscience terminology might be challenging for some readers. We highly recommend referring back to key terms defined in the glossary at the end of the text to better understand key neuroscience concepts.

Concluding Thoughts

In our favorite textbooks, the personalities of the authors resonate through the pages. We wrote this text with the intention that you will get to know how we think and feel about counseling children and adolescents. At times, our style of writing borders on the informal, to help you understand our own backgrounds and perspectives. At other times, the information is presented in a more formal and technical fashion. We have attempted to balance these two polarities in our writing. We hope that sharing our own experiences with the topic will humanize the neuroscience information and make it more digestible to you.

About the

Authors

Thomas A. Field, PhD, is an assistant professor of psychiatry in the Mental Health Counseling and Behavioral Medicine program at Boston University School of Medicine. He has worked as a counselor educator since 2011. He also currently sees clients in private practice. Since 2006, Professor Field has worked with more than 1,000 clients in a variety of settings, including schools, inpatient psychiatric units, and outpatient private practice. He received his doctorate in counseling and supervision from James Madison University. In 2019, he received the Linda Seligman Counselor Educator of the Year Award from the American Mental Health Counselors Association (AMHCA). His primary areas of research are the integration of neuroscience into counseling practice and professional advocacy issues. He is currently the associate editor of the *Journal of Mental Health Counseling*, the coeditor of *Counseling Today*'s neurocounseling column, and chair of the AMHCA Neuroscience Interest Network and Neuroscience Taskforce.

• • •

Michelle R. Ghoston, PhD, is an assistant professor at Wake Forest University. She has been a licensed counselor since 2006 and has worked as a counselor educator in some capacity since 2010. Professor Ghoston has worked with a variety of clients at many different levels and in many settings, including group homes, schools, hospitals, private practice, and intensive in-home treatment. Since entering the world of academia, she has consistently looked back on those early years of working with young people and how they have shaped who she is today. Her primary areas of research are social justice and equity, advocacy, and better understanding how neuroscience influences the work of counselors. Professor

Ghoston currently serves as a member of the editorial board of *Teaching and Supervision in Counseling* (the official journal of the Southern Association for Counselor Education and Supervision) and is on a number of taskforces, including the AMHCA Neuroscience Taskforce.



Acknowledgments

We are grateful to our colleagues who supported us while we were writing this text and our supervisors from years past who helped us become better counselors. We would like to especially thank Rachel Chaney for her terrific work on several of the graphics used in this book. We also offer the following personal acknowledgments.

Thom: I am grateful for the loving relationships and support of my wife, Selina, and our two children, Elliott and Owen. Being a parent has given me a much richer perspective on child development and strategies for best meeting the needs of children, adolescents, and families.

Michelle: It is with a humble heart that I first give thanks to Thom for inviting me along on this journey. Many thanks to my mother and daughter, who put up with me needing to do a “little” work on this book during our vacation. Mom, you made it clear early on that education was a must—thank you! Lauren, you continue to amaze me with where your life continues to take you. I am beyond thankful and blessed!

We would also like to note that this book was written in the context of our belonging to a community that is dedicated to the integration of neuroscience into counseling. Belonging to this community has helped us over the years to cultivate our understanding of neuroscience-informed counseling. We are grateful for the ongoing impassioned discussions and projects that we share with our colleagues, who include (but are not limited to) Eric Beeson, Ted Chapin, Jamie Crockett, Kathryn Douthit, Mark Gerig, Gary Gintner, Penijean Gracefire, Sean Hall, Allen Ivey, Laura Jones, Chad Luke, Raissa Miller, Yoon Suh Moh, Morgan Riechel, Lori Russell-Chapin, Michael Russo, Eraina Schauss, and Carlos Zalaquett.



