



HELDA PINZÓN-PÉREZ
MIGUEL A. PÉREZ
EDITORS

COMPLEMENTARY, ALTERNATIVE, AND INTEGRATIVE HEALTH

A MULTICULTURAL PERSPECTIVE

JOSSEY-BASS™
A Wiley Brand

COMPLEMENTARY, ALTERNATIVE, AND INTEGRATIVE HEALTH

A MULTICULTURAL PERSPECTIVE

Edited by

Helda Pinzón-Pérez and Miguel A. Pérez

 **JOSSEY-BASS™**
A Wiley Brand

Published by Jossey-Bass A Wiley Brand
One Montgomery Street, Suite 1000, San Francisco, CA
94104-4594—www.josseybass.com

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, or online at www.wiley.com/go/permissions.

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. Readers should be aware that Internet Web sites offered as citations and/or sources for further information may have changed or disappeared between the time this was written and when it is read.

Jossey-Bass books and products are available through most bookstores. To contact Jossey-Bass directly call our Customer Care Department within the US at 800-956-7739, outside the US at 317-572-3986, 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

Names: Pinzón-Pérez, Helda, 1966–, author. — Pérez, Miguel A., 1969–, author.
Title: Complementary, alternative, and integrative health : a multicultural perspective / Helda Pinzón-Pérez and Miguel A. Pérez.
Description: First edition. — San Francisco, CA : Jossey-Bass & Pfeiffer Imprints, Wiley, [2016] — Includes bibliographical references and index.
Identifiers: LCCN 2015051175 (print) — LCCN 2016001201 (ebook) — ISBN 9781118880333 (paperback) — ISBN 9781118880456 (epdf) — ISBN 9781118880425 (epub)
Subjects: — MESH: Complementary Therapies — Integrative Medicine — Cross-Cultural Comparison
Classification: LCC R733 (print) — LCC R733 (ebook) — NLM WB 890 — DDC 610—dc23
LC record available at <http://lcn.loc.gov/2015051175>

Cover design by Wiley
Cover image: © Subbotina Anna/Shutterstock

Printed in the United States of America

FIRST EDITION

PB Printing 10 9 8 7 6 5 4 3 2 1

The editors wish to dedicate this publication to their parents, Jesus Pinzón and Maria Vivas de Pinzón and Ricardo and Elena Pérez, as well as to our sister, Betty Calderon. Our work is a reflection of the values and work ethic we learned from each of them. To our children, Maria Elena, Kenneth, Daniel, and David, whom we hope will learn to value hard work in their search for excellence. We hope to teach them that the pursuit of excellence is a lifelong quest.

CONTENTS

Preface	vii
Acknowledgments	xiii
About the Editors	xv
About the Contributors	xvii
Chapter 1 Exploring Complementary, Alternative, and Integrative Health: Overview, Limits, and Controversies	1
<i>Cyndi Guerra, Cheryl Hickey, and Helda Pinzón-Pérez</i>	
Chapter 2 Mind-Body Medicine	29
<i>Catherine L. Zeman</i>	
Chapter 3 Natural Complementary and Alternative Medicine Modalities	57
<i>Cheryl Hickey and Cyndi Guerra</i>	
Chapter 4 Manipulative and Body-Based Practices	83
<i>Kathleen Rindahl, Helda Pinzón-Pérez, and Georgina Castle</i>	
Chapter 5 Ayurveda and Other Complementary Health Approaches	121
<i>Peter Garcia and Monika Joshi</i>	
Chapter 6 The Role of Spirituality in Healing	145
<i>Dominick L. Sturz</i>	
Chapter 7 Complementary, Alternative, and Integrative Health Approaches among American Indians and Alaska Natives	177
<i>Vickie D. Krenz and Amber Huhndorf</i>	

Chapter 8	Complementary, Alternative, and Integrative Health Approaches among Hispanics/Latinos	207
	<i>Raffy R. Luquis and Joel Arboleda Castillo</i>	
Chapter 9	Complementary, Alternative, and Integrative Health Approaches among African Americans	235
	<i>Pierre E. Wright and Steven B. Owens</i>	
Chapter 10	Complementary, Alternative, and Integrative Health Approaches among Asian Americans, Native Hawaiians, and Pacific Islanders	259
	<i>Liliana Rojas-Guyler and Mariamma K. Mathai</i>	
Chapter 11	Complementary, Alternative, and Integrative Health Approaches among Caucasian/European Americans	283
	<i>Kara N. Zografos</i>	
Chapter 12	Complementary, Alternative, and Integrative Health Approaches among West Asian American Communities	305
	<i>Gina Marie Piane and Brandon M. Eggleston</i>	
Chapter 13	Complementary, Alternative, and Integrative Health: Beyond the Paradigm of CAM	323
	<i>Helda Pinzón-Pérez, Miguel A. Pérez, and Raffy R. Luquis</i>	
	Index.	351

PREFACE

In December 2014, in an omnibus budget measure signed by President Obama, Congress changed the name of the National Center for Complementary and Alternative Medicine (NCCAM) to the National Center for Complementary and Integrative Health (NCCIH) (NCCIH, 2015a). The editors and contributors of this volume welcome this change since it reflects the center's commitment to enhance public and scientific understanding of alternative, complementary, and integrative health practices, instead of only medical practices. Throughout this book, both names NCCAM and NCCIH will be utilized, depending on the terminology used by the bibliographical sources consulted.

This book emphasizes a new understanding of complementary and alternative medicine (CAM). It reflects an emphasis on complementary, alternative, and integrative health (CAIH) while recognizing the value that the term *CAM* has brought historically to our understanding of alternative models of care. In this book, the acronym *CAM* is replaced by *CAIH* to reflect the current understanding of complementary and integrative health. The acronym *CAM* will be utilized only when the bibliographical references consulted for this publication used that term.

Various names were considered for the title of this book, one of them being “Integrative, Complementary, and Traditional Health Practices,” a term used by the American Public Health Association for one of its professional sections (2015). A second potential title was “Complementary, Alternative, and Integrative Health Care,” which was used by the University of North Carolina at Chapel Hill (University of North Carolina at Chapel Hill School of Medicine, 2015). A third potential title was “Complementary and Integrative Medicine,” which was used by the Mayo Clinic (2015) and the University of Texas MD Anderson Cancer Center (2015). Also considered was “Traditional and Complementary Medicine,” used by the World Health Organization (WHO) in its 2013 document, “WHO Traditional Medicine Strategy 2014–2023.” The editors chose to embrace the vision of the NCCIH and provide a more comprehensive perspective by using the term *complementary, alternative, and integrative health*, which places the emphasis on health and wellness rather than on the medical model. Although NCCIH refers to these practices as complementary and

integrative health (CIH) approaches, the editors of this book added the word *alternative* in the acronym to acknowledge that consumers still use some of these practices as alternative forms of care.

In this book, the term *CAIH* is used to transition consumers and health professionals to the new terminology that may guide research and evidence-based practice in the future. Our hearts and scientific discovery remain committed to enhance the understanding of complementary, alternative, and integrative health approaches.

Why a Book on CAIH?

Multiple books have been published on CAM, but very few have captured the recent changes in the NCCIH and the new terms associated with traditional, complementary, alternative, and integrative health. This book responds to the need to train customers and health professionals on these recent changes. The editors and authors of this publication hope that this book begins to address this need.

This book also emphasizes the importance of the multicultural perspective of CAIH approaches. Multiple chapters of this book discuss the use of CAIH and CAM practices among various ethnic and cultural groups. Some sections emphasize the relevance of the concepts for health educators, since the editors are Master Certified Health Education Specialists and since all health professionals have a responsibility to educate the public on health-related issues.

Another reason for the publication of this book is the increasing use of complementary, alternative, and integrative health approaches worldwide and in the United States. Data from the WHO (2004) show that up to 80% of people in developing countries use traditional medicine as a primary source of healthcare. In the United States, results from the 2012 National Health Interview Survey indicated that 33.2% of US adults and 11.6% of US children age 4 to 17 used complementary health approaches (Clarke et al., 2015; NCCIH, 2015b). Despite their wide usage, however, CAIH and CAM practices continue to be misunderstood, are not always regulated, and are controversial among US healthcare practitioners.

A common concern expressed by detractors of CAIH is the lack of “scientific evidence” for many of the claims made by proponents, concerns that are heightened only by charlatans who sometimes employ deceptive marketing practices to lure unsuspecting consumers to try treatments that may in fact place their health status at risk. Proponents of CAIH point to the increasing body of evidence that supports the use of certain modalities such as acupuncture and tout fewer side effects as a reason for its use. Despite continuing controversies, there is agreement that more

information is needed; that healthcare providers ought to be better versed in CAIH; and that consumers and healthcare providers must increase their communication related to CAIH. Currently, several efforts are under way to address these issues.

In the year 2000, WHO released the *General Guidelines for Methodologies on Research and Evaluation of Traditional Medicine* in an effort to maximize the proper utilization of traditional medicine, as well as to provide guidelines for research and evaluation initiatives on this topic. This official WHO publication set the framework for the scientific evaluation of CAIH and CAM and provided ethical guidelines for its evaluation and implementation.

In the United States, the need to improve communication between patients and providers has resulted in advocacy efforts to achieve that goal with very specific results. An important step in improving such communication is to train future generations of health professionals on CAIH. Howell (2012), a reporter from the Association of American Medical Colleges, discussed the value of incorporating CAM into the curriculum of medical schools to empower doctors to actively discuss with their patients the use of CAM. According to Howell, the emphasis on incorporating CAM training for health professionals began when the National Center for Complementary and Alternative Medicine launched the CAM Education Project in 1999.

This book aims to be a resource for students and health professionals to better understand CAIH approaches and translate that knowledge into more effective communication patterns with consumers. It is imperative that healthcare practitioners, including health educators, better understand the most common CAIH practices employed by individuals, since research results indicate that some populations employ CAM along with, and in some cases in lieu of, allopathic treatments. In addition, patients do not always reveal this information to their healthcare providers (NCCIH, 2015c).

Key Features of This Book

This book uses the acronym CAIH, which stands for complementary, alternative, and integrative health. This acronym collectively refers to common names used in the past and new emerging terms. The use of this acronym represents an attempt to reach consensus on the terminology to be used since there are multiple terms associated with the fields of traditional healing, alternative medicine, and integrative health, which can be confusing to both consumers and professionals alike. These terms show the transformation of the concepts and the evolution of our understanding of these fields. This book is based on the WHO's definition

of complementary/alternative medicine, which is “the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness” (n.d., p. 1).

Since the classification of CAM therapies has varied throughout the years, this book groups CAM therapies into the divisions originally suggested by the NCCAM and integrates the new divisions currently proposed by the NCCIH. Initially, NCCAM (2014) divided CAM modalities into five categories: (1) alternative medical systems, (2) mind-body interventions, (3) biologically based treatments, (4) manipulative and body-based methods, and (5) energy therapies. Later, NCCAM grouped CAM practices into four categories: (1) natural products, (2) mind and body medicine, (3) manipulative and body-based practices, and (4) other CAM practices. This classification was revised again, and in 2015, NCCIH (2015b) divided complementary health approaches into three subgroups: (1) natural products, (2) mind and body practices, and (3) other complementary health approaches.

Most of the chapters in this book were written by a team of CAM practitioners and academicians working on CAIH. The combination of the real-life experience provided by CAM practitioners and the scientific approach given by university professors and other academicians in CAIH provides a unique approach to the reader’s understanding of CAIH and CAM.

This edited volume is designed to provide a foundation to CAIH healing practices. It explores proven methods and provides a framework for questioning the efficacy of CAIH while exploring its use within a cross-cultural framework. Six chapters are dedicated to the exploration of CAIH in the racial and ethnic groups most commonly found in the United States. Since the current literature uses the term *CAM*, each chapter describes the CAM practices most often used by the selected racial and ethnic groups. A section titled “*Caveat Emptor*” is included in each chapter to remind readers that questions persist about CAIH and CAM. This book does not provide a detailed list of practices in each group, as doing so would take an entire encyclopedia. In addition to the racial/ethnic-specific chapters, the authors explore the most commonly used treatment methods and provide information on research literature to back up or deny their claims.

Each chapter in this book includes the following main sections: Learning Objectives, Introduction, Theoretical Concepts, Consumer Issues, Implications for Health Professionals, *Caveat Emptor*, Conclusion, Summary, Case Study, Key Terms, and References. A major emphasis of this

book is the impact of the Affordable Care Act on CAIH practices. This topic is included primarily in the “Implications for Health Professionals” sections. The “*Caveat Emptor*” sections include regulatory and practical realities related to licensing and credentialing of healers in the corresponding chapter topics. The final chapter discusses the foundation for a new way of thinking about complementary and alternative medicine in the 21st century.

A basic premise of this publication is the inclusion of educational strategies designed to allow readers to critically analyze and evaluate CAIH practices, their impact in the healthcare system, and their association with the Affordable Care Act. In addition to a discussion on the different CAIH practices, each book chapter contains two sections designed to promote a better understanding of the practices included in the chapter. The “Summary” sections emphasize the main issues and concepts regarding traditional healing practices particularly relevant to each cultural and ethnic group. Similarly, the “Case Study” sections are designed to challenge the reader to be a critical consumer of CAIH services by analyzing a situation in light of the information contained in the chapter.

The editors hope that the information contained in this book helps improve the lives of consumers who read it. Consumers need to understand that much needs to be learned about the effective and safe use of non-mainstream healthcare practices including interactions with allopathic treatments. The purpose of this book is to provide a critical analysis of nonallopathic healing practices in the United States, their uses and limitations.

The editors also hope that the information contained herein be used to deliver more efficient and culturally appropriate healthcare services. It is hoped that US healthcare professionals, including health educators, will better understand the reasons, applications, and cultural context of CAIH practices.

An instructor’s supplement is available at www.wiley.com/go/pinzonperez. Additional materials, such as videos, podcasts, and readings, can be found at www.josseybasspublichealth.com. Comments about this book are invited and can be sent to publichealth@wiley.com.

References

- American Public Health Association. (2015). *Integrative, complementary, and traditional health practices*. Retrieved from <https://www.apha.org/apha-communities/member-sections/integrative-complementary-and-traditional-health-practices>

- Clarke, T. C., Black, L. I., Stussman, B. J., Barnes, P. M., & Nahin, R. L. (2015). *Trends in the use of complementary health approaches among adults: United States, 2002–2012*. National Health Statistics Report, No 79. Hyattsville, MD: National Center for Health Statistics.
- Howell, W. L. (2012). *More medical schools offer instruction in complementary and alternative medicine*. Retrieved from <https://www.aamc.org/newsroom/reporter/feb2012/273812/therapies.html>
- Mayo Clinic. (2015). *Complementary and integrative medicine*. Retrieved from <http://www.mayoclinic.org/departments-centers/general-internal-medicine/minnesota/overview/specialty-groups/complementary-integrative-medicine>
- National Center for Complementary and Alternative Medicine. (2011). *What is complementary and alternative medicine?* Retrieved from <http://nccam.nih.gov/health/whatiscam#informed>
- National Center for Complementary and Alternative Medicine. (2014). *NCCAM facts-at-a-glance and mission*. Retrieved from <http://nccam.nih.gov/about/ata glance>
- National Center for Complementary and Integrative Health. (2015a). *Important events in NCCIH history*. Retrieved from <http://www.nih.gov/about/almanac/organization/NCCIH.htm>
- National Center for Complementary and Integrative Health. (2015b). *What complementary and integrative approaches do Americans use?* Retrieved from <https://nccih.nih.gov/research/statistics/NHIS/2012/key-findings>
- National Center for Complementary and Integrative Health. (2015c). *Time to talk about CAM: Healthcare providers and patients need to ask and tell*. Retrieved from <https://nccih.nih.gov/news/2008/060608.htm>
- University of North Carolina at Chapel Hill School of Medicine. (2015). *Introduction to complementary, alternative, and integrative health care*. Retrieved from <https://www.med.unc.edu/phyrehab/pim/education/principles-and-practices-of-alternative-and-complementary-medicine>
- University of Texas MD Anderson Cancer Center. (2015). *Complementary and integrative medicine*. Retrieved from <http://www.mdanderson.org/patient-and-cancer-information/cancer-information/cancer-topics/cancer-treatment/complementary-medicine/index.html>
- World Health Organization. (2000). *General guidelines for methodologies on research and evaluation of traditional medicine*. Geneva, Switzerland. http://whqlibdoc.who.int/hq/2000/WHO_EDM_TRM_2000.1.pdf?ua=1
- World Health Organization. (2004). *New WHO guidelines to promote proper use of alternative medicines*. Retrieved from <http://www.who.int/mediacentre/news/releases/2004/pr44/en/>
- World Health Organization. (2013). *WHO traditional medicine strategy 2014–2023*. Retrieved from http://apps.who.int/iris/bitstream/10665/92455/1/9789241506090_eng.pdf?ua=1&ua=1
- World Health Organization. (n.d). *Traditional medicine: Definitions*. <http://www.who.int/medicines/areas/traditional/definitions/en/>

ACKNOWLEDGMENTS

The editors wish to express their thanks first to God for the opportunity to work on this project, to the authors who have agreed to share their knowledge and experience through their contributions to this work, and to the staff at Jossey-Bass, especially our dearly departed friend Andy Pasternack, who encouraged us from the start to pursue this project. We would also like to thank the draft reviewers, Joyce Perkins and Michael Goldstein. They provided thoughtful and constructive comments on the complete draft manuscript. Most chapters in this book were written by a team of practitioners and academicians working on complementary, alternative, and integrative health. Our highest gratitude goes to the members of each team for their willingness to join efforts and learn from each other. The successful production of this work would not have been possible without each of them.

ABOUT THE EDITORS

Dr. Helda Pinzón-Pérez is a professor in the Department of Public Health and School of Nursing at California State University, Fresno. She is a native of Colombia. Her research interests are international health as well as alternative medicine and integrative healing. Dr. Pinzón-Pérez has authored various articles on health and diversity. She has presented her research at multiple international conferences and has worked with colleagues from Colombia, Mexico, Ecuador, Costa Rica, the Dominican Republic, Uganda, India, and Thailand. She has received two Fulbright teaching and research awards—the first one in 2008 to work with a school of medicine in the Dominican Republic and the second one in 2016 to work with a school of public health in Peru. She has also been trained as a massage therapist.

Dr. Miguel A. Pérez is a health educator who specializes in international adolescent health issues, applied research, and cultural competence. Dr. Pérez has authored a textbook in health education, coedited a couple of books, and written several book chapters, in addition to over 40 peer-reviewed publications and numerous presentations at local, state, national, and international conferences, many based on his research on migrant and adolescent health risk behaviors in Colombia, El Salvador, the Dominican Republic, and Mexico. Dr. Pérez has received four Fulbright awards, two of them as a senior specialist in public/global health to work in Colombia and in South Africa dealing with drug prevention and HIV/AIDS education and prevention programs. In 2013 Dr. Pérez developed a health promotion and disease training program for nurses in Thailand.

ABOUT THE CONTRIBUTORS

Joel Arboleda Castillo is director of the Scientific Research Institute of the Universidad Central del Este in the Dominican Republic and professor of sociology at Universidad Autónoma de Santo Domingo. Mr. Arboleda is a PhD candidate in the sociology of globalization at the University of the Basque Country, Spain. He earned a master's degree in applied statistics in 2014 at Universidad Autónoma de Santo Domingo and a master's in the sociology of globalization at the University of the Basque Country in 2008. Mr. Arboleda's primary research interests include consequences of globalization on health and education issues in underdeveloped countries, impacts of migrations on public health, and social inequalities in health and education. Mr. Arboleda has several refereed publications.

Georgina Castle is a California licensed acupuncturist and herbalist. She earned a master's degree in traditional Oriental medicine from Emperor's College of Traditional Oriental Medicine, graduating with the highest honors. She is board certified by the National Commission for Acupuncture and Oriental Medicine as a diplomate in Oriental medicine. She is also a diplomate of acupuncture orthopedics certified by the National Board of Acupuncture Orthopedics. Prior to becoming an acupuncturist, she graduated from St. Mary's College of California with a bachelor of science degree in biology and earned a master's of public health degree in epidemiology at the University of California, Los Angeles. While at UCLA, she performed HIV and cancer research at the School of Public Health and facilitated data analysis at the Los Angeles County Department of Public Health. Ms. Castle provides a holistic approach to her patients' acupuncture experience through pulse analysis, herbal and nutritional therapies, cupping, and heat treatments. She specializes in neuromusculoskeletal pain management, fertility, and women's health issues. She has published articles on Chinese cupping and healthy habits of families.

Brandon M. Eggleston is an associate professor and lead faculty member of the online BS in Public Health program at National University, Costa Mesa, California. Dr. Eggleston earned his PhD from the University of Indiana,

Bloomington, and his master's in public health from Indiana University, Indianapolis. He has written five published peer-reviewed articles and a textbook on biostatistics as well as a workbook in the field of public health and health promotion. In addition to his published work, Dr. Eggleston has participated in 35 peer-reviewed professional conferences and made a number of invited presentations at the local, state, and national levels. Dr. Eggleston serves as a peer reviewer for the *International Journal of Yoga Therapy* and is an associate editor for the *International Journal of Health, Wellness, and Society*.

Peter Garcia is an assistant professor in the School of Nursing, California State University, Fresno. Dr. Garcia earned his Doctor in Nursing Practice (DNP) degree in health care systems leadership at the University of San Francisco and his master's degree in nursing with a nurse practitioner certification. He earned a bachelor's degree in nursing at Fresno State. Dr. Garcia's primary teaching and research interests focus on the role of the DNP in academia and nursing practices, evidence-based practices specific to surgical patients, and the role of holistic care for acute surgical clients. Aside from teaching, Dr. Garcia is a practicing nurse practitioner in Fresno, California, at a large private urologic center.

Cyndi Guerra is an assistant professor in the School of Nursing, California State University, Fresno. Dr. Guerra received her doctorate in nursing practice in health care systems leadership at the University of San Francisco, School of Nursing. She also served as an adjunct nursing faculty member at the university's master's in nursing program for the past four years and began teaching part time at Fresno State in 2012. She obtained her bachelor's degree, master's degree, and school nurse credential from Fresno State. Dr. Guerra was nominated as "Employee of the Year" at her previous place of employment. She currently serves as an executive board member for the Nancy Hinds Hospice Foundation. Dr. Guerra is an active member of the National Association of School Nurses, California School Nurses Organization, Sigma Theta Tau, and American Association of Nurse Practitioners.

Cheryl Hickey is an associate professor in the doctor of physical therapy program at California State University, Fresno. Dr. Hickey earned her EdD. in education at the University of California, Davis, and California State University, Fresno; and her MS in counseling, her MPT in physical therapy, and her BS in science at Fresno State. Dr. Hickey has taught at the college level for over 16 years. Her primary teaching and research interests

include multicultural health with an emphasis on language barriers in physical therapy practice, cultural competency in health promotion, electrophysiology and muscle behavior, and patient–practitioner interaction with the role of the therapist as a teacher. Dr. Hickey has practiced clinical in physical therapy in the areas of acute care and oncology, outpatient orthopedics, and neuro-rehabilitation. She has publications in a section journal of the American Physical Therapy Association and in an international journal on the effect of language barriers in practice.

Amber Huhndorf is an Athabascan/Yupik from Nikiski, Alaska. She received her BS from Oregon State University. She has worked as a health educator and has planned, implemented, and evaluated health programs for her tribal wellness center. She is enrolled in the master's of public health program at California State University, Fresno, where she is investigating the Native community's readiness to address historical trauma for her master's thesis.

Monika Joshi is a registered nurse and a clinical ayurvedic specialist. She was a lieutenant, military nursing officer, and midwife in the Indian Army before moving to the United States in 1990. Ms. Joshi has worked in various hospital settings. She is a graduate of California College of Ayurveda and is also certified by the American Institute of Vedic Studies. She is a member of the National Ayurvedic Medical Association and the Association of Ayurvedic Professionals of North America. She is a sought-after speaker on various aspects of ayurveda. She has published a chapter about ayurveda in *Rose Lore: Essays in Semiotics and Cultural History*. Ms. Joshi was the first clinical ayurvedic specialist to have a practice in Central California. She has also worked as a field intern supervisor for the California College of Ayurveda, mentoring and supervising new graduates.

Vickie D. Krenz is a professor of public health at Fresno State and has been a faculty member for 25 years. She is recognized for her work in program planning and evaluation with a focus on tobacco prevention. She completed a bachelor's degree in Religions Studies, a master's degree in Philosophy and Religion, and a master's of Science in Public Health. She holds a PhD in health education from the University of Utah, Salt Lake City, Utah. Currently, she is the President of the Fresno State American Indian Faculty and Staff Association and is of Cherokee ancestry.

Raffy R. Luquis is an associate professor and program coordinator of the health education master's degree in the School of Behavioral Sciences

and Education at Pennsylvania State University, Harrisburg. Dr. Luquis earned his PhD in health science at the University of Arkansas, and his MS in health education and BS in science at Pennsylvania State University. Dr. Luquis' primary teaching and research interests include multicultural health, cultural competency in health promotion, community health, program evaluation, and human sexuality. Dr. Luquis has had several refereed publications and more than 50 national, regional, and state presentations. He is a fellow of the former American Association for Health Education and the Research Consortium of the American Alliance for Health, Physical Education, Recreation, and Dance. Dr. Luquis earned the Master Certified Health Education Specialist credential from the National Commission for Health Education Credentialing in 2011.

Mariamamma K. Mathai is currently a professor and associate director of Nursing at National University, Fresno campus. She is also professor emerita of nursing at California State University, Fresno, having spent 30 years teaching graduate and undergraduate students, including two terms as the chair of the department. Dr. Mathai earned her doctorate in nursing education and nursing administration and her master's in nursing education from Teachers College, Columbia University, in New York City. She received her BS in nursing from Kerala University, Trivandrum, India. Dr. Mathai has traveled extensively, visiting nursing schools and hospitals and making presentations about nursing and nursing education.

Steven B. Owens is a seasoned family medicine and public health–trained physician with expertise in minority health issues—health equity, disparities, and public health workforce recruitment and development. As the director of health equity for the Directors of Health Promotion and Education (DHPE), he provides technical assistance to state, local, and territorial departments of health to address health inequities by using public health systems and environmental change tools and geographic analysis of market research data to plan and inform effective health programs. Emphasizing health equity, he provides health department staff trainings on integrating social and behavioral determinants of health into projects and activities addressing chronic disease prevention and health promotion. Additionally, Dr. Owens oversees the placement of DHPE's health promotion and policy fellows at state departments of health. Prior to joining DHPE, Dr. Owens led the Diversity Initiative for United States Agency for International Development's Global Health Fellows program. Dr. Owens has provided capacity building and technical assistance in the area of HIV/AIDS and behavioral interventions for community-based organizations throughout

the United States, US Virgin Islands, and Africa. Additionally, Dr. Owens has directed various health promotion programs in the areas of cancer prevention and research, aging, HIV/AIDS, hepatitis, nutrition, and minority health. He designs community programs to improve healthcare delivery and community-clinical linkages for vulnerable populations and serves as an external reviewer for the Centers for Disease Control and Prevention and other federal and state agencies. Dr. Owens is a certified Fascial Stretch Therapy group instructor, yoga practitioner, and distance runner. He earned his MD (medical doctorate) from the Brody School of Medicine at East Carolina University, his MPH (master's of public health) in international health policy and management from the Rollins School of Public Health at Emory University, and his master's degree in biology from Hampton University.

Gina Marie Piane has more than 30 years of experience in the public health field. Dr. Piane is a Certified Health Education Specialist and has experience working with diverse communities and patients of all ages and backgrounds. She taught students in the master's of public health program at Northern Illinois University and California State University, Long Beach, before moving to National University as the director of the master's of public health program. Dr. Piane conducts research in health behavior and international health. Her most current research studies investigate evidence-based interventions to reduce maternal mortality in sub-Saharan Africa. Dr. Piane is a faculty member of Delta Omega, the honor society for public health; the American Public Health Association; the Society for Public Health Education; and the Southern California Public Health Association. In addition to teaching and research, Dr. Piane has traveled extensively with students studying healthcare issues and systems in India, Thailand, Kenya, Tanzania, Zanzibar, Chile, Ecuador, and Brazil.

Kathleen Rindahl is an assistant professor of nursing at California State University, Fresno. Dr. Rindahl earned her DNP from Western University of Health Sciences, her MSN from Fresno State, and her BSM from California State University, Los Angeles. Dr. Rindahl also is a practicing nurse practitioner in an urgent care/family practice clinic. Her education and training includes public health nursing and school nursing and time as a Veteran Hospital Corpsman in the United States Navy. Dr. Rindahl's research focus includes rural and community health nursing and eating disorders, especially in early adolescents. She has been a guest speaker at local, national, and international conferences, presenting on topics in her areas of research.

Liliana Rojas-Guyler is an associate professor in the health promotion and education program at the University of Cincinnati. Dr. Rojas-Guyler earned her PhD in health and human behavior at Indiana University, and her MHSE in health education and her BS in health science at the University of Florida. Dr. Rojas-Guyler has taught at the college level for 18 years. Her primary teaching and research interests include Latino and vulnerable population health, multicultural health, and women's health. Dr. Rojas-Guyler has published over 20 articles in refereed journals and has made over 50 international, national, regional, and state presentations. She is a member of several professional organizations and is a board member of Eta Sigma Gamma, the national health education honorary society.

Dominick L. Sturz is an associate professor at California Baptist University, teaching various courses in public health and leading the development of their online master's of public health program. He is also a lecturer for the Department of Health Science at California State University, Fullerton, where he completed his undergraduate work and obtained his master's of public health degree in community health and disease prevention. Additionally, he has served as the director of educational program development for Choose Health Inc., a nonprofit that focuses on community health disparities, since 2008. Dr. Sturz obtained his doctor of public health in health education and promotion degree (DrPH) from Loma Linda University, where his research interests focused on spirituality, religion, and health. During his doctoral studies, he served the local community as a director of community health services and education for the Mexican Consulate in San Bernardino, California, and is currently a member of their Executive Planning Committee for their annual Bi-National Health Fair.

Prior to his work in academia, Dr. Sturz spent 10 years in the field of pharmaceuticals—working for Merck & Co., specializing in cardiovascular diseases, and then for Johnson & Johnson, specializing in mental health. During his time at Johnson & Johnson, he collaborated with the Department of Government Services, was a pharmacokinetic consultant in the development of specific pharmaceutical protocols for the California Department of Mental Health, led educational activities on state-wide county medical directors' conference calls, and developed a wellness program that subsequently was implemented in the California State Hospital system, gaining the attention of the Department of Health and Human Services and the Office of the Governor.

Pierre E. Wright has served as lecturer in the school psychology department at Howard University for over five years. Dr. Wright has over 15 years of experience in higher education, which includes outreach, research, evaluation, budget, and grants management. He has served in several executive leadership roles for national nonprofit organizations with missions to educate and advance the overall academic, social, and mental health of college students and their communities. He has published works in public health and education and maintains a special interest in HIV/AIDS education and risk reduction. Dr. Wright is also a Bikram Yoga studio owner. He is certified as a Fascial Stretch Therapist Level II, group stretch facilitator, and trained yoga therapist. As a result of strong practice and dedication to mind/body work, Dr. Wright has instructed yoga internationally and in cities around the United States. Currently Dr. Wright is working to establish a nonprofit organization to increase African American youth engagement in the practice of yoga and meditation to reduce and to promote optimal health. Dr. Wright continues to teach yoga at local school districts and churches and with civic groups attempting to mobilize health in their communities and regions.

Catherine L. Zeman has worked on sustainability and environmental health issues in a multitude of capacities through community organizing, as a consultant, and as a professor since 1990. Dr. Zeman received her PhD in preventive medicine with an emphasis on environmental and occupational health from the University of Iowa and a master's in environmental science from Southern Illinois University. Her undergraduate background includes degrees in nursing, biology, and anthropology. She also has a diploma in holistic health practice from the American College of Health Sciences. Dr. Zeman was a Fulbright Scholar to Romania on environmental health issues. She is the director of the Recycling and Reuse Technology Transfer Center at the University of Northern Iowa, where she oversees a staff of 10 student employees, researchers, and full- and part-time staff. She is a professor in the health division, School of Health, Physical Education and Leisure Services, at the University of Northern Iowa. She teaches classes in epidemiology, human diseases, environmental health, and environmental and occupational health regulations. Her research interests include nitrates in the environment and their impact on human health, immunity and exposure assessment, and international health disparities issues (primary), with secondary work in the areas of mind/body medicine, industrial ecology, and environmental sustainability.

Kara N. Zografos earned a bachelor of science in health science degree and a master's of public health degree from California State University, Fresno. She earned a doctorate in public health from Loma Linda University, receiving the Chancellor's Award for academic excellence upon graduation. She is currently an associate professor for the Department of Public Health at Fresno State, where she teaches courses at the undergraduate and graduate level. She is also the director of the master's of public health program. Her research interests include asthma, air pollution, and the relationship between religion and health. She is a member of the American Public Health Association and the Society for Public Health Education. Additionally, she is the Sunday School principal for the St. George Greek Orthodox Church in Fresno, California.

EXPLORING COMPLEMENTARY, ALTERNATIVE, AND INTEGRATIVE HEALTH

Overview, Limits, and Controversies

Cyndi Guerra, Cheryl Hickey, and Helda Pinzón-Pérez

Today's health economics often drives the cost of modern medications, treatments, and therapies. Increasingly, these dynamics polarize the patient-consumer roles and alienate patients in the same system from which they seek care. Patients diagnosed with chronic disease, or illnesses, are particularly vulnerable to the economics of healthcare. For example, issues such as polypharmacy significantly escalate the cost of care for patients. As a result, patients are driven to seek other alternatives. Consequently, health-care practitioners and health educators, whose patients have begun to explore more self-regulated and less expensive options afforded through complementary, alternative, and integrative health (CAIH) approaches, increasingly find themselves in need of knowledge related to these models of care. In today's society, these modalities can represent a more accessible treatment option and a lower financial burden for already economically challenged and chronically ill consumers.

Despite a young and limited body of formal research, as well as mixed conclusions regarding treatment efficacy, several motivations have fueled the patient/consumer's desire to use complementary and alternative treatments

LEARNING OBJECTIVES

At the completion of this chapter, students will be able to:

- Understand the importance of complementary, alternative, and integrative health (CAIH) and complementary and alternative medicine (CAM) in today's society.
- Differentiate current controversies between traditional medicine and complementary, alternative, and integrative therapies.
- Discuss strategies to bridge the gap between allopathic medicine and CAIH modalities.
- Provide an overview of CAM under the guidelines of the Affordable Care Act.

for addressing physical problems and for maintaining good health. This chapter explores the reasons patients/consumers are driven to engage in CAIH practices and the factors that have led to the continued historical prevalence of complementary and alternative medicine (CAM) use. It also provides a contemporary overview of CAIH, a discussion of modern controversies surrounding CAM, and the need for healthcare providers to increase their education related to CAIH modalities.

Throughout this chapter and the others in this book, the names National Center for Complementary and Alternative Medicine (NCCAM) and National Center for Complementary and Integrative Health (NCCIH) are both utilized due to the 2014 name change of the major federal organization related to CAIH and CAM in the United States. In addition, the term *Complementary, Alternative, and Integrative Health* will be used under the acronym CAIH to reflect an emphasis on health and wellness.

In this book, the acronym CAM is replaced by CAIH to adhere to the current emphasis on complementary and integrative health. Although NCCIH refers to these practices as complementary and integrative health (CIH) approaches, the editors of this book added the word *Alternative* in the acronym to acknowledge that consumers are still using some of these practices as alternative forms of care.

While we recognize the value that the denomination CAM (Complementary and Alternative Medicine) has brought historically to our understanding of traditional health and alternative models of care, the acronym CAM is currently being abandoned and will only be utilized in this book when used by the bibliographical references consulted for this publication. For additional clarification on the terms used in this book, please read the preface.

Theoretical Concepts

The National Center for Complementary and Alternative Medicine (NCCAM), known since December 2014 as the National Center for Complementary and Integrative Health (NCCIH), is the leading federal agency on CAIH approaches in the United States. It is one of the 27 institutes and centers of the National Institutes of Health within the US Department of Health and Human Services. Its mission is to “define, through rigorous scientific investigation, the usefulness and safety of complementary and integrative health interventions and their roles in improving health and health care” (NCCIH, 2015a). Throughout this book, both names (NCCAM and NCCIH) will appear according to the term used by the bibliographical references.

The NCCIH (2015a) defined *integrative health* as the incorporation of complementary approaches into mainstream healthcare, bringing conventional and complementary modalities together in a coordinated way. *CAM* is defined as the integration of biomedicine, complementary, and alternative modalities used together with safety and efficacy (NCCAM, 2009). According to NCCIH (2015a), “complementary” medicine is when a nonmainstream practice is used together with conventional medicine; “alternative” medicine is when a nonmainstream practice is used in place of conventional medicine.

Complementary, alternative, and integrative health is a term that includes complementary, alternative, and integrative approaches to prevent and manage disease as well as to maintain or restore health and wellness. This term is congruent with the 2014 name change of the National Center for Complementary and Alternative Medicine to the National Center for Complementary and Integrative Health. The NCCIH (2015a) defines complementary health approaches as practices and products of nonmainstream origin.

The classification of CAM therapies by the NCCAM and the NCCIH has varied throughout the years. Initially, NCCAM divided CAM modalities into five categories:

1. Alternative medical systems
2. Mind-body interventions
3. Biologically based treatments
4. Manipulative and body-based methods
5. Energy therapies

Later, NCCAM (2014) grouped CAM practices into four categories:

1. Natural products
2. Mind and body medicine
3. Manipulative and body-based practices
4. Other CAM practices

This classification was revised again. The NCCIH (2015a) divided complementary health approaches into three subgroups:

1. Natural products
2. Mind and body practices
3. Other complementary health approaches

Natural products include products such as herbs, botanicals, vitamins, minerals, probiotics, and dietary supplements. Mind and body practices include procedures and techniques such as yoga, chiropractic and osteopathic manipulation, meditation, massage therapy, acupuncture, tai chi, qi gong, healing touch, hypnotherapy, movement therapies (Feldenkrais method, Alexander technique, Pilates, Rolfing Structural Integration, and Trager psychophysical integration), and relaxation techniques (breathing exercises, guided imagery, and progressive muscle relaxation). Other complementary health approaches include traditional healers, ayurvedic medicine, traditional Chinese medicine, naturopathy, and homeopathy (NCCIH, 2015a).

Complementary, Alternative, and Integrative Approaches and CAM in Contemporary US Society and around the World

It is important for healthcare practitioners to have knowledge regarding the wide range of treatment modalities associated with CAIH. Understanding the role of CAIH in health management can be a powerful tool for practitioners and consumers. CAIH therapies can be instrumental in disease prevention and treatment. For this reason, many consumers are showing increasing preference for such practices that used to be called CAM (NCCAM, 2008).

Understanding or assisting patients in integrating CAIH modalities into their healthcare does not necessarily indicate acceptance on the part of the health educator or healthcare practitioner. Rather, it indicates a willingness to allow patients to have more autonomy and control over their care.

There has been an expansion of wellness programs in the United States over the last few decades, and many of these programs utilize CAIH modalities. Increasingly, such modalities have appealed to the US population because of some promising findings for improved health and wellness (Gebhardt & Crump, 1990). The concept of health awareness enabled people to be more proactive and responsible for their own health. Wellness programs, which surfaced decades ago, offered incentives to employees who chose to live healthier lifestyles and included initiatives such as weight loss and smoking cessation programs (Erfurt, Foote, & Heirich, 1992).

Other venues beyond the work setting also began in the 1990s to promote health and wellness programs for populations. Research reinforced the value of wellness programs by showing that they could improve health and, in some cases, reverse chronic conditions. Many occupational settings,