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Preface

Robert G. Frank and Timothy R. Elliott

More than 20 years ago, we (Tim Elliott and Bob Frank) began to work on the first edition of the *Handbook of Rehabilitation Psychology*. For several years, we had chatted about the progress in our field and the need to consolidate knowledge in one comprehensive, contemporary text. We shared a common vision of opportunities for the field, including a need for greater theoretical development, the value of the scientist–practitioner as a metamodel encouraging adaptive thinking as a discipline, and the need for stronger recognition of the changing models of health care on psychologist practice. In 1995, we began to outline current knowledge and areas in which we hoped to inspire future growth. By 1997, we set to work in earnest to bring together leaders in the field to craft a compendium of knowledge defining the discipline and its potential for the future. It took 3 years to realize our vision: The first edition was published in 2000, at the dawn of a new century.

Rehabilitation psychology was in an exciting phase at that point as the discipline struggled to become a specialty and to integrate the momentous changes occurring in the larger health care environment. In our final chapter “Afterword: Drawing New Horizons” (Elliott & Frank, 2000), we considered the promise of the century in light of the status of the field of rehabilitation psychology. This “look forward” to consider issues the discipline needed to address in the near and distant future focused on professional identity, the importance of integrating rehabilitation psychology into the larger changes in health care and science, and the need to move away from “naïve empiricism” that dominated the literature at that point. Our thinking reflected a distinct bias toward the value of the “scientist–practitioner model” as the most critical element of growth for rehabilitation psychology. We recognized the importance of rehabilitation psychologists engaging in national experiments to create alternative health care delivery models focused on cost-effective, integrated care for all aspects of people’s lives (physical, psychological, functional, environmental) and whatever challenges they faced. We noted the likely transformative power of new brain imaging models such as functional magnetic resonance imaging to change assessment and our understanding of brain–behavior relationships. We concluded that psychologists must be catalysts in changing the focus from acute care to integrated care addressing chronic health limitations and psychological health.

As the first compilation of expert perspectives on theory, research, and clinical practice in rehabilitation psychology, the first edition of this handbook quickly became the primary resource for the discipline. In 2004, Tim Elliott suggested the need for a second edition reflecting the progress of the field, though he would not be able to participate. Mitch Rosenthal had previously approached Bob Frank indicating his interest in being involved in future editions of the handbook, so he joined the team, replacing Tim. A few weeks later, Bruce Caplan joined us

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as third editor. By 2007 we had the project on track. However, in May of that year, we and our colleagues around the world in rehabilitation psychology were stunned by Mitch's untimely death. Given our close friendship and his significant role in managing the development of a number of chapters in the second edition, we lost a year recovering from his death and coming to terms with the need to push the project forward without his involvement. The second edition of the *Handbook of Rehabilitation Psychology* was published in 2010.

We asked one of the truly innovative thinkers in the field of rehabilitation psychology, John Corrigan, to write the last chapter of the second edition. In his chapter, "Afterword: Of Bins and Arrows" (Corrigan, 2010), he recognized the history of theoretical fragmentation that Elliott and Frank (2000) described as "naïve empiricism" disconnected from theoretical models. Corrigan described the phenomenon as "bins" of theory that "did not inform each other, but rather sat side-by-side as competing models" (Corrigan, 2010, p. 477). He noted that the development of the World Health Organization's *International Classification of Functioning, Disability and Health* (2000) was important for creating critical "bins" for rehabilitation psychology with the inclusion of health and function, and for creating an overarching model that highlighted influences between the bins. Pointing to the scientific advances that occur when research focuses on interactions of multiple influences on behavior, Corrigan (2010) provided the example of the increasing importance of understanding genotypic expression as a function of environmental influences. He noted that phenotypic plasticity, the differential expression of genotypic expression as a function of the environment, potentially interacts with the bins affecting behavior and may cause plasticity to be expressed within the lifetime of an organism (Corrigan, 2010). Corrigan further reflected on the value of research on interactions between bins as exemplified in the growing interest in applying "big data" (i.e., sifting through large databases to identify relationships) to understand how environmental factors in neighborhoods impact health and social well-being. For example, Corrigan and Bogner (2008) found that neighborhood characteristic improved predictions of subjective well-being among individuals with traumatic brain injury. Corrigan (2010) concluded, "It may be time to look beyond disability and chronic illness as complex conditions with multiple interactions and attend to ways these influences interact and influence with each other in their own right" (p. 480).

As the second edition aged, we began to consider the need for a third edition reflecting changes within the field. Tim Elliott returned as a coeditor, and we recognized a need to better reflect the dynamics of the Division of Rehabilitation Psychology. Lisa Brenner and Stephanie Reid-Arndt agreed to join our team, adding their experience and perspectives reflecting the best and brightest of the new demographic of the Division of Rehabilitation Psychology. The third edition of the *Handbook of Rehabilitation Psychology* addresses a more mature specialty, now recognized by the APA Council of Specialties. The number of individuals with Diplomates in rehabilitation psychology has rapidly moved to match the numbers of much more historic specialties.

As noted by John Corrigan (2010) in his conclusion to the second edition, rehabilitation psychology increasingly interfaces with the health of the population. Population health recognizes multiple determinants of health outcomes, "including medical care, public health interventions, aspects of the social environment (income, education, employment, social support, culture) and of the physical environment (urban design, clean air and water), genetics, and individual behavior" (Kindig & Stoddart, 2003, p. 381). Recognizing the changing emphasis on health outcomes and the need to understand multiple determinants of health, the third edition includes chapters on public health, global health, community

rehabilitation, and the epidemiology of disability. Recognizing the many new technologies impacting rehabilitation, chapters on artificial intelligence and technology changes in rehab are included.

As with the previous edition of the handbook, approximately 30% of the material in the third edition is new to the volume, and the remainder is dedicated to updated content on foundational issues such as spinal cord injury, traumatic brain injury, acquired disability, amputation, burn injuries, chronic pain, and disability associated with aging. The third edition also provides current guidance regarding education and training, health policy, ethics, and various roles that rehabilitation psychologists face in assessment, intervention, critical care, and consultation.

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INTRODUCTION

Stephanie A. Reid-Arndt and Lisa A. Brenner

We are in the midst of a decade of seismic changes in the United States health care system associated with the Patient Protection and Affordable Care Act (2010) and subsequent efforts to repeal the legislation. Looking forward, modifications to this health care legislation are likely, although the current partisan political divide renders hazardous any prediction of specific alterations. Nonetheless, changes may be substantial, again altering the landscape of health care services. Efforts surrounding policies have reignited discussion regarding access to health care as a basic human right, a topic of particular salience to those living with chronic health conditions and disability. As such, principles and practices that are the foundation of rehabilitation psychology (e.g., the person–environment interaction; Wright, 1983) and an emphasis on integrated, team-based care have affected approaches to health care and have the potential to have an enduring influence. Opportunities abound for expanding the impact of the principles, research, and practice of rehabilitation psychology.

Simultaneously, other national and global events have affected the U.S. health care system and the practice and science of rehabilitation psychology. In particular, the United States' involvement in two sustained wars—in Iraq (2003–2012) and Afghanistan (the longest war in its history, 2001–present)—has modified the health care landscape. Innovations in health care historically have occurred to meet the needs of military personnel following engagement in military action or war. Such innovations have

had profound effects during Operation Enduring Freedom and Operation Iraqi Freedom, as “modern changes in medical management, coupled with improved protective gear and evacuation capabilities, have facilitated the highest survival rate in combat history” (Ling, Rhee, & Ecklund, 2010, p. 457). In many cases, survival has increased the need for rehabilitation services for symptoms associated with traumatic brain injuries, mental and behavioral health issues, and other chronic conditions and disabilities, as well as for growth in research and practice in all health care disciplines engaged in rehabilitation.

Although the relative youth of rehabilitation psychology contributes to its position as one of the best-kept secrets in a whole-person approach to interdisciplinary health care practice and research, it arguably renders rehabilitation psychology nimbler and therefore better able to respond to changes in the health care environment. To remain relevant, we must continually examine our research and clinical practices to refine the essential knowledge base and clinical skills required for the practice of rehabilitation psychology. This will also facilitate the best outcomes for patients, families, and providers. We also must demonstrate how principles rooted in care provided to persons with disability are relevant to experiences of persons with acute and chronic health conditions, previously less associated with rehabilitation psychology care (e.g., a patient receiving care in intensive settings).

FUNDAMENTALS OF REHABILITATION PSYCHOLOGY

Rehabilitation psychology is a specialty area within psychology that focuses on the study and application of psychological knowledge and skills on behalf of individuals with disabilities and chronic health conditions to maximize health and welfare, independence and choice, functional abilities, and social role participation (Scherer, 2010). Rehabilitation psychologists are uniquely trained in this specialty area of practice, which includes a broad range of activities: clinical practice; consultation; program development; service provisions; research; teaching and education; training; administration; development of public policy; and advocacy (American Psychological Association, 2018a).

The field of rehabilitation psychology is distinct from other psychological specialties and from rehabilitation medicine for its early adoption of principles later espoused in the International Classification of Functioning, Disability and Health (ICF; World Health Organization, 2001) regarding the role of the environment in the experiences of persons living with chronic health conditions and disability. In his seminal work published in 1948, Lee Meyerson suggested that adjustment to physical disability is

promoted by creating favorable social psychological situations for individuals living with disabilities (i.e., positive person–environment relations). Adjustment to physical disability was recognized as not just an issue for people living with disabilities; rather, Meyerson proposed that society as a whole must also learn to adjust to the experiences and outlooks of those living with physical disabilities. More recently, these tenets have also been expanded to those living with psychological disabilities and chronic health conditions.

Foreshadowed by founders of the field of rehabilitation psychology, this evolution of concepts regarding health and disability are evidenced in the creation and implementation of the ICF As depicted in Figure 1, “The ICF is based on an integration of the medical and social models of disability, addressing the biological, individual, and societal perspectives of health in a biopsychosocial approach,” which is, in part, accomplished by a model in which “functioning and disability are conceptualized within the dynamic interaction between health conditions and contextual factors” (World Health Organization, 2001, p. 106). The ICF model is ideal for community and community-based work, encouraging a focus on environmental factors that can be levers for maximizing opportunities for all persons to engage in

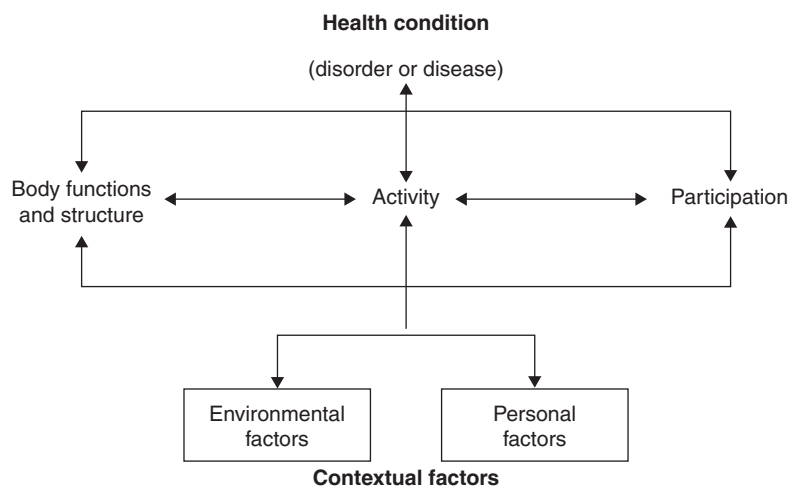


FIGURE 1. International Classification of Functioning, Disability and Health model. From *International Classification of Functioning, Disability and Health* (p. 18), by World Health Organization, 2001, Geneva, Switzerland: Author. Copyright 2001 by the World Health Organization. Reprinted with permission.

all aspects of community life (e.g., universal design principles).

The third edition of the *Handbook of Rehabilitation Psychology* was developed in the context of a changing health care environment, with reflections on both the foundations of rehabilitation psychology and the opportunities for expanding the field's influence. Relative to other psychological specialties, rehabilitation psychology is arguably still in its formative years. Though it has existed for more than 55 years (since World War II), the first training guidelines for rehabilitation psychology were published just over a decade ago (Patterson & Hanson, 1995), and rehabilitation psychology was recognized as a specialty by the American Board of Professional Psychology in 1997 (American Psychological Association, 2018a). More recently, in large measure due to the efforts of a dedicated team led by William Stiers, the American Psychological Association Education Directorate recognized rehabilitation psychology as a specialty in 2015. This designation confirms that rehabilitation psychology is “a defined area of psychological practice which requires advanced knowledge and skills acquired through an organized sequence of education and training” (American Psychological Association, 2018b, “About Specialties,” para. 1; see also Stiers et al., 2012). For additional information, see the comprehensive examination of competencies unique to rehabilitation psychology by Cox, Cox, and Caplan (2013) and the discussion of competencies in this volume (see Chapter 1, this volume).

NEW FEATURES OF THE THIRD EDITION HANDBOOK

The first edition of the *Handbook of Rehabilitation Psychology* was published in 2000 and was recognized as an essential text in the field (Ryan & Tree, 2004). It was followed by an updated second edition in 2010. Both editions are intended to be source books for theory and practice in rehabilitation psychology and include state-of-the-science reviews of assessment and intervention strategies for core clinical conditions, as well as advances in the field and innovations on the horizon.

This third edition of the *Handbook* highlights the progress in theory application and research since

2010, and remains forward-thinking in identifying areas of opportunity for the growth of rehabilitation psychology in the context of an ever-changing health care environment. In this edition, chapters highlight the evidence base for assessment and intervention activities, integrating evidence-based care principles that have been explored with other clinical conditions and patient populations and noting where additional research is needed. Updated coverage of the foundations and core areas of expertise within rehabilitation psychology is provided, both in terms of clinical conditions that are often linked with rehabilitation psychology and the foundational psychological principles that inform practice and research in rehabilitation psychology. Toward this end, a chapter focused on rehabilitation psychology and competency-based training and practice has been added (Chapter 1, this volume). In addition, chapter authors have integrated references to clinical competencies throughout the handbook (American Board of Professional Psychology and American Board of Rehabilitation Psychology, 2018).

To reflect the changing health care environment and the need for rehabilitation psychologists to engage with expanding opportunities in health care, multiple new topics are covered in this third edition. The importance of viewing disability and chronic illness from a public health perspective is reflected in the inclusion of chapters reviewing the epidemiology of disability, public health models of care, and global health needs. Opportunities for expanding the influence of rehabilitation psychology to other settings and with other medical populations are highlighted in chapters on critical care, polytrauma, and community rehabilitation. Finally, reflecting technological advances since 2010, this edition includes chapters examining the application of technology in rehabilitation settings and with persons having chronic health conditions and disability.

ORGANIZATION OF THIS VOLUME

This third edition of the *Handbook* is divided into three parts. Part I, Core Areas and Professional Competencies, includes chapters on topics that are transdiagnostic, covering material that is germane to the study and implementation of rehabilitation

psychology regardless of the scenario or clinical condition at hand. The first chapter is focused on rehabilitation psychology and competency-based training and practice. Additional chapters in this section reflect the latest advances in broad areas relevant to psychology education, practice, research, and policy. They include reviews of evidence-based, best-practice approaches to assessment, intervention, and consultation. Chapters in this section also explore issues related to disability across the lifespan, the social psychology of living with a disability, as well as implications for family members and the importance of multicultural awareness in rehabilitation psychology. Foundational principles of the field are explored, as are the applications of ethical principles in rehabilitation psychology. Within this section, readers will also find chapters on the epidemiology of disability with implications for research to inform care and health policy, as well as an examination of the state of the field's evidence base and research foundation, noting gains since the prior *Handbook* edition as well as areas of opportunity.

In Part II, Clinical Conditions, readers will find updated reviews of evidence-based practice in assessment, intervention, consultation, and advocacy with populations that have long been served by rehabilitation psychologists (e.g., persons with pediatric acquired conditions, amputations, spinal cord injuries, traumatic brain injuries, burns) as well as new areas of focus, including rehabilitation in the post-9/11 era. In the chapters, authors have highlighted links between the research and theory and the newly modified competencies for board certification in rehabilitation psychology (see Chapter 1, this volume).

In Part III, Topics in Practice and Public Health, chapters are offered that cover multiple issues not reviewed in previous editions of the *Handbook*. Specifically, topics are focused on those pertinent to the continued growth and expansion of rehabilitation psychology, including public health models of care, rehabilitation psychology in the global setting, rehabilitation psychology in public service settings, artificial intelligence and rehabilitation, and applications of virtual reality. These chapters point to evolving opportunities in new practice and research

settings, as well as advances in rehabilitation science and technology that will shape the field of rehabilitation psychology.

This *Handbook* aims to serve as the essential sourcebook regarding the specialty practice of rehabilitation psychology for psychologists at all stages of their careers. For students exploring rehabilitation psychology and seeking to expand their knowledge of key concepts regarding health and disability, chapters discussing the foundations of rehabilitation psychology and those detailing the application of rehabilitation psychology principles to practice and research may be particularly informative. Early career psychologists seeking American Board of Professional Psychology board certification in rehabilitation psychology will find the integration of core competencies throughout the chapters, particularly in Parts I and II, a useful resource for expanding understanding, honing skills, and preparing for the examination process. It is our hope that all readers, and perhaps particularly those well-established in their careers, recognize the critical need to stay apprised of developments in the field and appreciate this edition's focus on advances in evidence-based practice. Furthermore, we propose that core principles of rehabilitation psychology (e.g., person-environment interaction) can positively influence practice and research in other health care disciplines as well as related psychological specialties. As such, we also see this volume as an important source of information for practitioners and researchers in a wide range of fields, including medicine, nursing, physical therapy, occupational therapy, speech-language pathology, and health care administration. We hope that this *Handbook* will serve as an informative collection of rehabilitation psychology's significant contributions to the care of persons with chronic health conditions and disabilities and as a source of inspiration—a compilation of advances and opportunities that will stimulate additional efforts to move the field of rehabilitation psychology forward.

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