William K. Wohlgemuth
Ana Imia Fins

Advances in Psychotherapy –
Evidence-Based Practice

Insomnia

hogrefe

Insomnia

About the Authors

William K. Wohlgemuth, PhD, graduated from the University of Miami with a degree in clinical health psychology. Following his internship, he completed postdoctoral training in the behavioral sleep medicine clinic at Duke University Medical Center. During that time, he was involved with several clinical trials investigating the efficacy of CBT-I. Since 2005, Dr. Wohlgemuth has been the director of the behavioral sleep medicine clinic at the Bruce W. Carter VA Medical Center in Miami. He is actively involved in training psychology practicum students and interns. Dr. Wohlgemuth is certified in behavioral sleep medicine by the American Academy of Sleep Medicine.

Ana Imia Fins, PhD, received her doctorate in clinical health psychology from the University of Miami. She completed predoctoral and postdoctoral training in behavioral sleep medicine at the Durham, NC, Veterans Affairs Medical Center and at the Duke University Sleep Disorders Center. Currently, she is professor at the College of Psychology at Nova Southeastern University, where she also codirects an insomnia clinic. For over 18 years she has been training students in the application of CBT-I and other behavioral sleep medicine intervention strategies.

Advances in Psychotherapy – Evidence-Based Practice

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.

Continuing Education Credits

Psychologists and other healthcare providers may earn five continuing education credits for reading the books in the *Advances in Psychotherapy* series and taking a multiple-choice exam. This continuing education program is a partnership of Hogrefe Publishing and the National Register of Health Service Psychologists. Details are available at https://us.hogrefe.com/cenatreg

The National Register of Health Service Psychologists is approved by the American Psychological Association to sponsor continuing education for psychologists. The National Register maintains responsibility for this program and its content.

Advances in Psychotherapy – Evidence-Based Practice, Volume 42

Insomnia

William K. Wohlgemuth
Sleep Disorders Center, Bruce W. Carter VA Medical Center,
Miami, FL

Ana Imia Fins
College of Psychology, Nova Southeastern University,
Fort Lauderdale, FL

hogrefe

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 2018960136

Library and Archives Canada Cataloguing in Publication
Wohlgemuth, William K., 1963-, author
Insomnia / William K. Wohlgemuth, Sleep Disorders Center, Bruce W. Carter VA Medical Center, Miami, FL, Ana Imia Fins, College of Psychology, Nova Southeastern University, Fort Lauderdale, FL.
(Advances in psychotherapy--evidence-based practice ; v. 42)

Includes bibliographical references. Issued in print and electronic formats.
ISBN 978-0-88937-415-7 (softcover).--ISBN 978-1-61676-415-9 (PDF).--ISBN 978-1-61334-415-6 (EPUB)

1. Insomnia. 2. Insomnia--Treatment. 3. Insomniacs. I. Fins, Ana Imia, author II. Title. III. Series: Advances in psychotherapy--evidence-based practice ; v. 42

RC548.W64 2018 616.8'4982 C2018-906149-9
C2018-906150-2

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, 3012 Bern

Format: PDF

ISBN 978-0-88937-415-7 (print) • ISBN 978-1-61676-415-9 (PDF) • ISBN 978-1-61334-415-6 (EPUB)
http://doi.org/10.1027/00415-000

Preface

Insomnia is a widespread problem. Estimates suggest that, within a given year, about 40% of the population will experience difficulty falling or staying asleep, while about 10% experience chronic insomnia. Sleeping pills have been used for decades, but physicians are wary about the consequences of long-term use. Fortunately, efficacious nondrug, behavioral methods have been developed and tested over the past 2 decades. These treatments were developed with knowledge of the biological underpinnings of sleep. Additionally, during this time, investigators gained a better understanding of common beliefs about sleep and the disruptive habits which develop as a result of those beliefs. This knowledge has been incorporated into a treatment called *cognitive behavioral therapy for insomnia* (or CBT-I). Treatment guidelines based on reviews of the evidenced-based literature, published by both the American Academy of Sleep Medicine and the American College of Physicians, support CBT-I as first-line therapy for insomnia.

Insomnia is a common symptom of many medical, psychiatric, and other sleep disorders, and proper evaluation is necessary to rule out other potential causes of the sleep difficulty. Consultation with a sleep specialist may be needed to determine if a comorbid sleep disorder is present. Consultation with a physician or psychiatrist may be needed to rule out either medical or psychiatric causes of insomnia. Sometimes it may be necessary to work in tandem with a physician or sleep specialist to coordinate medical treatment (e.g., hypnotic medication) with CBT-I.

When learning any new therapeutic technique, therapists can be assisted by supervised practice for several cases to gain confidence in effective implementation of the therapy. We suggest that therapists seek to consult when beginning to use CBT-I, as clinical cases are varied and can be quite complex.

Our goal in this book is to provide a general overview of definitions, prevalence, impact, and theories of insomnia. We then provide a more specific, detailed description of the evaluation and treatment of insomnia. We also review more recent developments in the treatment of insomnia, such as the online implementation of CBT-I and interventions which focus more directly on cognitive aspects of insomnia. Recently, clinical trials have effectively combined CBT-I with other therapies (e.g., antidepressants) in patients with comorbid conditions (e.g., insomnia and depression). Positive results in these trials demonstrate the flexibility and strength of CBT-I with more complex presentations of insomnia.

Finally, we present a sample case of insomnia which includes the use of CBT-I. This case was not complicated with comorbidities and demonstrates many prototypical issues that arise when using CBT-I. The appendices include useful resources for assessment and treatment of insomnia, which readers are free to use in their practice.

Dedication

To my family – Mom and Dad, Kathy, Greg, and Mark – for their unconditional support and continued interest in my professional work.

W. K. W.

To my husband, Tony, who has always encouraged me to go outside my comfort zone and has steadfastly supported me in all of my professional endeavors; to Katrina and Anthony, whose love and support mean the world to me; and to my parents, who from an early age taught me to work hard and persevere in reaching my goals.

A. I. F.

Acknowledgments

We want to acknowledge our mentor and friend, Jack Edinger, PhD. Jack has been a pioneer and industrious investigator in behavioral sleep medicine. He introduced us to the world of insomnia during our internships and continued to train us in behavioral sleep medicine after hiring each of us as research coordinators for his insomnia grants. Since then, Jack has continued to mentor and serve as a consultant in our own work. We are both indebted to him for the fundamental role he has played in our professional development.

We are also grateful for the extensive encouragement and support received from Linda Sobell, PhD, even when our progress was impeded by unexpected events. Moreover, from the initial idea for this book and its inception, as well as throughout the writing process, her editorial feedback and comments have been invaluable and have greatly enhanced the clarity of the book.

Finally, we would like to acknowledge our students and their interest and excitement in learning how to diagnose and treat insomnia. Their energy has made it easy for us to "pay it forward" and emulate Jack's mentorship to train future behavioral sleep medicine specialists. We would also like to recognize Shantha Gowda and Danielle Millen for their contribution to the preparation of this book.

Contents

1

Description of Insomnia

1.1 Terminology

The term *insomnia* can be used to characterize a symptom, a cluster of symptoms, or a disorder. In broad terms, *insomnia* refers to difficulty sleeping. However, the complaints of insomnia can present in a variety of ways. Insomnia is characterized by difficulty either falling asleep or maintaining sleep (e.g., waking frequently during the night, difficulty falling asleep after waking, or awakening early in the morning without the ability to return to sleep). Sleep that is not restorative (in the absence of nighttime wakefulness) has historically been included as part of the diagnostic criteria. However, in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM-5; American Psychiatric Association, 2013) the criteria for insomnia do not include nonrestorative sleep.

1.2 Definition

1.2.1 Classification of Insomnia

The characteristics of the symptoms can aid with the classification of the disorder and, in turn, can inform treatment planning. There are a number of different ways that symptoms of insomnia can be classified.

Insomnia associated with difficulty falling asleep, or initiating sleep, is classified as sleep-onset insomnia, whereas difficulty remaining asleep is considered sleep-maintenance insomnia. Most commonly, however, patients present with a combination of these sleep complaints.

Acute insomnia occurs at least 3 times per week and lasts less than 3 months

Insomnia can also be categorized by considering the duration of symptoms. *Acute insomnia* symptoms generally occur at least 3 times a week, last a brief period of time (less than 3 months; American Psychiatric Association, 2013), and are often easily linked to a precipitating cause (e.g., a significant life event). Symptoms associated with an acute episode often resolve without any type of intervention. Sometimes, however, the insomnia may be treated with a short trial of hypnotic medication to help the person manage troublesome symptoms. To be considered as chronic or persistent, insomnia complaints must be experienced at least three times per week for a minimum of 3 months. However, patients with *chronic insomnia* typically report symptoms that persist over a longer period of time.

Chronic insomnia lasts 3 months or more

Insomnia most often presents concurrently with medical or psychiatric conditions. In such cases, the insomnia disorder can be classified as a comorbid disorder. The term *primary insomnia* has been used to describe insomnia symptoms that cannot be attributed to another condition. However, the DSM-5 no longer utilizes the term *primary* to distinguish insomnia symptoms that are not linked to other conditions, from insomnia symptoms that occur concurrently with other disorders. When psychiatric, medical, or other sleep comorbidities exist, DSM-5 requires clinicians to specify and code the comorbid condition concurrently with the insomnia diagnosis (American Psychiatric Association, 2013). It is important to recognize that, in the case of comorbid insomnia, it is often difficult to ascertain the relationship between the insomnia symptoms and the concurrent disorder; as a result, establishing which condition presented first can be challenging. Differential diagnoses and comorbidities will be discussed further in Chapter 3 (Diagnosis, Assessment, and Treatment Indications).

When comorbidities exist, the diagnosis of insomnia can be more complicated

Three separate classification systems with diagnostic criteria for insomnia exist. These are the DSM-5, the *International Classification for Sleep Disorders* (3rd ed.; ICSD; American Academy of Sleep Medicine, 2014), and the *International Classification of Diseases* (11th ed., ICD-11; World Health Organization, 2018). Differences in the diagnostic criteria across these classification systems have varied over the years. Currently the DSM-5, ICSD-3, and ICD-11 share similar diagnostic criteria for insomnia.

Diagnostic criteria have consolidated many previous diagnoses into one of *insomnia disorder*

1.3 Epidemiology

1.3.1 Prevalence

The prevalence of insomnia can be evaluated by examining the rates of insomnia as a symptom or as a diagnosable disorder. The operational definitions used to define insomnia can lead to highly variable prevalence findings. In fact, prevalence rates can vary dramatically and have been reported to range anywhere between 4% and 50% (Wade, 2011). In an epidemiological survey of community-dwelling residents, approximately 42% of respondents reported at least one symptom of insomnia (sleep-onset, sleep-maintenance, early morning awakenings, or nonrestorative sleep; Walsh et al., 2011). When considering prevalence rates of insomnia as a disorder, rates can also vary as a result of the diagnostic criteria and classification system used, with rates between 3% and 22% reported (Ohayon & Reynolds, 2009; Roth et al., 2011).

Certain patient characteristics are also associated with greater prevalence of insomnia, including being female or older, as well as having comorbid medical or psychiatric conditions or being employed as a shift worker (Morin & Jarrin, 2013a, 2013b; Ohayon, 2002).

Insomnia disorder is more prevalent among women, older people, and those with comorbid conditions

1.3.2 Economic Impact of Insomnia

Insomnia can have a significant impact on costs associated with health care utilization, medication use, and other direct costs, as well as indirect costs,

Insomnia is associated with a costly loss of productivity and workplace accidents

such as increased absenteeism and reduced work productivity. Wade (2011) estimated annual direct costs (e.g., medication use, health care utilization) associated with insomnia in the US to be US $14 billion, while indirect costs (e.g., missed work days) range between US $77 billion and $92 billion annually. Moreover, Kessler et al. (2011) reported that insomnia (after controlling for comorbid conditions) was associated with almost 8 days of lost work performance annually; these losses translate to about US $60 billion annually in lost productivity. Costs can also be incurred as a result of accidents and injuries related to insomnia. For example, in a study of 4,900 people, those with insomnia reported more accidents and errors in the workplace (Shahly et al., 2012). In addition, the authors found that costs associated with insomnia-related accidents and errors were significantly more costly than those not related to insomnia. Further, they estimated the cost of insomnia-related accidents and errors in employment settings to be approximately US $31 billion. Recently, Reynolds and Ebben (2017), using data adjusted for inflation, estimated combined direct and indirect costs of insomnia to range annually between US $150 billion and $175 billion, respectively.

When assessing the financial impact of insomnia, it is important to report the costs associated with treatment. Both *cognitive behavioral therapy for insomnia* (CBT-I) and *sedative-hypnotic treatments* have been shown to be cost-effective overall. However, head-to-head comparisons that account for combined direct and indirect cost-effectiveness, as well as costs associated with adverse effects, are difficult to find. Utilizing simulations to estimate costs for insomnia treatment in community-dwelling older adults, Tannenbaum et al. (2015) determined the cost to treat insomnia with sedative-hypnotic treatment would be US $32,452/person per year as compared with US $19,442 for CBT-I. These large estimated treatment costs included additional costs associated with the consequences of falls.

Use of CBT-I may be more cost-effective than medical management with sleeping pills

Reynolds and Ebben (2017) attempted to compare direct cost estimates for CBT-I and pharmacotherapy. Using 3 years as their calculation period (based on the longest period that CBT-I treatments have been examined), they calculated the cost of CBT-I to be slightly greater than that of pharmacotherapy (US $420 and $381, respectively.) They also noted that if medication use was continued for longer time periods (with corresponding physician visits for medication management), CBT-I would likely become more cost-effective than pharmacotherapy. These findings suggest that over the long term, when compared with pharmacotherapy, the use of CBT-I will be associated with reduced direct and indirect costs.

1.4 Course and Prognosis

The course of insomnia symptoms can be highly variable. For some patients, symptoms are short-lived while for others the course can be significantly protracted. Even in the case of chronic insomnia, the intensity of symptoms can vary significantly from night to night.

For many individuals, transient insomnia symptoms can remit without further exacerbation of symptomatology. However, numerous longitudinal