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Editorial

## Historical perspective and future directions in Cognitive Behavioral Therapy for insomnia and behavioral sleep medicine

Psychotherapists were initially fascinated by sleep because of the hidden information manifested in dreams. As the relatively young field of sleep research has demystified sleep and dreaming, psychologists have turned their attention to empirical testing of the treatment of insomnia. The initial focus on primary insomnia in young adults has gradually expanded to include treatments for insomnia across the life span, insomnia that is co-morbid with other disorders, and sleep disorders other than insomnia. Early non-pharmacological treatments for insomnia focused on primary insomnia. These early interventions targeted the state of hyper-arousal associated with difficulty sleeping and have, therefore, applied interventions such as systematic desensitisation (Geer & Katkin, 1966), relaxation (Lick & Heffler, 1977), hypnosis (Anderson, Dalton, & Basker, 1979), biofeedback (Hauri, 1981), and paradoxical intention (Frankl, 1955). These were the first psychologically based interventions for insomnia to be tested in randomized controlled trials (Borkovec & Fowles, 1973; Steinmark & Borkovec, 1974; Turner & Asher, 1979). During the 1970s the first intervention that did not directly address hyper arousal was introduced. It applied stimulus control principles to insomnia (Bootzin, 1972). Stimulus control instructions became the most researched single component intervention for insomnia and has, therefore, been labeled by the American Academy of Sleep Medicine as a recommended “standard” treatment for primary insomnia (Chesson et al., 1999). In the late 1980s a new behavioral intervention, sleep restriction (Spielman, Saskin, & Thorpy, 1987), was introduced. During the same decade the application of cognitive restructuring for unhelpful beliefs about sleep to insomnia was proposed (Davies, 1989) and subsequently formalized and integrated into several multi-components treatments of insomnia (Morin, Kowatch, Barry, & Walton, 1993). With time different combinations of cognitive and behavioral components have been tested, collectively referred to as Cognitive Behavioral Therapy for Insomnia (CBT-I).

This special issue of Clinical Psychology Review includes seven manuscripts reviewing psychological treatments for sleep difficulties in general and in specific populations. The first paper in this special issue (Edinger and Means) reviews the body of research on the efficacy and effectiveness of single and multi-component non-pharmacological treatments for insomnia. In the second paper, which reviews the role of cognitive processes in the development and maintenance of insomnia, Harvey and her colleagues describe what is currently known about the cognitive processes that maintain insomnia, including what has been learned from experimental analogue studies manipulating pre-sleep and daytime sleep-related thoughts and attention. These cognitive processes include intrusive thoughts, beliefs, attributions, expectations, perception and attention.

The third paper in this special issue (Smith, Huang, and Manber) discusses the issues involved in treating insomnia when co-existing with medical or psychiatric conditions and summarizes the available data on the treatment of non-primary forms of insomnia. The research reviewed in this paper arose as a result of the accumulation of evidence about the efficacy of cognitive behavioral treatments for primary insomnia and the growing recognition that the majority of persons seeking treatment for insomnia present with co-morbid conditions. Co-existing medical and psychiatric conditions covered in this paper include cancer, chronic pain, HIV, depression, posttraumatic stress disorder, alcoholism, bipolar disorder, eating disorders, generalized anxiety, and obsessive-compulsive disorder. The available data reviewed suggest that by improving sleep, CBT-I might also indirectly improve medical and psychological endpoints.

Many of the early psychological insomnia treatment studies were conducted on young college-aged adults, neglecting important issues related to the application of the treatments across the life span. A constantly growing body of knowledge on developmental aspects of sleep and its disorders has prompted a parallel interest in the development of treatments that specifically address disturbed sleep in childhood, adolescence, and older adulthood. Hence, three papers in this special issue are devoted to describing these advances. These papers review what is known about sleep disturbances across the lifespan, highlighting age-specific aspects of the problems and their treatments. Sadeh's paper reviews treatments of disturbed sleep in childhood, from infancy to preadolescence. The review emphasizes the need to consider children's difficulties initiating or maintaining sleep within the context of their family. It reviews the more familiar behavioral methods that are based on extinction paradigms as well as alternative interventions that consider the emotional difficulties parents experience when contemplating or trying to implement extinction based interventions. Bootzin and Stevens focus an important, yet previously neglected, aspect of adolescents' sleep. These authors discuss the interplay between disturbances of sleep and alertness and the problem of substance abuse and associated negative health, social, and emotional outcomes. Bootzin and Stevens describe a six-session group treatment for sleep disturbances in adolescents who have received treatment for substance abuse. Preliminary results provide encouraging evidence that adolescents who participated in at least four of the six sessions showed improved sleep at post treatment and that improving sleep may lead to a reduction in substance abuse problems at the 12 month follow-up. These preliminary data also reveal that this intervention is associated with very high incidence of early discontinuation. As for insomnia in older adults, Nau and his colleagues review the effects of aging on ability to sleep and the efficacy of CBT-I. Their review highlights the high prevalence of co-existing health problems and increased prevalence of hypnotic-dependent insomnia in this age group and the challenge these issues present to those who treat insomnia in older adults.

The role of clinical psychologists in sleep medicine has recently been extended beyond the treatment of insomnia, as the recognition of psychological processes associated with a broader range of sleep disorders has become more apparent. Haynes' review of this new frontier in sleep medicine highlights the role of clinical psychologists in promoting adherence to the treatment of sleep-disordered breathing. It also discusses the association between sleep disordered breathing and psychiatric conditions. The role of clinical psychology in the treatment of disorders other than difficulties initiating or maintaining sleep is also discussed by Sadeh's review of childhood sleep disorders. In particular, Sadeh reviews non-pharmacological treatments of parasomnias and sleep-disordered breathing in children.

Each of the seven manuscripts highlights a wide range of new directions for research. We would also like to highlight the challenge of devising effective dissemination strategies for those treatments that

have already been developed and empirically validated. Even though sleep disturbances are often reported by patients receiving psychotherapy, only a quarter of these patients experience meaningful improvement in these symptoms with general eclectic psychotherapy (Kopta, Howard, Lowry, & Beutler, 1994). Very few physicians and psychologists make use of the empirically supported treatments described in this issue (Baillargeon, Demers, Gregoire, & Pepin, 1996). In part, the problem stems from the paucity of available training in the use of these interventions. Researchers in the United Kingdom have reported that only 17% of undergraduate degree programs in psychology in the UK offer a course on sleep (Wiggs & Stores, 1996) and only half of the courses that taught behavioral strategies for treating sleep disorders covered this topic in less than 15 min (Stores & Wiggs, 1998). Although in-depth knowledge of normal sleep and its disorders would be desirable, there is evidence that even clinicians who are not proficient in sleep medicine (e.g., nurses) can effectively deliver cognitive behavioral therapy for insomnia (Espie, Inglis, Tessier, & Harvey, 2001).

Together, the seven manuscripts in this issue clearly demonstrate that clinical psychology has made exciting discoveries and important contributions to the understanding and treatment of sleep disorders. This has led to the emergence of the specialty of Behavioral Sleep Medicine (Perlis & Lichstein, 2003). We hope that this special issue of CPR will stimulate future contributions to this developing field.

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