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CLINICAL REVIEW

Self-help therapy for insomnia: A meta-analysis

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Summary *Background:* Insomnia is a prevalent problem which often leads to a reduced quality of life and diminished work productivity. Only a minority of patients are treated with effective non-pharmacological therapies. A self-help intervention might offer an inexpensive and more accessible alternative to face-to-face treatment.
Methods: We conducted a meta-analysis of randomized controlled studies examining the effects of self-help interventions for insomnia, identified through extensive searches of bibliographical databases. We examined the effects of self-help on different sleep outcomes, in comparison with both waiting lists controls and face-to-face treatments.
Results: Ten studies with a total of 1000 subjects were included. The intervention did improve sleep efficiency ($d = 0.42$; $p < 0.05$), sleep onset latency ($d = 0.29$; $p < 0.05$), wake after sleep onset ($d = 0.44$; $p < 0.05$) and sleep quality ($d = 0.33$; $p < 0.05$) but not total sleep time ($d = 0.02$; $p > 0.05$). The sleep improvements were maintained over the longer term. Symptoms of anxiety and depression also decreased after self-help ($d = 0.28$; $p < 0.05$ and $d = 0.51$; $p < 0.05$, respectively). Although based on a very limited number of studies, the face-to-face treatments did not show statistically significant superiority to the self-help treatments. The effect sizes associated with self-help treatments might be overestimated due to publication bias.
Conclusions: The effects of self-help treatments are small to moderate. Nevertheless, they might constitute a useful addition to existing treatment options especially when integrated in a stepped care approach.

Introduction

Insomnia is a common problem: about one-third of the general population suffers from one or more symptoms of the condition. About 10% of the

Abbreviations: SE, sleep efficiency; SOL, sleep onset latency; SQ, sleep quality; TST, total sleep time; WASO, wake after sleep onset.

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general population suffers from insomnia with daytime consequences, including daytime fatigue, difficulties in cognitive performance, mood disturbances and psychological distress.[1,2] Insomnia often leads to a reduced quality of life and diminished work productivity, and is frequently associated with other physical and psychiatric conditions (e.g., depression, anxiety disorders, alcohol abuse).[2]

Despite the widespread prevalence and consequences of insomnia, only a minority of sufferers are treated.[3,4] Those who do get treatment usually receive pharmacological therapies, mostly benzodiazepines.[3] Meta-analyses have shown that pharmacological therapies are effective.[5–7] However, there are several important drawbacks related to the use of pharmacological therapies, especially when use is prolonged: deterioration of daytime functioning and the development of psychological dependence, tolerance and addiction may result. Furthermore, cessation is often difficult due to rebound effects. Numerous studies and several meta-analyses have demonstrated the efficacy of non-pharmacological treatments.[8–11] Although few studies directly compare pharmacological therapies with non-pharmacological ones, the results seem to be especially promising for the non-pharmacological options.[12–14] All this has led many to believe that non-pharmacological therapies should be the treatment of choice.[15,16]

Non-pharmacological treatments are most often based on cognitive behavioral principles and contain one or more of the following elements[10]: stimulus-control (going to bed only when sleepy and getting out of bed at the same time each morning), sleep restriction (restricting the time spent in bed to the person's estimated average amount of night-time sleep), sleep hygiene (education about behaviors known to interfere with sleep), relaxation, cognitive restructuring (altering irrational beliefs about sleep), paradoxical intention (explicitly instructing patients to try to stay awake when they get into bed) or imagery training (e.g., visualizing the shape, colour, movement, and texture of a common object).

There are several reasons why non-pharmacological therapies have not yet become widespread. These include the unavailability of trained therapists and the higher initial costs involved in this type of treatment. In recent years, self-help therapies have been proposed as an inexpensive, and more easily accessible alternative to face-to-face non-pharmacological treatments. Self-help treatments are defined as standardized psychological treatments which can be worked through independently by the patients themselves in their own homes. They are effective for a large number of mental disorders of mild to moderate severity.[17–22] There have been a number of controlled studies on self-help treatment for insomnia. However, the results of these studies are mixed. Some clearly show that sleep improves after self-help, while others show mixed results or fail to demonstrate an effect on sleep. This might be due to the relatively small number of patients included in most of these studies. Until now no systematic review or meta-analysis has attempted to integrate the results of these randomized trials. Since self-help might be such a valuable addition to current insomnia treatments, we decided to conduct a meta-analysis in order to examine the effects in comparison to waiting list control groups and face-to-face treatments both in the short and longer term.

Patients and methods

Identification and selection of studies

Studies were traced as follows. First we carried out a literature search in Pubmed, Psycinfo, Embase and Digital dissertations. We searched all literature up to January 2007 by combining terms (both MeSH terms and text words) indicative of insomnia and self-help treatments. The following terms were used: insomnia, sleep disorders, sleep initiation and maintenance disorders, sleep problems, bibliotherapy, self-help, minimal intervention, early intervention, Internet intervention, and sleep treatment. Second we examined the references of all relevant papers. For our meta-analyses we included all randomized studies in which a self-help intervention was compared to a waiting list or a treatment control group for patients with sleeping problems. Furthermore, we included only studies in which loss to follow-up was smaller than 50%. No language or age restrictions were applied. We defined a self-help treatment as any psychological treatment which could be worked through independently by the patient. We allowed all different formats of self-help interventions (e.g., books, Internet, or audiotapes). We also allowed support as long as it was limited in time and directed at mastering the self-help strategies.

Quality assessment

At least 25 scales are available to assess the validity and quality of randomized controlled trials.[23] There is no evidence, however, that these scales provide more reliable assessments of validity than more simple approaches. Therefore we used the four basic criteria as suggested in the