patients, access to trained providers of this treatment remains limited. The current study is testing he efficacy of an online CBTI among CPAP treated sleep apnea patient with comorbid insomnia.
Methods: Patients enrolled in this trial complete baseline measures and then are randomized to either an online version of Cognitive Behavioral Insomnia Therapy (CBTI) or no additional treatment beyond their CPAP therapy (CTRL). After 8 weeks of treatment all patients are reassessed. The current report considers changes in scores on the ISI and Epworth Sleepiness Scale (ESS) as well as average minutes of nightly CPAP use from pre-treatment to the end of the initial 8 weeks of online treatment relative to the no treatment CTRL. The sample for this report included the first 276 participants enrolled in this trial (mean age = 56.5±12.5 yrs; 58.7% females).
Results: Those receiving online CBTI showed greater reductions in their ISI scores from baseline to the end of the initial 8-week treatment phase than did those in the CTRL group (p = .0001). Average ISI score improvements among those receiving online CBTI moved patients from moderately severe insomnia to mild insomnia symptoms. In contrast, no differences were noted between the online CBTI and CTRL groups in regard to pre- to post-treatments changes on the ESS (p= .2541) scores or amount of CPAP use (p = .4383).
Conclusion: Whereas online CBTI does not seem to reduce daytime sleepiness or improve CPAP adherence among patients with comorbid sleep apnea and insomnia, it appears to be an effective intervention for reducing insomnia severity for this patient group.
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USE OF BLINDED HYPNOTIC TAPERING FOR HYPNOTIC DISCONTINUATION: FINAL REPORT

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Introduction: Many patients have difficulties achieving hypnotic discontinuation due to anxiety that arises when they knowingly reduce their hypnotic dose or withhold it entirely. This study tested a blinded tapering approach to reduce patients' anxiety and help them discontinue their hypnotics.
Methods: The study sample included 78 (M age = 55.2 ± 12.8 yrs.; 65.4% women) users of benzodiazepine and benzodiazepine receptor agonists. Following baseline assessments, enrollees first completed 4 sessions of cognitive behavioral insomnia therapy (CBTI). Subsequently they were randomized to one of three 20-week, double-blinded tapering protocols wherein their medication dosage either remained unchanged (CTRL) or was reduced by 25% or 10% every two weeks. At the end of the 20-week period the study blind was eliminated and those who completed one of the two blinded tapering protocols entered a 3-month follow-up period, whereas CTRL participants were offered an open label taper before completing the follow-up.
Results: Among those who completed one of the blinded tapering protocols, 92.9% totally discontinued their medication use by the end of the 20-week tapering phase, whereas 77.3% in the CTRL group discontinued hypnotic use by the end of their open label tapering. At follow-up 72.1% of those who completed blinded tapering remained medication free whereas only 52% of those who underwent open-label tapering remained medication free. Comparisons at follow-up showed those who received the open-label taper continued to use hypnotics on average 2.06 nights/week compared to .051 times per week for the blinded taper group (p = .042). The average weekly diazepam equivalent dose of medication used by the open label tapering group was 11.29 mg whereas the weekly dose for the blinded tapering group was 3.22 (p = .069).
Conclusion: CBTI combined with blinded hypnotic tapering is a promising treatment approach for helping hypnotic users overcome their medication dependence.
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COGNITIVE BEHAVIORAL THERAPY AND LIGHT DARK THERAPY FOR POSTPARTUM INSOMNIA SYMPTOMS: FINDINGS FROM A RANDOMIZED CONTROLLED TRIAL

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Introduction: Symptoms of insomnia are common in the postpartum period and are associated with a range of negative outcomes. Despite this, interventions to improve maternal postpartum sleep remain scarce. Cognitive Behavioral Therapy (CBT) and Light Dark Therapy (LDT) target two different mechanisms to reduce sleep disturbance. This randomized controlled trial examined the efficacy of CBT and LDT against a treatment-as-usual (TAU) condition in reducing maternal postpartum insomnia symptoms.
Methods: Nulliparous women 4–12 months postpartum with self-reported symptoms of insomnia (Insomnia Severity Index scores [ISI] >7) were included; excluded were those with: current severe health/psychiatric conditions, unsettled infant behaviors, sleep-affecting medication use and photosensitivity. Eligible women were randomized 1:1:1 to 6 weeks of CBT (CBT for insomnia and fatigue), LDT (morning bright light therapy, evening light hygiene), or TAU. Interventions were therapist-assisted and personalized through two telephone calls and included automated self-help intervention materials (i.e., emails) delivered over six weeks. Symptoms of insomnia (ISI; primary outcome), fatigue, sleepiness, depression, and anxiety were assessed at baseline, mid-intervention, post-intervention, and 1-month post-intervention. Analyses were intention-to-treat latent growth models.
Results: 114 women were randomized (mean age = 32.20 ± 4.62 years) and 108 women completed the intervention. Compared to TAU, symptoms of insomnia significantly reduced from baseline to post-intervention in both CBT and LDT groups (p-values <.001), with very large effect sizes (d > 1.5) at post-intervention; gains were maintained at follow-up. Fatigue symptoms significantly reduced in the CBT group (p<.0001; d = 0.85) but not LDT (p = 0.11) compared to TAU at post-intervention; gains were maintained for CBT at follow-up. Group differences in sleepiness, depression, and anxiety were nonsignificant (all p > 0.08).
Conclusion: Therapist-assisted self-help CBT and LDT with different therapeutic mechanisms are both efficacious for reducing maternal insomnia symptoms during the postpartum period. Findings were mixed for fatigue, sleepiness and mood. Future research on predictors of treatment responses is needed.
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PREDICTORS OF DROPOUT IN UNIVERSITY STUDENTS PARTICIPATING IN AN 8-WEEK E-MAIL BASED COGNITIVE BEHAVIORAL THERAPY FOR INSOMNIA

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Introduction: As dropout from treatment potentially diminishes its therapeutic effect and poses clinical concern, it is important to find out which characteristics of participants are suitable for online-based treatment. Therefore, we aimed to identify factors that predicted a dropout in the e-mail based cognitive behavioral therapy (REFRESH) developed by Stanford University for the purpose of psychological intervention for insomnia.
Methods: Participants who participated in the REFRESH program consisted of 158 university and graduate students aged 18 to 30 in Hong Kong and Korea who scored higher than 10 on the Insomnia Severity Index (ISI), and the intervention was delivered in 8 weekly sessions sent via weekly e-mails. Among them, 110 were women (70%) and the average age was 22 (±2.71) years old. All participants were asked to answer the following self-reporting questionnaires before and after the intervention: Insomnia Severity Index; ISI, Depression Anxiety Stress Scale 21; DASS-21, Sleep Hygiene Practice Scale; SHPS, Dysfunctional Beliefs and Attitude about Sleep 16; DBAS-16. Descriptive statistics and ROC decision tree analysis were conducted to address our aim.
Results: Of the 158 participants, 68 completed the program, and 90 participants (57%) dropped out. The best predictor of dropout was DASS score with an optimal cup-point of <34. Of the 107 participants who reported DASS <30, 70(65.4%) dropped out. In contrast, of the 50 participants who reported DASS ≥34, 12(38%) dropped out. The second-level predictor was expectations for sleep score with a cut-point of <18. Among participants with DASS <34 and expectations for sleep score <18, 57(73.1%) dropped out. Of the 29 participants who reported DASS <34 and expectations for sleep score ≥18, 13(44.8%) dropped out.
Conclusion: Mild levels of depression, anxiety and stress and expectations for sleep appear to be predictive of dropout in an e-mail based intervention. People with mild symptoms may experience less distress and impairment, which may result in lower motivation to receive treatment. This may lead to inability to complete treatment and higher rates of dropout.
Support (if any):

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A SLEEP HYGIENE AND RELAXATION TRAINING PROGRAM AFTER THE GREAT EAST JAPAN EARTHQUAKE: WHAT ASPECTS OF SLEEP COULD BE IMPROVED?

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Introduction: After a natural disaster, the incidence of sleep difficulties tends to increase. Specifically, the prevalence of suspected insomnia was reported to have increased among disaster victims after the Great East Japan Earthquake of March 11, 2011. In a previous study, we have reported that education on sleep hygiene and relaxation training was effective in improving nighttime sleep in students of universities in Sendai city after the earthquake of March 2011. According to analyses of subscale scores of the Pittsburgh Sleep Quality Index (PSQI), the present study aimed to determine what aspects of sleep difficulties were successfully improved.
Methods: University undergraduates and graduates who reported having sleep difficulties were asked to respond to a questionnaire including the PSQI thrice, before attending a 90-min lecture on sleep hygiene and relaxation training, and a month and three months after attending the program. All participants who reported the total PSQI score of the cutoff point (6) or more were divided into two groups based on their PSQI scores before the program, that attending the course and that not attending it, that is, the "waiting list" group.
Results: The "attending" group exhibited a decrease in the total PSQI score in the first month after attending the program, and the score in this group reduced further three months later; Nine of twenty (45.0%) attending participants reported the score of less than 6 after a month, while only three of seventeen (17.6%) wait-list participants did. The PSQI subscale scores reported by the nine successful attending participants indicated a significant decrease in the subscale scores on subjective sleep quality, sleep latency, sleep duration, and sleep disturbance from before the program to one month later.
Conclusion: These results suggest that the short course on sleep hygiene and relaxation training intended for university students was effective, and about a half of the attended participants reported the PSQI score of less than the PSQI cutoff score one month later. This substantial effect would be mainly based on the improvement of their subjective sleep quality, latency, duration, and disturbance.
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DURABILITY OF TX RESPONSE TO ZOLPIDEM USING A PARTIAL REINFORCEMENT REGIMEN: DOES THIS STRATEGY REQUIRE CONTINGENT REINFORCEMENT?

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Introduction: In 2015, partial reinforcement (PR) was assessed as an alternative approach to maintenance therapy with zolpidem. The method being: once a treatment response is obtained over the course of 1-month's Tx with QHS dosing (Phase-1), Tx response can maintained over time with a PR regimen (Phase-2 [nightly pill/capsule use with 50% of capsules having medication and 50% having only inert filler]). In that study, it was assumed that Phase1 QHS dosing was required 1) to maximize treatment responding and 2) for the conditioning of pharmacologic responses to the medication vehicle (capsule). In the present study, these assumptions were tested by including both QHS and PR arms into Phase-1.
Methods: In Phase-1 (1 month), subjects were randomized to the QHS or PRS conditions (2QHS:1PRS). In Phase-2 (3 months), the PRS group continued forward without a change in the treatment regimen (variable dose [VD-VD]) and the QHS group was re-randomized to either continued QHS Tx (full dose [FD-FD]) or to PRS Tx [FD-VD]). Both study phases were evaluated for treatment responses rates and for average change in TWT (SL+WASO+EMA).
Results: 55 subjects (age 61.2+/-8.1, 64% female, & 73% white) were enrolled into Phase-1; 39 were randomized to the QHS condition and 16 to the PRS condition. In Phase-1, 77% (QHS) and 50% (PRS) exhibited treatment responses (p=0.09) where the average change in TWT was similar by group (QHS was -43min [CI -76,-9] and PRS was -76min [CI -138,-14];p=0.35). In Phase-2, 73% (FD-FD), 57% (FD-VD), and 88% (VD-VD) exhibited continued treatment responses (p=0.22) where the average improvement of TWT continued with FD-FD and remained stable for FD-VD and VD-VD (p<0.01).
Conclusion: These data, while preliminary, suggest that QHS (vs. PRS) dosing produces more treatment responders and similar initial effects on sleep continuity during Phase-1, comparable maintenance of treatment response over time, and continued improvement on sleep continuity during Phase-2. These results suggest that partial reinforcement can maintain effects but cannot allow for the additional clinical gains afforded by continuous treatment. Given this, it may be the case