memory consolidation and (fast) NREM sleep spindle change indicating a beneficial cognitive effect of the SMR training protocol. **Conclusion:** Current results indicate that besides healthy individuals also people suffering from primary insomnia can benefit subjectively as well as objectively from SMR conditioning.

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An ecological momentary assessment of daytime symptoms in insomnia during brief sleep restriction therapy

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Objectives: Sleep Restriction Therapy (SRT) is a highly utilised and effective Cognitive Behavioural Therapy for Insomnia. However, little is known about how and when this intervention may work. In this study, the Daytime Insomnia Symptom Scale (DISS) was employed within an Ecological Momentary Assessment (EMA) technique to examine the daytime impact before (1 week) and during SRT (3 weeks) at four time points per day.
Method: Nine participants (six females; mean age = 46.4) highly screened for Psychophysiological Insomnia completed paper-based versions of the DISS at Risetime, Noon, 18:00, and Bedtime, for 1 week before the intervention (Baseline) and for 3 weeks during the intervention (Weeks: 1, 2, and 3).
Results: Insomnia Severity Index scores were found to significantly decrease pre-to-post treatment [M = 18 (5) versus 7 (5), $P < 0.05$]. The completion rate for the DISS was high at 94.62%. Four previously validated factors from the DISS were examined; Alert Cognition, Positive Mood, Negative Mood, and Sleepiness/Fatigue. A mixed model analysis was implemented for each of the factors (fixed effects for week and time of day, and random effects for between subject variation).
Alert Cognition initially decreased ($P < 0.05$) compared to Baseline at Week 1, subsequently returning to Baseline levels by Week 3 of SRT. Within the Day Time points; Alert Cognition reduced at Bedtime and increased at Risetime by Week 3 compared to Baseline.
Negative Mood remained stable across the weeks.
Positive Mood initially decreased compared to Baseline at Week 1 ($P < 0.05$). At Week 2, scores returned to Baseline levels, and by Week 3 scores generally increased compared to Baseline ($P = 0.06$). Sleepiness/Fatigue initially increased at Week 1 compared to Baseline ($P < 0.001$). Scores then slightly reduced at Week 2 compared to Baseline ($P = 0.143$). At Week 3 scores significantly decreased compared to Baseline ($P < 0.001$).
Conclusion: This study represents the first attempt to profile the daytime experience of insomnia during SRT, via EMA methods. Changes at Risetime and Bedtime for Alert Cognition and Sleepiness/Fatigue seem like candidates for further study as mechanisms of action in SRT treatment response; potentially reflecting changes to the input and output of the sleep homeostat. This study demonstrates the value of assessing symptoms at multiple time-points throughout insomnia treatment.

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Mindfulness-based therapy for insomnia in an Australian population

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Objective: This study investigated group delivery of a mindfulness-based intervention for primary insomnia in an Australian population. Mindfulness Based Therapy for Insomnia (MBT-I) offers an alternative approach to the current gold standard, non-pharmacological approach to insomnia, CBT-I, with a focus on reducing sleep-related arousal. Findings have indicated reductions in several subjective sleep measures following MBT-I treatment (Ong, Shapiro, & Manber, 2008). This study aimed to investigate the outcome of MBT-I in an Australian population recruited from a sleep clinic to examine the generalizability in a diverse sample. Participants: 30 participants, consisting of 21 females (M age = 50, range = 26–72) and nine males (M age = 45, range 34–59) who met criteria for primary insomnia.
Methods: Treatment consisted of six sessions of MBT-I (Ong, Shapiro, & Manber, 2008) delivered in groups of 7–8 with each session lasting 2 h in duration. The primary outcome measure was the Insomnia Severity Index (ISI) and secondary the Pittsburg Sleep Quality Index (PSQI). Outcome measures were recorded at four time-points (screening, baseline, post-treatment and 3 month follow-up).
Results: The average severity of insomnia as measured by the ISI reduced significantly from a moderate level of insomnia (M = 18.74) to sub-clinical insomnia (M = 12.79, $P < 0.01$) indicating that on average, participants no longer met the criteria for insomnia following treatment. The Pittsburgh Sleep Quality Index (PSQI) overall score reduced significantly (M = 13.1 to M = 9.2, $P < 0.01$) reflecting an increase in sleep quality following treatment. All 7 PSQI component scores reduced significantly. The largest change was the component score assessing sleep efficiency (the proportion of average sleep compared to time in bed), which increased from 72% to 83% ($P < 0.01$) following treatment.
Conclusion: Analysis of data collected in response to a group treatment of MBT-I for insomnia delivered over 6 weeks revealed significant reductions in insomnia symptoms, and improvements in sleep quality and sleep efficiency. This suggests that MBT-I can be delivered in a sleep clinic setting with indications of effectiveness.

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Daytime driving performance and cognitive evaluation of untreated insomniac patients

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Sleepiness is one of the most causes of road accidents and may be linked to sleep disorders, circadian problem or hypnotic consumption. Among sleep disorders, insomnia is one of the most prevalent sleep complain as it reaches about 30% of general population. Although epidemiological studies have showed that sleepiness increases the risk of driving accidents, the effects of insomnia on driving performance are unknown. The purpose of this work was thus to assess the driving performance of untreated insomniac patients.
To date, twenty insomniacs and 15 good sleepers matched in age and sex were recruited. Monotonous driving performance was evaluated with a mono-screen driving simulator. Subjects had to