



ACT/ CBT-I Group Treatment for Insomnia and Chronic Pain

Skye Ochsner Margolies, PhD and John Schwartz, M.A.

Introduction

Sleep is a vital component of functioning and quality of life and the presence of clinical insomnia among chronic pain patients is well established. Cognitive Behavior Therapy for Insomnia (CBT-I) as an intervention for these patients shows strong improvement in sleep but not consistently in pain outcomes.

Current treatment approaches for chronic pain focus increasingly on acceptance-based interventions. Integrating ACT into a CBT-I group protocol has the potential to optimize both sleep and pain outcomes.

Outcome Measures

Sleep:

- Sleep Diary (sleep efficiency, sleep latency, total sleep time, wake after sleep onset)
- Insomnia Severity Index

Pain:

- Chronic Pain Acceptance Questionnaire
- Pain Catastrophizing Scale

Sleep and Pain:

- Beliefs about The Relationship Between Pain and Sleep

Mood:

- Patient Health Questionnaire-9
- Generalized Anxiety Disorder 7 Item Scale

ACT/CBT-I for Chronic Pain

An **ACT/CBT-I** six-session weekly group protocol for patients with comorbid insomnia and chronic pain was developed and piloted. The primary components of CBT-I emphasized throughout treatment included sleep education, stimulus control, and sleep restriction. Cognitive restructuring was not introduced.

To assist with sleep interference related to chronic pain, the addition of ACT techniques including mindfulness, willingness, values-guided committed action, and cognitive defusion strategies were integrated throughout treatment.

	Objectives	Committed Action
Session 1	Introduction of CBT-I and ACT Models Sleep/ Pain Education	Set consistent wake time
Session 2	Stimulus control, sleep restriction, and cognitive defusion	Consistent wake time, noticing thoughts, daily mindfulness exercise
Session 3	Healthy Sleep Behaviors, Pain Willingness, Values	Consistent wake time, daily mindfulness exercise, noticing thoughts, goals
Session 4	Pain willingness, Self as Context, and Self Compassion	Consistent wake time, daily mindfulness, self-compassion mantra
Session 5	Review behavioral recommendations, Pain Willingness, Review ACT model	Consistent wake time, daily mindfulness exercise, self-compassion mantra
Session 6	Pain and Sleep Willingness Review	Continue to practice: consistent wake time and pain and sleep willingness

Results

Participants recruited from an outpatient pain management clinic were on average 57 years old, 100% female and 75% white. Post-treatment, patients reported significantly improved **insomnia symptoms** (ISI $M_{diff}=5.8$, $SD_{diff}=3.9$, $p < .05$, $ES=1.5$), **sleep efficiency** (SE, $M_{diff}=16\%$, $SD_{diff}=10\%$, $p = .05$, $ES=1.5$), **pain catastrophizing** (PCS $M_{diff}=9$, $SD_{diff}=4.7$, $p < .05$, $ES=2$), **pain acceptance** (CPAQ $M_{diff}=11.5$, $SD_{diff}=7.5$, $p = .05$, $ES=1.5$), **beliefs about the relationship between pain and sleep** (PBAS $M_{diff}=2.3$, $SD_{diff}=1.3$, $p < .05$, $ES=1.8$) and **anxiety** (GAD-7 $M_{diff}=3.3$, $SD_{diff}=2.1$, $p < .05$, $ES = 1.6$).

Discussion

An ACT/CBT-I group protocol for insomnia and chronic pain showed significant improvements in sleep and pain outcomes. This pilot study demonstrates the benefits of incorporating an ACT approach to optimize pain as well as sleep outcomes. While the behavioral components of traditional CBT-I were maintained, ACT targeted the cognitive arousal associated with pain and sleep interference.

Future efforts will continue to refine an ACT/ CBT-I protocol in the setting of chronic pain management.