

# Cognitive behavioral therapy for chronic insomnia in occupational health services: Analyses of outcomes up to 36 months post-treatment

Järnefelt Heli<sup>1</sup>, Sallinen Mikael<sup>1,2</sup>, Luukkonen Ritva<sup>1</sup>, Kajaste Soili<sup>3</sup>, Savolainen Aslak<sup>4</sup>, Hublin Christer<sup>1</sup>

<sup>1</sup>Finnish Institute of Occupational Health (FIOH), Helsinki, Finland

<sup>2</sup>Agora Center, University of Jyväskylä

<sup>3</sup>Private Psychologist, Helsinki, Finland

<sup>4</sup>Finnish Broadcasting Company (YLE), Helsinki, Finland

heli.jarnefelt@ttl.fi

## Objectives

- The purpose of this study is to examine effectiveness of cognitive behavioral therapy for insomnia (CBT-I) delivered by occupational health (OH) professionals over a 36 months follow-up period.
- In our previous follow-up study up to 24 months (Järnefelt et al., 2014) 63 % of the participants, described as responders, showed a moderate improvement after CBT-I, whereas the remaining participants, described as partial responders, showed only a minor improvement. Similarly, response patterns of participants over a 36-month follow-up period is presented here.

## Results

- Self-perceived severity of insomnia ( $F_{5,207} = 21.04$ ,  $p < .001$ ,  $\eta^2 = .35$ ), sleep-related dysfunctional cognitions ( $F_{4,156} = 28.37$ ,  $p < .001$ ,  $\eta^2 = .42$ ) and psychiatric symptoms ( $F_{4,162} = 10.44$ ,  $p < .001$ ,  $\eta^2 = .21$ ) showed improvements over a 36-month follow-up period.
- Two response groups were still found as illustrated below. The responders perceived their pre-treatment insomnia and other symptoms milder than the partial responders.
- There were significant interactions between the measurement points and the response groups in self-perceived severity of insomnia and sleep-related dysfunctional cognitions both showing major improvements in the group of responders especially over long-term follow-ups.

## Methods

- The participants were 59 media daytime and shift workers with chronic insomnia, of whom 66 % were reached at 36-month follow-up.
- The study design was a non-randomized group intervention. Trained OH nurses led the CBT-I groups.
- Questionnaires [Insomnia Severity Index (ISI), Dysfunctional beliefs and attitudes about sleep (DBAS-16) and Symptom Check List 90 (SCL-90)] over eight measurement points were used as outcomes.
- ISI score was used as a response indicator (Järnefelt et al., 2014).

## Conclusions

- The current results confirmed out earlier results (Järnefelt et al., 2014) regarding long-term improvements and two patterns of treatment response after CBT-I delivered by OH nurses. Perceived severity of pre-treatment symptoms showed to be an indicator in the terms of the degree to which CBT-I is beneficial in the long-term.
- Those with a modest response may need additional, more individually tailored and long-term treatment.
- The results need to be interpreted cautiously as insomnia of participants was on average mild, and the study design was non-randomized.

