

## Long-term outcome evaluation of Interdisciplinary Multimodal Pain Therapy (IMPT) on Insomnia: A retrospective analysis of patients with chronic pain at the Cantonal Hospital St.Gallen (Switzerland)

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### Objectives / Introduction:

Chronic pain, in contrast to acute pain, has lost his tissue-danger-signalling property and may cause suffering, loss of function and decrease in quality of life (QoL). Patients with chronic pain often suffer from poor sleep quality and comorbid affective symptoms. Increasing data show a pain-enhancing effect of sleep loss/poor sleep (Finan et al., 2013, Journal of Pain). Interdisciplinary multimodal pain therapy (IMPT), based on the biopsychosocial model, is a collaborative approach and the gold standard to address the multifaceted dimensions of chronic pain. The aim of this study was both to explore prevalence of sleep disturbance in chronic pain patients and to evaluate sleep-related benefit of an IMPT.

### Methods:

This retrospective single-arm interdisciplinary study included 151 patients (101 women, 50 men, mean age = 45.2) with chronic pain (CHOP criteria). We assessed the prevalence sleep disturbance using the Insomnia Severity Index (ISI) at T0 (start of 3.5-week IMPT). We furthermore compared pre-post changes in ISI scores of 32 patients (24 women, 8 men) between T0 and T1 (6 months after completion of IMPT) by performing paired t-tests (87% statistical power).

### Results:

The mean ISI score among all patients was 13.7 (SD = 6.2) on a 0 - 21 scale. This meets the criteria of a subthreshold insomnia whereas a cut-off score of  $\geq 15$  indicates clinical relevance. 74 patients resp. 49% of the sample showed clinical relevant ISI scores. The results from the pre-IMPT (M = 12.3, SD = 5.5) and post-IMPT (M = 9.8, SD = 6.1) reflect a statistical significant decrease in insomnia severity,  $t(31) = 2.4$ ,  $p = .021$ ,  $d = .431$ . We could not identify any predictors (e.g. sex, age, employment status) with regard to sleep-related benefit of the IMPT.

### Conclusion:

Although results demonstrate statistically significant pre-post improvement in insomnia, 8 patients resp. 25% of the subsample showed clinically relevant post-intervention ISI scores. As clinical IMPT programs often lack initial sleep assessment and sleep-specific modules, we suggest to implement such additional offers, e.g. cognitive behavioral therapy for insomnia (CBT-I), into existing therapies. This may contribute to prevent sleep disturbance in patients with chronic pain.

<b>keywords</b>	Interdisciplinary Multimodal Pain Therapy; IMPT; Pain; Chronic Pain; Sleep; Insomnia; Sleep Disorder; ISI
<b>type of project</b>	clinical studies
<b>status</b>	ongoing - follow up
<b>start of project</b>	2022
<b>end of project</b>	2022
<b>study design</b>	Retrospective study analysis
<b>responsible person</b>	Dr. med. Jochen Oeltjenbruns / Dr. med. Dagmar Schmid