

# Cognitive behavioral program in treating insomnia among elderly patients

Kheginja Richter<sup>1,2,3</sup>, Lence Miloseva<sup>2</sup>, Anja Piehl<sup>1</sup>, Guenter Niklewski<sup>1,2</sup>

<sup>1</sup> University Clinic für Psychiatry and Psychotherapy, Paracelsus Private Medical University

<sup>2</sup> University Goce Delcev Stip, Faculty of Medical Science, R. Macedonia

<sup>3</sup> Faculty for Social Sciences, Technical University Nuremberg Georg Simon Ohm



## INTRODUCTION

Insomnia is a most common in elderly patients. World wide experience showed that Cognitive behavioral program in treating insomnia is one of the best effective model. The present study aim to present clinical experience from University Clinic Nuremberg, Centre for Sleeping Medicine with application of Cognitive behavioral program in treating insomnia among elderly.

## MATERIAL AND METHODS

### Cognitive behavioural program

The sample consists of 22 patients with chronic insomnia (10 primary insomnia, 12 secondary insomnia; 16 women, 6 men; mean age 64.6 years) treated in two consecutive group sessions. Participants compliance was 82%.

Treatment program was consists of: 6 Group meetings, 1 Activation week, with total duration during 10 week. It include: Sleep hygiene and stimulus control; Sleep restriction; Progressive Muscle Relaxation; Mental Relaxation, Cognitive restructuring; Light Therapy; Sport; Excursions and cultural program.

#### Content of the group program:

- 6 sessions, 1 week Gym. and cultural activities
- Duration 10 weeks
- Sleep Education
- Sleep restriction and compression
- Progressive Muscle Relaxation
- Light Therapy

#### Group Sessions

#### Activation week with Gymnastic and cultural activities

### Methods

In order to asses: sleep quality, daytime sleepiness, depressive symptoms, cognitive performance, before and after the training, the participants were examined with Pittsburgh Sleep Quality Index, (PSQI); Epworth Sleepiness Scale (ESS); Beck Depression Inventory (BDI); Syndrome Short Test (SKT).

In addition, sleep diary were conducted and completed an evaluation questionnaire at the last meeting of the patient.

In order to assess the results of the Sleep diary and for the total and possibly sub-scores of the questionnaires pre-post comparison were made with the Wilcoxon signed-rank test, as a non-parametric statistical hypothesis test used for comparing two matched samples. Statistical analyzes depending on the machining rate on subgroups (15 to 17 people).

## RESULTS

### Abanalysis of the sleep quality using sleep diaries

The following table presents the results of the comparison of sleep parameter before and after the group treatment. Seventeen participants filled sleep diaries beginning from the onset until the end of the therapy. The results show improvement of the sleep latency and daily fatigue.

	PRE	POST	p
Sleep at day (Min.)	5,0 (10,0)	3,6 (9,1)	,028*
Sleep Drugs (intake in days)	1,1 (1,8)	1,1 (1,7)	,465
Drinking Alcohol (Glasses)	1,1 (1,5)	0,6 (0,9)	,123
Fatigue befor going to bed ( scala from 1 to 6)	3,8 (0,9)	3,5 (0,7)	,055
Sleep Latency (Min.)	43,6 (25,2)	34,0 (29,1)	,002**
Number of awakening at night	2,3 (1,5)	2,3 (1,4)	,938
Wake time after sleep onset (Min.)	39,4 (27,2)	59,4 (49,9)	,061
Total Sleep Time(h)	5,5 (1,4)	5,3 (1,1)	,609
Time in Bed (h)	8,1 (0,8)	8,0 (0,8)	,938
Sleep efficiency(%)	67,7 (13,8)	66,5 (15,4)	,722

### Pre Post Comparasion based on psychological tests

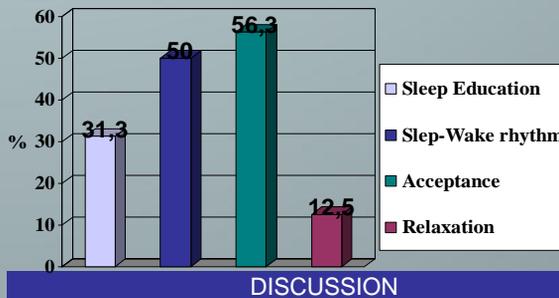
Table 2 shows the results of the psychometric questionnaires with levels of significance in black.

	PRE	POST	p
ESS (N = 16)	7,4 (5,8)	5,5 (4,9)	,043*
PSQI Score (N = 16)	12,8 (3,8)	11,6 (4,4)	,137
PSQI Sleep Latency	2,4 (0,9)	1,9 (1,1)	,014*
PSQI Time in Bed	8,4 (0,9)	7,9 (1,0)	,050
BDI (N = 17)	17,2 (9,3)	13,9 (8,3)	,028*
SKT Score (N = 15)	2,1 (3,0)	2,1 (2,9)	1,000
SKT Memory	0,7 (0,8)	0,5 (1,1)	,206
SKT Attention	1,4 (2,7)	1,7 (2,1)	,414

There was significant improvement of the sleep latency (PSQI), daily sleepiness (ESS) and depressive symptoms as well (BDI). The Memory test indicates light memory disturbances of the participants at the time of treatment start. There are wide ranges of standard deviation in all significant results (ESS, BDI, SKT) which could be a sign for high variability of the symptoms.

## Results

The Analysis of the evaluation after finishing of the group treatment revealed results for 16 participants. About one half of them reported to have big advance of sleep education and have learned to accept their sleep problems with much less focusing on them.



The high attendance compliance of 82% indicates a great motivation of the participating patients. The decisive factor here is probably a high psychological strain caused. The "poor" sleep quality of our sample showed both psycho-metric (PSQI) and in the sleep diary (sleep efficiency: 67.7%).

Of the accompanying symptoms mentioned above in a means "light" depressive symptoms could be objectified, whereas daytime sleepiness and cognitive impairment were on the clinical border relevance.

## CONCLUSIONS

The results of the pre-post lead us to the conclusion that sleep quality, daytime sleepiness, sleep time, and mood positively changed during the day among older insomnia patients under the described cognitive-behavioral group program. Is draw special-lift that just often complained of the elderly long sleep onset and increased daytime sleep were reduced. However, important parameters such as sleep efficiency and total sleep time were unaffected, suggesting the need for a more intensive therapy settings.