

# MINDFULNESS-BASED PAIN THERAPY (MBPT)

Mindfulness Meditation for the treatment of  
chronic low back pain:

A preliminary quasi-randomized controlled pilot  
study at Klinikum Klagenfurt a. W.

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# WHAT IS MINDFULNESS-BASED PAIN THERAPY?

Mindfulness-Based Pain Therapy (MBPT) a treatment combining mindfulness meditation and several interventions taken from cognitive therapy within the frame of the multimodal pain therapy program

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# WHAT IS MINDFULNESS?

Mindfulness is the basic human ability to be fully present, aware of where we are and what we're doing, and not overly reactive or overwhelmed by what's going on around us.




# THE TRIAL

- ▶ **Design:** A quasi-randomized case-control study.
- ▶ **Subjects:** The study included 20 subjects with chronic low back pain (CLBP) were recruited and quasi-randomly allocated to a standard multimodal pain therapy (n=10) or to a multimodal pain therapy group with MBPT (n=10).
- ▶ The intervention was identical for both groups except for the mindfulness meditation program.
- ▶ **Methods:** Both groups participated in a 4-week training, 5 times/week. All subjects underwent the same measurement protocol before and after the intervention.
- ▶ **Frequency and Setting:** patients were trained daily (2 h) in mindfulness meditation over a period of 4 weeks

# PROGRAM TECHNIQUES

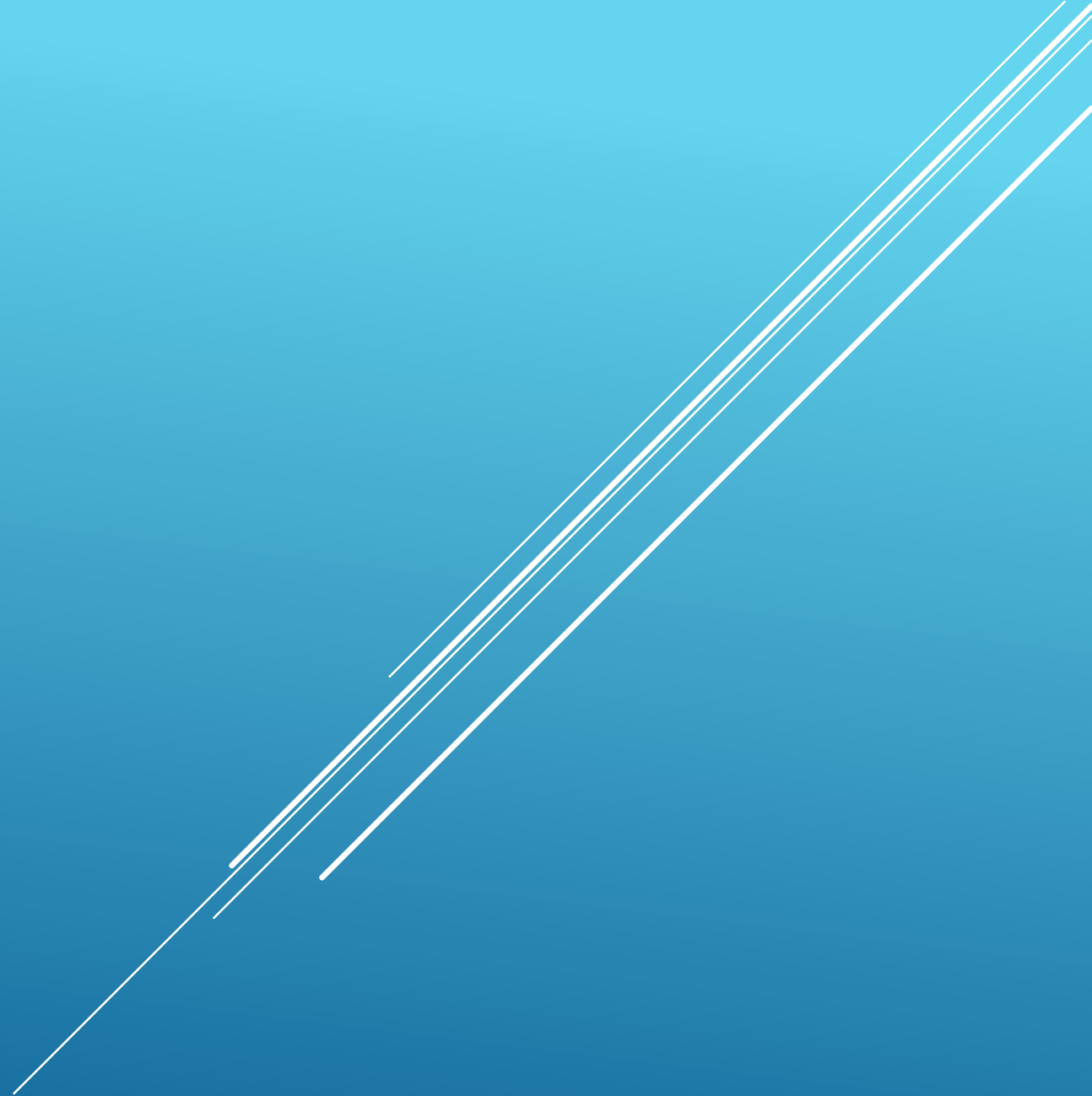
The MBPT program focuses specifically on chronic pain and involves a variety of mindfulness meditation techniques including:

- ▶ mindful breathing
  - ▶ body scan
  - ▶ mindful yoga
  - ▶ walking meditation
  - ▶ other meditations (metta)
  - ▶ cognitive therapy techniques
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# MEASURES

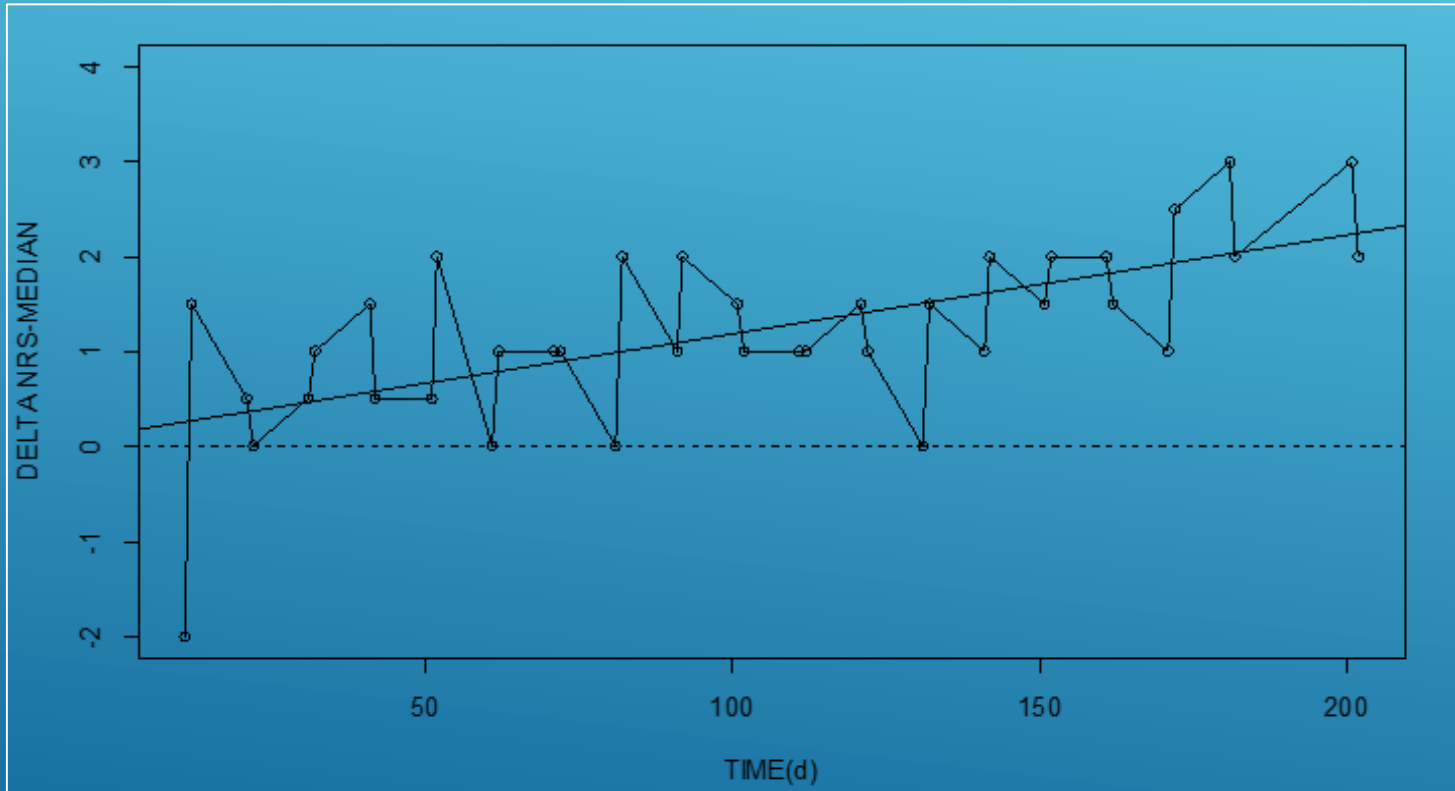
- ▶ **Numerical Pain Rating scale (NRS)** - Measure the intensity of pain
- ▶ **EuroQol 5-D** - Assessment of the health status
- ▶ **Pain perception Scale (PPS)** - Assessment of perceived pain  
(Emotional and the sensory pain)
- ▶ **Pain disability Index (PDI)** - Pain related disability in  
different areas of patient's life activity
- ▶ **Beck Depression Inventory (BDI)** - Measure of depression
- ▶ **Pain Catastrophizing Scale (PCS)** - Assessment of catastrophizing

# RESULTS





# NUMERICAL PAIN RATING SCALE

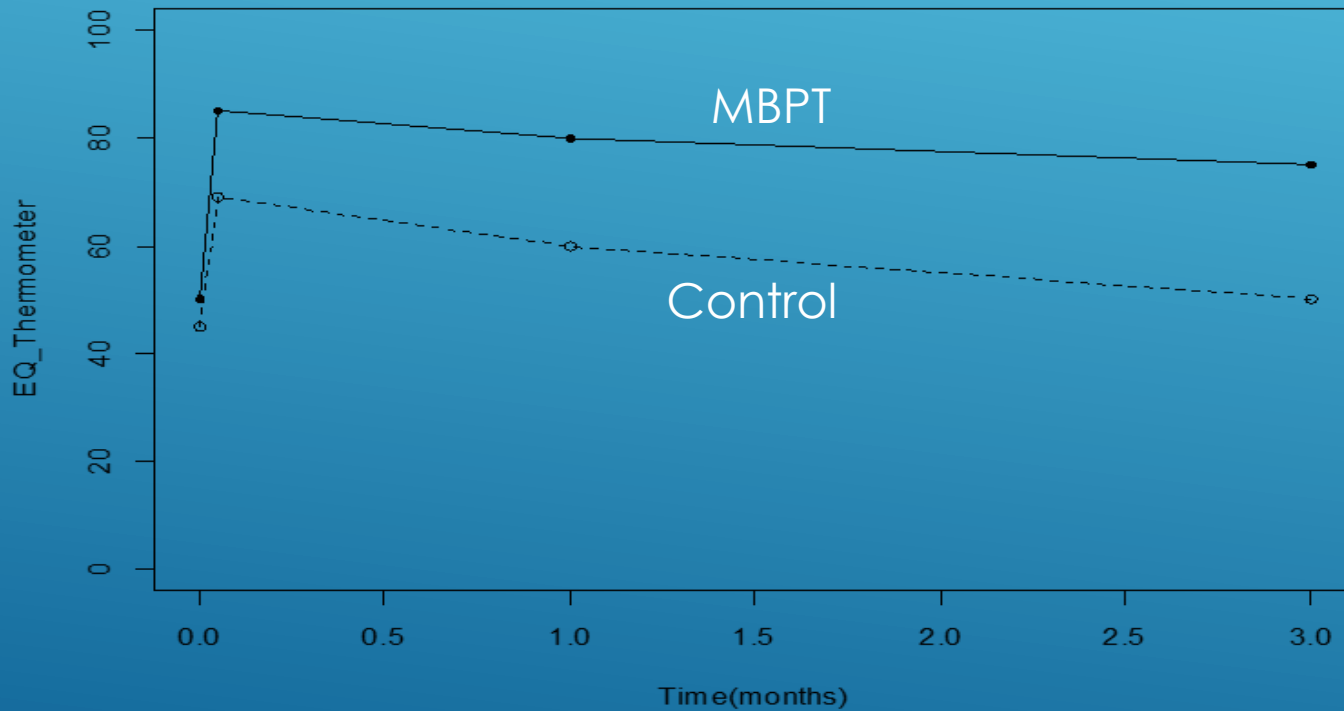


Time progression of the NRS median differences.

MBPT patients have highly significant lower pain scores



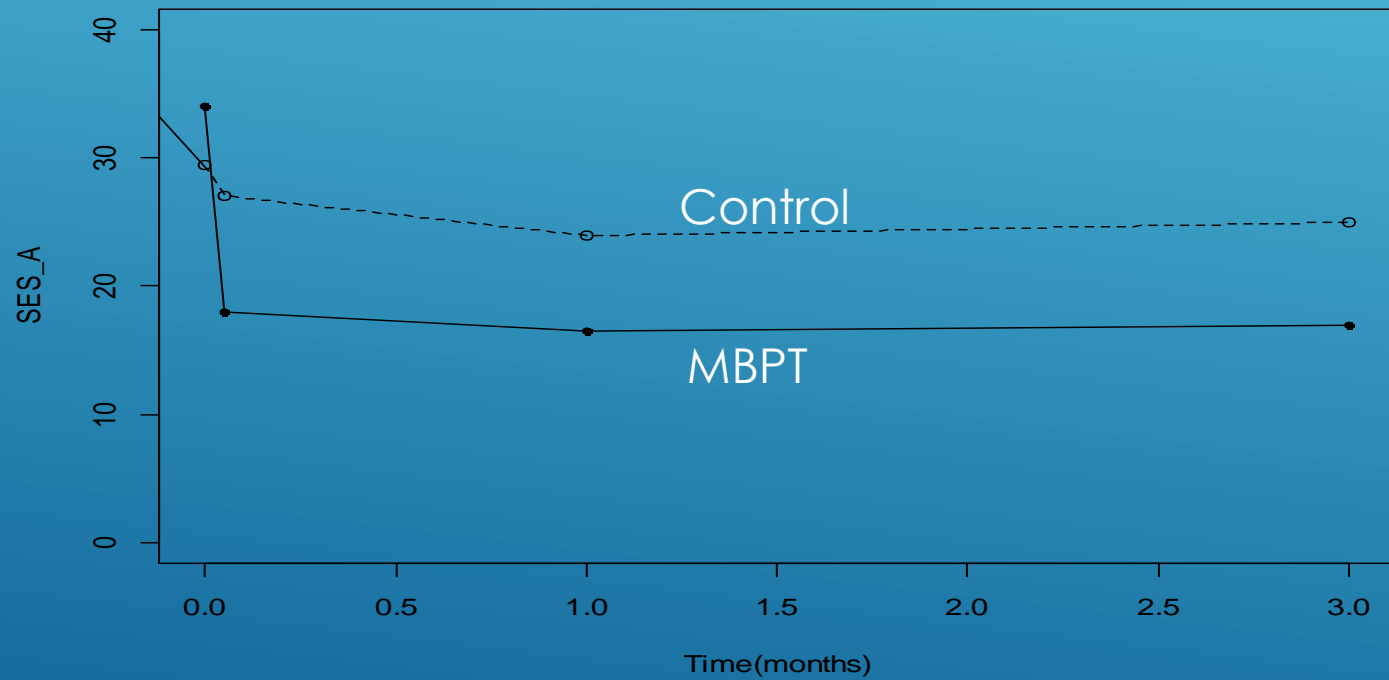
# EUROQOL 5-D



The patients of the experimental group declared an increase in quality of life from 50% (pre) to 75% (3-Months)

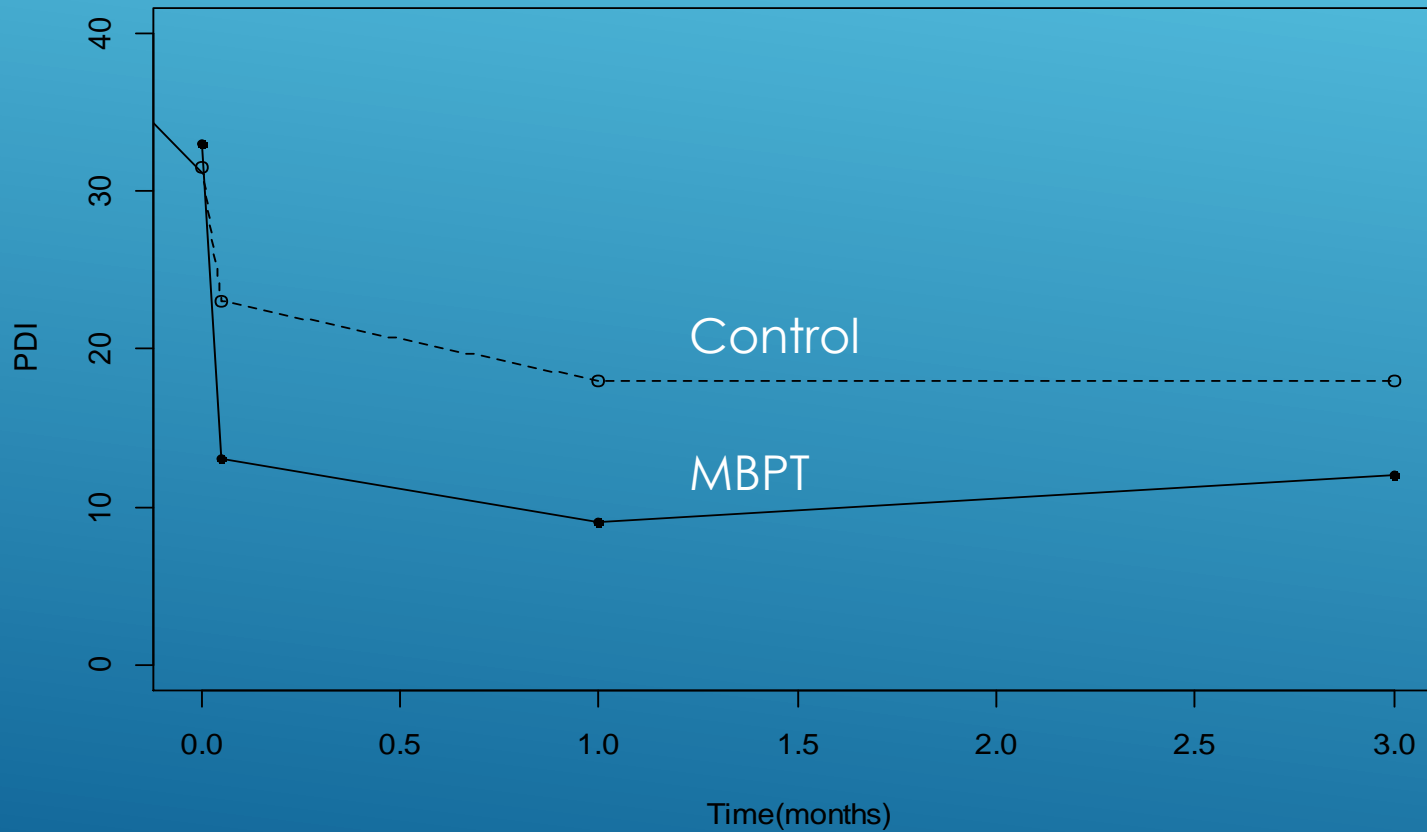
control group (Pre: 45% Follow-up at 3 months: 50%)

# PAIN PERCEPTION SCALE PPS



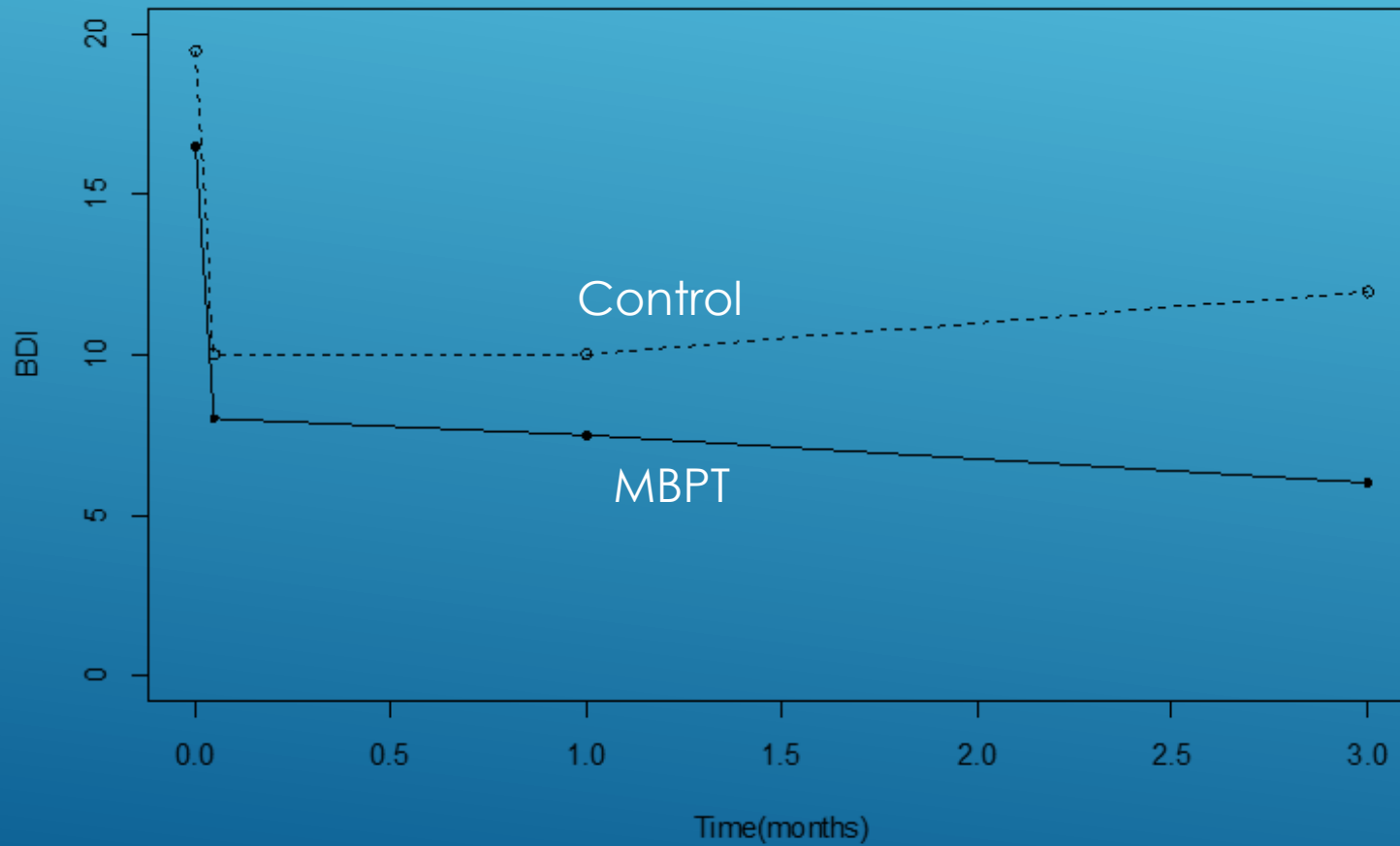
The MBPT-group has consistently lower values than the control group

# PAIN DISABILITY INDEX



Significant changes in pain-related disability were observed in the MBPT-Group immediately at post and at 1 month

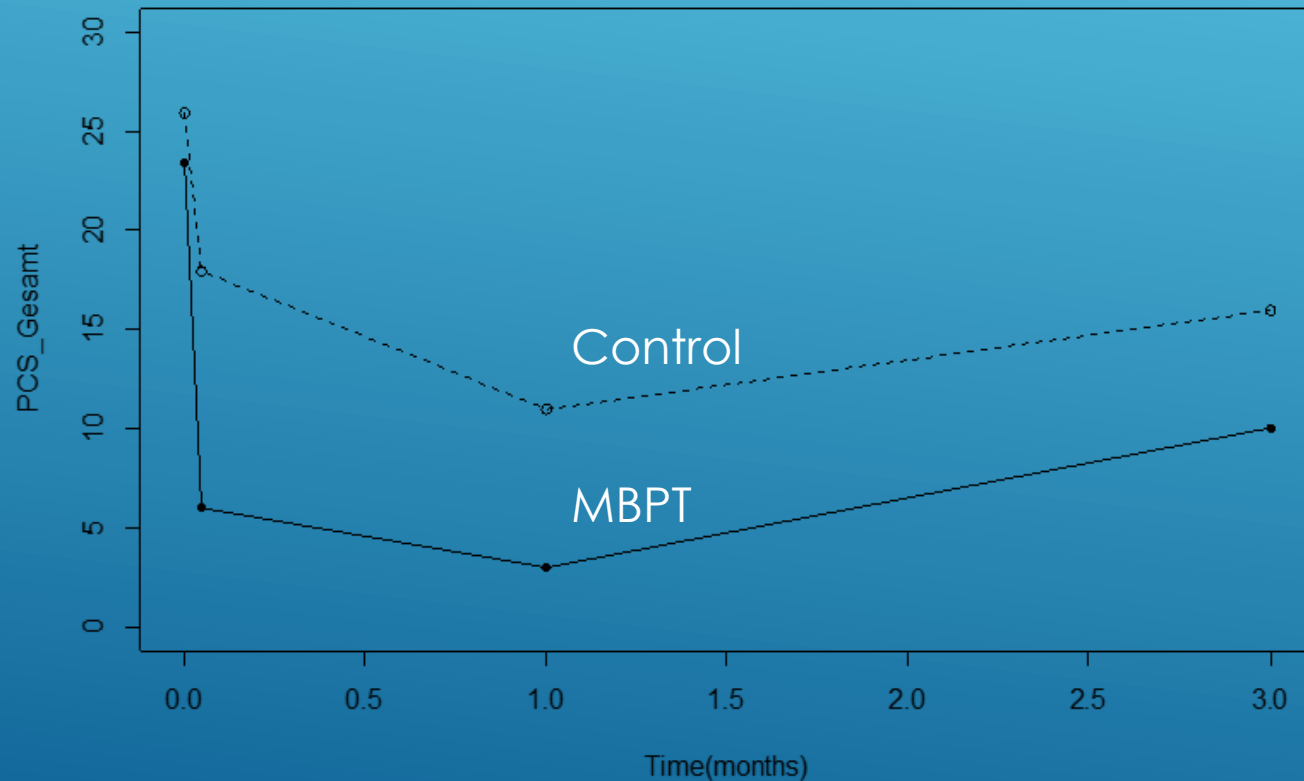
# BECK DEPRESSION INVENTORY



Although the differences at the single measurement points are not significant, the progressive increase of the median differences between the two groups is remarkable

# PAIN CATASTROPHIZING SCALE

The MBPT group demonstrates a significant decrease in pain catastrophizing value from baseline compared with control group.



Results indicate that pain catastrophizing reduction was maintained over 1-month to 3-month follow-up periods.

# WHY MINDFULNESS MEDITATION WORKS?

The 4 mechanisms of Mindfulness Meditation

| <b>Body awareness</b>                 | <b>Emotional regulation (Acceptance)</b>                                | <b>Attention regulation</b>   | <b>Change in perspective of the self</b>                   |
|---------------------------------------|---|-------------------------------|--|
| Sensory experience of body sensations | Approaching ongoing emotional reactions nonjudgmentally with acceptance | Attentional training (Breath) | Detachment from identification with a static sense of self |