

SMS-feedback helps to support therapy of aversive tension states and tinnitus

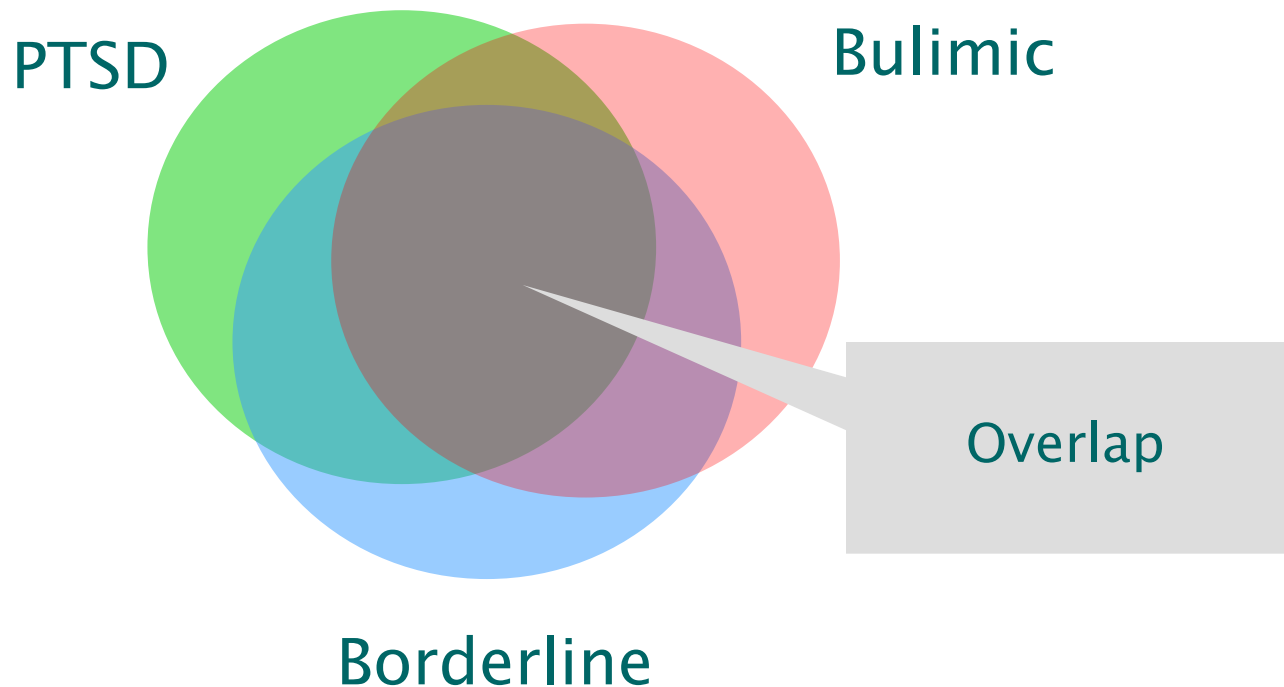
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Background

- Borderline-, post-traumatic-stress-disorder, and bulimic patients typically suffer from **aversive tension states**



Rational

Aversive Tension State

- Restlessness
- Irritability
- Explosive Anger
- Phases of Inner Emptiness
- Intensive and consistent

Unwanted Behaviour

- Self damaging behaviour
- Binge eating, vomiting
- Risk seeking

**Intervention:
increasing
regulation
and
self control**

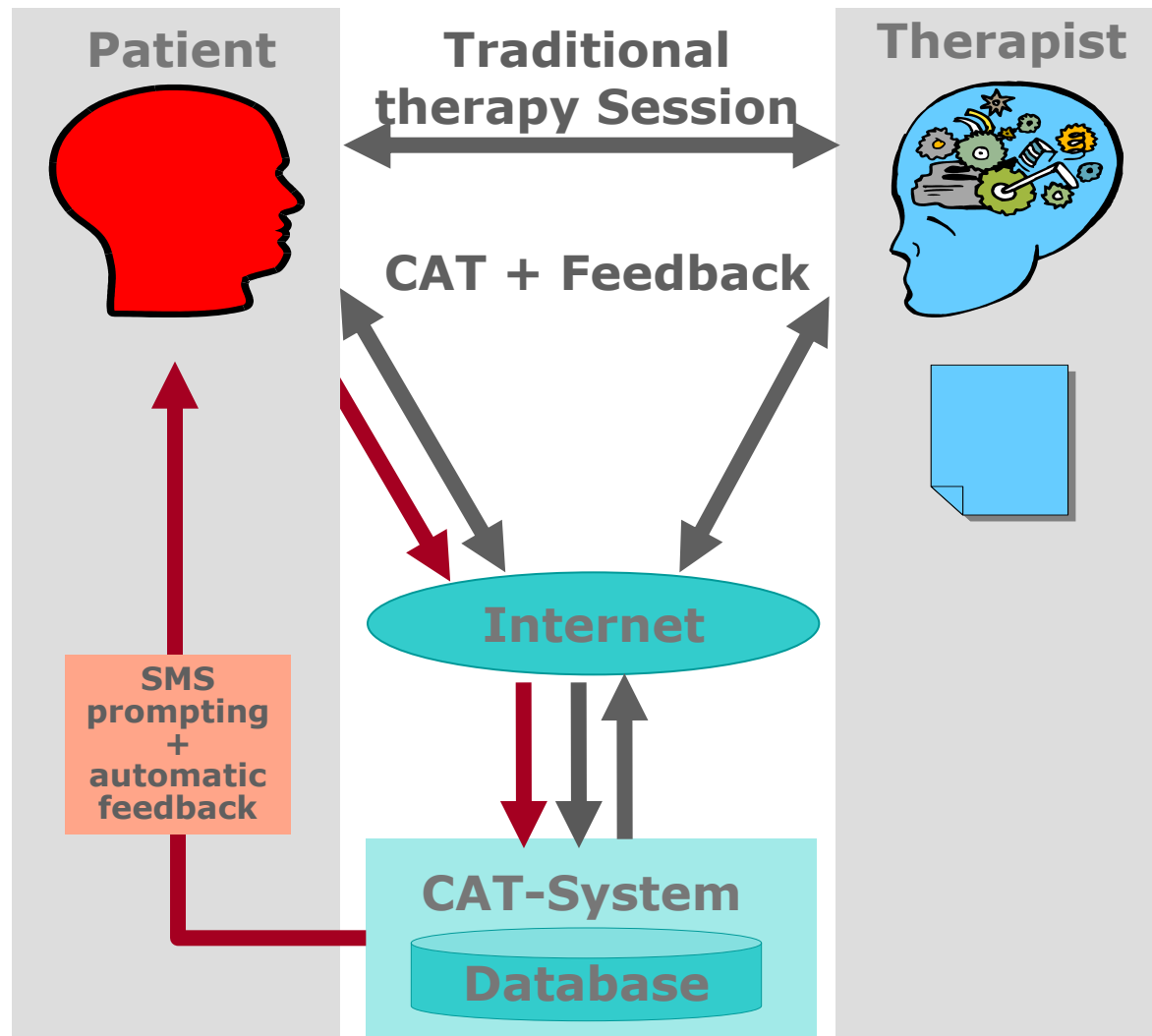
A tailored intervention

SMS-Feedback via mobile phone is expected to

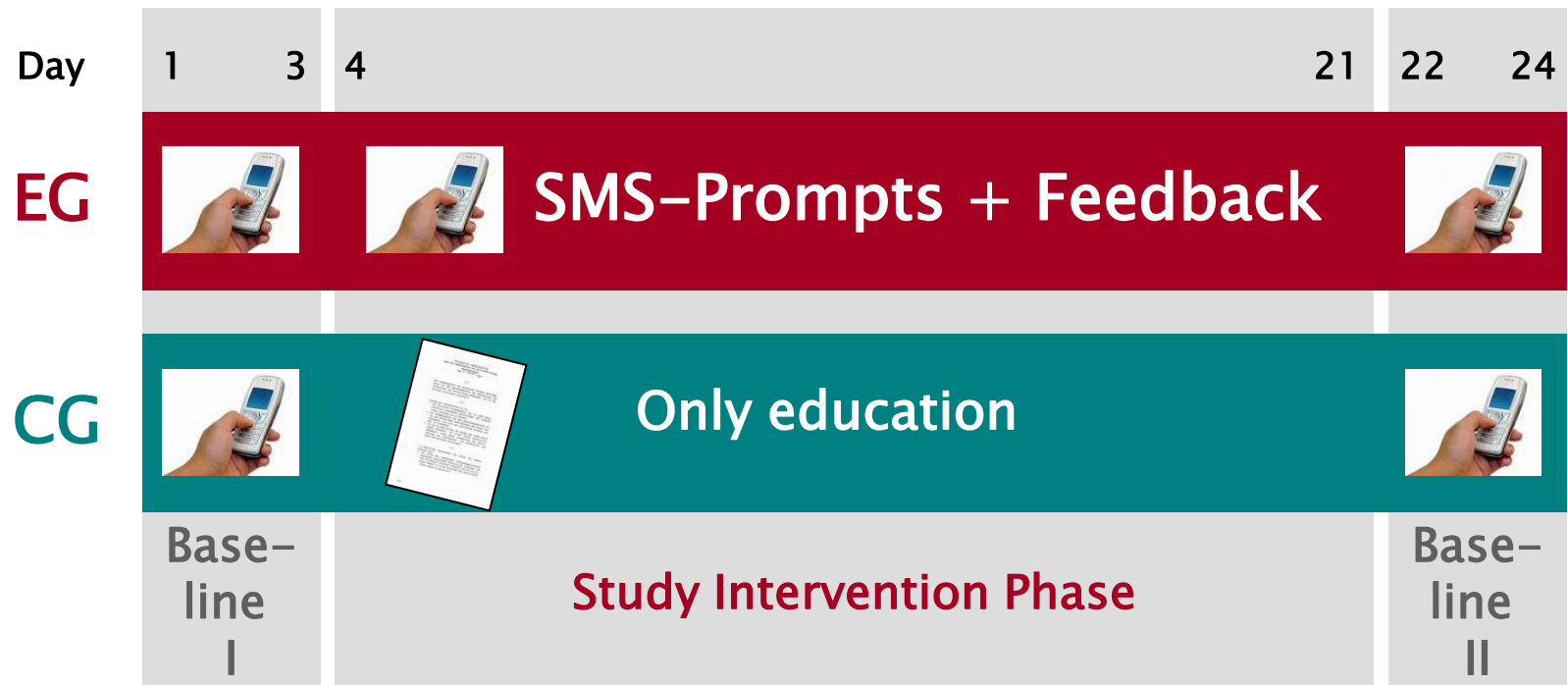
- improve mood perception
- increase acuity of perception of aversive inner tension states
- suggest helpful strategies for the **regulation** of tension states
- increase **self control**



Technical platform: CAT-System



Design





Prompts and feedback

- 4 prompts per day (randomly distributed) requested ratings of current mood states
- Mood could also be rated self initiated and had to be rated after awakening and before going to sleep
- EG: during intervention phase: **Feedback, suggesting help strategies if tension ≥ 7**
- **30 min later SMS-Prompt for effects of intervention**
- Request for a list of helpful strategies whenever needed

Mood assessment

Are you currently experiencing one of the following mood states? If yes, how intense?

(0 = not at all, 9 = maximal intensity)

■	Happiness	0	1	2	3	4	5	6	7	8	9
■	Anxiety	0	1	2	3	4	5	6	7	8	9
■	Anger	0	1	2	3	4	5	6	7	8	9
■	Shame	0	1	2	3	4	5	6	7	8	9
■	Disgust	0	1	2	3	4	5	6	7	8	9
■	Sadness	0	1	2	3	4	5	6	7	8	9

Aversive inner tension

Are you currently experiencing an aversive inner tension state?

0 1 2 3 4 5 6 **7 8 9**

Suggested Help Strategies

- Distraction
- Physical Activity
- Intense Sensations
- Get Support
- Relaxation/Breathing Exercise

Prompt after 30 Minutes:

- How intense is the tension now?
- Could you use one of the suggested strategies? Which one?

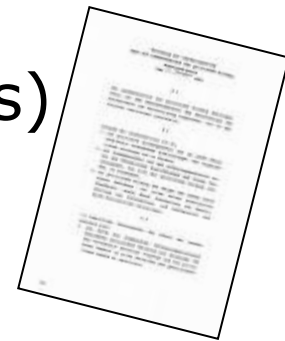


Subjects and number of input

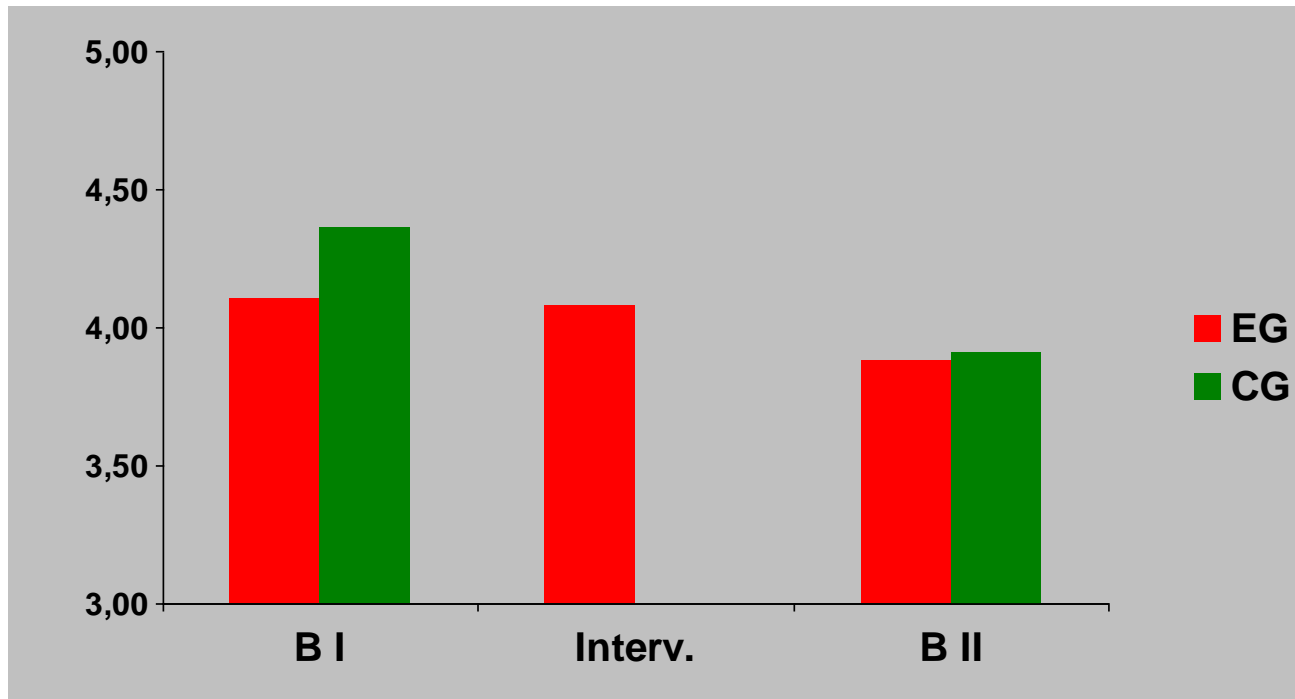
- **EG:** N= 45 Patients (2 males)
- Input: 276/3182/262
- Feedback-Help 350; effect of help 338



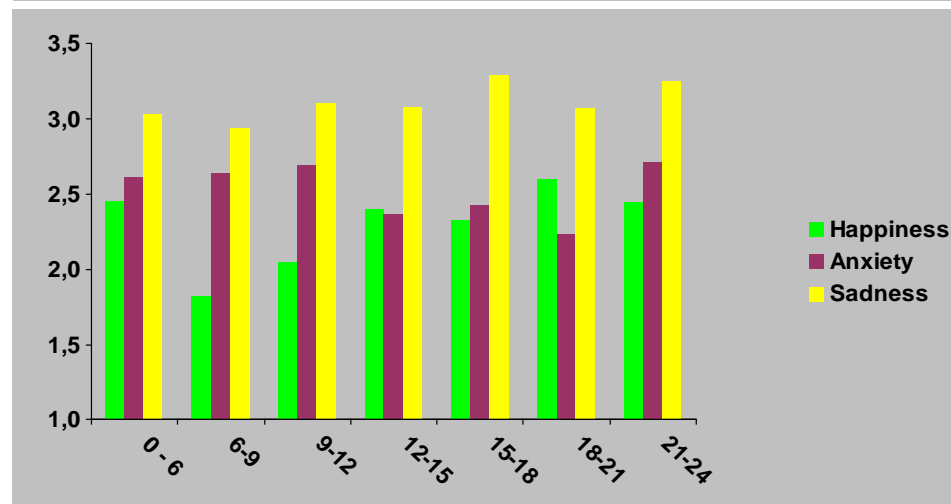
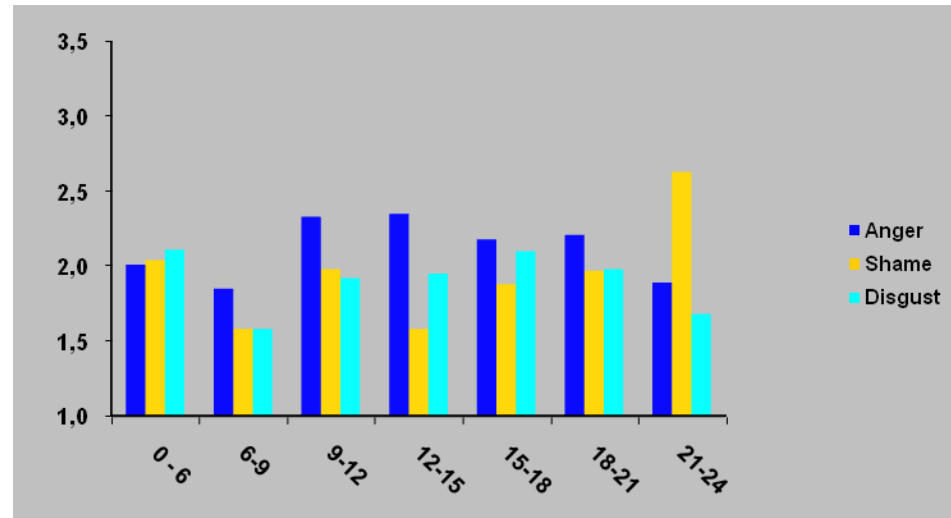
- **CG:** N= 49 Patients (6 males)
- Input: 327/-/294



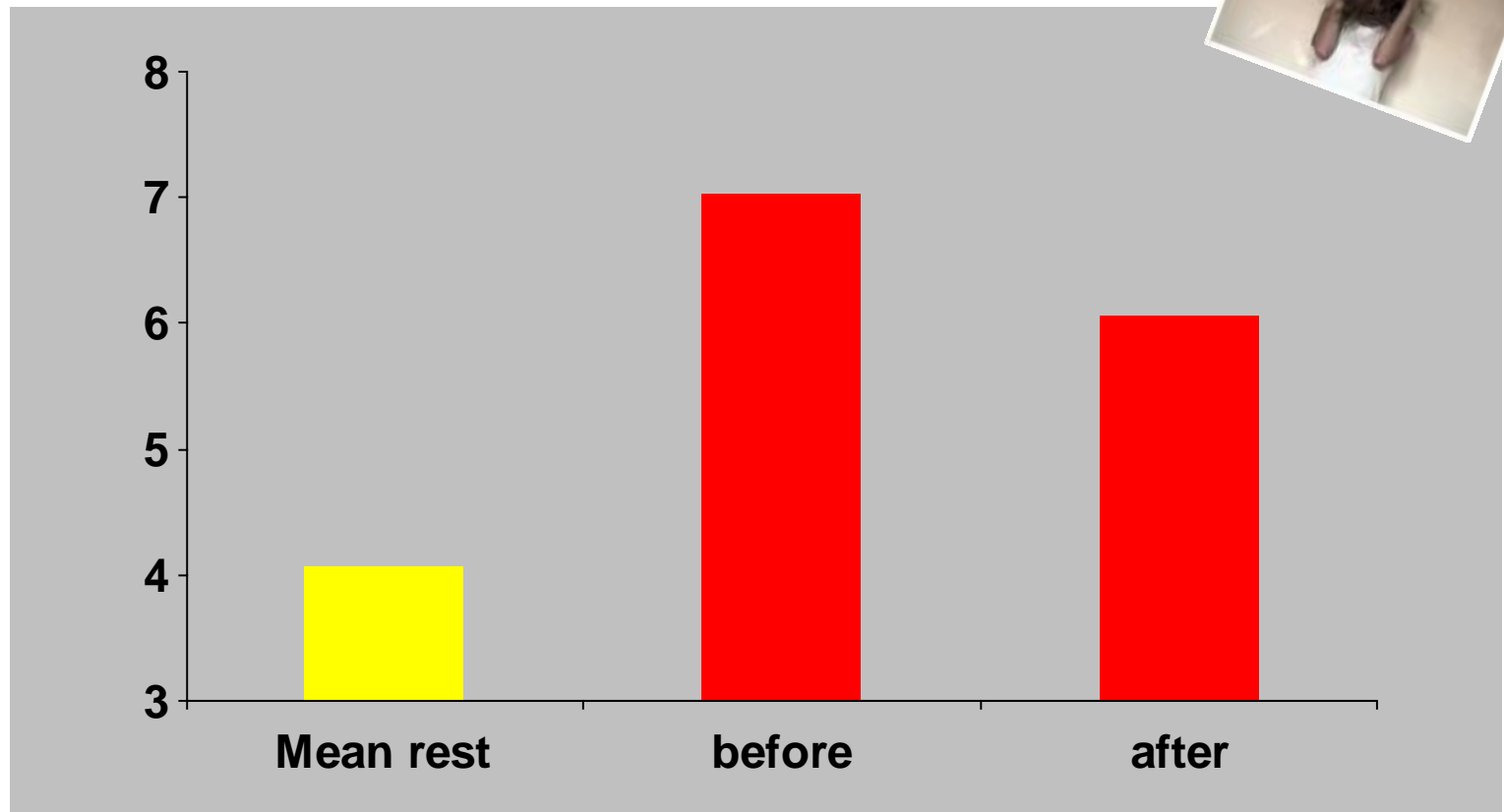
Tension values



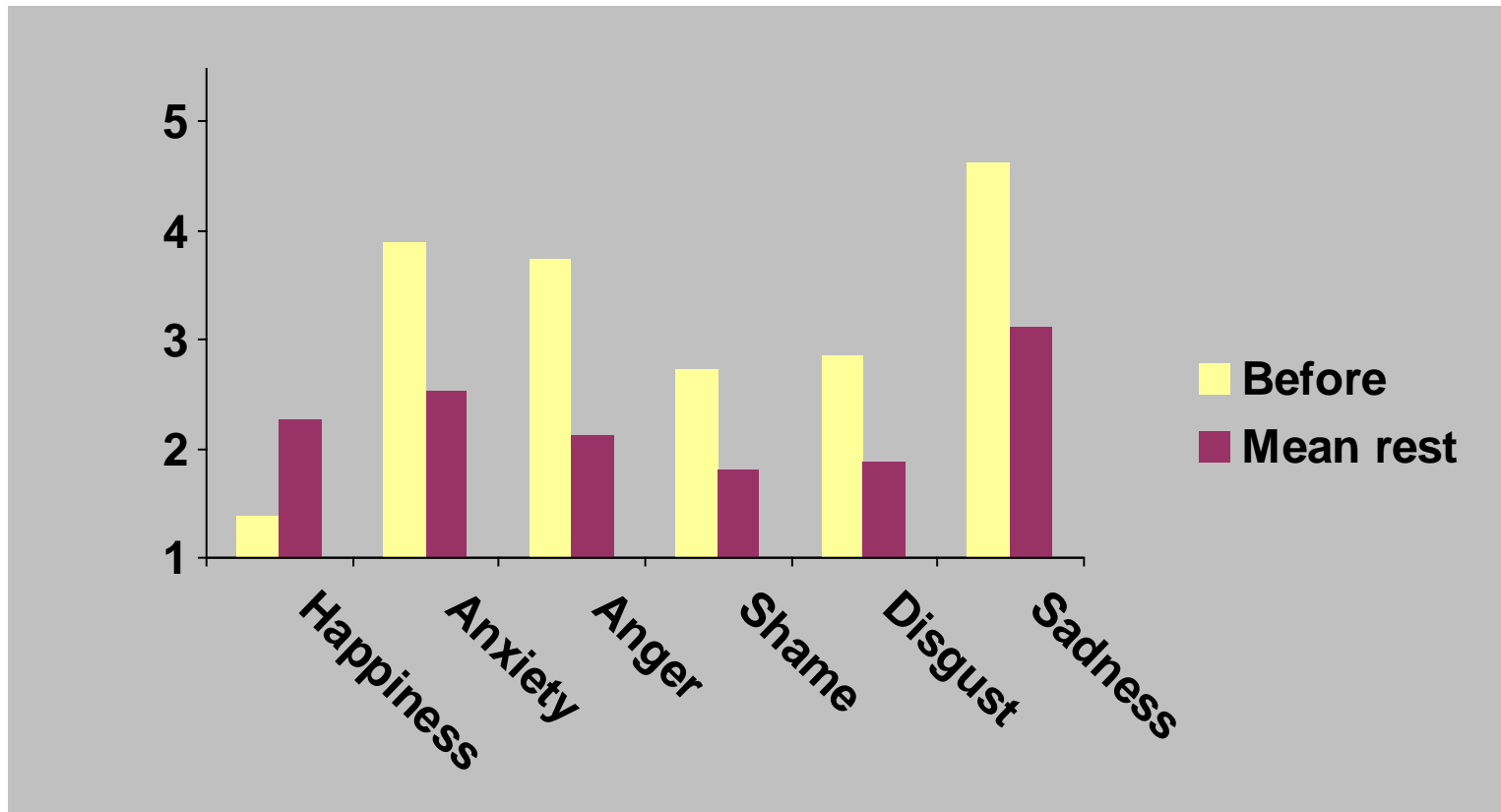
Mood ratings: 24 hrs, EG, Intervention phase



Effects of feedback on tension



Mood and inner tension



Use of help strategies

■ Distraction	30%
■ Physical activity	14%
■ Relaxation	12%
■ Support	10%
■ Intense sensations	8%
■ Other	6%
■ None	18%

Limitations

- Patients should know that there is no immediate contact to a therapist
- Feedback-help is created automatically and is not individually tailored
- Reinforcing value of feedback may have influenced tension ratings



Summary

- Inner aversive tension in general and throughout the day decreased, albeit not exclusively for the EG
- The different mood states were, in conjunction with increased inner aversive states, perceived as more intense
- Feedback helped to reduce tension levels
- Methods to reduce aversive states were applied in differing frequency



Outlook

- The method seems a promising approach to react immediately to aversive states as they occur and to induce patients to recur to prearranged therapeutic strategies
- A comprehensive final analysis will be able to show to what extent overall treatment has been positively affected.
- It can be used with potential profit in other areas as well



CAT used in the treatment of tinnitus

- Attention distraction exercises are an important feature within the treatment of **tinnitus**
- An ongoing study uses the same technical platform.
- For every self initiated attention distraction exercise the effect on tinnitus has to be reported
- If no exercises are reported, a reminder is sent out together with a suggestion of various exercise types.

St. Franziska-Stift

... thank you very much for your attention

Psychosomatische Fachklinik

Bad Kreuznach