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Development of relaxation and reduction of chronic stress through the intervention of *gradual cognitive training*

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background:

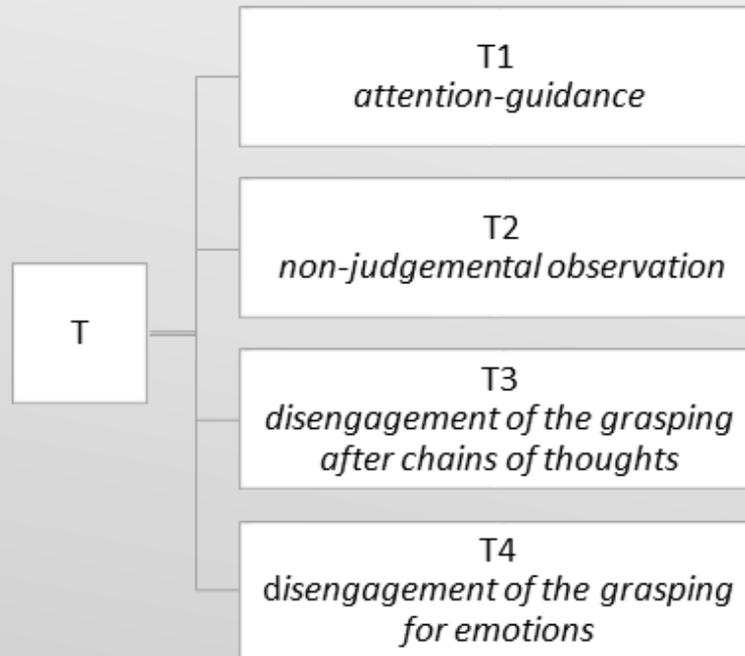
the intervention of *gradual cognitive training* was developed based on ten years of Buddhist, Tibetology and Tibetan medicine studies in native language contexts

introspective methods:

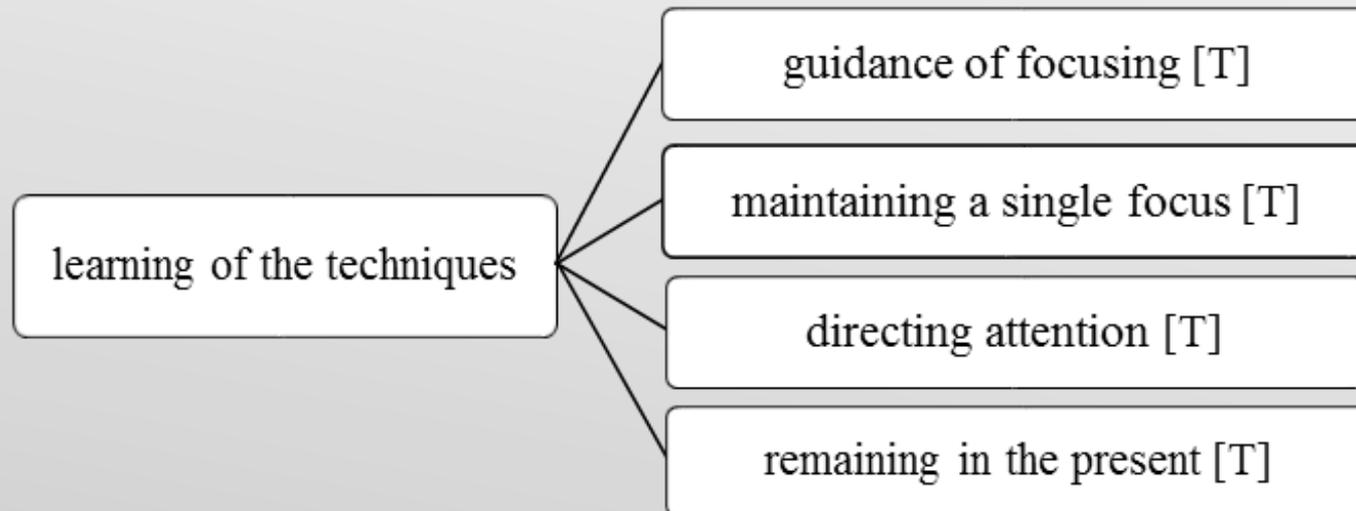
- consist of *topdown* as well as *bottomup* effective components
- commence with an easy to conduct focusing exercise

teaching the intervention:

after teaching it to the probands for one day (about six hours) it was used by them on a daily basis.



key techniques of training (modified) (Attersee Anders, 2016, pg.129, fig. 16)



learning of the techniques (Attersee Anders, 2017, pg. 193, fig. 27)



techniques of introspective training for beginners:

that is, the understanding of the stabilising effect of the single focus was combined with techniques of multiple focus, which were supposed to enhance observation and reflection of thoughts and emotions.

fields of application of introspective training and its effects:

- self-reference and emotion regulation in psychotherapy
- introspection of the therapist and patient affect the therapeutic relationship, therapy process and outcome
- in clinical work and psychotherapy



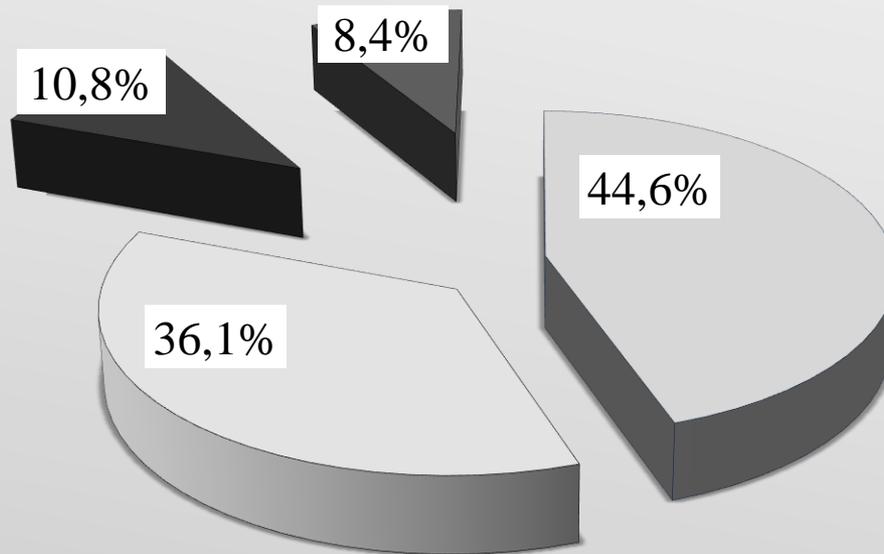
83 probands (group of training)
71 people in the waiting control group

training:

individual training after six hours of teaching

for four weeks up to six months

here: results after four weeks of training



- no psychotherapy
- psychotherapist
- in psychotherapy
- past psychotherapy

percentage of psychotherapists, psychotherapy patients and students (Attersee Anders, 2016, pg. 169, fig. 31 modified)



method of investigation:

two psychological questionnaires:

1. "ASS-SYM Symptomfragebogen" (Krampen, 2006) and
2. "TICS SSCS" (Schulz, Schlotz, Becker, 2004).

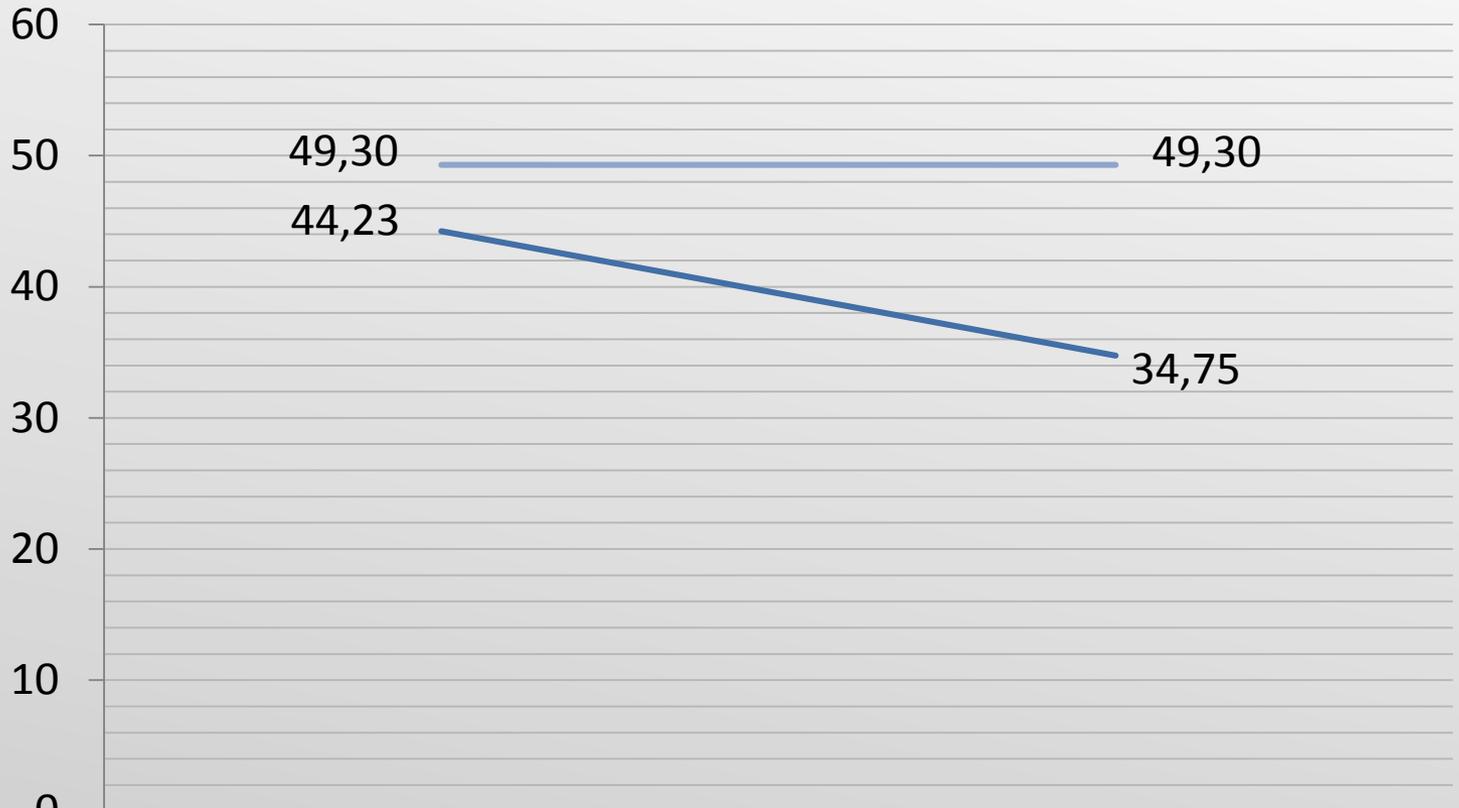
analysis:

t-tests for connected samples in total scales and dimensions



It was shown to induce relaxation and decrease in chronic stress in students, psychotherapists and psychotherapy patients after one month of about daily ten minutes training.

effect in relaxation after four weeks of training
[with ASS-SYM-G, Krampen, 2006]



| | baseline | after four weeks |
|---------------------|----------|------------------|
| — group of training | 44,23 | 34,75 |
| — control group | 49,30 | 49,30 |

t-test ASS-SYM-G, in past two weeks (Attersee Anders, 2016, pg. 171, fig. 32)



asking for the past two weeks:

group of training:

$n=79$

$p=0,000*$** when $\alpha=0,05$

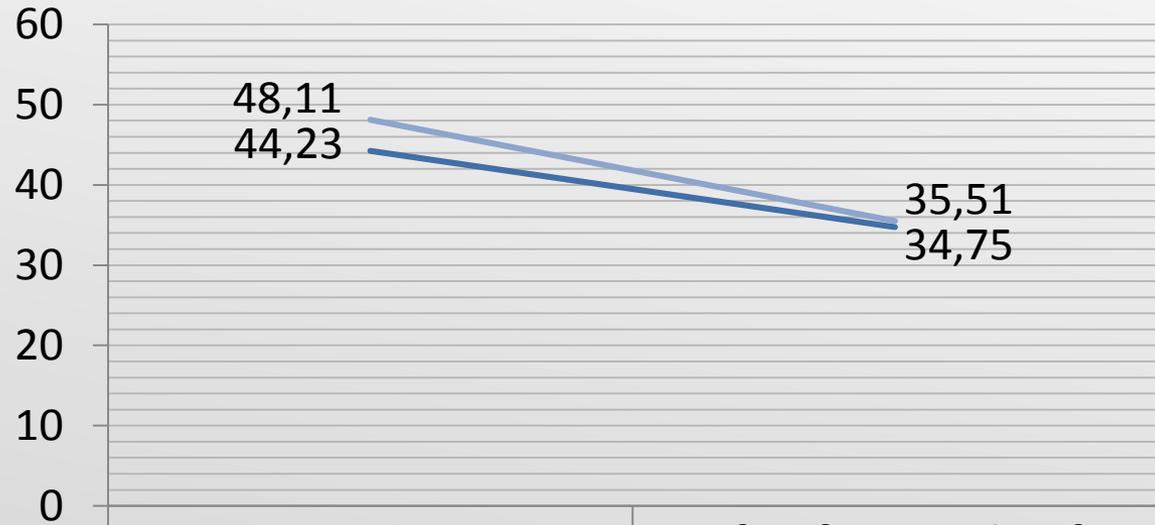
$M_1=44,23$, $SD_1=25,03$, $M_2=34,75$, $SD_2=22,71$, $t=5,08$, $KI=5,77-13,20$

control group:

$n=69$

$M_1=49,30$, $SD_1=24,93$, $M_2=49,30$, $SD_2=25,62$, $t=0,00$, $KI=-4,58-4,58$

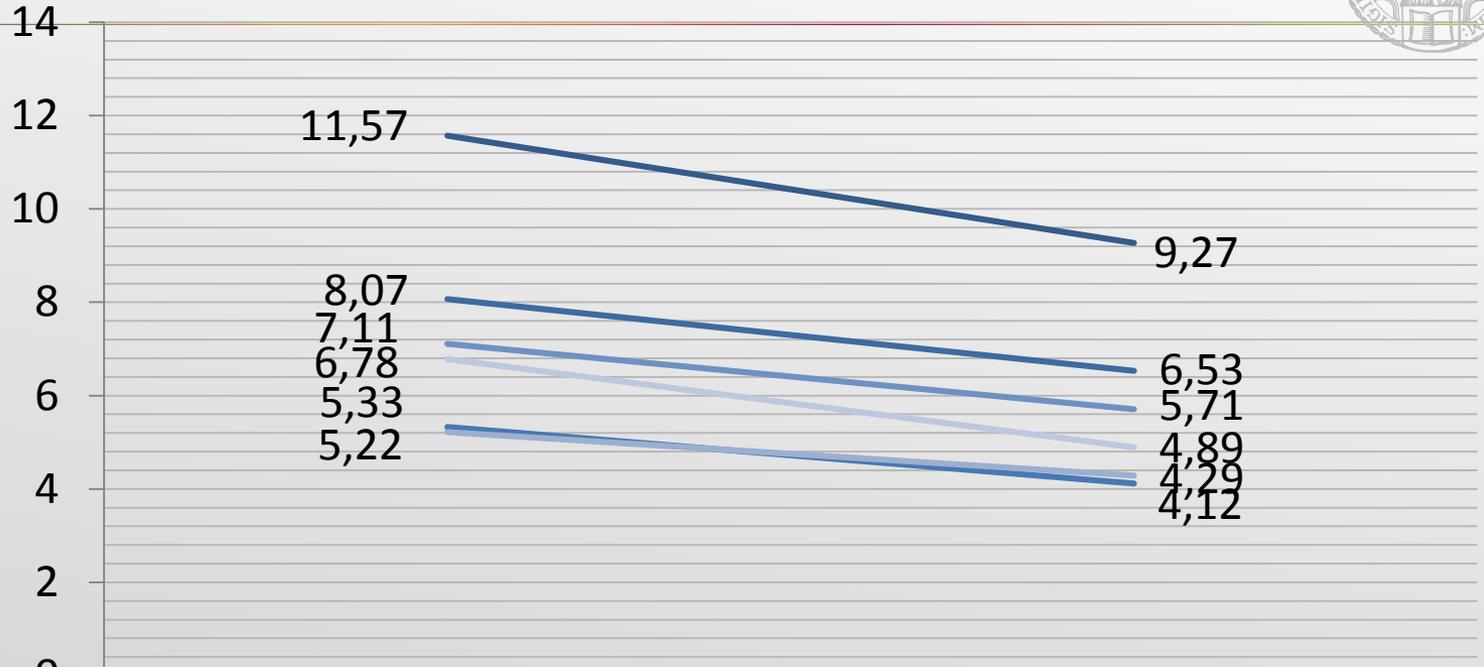
t-test ASS-SYM-G, in past two weeks (Attersee Anders, 2016, pg. 170, 171)



| | before training | after four weeks of training |
|----------------------------------|-----------------|------------------------------|
| —referring to the past two weeks | 44,23 | 34,75 |
| —referring to past four weeks | 48,11 | 35,51 |

t-test ASS-SYM-G, comparing question son the past two and past four weeks
(Attersee Anders, 2016, pg. 172, fig. 33)

changes within the six dimensions of *ASS-SYM*
after four weeks of training, referring to past two weeks



| | before training | after four weeks of training |
|------------------|-----------------|------------------------------|
| — ASS-SYM-ERSCHÖ | 11,57 | 9,27 |
| — ASS-SYM-ANSPAN | 8,07 | 6,53 |
| — ASS-SYM-DYSREG | 5,33 | 4,12 |
| — ASS-SYM-LEIST | 7,11 | 5,71 |
| — ASS-SYM-SCHMER | 5,22 | 4,29 |
| — ASS-SYM-SELBST | 6,78 | 4,89 |

physical and mental exhaustion

[*Körperliche und psychische Erschöpfung*]

$p=0,000^{*}$** , $N=83$, $M_1=11,57$, $SD_1=5,26$,
 $M_2=9,27$, $SD_2=4,71$, $t=4,85$, $KI=1,36-3,25$

strain and nervousness

[*Anspannung und Nervosität*]

$p=0,000^{*}$** , $N=83$, $M_1=8,07$, $SD_1=5,13$,
 $M_2=6,53$, $SD_2=4,57$, $t=3,81$, $KI=0,74-2,35$

psychophysiological dysregulation

[*Psychophysiologische Dysregulationen*]

$p=0,001^{*}$** , $N=83$, $M_1=5,33$, $SD_1=4,59$,
 $M_2=4,12$, $SD_2=3,85$, $t=3,30$, $KI=0,48-1,93$

difficulties in performance and behaviour

[*Leistungs- und Verhaltensschwierigkeiten*]

$p=0,001^{*}$** , $n=79$, $M_1=7,11$, $SD_1=5,30$,
 $M_2=5,71$, $SD_2=4,89$, $t=3,39$, $KI=0,58-2,23$

pain conditions

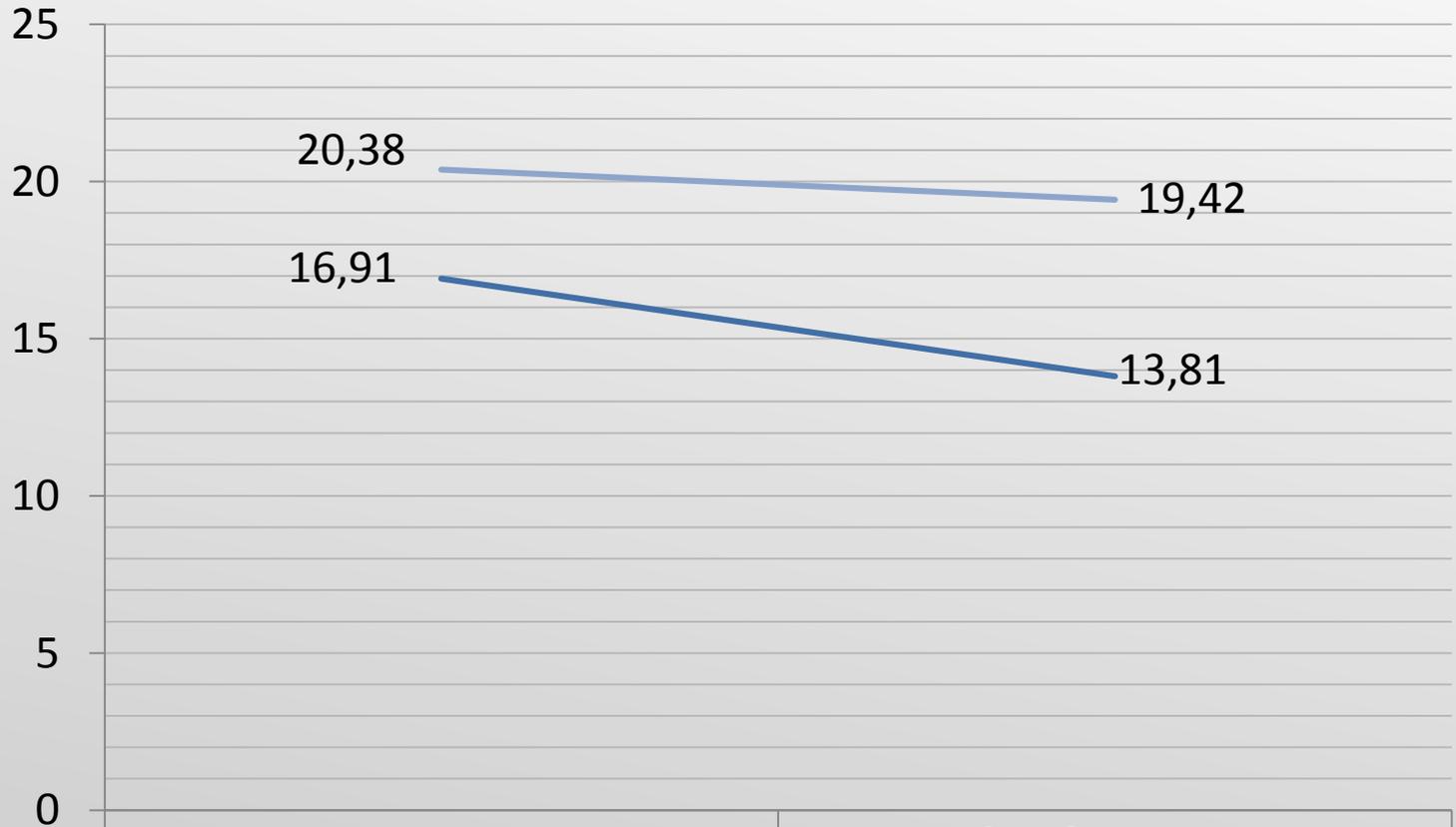
[*Schmerzbelastungen*]

$p=0,009^{}$** , $n=79$, $M_1=5,22$, $SD_1=4,26$,
 $M_2=4,29$, $SD_2=3,79$, $t=2,66$, $KI=0,23-1,61$

problems with self-determination

[*Probleme in der Selbstbestimmung*]

$p=0,000^{*}$** , $n=79$, $M_1=6,78$, $SD_1=5,16$,
 $M_2=4,89$, $SD_2=4,53$, $t=4,04$, $KI=0,96-2,83$



| | baseline | after four weeks |
|-------------------|----------|------------------|
| group of training | 16,91 | 13,81 |
| control group | 20,38 | 19,42 |

***t*-test TICS SSCS comparing group of training and control group, asking for past three months
(Attersee Anders, 2016, pg. 173, fig. 34)**



group of training:

$n=81$

$p=0,000***$

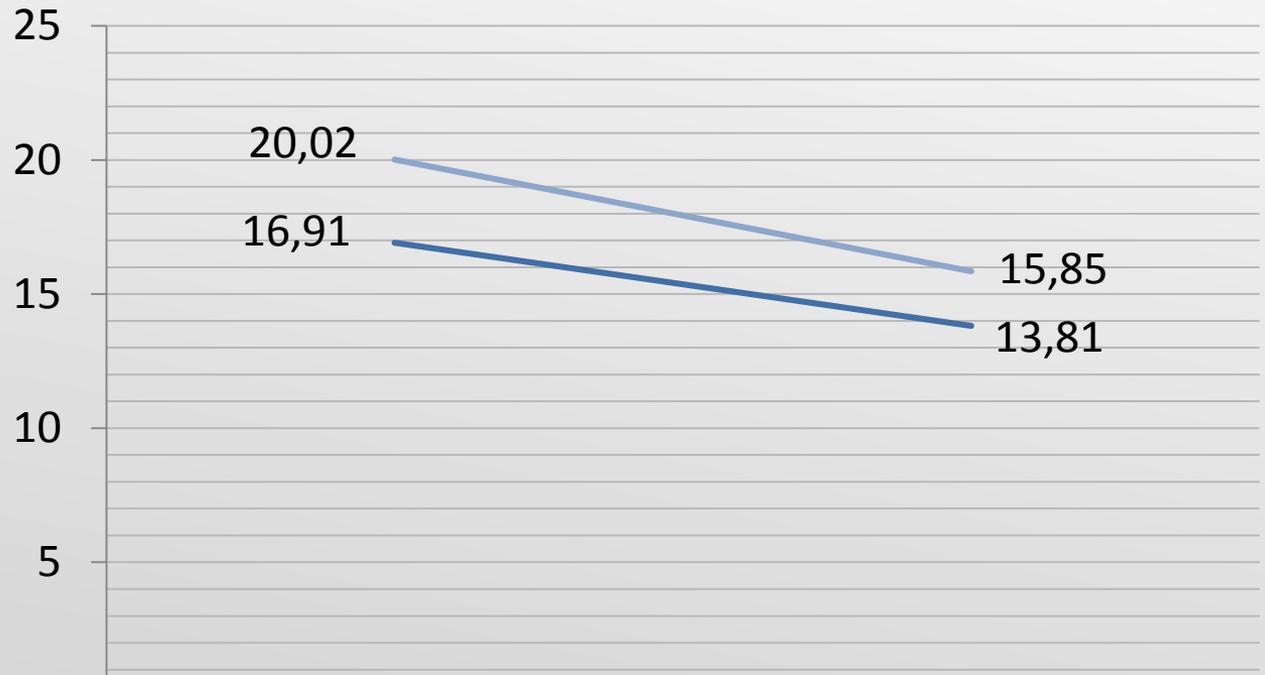
$\alpha=0,05$, $M_1=16,91$, $SD_1=9,17$, $M_2=13,81$, $SD_2=9,19$, $t=5,00$,
 $KI=1,87-4,33$

control group:

$n=69$

$M_1=20,38$, $SD_1=9,84$, $M_2=19,42$, $SD_2=9,94$, $t=1,07$,
 $KI=-0,84-2,75$

t-test TICS SACS comparing group of training and control group, asking for past three months
(Attersee Anders, 2016, pg. 173, 174)



| | before training | after four weeks of training |
|--------------------------------|-----------------|------------------------------|
| —relating to past three months | 16,91 | 13,81 |
| —relating to past four weeks | 20,02 | 15,85 |

t-test TICS-SSCS, comparing relation to the past three months and past four weeks
(Attersee Anders, 2016, pg. 182, fig. 39)



relaxation effect and reduction of chronical stress
after four weeks of about ten minutes of daily training



interpretation of these results:

- show how individual introspective training, which allows a repeated induction of a vagotone condition, induces not only relaxation but also reduction of chronic stress within four weeks of training

implications:

- facing an increase in stress-induced diseases, they may get used for further investigation in clinical and preventive contexts
- relaxation forms a basis for developing *self-reference* in increasing subtle ways of observation and reflection
- on clinical work and psychotherapy when used by therapist and/or patient
- on introspective educational tools implemented in education (of psychotherapists) in the sense of applied learning



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Thank you for your attention.