

Interoceptive Awareness in Studies of Mind-Body Therapies: a Review of Research Studies

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BACKGROUND

Interoception

is the sense of the state of the body.

Interoceptive Bodily Awareness

the awareness of sensations from inside the body, incl. emotions, and describes how we attend to them.

Yoga, TaiChi, Meditation

and other mind-body approaches train interoceptive bodily awareness.

MAIA

Multidimensional Assessment of Interoceptive Awareness is a self-report measure for clinic and studies of Mind-Body Therapies.

OBJECTIVE

to review some of the best research that applied the MAIA.

METHODS

Narrative Review

Measure: the MAIA questionnaire assesses 8 dimensions of BA :

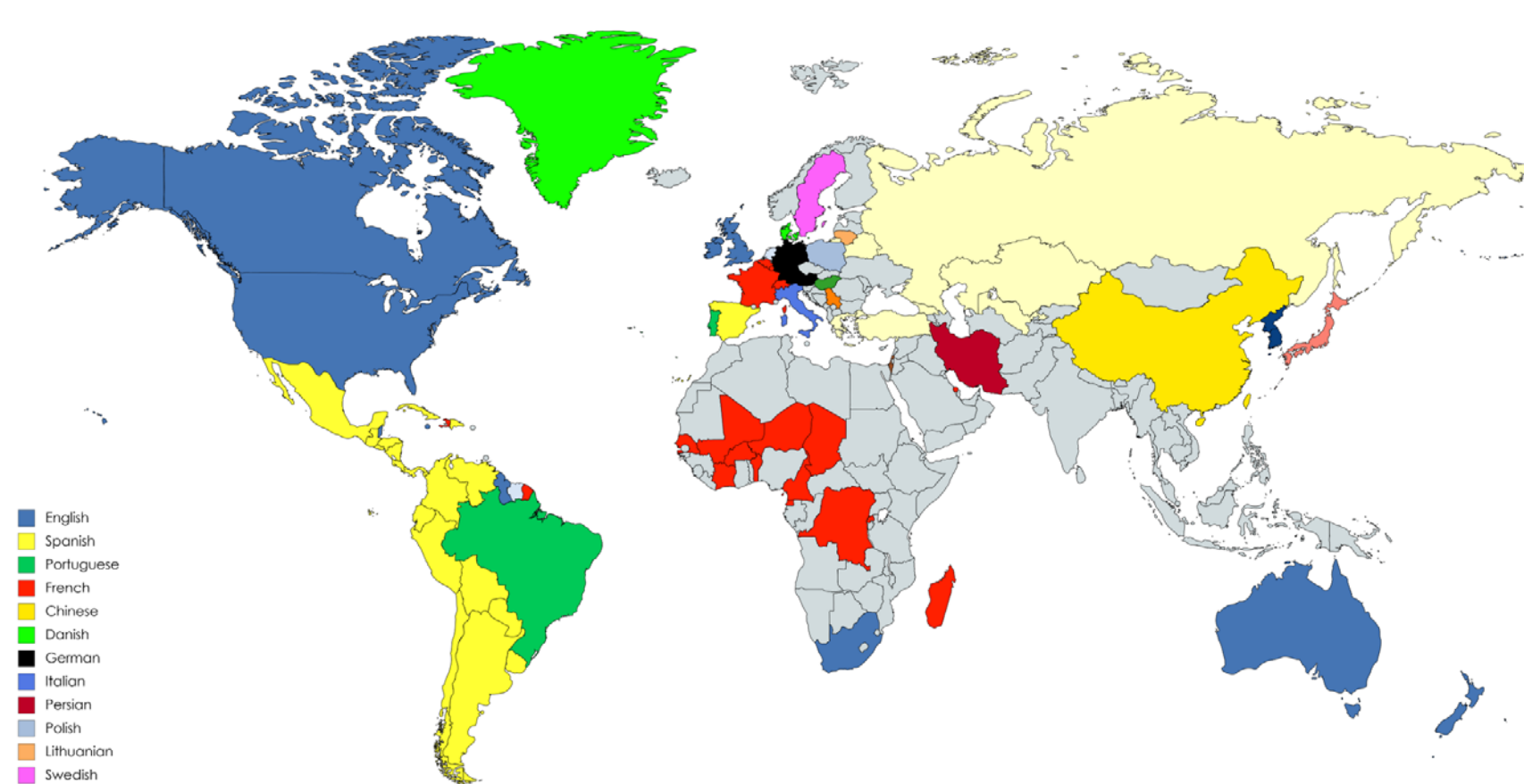
**Noticing,
Distracting,
Worrying,
Attention Regulation,
Emotional Awareness,
Self-Regulation,
Body-Listening,
Trusting.**

Current version 2: Dec 2018

37 items on 8 scales

20+ translations, of which

11 validation studies



- + systematic developed with mind-body experienced, validated in in-experienced participants
- + assesses multiple dimensions incl. regulatory aspects
- notoriously unrelated to objective measures of interoceptive **accuracy**
- cross-cultural differences

RESULTS

- 3 months of contemplative training improves regulatory aspects of interoceptive awareness

Bornemann, Herbert, Mehling, Singer (2014) *Front Psychol*

- 8 weeks of Mindful Awareness in Body-oriented Therapy (MABT) for women with chemical dependency improves interoceptive awareness and abstinence from drugs

Price, Thompson et al. (2018) *Subst Abuse*

- 8 weeks of Mindfulness-Based Cognitive Therapy (MBCT) for comorbid depression + chronic pain improve interoceptive awareness, mediating improvements in depression

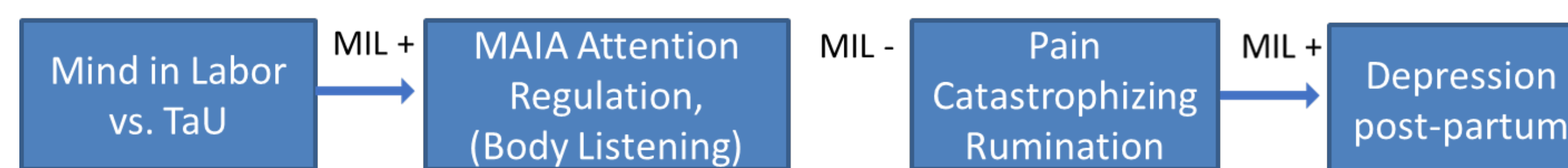
De Yong, ... Gard (2016) *Front. Psychol*

- 12 weeks of Integrative Group Exercise for war veterans with PTSD improve interoceptive awareness and PTSD CAPS scores.



Mehling, Chesney, ... Neylan (2017) *J Clin Psychol*

- 2 ½-day workshop *Mind in Labor*, based on Mindfulness-Based Childbirth and Parenting (MBCP), improved interoceptive awareness mediating a reduction in postpartum depression

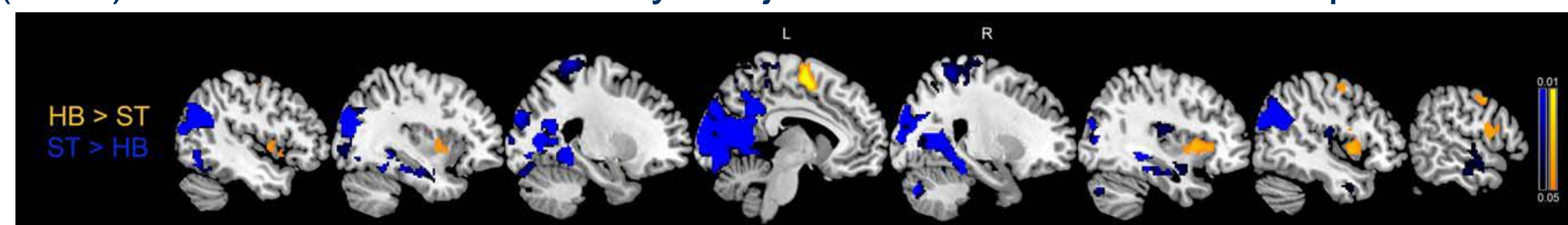


Duncan et al.(2017) *BMC Pregnancy Childbirth*

- A 7-day 25 minutes mindfulness training for depression improves interoceptive awareness mediating improvement in depression.

Fissler, Winnebeck, ... Barnhofer (2016) *Mindfulness*

- Neural correlates (fMRI) of MAIA scores in healthy subjects and in obsessive compulsive disorder



Stern, Grimaldi et al. (2017) *Human Brain Mapping*

- MAIA scores at baseline predict treatment responses in patients with chronic low back pain

Vachon-Presseau, ... Apkarian (2019) *PLoS Biol.*

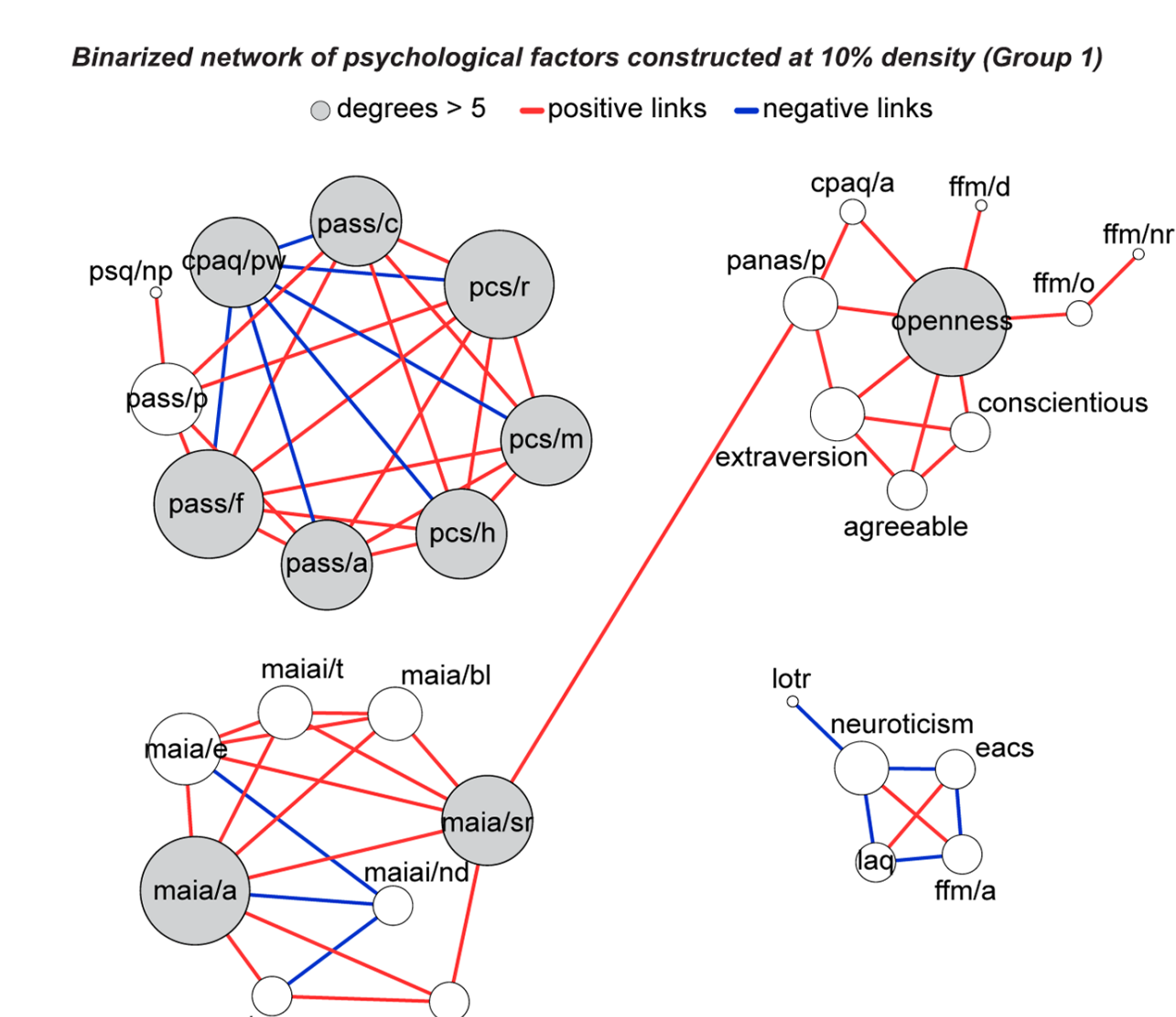
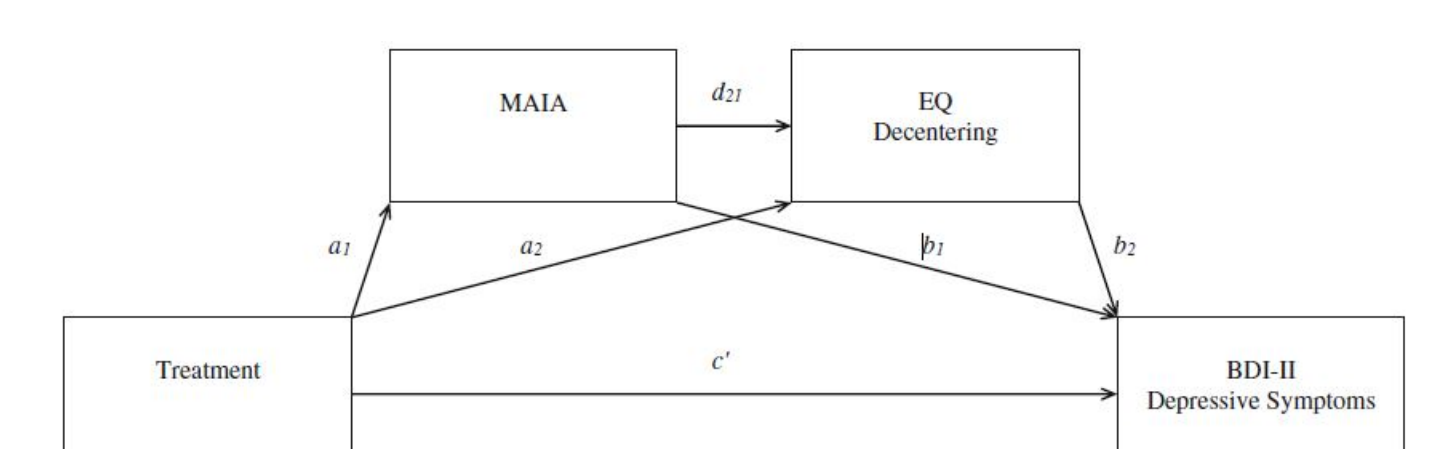
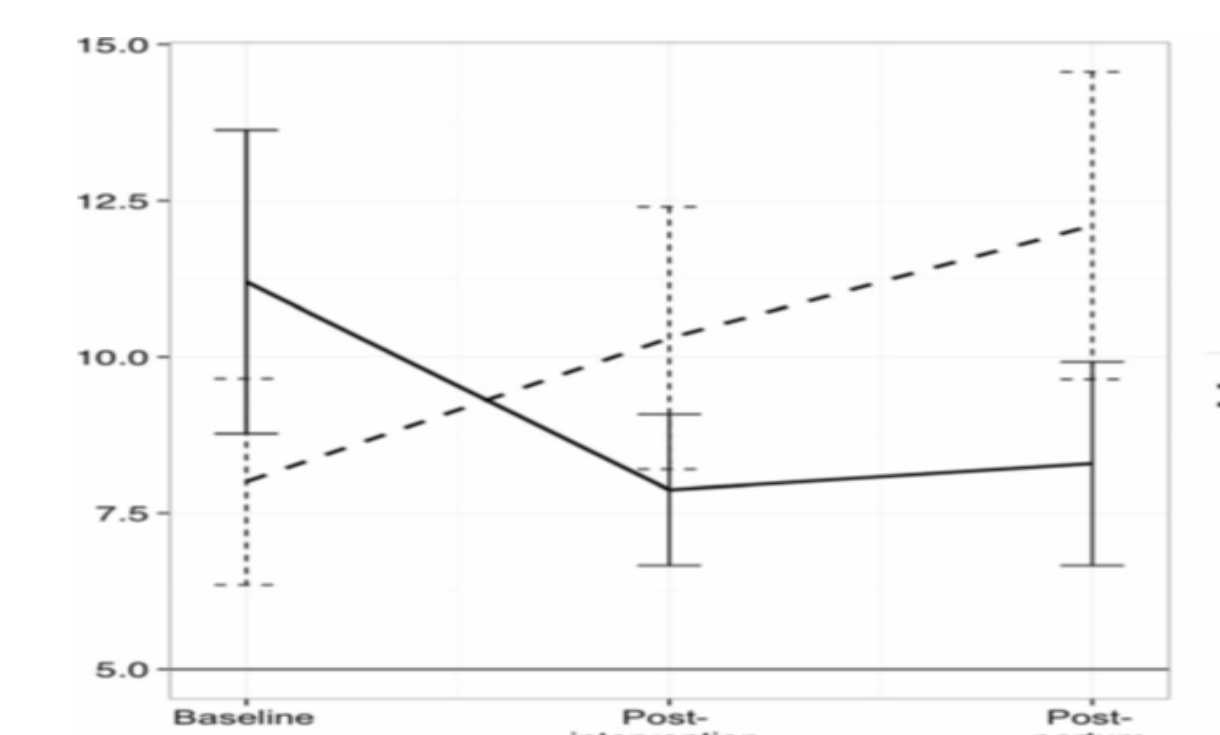
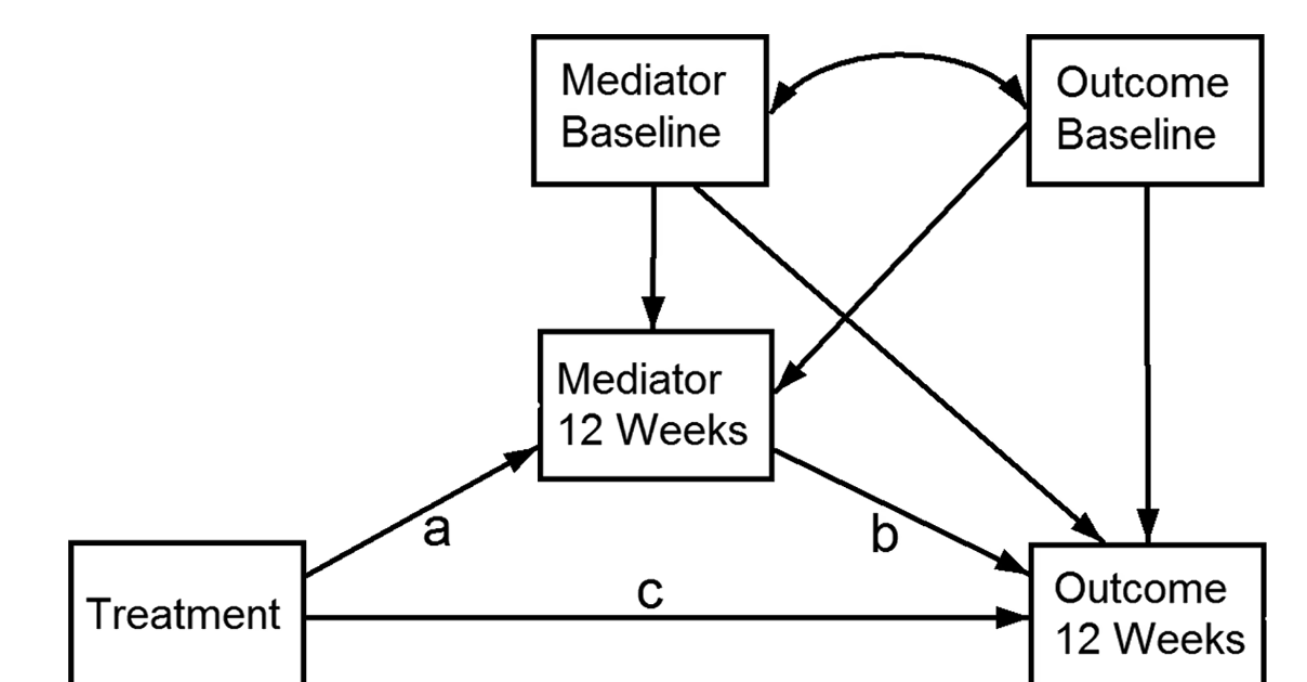
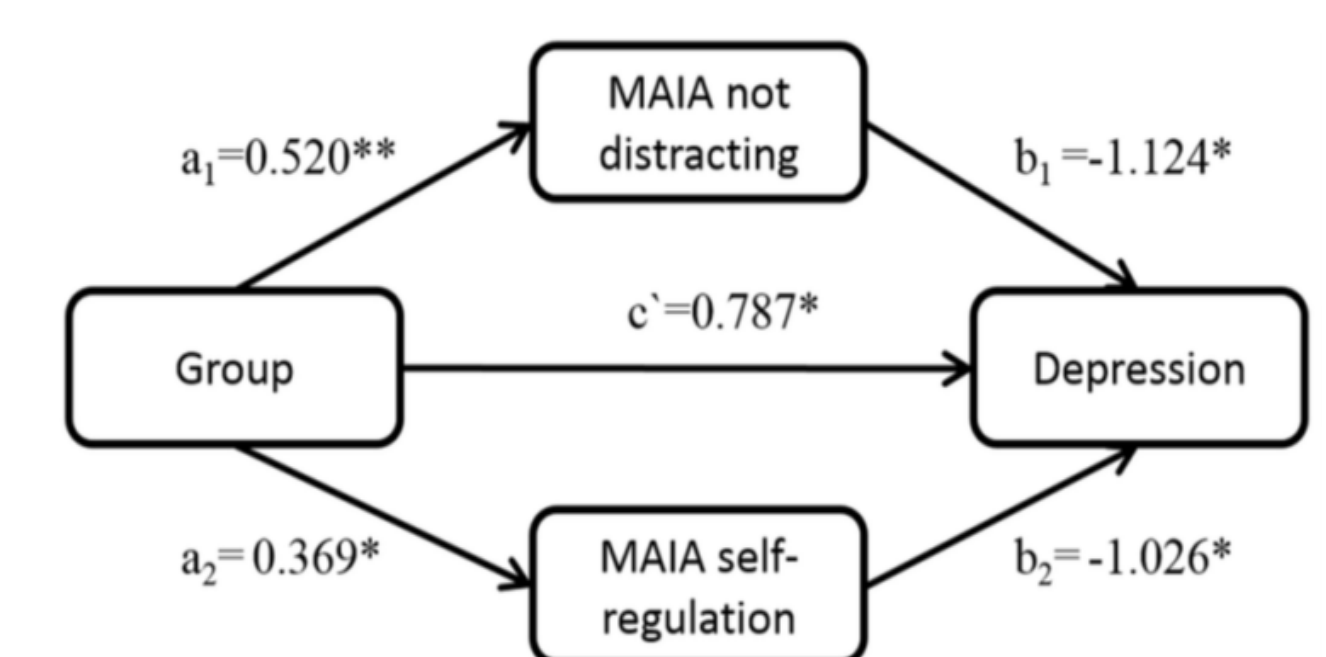
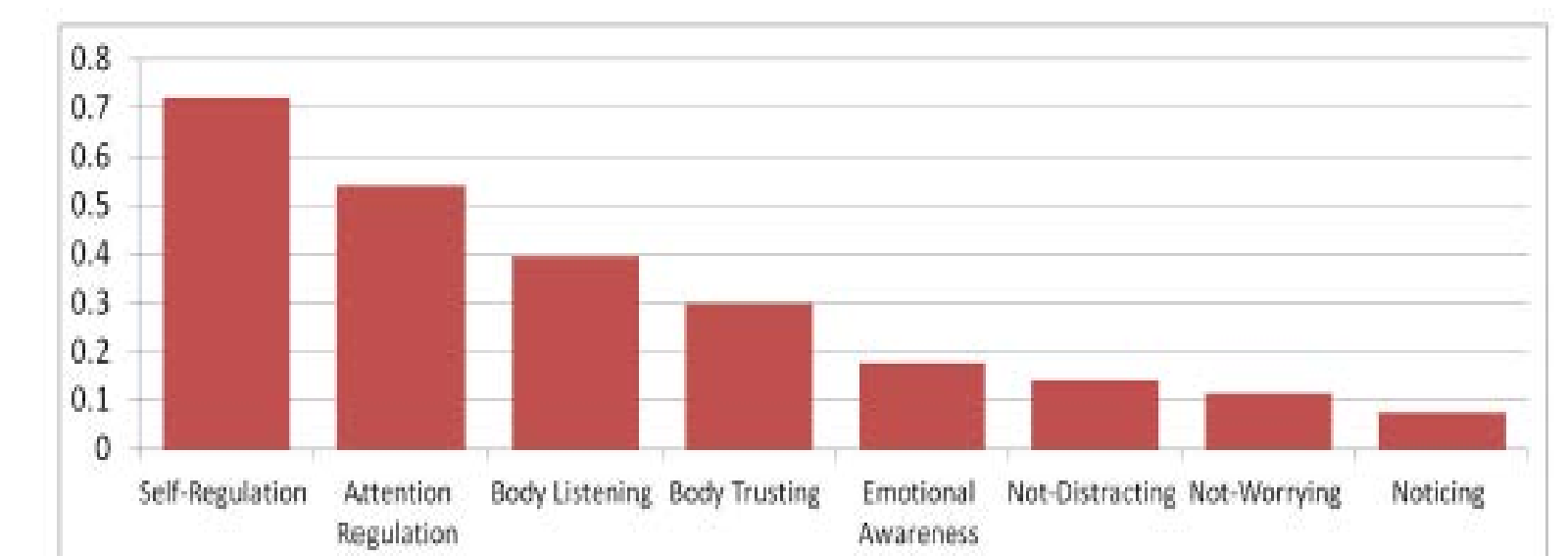
- MAIA scores are associated with eating disorder symptoms

Brown et al (2017) *Eur Eat Disorder Rev*

- Interpersonal relationships (e.g., attachment styles) are associated with later interoceptive awareness.

Oldroid, Pasupathi, Wainryb (2019) *Front Psych*

Results: a variety of longitudinal studies including RCTs suggest that mind-body therapies differentially improve regulatory dimensions of interoceptive bodily awareness, which mediate the therapies effects on health benefits and correlate (cross-sectionally) with fMRI findings.



CONCLUSION:

- Interoceptive bodily awareness is a key parameter in mind-body therapies.
- The MAIA is an appropriate self-report measure for its assessment