

Mindful Meditation

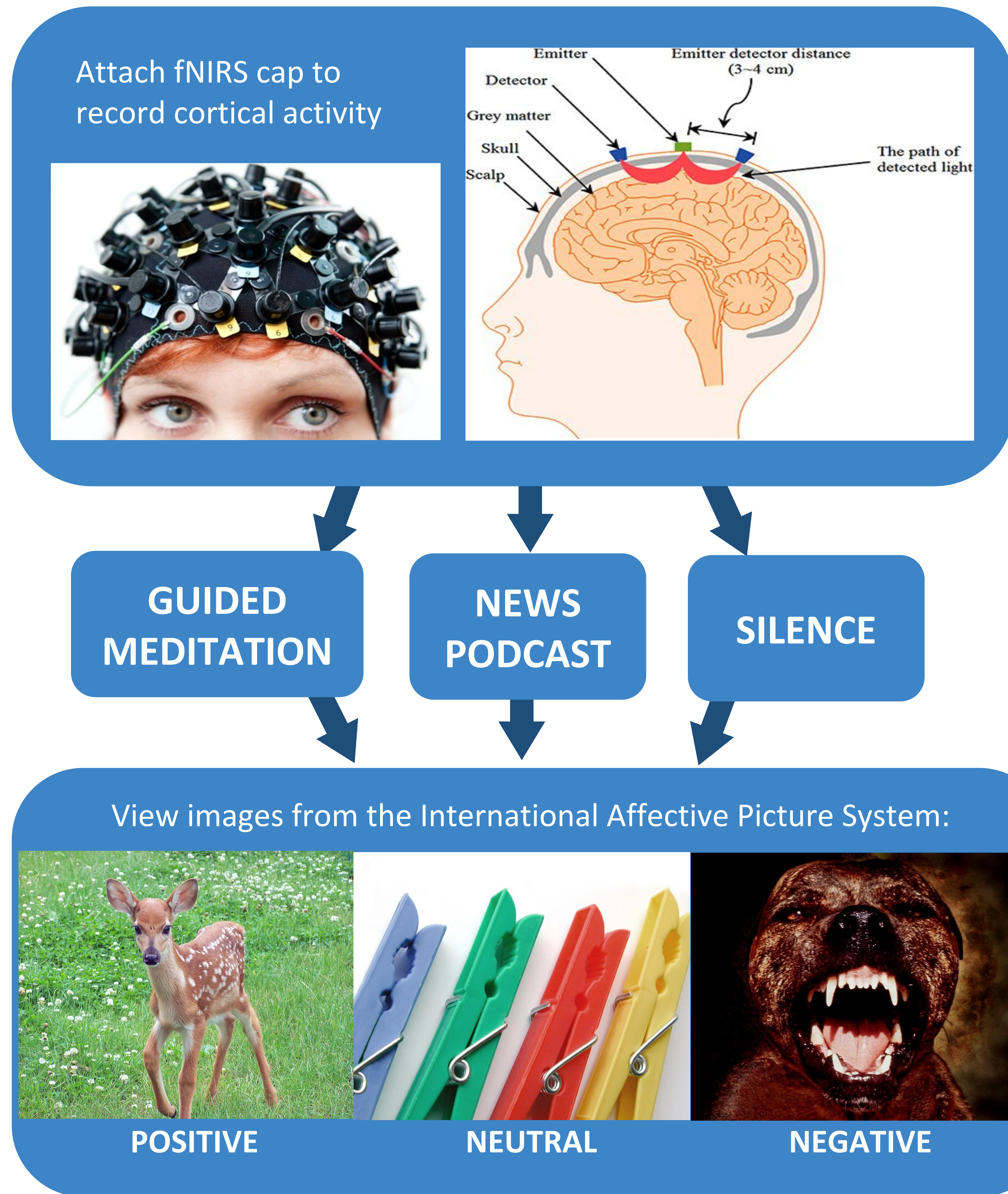
- Encourages practitioners to be present in the moment and to view current emotions, thoughts, and sensations without judgment
- May affect processing of emotional stimuli
- May increase empathy
- Prefrontal cortex areas are associated with mindfulness and with empathy

Research Questions

Using Functional Near-Infrared Spectroscopy (fNIRS) we ask:

1. Does mindful meditation alter cortical responses to emotional stimuli?
2. Do experienced meditators show different neural responses than those with less experience?
3. Are experienced meditators more empathetic?

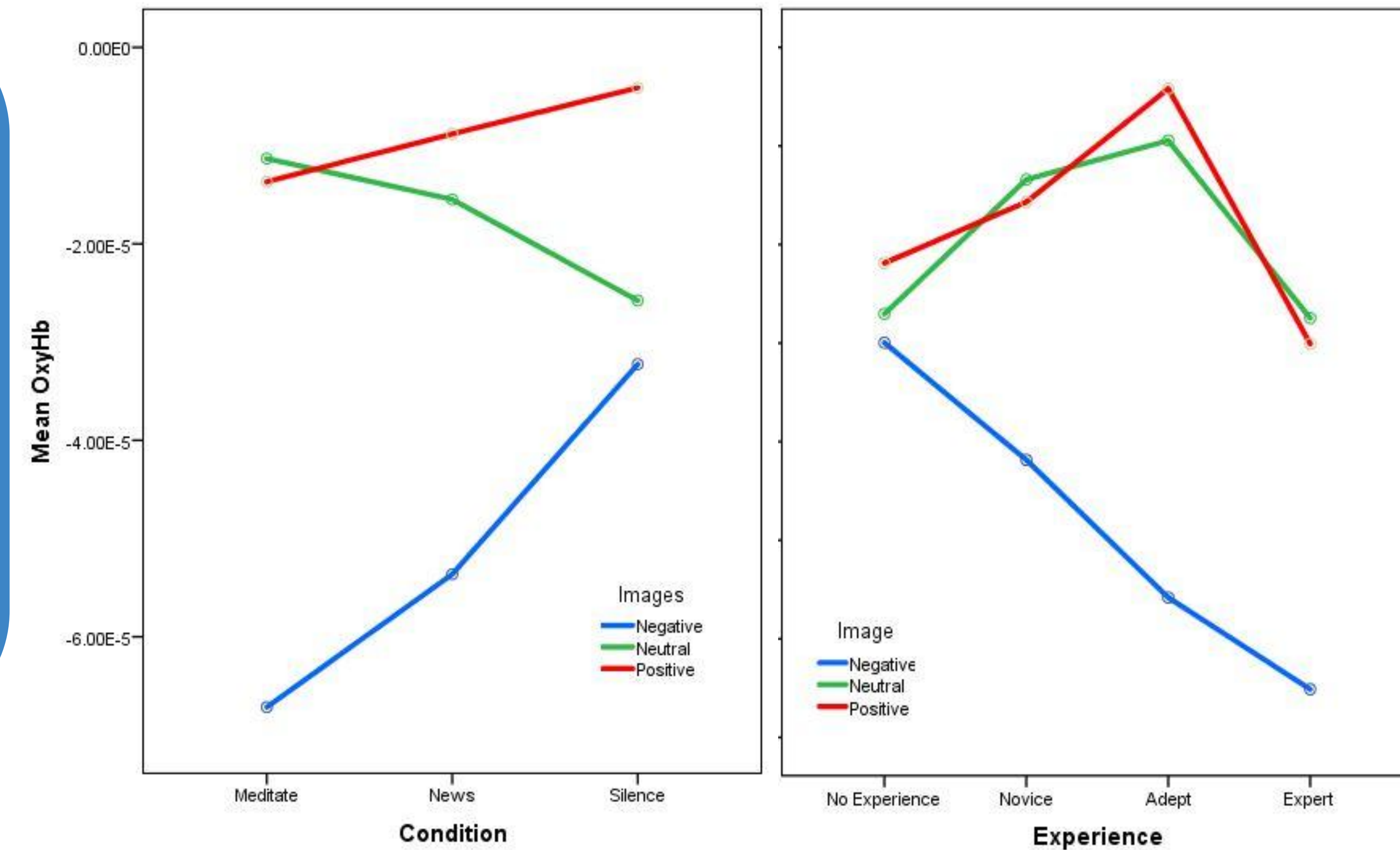
Methods



Toronto Empathy Questionnaire (Spreng et al. 2009). Sample items:

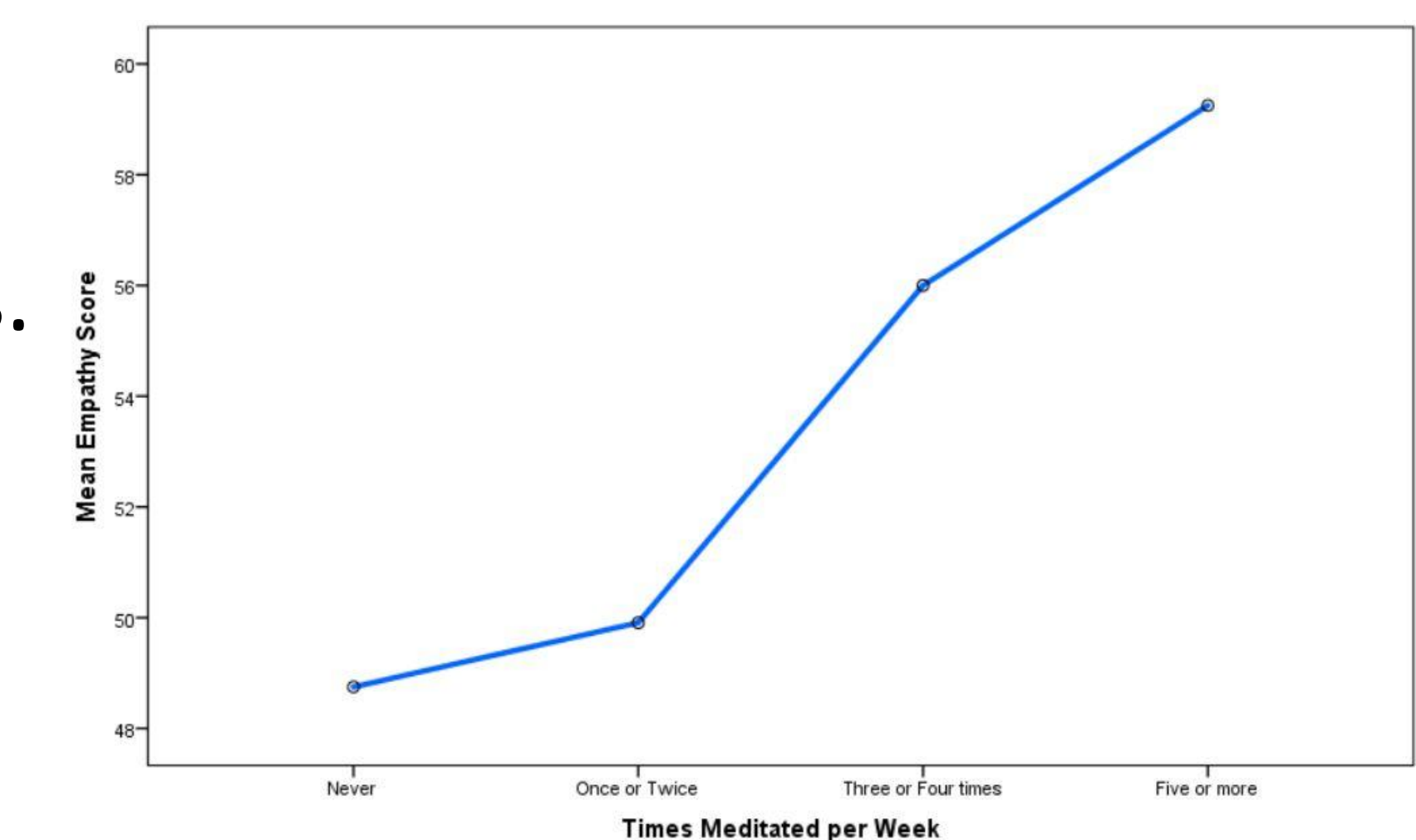
- When someone else is feeling excited, I tend to get excited too
- Other people's misfortunes do not disturb me a great deal
- I do not feel sympathy for people who cause their own serious illnesses

Results



With 56 participants so far, we notice these trends:

- Participants who meditated had less cortical activity in response to negative images.
- Participants with more meditation experience showed less response to negative images.
- Meditation experience is associated with empathy, but not related to changes in neural reactivity.



Impact

- Elucidates effects of meditation on emotional processing
- Benefits of a few minutes of mindful meditation, even for those without experience

Future Directions

- Investigate different areas of prefrontal cortex
- Investigate role of empathy in emotional processing

Limitations

- Mainly Caucasian female psychology majors
- Most had no prior experience with meditation
- Cannot observe subcortical regions