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DISPOSITIONAL MINDFULNESS, ALEXITHYMIA AND SENSORY REACTIVITY: EMERGING INSIGHTS FROM HABITUATION OF THE ACOUSTIC STARTLE REFLEX RESPONSE

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Background: There is growing evidence of beneficial effects of mindfulness developed through engaging in mindfulness training/practices on sensory and cognitive processing, emotion regulation and mental health. Mindfulness has also been conceptualised as a dispositional 'trait', i.e. the naturally-occurring ability of meditation-naïve individuals to display, in varying degree, a non-judgmental non-reactive present-moment awareness in everyday life.

Aims: As part of our ongoing project (involving assessment of sensory processing in meditators and non-meditators in the UK and India), we examined possible associations between i) trait mindfulness and startle reactivity (amplitude and habituation of the acoustic startle response), ii) trait mindfulness and alexithymia (a set of traits that involve difficulty identifying and expressing feeling, and are associated with several mental disorders), and iii) alexithymia and startle reactivity.

Method: Eye-blink startle responses to acoustic stimuli of varying intensity [90-dB or 100-dB over 70 dB (A) background noise] were assessed in meditation-naïve healthy adults (50% men) using electromyographic recordings of the orbicularis muscle. All participants completed the Five Facet Mindfulness Questionnaire (FFMQ) and the 20-item Toronto Alexithymia Scale (TAS-20).

Preliminary results and conclusions: We found, confirming previous reports, a negative association between dispositional mindfulness and alexithymia. Startle habituation over blocks of 100-dB trials correlated positively with dispositional mindfulness ($r = .584$) and negatively with alexithymia ($r = -.407$), with a significant unique contribution of dispositional mindfulness. In addition, the 'Difficulty Describing Feelings' dimension of alexithymia correlated negatively with startle response amplitude to 90-dB probes (non-significant negative associations also present in startle response amplitude to 100-dB probes). The findings indicate similar startle habituation, possibly mediated by interoceptive awareness, in people with a high level of dispositional mindfulness and/or a low level of alexithymia to that reported previously (Antonova, Chadwick, & Kumari, 2015, PlosOne) in people with moderate mindfulness meditation practice intensity. Hypo-startling in association with 'Difficulty Describing Feelings' suggests a similar profile of people with this dimension of alexithymia to that reported previously for people with elevated blood pressure and/or depression.

Keywords: Dispositional mindfulness, Alexithymia, Emotion regulation, Acoustic startle, Sensory reactivity

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