

The mindful eye: Smooth pursuit and saccadic eye movements in meditators and non-meditators

ABSTRACT:

Background

There is growing evidence for a positive effect of cultivated (i.e. developed through training) mindfulness on a range of cognitive functions. There are limited data at present examining the association between dispositional (trait) mindfulness, as measured in the general non-meditating population using self-report questionnaires, and cognitive function.

Aim of the study

To examine the effects of cultivated and dispositional (trait) mindfulness on smooth pursuit (SPEM) and anti-saccade (AS) tasks known to engage the fronto-parietal network implicated in attentional and motion detection processes, and the fronto-striatal network implicated in cognitive control, respectively.

Method

Sixty healthy men (19-59 years), of whom 30 were experienced mindfulness practitioners and 30 meditation-naïve, underwent infrared oculographic assessment of SPEM and AS performance. Trait mindfulness was assessed using the self-report Five Facet Mindfulness Questionnaire (FFMQ).

Results

Meditators, relative to meditation-naïve individuals, made significantly fewer catch-up and anticipatory saccades during the SPEM task, and had significantly lower intra-individual variability in gain and spatial error during the AS task. No SPEM or AS measure correlated significantly with FFMQ scores in meditation-naïve individuals.

Conclusions

Cultivated, but not dispositional, mindfulness is associated with improved attention and sensorimotor control as indexed by SPEM and AS tasks.

Keywords

Eye movements, Mindfulness, Attention, Inhibition

Published Work:

Antonova, E., Amaratunga, K., Wright, B., Ettinger, U., & Kumari, V. (2016). Schizotypy and mindfulness: Magical thinking without suspiciousness characterizes mindfulness meditators. *Schizophrenia Research: Cognition*, 5, 1-6. doi: 10.1016/j.scog.2016.05.001

Os textos são da exclusiva responsabilidade dos autores
All texts are of the exclusive responsibility of the authors

Kumari, V., Antonova, E., Wright, B., Hamid, A., Hernandez, E., Schmechtig, A., & Ettinger, U. (2016). The mindful eye: Smooth pursuit and saccadic eye movements in meditators and non-meditators. *Consciousness and Cognition*, 48, 66-75. doi: 10.1016/j.concog.2016.10.008

Researchers' Contacts:

Dr. Veena Kumari

Chief Scientific Officer
Sovereign Health Group
1211 Puerta Del Sol, STE 270
San Clemente, CA 92673 USA.

Tel: (+1) 949 304-3172

Email: v.kumari@sov.health.com

Dr. Elena Antonova

Department of Psychology (P078)
Institute of Psychiatry, Psychiatry and Neuroscience
King's College London (KCL)
De Crespigny Park, London SE5 8AF, UK.

Tel: (+ 44) 207 848 0480.

Email: elena.antonova@kcl.ac.uk