Mindful Reading: Mindfulness meditation helps keep readers with dyslexia or ADHD on the lexical track

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This study explored the effects of a Mindfulness-Based Stress Reduction (MBSR) intervention on reading, attention, and psychological wellbeing among people with developmental dyslexia and/or attention-deficits.

Various types of dyslexia exist, characterized by different error types. We examined a question that has not been tested so far: which types of errors (and dyslexias) are affected by MBSR training. To do so, we tested, using an extensive battery of reading tests, whether each participant had dyslexia, and which errors types s/he makes, and then compared the rate of each error type before and after the MBSR workshop.

We used a similar approach to attention disorders: we evaluated the participants' sustained, selective, executive, and orienting of attention to assess whether they had attention-disorders, and if so, which functions were impaired. We then evaluated the effect of MBSR on each of the attention-functions. Psychological measures including mindfulness, stress, reflection and rumination, life-satisfaction, depression, anxiety, and sleep-disturbances were also evaluated.

Nineteen Hebrew-readers completed a two-month mindfulness workshop. The results showed that whereas reading errors of letter-migrations within and between words and vowel-letter errors did not decrease following the workshop, most participants made fewer reading errors in general following the workshop, with a significant reduction of 19% from their original number of errors. This decrease mainly resulted from a decrease in errors that occur due to reading via the sublexical- rather than the lexical-route. It seems, therefore, that mindfulness helped reading by keeping the readers on the lexical route.

This improvement in reading probably resulted from improved sustained attention: the reduction in sublexical reading was significant for the dyslexic participants who also had attentional deficits, and there were significant correlations between reduced reading errors and decreases in impulsivity.

Following the meditation workshop, the rate of commission errors decreased, indicating decreased impulsivity, and the variation in RTs in the CPT task decreased, indicating improved sustained attention. Significant improvements were obtained in mindfulness, perceived-stress, rumination, depression, state-anxiety, and sleep-disturbances. Correlations were also obtained between reading improvement and increased mindfulness following the workshop. Thus, whereas mindfulness training did not affect specific types errors and did not improve dyslexia, it did affect the reading of adults with developmental dyslexia and ADHD, by helping them to stay on the straight path of the lexical route.