# Literacy is related to speed of interhemispheric transfer and attention: a dyslexia study

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**Abstract**

Individuals with dyslexia have been shown to have abnormally fast interhemispheric transfer times, as well as hemispheric interaction and attentional deficits. Little is known about how these variables are related to each other and with literacy. An association between faster interhemispheric transfer times and more efficient hemispheric interactions has been demonstrated in individuals without dyslexia (Cherbuin & Brinkman, in press). However, it is thought that an excessively fast transfer might be associated with disruptions of hemispheric interactions in individuals with dyslexia. Since the efficiency of attentional allocation has been shown to be associated with that of hemispheric interactions it is expected that individuals with dyslexia might present with concurrent faster interhemispheric transfer, less efficient hemispheric interactions, and poorer attentional processes. The aim of the present study was to test these predictions by assessing these variables in a group of adults with dyslexia and an age, sex, and IQ matched control group. Results confirmed that dyslexia is associated with faster interhemispheric transfer and poorer attentional processes. Furthermore, correlational analyses suggest that interhemispheric transfer time and attention make largely independent contributions to literacy.

KEYWORDS:
DYSLEXIA, INTERHEMISPHERIC TRANSFER TIME, HEMISPHERIC INTERACTION, ATTENTION, FUNCTIONAL LATERALISATION