

Processing speed determines dyslexia risk

Males exhibit a lower average reading performance than females, according to new data from Anne Arnett and colleagues. The researchers devised a framework to first validate the apparent sex difference in prevalence of dyslexia and then determine which cognitive correlates may underlie this difference. The study included 2,401 youths aged 7-24 years, who were asked to complete tests for reading accuracy and IQ. Analysis of the results verified that males have a lower mean and more variable reading performance than females. This difference may be due to a slower processing speed (PS; the time required to perform a mental task) and poorer inhibitory control (INH; the capacity to regulate a behavioural response) demonstrated by males compared to females in this cohort. Males did, however, perform better than females in verbal reasoning (VR; the ability to comprehend concepts expressed in words). The researchers conclude that reading performance in males is associated with two cognitive risk factors (PS and INH) and a protective factor (VR), which together mediate the sex bias towards males in dyslexia.

Arnett, A. B., Pennington, B. F., Peterson, R. L., Willcutt, E. G., DeFries, J. C. & Olson, R. K. (2017), Explaining the sex difference in dyslexia. J Child Psychol Psychiatr, 58:719-727. doi:10.1111/jcpp.12691