

The contribution of auditory attention to reading processes of school-age children with and without dyslexia

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Propositions of the doctoral dissertation

The contribution of auditory attention to reading processes of school-age children with and without dyslexia

1. Loudness and intelligibility of background speech differentially disrupt children's reading skills, and poor auditory inhibitory control places children more at risk.
2. Similarly to adults, increased phase coherence at the attended frequency serves as a reliable neural index of children's ability to select and maintain attention to an auditory target stream.
3. Children with dyslexia did not show group-level deficits in auditory attention, but poor auditory attention in some dyslexic readers may represent a risk for more severe difficulties in letter-speech sound learning, reading fluency and speech-in-speech perception in challenging acoustic settings.
4. Poor auditory attention may prevent children from benefiting from reading-specific interventions for dyslexia, but randomised controlled trials are needed to establish the link between attention and susceptibility to intervention.
5. Dyslexic readers show a reduced ability of learning letter-speech sound associations.
6. The appeal of single-core deficit hypotheses of neurodevelopmental disorders such as dyslexia dissolves when these fail to explain a complex array of observable characteristics emerging within a diagnostic category.
7. Incorporating fundamental research on the neural bases of auditory and speech processing in clinical trials will allow for greater progress in understanding and remediating dyslexia. This requires large samples and strong inter-institutional collaborations.
8. Broadening our understanding of domain-general processes and their relationship with language-specific skills can improve our understanding of reading disabilities and permits individualised interventions.
9. It's a researcher's responsibility to take actions to communicate to the general population and translate scientific evidence into changes in educational and clinical systems, as well as to ensure that their research can be replicated.