

Literacy Problems in School-Age Children

(A workshop presented by Dr Hugh Catts under the auspices of The Thames Valley District School Board on 20 October 2004)

Dr Catts presented a most comprehensive overview of current research in the field of dyslexia and its implications for remediation. Looking at the neurological basis of the disorder, MR imaging of dyslexic readers during cognitive tasks have revealed decreased brain activation in the left temporo-parietal regions. Also, this left hemisphere dysfunction was found to be already present in young dyslexic children, which makes it causal to, and not a result of, a lifetime of poor reading. Further efficacy studies have shown the sequential pattern of brain activation in severely dyslexic children to approach strongly that of normal readers after only a few months of appropriate intervention. In other words, brain responses in these children are not just compensatory but move towards the normal pattern of bilateral activation of the visual cortices, followed by left baso-temporal activation, and finally that of the left superior temporal and inferior parietal regions.

Various causal hypotheses were critically evaluated, perhaps the most popular being that of a central auditory processing (CAP) deficit impeding the temporal analysis of speech, thereby leading to problems in phonological awareness and reading. Dr Catts questioned whether the problem could be seen as being specific to audition, for CAP testing involved also attention, cognition and language. Furthermore, would a subsequent diagnosis of a CAP disorder lead to any specific treatment, other than appropriate seating within the classroom or the use of an FM system, in which case the need for assessment is questionable. Along with other deficit hypotheses, such as visual processing and sensori-motor integration, it was concluded that there is, as yet, no *convergent* evidence to support these theories. At this point then, the primary causal factor in dyslexia remains one of left temporo-parietal-based language impairment. This manifests most usually in poor phonological awareness, which can take the form of memory, retrieval and production deficits. Numerous phonologically-based, multisensory intervention programmes were evaluated, along with approaches to boosting vocabulary, the explicit teaching of grammar and syntax, and strategic learning. The therapeutic aim should be to teach the child enough language and to provide him/her with the scaffolding necessary to be able to further his/her own language development independently.

Further references:

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