

Early prediction of reading and writing disabilities: some methodological problems in the assessment of tasks validity.

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The applied research on reading and writing disabilities, is increasingly interested in the identification of children at risk in preschool children. This kind of investigation presents both theoretical and methodological problems such as: the selection of fitting models and instruments and the high cost of screening whole classes. The aim of this paper consists in proposing a two-stage method of cognitive assessment of learning disabilities: a) a preliminary screening of the population using “critical” and non redundant measures and b) a deeper stage of analysis of children identified as disabled during the first assessment.

Three secondary aims were also considered: a) to recover the research tradition on visuo-spatial components of reading and writing after a long period in which it was overlooked, b) to obtain, by means of a statistical procedure, groups of children with similar profiles in reading and writing, c) to detect the best criteria for the selection of the control groups. In the present work a recent instrument (PACSI) for the evaluation of cognitive abilities in pre-readers has been used. A cluster analysis (method of k-means) identified a group of learning-disabled children who did not differ from the other children with regards to IQ. Re-sampling children without learning disabilities, nine different control groups were formed and subsequently compared in an equal number of discriminate analyses with the group of disabled children.

This procedure has led to a reliable result indicating that four tests, out of the 12 enclosed in PACSI, were able to predict the children’s reading and writing performances. Such tests were: Naming, Working Memory, Visual Search and Segmentation. This result suggests a re-examination of the phonological-core hypothesis of reading and writing disabilities, since other functions seem to be implied in these processes: e.g. semantic and working memory and visual scanning. PACSI should be adopted both in its reduced format- as a efficient instrument for wide screening of the population- and as a complete instrument to study cognitive profiles of pre-readers or beginning readers with reading and writing disabilities.

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