

**ZMATH 06676218**

**Iglesias-Sarmiento, Valentín; Deaño, Manuel; Alfonso, Sonia; Conde, Ángeles**

**Mathematical learning disabilities and attention deficit and/or hyperactivity disorder: a study of the cognitive processes involved in arithmetic problem solving.**

Res. Dev. Disabil. 61, 44-54 (2017).

Summary: Background: The purpose of this study was to examine the contribution of cognitive functioning to arithmetic problem solving and to explore the cognitive profiles of children with attention deficit and/or hyperactivity disorder (ADHD) and with mathematical learning disabilities (MLD). Methods: The sample was made up of a total of 90 students of 4th, 5th, and 6th grade organized in three: ADHD ( $n = 30$ ), MLD ( $n = 30$ ) and typically achieving control (TA;  $n = 30$ ) group. Assessment was conducted in two sessions in which the PASS processes and arithmetic problem solving were evaluated. Results: The ADHD group's performance in planning and attention was worse than that of the control group. Children with MLD obtained poorer results than the control group in planning and simultaneous and successive processing. Executive processes predicted arithmetic problem solving in the ADHD group whereas simultaneous processing was the unique predictor in the MLD sample. Conclusions: Children with ADHD and with MLD showed characteristic cognitive profiles. Groups' problem-solving performance can be predicted from their cognitive functioning.

*Classification:* C40 D70 C30 F30 D50

*Keywords:* attention deficit and/or hyperactivity disorder (ADHD); mathematical learning disabilities (MLD); arithmetic problem solving; cognitive processes

doi:10.1016/j.ridd.2016.12.012