Assessing the Executive Functioning of Colombian Children

N. Cadavid & P. Del Río
Universidad de Salamanca – Universidad Carlos III de Madrid
ncadavid@usal.es

Information about executive functioning in normally developing children in Colombia is limited. The aim of this research was to establish the cognitive profile of Executive Function (EF) of children from Bogotá (Colombia) to gain insight into how they are developing in this population.

As a process of cognitive and metacognitive control of mental processing (Eslinger, 1996), EF is essential to cognitive development in children since it allows the children to learn and expands their cultural knowledge (Barley, 2001). It can be conceived as the act of voluntarily controlling the individual’s own behavior to adapt to present and future environmental conditions.

**Method**

**Participants**
A cross-sectional exploratory study was conducted using 120 rural and urban normally developing Colombian children (60 girls, 60 boys) from four public and private schools, grouped equally according to two variables: age (4, 6 and 8 years old) and socioeconomic status –SES (low, middle, high).

**Materials**

The measures used were chosen because they are developmentally relevant in the scientific literature concerning EF and had appropriate statistical values within the Spanish population. These measures included a go/no go task, a digit-span task, a planning task, a hand movement task, a spatial orientation task, a motor task, and a verbal regulation task, all of them subtests of the Luria Initial EF dimension for the 4 and 6-year-old group (Manga & Ramos, 2006) and the Diagnóstico Neuropsicológico Infantil de Luria for the 8-year-old group (Manga & Ramos, 1991). The subtests of Vocabulary, Phrases, Digits and Block Design of the WIPPSI and WISC-IV Spanish versions completed the test administration.

**Results and Discussion**

Multivariate analysis of variance was conducted to search for the effects and interactions of age, sex and SES in the different EF subtests applied. See Table 1. Significant effects of age were seen in all subtests, while SES effects and interactions of age, sex and SES in the different EF domains. In contrast, the children from the middle and high SES groups had comparable performances as regards efficiency on all subtests applied. In particular, we found a significant interaction between age and SES in the scores on the go/no go and verbal regulation tasks.

Post hoc comparisons (Tukey DHS) were used to determine at which age and SES status the differences were located. See figure 1.

**References**


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