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# **Mapping between numerical and non-numerical magnitude information: An observational study of the integration and interconversion between magnitudes and formats in Colombian children**

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## **Abstract**

Improving the magnitude processing during early childhood is essential for further developing numerical cognition and mathematical skills. In this regard, there is an intense debate about whether numbers are processed using a number-specific system or a general magnitude processing system. Additionally, the evidence available focuses on the magnitude's interference but not on the translation and integration process. This study aims to analyze the ability to map between non-symbolic and symbolic numerical information and integrate numbers and space. For this purpose, we designed an observational between-subjects study using two-cross format comparison tasks involving the integration and interconversion between magnitudes and formats. We will assess for each task the relation between ratio and performance, and the discrimination thresholds in 8- and 12-years old Colombian children to explore the developmental trajectory of these numerical cognition processes.