

# New Research From Psychological Science

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Read about the latest research published in *Psychological Science*:

## [State and Trait Effects on Individual Differences in Children's Mathematical Development](#)

*Drew H. Bailey, Tyler W. Watts, Andrew K. Littlefield, and David C. Geary*

Research indicating a relationship between children's early math achievement and their later math achievement seems to be at odds with findings showing that the effects of early math interventions diminish over time. To explain this apparent contradiction, the researchers modeled the influence of latent traits (stable characteristics affecting learning; e.g., general cognitive ability and motivation) and states (e.g., prior knowledge and early mathematical competency) on mathematical achievement in children over time. The researchers found that latent traits had a larger influence on mathematical achievement than state effects. This suggests a need for multifaceted mathematic interventions that target both deficits in knowledge and the latent characteristics that influence learning.

## [Filling the Gap: Relationship Between the Serotonin-Transporter-Linked Polymorphic Region and Amygdala Activation](#)

*Jojanneke A. Bastiaansen, Michelle N. Servaas, Jan Bernard C. Marsman, Johan Ormel, Ilja M. Nolte, Harriëtte Riese, and André Aleman*

A recent meta-analysis confirmed a link between increased amygdala activation and certain variants of the serotonin-transporter-linked polymorphic region (5-HTTLPR); however, there is some concern that some of the studies included in the meta-analysis may have been underpowered and that publication bias may have skewed the meta-analytic finding. In the current study, the authors examined the link between amygdala activation and 5-HTTLPR in 120 female participants and completed an updated meta-analysis using both published and unpublished findings. The authors found no link between 5-HTTLPR and amygdala activation in their individual study or in the updated meta-analysis, calling into question the strength of reported findings in this area of research.

## [Anchoring the Self to the Body: Vestibular Contribution to the Sense of Self](#)

*Elisa Raffaella Ferrè, Christophe Lopez, and Patrick Haggard*

Can stimulation of the vestibular system — which provides a reference for where the body is in space — influence a person's sense of self? Participants received 6 seconds of galvanic vestibular stimulation (GVS) or sham stimulation before taking part in a graphesthesia task. In this task, a letter was traced on each participant's forehead and he or she identified the letter that had been drawn. GVS led to more first-person-perspective judgments (viewing the letter from inside the head) than third-person-perspective

judgments (viewing the letter from the perspective of the writer). The authors suggest that low-level GVS may have augmented the contribution of the vestibular system to embodiment and that higher-level stimulation that disrupts vestibular system function may promote a third-person perspective.