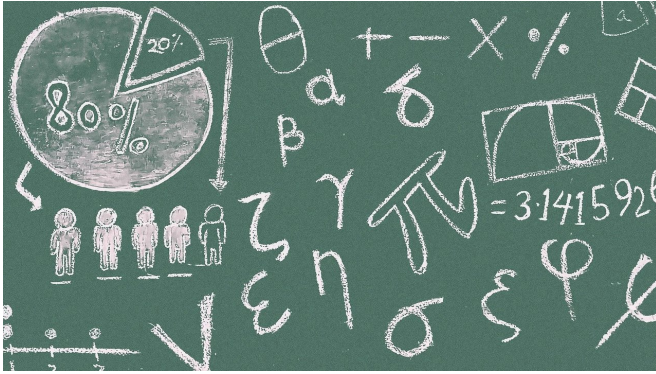


# Early numeracy performance of young kids linked to specific math activities at home

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New research links specific numerical activities undertaken by parents to certain math skills in young children. Published today in open-access journal *Frontiers in Psychology*, the study also finds that the more parents engage in mathematical activities with their children, the higher their early numeracy performance.

Previous studies indicate that early [mathematical skills](#) provide a better transition to school-taught mathematics. It's well-known that parents can play an important role in their [children's](#) early mathematical development—but, until now, the link between specific numerical activities and certain math skills was not well understood.

To shed light on these links, researchers from KU Leuven in Belgium assessed 128 kindergarten-age children for various symbolic and non-symbolic numerical tasks. The researchers also asked parents to indicate the frequency of certain numeracy activities undertaken with their children at home and then looked for connections between this and the children's early numeracy skills.

"We found that the more parents engaged in

activities such as identifying numerals, sorting objects by size, color, or shape, or learning simple sums, the higher the children performed on skills like counting," says the study's lead author, Belde Mutaf Y?ld?z.

"These activities—and talking about money when shopping or measuring ingredients while cooking—were linked with a more accurate estimation of the position of a digit on an empty number line. In addition, engaging in activities such as card and board games was associated with better pictorial calculation skills."

Mutaf Y?ld?z says the research supports and extends the idea that parent-child interaction plays a role in children's acquisition of early mathematical skills—and that policymakers should recognize this.

"Increased public awareness on the role that parents can play in their children's development of mathematical skills just by doing more number related activities in a home environment would be hugely useful," she says.

"Policymakers should think about providing educational tools for some home numeracy activities to help parents enhance their children's mathematical development."

The researchers caution that the study's findings are based on cross-sectional design and correlation analysis, meaning that the results don't indicate any cause-and-effect relationship. For example, it could be that children who are already good at mathematics are the ones triggering 'home numeracy' instead of their [parents](#).

Despite this, with research on home numeracy in its infancy, Mutaf Y?ld?z and her colleagues are calling for more comprehensive investigations and observations of home [numeracy](#) activities, as well as further intervention studies to determine which specific activities best help children enhance their

mathematical skills.

**More information:** Frequency of home numeracy activities is differentially related to basic number processing and calculation skills in kindergartners, *Frontiers in Psychology* (2018). DOI: [10.3389/fpsyg.2018.00340](https://doi.org/10.3389/fpsyg.2018.00340) , [www.frontiersin.org/articles/10.3389/fpsyg.2018.00340/full](http://www.frontiersin.org/articles/10.3389/fpsyg.2018.00340/full)

Provided by Frontiers

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