

Children who delay gratification more likely to do well academically, have fewer behavioral problems, study finds

April 18 2024



The study revealed that children who show greater self-restraint and willingness to delay their gratification in their preschool years also tended to have better working memory and self-control which were linked to better academic skills

and fewer behavioural and emotional problems two years later. Credit: Chen Luxi

Suppose you were given a choice between having a smaller reward now and getting a larger reward 10 minutes later. For most adults, the choice is clear. Withstanding short-term temptation in pursuit of a greater long-term goal is crucial for the functioning and well-being of individuals and society.

While the famous "Marshmallow Test" developed by Stanford psychologist Walter Mischel in the 1960s has pioneered a large body of research on [delayed gratification](#) in Western populations, little is known about how well other tasks can measure young [children's](#) ability to delay gratification, particularly in the Asian context.

A study titled "Delayed Gratification Predicts Behavioral and Academic Outcomes: Examining the Validity of the Delay-of-Gratification Choice Paradigm in Singaporean Young Children," by Dr. Chen Luxi and Professor Jean Yeung from the NUS Yong Loo Lin School of Medicine, modified and validated a different task, called the choice paradigm, to measure delay of gratification among Singaporean young children and examined the factors behind the development of delayed gratification and its longitudinal outcomes.

In the choice paradigm, children were presented with both the "now" and "later" options simultaneously. They made choices between getting the smaller reward immediately and getting the larger rewards 10 minutes later, over 9 test trials. The work is [published](#) in the journal *Applied Developmental Science*.

This study has shed light on the development of self-regulation among

Asian children to address the gap in research in this area, which has predominantly focused on the classic marshmallow test and Western populations.

Nationally representative data used in this study were part of the Singapore Longitudinal Early Development Study (SG-LEADS), led by Prof Yeung and housed by the Center for Family and Population Research at the NUS Faculty of Arts and Social Sciences.

As a modern and affluent nation with a highly educated, multicultural and multiracial population, Singapore serves as a useful case study for valuable insights into the development of children from other Asian societies with similar characteristics.

Close to 3,000 Singaporean preschool children were tested in two waves—the first assessed children's working memory, delay of gratification indexed by the choice paradigm, as well as parent-rated children's [self-control](#) in their daily lives.

The second wave two years later saw roughly the same batch of children being studied for academic achievement and behavioral issues. The results were interesting—age, gender, and parental education were the factors found to influence a young child's ability to delay gratification.

Preschool girls were found to have generally outperformed preschool boys during the delay of gratification choice task. While girls generally made future-oriented choices at age 4, boys started to delay gratification later at age 5.

Dr. Chen and Prof Yeung also discovered that children of parents with lower education backgrounds started delaying gratification at an older age. The findings suggest the role of socioeconomic environments in nurturing children's ability to delay gratification during early childhood.

The data further revealed that children who show greater self-restraint and willingness to delay their gratification in their preschool years also tended to have better working memory and self-control which were linked to better academic skills and fewer behavioral and [emotional problems](#) two years later.

Dr. Chen said, "The findings have practical implications. It revealed that having greater self-regulation in [early childhood](#), including having a greater ability to delay gratification, more advanced working memory, and stronger self-control in their daily lives, can predict children's more excellent academic achievement and positive behavioral development later in life.

"Our findings underscore the importance of incorporating self-regulation into future interventions and educational programs.

"It is crucial to nurture children's emotional, cognitive, and behavioral self-regulation during the [preschool years](#), so as to enhance their school readiness and build a good foundation for their socioemotional functioning and academic skills in formal schooling," she added.

More information: Luxi Chen et al, Delayed gratification predicts behavioral and academic outcomes: Examining the validity of the delay-of-gratification choice paradigm in Singaporean young children, *Applied Developmental Science* (2024). [DOI: 10.1080/10888691.2024.2307366](https://doi.org/10.1080/10888691.2024.2307366)

Provided by National University of Singapore

Citation: Children who delay gratification more likely to do well academically, have fewer

behavioral problems, study finds (2024, April 18) retrieved 15 May 2024 from <https://medicalxpress.com/news/2024-04-children-delay-gratification-academically-behavioral.html>

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