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**Inhibitory control in a notorious brain teaser: the Monty Hall dilemma.**

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Summary: The Monty Hall dilemma (MHD) is a counterintuitive probability problem in which participants often use misleading heuristics, such as the equiprobability bias. Finding the optimal solution to the MHD requires inhibition of these heuristics. In the current study, we investigated the relation between participants' equiprobability bias and their MHD performance. Because the equiprobability bias is supposed to increase with age and statistical education, different age groups were included. The results showed that in the classic MHD, the equiprobability bias strongly hindered older participants in solving the problem and fully understanding it. When more alternatives were included, both behavioral performance and problem understanding of older participants improved. The behavioral performance of the younger participants was less influenced by the equiprobability bias, but these participants overall failed to gain understanding in the MHD, probably because of still underdeveloped knowledge of probabilistic situations.

*Classification:* K50 C30 C40 D50

*Keywords:* Monty Hall problem; probability; counterintuitive problems; inhibitory control; problem understanding

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