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Authors
Lavalle, Joseph
Hung, Supin

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The Cognitive Reflection Test, Numeracy and Decision-making Tasks: A Study in Taiwan

Joseph Lavallee
Ming Chuan University, Taipei, Taiwan

Supin Hung
National Cheng Kung University, Tainan, Taiwan

Abstract: Despite its widespread use, disagreement remains about whether the Cognitive Reflection Test (CRT) measures the ability to inhibit an intuitively appealing but incorrect response to a problem, or simply numeracy skills. We administered Chinese-language versions of the extended seven-item CRT, two widely-used numeracy scales and a set of decision-making tasks (risk preferences, ratio bias and framing) to 186 students at a university in Taiwan. Higher levels of parental education significantly predicted higher CRT scores ($p < .001$) but not higher numeracy scores; males outperformed females on both, but differences were not significant. In contrast to earlier studies, no pattern of significant relations between CRT, numeracy and risk preferences emerged. Higher numeracy – but not CRT – scores were associated with better choices on the ratio bias task. Higher numeracy – but not CRT scores – were associated with lower susceptibility to framing, but differences did not reach significance. Overall, results suggest two distinct constructs.