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**Primary school children's strategies in solving contingency table problems: the role of intuition and inhibition.**

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Summary: Understanding contingency table analysis is a facet of mathematical competence in the domain of data and probability. Previous studies have shown that even young children are able to solve specific contingency table problems, but apply a variety of strategies that are actually invalid. The purpose of this paper is to describe primary school children's strategy use, and to explore the extent to which psychological theories of intuition and inhibition help better understand the cognitive mechanisms underlying these strategies. In an initial study, we investigated 231 second-graders' performance on various types of contingency table problems in a paper-and-pencil test. In a second study, we asked 45 second- and fourth-graders to give reasons for their decisions on contingency table problems in an interview situation. Results of both studies suggest that ignoring relevant information and referring to additive rather than multiplicative relationships between cell frequencies were among the children's primary strategies. These strategies can be explained by intuition, which the children were often not able to inhibit. We discuss the implications of this interpretation from a mathematics education perspective.

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*Keywords:* probabilistic reasoning; proportional reasoning; dual-process theory; whole-number bias; base-rate neglect

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