

The Influence of Additivity Training on Cue Competition Effects in Children's Causal Learning

Victoria Simms

Queen's University Belfast

Teresa McCormack

Queen's University Belfast

Tom Beckers

Katholieke Universiteit Leuven

Abstract: The inferential reasoning account of causal learning holds that effortful reasoning processes underpin causal judgments. Evidence for this account comes from demonstrations that performance on cue competition tasks is affected by pretraining showing causal cues to be additive in their effects. If inferential reasoning underpins the additivity effect, then we might expect this effect to emerge developmentally. The current study provided 172 children (4-5-year-olds and 6-7-year-olds) with either additive or non-additive pre-training, involving a new child-friendly version of the 'allergy' paradigm previously used to investigate cue competition effects in adults. We observed an effect of pre-training and age on causal judgments, with a significant effect of additivity training only in the older age group. These results are consistent with an inferential reasoning account of additivity and cue competition effects, and suggest that the ability to engage in the necessary inferential reasoning emerges developmentally.