

## The Impact of Cognitive Load on Deceit Detection and Memory Recall in Children's Interviews: A Meta-Analysis

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**Abstract :** The detection of deception in children's interviews is essential for statement veracity. The widely used method for deception detection is building cognitive load, which is the logic of the cognitive interview (CI), and its effectiveness for adults is approved. This meta-analysis delves into the effectiveness of inducing cognitive load as a means of enhancing veracity detection during interviews with children. Additionally, the effectiveness of cognitive load on children's total number of events recalled is assessed as a second part of the analysis. The current meta-analysis includes ten effect sizes from search using databases. For the effect size calculation, Hedge's  $g$  was used with a random effect model by using CMA version 2. Heterogeneity analysis was conducted to detect potential moderators. The overall result indicated that cognitive load had no significant effect on veracity outcomes ( $g = 0.052$ , 95% CI  $[-.006, 1.25]$ ). However, a high level of heterogeneity was found ( $I^2 = 92\%$ ). Age, participants' characteristics, interview setting, and characteristics of the interviewer were coded as possible moderators to explain variance. Age was significant moderator ( $\beta = .021$ ;  $p = .03$ ,  $R^2 = 75\%$ ) but the analysis did not reveal statistically significant effects for other potential moderators: participants' characteristics ( $Q = 0.106$ ,  $df = 1$ ,  $p = .744$ ), interview setting ( $Q = 2.04$ ,  $df = 1$ ,  $p = .154$ ), and characteristics of interviewer ( $Q = 2.96$ ,  $df = 1$ ,  $p = .086$ ). For the second outcome, the total number of events recalled, the overall effect was significant ( $g = 4.121$ , 95% CI  $[2.256, 5.985]$ ). The cognitive load was effective in total recalled events when interviewing with children. All in all, while age plays a crucial role in determining the impact of cognitive load on veracity, the surrounding context, interviewer attributes, and inherent participant traits may not significantly alter the relationship. These findings throw light on the need for more focused, age-specific methods when using cognitive load measures. It may be possible to improve the precision and dependability of deceit detection in children's interviews with the help of more studies in this field.

**Keywords :** deceit detection, cognitive load, memory recall, children interviews, meta-analysis

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