ARE CAREGIVERS REALLY EFFECTIVE IN SUPPORTING INFANT PAIN REACTIVITY AND REGULATION DURING IMMUNIZATION?

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**INTRODUCTION / AIM**

Primary caregivers are critical to understanding the infant in pain (Pillai Riddell & Racine, 2009), and decades of attachment research have demonstrated the integral role of caregivers in modeling their child’s distress regulation during painful events (Bowlby, 1982). The aim of this study was to assess the efficacy of parent-led non-pharmacological interventions (e.g., rocking) on pain reactivity and immediate pain regulation of preterm infants, neonates, and older infants from 0-3 years during immunization.

**METHODS**

As part of a larger Cochrane systematic review on non-pharmacological interventions for children’s pain, this was a sub-analysis of strategies that used the primary caregiver as part of the intervention. This included 22 randomised controlled trials and randomized crossover trials with a non-intervention control, and 1693 participants.

**RESULTS**

None of the parent-led interventions were efficacious for pain reactivity. For immediate pain regulation, the largest standardized mean difference (SMD) for intervention improvement over control was seen for rocking/holding (neonate: SMD -0.75; 95% CI -1.20 to -0.30), displaying a moderate-large effect size. Massage/touch-related interventions, toy distraction, parent presence, and parent coaching were not efficacious for immediate pain regulation.

**DISCUSSION / CONCLUSIONS**

Rocking/holding was the only intervention shown to have a significant effect on pain regulation based on low quality evidence. None of the interventions were efficacious in reducing pain reactivity, suggesting that the effectiveness of parent-led interventions may not be seen until the regulatory period. More high-quality research is needed to examine the effect of parent-led interventions, as well as parent coaching of these strategies in the immunization context.

**OTHER AUTHORS**

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