The Impact of Information and Context on Promoting Parents' Early Academic Input

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Preschoolers whose parents provide numeracy input frequently tend to have better numeracy knowledge than their peers whose parents provide numeracy input infrequently (e.g. Elliott et al., 2017). However, very little of parents' numeracy input to their preschoolers is about advanced early numeracy concepts (Ramani et al., 2015). Additionally, parents' numeracy input is often related to their belief about the importance of numeracy for their children (Douglas et al., 2019). The current study examined whether parents' input and child-centered belief about magnitude comparison, an advanced early numeracy concept, could be promoted by providing parents with related information. The study also examined how the context of play and child gender affect parents' magnitude comparison input.

Sixty parents and their three- to five-year old children (53% boys) were recruited to engage in a twenty-minute, videotaped parent-child interaction. Parents were predominantly mothers (75%), white (83%), and well educated (76% of mothers and 80% of fathers had at least a bachelor's degree).

Parents completed questionnaires on their academic beliefs about their preschooler immediately before and about one week after they participated in the parent-child interaction. They played two card games with their child during the interaction, received some information about magnitude comparison, and then played the two card games again. Parents' magnitude comparison talk during the interaction was coded in 10-second intervals.

A paired sample t-test indicated that parents rated magnitude comparison as significantly more important for their child after receiving related information. A two-way repeated measures ANCOVA was used to examine whether parents' magnitude comparison input differed across time and context of play, controlling for child gender. There was a significant main effect of context on parents' input about magnitude comparison. However, there was no significant main effect of time, though there was a significant interaction effect of time and child gender. Specifically, the magnitude comparison input provided by parents of girls increased significantly across time, but the magnitude comparison input provided by parents of boys did not change.

The current study continues efforts to identify effective ways to promote parents' early numeracy input. Though the study's main hypotheses were only partially supported, it offers insightful findings on the malleability of parents' numeracy input and beliefs. First, the current study indicates that parents' beliefs about early numeracy concepts are malleable. Second, encouraging parents to play a specific card game (i.e. *War)* with their preschooler effectively promotes frequent parent magnitude comparison input. Third, future research on promoting parents' early numeracy input should consider child gender given that we successfully promoted magnitude comparison input among parents of girls but not boys.

References

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