Research summary

Although the number of studies that examine the association between parenting and executive function in young children had been increasing (e.g., Bernier, Carlson & Whipple, 2011; Matte-Gagne, Bernier & Lalonde, 2015; Merz, et al., 2017), many studies investigated children’s executive function by creating a composite score of EF (e.g., Matte-Gagne & Bernier, 2011; Daneri et al., 2019; Distefano et al., 2018). It is less known about the relationship between parenting and working memory specifically. This study investigated the association between parenting and verbal and spatial working memory specifically to examine how different dimensions of parental behaviors are related to verbal and spatial working memory in young children.

A total of 59 children from 3 ½ to 4 ½ years of age completed three spatial working memory tasks (the Spaceship spatial memory task and the Corsi-block forward and backward tapping tasks), one verbal working memory task (backward word span task) and one attention task (Track-it task). Parents completed the Parenting Behaviors and Dimensions Questionnaire and Children’s Behavior Questionnaire. Greater democratic discipline and greater sustained attention from the Track-it task predicted greater memory biases away from the midline symmetry axis of the computer monitor and more accurate memory responses in the Spaceship task, i.e., a more developmentally advanced memory response. Attentional shifting predicted greater spatial memory span in the Corsi-block backward tapping task, after controlling for age. Findings suggest that democratic parenting is essential to working memory development in young children; attention is associated with working memory in early childhood. In conclusion, this study provides evidence for an association between democratic parenting and spatial working memory development in young children; and a link between attention and working memory in early development.