Methods have been to less that optimal developmental outcomes in toddlers. Maternal emotional availability (EA) is associated with better cognitive and language abilities. It is less clear whether early care-giving relationships can moderate the impact of prenatal stress on child development. Data were available in 131 families. Measures of prenatal stress were collected within one year of the 2011 Queensland Flood. Women were then assessed for emotional availability (sensitivity and structuring) at 16 months based on video recorded mother-child play interactions. The toddlers' cognitive and language development was assessed at 30 months. Moderation analyses determined whether maternal EA moderated the relationship between PNMS and toddler cognitive and language functioning. Prenatal stress was not directly associated with toddlers' cognitive and language development at 30 months. Overall, high maternal structuring and sensitivity were associated with better toddler vocabulary. However, children who were exposed to moderate to high levels of prenatal stress and peritraumatic distress spoke more words relative to toddlers of low structuring mothers exposed to high levels of overall subjective stress and to a lesser extent high peritraumatic distress. A similar difference was detected for PTSD-like symptoms and to a lesser extent peritraumatic distress. Children of low structuring mothers spoke fewer words as maternal stress exposure increased. The current study highlights the importance of maternal emotional availability (especially structuring) for cognitive and language development in young children. Findings suggest that toddlers exposed to higher levels of PNMS in utero may benefit from high maternal structuring in their language development. Moreover, the results also suggest that toddlers of mothers exposed to enduring subjective stress (i.e., PTSD-like symptoms) speak fewer words at 30 months of age when their mothers exhibit low levels of structuring during joint play at 16 months.

Results

Interaction effect for the maternal composite subjective stress score (COSMOSIS) and maternal structuring on MCDI vocabulary levels at 30 months. No impact of Maternal Structuring on MCDI scores was detected for toddlers of mothers who experienced low composite subjective stress scores. However, the higher the maternal composite subjective stress scores, the greater the association between maternal structuring and the toddlers' vocabulary at 30 months. When Maternal Structuring was low, prenatal subjective stress was not found to have an effect on language development at 30 months, however, for toddlers with mothers who were highly structuring and exposed to the highest levels of composite subjective stress, their vocabulary scores were up to 50 words larger than those of toddlers with lower structuring mothers. Thus, for those toddlers with high structuring mothers, the higher the maternal composite subjective stress scores the higher their vocabulary scores.

Conclusion and discussion

The current study highlights the importance of maternal emotional availability (especially structuring) for cognitive and language development in young children. It suggest that toddlers exposed to higher levels of prenatal maternal stress in utero may benefit from high maternal structuring in their language development. It also suggest that at toddlers at risk for enduring subjective stress (i.e., PTSD-like symptoms) speak fewer words at 30 months of age when their mothers exhibit low levels of structuring during joint play at 16 months. EA did not moderate the relationship between PNMS and cognitive abilities. The findings of the current study align with previous research that found that maternal autonomy support was associated with better expressive language development at 2 years. Given the strong association between EA and quality of attachment the current findings also align with previous research that shows attachment security is associated with more optimal language and cognitive development in children.