

# Is Parental Encouragement (As Measured by PICCOLO) During Toddlerhood Correlated

## with High-Risk Behaviors in 5<sup>th</sup> Grade?



Emma Eccles Jones  
College of Education & Human Services  
Utah State University

### Are these correlations different for first-born children versus children with older siblings?

\*Jocelyn Meyers | Faculty Members: \*\*Dr. Tasha Olson, \*\*Dr. Lori Roggman | \*Department of Psychology | \*\*Department of Human Development & Family Studies | Utah State University

#### Introduction

Children need support through healthy, positive relationships with adults, but they also need room to grow, learn, and slowly gain independence. Parents can use encouragement during interactions with their young children to actively “support of exploration, effort, skills, initiative, curiosity, creativity, and play” (Roggman et.al., 2013, scoring sheet). Parental support and encouragement of autonomy leads to better development of self-regulation and brain development, and can even influence executive functioning and parent-child relationships (Bernier et al., 2010). Maternal intrusiveness, or lack of encouragement and autonomy, has negative effects on young children and the relationship between the mother and the child, which predicts a child’s level of negativity later in life (Ispa et al., 2004). Highly supportive relationships between both parents and peers during adolescence is correlated with lower levels of internalized and externalized problem behaviors, and the lack of such support is related to increased reports of depressive moods, conflict, and antisocial behavior (Sentse & Laird, 2010).

#### Purpose

The purpose of this study is to look at the relationship between the level of encouragement at 14, 24, and 36 months of age with high-risk, anti-social, and big behaviors (aggression and anger) in 5th grade, and to determine whether these correlations are different for first born children and children who have older siblings.

#### Sample

Extant data on a sample of 3,001 low-income families and their infants from the Early Head Start Research and Evaluation Project (EHSREP), a nationwide longitudinal study, were used for this project.

Characteristic	Percent of Sample
Male	51.0%
Female	49.0%
Child is First-born	62.6%
Child is Later-born (has older siblings)	37.4%
<b>Race</b>	
White	37.2%
Black	34.7%
Hispanic	23.6%
Other	4.6%

#### Methods/Measures

##### Parental Encouragement - 14, 24, 36 Months

The Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO; Roggman et al., 2013), measures the prevalence of 28 different positive parenting behaviors across four domains, through direct observation of 10 minute recordings of children and their parents playing together. For the purpose of this study, we use the Encouragement domain which measures active support of exploration, effort, skills, initiative, curiosity, creativity, and play. Each item is scored on a scale of 0 to 2, 0 meaning the behavior was not seen at all, or 2 meaning the behavior was clearly observable multiple times. For the entire Encouragement domain, an individual may score between a 0 and 14. Seven specific behaviors are measured within the encouragement domain, namely;

Wait for the child’s response after making a suggestion.	Verbally encourages child’s efforts
Encourage child to handle toys.	Offers suggestions to help child.
Supports child in doing things on his/her own.	Shows enthusiasm about what the child is doing.
Supports child in making choices.	

##### Child Parent-Report Behaviors - 5th Grade

The Achenbach System of Empirically-Based Assessment (ASEBA), Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2000), measured parent-report of their child’s behaviors. The questions included criteria such as child’s level of aggression, level of activity or hyperactivity, temperament, and other internal and external behaviors and emotional displays. Items were scored on a scale of 1 to 3. 1 meaning ‘not true’, 2 meaning ‘sometimes or somewhat true’, and 3 meaning ‘very or often true’. Measured behaviors include;

Aggressive behavior	Social problems
Anxious/Depressed behaviors	Somatic Complaints
Attention Problems	Thought Problems
Rule-breaking Behavior	Withdrawn/Depressed Behaviors
Externalizing Behavior (Which includes Rule-breaking behavior and Aggressive behavior)	Internalizing Behavior (Which includes Anxious/Depressed behaviors, Withdrawn/Depressed behaviors, and somatic complaints)

##### Child Self-Report Behavior - 5th Grade

The Self-Description Questionnaire I (SDQ; Marsh, 1990; Klein, et al., 2016) measured children’s self-report of their own perceptions of their behavior, specifically problem behaviors, and their relationship with their parents. The questionnaire included 28 items and each item was scored on a scale of 1 to 4. 1 meaning ‘not at all true’, 2 meaning ‘a little bit true’, 3 meaning ‘mostly true’, and 4 meaning ‘very true’. Measured behaviors include;

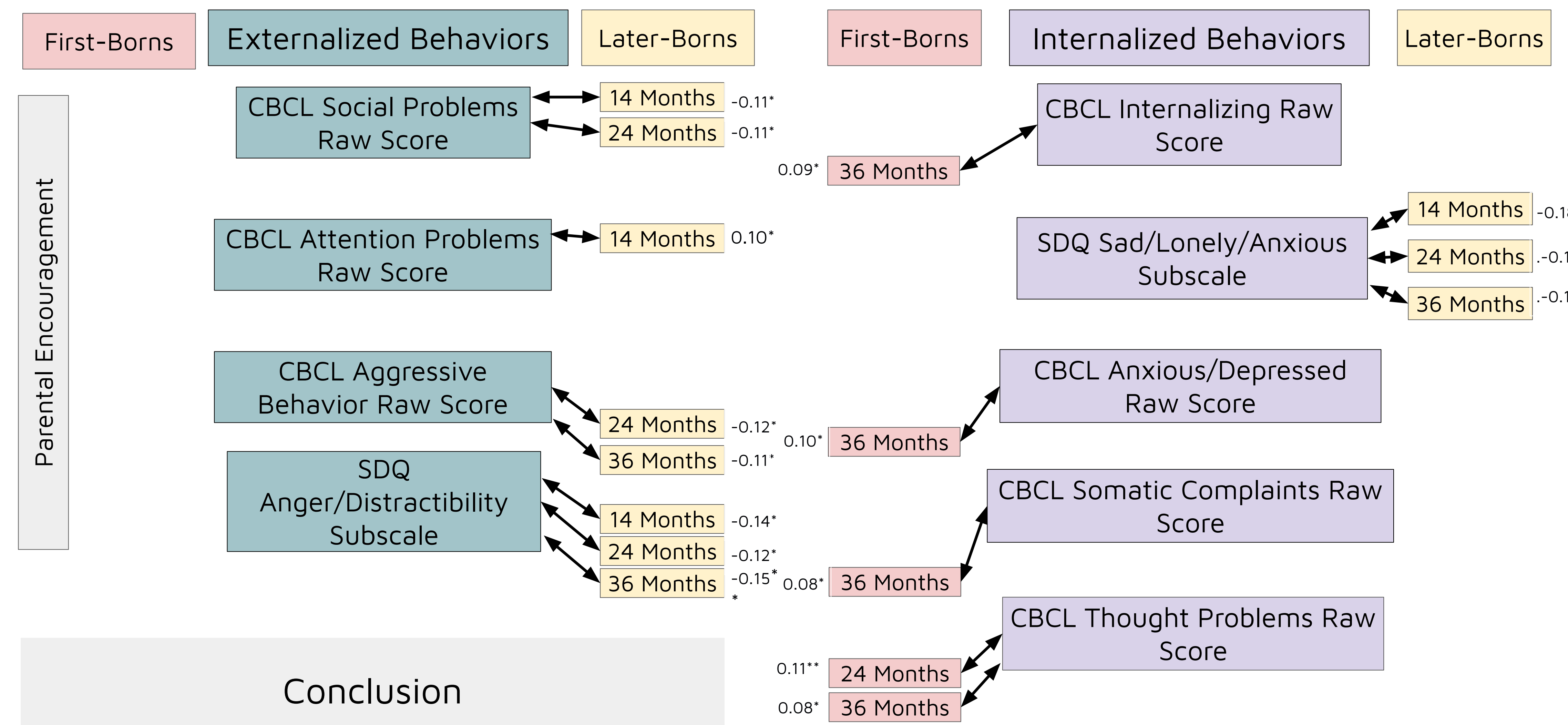
Anger/Distractibility	Child Reported Relationship with Dad
Sad/Lonely/Anxious	Child Reported Relationship with Mom
Peer Relations	

#### Results

Statistically significant correlations between parental encouragement through toddlerhood and measured behavioral outcomes in 5th grade.

	Encouragement 14 months	Encouragement 24 months	Encouragement 36 months	Encouragement Average
CBCL Rule-Breaking Behavior Raw Score	-0.07*			
SDQ Anger/Distractibility Subscale	-0.07*			-0.07*
SDQ Sad/Lonely/Anxious Subscale	-.09**	-.10**	-.09**	-.08**
CBCL Thought Problems Raw Score		.07*		.07**

Statistically significant correlations between parental encouragement through toddlerhood and measured behavioral outcomes in 5th grade for First-born and Later-born children.



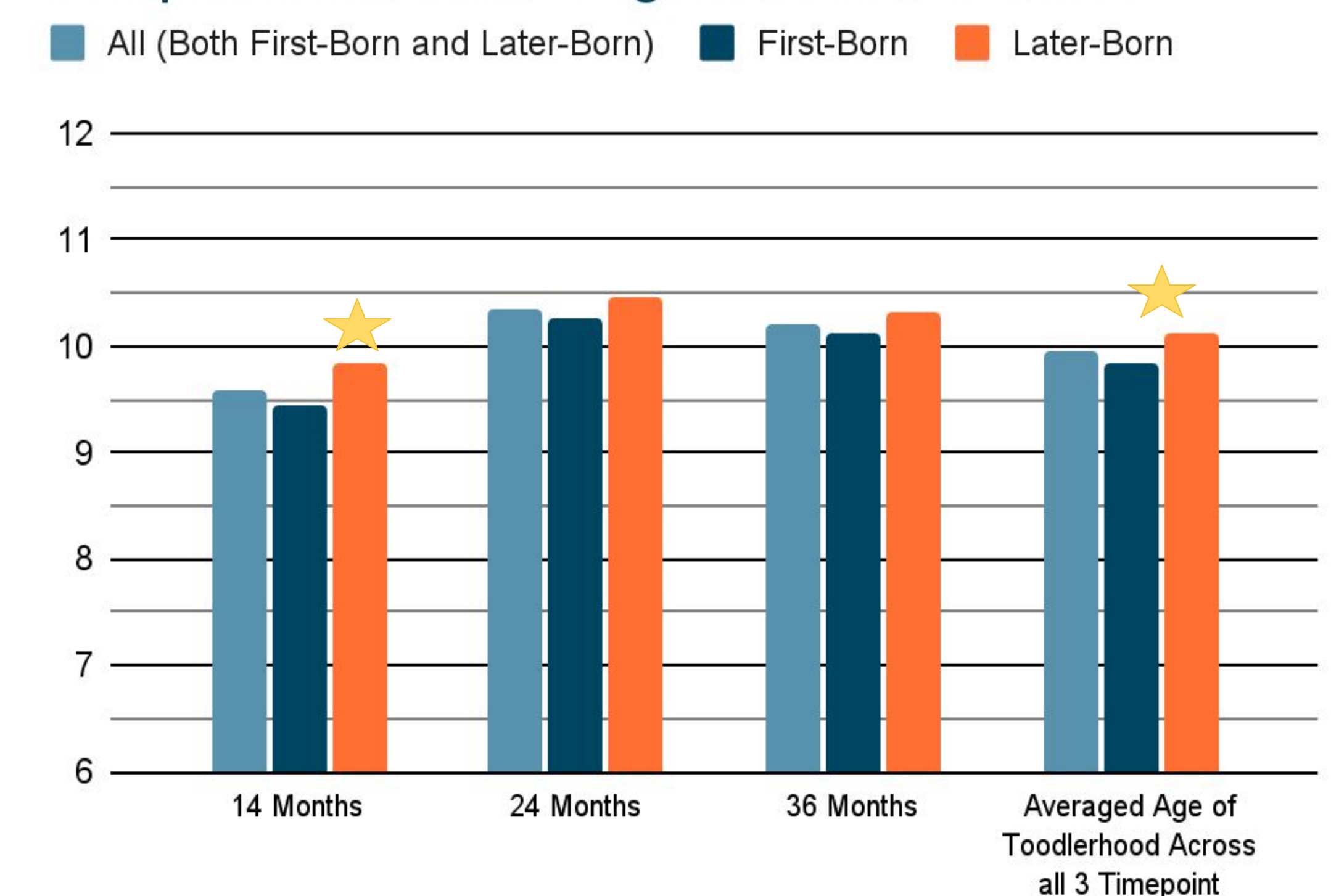
#### Conclusion

- Later-borns: At any time point, an increase in parental encouragement scores was correlated to a decrease in social problems, attention problems, aggressive behavior, anger and distractibility, and sad, lonely, and anxious feelings.
- First-borns: At all time points, an increase in internalized behaviors overall (Sad/lonely/anxious subscale, anxious/depressed subscale, somatic complaints, and thought problems) as well as an increase in anxious and depressed behaviors, somatic complaints, and thought problems as parental encouragement increase.
- For all children, regardless of birth order: At 14 months an increased parental encouragement score resulted in a decrease in Rule-Breaking Behavior and Anger/Distractibility. At 24 months, an increase in thought problems. At all time points as well as when averaged across all time points, and a decrease in Sad/Lonely/Anxious scores.

Recognizing these relationships between parental involvement in the early years of a child’s life and the later consequences it appears that parental encouragement in the first years of a child’s life can influence children’s behavior. Later-born children appeared to be influenced internally and externally while first-borns only showed significant correlations internally. These findings support the importance of positive encouragement in early development.

Later-born children received significantly more encouragement at 14 months than first-born children  $t(1563) = 3.16, p < .01$ . Overall, Later-born children received more encouragement than first-born children  $t(1981) = 2.90, p < .01$ .

#### Comparison of Encouragement Mean Score





# References

- Bernier, A., Carlson, S. M., & Whipple, N. (2010). From external regulation to self-regulation: Early parenting precursors of young children's executive functioning. *Child Development, 81*(1), 326–339. <https://doi.org/10.1111/j.1467-8624.2009.01397.x>
- Ispa, J. M., Fine, M. A., Halgunseth, L. C., Harper, S., Robinson, J., Boyce, L., Brooks-Gunn, J., & Brady-Smith, C. (2004). Maternal Intrusiveness, Maternal Warmth, and Mother-Toddler Relationship Outcomes: Variations Across Low-Income Ethnic and Acculturation Groups. *Child Development, 75*(6), 1613–1631. <https://doi.org/10.1111/j.1467-8624.2004.00806.x>
- Klein, A. K., Kemmerer, C., West, J., Lim, G. (2016). Early head start research and evaluation project (EHSREP): 1996-2010 measures compendium. Office of planning, Research, & evaluation (OPRE report) 2016-101. *Administration for children and families*. Mathematica policy research. <https://www.acf.hhs.gov/opre/report/early-head-start-research-and-evaluation-project-ehsrep-1996-2010-measures-compendium>
- Roggman, L., Cook, G., Innocenti, M., Norman, V. J., Christiansen, K., Anderson, S. (2013). PICCOLO. *Parenting interactions with the children: Checklist of the observations linked to the outcomes*. Users guide. Emma Eccles Jones College of Education and Human Resources, Utah State University. Brookes publishing.
- Sentse, M., & Laird, R. D. (2010). Parent-child relationships and dyadic friendship experiences as predictors of behavior problems in early adolescence. *Journal of Clinical Child and Adolescent Psychology, 39*(6), 873–884. <https://doi.org/10.1080/15374416.2010.517160>