

## WORKS COMPLETED USING DATA FROM THE TRIAD CHILD STUDY

\*Denotes graduate student or postdoc coauthor

### Publications

#### Peer-Reviewed

- \*Su, J., \*Augustine, M.E., & Leerkes, E.M. (in press). DRD4 interacts with adverse life events in predicting maternal sensitivity via emotion regulation. *The Journal of Family Psychology*.
- \*Augustine, M., Leerkes, E.M., & Calkins, S.D. (in press). Relations between early maternal sensitivity and toddler self-regulation: Exploring variation by oxytocin and dopamine D2 receptor genes. *Developmental Psychobiology*.
- Leerkes, E.M., & \*Zhou, N. (in press). Maternal sensitivity to distress and attachment outcomes: Interactions with sensitivity to non-distress and infant temperament. *The Journal of Family Psychology*.
- \*Qu, J. & Leerkes, E.M. (in press). The joint effect of infants' vagal tone and distress in predicting behavior problems at preschool: A person-centered approach. *Developmental Psychobiology*.
- Verhage, M.L., Pasco Fearon, R.M., Schuengel, C., van IJzendoorn, M.H., Bakermans-Kranenburg, M.J....& The Collaboration on Attachment Transmission Synthesis. (in press). Examining ecological constraints on the intergenerational transmission of attachment via individual participant data meta-analysis. *Child Development*.
- \*Cao, H., \*Zhou, N., \*Qu, J. & Leerkes, E.M. (2018). Multiple domains of new mothers' adaptation: Interrelations and roots in childhood maternal non-supportive emotion socialization. *The Journal of Family Psychology*, 32, 575-587.
- \*Norcross, P.L., \*Zhou, N. & Leerkes, E.M. (2017). Examining pathways linking maternal depressive symptoms in infancy to children's behavior problems: The role of maternal unresponsiveness and negative behaviors. *Infant Behavior & Development*, 238-247.
- Gartstein, M., Prokasky, A., Bell, M.A., Calkins, S., Bridgett, D., Braungart-Rieker, J., Leerkes, E.M., Cheatham, C., Eiden, R., Mize, K., Jones, N., Mireault, G., & Seamon, E. (2017). Latent profile and cluster analysis of infant temperament: Comparisons across person-centered approaches. *Developmental Psychology*, 53, 1811-1825.
- Leerkes, E.M. & \*Qu, J. & (2017). The Maternal Responsiveness Questionnaire: A

new self report of parenting during infancy. *Infant and Child Development*, 26:e1992  
DOI: 10.1002/icd.1992

\*Zhou, N., \*Cao, H., Leerkes, E.M. (2017). Interparental conflict and infants' behavior problems: Direct effects and the differential mediating roles of maternal sensitivity in distress and nondistress contexts. *Journal of Family Psychology*, 31, 464-474.

Raby, K.L., Yarger, H.A., Lind, T., Fraley, R.C., Leerkes, E.M., & Dozier, M. (2017). Attachment states of mind among internationally adoptive and foster parents. *Development & Psychopathology*, 29, Special Issue: Attachment in the Context of Atypical Caregiving: Harnessing Insights From a Developmental Psychopathology Perspective, 365-378.

Leerkes, E.M., \*Gedaly, L.R., \*Zhou, N., Calkins, S.D., Heinrich, V. & Smolen, A. (2017). Further evidence of the limited role of candidate genes in relation to infant-mother attachment outcomes. *Attachment & Human Development*, 19, 76-105.

Leerkes, E.M., \*Su, J., Calkins, S.D., A.J., Heinrich, V. & Smolen, A. (2017). Variation in mothers' arginine vasopressin receptor 1a and dopamine receptor D4 predicts maternal sensitivity via social cognition. *Genes, Brain & Behavior*, 16, 233-240.

Leerkes, E.M., \*Su, J., Calkins, S.D., Supple, A.J., O'Brien, M. (2017). Maternal physiological arousal and regulation while caregiving pose risk for subsequent infant attachment disorganization and behavior problems. *Development and Psychopathology*, 29, 245-257.

Leerkes, E.M., \*Su, J., Reboussin, B.A., Daniel, S.S., Payne, C.C., & Grzywacz, J.G. (2017) Establishing the measurement invariance of the Very Short Form of the Infant Behavior Questionnaire Revised for mothers who vary on race and poverty status. *Journal of Personality Assessment*, 99, 94-103.

Leerkes, E.M., \*Gedaly, L. & \*Su, J. (2016). Parental sensitivity and infant attachment. In L. Balter & C.S. Tamis-LeMonda (Eds). *Child Psychology: A Handbook of Contemporary Issues*, 3<sup>rd</sup> edition. (pp. 21-41). New York: Psychology Press.

Leerkes, E.M., Supple, A.J., \*Su, J., & \*Cavanaugh, A. (2015). Links between childhood emotion socialization and adult well-being: Similarities and differences for African American and European American women. *Journal of Family Issues*, 36, 1854-1877.

Leerkes et al., Supple, A.J., O'Brien, M., Calkins, S.D., \*Haltigan, J.D., Wong, M., & Fortuna, K. (2015). Antecedents of maternal sensitivity to infant distress: Integrating attachment, social information processing, and psychobiological perspectives. *Child Development*, 86, 94-111.

\*Mathews, M.E., Leerkes, E.M., Lovelady, C. & Labban, J. (2014). Psychosocial predictors of breastfeeding initiation and duration. *Journal of Human Lactation*, 30, 480-487.

Leerkes, E.M., Supple, A.J., & \*Gudmundson, J. (2014). Ethnic differences in emotional reactions to parental emotion minimization. *Marriage and Family Review*, 50, 435-446.

\*Haltigan, J. D., Leerkes, E. M., Wong, M. S., Fortuna, K., Roisman, G. I., Supple, A. J., & ... Plamondon, A. (2014). Adult attachment states of mind: Measurement invariance across ethnicity and associations with maternal sensitivity. *Child Development*, 85(3), 1019-1035. doi:10.1111/cdev.12180

\*Haltigan, J. D., Leerkes, E. M., Supple, A. J., & Calkins, S. D. (2014). Infant negative affect and maternal interactive behavior during the still-face procedure: The moderating role of adult attachment states of mind. *Attachment & Human Development*, 16(2), 149-173. doi:10.1080/14616734.2013.863734

\*Haltigan, J.D., Leerkes, E.M., \*Burney, R.V., O'Brien, M., Supple, A.J., & Calkins, S.S. (2012). The Infant Crying Questionnaire: Initial factor structure and validation. *Infant Behavior & Development*, 35, 876-883.

### **Under Review**

Leerkes, E.M. & \*Qu, J. (under review). The My Emotions Questionnaire: A new self-report of mothers' emotional reactions to infant crying.

\*Augustine, M. & Leerkes, E.M. (under review). Associations between maternal physiology and maternal sensitivity vary depending on infant distress and emotion context.

Cote-Arsenault, D., Leerkes, E.M., & Zhou, N. (under review). Individual differences in maternal, marital, parenting and child outcomes following perinatal loss: A longitudinal study.

### **In Preparation**

Leerkes, E.M., \*Bailes, L. G. & \*Augustine, M. (in preparation). The intergenerational transmission of emotion socialization. Invited submission for *Developmental Psychology* special issue on emotion socialization.

\*Bailes, L.G. & Leerkes, E.M. (in preparation). Predicting insensitive maternal behaviors from maternal personality and causal attributions: Direct and indirect effects

\*Augustine, M. & Leerkes, E.M. (in preparation). Relations between maternal behaviors and child behavior problems vary by interactive context and child temperament types.

## **Invited Chapters**

Leerkes, E.M. & \*Augustine, M. (in press). Parenting and Emotions. In M. H. Bornstein (Ed.), *Handbook of Parenting, 3<sup>rd</sup> ed, Vol 3. Being and Becoming a Parent*. Routledge.

Leerkes, E.M., \*Gedaly, L. & \*Su, J. (2016). Parental sensitivity and infant attachment. In L. Balter & C.S. Tamis-LeMonda (Eds). *Child Psychology: A Handbook of Contemporary Issues, 3<sup>rd</sup> edition*. (pp. 21-41). New York: Psychology Press.

Leerkes, E.M. & \*Parade, S.H. (2015). A psychobiological perspective on emotional development within the family context. In S.D. Calkins (Ed). *Handbook of infant development: Biopsychosocial perspectives* (pp. 206-231). New York: Guilford.

## **Presentations**

### ***Invited***

Leerkes, E.M. (2016, April). *Implications of maternal arousal & regulation for maternal sensitivity & infant adjustment*. Paper presented at the HDFS colloquium series, University of Texas at Austin.

Leerkes, E. M. (2014, October). *Origins and outcomes of maternal sensitivity to infant distress*. In Advances in Child Development and Behavior Research Speaker Series sponsored by the Child Development and Behavior Branch in the Division of Extramural Research, NICHD, Rockville, MD

Leerkes, Esther M. (2013, November). Implications of maternal arousal & regulation for maternal sensitivity & infant adjustment. In *Development of Individual Differences in Emotion Regulation and Dysregulation Across the Life Span*. Proseminar of the Carolina Consortium on Human Development. Chapel Hill, NC.

Leerkes, E.M. & \*Gudmundson, J. (2011, June). *Adult attachment classifications predict pregnant women's physiological responses to and perceptions of crying infants*. Paper presented at the 11<sup>th</sup> International Cry Workshop, Zeist, Netherlands.

### ***Peer-Reviewed***

Leerkes, E.M. & \*Su, J. (July 2018). *Mothers' self-reported emotion regulation predicts infant outcomes*. Poster presented at the Biennial Meeting of the International Congress on Infant Studies, Philadelphia, PA.

- Leerkes, E.M. & \*Qu, J. (July 2018). *My Emotions: A new self report of mothers' emotional reactions to infant crying*. Poster presented at the Biennial Meeting of the International Congress on Infant Studies, Philadelphia, PA.
- \*Norcross, P. & Leerkes, E.M. (July 2018). *Examining pathways linking maternal depressive symptoms to maternal sensitivity: Role of maternal causal attributions*. Poster presented at the Biennial Meeting of the International Congress on Infant Studies, Philadelphia, PA.
- Leerkes, E.M. & \*Zhou, N. (April, 2017). *The role of maternal sensitivity to infant distress and infant temperament in relation to infant attachment insecurity dimensions*. Paper presented in M. Gartstein (Chair). Co-creating interactions with parents: Child effects re-examined. Symposium presented at the Biennial Meeting of the Society for Research in Child Development. Austin, TX.
- \*Zhou, N., \*Cao, H., & Leerkes, E.M. (April, 2017). *Interparental conflict and infants' behavior problems: The mediating role of maternal sensitivity within distressing contexts*. Paper presented in E. Leerkes (Chair) Interparental conflict, parenting and child well-being. Symposium presented at the Biennial Meeting of the Society for Research in Child Development. Austin, TX.
- \*Norcross, P., Leerkes, E.M., & \*Qu, J. (April, 2017). *Pathways linking maternal depressive symptoms to child compliance behaviors*. Poster presented at the Biennial Meeting of the Society for Research in Child Development. Austin, TX.
- \*Qu, J. & Leerkes, E.M. (April, 2017). *Infants' emotion regulation behaviors associated with short-term negative affect reduction and fewer long-term behavior problems*. Poster presented at the Biennial Meeting of the Society for Research in Child Development. Austin, TX.
- Leerkes, E.M., \*Zhou, N. & Calkins, S.D. (May, 2016). *Maternal sensitivity and infant vagal regulation moderate links between infant temperament and infant/toddler weight outcomes*. Paper presented in E.M. Leerkes & S.D. Calkins (Chairs), *Prenatal and infancy predictors of subsequent obesity: a focus on biological and environmental factors*. Symposium presented at the International Congress on Infant Studies, New Orleans, Louisiana.
- \*Qu, J. & Leerkes, E.M. (May, 2016). *The joint effect of infants' vagal tone and distress in predicting behavior problems at preschool: A person-centered approach*. Poster presented at the International Congress on Infant Studies, New Orleans, Louisiana.

- \*Norcross, P.L., \*Zhou, N. & Leerkes, E.M. (May, 2016). *Parenting pathways linking maternal depressive symptoms with children's subsequent behavior problems*. Poster presented at the International Congress on Infant Studies, New Orleans, Louisiana.
- \*Gedaly, L. & Leerkes, E.M. (May, 2016). *What leads mothers to engage in overtly negative behavior when their infants are distressed?* Poster presented at the International Congress on Infant Studies, New Orleans, Louisiana.
- \*Gedaly, L.R. & Leerkes, E.M. (August 2015). *Predictors of attachment disorganization: Overtly negative maternal behavior, sensitivity to distress, and sociodemographic risk*. Poster presented at the International Attachment Conference Biennial Meeting, New York, NY.
- Leerkes, E.M., Calkins, S.D., \*Su, J., & Henrich, V. (March 2015). Do oxytocin and dopamine related genes moderate effects of maternal sensitivity on toddler self-regulation. In Bernier, A. & Bouvette-Turcot, A (Chairs), *Biological substrates and implications of caregiving relationships: An incursion into the nervous system, genes, and the brain*. Paper symposium presented at the Biennial Meeting of the Society for Research in Child Development. Philadelphia, PA.
- Leerkes, E.M., Calkins, S.D., \*Su, J., & Henrich, V. (March 2015). G X E predictors of maternal responses to infant crying: Oxytocin and dopamine related genes moderate effects of early childhood experiences. In Hechler, C. (Chair), *Infant crying: Emotional, cognitive, and behavioral reactions*. Paper symposium presented at the Biennial Meeting of the Society for Research in Child Development. Philadelphia, PA.
- \*Qu, J., Leerkes, E.M., & Calkins, S.D. (March 2015). *Infant emotion regulation behaviors at 6 months prevent behavior problems at 1 year*. Poster presented at the Biennial Meeting of the Society for Research in Child Development. Philadelphia, PA.
- \*Qu, J., Leerkes, E.M., & Calkins, S.D. (March 2015). *Does emotion regulation buffer temperamentally reactive children from developing behavior problems?* Poster presented at the Biennial Meeting of the Society for Research in Child Development. Philadelphia, PA.
- \*Gedaly, L., Leerkes, E.M., Calkins, S.D. & Henrich, V. (March 2015). *G X E predictors of infant attachment disorganization: The unique role of the oxytocin receptor gene*. Poster presented at the Biennial Meeting of the Society for Research in Child Development. Philadelphia, PA.
- Leerkes, E.M. & \*Su, J. (November 2014). *Patterns of maternal arousal and regulation while parenting pose risk for subsequent infant well-being*. Poster presented at the SRCD

Special Topic Meeting on New Conceptualizations in the Study of Parenting-at-Risk.  
San Diego, CA.

Leerkes, E.M., O'Brien, M., Calkins, S.D., Supple, A.J., & Su, J. (July 2014). Links between maternal arousal, regulation, and sensitivity during distress eliciting tasks. In Mesman, J. (Chair), *A closer look at the origins of parental sensitivity in infancy*. Paper symposium presented at the International Conference on Infant Studies, Berlin, Germany.

Leerkes, E.M. (July 2014). The stability and predictive validity of expectant mothers' responses to cry stimuli. In Verhage, M. (Chair) *Predicting Parenting: The Use of Cry Paradigms in the Transition to Parenthood*. Paper symposium presented at the International Conference on Infant Studies, Berlin, Germany.

Qu, J. & Leerkes, E.M. (July 2014). *The convergent and predictive validity of the Maternal Responsiveness Questionnaire*. Poster presented at the International Conference on Infant Studies, Berlin, Germany.

Leerkes, E.M., \*Haltigan, J.D., Wong, M.S., Fortuna, K., O'Brien, M., Calkins, S.D., & Supple, A. (2013, April). *A psychobiological model of the origins of maternal sensitivity to infant distress*. Paper presented at the Biennial Conference of the Society for Research in Child Development, Seattle, Washington.

\*Haltigan, J.D., Leerkes, E.M., Wong, M.S., Fortuna, K., Supple, A., O'Brien, M., Calkins, S.D., & Plamondon, A. (2013, April). *The latent structure of adult attachment: Confirmatory replication, measurement invariance, and relations to maternal sensitivity*. Paper presented at the Biennial Conference of the Society for Research in Child Development, Seattle, Washington.

\*Mathews, M.E. & Leerkes, E.M. (2013, April). *Psychosocial predictors of breastfeeding: Adult attachment, beliefs about crying, and perceptions of infant temperament*. Poster presented at the Biennial Conference of the Society for Research in Child Development, Seattle, Washington.

\*Haltigan, J.D., Leerkes, E.M., Wong, M.S., Fortuna, K., Supple, A., O'Brien, M., & Plamondon, A. (2013, April). *The three-factor structure of adult attachment: measurement invariance and evidence for ethnic differences in passive, loss-related preoccupation*. Poster presented at the Biennial Conference of the Society for Research in Child Development, Seattle, Washington.

Leerkes, E.M., \*Haltigan, J.D., Wong, M.S., & Fortuna, K. (2012, June). *Pregnant women's responses to infant crying vary based on their attachment related experiences and schema*. Paper presented at the International Conference on Infant Studies, Minneapolis, Minnesota.

\*Haltigan, J.D. & Leerkes, E.M. (2012, June). *Self-reports of adult attachment and mothers' Cognitive and emotional responses to infant distress*. Paper presented at the International Conference on Infant Studies, Minneapolis, Minnesota.

\*Perry, N. & Leerkes, E.M. (2012, June). *Recollections of fathers' socialization of emotions in childhood predicts womens' physiological responses to crying infants*. Poster presented at the International Conference on Infant Studies, Minneapolis, Minnesota.

Leerkes, E. M., \*Parade, S. H., \*Gudmundson, J. A., & \*Burney, R. (2011, April). Racial differences in the effects of parents' emotion socialization strategies on emotional adjustment. In E. M. Leerkes & J. A. Nelson (Co-chairs), *Racial and cultural differences in parents' emotion socialization beliefs and practices*. Symposium presented at the Biennial Meeting of the Society for Research in Child Development, Montreal, QC.

Leerkes, E. M., \*Parade, S. H., \*Gudmundson, J. A., Walker, M., Watson, C., & \*Burney, R. (2011, April). *Links between pregnant women's physiological reactions to and appraisals of crying infants*. Poster presented at the Biennial Meeting of the Society For Research in Child Development, Montreal, QC.

### **Graduate Student Theses and Dissertations**

Matthews, M. (2013). *Psychosocial predictors of breastfeeding initiation and duration*. Unpublished master's thesis. The University of North Carolina at Greensboro. (Department of Human Development and Family Studies).

Gedaly, L. R. (2015). *Environment and genetic predictors of infant attachment disorganization*. Unpublished master's thesis. The University of North Carolina at Greensboro. (Department of Human Development and Family Studies).

Norcross, P. (2016). *Examining parenting pathways linking maternal depressive symptoms to children's internalizing and externalizing behavior problems*. Unpublished master's thesis. The University of North Carolina at Greensboro. (Department of Human Development and Family Studies).

Qu, J. (2017). *Identifying Adaptive Emotion Regulation Behaviors Among Infants*. Unpublished doctoral dissertation. The University of North Carolina at Greensboro. (Department of Human Development and Family Studies).

### **Undergraduate Research Supported by UNCG's Office of Undergraduate Research**

- *How Quickly Mothers Respond to Their Infants' Cries: The Role of Context, Infant Age and Mothers' Childhood Experiences* (2013). Undergraduate Research Assistantship University of North Carolina at Greensboro (written on behalf of Emalee Zingher, \$2,000).



- *Gender Differences in Infant Emotion Regulation* (2012). Undergraduate Research Assistantship University of North Carolina at Greensboro (written on behalf of Jillian Troxler, \$1,500).

- *Links Between Infant Temperament and Maternal Sensitivity* (2011). Undergraduate Research Assistantship University of North Carolina at Greensboro (written on behalf of Glynnis Brown, \$1,500).

- *Links Between Mothers' Experiences in Close Relationships and Maternal Sensitivity* (2011). Undergraduate Research Assistantship University of North Carolina at Greensboro (written on behalf of Shemeka Thorpe, \$3,000).

### Undergraduate Research Experience

Name	Major	Position(s) on Project	When on Project
Maggie Allred	Education & SES	Paid RA	Fall 2009- Spring 2011
Danika Washington	HDF	HDF intern; once graduated paid RA	Intern: Spring 2010 Graduated Paid RA: May 2010-August 2010
Kristen Smith	HDF	HDF 401	Spring 2010
Charity Davenport	HDF	HDF intern	Summer 2010
Glynnis Brown	HDF	HDF 401; Paid RA; UNCG URA	HDF 401: Summer 2010; Paid RA: Summer 2011; UNCG URA: Fall 2011
Amelia Hopkins	Speech Pathology and Audiology	HDF 401	Fall 2010
Courtney Johnson	HDF	HDF 401	Fall 2010
Brittany Doyle	HDF	HDF 401	Fall 2010
Shemeka Thorpe*	HDF	HDF 401; UNCG URA	HDF 401: Fall 2010; UNCG URA: Summer 2011
Au'Brie McKoy	HDF	HDF 401	Spring 2011

Alisha Brown	PSY	HDF 401; PSY433 (psy internship)	HDF 401: Spring 2011; PSY 433: Fall 2011
Jessica Jacobs	HDF	HES URA; HDF 401	HES URA: Spring 2011- Summer 2011; HDF 401: Fall 2011
Theresa Lombard	HDF	HDF intern; once graduated Paid RA	HDF intern: Spring 2011; Paid RA: Summer 2011-Fall 2011
Megan Scudder	PSY	HDF 401	Fall 2011
Sarah Wendland	PSY	HDF 401	Fall 2011
Ashley Smith	HDF	HDF intern	Fall 2011
Kim Jung	PSY	HDF 401	Fall 2011-Spring 2012
Brittany Morgan	HDF	HDF intern	Spring 2012
Rashema Rouse	HDF	HDF intern	Spring 2012
Jametta Billy	Women's and Gender Studies	HDF 401	Spring 2012
Brittany Thompson	PSY	HDF 401	Spring 2012
Jillian Troxler**	PSY & Sociology	HDF 401 URCA paid RA	Spring 2012, 2014 Summer 2012 Spring; Summer 2014
Ashley Michael	PSY	HDF 401	Spring 2012
Charisse Wade	PSY		Fall 2012
Hannah Mould	HDF		Fall 2012
Shamika Robinson	HDF		Fall 2012
		HDF 499	
Evelyn Covington	HDF		Spring 2013
Maylee Vasquez	HDF		Spring 2013

Kyra Pridgen	HDF		Spring 2013
Desiree Lambert	HDF	HDF 499	Spring 2013
Emalee Zingher**	HDF	HDF 401 URCA HDF 499	Spring 2013, 2014 Summer 2013 Fall 2013
Caroline Craig	HDF	HDF 499	Fall 2013
Kelsey Meyers	HDF	HDF 401, paid RA	Spring, Summer 2014

Note:

HDF 401 and PSY 433 are independent study courses

URA/URCA = Undergraduate Research and Creativity Award

HES = former school of Human and Environmental Sciences

\*\* Denotes students who went on to PhD programs.