

Adolescent Parents' Participation in Learning: Factors Contributing to Children's Development

Kathryn E. Woods, M.A.
Lisa L. Knoche, Ph.D.
Kelly Rasmussen, B.A.
Susan M. Sheridan, Ph.D.
University of Nebraska-Lincoln



National Association of School Psychologists
Annual Conference
March 28, 2007

Getting Ready Project

- The Getting Ready Project is a five-year, federally funded, longitudinal study
- This project seeks to promote parent strengths and competencies through comprehensive, evidence-based family-centered services
- *Parent engagement with child* (i.e., warmth & sensitivity, support for autonomy, participation in child learning) *and with teachers* (i.e., collaborative interactions and planning) are the focus of the intervention
- Child and parent outcomes are investigated given our interest in child *and* family readiness for school
- Adolescent parents are one group involved in the project who present with unique strengths and challenges when raising their children

Adolescent Parents

- Approximately 750,000 teens become pregnant each year (Borkowski, Bisconti, Willard, Keogh, & Whitman, 2002)
 - Adolescents in the U.S. experience substantially higher pregnancy and birth rates than other industrialized countries (Singh & Darroch, 2000; Boonstra, 2002)
- At least 40,000 adolescents who become pregnant drop out of school each year
 - Fewer than six out of ten adolescent mothers graduate from high school by age 29 (Pianta & Walsh, 1996)
- The experience of being an adolescent parent has critical implications for parents as well as their children

Adolescent Parents

- Like many parents with young children, adolescent parents may struggle with understanding their child's needs, communicating with their child, and developing their child's cognitive skills
- All parents may increase their ability to prepare their children for successful entry into school by promoting essential pre-academic skills, such as language development, that relate to later cognitive outcomes

Importance of Early Language Development

- Early language skills are an important precursor to the foundational skills of phonological processing, print awareness, and other essential features of reading (Whitehurst & Lonigan, 2002)
- Increasing children's language skills can prevent a majority of reading problems (Snow, Burns & Griffin, 1998)
- Children with larger vocabularies have higher reading scores and a better understanding of spoken language (Whitehurst & Lonigan, 2002)

Parent Behaviors That Support Early Language Development

- Parent engagement plays a significant role in language and skill development (Harris, Jones, Brookes, & Grant, 1986; Landry et al., 1997; Tomasello & Todd, 1983)
- Maternal facilitation of language positively relates to positive expressive language and reading outcomes for children (Fewell & Deutscher, 2002)
- The use of positive affect and the expression of warmth through physical closeness and sensitive voice tones are also associated with improved cognitive outcomes (Landry, Smith, Swanck, Assel, & Vellet, 2001) and later language development (Bornstein & Tamis-LeMonda, 1989)

Parent Behaviors That Support Early Language Development

- Parents may engage in a variety of behaviors to promote early language skills:
 - Shared reading (Cornell, Senechal, & Broda, 1988)
 - Exposing children to print (Elley, 1989)
 - Rhyming, word-sound games (Whitehurst & Lonigan, 2002)
 - Reading aloud to their children (Raikes et al., 2006; Wood, 2002)
 - Using open-ended questions, expansions, and following a child's lead (Arnold et al., 1994)
 - Aspects of the home literacy environment (Senechal, LeFevre, Hudson, & Lawson, 1996)
- Research indicates that adolescent parents are less likely to engage in behaviors that support language development than older mothers (Field, 1991; Osofsky & Osofsky, 1978)

Support for Adolescent Parents

- Professionals can provide support to improve outcomes for adolescent parents and their children
- Support provided by school professionals has focused on practices that increase high school graduation (Smith-Battle, 2006) and parent-child interactions patterns (Crockenberg, 1985)
- Research examining the type of support provided to adolescent parents has typically focused on support provided by the mother's family, partner, or social network (Bunting & McAuley, 2004; Letourneau, Stewart, & Barnfather, 2004)
- Research has yet to examine how professional support may impact the parenting behaviors of adolescent parents that support the learning and early language development of their children

Research Questions

1. How do *observed adolescent parental behaviors that support child language and learning* relate to early language development in children of adolescent parents?
2. How do *adolescent parental perceptions of professional support* relate to early language development in children of adolescent parents?
3. How do *adolescent parental perceptions of professional support and behaviors that support language and learning* interact to predict early language development in children of adolescent parents?

Methods

Table 1
Demographic Information (n = 54)

	Parent	Child
Age		
Mean	17.24 years	9.89 months
Range	14-21 years	1-35 months
Gender		
Male	0%	41%
Female	100%	59%
Ethnicity		
Caucasian	44%	28%
African-American	22%	28%
Hispanic	15%	17%
Other	19%	27%

Participants

- Recruited from four high schools in a Midwestern community
- Each adolescent mother participates in the Student Parent Program at her school and is enrolled in the Getting Ready Project
- Adolescent mothers must be enrolled in the program for at least one year
- Mothers are enrolled in high school courses and a parenting class while their children are cared for in a child development center

Procedure

- Infant/toddlers are assessed by graduate research assistants twice per year
- Parent interviews are conducted three times per year
- Adolescent parents are compensated for their time

Measures

- *Preschool Language Scale — Fourth Edition*
(PLS-4; Zimmerman, Steiner, & Pond, 2002)
 - Measured language development of the infant and toddler participants across auditory and expressive domains
- *Professional Support*
 - Mothers rated their perceptions of support by professionals over the past 3-6 months over 3 items
(1=Not Very Helpful; 3 = Very Helpful)
- *Parent/Caregiver Involvement Scale*
(PCIS; Farran, Kasari, Comfort, & Jay, 1986)
 - Parent-child semi-structured play sessions were videotaped and reliably coded for the quality with which parents engaged in behaviors to support their child's language and learning (i.e., "learning behaviors" -- verbal involvement, relationships between activities, and teaching behaviors)

Video

Table 2
Descriptive Information on Measures

	<i>Mean</i>	<i>SD</i>
PLS-IV ^a	96.67	14.50
Professional Support ^b	2.53	0.58
Learning Behaviors ^c	3.94	0.52

^aPreschool Language Scale-IV; Mean = 100; SD = 15

^bProfessional support ratings range from 1-3 with high scores suggestive of greater levels of perceived professional support

^cParent/Caregiver Involvement Scale, ratings range from 1-5 with high scores indicative of higher quality of parental behaviors that support learning and language

Analyses and Results

Analyses

- Correlation and multiple regression were conducted to predict the language and learning of infants and young children
- The analysis included professional support, learning behaviors and their interaction as predictors of child language and learning
- Bivariate correlations were computed among the PLS-IV, learning behaviors, professional support, maternal age, and child age

Table 3

Bivariate Correlations (n = 54)

	PLS-IV	Learning Behaviors	Professional Support	Mothers Age	Child's Age
PLS-IV					
Learning Behaviors	0.24+				
Professional Support	0.20	0.05			
Mother's Age	-0.12	-0.11	-0.15		
Child's Age	-0.15	0.15	-0.27+	0.24+	

+ $p \leq .10$

- As adolescent mothers learning behaviors increase, their children's scores on the PLS-IV increase

Table 3

Bivariate Correlations (n = 54)

	PLS-IV	Learning Behaviors	Professional Support	Mothers Age	Child's Age
PLS-IV					
Learning Behaviors	0.24+				
Professional Support	0.20	0.05			
Mother's Age	-0.12	-0.11	-0.15		
Child's Age	-0.15	0.15	-0.27+	0.24+	

+ $p \leq .10$

- Professional support is not significantly correlated with learning behaviors or PLS-IV scores

Table 3

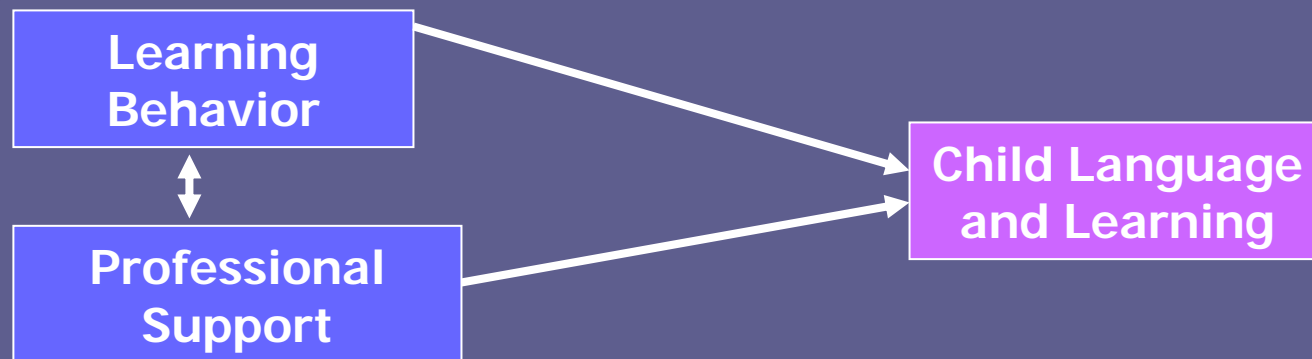
Bivariate Correlations (n = 54)

	PLS-IV	Learning Behaviors	Professional Support	Mothers Age	Child's Age
PLS-IV					
Learning Behaviors	0.24+				
Professional Support	0.20	0.05			
Mother's Age	-0.12	-0.11	-0.15		
Child's Age	-0.15	0.15	-0.27+	0.24+	

+ $p \leq .10$

- As children get older, adolescent parents perceive less professional support

Multiple Regression



- The overall regression model, produced a significant effect, $R^2 = .22$, adjusted $R^2 = .17$, $F(3,46) = 4.23$ $p \leq .01$
 - The model predicts up to 22% of the variance in child language and learning

Table 4

Multiple Regression Predicting Child Language and Learning

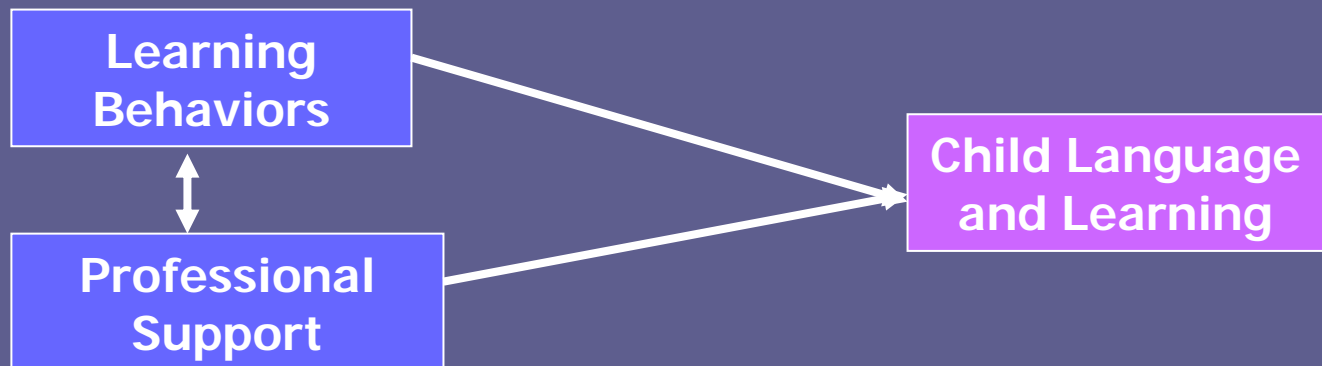
Model	B	SE B	β
(Constant)	96.81	1.93	
Learning Behaviors	5.14	3.73	0.18
Professional Support	3.61	3.63	0.13
Interaction Learning Behaviors x Professional Support	-19.75	7.30	-0.36**

Note. $R^2 = 0.22$

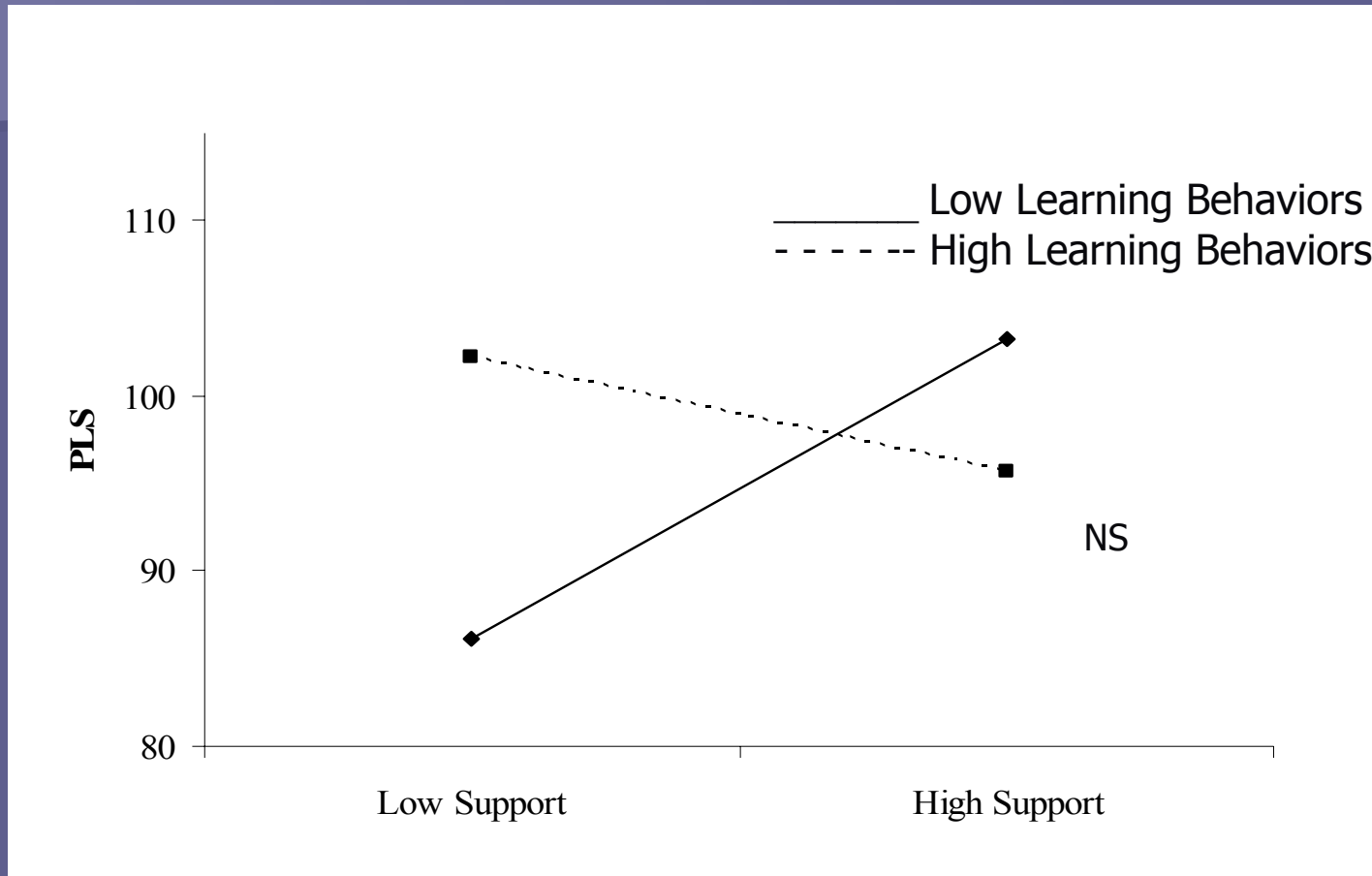
* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Multiple Regression

- Adolescent parent learning behaviors, when controlling for the effects of professional support and the interaction term, was not significantly predictive of child language scores on the PLS-IV
- Similarly, professional support, when controlling for the effects of parent learning behavior and the interaction term, was not statistically significant
- However, there was a significant interaction between adolescent parent learning behaviors and professional support in predicting child language and learning

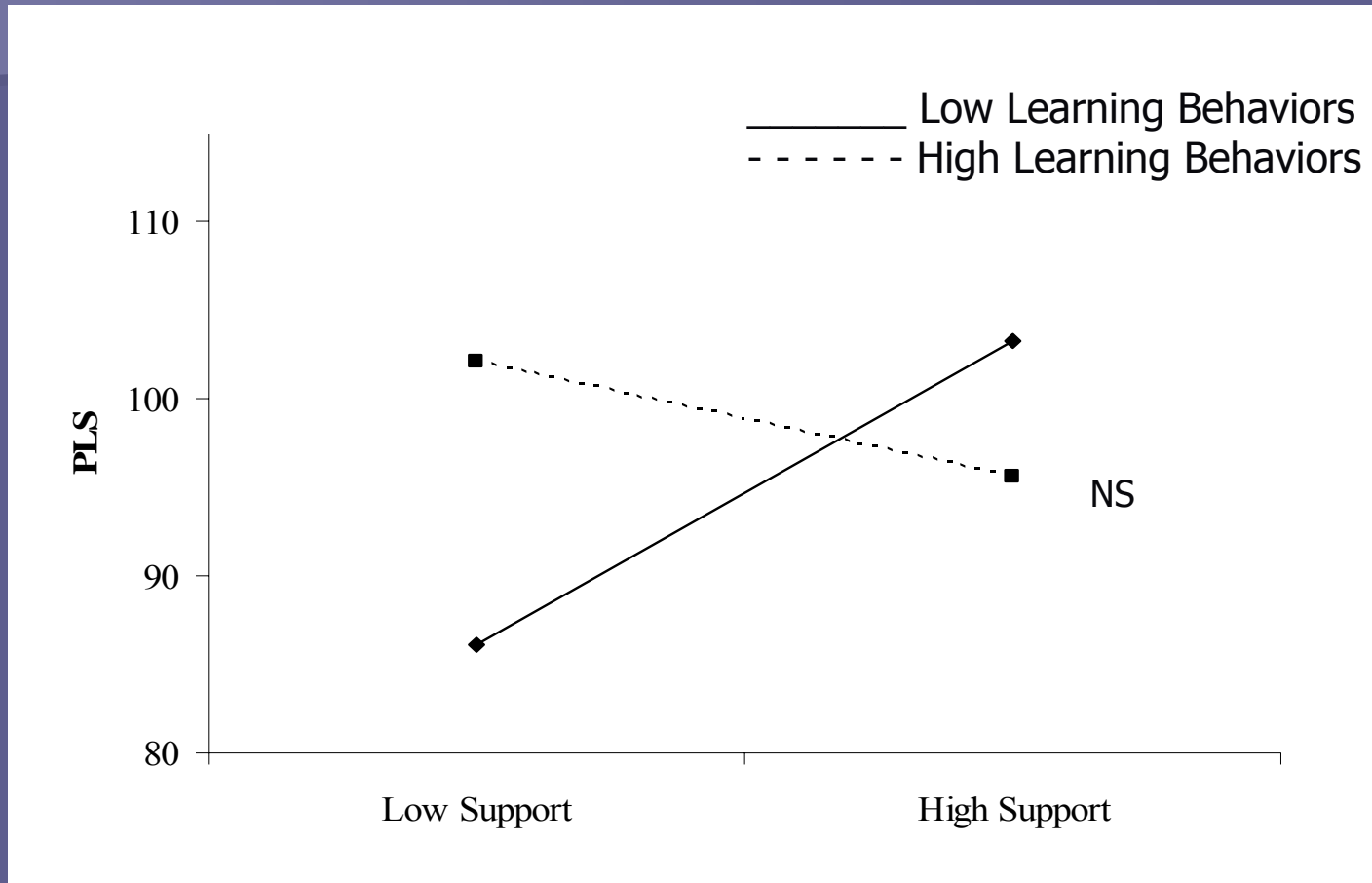


Interaction Effects



For adolescent parents who demonstrate low levels of learning behaviors (*one standard deviation below the mean*), those with low levels of perceived professional support (*one standard deviation below the mean*), have children who score lower on the PLS-4 than those adolescent parents with high perceived levels of professional support

Interaction Effects



For adolescent parents with high learning behaviors (*one standard deviation above the mean*), perceived level of professional support is not related to child language and learning

Discussion

- Perception of support by professionals is important
 - Especially important in indirectly influencing child learning outcomes when adolescent parents do not exhibit a great deal of behaviors that support their child's learning and early language
 - When parents do not engage in learning behaviors, and do not perceive professional support, children's early language outcomes are diminished
 - Perceived support appears less important for parents who are already demonstrating high levels of behaviors that encourage children's language and learning

Discussion

- Specific pathways by which the observed relationships and interactions occur is unknown
 - Language development can be influenced through other pathways in addition to positive learning behaviors demonstrated by parents
 - Perceived support may contribute to other forms of parent engagement, such as parents' warmth, responsiveness and attachment, or support for their child's autonomy, thereby promoting positive language outcomes

Discussion

- Other dimensions of the professional-parent relationship, beyond support, may be influential and predictive of child outcomes
 - Family-centered services endorse attitudes and practices that parallel “support”
- Parent-professional partnerships may promote other positive behaviors of both partners that enhance healthy child development

Implications for Practice

- The *perception* of professional support by adolescent parents is important, specifically for those who do not demonstrate behaviors to support learning in their young child
- It is essential that school psychologists consider how efforts to support young parents are actually perceived
- It is not clear what types of support are most helpful or important for this sample

Limitations

- Our *measure of parent behaviors* to support learning and language taps only one aspect of what, when, where, and how parents actually interact with their children around learning
- *Psychometric analysis* of the PCIS with this sample is still underway
- The *measure of professional support* is incomplete
- *External validity* is questionable given sample in high school program and in a research project
- Restricted range of outcome measures may have reduced observed relationships

Future Research

- Many, many research questions are left unanswered!
- What is the relationship between parent behaviors that support learning and language, and other child outcomes?
- How do the constructs of parental participation in learning (behaviors) and perceived professional support change over time?
- What is their influence at different times in the life of the adolescent parent? How do they influence the child at different developmental periods and transitions, in different contexts, in relation to alternative developmental domains?

Future Research Directions

- What is the best way to operationalize and characterize parent behaviors supportive of language and learning? How do we best capture it?
- What are effective models of professional support that are responsive to individual parent and child needs, and effective in producing important parent and child outcomes?
- How is the role of professional support altered in the face of other forms of support experienced by the adolescent parent? What is its relative importance?

For More Information, contact:

- *Susan Sheridan: ssherida@unlserve.unl.edu*
- *Lisa Knoche: lknoche2@unl.edu*
- *Kathryn Woods: kwoods@bigred.unl.edu*
- *Kelly Rasmussen: kelrasmussen@hotmail.com*

This research is supported by a grant awarded to Drs. Susan Sheridan and Carolyn Pope Edwards by the Department of Health and Human Services (DHHS) -- National Institute of Child Health and Human Development (NICHD), Administration for Children and Families (ACF) and Office of the Assistant Secretary for Planning and Evaluation (ASPE); and the Department of Education (DOE) -- Office of Special Education and Rehabilitative Services. The opinions expressed herein are those of the investigators and do not reflect the funding agencies (GRANT # 1R01H00436135).

References

- Arnold, D. H., Lonigan, C. J., Whitehurst, G. J., & Epstein, J. N. (1994). Accelerating language development through picture book reading: Replication and extension to a videotape training format. *Journal of Educational Psychology, 86*, 235–243.
- Boonstra, H. (2002). Teen pregnancy: Trends and lessons learned. *The Guttmacher Report on Public Policy, 5*, 7-10.
- Bornstein, M. H., & Tamis-LeMonda, C. S. (1989). Maternal responsiveness and cognitive development in children. In M. H. Bornstein (Ed.), *Maternal responsiveness: Characteristics and consequences* (pp. 49-61). San Francisco, CA: Jossey Bass.
- Borkowski, J. G., Bisconti, T., Willard, C. C., Keogh, D. A., & Whitman, T. L. (2002). The adolescent as parent: Influences on children's intellectual, academic, and socioemotional development. In J. G. Borkowski, S. L. Ramey, & M. Bristol-Power (Eds.), *Parenting and the Child's World* (pp. 161-184). Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Bunting, L. & McAuley, C. (2004). Teenage pregnancy and motherhood: The contribution of support. *Child and Family Social Work, 9*, 207-215.
- Cornell, E. H., Sénéchal, M., & Broda, L. S. (1988). Recall of picture books by 3-year-old children: Testing and repetition effects in joint reading activities. *Journal of Educational Psychology, 80*, 537-542.
- Crockenberg, S. (1985). Professional support and care of infants by adolescent mothers in England and the United States. *Journal of Pediatric Psychology, 10*, 413-428.
- Elley, W. B. (1989). Vocabulary acquisition from listening to stories. *Reading Research Quarterly, 24*, 174-187.
- Farran, D. C., Kasari, C., Comfort, M., Jay, S. (1986). Parent/Caregiver Involvement Scale. Greensboro, NC: Continuing Education, University of North Carolina at Greensboro.

References

- Fewell, R. R., & Deutscher, B. (2002). Contributions of receptive vocabulary and style: Variables to later verbal ability and reading in low birth weight children. *Topics in Early Childhood Education, 22*, 181–191.
- Field, T. (1991). *Infancy*. Cambridge, MA: Harvard University Press.
- Harris, M., Jones, D., Brookes, S., & Grant, J. (1986). Relations between the non-verbal context of maternal speech and rate of language development. *British Journal of Developmental Psychology, 4*, 261-268.
- Landry, S. L., Smith, K. E., Miller-Loncar, C. L., & Swank, P. R. (1997). The role of child-centered perspectives in a model of parenting. *Journal of Experimental Child Psychology 66*, 341–361.
- Landry, S. H., Smith, K. E., Swank, P. R., Assel, M. A., & Vellet, S. (2001). Does early responsive parenting have a special importance for children's development or is consistency across early childhood necessary? *Developmental Psychology, 37*, 387-403.
- Letourneau, N. L., Stewart, M. J., & Barnfather, A. K. (2004). Adolescent mothers: Support needs, resources, and support-education interventions. *Journal of Adolescent Health, 35*, 509-525.
- Osofsky J. D., & Osofsky H. J. (1978). Teenage pregnancy: Psychological considerations. *Clinical Obstetric Gynecology, 21*, 1161-1173.
- Pianta, R. C., & Walsh, D. J. (1996). *High risk children in the schools: Creating sustaining relationships*. New York: Routledge.

References

- Raikes, H., Pan, B. A., Luze, G., Tamis-LeMonda, C., Brooks-Gunn, J., Constantine, J., Tarullo, L., Raikes, A., & Rodriguez, E. (2006). Mother-child bookreading in low-income families: Correlates and outcomes during the first 3 years of life. *Child Development, 77*, 924-953.
- Senechal, M., LeFevre, J., Hudson, E., & Lawson, E. P. (1996). Knowledge of storybooks as a predictor of young children's vocabulary. *Journal of Educational Psychology, 88*, 520-536.
- Singh, S., & Darroch, J.E. (2000). Adolescent pregnancy and childbearing: Levels and trends in developed countries. *Family Planning Perspectives, 32*(1), 14-23.
- Smith-Battle, L. (2007). 'I wanna have a good future': Teen mothers' rise in educational aspirations, competing demands, and limited school support. *Youth & Society, 38*, 348-371.
- Snow, C. E., Burns, M. S., & Griffin, P. (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.
- Tomasello, M., & Todd, J. (1983) Joint attention and lexical acquisition style. *First Language, 4*, 197-212.
- Whitehurst, G. J. & Lonigan, C. J. (2002). Emergent literacy: Development from prereaders to readers. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of Early Literacy Research* (pp. 11-29). New York, New York: The Guilford Press.
- Wood, C. (2002). Parent-child pre-school activities can affect the development of literacy skills. *Journal of Research in Reading, 25*, 241-258.
- Zimmerman, I. L., Steiner, V. G., & Pond, R. E. (2002). *Preschool Language Scale Fourth Edition: Examiner's Manual*. San Antonio, TX: The Psychological Corporation.