Family & Home Environment

The first years of life are the foundation for later well-being.

Infants begin their lives with amazing abilities that serve as the foundation for their health and development throughout childhood and into adulthood. Every part of the child's body is growing and developing. Health and development are intertwined from the moment of conception so that addressing the developmental needs of young children is just as important for physical and mental well-being as it is for preparing the child to succeed in school.[1]

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Particularly important is the growth that occurs in the child's brain. During the first three years of life, the brain is more influenced by a child's experiences than it will be later in development. Because young children are amazingly receptive to their environment, early childhood experiences are the foundation for later abilities. Children develop increasingly complex skills by building on their previous skills. A strong foundation increases the likelihood of positive outcomes; a weak foundation increases the likelihood of problems with learning, behavior, and health.[2,3]

Early relationships influence how children grow and develop.

From the beginning, infants have a built-in capacity to be social and engage with others. They send non-verbal messages or cues to indicate that they want attention, need a rest, or feel distress.[4] How parents and caregivers respond to these cues has long-term effects on a child's emotional development. For example, when a parent responds to a baby's crying, the baby learns that the environment is safe and nurturing, and that care and attention will come promptly when needed. Being held, gently touched, and quietly talked to can show infants that they are safe, loved, and important. Infants whose needs are met feel safe and learn to trust their parents and caregivers. This security promotes emotional development and creates the foundation for trusting relationships to come.[5]

How parents respond to their children's cues is also important for cognitive development. When parents are sensitive to children's signals, they naturally encourage learning by tailoring activities that are challenging but manageable. This is known as scaffolding.[6] As they become more mobile and more independent, having an attentive parent nearby comforts a child in new or challenging situations and provides a secure base from which he can explore with greater confidence. Parental sensitivity and scaffolding during infancy and early childhood promote cognitive development throughout later childhood.[7]

Postpartum depression is a health risk for mothers and their babies.

Positive parenting is especially important during a child's first few years.[8] Hardships such as financial difficulties, stress, lack of support, and poor health reduce parents' emotional resources and make it difficult for them to adjust to the demands of parenting. Because risk factors like these can affect parenting quality, they can also affect children's early development.

One widely studied risk factor is postpartum depression, the most common medical complication of childbirth.[9] Many women—about 70 percent—experience brief depressive symptoms shortly after giving birth. Often called "baby blues", these feelings usually subside after about two weeks. Postpartum depression, by contrast, is a persistent and serious disorder affecting 10 to 20 percent of new mothers. Symptoms include insomnia, crying spells, poor appetite, and feelings of guilt and hopelessness.[10,11]

Research has repeatedly found that adolescent mothers, African-American mothers, low-income mothers, and mothers with low education are at increased risk for postpartum depression.[10,12] Other risk factors include low self-esteem and lack of social support. Similarly, women who remember their own parents as unresponsive or neglectful are more likely to experience depression when they become parents themselves.[13]

If left untreated, postpartum depression can impair a mother's ability to provide the positive interactions that her baby needs. Research has linked maternal depression during infancy with parenting styles that are either withdrawn and uninterested or harsh and impatient.[14] Mothers who are depressed may not be emotionally available to their children and may be insensitive to their child's cues. Depressed mothers have been found to play less often with their infants and engage in fewer activities to promote child development than mothers without depression.[15]

Maternal depression affects children's brain development and emotional health.

Infants of depressed mothers are at risk for cognitive and social difficulties that can appear as early as two months. They tend to be less active, to make less eye contact, and to engage in more negative behaviors than other babies.[16] They are also at risk for depression, with symptoms sometimes appearing by four months.[17] Long term effects have also been documented, including emotional instability, conduct problems, and mental health disorders.[11] Recent research has discovered distinct neurobiological patterns associated with maternal depression. For instance, brain activity and stress hormone levels are measurably different in children of depressed mothers.[14]

Maternal Depression and Parenting Style among Shelby County Mothers

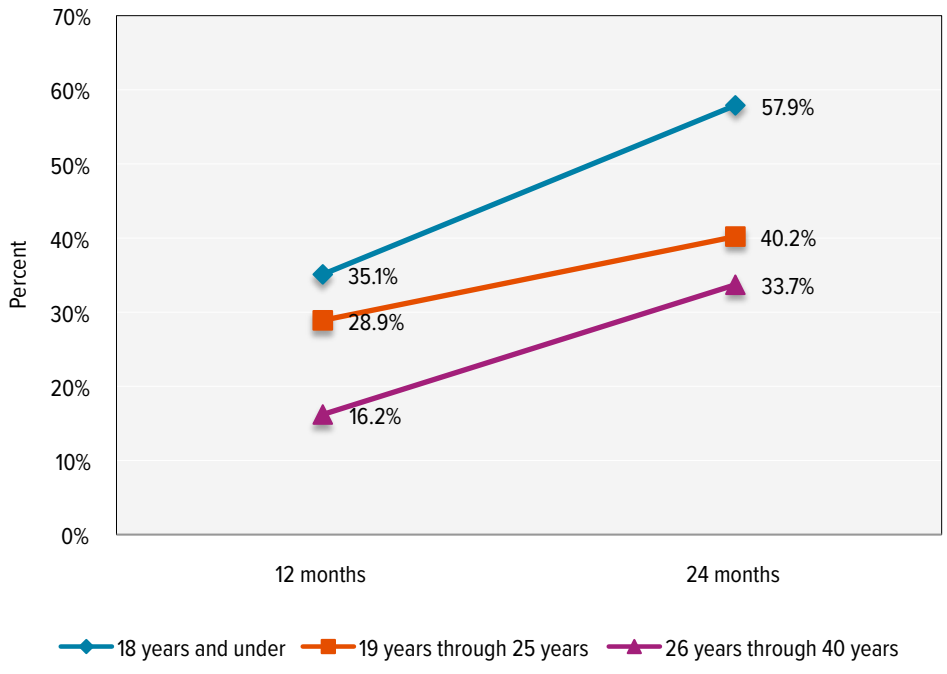
In a study[18] of Shelby County mothers and their young children, mothers' parenting styles were observed as they taught their children to play with a new toy. 561 mother-child pairs were observed when the child was 12 months old and again at 24 months. Interactions were coded according to a widely accepted rating scale measuring effective parenting behaviors such as responsiveness and sensitivity. 22.5 percent of mothers at 12 months and 39 percent of mothers at 24 months scored in the At Risk range, indicating that their parenting styles were not fostering optimal development.

Consistent with previous research, there were large variations according to mothers' age, education, and race:

- Younger mothers were more likely to score At Risk at both 12 months and 24 months (Figure 1).
- At both time points, mothers with a college or graduate/professional degree were less likely to score At Risk than mothers with less education (Figure 2).
- Black mothers were more likely to score At Risk than white mothers at both 12 months and 24 months (Figure 3).

FIGURE 1: Percent of Mothers Who Scored At Risk on Mother-Child Interaction Scale at 12 Months and 24 Months by Maternal Age.

Source: The Urban Child Institute & University of Tennessee Health Science Center. Conditions Affecting Neurocognitive Development and Early Learning (CANDLE) data, 2011.



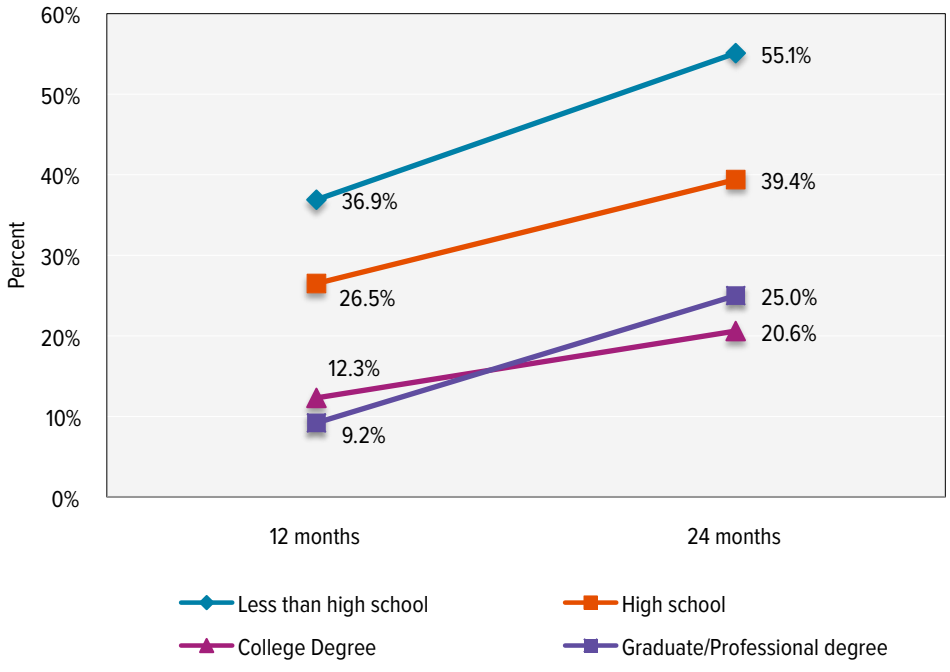


FIGURE 2:
Percent of Mothers Who Scored At Risk on Mother-Child Interaction Scale at 12 Months and 24 Months by Maternal Education

Source:
The Urban Child Institute & University of Tennessee Health Science Center. Conditions Affecting Neurocognitive Development and Early Learning (CANDLE) data, 2011.

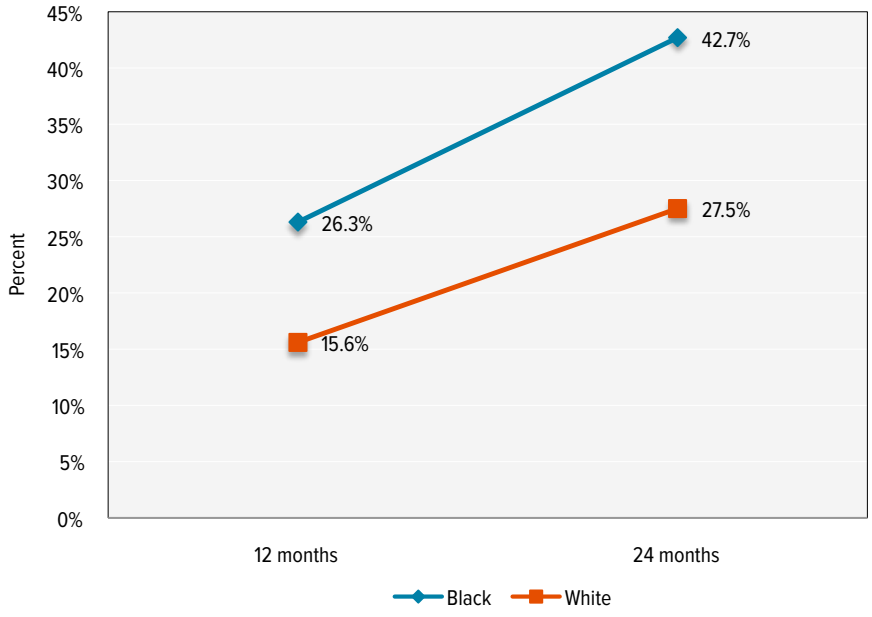


FIGURE 3:
Percent of Mothers Who Scored At Risk on Mother-Child Interaction Scale at 12 Months and 24 Months by Maternal Race

Source:
The Urban Child Institute & University of Tennessee Health Science Center. Conditions Affecting Neurocognitive Development and Early Learning (CANDLE) data, 2011.

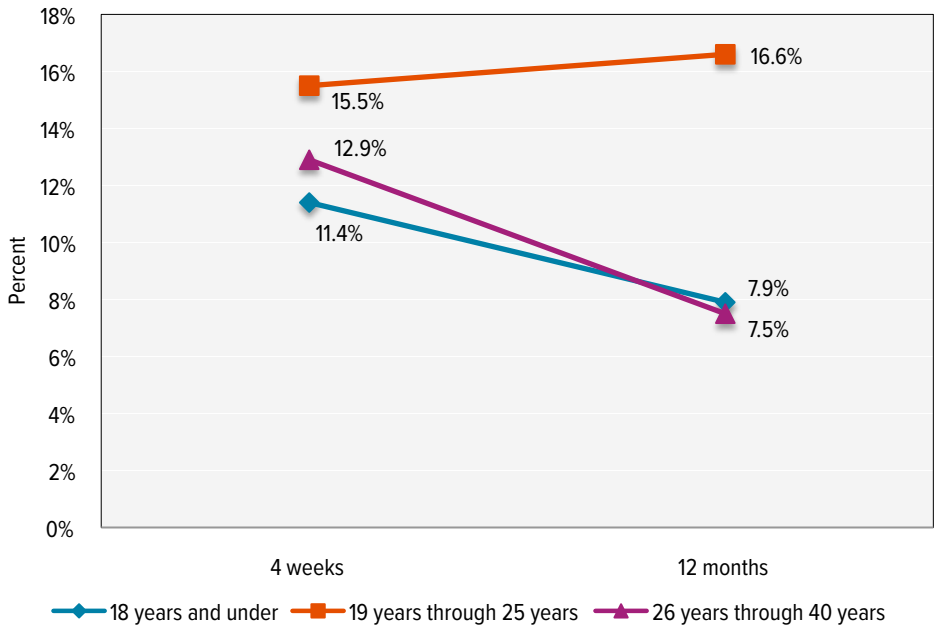
Mothers also completed a brief assessment to determine their risk for postpartum depression. At 4 weeks after birth and again at 12 months, they answered a brief questionnaire designed to screen for possible depression. At 4 weeks, 13.8 percent of all mothers scored At Risk. At 12 months, 11.2 percent scored At Risk. While not an actual diagnosis, an At Risk score indicates that a mother is likely to be suffering from postpartum depression and that further assessment is recommended.

Consistent with past research, depression risk scores varied by age, education, and race:

- At both assessments, 19-25-year-old mothers were more likely than other mothers to score At Risk. Additionally, the likelihood of risk increased from 4 weeks to 12 months for 19-25-year-olds, while it decreased for the other two age groups (Figure 4).
- Mothers with a college or graduate/professional degree were less likely to be at risk for depression than mothers with less education. Risk levels decreased from 4 weeks to 12 months for more educated mothers and increased slightly for mothers with a high school education or less (Figure 5).
- Black mothers were more likely than white mothers to be at risk for depression at 4 weeks and at 12 months. The percentage of At Risk scores decreased for both groups between the first and second assessments, but the gap between white and African American mothers increased, with African American mothers now more than twice as likely to be at risk (Figure 6).

FIGURE 4: Percent of Mothers Who Scored At Risk for Depression at 4 Weeks and 12 Months by Maternal Age

Source: The Urban Child Institute & University of Tennessee Health Science Center. Conditions Affecting Neurocognitive Development and Early Learning (CANDLE) data, 2011.



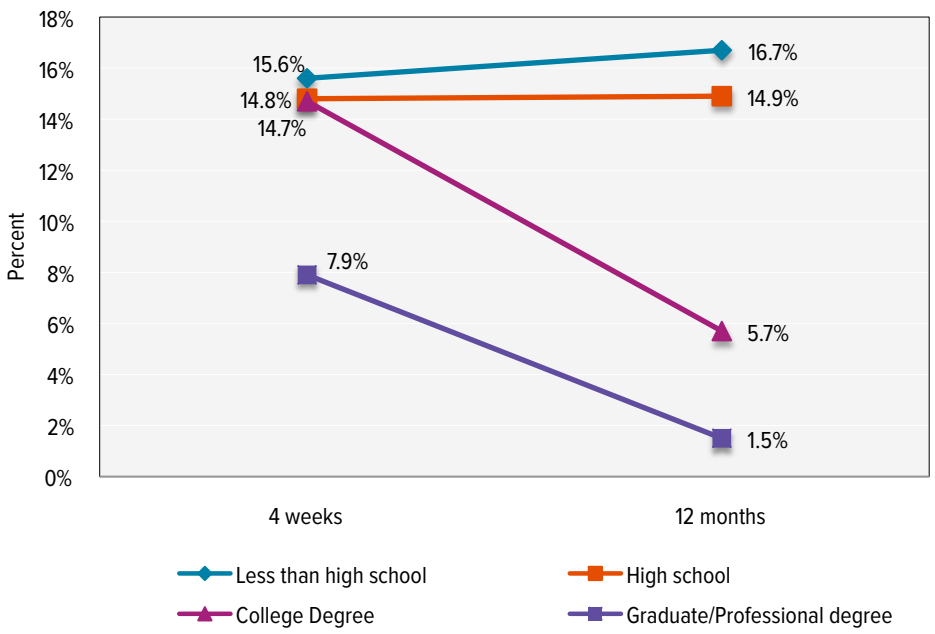


FIGURE 5:
Percent of Mothers Who Scored At Risk for Depression at 4 Weeks and 12 Months by Maternal Education

Source:
The Urban Child Institute & University of Tennessee Health Science Center. Conditions Affecting Neurocognitive Development and Early Learning (CANDLE) data, 2011.

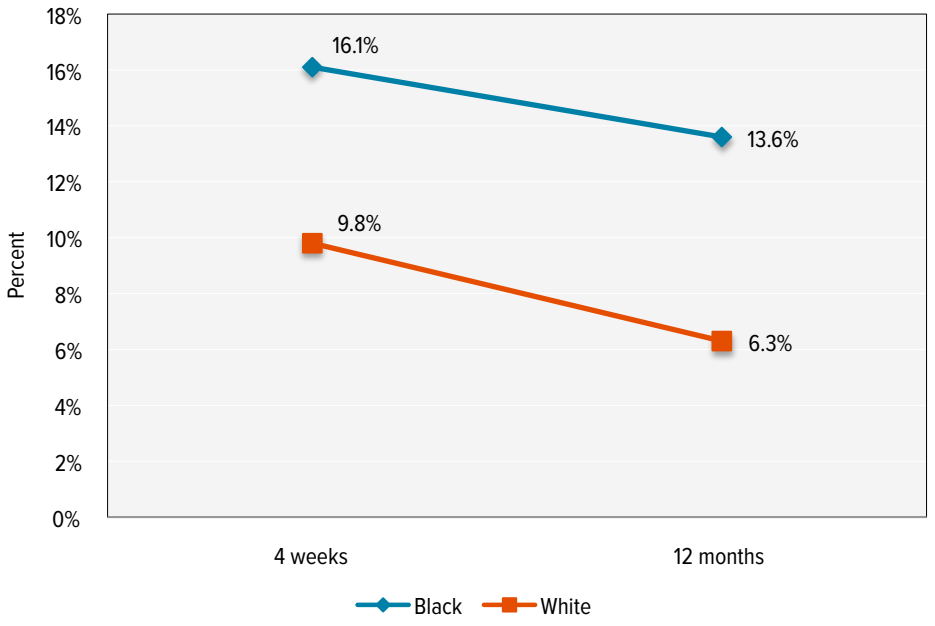


FIGURE 6:
Percent of Mothers Who Scored At Risk for Depression at 4 Weeks and 12 Months by Maternal Race

Source:
The Urban Child Institute & University of Tennessee Health Science Center. Conditions Affecting Neurocognitive Development and Early Learning (CANDLE) data, 2011.

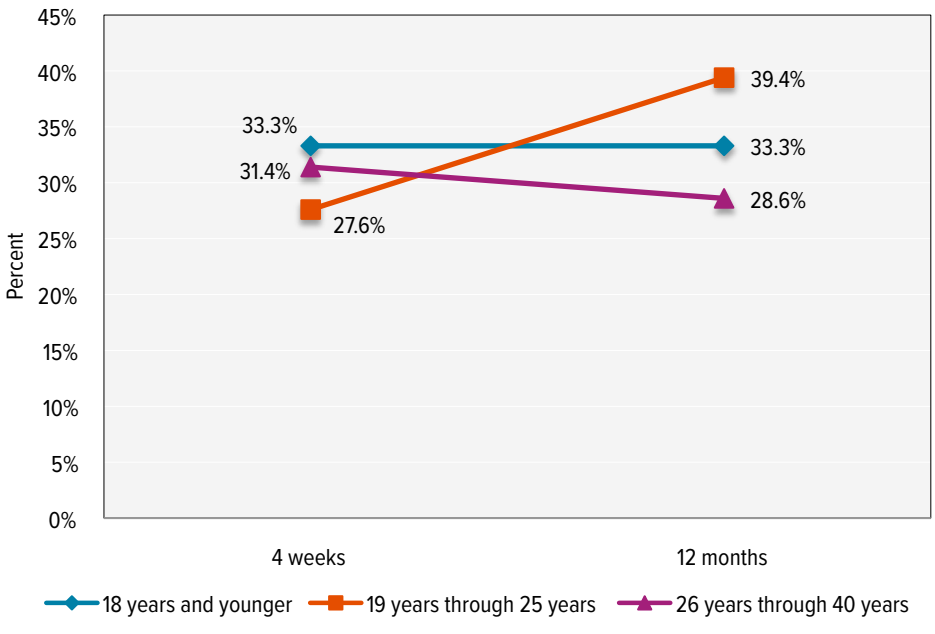
The current study also examined how mother-child interactions related to maternal risk for depression. Among mothers who scored At Risk for depression at 4 weeks, 30 percent also scored At Risk on the 12 month interaction assessment. Among mothers who scored At Risk for depression at 12 months, 35 percent also had At Risk interaction scores.

For mothers at risk for depression, there were variations in mother-child interaction quality:

- Among mothers who scored At Risk for depression at 4 weeks, those who were 18 and younger were slightly more likely to have at-risk interactions with their infants at 12 months. Among mothers who were at risk for depression at 12 months, 19-25-year-old mothers had the highest percentage of At Risk interaction scores (Figure 7).
- Surprisingly, mothers with less than a high school education had the lowest percentage of At Risk interaction scores among mothers with depression risk at 4 weeks. If they had depression risk at 12 months, however, they were almost three times more likely to have At Risk interaction scores (Figure 8).
- Mothers with a college degree showed the opposite pattern: those with depression risk at 12 months were less likely to have At Risk interaction scores than those with depression risk at 4 weeks (Figure 8).
- Black mothers had a higher percentage of At Risk scores for mother-child interactions at 12 months among mothers with depression risk at 4 weeks. For mothers who were at risk for depression at 12 months, interaction scores were similar, with white mothers slightly more likely to score At Risk (Figure 9).

FIGURE 7: Percent of Mothers Who Scored At Risk on Mother-Child Interaction Scale at 12 Months and 24 Months by Maternal Age (among mothers with depression)

Source: The Urban Child Institute & University of Tennessee Health Science Center. Conditions Affecting Neurocognitive Development and Early Learning (CANDLE) data, 2011.



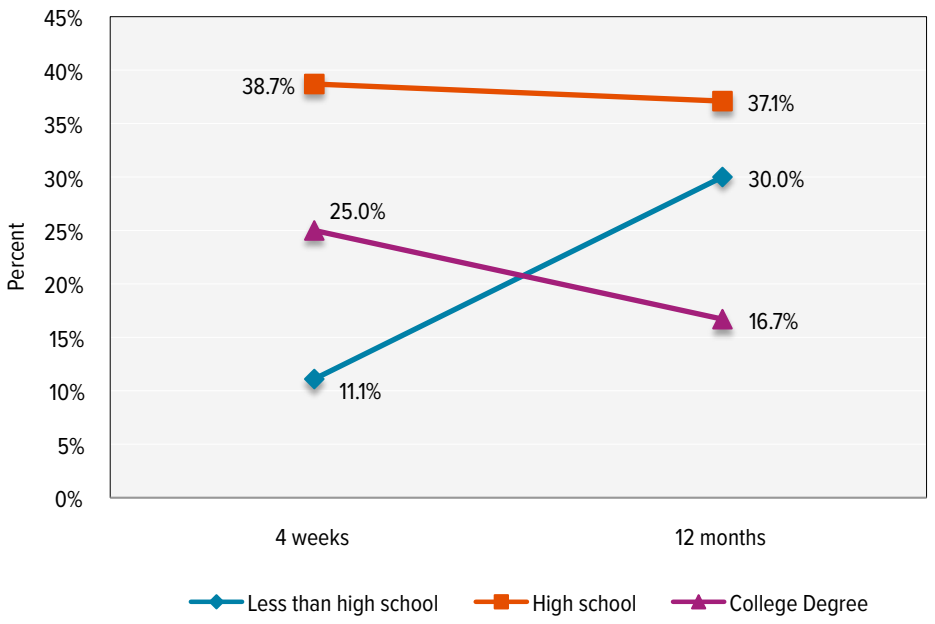


FIGURE 8:
Percent of Mothers Who Scored At Risk on Mother-Child Interaction Scale at 12 Months and 24 Months by Maternal Education (among mothers with depression)

Source:
The Urban Child Institute & University of Tennessee Health Science Center. Conditions Affecting Neurocognitive Development and Early Learning (CANDLE) data, 2011.

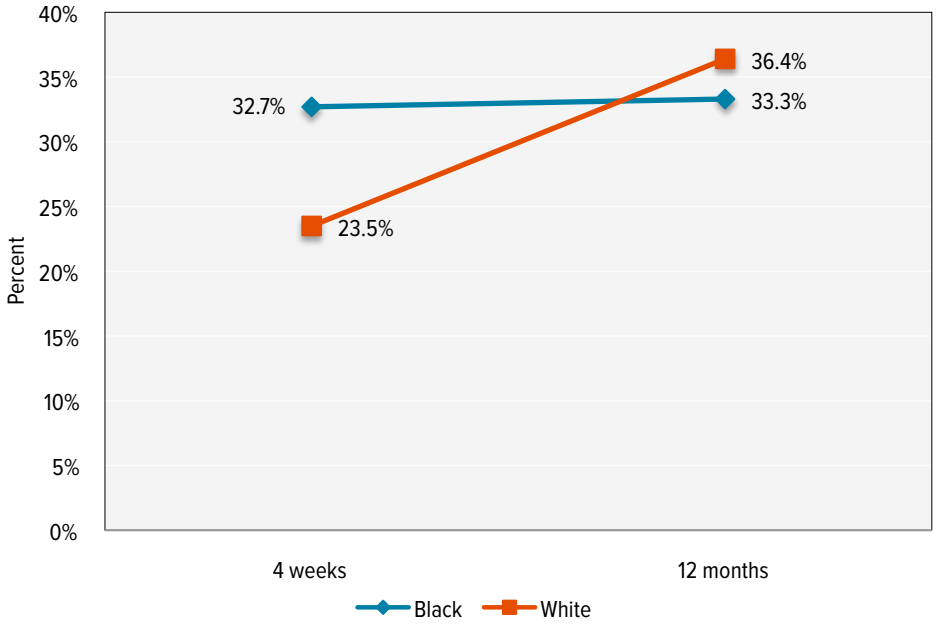


FIGURE 9:
Percent of Mothers Who Scored At Risk on Mother-Child Interaction Scale at 12 Months and 24 Months by Maternal Race (among mothers with depression)

Source:
The Urban Child Institute & University of Tennessee Health Science Center. Conditions Affecting Neurocognitive Development and Early Learning (CANDLE) data, 2011.

Improved screening and treatment can better protect children against the developmental threats associated with maternal depression.

Most women suffering from postpartum depression do not seek help. This may be due to scheduling difficulties involved in caring for a newborn baby, the stigma of mental illness, or a lack of motivation caused by the depression itself.[11] In many cases, the disorder remains undiagnosed and untreated, despite the existence of effective treatments. Many antidepressant medications are considered safe for breastfeeding mothers. Psychotherapy is another option with proven results.[10,19]

Improving providers' awareness of postpartum depression can help depressed mothers understand their symptoms and seek treatment.[10] There are several brief screening tools that are effective at identifying mothers who may be clinically depressed. These take only a few minutes to administer and have a high success rate. Screening for postpartum depression should be an integral part of routine health care visits for mothers with infants.[10,11]

Infants and toddlers have fewer coping strategies than older children and are more dependent on their parents. They are more likely, therefore, to experience the negative environment associated with maternal depression.[20] Early identification and treatment of postpartum depression is essential for protecting our most vulnerable children during this sensitive period of development.

References

1. Shonkoff JP, Boyce WT, McEwen BS. Neuroscience, molecular biology, and the childhood roots of health disparities: Building a new framework for health promotion and disease prevention. *Journal of the American Medical Association*. 2009; 301: 2252-2259.

2. National Scientific Council on the Developing Child. 2007. *The science of early childhood development*. Retrieved from http://www.developingchild.net

3. Shonkoff JP, Phillips DA. (eds.). *From neurons to neighborhoods: The science of early childhood development*. 2001. Washington, DC: National Academy Press.

4. Sumner G, Spietz A. *NCAST-AVENUW: Caregiver/parent-child interaction teaching manual*. 1994. Seattle, WA: NCAST Publications, University of Washington, School of Nursing.

5. Lerner C, Dombro A, Levine K. 2000. *The magic of everyday moments*. Washington, DC: Zero to Three. Retrieved from http://www.main.zerotothree.org/magic

6. Smith KE, Landry SH, Swank PR. Does the content of mothers' verbal stimulation explain differences in children's development of verbal and nonverbal cognitive skills? *Journal of School Psychology*. 2000; 38 (1): 27-49.

7. Smith KE, Landry SH, Swank PR. The role of early maternal responsiveness in supporting school-aged cognitive development for children who vary in birth status. *Pediatrics*. 2006; 117: 1608–17.

8. Mistry RS, Benner AD, Biesanz J, et al. Family and social risk, and parental investments during the early childhood years as predictors of low-income children's school readiness outcomes. *Early Childhood Research Quarterly*. 2010; 25: 432–449.

9. Sit DK, Wisner KL. The identification of postpartum depression. *Clinical Obstetrics and Gynecology*. 2009; 52(3): 456–468.

10. Chaudron LH. Postpartum Depression: What Pediatricians Need to Know. *Pediatrics In Review*. 2003, May; (24): 154-161.

11. Marcus SM, Heringhausen JE. Depression in childbearing women: when depression complicates pregnancy. *Primary Care*. 2009; 36(1): 151-65.

12. Luke S, Salihu HM, Alio AP, et al. Risk factors for major antenatal depression among low-income African American women. *Journal of Women's Health*. 2009; 18(11):1841-1846.

13. Crockenberg SC, Leerkes EM. Parental acceptance, postpartum depression, and maternal sensitivity: mediating and moderating processes. *Journal of Family Psychology*. 2003; 17: 80-93.

14. Field T, Hernandez-Reif M, Diego M. Intrusive and withdrawn depressed mothers and their infants. *Developmental Review*. 2006; 26: 15–30.

15. McLearn KT, Minkovitz CS, Strobino DM, et al. Maternal depressive symptoms at 2 to 4 months post partum and early parenting practices. *Archives of Pediatrics & Adolescent Medicine*. 2006; 160: 279-284.

16. Petterson SM, Albers AB. Effects of poverty and maternal depression on early child development. *Child Development*. 2001; 72: 1974-1813.

17. Luby J. Depression. In Zeanah C, ed. *Handbook of infant mental health*. New York, NY: Guilford Press; 2000: 296-382.

18. Tylavsky F, Atkins JK, Atkins R, Bush A, et al. *Conditions Affecting Neurocognitive Development and Learning in Early Childhood*. 2011. Unpublished raw data.

19. Logsdon MC, Wisner KL, Pinto-Foltz MD. The impact of postpartum depression on mothering. *Journal of Obstetric Gynecological and Neonatal Nursing*. 2006; 35: 652-658.

20. Lovejoy MC, Graczyk PA, O'Hare E, et al. Maternal depression and parenting behavior: A meta-analytic review. *Clinical Psychology Review*. 2000; 20: 561-592.