

A Community Collaboration Toolkit for Pennsylvania Providers

What is Perinatal Depression?

Impact of Mother-Baby Relationship and Child Development

Maternal depression and impact on early childhood development and mother-baby relationship

Maternal Depression During Pregnancy

It is widely recognized that maternal depression can cause significant barriers to the healthy social emotional, cognitive, and behavioral development of young children, particularly among low-income families. Many women already experience the onset of their depressive symptoms before or during their pregnancy. Depression during pregnancy has been linked with inadequate use of prenatal care, malnutrition¹, substance abuse, preeclampsia², increased risk of postpartum depression, and poor pregnancy outcomes, such as low birth-weight, prematurity, fetal growth delay, and obstetric complications³.

Brain research shows evidence that depression leads to elevated levels of the stress hormone Cortisol which causes changes in the chemistry of the brain, including a decrease of levels of important neurotransmitters, such as Serotonin and Norepinephrine. Scientists believe a deficiency in Serotonin may cause the sleep problems, irritability, and anxiety associated with depression. Additionally, a decreased amount of Norepinephrine, which is responsible for regulating alertness and arousal, may contribute to the fatigue and depressed mood of the illness. It is believed that the change in maternal hormones due to the mother's depressive symptoms can interfere with hormone levels of the fetus as well, therefore resulting in negative neo-natal neurobehavioral functioning, such as excessive crying, abnormal reflexes, and fewer expressions of interest^{4,5}.

Maternal Depression and Mother-Baby Relationship

After a baby is delivered, the mother transitions gradually into her new role, and develops a deep sense of maternal sensitivity and responsiveness. Eventually the baby becomes the center of her attention. The newborn baby now depends completely on her/his primary caregiver who provides her/him with emotional nurturance, physical care, protection, and stimulation in order to achieve a healthy social and emotional development. Through taking care of the baby's emotional and physical needs, the mother creates a close emotional tie — or attachment — with her baby. The experience of a secure attachment allows the child to develop trust and confidence, and creates the foundation for learning empathy, communication, and the capability of regulating stress⁶. When a mother is depressed, her ability to take care of these needs can be significantly impaired. While she perhaps may be able to take care at least of the baby's physical needs, her emotional unavailability, decreased maternal sensitivity and responsiveness won't allow her to interact with the child in such a way to foster and nurture a close mother-baby relationship. When a mother and her baby are attuned to each other it is like performing a so-called "baby dance", meaning that both, the baby and the mother, are in tune to each others emotional signals, such as tone of voice, gestures, movements, and facial expressions. Additionally, the mother is very sensitive to capture the baby's cues expressing her/his immediate needs, and willing to respond appropriately to satisfy the baby.

The parenting style of a depressed mother can be reflected in the following ways⁷:

- Reduced maternal responsiveness
- More negative attitudes towards the infant
- Less responsiveness to social signals
- Difficulty relating to infant
- Decreased eye gaze during feeding
- Handling their infant more roughly
- Disengagement from their infant and flat affect
- Less positive interactions
- Emotional disconnection
- Decreased mutual cueing (“baby dance”)
- Less interactive activities (singing, reading, social play etc.)
- Needs of child are not satisfied appropriately
- Difficulty in modeling for mood/affect regulation
- Difficulties in setting limits
- Safety issues (for example not securing baby in car seat)

Maternal Depression and Early Childhood Development

Research in the area of infant mental health shows evidence that babies of depressed mothers can display^{8,9}:

- More cognitive deficits and poorer mental and motor development
- Insecure attachment patterns (anxious/avoidant), (withdrawal) or (anxious/resistant)
- Flat affect and look away more
- Less engagement with objects
- More anger, fussiness, sadness and crying
- Problematic sleeping behaviors

A newborn’s brain is about 25% of its approximate adult weight and by age 3 the brain has developed to 80% of its final size. The young child’s brain can only develop fully, if being provided with appropriate stimulation through experiences and interactions with her/his environment¹⁰. Therefore, children between the age of 0 and 3 years are especially vulnerable when having a depressed primary care giver as the child’s social emotional development can be heavily compromised.

Maternal Depression and Long-Term Effects on School-Age Children

It has been shown that maternal depression has long-term effects on older children, such as^{11,12}:

- Being cognitively compromised and do not do as well on developmental tests or in school.
- Struggling with relationships with parents and/or peers.
- Displaying poor attention with over activity.
- Displaying aggressive or impulsive behavior
- Poor self-concept and low self-esteem.
- Increased risk for psychiatric and behavioral difficulties into adolescence.
- Greater risk for continued insecure attachments (unhealthy relationships later in adult life).

The effects, mentioned above, can later lead to underlying issues in adult life for unemployment, failure to sustain healthy relationships, domestic violence, parental abuse and neglect, homelessness, self-injurious behavior, and crime¹³.

It is important to know that perinatal depression is treatable and does not automatically mean that the child of the affected mother will have poor developmental outcomes. Protective factors, such as resiliency — or the individual positive capacity to cope with stress and trauma and ability to recover — and the availability of a healthy caregiver who may be able to support the depressed mother by providing the child a positive and nurturing parenting, are known to decrease the actual risk of adverse affects. With the right treatment, care and support a woman experiencing perinatal depression will get better and be able to enjoy again her life and family.

- ¹ Committee to Study the Prevention of Low Birthweight (1985). Etiology and risk factors. Washington (DC): National Academy Press.
- ² Kuri et al. (2000). Depression and anxiety in early pregnancy and risk for preeclampsia. *Obstetrics and Gynecology* 95(4):487-90.
- ³ Bonari et al. (2004). Perinatal Risks of Untreated Depression During Pregnancy. *Canadian Journal of Psychiatry* 49(11): 726-735.
- ⁴ Lundy B, Field T. (1996). Newborns of mothers with depressive symptoms are less expressive. *Infant Behav Dev* 1996; 19: 419-24.
- ⁵ Lundy B, Jones NA, Field T, et al. (1999). Prenatal depression effects on neonates. *Infant Behav Dev* 1999; 22: 119-29.
- ⁶ C.A. Rees (2005). Thinking about children's attachments. *Arch Dis Child* 2005;90: 1058-1065. Downloaded from www.adc.bmj.com on 11 October 2007.
- ⁷ British Columbia Reproductive Care Program (2003).
- ⁸ British Columbia Reproductive Care Program (2003).
- ⁹ Goodman S.H., Gotlib I.H. (1999). Risk for psychopathology in the children of depressed mothers: A developmental model for understanding mechanisms of transmission. *Psychological review*, 106, 458-490.
- ¹⁰ Program for Infant Toddler Caregivers (2003) / Zero to Three.
- ¹¹ British Columbia Reproductive Care Program (2003).
- ¹² Onunaku N. (2005). Improving maternal and infant mental health: Focus on maternal depression/ Zero to three.
- ¹³ C.A. Rees (2005). Thinking about children's attachments. *Arch Dis Child* 2005;90: 1058-1065. Downloaded from www.adc.bmj.com on 11 October 2007. ■