Pamela S. Lansky, MA, MEd, RCC, Tim Oberlander, MD, FRCPC

Toward comprehensive treatment for postpartum depressed mothers and their infants

Treating only one half of the mother-infant dyad with a single therapeutic approach is unlikely to have the success we wish for our patients—instead, a coordinated approach that treats the dyad and family can improve outcomes for both mother and child.

ABSTRACT: When physicians are faced with a postpartum depressed mother and her infant, they must deal with multiple complex etiologies that take them far beyond typical public health problems. To date, interventions have focused on maternal well-being, prevention, screening, and treatment. Some intervention models now recognize both maternal and infant symptoms in an effort to meet the multiple needs of family members and to provide timely access to services and professionals. Physicians should be aware of infant and maternal behaviors signaling dyadic distress, the impact of postpartum depression on infant development, and various treatment approaches. Currently, a team or community-based approach to comprehensive treatment and follow-up appears most likely to reduce adverse outcomes for mothers and their children.

"It was the best of times, it was the worst of times."[1]

With this opening to *A Tale of Two Cities,* Charles Dickens could easily have been referring to the first few months following childbirth. For many new mothers, childbirth is a tremendously hopeful and happy time, but for others it is associated with depressed moods ranging from the "baby blues" to postpartum psychosis.[2] Postpartum depression (PPD) affects from 10% to 35% of new mothers and typically occurs in the first 3 to 12 months following childbirth.[3] PPD increases the risk for future depression and can have lasting effects on mothers, children, and their families.[4] Depressed maternal mood following pregnancy is a frequent mental health concern that directly affects mothers' well-being and infants' social and emotional development, extending into childhood.[5] As a result, there have been calls for universal screening, early intervention, and treatment programs for PPD.[6,7] Many models have been maternally focused, applying early interventions to improve maternal mood and provide strategies for prevention and treatment. These models have met with varying success.[8-10] Interventions aimed at jointly improving maternal and infant outcomes are proliferating, but these models, too, have yielded inconsistent results.[8] Such models may not be recognizing combinations and interactions of maternal and infant symptoms. They may not be acknowledging coexisting issues known to sometimes accompany PDD: marital tension; mother, partner, and family of origin mental health problems; poverty and other life stressors. Therefore, these models may fail to provide ongoing, timely, and

Ms Lansky is a registered clinical counselor in private practice. She provides postpartum support and infant mental health services to families and facilitates parent support groups with Burnaby Family Life Institute. She an active member of Pacific Post Partum Support Society. Dr Oberlander is a developmental pediatrician at BC Children's Hospital and Sunny Hill Health Centre for Children. He works as a clinician with children and youth with prenatal drug and alcohol exposure. As a researcher, his work focuses on understanding the effect of prenatal exposure to maternal depressed mood and antidepressant medications on child development and behavior.

comprehensive links to a variety of services and professionals. For optimum care of postpartum depressed mothers and their infants, we need to consider the impact of PPD on infant development, infant and maternal behaviors signaling dyadic distress, current interventions, and the critical importance of a team or community-based approach to comprehensive treatment and follow-up.

Postpartum depression and the mother

PPD has been defined as at least 2 weeks of dysphoric mood or lack of interest or pleasure, along with several other possible symptoms, including low energy, insomnia, change in appetite, excessive guilt, and suicidal ideation. Mood changes can include irritability, emotional lability, and excessive anxiety. The onset can occur within 4 weeks of delivery,[11] with the peak incidence ranging from 3 to 12 months postpartum.[12]

There is no single causal factor for PPD. Risk factors include a personal and family history of depression or other mental health issues, marital disturbance, poor social support, poverty, and other stressful life events (e.g., moving from one community to another, losing a job).[13] Symptoms can easily go unrecognized, and even when they are finally identified there may be a delay between referral, further evaluation, and treatment. Depressed women may not recognize the symptoms as depression because of the fatigue, early morning waking, and weight fluctuation that commonly occur after delivery.[3] Clinicians may recognize only half of PPD cases during routine postpartum care,[14] and in the US, where obstetricians provide primary postpartum care, symptoms may present well after the typical 4- to 6-week visit. Similarly, pediatricians, who frequently see infants early in life and are well positioned to detect and refer for PPD, are also less likely to detect a stressed mother-infant dyad or early signs of PPD[7] because the mother is not the focus of their care, there is a lack of appropriate screening instruments, and the pediatrician may spend limited time with the dyad. A number of recent reviews[15] have highlighted the need for pediatricians and family doctors to play a role in ensuring early recognition of PPD and provision of referral for intervention in order to improve outcomes for both mother and infant alike.

Postpartum depression and the infant

From the earliest newborn period, infants are very sensitive to the emotional states of their mothers and other significant caregivers.[16] Postpartum depression can lead to substantial adverse consequences for infants via multiple direct biological mechanisms (e.g., medication exposure, maternal genetic factors) and environmental conditions (e.g., mother-child interaction).[17] Even early neonatal behavior can be a reflection of maternal mood during gestation and postpartum.[18-20] Maternal insensitivity and emotional unavailability can influence the infant's ability to develop a neurobiological capacity for arousal regulation, as manifested by increased infant irritability, distress, and crying.[21] When compared with controls, infants of postpartum depressed mothers display differences in frontal lobe EEG studies, showing less activation of the left hemisphere (the "feel good" side) during playful interaction.[22]

Depressed maternal behavior can contribute to compromised infant social, emotional, and, to a lesser extent, cognitive functioning during infancy and into childhood.

Depressed maternal behavior can contribute to compromised infant social, emotional, and, to a lesser extent, cognitive functioning during infancy and into childhood.[11,23,24] In terms of social and emotional development, more negative responses to social initiations are found in infants and toddlers of postpartum depressed mothers,[6] along with a tendency toward increased levels of behavioral disturbance (e.g., conduct difficulties),[8] particularly in boys. Postpartum depression can disrupt the mother-child relationship[8] through intrusive or withdrawn parenting styles[25] and a failure to respond appropriately to infant behaviors such as crying.[26] Insecure, disorganized/disoriented attachments may result, which increase the risk for subsequent externalizing and internal-

izing behaviors in the developing child.[27] Results regarding the impact of PPD on cognitive abilities are mixed. Some studies find differences in early Bayley Scales scoring (mental and motor subscales) and later McCarthy Scales of Children's Abilities scoring.[28] Other results suggest that cognitive difficulties are more related to a combination of postpartum depression and other factors—specifically parental conflict and low socioeconomic status.[29] Interestingly, postpartum depression can also have implications for child health as a result of reduced maternal attention to following preventive health practices, using car safety seats, and seeking timely medical advice.[30]

Although a relationship between postpartum depression and child development outcomes has been well described, the relationship is not linear. Infant and child development in this context reflects a "complex reciprocal process with both child and mother contributing to each other's difficulties and to the child's future problems."[31]

Assessments and interventions need to address the dynamic and sometimes unpredictable nature of PPD and its impact on infant development. They also need to consider risk and protective factors (relationship stability, social support, maternal education, socioeconomic status), all of which influence both maternal and infant mental health.[32]

Infant behavior as a red flag

Infant behavior and infant crying in particular can be used to diagnose dyadic distress, even though diagnosis for PPD typically focuses on maternal symptoms. Soothability (i.e., the infant's ability to regulate behavior) may be altered in infants of depressed mothers[33] and may affect crying behavior (duration, timing, fundamental frequency). Infant crying may even exacerbate or trigger postpartum depression, thereby increasing developmental risk.[34] Infants may be more drowsy, more distressed and fussy, look less at their mothers, and engage in more self-directed activity.[35] Reduced stimulation, which can be caused by the depressed mother having more negative perceptions of her infant and offering less stimulation, may lead to disrupted learning during nonsocial learning tasks.[22] While these findings do not suggest a causal relationship between crying and maternal mood, they do highlight the importance of understanding infant crying as a possible reflection of a distressed mother-infant relationship.

Altered infant social behavior can be reflected in other areas as well. Withdrawn infant behavior or a general lack of sociability as seen through facial expression, eye contact, general level of activity, and briskness of response to stimulation may also be signs of a distressed and at-risk infant of a postpartum depressed mother.[36] Difficulties with infant sleep and feeding patterns may signal stressors in the relationship. Such findings support the need to ask about a range of infant behaviors, including crying patterns, sleep, sociability, and feeding, which can signal distress and underscore the importance of careful observation of infant behavior.[37]

While these infant social and emotional behaviors do not necessarily reflect a clinical disorder in the infant directly attributable to PPD, or a clinical disorder at all, they may serve as a red flag, signalling potential risk factors in the infant's psychosocial context. These behaviors may reflect subclinical levels of maternal symptoms[38] or highlight an increased risk for adverse infant outcomes that requires long-term follow-up.

Maternal behavior as a red flag

Evidence suggests that it is not postpartum depression per se that contributes to risk for infant development, but rather the parenting behaviors and responses that are associated with depression. According to Murray and Cooper, "it is the maternal interactive style, secondary to the affective disorder and/or social adversity, that is the potent causative agent."[39] This assertion is supported by evidence suggesting that depressed mothers gaze less at their infants, rock them less, are less active, and show poorer responsiveness overall.[40] Not every infant of a postpartum depressed mother will manifest developmental difficulties. Protective factors such as other significant caregivers and attachment figures (e.g., fathers, grandparents) and a strong social support system for the mother can potentially buffer the full impact of the maternal postpartum depression. However, in addition to increased genetic risk, it is maternal behaviors associated with postpartum depression that can wield the most negative impact.

Two components of maternal behavior have been established as major contributors to infant mental health: sensitivity and responsivity.[22] When a mother is sensitive to the meaning of the infant's signals for food, sleep, comfort, and affection and the mother responds in a prompt and warm fashion, the infant feels safe, secure, trusting, and protected. Postpartum depression may affect maternal responsibility by altering the mother's sensitivity to her infant's signal.[41] The perception of infant crying may vary with the level of postpartum depression. As levels of depression increase, the infant's cry may be perceived as less urgent and sick sounding (i.e., less aversive and less arousing).[41] Mothers who are more depressed

report perceiving their infant's cry as more difficult in general and are less sensitive to changes in cry frequency. Depression can lead the mother to ignore or misinterpret infant crying or other behavioral signals, thereby reducing her responsiveness and compounding her postpartum depression. Obvious lack of sensitivity and responsiveness may thus serve as a red flag, suggesting potential risk.

In addition to considering maternal sensitivity and responsivity to infant signals, the course of maternal mood from immediately postpartum to present has been found to be critical in assessing potential impact on the infant. Studies of mothers and their 3-month to 12-month infants found that infant social behavior was related to mother's report of depressed or anxious mood since birth but not directly to her currently reported mood (assessed by Edinburgh Postnatal Depression Scale score).[36] This finding highlights the importance of assessing maternal mood over the months after birth. Assessing current maternal mood alone may miss a vital link between altered infant behavior and the effects of exposure to maternal depressed mood over time.

The mother-infant dyad

Even when a mother receives treatment for her postpartum depression this does not necessarily improve infant outcomes.[42] Unhealthy dyadic relationship patterns established during the earlier stages of the postpartum depression may continue. These are patterns that the infant has participated in as a way of coping with or "normalizing" interaction with a depressed caretaker (e.g., imitating depressed affect or behavior [or both]; accommodating less verbal and visual interaction).[32] This provides further impetus for a treatment approach that addresses maternal, infant, and dyadic issues, as well as any concomitant individual or family problems. The following clinical scenario illustrates maternal and infant behaviors signaling distress.

Ann was a 21-year-old woman with a history of depression as a teen. During her pregnancy, she and her partner moved from a small town to a city, where her partner began attending university. The pregnancy was uneventful. Due to transportation difficulties and her partner's schedule, Ann found it difficult to attend prenatal classes. Her daughter, Casey, was delivered after a long and complicated vaginal extraction. Her mother visited from out of town in the first few days after the birth. Once her partner returned to full-time classes Ann often found herself alone with her daughter for long periods. She had few friends and little social support in the city. After a month of regularly scheduled public health visits, the community public health nurse became concerned by Casey's prolonged crying, Ann's isolation at home, and her comment that "my daughter is bored with me." She wondered whether Ann's flat affect, lack of interest in the infant, and a crying infant who was not engaging might be the first signs of a postpartum depression. She reported this to Ann's family physician who, during the next visit, recommended antidepressant medication. However, Ann was concerned that this would affect her breastfeeding infant and she refused medication. She also refused a consult with a reproductive psychiatrist. Ann talked about wanting "someone to talk to" and the need for someone to be with her during the day. The family physician was concerned by Ann's mood and social isolation, but was uncertain what to do next.

The challenge with early screening tools is to establish what to screen for—the mother's mental health, the infant's mental and neurobiological health, the health of the dyadic interaction, the family history of mental health, the current socioeconomic situation, or all of the above.

Interventions to date: Comprehensive enough?

Early intervention work has focused on maternal outcomes, screening tools, and specific pharmacological and psychosocial interventions to manage and reduce the incidence of PPD.[6,14] Work to develop universal PPD screening,[15] in-home nurse-based interventions, or psychological therapy for postpartum mothers has had mixed results.[8,14] The challenge with early screening tools is to establish what to screen for—the mother's mental health, the infant's mental and neurobiological health, the health of the dyadic interaction, the

family history of mental health, the current socioeconomic situation, or all of the above.[15]

Many current interventions are including the infant in the process, focusing on the health of the dyadic relationship. Community- and hospital-based early intervention programs have had some success in addressing specific components of PPD and related infant development.[8] Home- and office-based psychotherapeutic interventions appear to improve maternal mood, maternal sensitivity and responsivity, maternal feelings of competence, and mother-infant interaction.[43] Improved infant attachment patterns have been more difficult to achieve.[43,44] Generally, more frequent and consistent improvement, at least in the short term, has been found where interventions are brief and cognitively/behaviorally focused. There is somewhat less success where interventions are longer in duration and focus on changing maternal representations or attachment status.[8] Interventions aimed at improving maternal mood and marital supports have reported an effect on infant behavior[43] but not on infant emotional development.[8,45] In summary, it remains unclear whether any single intervention leads to a sustained improvement in both child development and maternal mood.[8,46] The complexity of maternal and infant variables and the interactions therein require not a single intervention, but a comprehensive, community-based approach to intervention that adopts a public health orientation focusing on an integrated care model.[47]

A comprehensive, community-based approach

Using a population health perspective,[48] an efficacious approach to PPD and infant mental health may require recognition of a broader context that includes mental, social, and physical determinants of health, coping skills, and community resources. With such an approach there are four key factors:

- Close consideration of a wide range of infant behavioral red flags that might reflect poor maternal mental health.
- An extended index of suspicion well into the first year of life.
- Provision of community resources as problems arise.
- Recognition of broader familial and social contextual variables in determining assessment and treatment options to ensure a flexible dyad or family-centred community-level approach.

Many of the services required for such an approach are already in place in major centres. Existing services include community baby and parent support groups. Service providers include social workers, psychologists, family therapists, infant mental health workers, community health nurses, reproductive psychiatrists, and family physicians. The real challenge is to ensure that services and service providers work together effectively in a coordinated and collaborative manner.

One initiative toward this end can be seen locally. The Westcoast Family Resources Society and Family Services of Greater Vancouver have joined with the Ministry of Children and Family Development (MCFD) to offer referred families the assistance of a family preservation worker (oral communication, Dorene Sutton, Westcoast Family Resources Society, 24 April 2006). This person accesses and coordinates the range of services required by a family. The family must be MCFD clients. A variation of integrated mental health care exists in the Calgary area, where a physician with a concern about the mental health of a young child and his or her family can request a meeting with a consultant from the Collaborative Mental Health Care Service (CMHS) as well as the involved family. The consultant acts as a resource for treatment, case management, and referral.[49] In the Netherlands, a network of services, embedded directly within the Dutch mental health service, is available to all depressed mothers and babies. This program offers a wide range of services, including mother-infant interaction support with a home visitor, treatment for the mother, social support, and other mental health services and social services. All of this is accessed and coordinated through the assignment of a home visitor.[32]

These examples of a more collaborative system for dealing with mental health issues illustrate how we can ensure effective and timely treatment of postpartum depressed mothers and their infants. Returning to our clinical scenario, we can see what a collaborative approach to intervention might look like.

Weeks went by and after a few more office visits Ann's physician felt that her mood was not just "baby blues" and that a more comprehensive plan was needed. Ann and her physician, with input from a community health nurse, discussed the community resources available. Referrals were made to a postpartum support group and an infant mental health team for dyadic intervention. Ann found it difficult to function within the support group, although she did meet one mother with whom she continued a relationship. She found the in-home visits of a child and family therapist useful. As dyadic therapy progressed, Ann felt more confident about her relationship with her daughter and more attuned to her needs, but she still felt depressed. She agreed to a trial of

medication, and along with her partner's support she returned to part-time work and engaged child care with a family friend. A referral was also made for couple counseling, as the tension in the relationship was adding to Ann's stress. Over the first year, Ann began to use community drop-in programs and establish some relationships with other mothers. In a coordinated effort, medication and therapeutic support were reduced and then eliminated. Follow-up with the family physician was regular and support from the infant mental health team was available as required.

Conclusions

Increased understanding of infant social and emotional behavior in the context of postpartum depression forces us to ask whether our clinical approach to PPD is focused broadly enough. Recognizing that PPD is a complex clinical entity influenced by a convergence of maternal mental health, infant behavior, and family variables, we need to ask who the target of our assessment and treatment should be: infant, mother, family, or all three? Based on the answer to this question, a treatment program tailored to the needs of a specific situation should be established and provided through coordination of the wealth of services that already exist in major centres. Similarly, given the unpredictable and varied ways PDD presents, services need to be available in a timely and flexible fashion.

Understanding how maternal mental illness affects offspring serves both public health and basic science purposes. While multiple intergenerational mechanisms that link family mental illness with poor child developmental outcomes require further investigation, it is already clear that collaboration can reduce adverse outcomes for mothers and their children. A flexible and responsive community-based approach that targets multiple aspects of the mother-infant dyad and relies on well-trained professionals will serve to continue the process of promoting healthy child and family development for all.

Competing interests

None declared.

Acknowledgments

This work was supported by the UBC Department of Paediatrics, Faculty of Medicine Special Population Fund. We are grateful to our colleagues Jill Hoube, MD, and Charlotte Waddell, MD, for their advice and support. We are also grateful to Ursula Brain for her editorial assistance.

References

1. Dickens C. A Tale of Two Cities. Oxford: Oxford University Press; 1998.
2. Weinberg MK, Tronick EZ. Emotional characteristics of infants associated with maternal depression and anxiety. Pediatrics 1998;102(5 suppl E):1298-1304.
3. Chaudron LH. Postpartum depression: What pediatricians need to know. Pediatr Rev 2003;24:154-161.
4. Beardslee WR, Bemporad J, Keller MB, et al. Children of parents with major affective disorder: A review. Am J Psychiatry 1983;140:825-832.
5. Lyons-Ruth K, Wolfe R, Lyubchik A. Depression and the parenting of young children: Making the case for early preventive mental health services. Harv Rev Psychiatry 2000;8:148-153.
6. Canadian Paediatric Society. Maternal depression and child development. Paediatr Child Health 2004;9:575-583.
7. Chaudron LH, Szilagyi PG, Kitzman HJ, et al. Detection of postpartum depressive symptoms by screening at well-child visits. Pediatrics 2004;113(3 Pt 1):551-558.
8. Murray L, Cooper PJ, Wilson A, et al. Controlled trial of the short- and long-term effect of psychological treatment of postpartum depression: 2. Impact on the mother-child relationship and child outcome. Br J Psychiatry 2003;182:420-427.
9. Dennis CL, Creedy D. Psychosocial and psychological interventions for preventing postpartum depression. Cochrane Database Syst Rev 2004;(4):CD001134.
10. McLennan JD, Offord DR. Should postpartum depression be targeted to improve child mental health? J Am Acad Child Adolesc Psychiatry 2002;41:28-35.
11. O'Hara MW, Swain AM. Rates and risk of post-partum depression—A meta-analysis. Int Rev Psychiatry 1996;8:37-54.
12. Chaudron LH, Klein MH, Remington P, et al. Predictors, prodromes and incidence of postpartum depression. J Psychosom Obstet Gynaecol 2001;22:103-112.
13. Murray L, Cooper PJ. Postpartum depression and child development. Psychol Med 1997;27:253-260.
14. Currie ML, Rademacher R. The pediatrician's role in recognizing and intervening in postpartum depression. Pediatr Clin North Am 2004;51:785-801, xi.
15. Murray L, Cooper P, Hipwell A. Mental health of parents caring for infants. Arch Women's Ment Health 2003;6(suppl 2): S71-S77.
16. Tronick EZ, Gianino AF, Jr. The transmission of maternal disturbance to the infant. New Dir Child Dev 1986;34:5-11.
17. Field T, Diego M, Dieter J, et al. Prenatal depression effects on the fetus and the newborn: A review. Infant Behav Dev 2004;27:216-229.
18. Field T, Diego M, Hernandez-Reif M, et al. Relative right versus left frontal EEG in neonates. Dev Psychobiol 2002;41:147-155.
19. Abrams SM, Field T, Scafidi F, et al. Newborns of depressed mothers. Infant Ment Health J 1995;16:233-239.
20. Field T, Diego M, Hernandez-Reif M, et al. Pregnancy anxiety and comorbid depression and anger: Effects on the fetus and neonate. Depress Anxiety 2003;17:140-151.
21. Field TM. Affective and interactive disturbances in infants. In: Osofsky JD (ed). Handbook of Infant Development. Oxford: John Wiley and Sons; 1987. 1391 pp.

22. Eliot L. What's Going on in There: How the Brain and Mind Develop in the First Five Years of Life. New York: Bantam Books; 1999. 533 pp.
23. Cohn JF, Campbell SB, Matias R, et al. Face-to-face interactions of postpartum depressed and nondepressed mother infant pairs at 2 months. Dev Psychol 1990;26:15-23.
24. Field T. Infants of depressed mothers. Infant Behav Dev 1995;18:1-13.
25. Tronick EZ, Weinberg MK. Depressed mothers and infants: failure to form dyadic states of consciousness. In: Murray L, Cooper PJ (eds). Postpartum Depression and Child Development. New York: Guilford Press; 1997. 322 pp.
26. Bettes BA. Maternal depression and motherese: Temporal and intonational features. Child Dev 1988;59:1089-1096.
27. Martins C, Gaffan EA. Effects of early maternal depression on patterns of infant-mother attachment: A meta-analytic investigation. J Child Psychol Psychiatry. 2000;41:737-746.
28. Murray L, Fiori-Cowley A, Hooper R, et al. The impact of postnatal depression and associated adversity on early mother-infant interactions and later infant outcome. Child Dev 1996;67:2512-2526.
29. Grace SL, Evinder A, Stewart DE. The effect of postpartum depression on child cognitive development and behavior: A review and critical analysis of the literature. Arch Women Ment Health 2003; 6:263-274.
30. Mandl KD, Tronick EZ, Brennan TA, et al. Infant health care use and maternal depression. Arch Pediatr Adolesc Med 1999;153:808-813.
31. Beck CT. The effects of postpartum depression on child development: A meta-analysis. Arch Psychiatr Nurs 1998; 12:12-20.
32. Van Doesum KTM, Hosman CMH, Riksen-Walraven JM. A model-based intervention for depressed mothers and their infants. Infant Ment Health J 2005; 26:157-176.
33. Donovan WL, Leavitt L, Walsh RO. Conflict and depression predict maternal sensitivity to infant cries. Infant Behav Dev 1998;21:505-517.
34. St James-Roberts I. Effective services for managing infant crying disorders and their impact on the social and emotional development of young children. In: Encyclopedia on Early Childhood Development. www.excellence-earlychildhood.ca/documents/St%20James-RobertANGxp.pdf (accessed 20 January 2006).
35. Cox AD. Maternal depression and impact on children's development. Arch Dis Child 1988;63:90-95.
36. Matthey S, Guedeney A, Starakis N, et al. Assessing the social behavior of infants: Use of the ADBB scale and relationship to mother's mood. Infant Ment Health J 2005;26:442-458.
37. Miller AR, Barr RG, Eaton WO. Crying and motor behavior of six-week-old infants and postpartum maternal mood. Pediatrics 1993;92:551-558.
38. Small R, Brown S, Lumley J, et al. Missing voices: What women say and do about depression after childbirth. J Reprod Infant Psychol 1994;12:19-22.
39. Murray L, Cooper P. Effects of postnatal depression on infant development. Arch Dis Child 1997;77:99-101.
40. Field T, Diego M, Dieter J, et al. Depressed withdrawn and intrusive mothers' effects on their fetuses and neonates. Infant Behav Dev 2001;24: 27-29.
41. Schuetze P, Zeskind PS. Relations between women's depressive symptoms and perceptions of infant distress signals varying in pitch. Infancy 2001;2:483-499.
42. Nylen KJ, Moran TE, Franklin CL, et al. Maternal depression: A review of relevant treatment approaches for mothers and infants. Infant Ment Health J 2006; 27:327-343.
43. van IJzendoorn MH, Juffer F, Duyvesteyn MG. Breaking the intergenerational cycle of insecure attachment: A review of the effects of attachment-based interventions on maternal sensitivity and infant security. J Child Psychol Psychiatry 1995; 36:225-248.
44. Cooper PJ, Murray L, Wilson A, et al. Controlled trial of the short- and long-term effect of psychological treatment of postpartum depression. I. Impact on maternal mood. Br J Psychiatry 2003;182:412-419.
45. Honey KL, Bennett P, Morgan M. A brief psycho-educational group intervention for postnatal depression. Br J Clin Psychol 2002;41(pt 4):405-409.
46. Chabrol H, Teissedre F, Saint-Jean M, et al. Prevention and treatment of post-partum depression: a controlled randomized study on women at risk. Psychol Med 2002;32:1039-1047.
47. Locicero AK, Weiss DM, Issokson D. Postpartum depression: Proposal for prevention through an integrated care and support network. Appl Prev Psychol 1997;6:169-178.
48. Tonmyr L, MacMillan HL, Jamieson E, et al. The population health perspective as a framework for studying child maltreatment outcomes. Chronic Dis Can 2002; 23:123-129.
49. Cawthorpe D. Primary care physician ability to identify pediatric mental health issues. Can Child Adolesc Psychiatry Rev 2005;14:99-102. BCMJ