

## CMEARTICLE

## Caring for the mother-child dyad as a family physician

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*At Adam's 12-month vaccination, your clinic nurse highlighted that his mother, Sara, seemed preoccupied in the waiting area. Adam began to cry but Sara only responded when his wails grew louder. She pushed his pacifier into his mouth rather mechanically and rocked his stroller back and forth on the spot. When they entered your room, Sara seemed rather stiff as she lifted Adam up from his stroller for your examination. Adam sat still in her lap, sucking his pacifier as he stared blankly at the Snellen chart on your clinic wall. He did not make any sound throughout the consultation. Sara looked tired and gave brief answers when asked about Adam's development.*

**WHAT IS THE MOTHER-CHILD DYAD?**

The mother-child dyad – the mother-offspring unit – share an intimate biological, social and psychological relationship. It is no surprise that infant social, emotional and neurological development is shaped by the bond established between mother and child. The quality of this attachment, often reflected in the level of maternal emotional availability, maternal sensitivity and responsiveness to infant cues, determines how infants learn, form relationships, experience the world and regulate their emotions. For example, young children demonstrate 'social referencing', in that they use parents' emotional expressions as guides in approaching or withdrawing from physical and social stimuli.<sup>(1)</sup> In an unfamiliar situation, a mother's emotional availability has a positive effect on the infant's affective, social and exploratory behaviours. Conversely, a physically present but emotionally unavailable mother invokes displeasure and inhibits her child's exploration.<sup>(2,3)</sup>

Infants who learn that their social initiatives are successful in getting a reciprocal response from their attachment figure are likely to be more secure, active and happy in their interactions; they also show more attentional engagement with their caregiver, fewer resistant behaviours and greater physiological regulation in response to stress.<sup>(4)</sup> Mothers do not need to be perfect, just 'good enough' to provide a secure base.<sup>(5)</sup>

**WHY IS THIS IMPORTANT TO MY PRACTICE?**

Maternal mental health is closely linked to child mental health and development. One in eight mothers experience postpartum depression.<sup>(6)</sup> Mothers with depression have been found to be less attuned to their infant's needs, demonstrate poorer responsiveness to infant cues, and display more negative, hostile or disengaged parenting behaviours. This is in turn associated with lower

cognitive functioning and adverse emotional development in their children.<sup>(7,8)</sup>

Short lapses in caregiving can be compensated for, but persistent attachment difficulties can cause longstanding ramifications. This is because neuroplasticity is highest in the first thousand days of a child's life, beyond which it becomes progressively harder to reverse any adverse adaptations that the child may have made in response to its mother's lack of attunement.<sup>(9)</sup> Children whose mothers had persistent and severe depression (as compared to children of mothers with transient postnatal depression) were at increased risk of behavioural problems by age 3.5 years, increased risk of depression in adolescence<sup>(10)</sup> and increased risk of stunted growth.<sup>(3,11)</sup>

**WHAT ARE THE RED FLAGS AND RISK FACTORS TO LOOK OUT FOR?**

Risk factors for dysfunction in the mother-child dyad include medical and psychiatric illness in both mother or child, as well as challenging socioeconomic circumstances.<sup>(12)</sup> Red flags to look out for include reduced maternal attunement, reduced child responsiveness to the mother, and restricted child growth and development (Table I). The family physician should also be cognisant of injury patterns suggestive of physical child abuse, which is beyond the scope of this article but was discussed in a previous Practice Integration and Lifelong Learning article on management of child abuse.<sup>(13)</sup>

**WHAT CAN I DO IN MY PRACTICE?**

The family physician is well-positioned to identify at-risk or dysfunctional mother-child dyads, and intervene to change the trajectory through touchpoints such as scheduled well-child developmental assessments, the routine postnatal check and ad-hoc consultations for acute illnesses.

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**Table I. Red flags for dysfunction in the mother-child dyad.**

Factor	Mother	Child
Red flags	<ul style="list-style-type: none"> <li>Reduced maternal attunement</li> <li>• Blunted affect</li> <li>• Reduced eye contact with child/doctor</li> <li>• Lack/delayed response to child's cries</li> <li>• Tearful appearance</li> <li>• Irritability</li> </ul>	<ul style="list-style-type: none"> <li>Reduced child responsiveness to mother</li> <li>• Infant lacking eye contact with mother</li> <li>• Infant irritability/fussiness</li> <li>• Resistant behaviour</li> <li>• Infant rejecting mother after separation</li> <li>Restricted growth and development</li> <li>• Language delay</li> <li>• Global developmental delay</li> <li>• Failure to thrive</li> </ul>
Risk factors <sup>(13)</sup>	<ul style="list-style-type: none"> <li>• Adolescent mother</li> <li>• Single mother</li> <li>• Unwanted pregnancy</li> <li>• Low maternal education or intelligence level</li> <li>• Low parental socioeconomic status</li> <li>• History of depression in mother</li> <li>• Maternal catastrophic illness, e.g. cancer</li> <li>• Maternal substance abuse</li> </ul>	<ul style="list-style-type: none"> <li>• Autism spectrum disorder</li> <li>• Trisomy 21 or other congenital malformations</li> <li>• Sensory deficits, e.g. visual or hearing impairment</li> <li>• Adopted child</li> </ul>

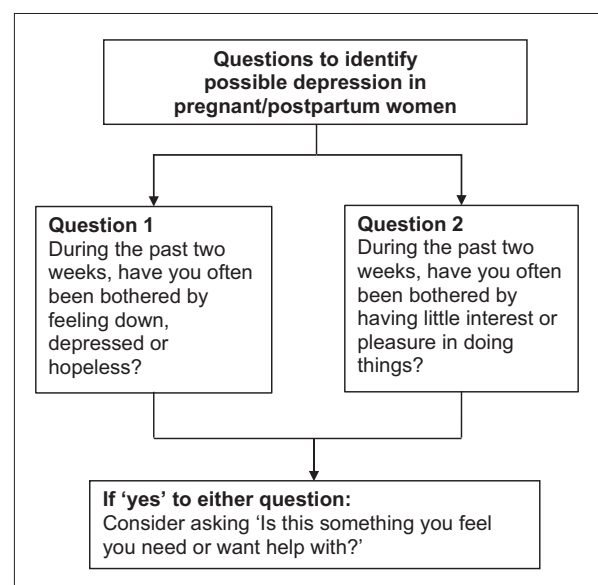
Simple tips to support the new mother (Box 1) are especially beneficial as a first step, and remain useful in mothers who decline referral to mental or emotional health services. The family physician can support mother-child interaction by encouraging the mother to talk positively in a gentle tone to the baby; this can nudge the dyad in a healthier direction.

Scheduled well-child developmental assessments are an opportune time for the family physician to screen the mother for postnatal depression, as recommended by the American Academy of Pediatrics.<sup>(14)</sup> In Connecticut, a well-established programme sited at a community health centre screens mothers for depression during pregnancy, at the routine six-week postpartum visit and during the infants' well-child visits.<sup>(15)</sup> Locally, the Integrated Maternal Child Wellness Programme, a novel collaboration between SingHealth Polyclinics and KK Women's and Children's Hospital's (KKH) Department of Paediatric Medicine and Women's Mental Wellness Service, uses a two-question screen (Patient Health Questionnaire 2) for maternal depression during scheduled well-child visits at Punggol Polyclinic (Fig. 1).<sup>(16)</sup> If the mother is not present (e.g. if the child is accompanied by the grandparents or domestic helper), the physician can enquire about the mother's well-being and encourage her to visit the clinic. Further details on what to do if the screening is positive can be found in a previous Practice Integration and Lifelong Learning article on postnatal depression.<sup>(16)</sup>

Early identification of mothers with depression is important so that they can be connected to services that might mitigate the impact of the depression on the mother-child dyad. Studies of maternal depression screening in paediatric practice suggest that (a) it is feasible; (b) it yields a significant number of mothers who require intervention; and (c) intervention is effective, translating into positive child outcomes.<sup>(15)</sup> Locally, a screening and early intervention programme for postnatal depression in KKH (established since 2008) has shown improved clinical outcomes in the affected mothers' symptoms, function and quality of life.<sup>(17)</sup>

**Box 1. Tips for mothers on emotional wellness after childbirth:**

1. Getting into a routine  
Establishing a schedule is helpful but there is a need to allow for flexibility, as the baby's needs may change.
2. Taking time for self-care  
Allow time to rest and relax, e.g. going for a walk or enjoying entertainment.
3. Eating well and exercising  
Good nutrition and exercise helps improve energy levels and well-being.
4. Talking to someone  
Confiding in a spouse, family member or trusted friend is helpful to release emotional tension.
5. Writing thoughts down  
This helps the mother to reflect and make sense of the life-changing experience of motherhood.



**Fig. 1** The Patient Health Questionnaire 2 screen for maternal depression.

**Table II. Safety net of resources according to type of help provided.**

Level	Type of help	Examples
Informal	<ul style="list-style-type: none"> <li>• Social network</li> <li>• Online self-help resources</li> </ul>	Spouse, family, friends, colleagues, religious groups HealthHub SG (via Web portal/mobile application)
Community	<ul style="list-style-type: none"> <li>• Social worker and financial support</li> <li>• Counselling</li> <li>• Community mental health services</li> <li>• Multidisciplinary support programmes for young children from vulnerable families</li> </ul>	Family Service Centres <ul style="list-style-type: none"> <li>• Family Service Centres</li> <li>• Telephone counselling hotlines:               <ul style="list-style-type: none"> <li>– Institute of Mental Health’s mental health hotline</li> <li>– Singapore Association for Mental Health</li> <li>– Counselling and Care Centre</li> <li>– Fei Yue Counselling Centre</li> <li>– Samaritans of Singapore</li> <li>– Association of Women for Action and Research</li> <li>– Parentline (specifically for parents with parenting and childcare issues)</li> </ul> </li> <li>• MindCare (by Ang Mo Kio Family Service Centre)</li> <li>• Clarity Singapore</li> <li>• KidSTART (by Early Childhood Development Agency)</li> <li>• KIDS 0-3 (by Temasek Cares)</li> </ul>
Specialist	<ul style="list-style-type: none"> <li>• General psychiatry</li> <li>• Maternal mental health</li> <li>• Mother-infant therapy</li> </ul>	Psychiatric referral to restructured hospitals <ul style="list-style-type: none"> <li>• Postnatal Depression Intervention Programme, Women’s Mental Wellness Service (by KK Women’s and Children’s Hospital [KKH])</li> <li>• Women’s Emotional Health Service (by National University Hospital)</li> </ul> SURE MUMS (SUpporting Resilience and Empowering MUMS, home-based therapy by KKH)

## WHAT RESOURCES ARE AVAILABLE FOR MOTHER-CHILD DYADS?

At an informal level, the family physician can encourage the mother to engage her spouse and family for support, especially senior members for their advice and experience. Enlisting the help of friends, colleagues or religious group members (educating and equipping them if necessary) can also be useful. Community support resources include Family Service Centres, counselling hotlines, community mental health services and other support programmes (Table II). KKH also offers home-based mother-infant therapy under the SURE MUMS (SUpporting Resilience and Empowering MUMS) programme.

If it appears that psychiatric attention will be beneficial, the family physician should offer to refer the mother to psychiatric services that are available in all restructured hospitals. Subspecialised services for maternal emotional and mental health are also offered at KKH and National University Hospital.

## TAKE HOME MESSAGES

1. Persistent attachment difficulties in mother-child dyads, as well as maternal mental health problems, can lead to long-term consequences for the child’s mental health and development.
2. Red flags for dysfunction in mother-child dyads include reduced maternal attunement, reduced child responsiveness to the mother, and restricted child growth and development.
3. The family physician can screen for dysfunction in the mother-child dyad and maternal depression during scheduled well-child visits.

4. Early identification of maternal depression facilitates intervention and can translate into positive child outcomes.
5. Resources to support mother-child units include informal help from family and friends, community resources, and specialist psychiatric services.

*You noted Sara’s blunted maternal affect and reduced maternal response to the child’s cries. Further history-taking revealed stressors including marital conflict and financial distress. Sara acknowledged that she often feels ‘down’. You gently suggested some tips on self-care and referred Sara to the postnatal depression intervention programme at KK Women’s and Children’s Hospital and the Family Service Centre for financial assistance and marital counselling. Sara and Adam returned six months later for Adam’s 18-month-old developmental assessment. This time, Sara chatted with you while keeping watch on Adam as he happily explored your room. Adam discovered a stray tongue depressor and triumphantly turned to show it to Sara, who smiled encouragingly before firmly instructing him to return it to you. You found that Adam met all developmental milestones and gladly shared this with Sara as a form of affirmation.*

## ACKNOWLEDGEMENTS

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**ABSTRACT** Infant social, emotional and neurological development is shaped by the mother-child dyad. Dysfunction in this bond, as well as maternal mental health problems, can negatively impact child development. The family physician is well-placed to spot dysfunction in the mother-child dyad and screen for postnatal depression during well-child visits. If any issues are identified, the family physician can provide support and help the mother-child dyad to access community resources and specialist psychiatric services.

*Keywords: child development, postnatal depression, well-child visit*

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## SINGAPORE MEDICAL COUNCIL CATEGORY 3B CME PROGRAMME

(Code SMJ 201910A)

	True	False
1. The mother-child dyad share an intimate biological, social and psychological relationship.	<input type="checkbox"/>	<input type="checkbox"/>
2. Infant social, emotional and neurological development is influenced by maternal emotional availability, maternal sensitivity and responsiveness to infant cues.	<input type="checkbox"/>	<input type="checkbox"/>
3. When exploring an unfamiliar situation, infants look to their parents' responses and emotional expressions as guides in approaching or withdrawing from stimuli.	<input type="checkbox"/>	<input type="checkbox"/>
4. Mothers do not need to be perfect, just 'good enough' to provide a secure base for their children.	<input type="checkbox"/>	<input type="checkbox"/>
5. One in 100 mothers experience postpartum depression.	<input type="checkbox"/>	<input type="checkbox"/>
6. Mothers with depression can be less attuned to their infant's needs, less responsive to infant cues, and display more negative, hostile or disengaged parenting behaviours.	<input type="checkbox"/>	<input type="checkbox"/>
7. Maternal depression affects an eight-year-old child as much as it does a six-month-old infant.	<input type="checkbox"/>	<input type="checkbox"/>
8. Children of mothers with persistent and severe depression are at increased risk of behavioural problems, depression in adolescence and stunted growth.	<input type="checkbox"/>	<input type="checkbox"/>
9. The mother of a child with autism spectrum disorder may display blunted maternal affect and delayed responses to the child's cries. This is a normal response and not a red flag for dysfunction, considering the stress of caring for a child with special needs.	<input type="checkbox"/>	<input type="checkbox"/>
10. No intervention needs to be considered for the child of an adolescent mother who exhibits irritable behaviour and delayed developmental milestones.	<input type="checkbox"/>	<input type="checkbox"/>
11. Reduced child responsiveness to the mother, and restricted child growth and development are red flags that may suggest dysfunction in the mother-child dyad.	<input type="checkbox"/>	<input type="checkbox"/>
12. Socioeconomic circumstances such as low maternal education level, being a single mother or having had an unwanted pregnancy increase the risk of dysfunction in the mother-child dyad.	<input type="checkbox"/>	<input type="checkbox"/>
13. Medical circumstances such as maternal illness and child hearing/visual impairment increase the risk of dysfunction in the mother-child dyad.	<input type="checkbox"/>	<input type="checkbox"/>
14. The family physician can opportunistically identify at-risk mother-child dyads during scheduled well-child developmental assessments and the routine postnatal check.	<input type="checkbox"/>	<input type="checkbox"/>
15. It is inappropriate to assess for dysfunction in the mother-child dyad during ad-hoc consultations for acute illnesses; assessment is inaccurate when the child is sick and the mother stressed.	<input type="checkbox"/>	<input type="checkbox"/>
16. The Patient Health Questionnaire 2 screen for maternal depression is time-consuming and difficult to implement in a busy family practice.	<input type="checkbox"/>	<input type="checkbox"/>
17. Early identification and treatment of mothers with depression can lead to improved maternal and child outcomes.	<input type="checkbox"/>	<input type="checkbox"/>
18. The spouse, family and social network are important sources of support for mother-child dyads.	<input type="checkbox"/>	<input type="checkbox"/>
19. Subspecialist maternal mental health services are available in all restructured hospitals in Singapore.	<input type="checkbox"/>	<input type="checkbox"/>
20. If a mother declines a referral to specialist mental/emotional health services, the family physician can still offer simple tips and refer her to community support services.	<input type="checkbox"/>	<input type="checkbox"/>

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