



OPEN ACCESS

Case report

Use of the Stafford Interview for assessing perinatal bonding disorders

Yumi Nishikii,¹ Yoshiko Suetsugu,² Hiroshi Yamashita,³ Keiko Yoshida^{4,5}

¹Department of Pediatrics and Psychosomatic Medicine, National Hospital Organizations Nagasaki Hospital, Nagasaki, Japan

²Department of Health Science, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan

³Department of Child Psychiatry, Kyushu University Hospital, Fukuoka, Japan

⁴Department of Neuropsychiatry, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan

⁵Department of Psychiatry, Iris Psychiatric Clinic, Fukuoka, Japan

Correspondence to

Dr Yumi Nishikii;
key71@nifty.com

Accepted 2 November 2019

SUMMARY

Perinatal bonding disorders have been advocated by Brockington and he developed the semistructured Stafford Interview which contains a specific section to assess these disorders. To our knowledge, this is the first report on a fully described clinical case by using the interview. A 29-year-old primiparous mother gave birth to a healthy girl, but visited our clinic because of depression at one month postnatally and received pharmacotherapy. Despite improvement of her depression, at around 7 months postnatally, she felt distressed by childcare. The Stafford Interview was conducted and it manifested evidences of anger and rejection to her infant: she screamed at her infant because of anger towards her infant, and had desire to escape from the baby care and then temporally transferred the care to her mother (grandmother of the baby). The evidence of maternal feelings by using the Stafford Interview is practically useful for treating mothers with bonding disorders.

BACKGROUND

Bonding disorders in the perinatal period have adverse influences on the mother–infant relationship, among which emotional rejection of the infant has become recognised as a particularly morbid condition. This can cause serious distress to both the mother and her infant in early life and even lead to child abuse in some cases.¹ While bonding disorders have been discussed in relation to perinatal depression,^{1,2} the two conditions differ in terms of their severity, clinical course and response to treatment.³ For the perinatal mental health service, maternal emotional rejection needs to be identified in addition to other psychiatric disorders.

Brockington and his international research group have developed a semistructural interview to collect information in perinatal psychiatric practice and research, called the fifth Birmingham Interview or the newest version of it: ‘the Stafford Interview’. There are 130 compulsory probes and 185 ratings to be rated by at least two interviewers for consensus.⁴ The interviewer also records the mother’s responses to the compulsory probes in narrative. This interview covers the social, obstetric and psychological background, and psychiatric complications, except for diagnostic interviews to meet the international operational criteria for psychiatric disorders or thorough personal history.⁴ Brockington also included a postnatal section into the interview, named ‘Mother–infant relationship’ for

assessing maternal emotional response towards her infant which can be used as a self-standing instrument. This section was constructed with prepared probes to classify into diagnostic categories of bonding disorders, which was also developed by Brockington: Emotional rejection, Infant focused anxiety, Pathological anger and Mild disorders.¹ In the Anglo-New Zealand study, this section has been used to validate and calibrate the Postpartum Bonding Questionnaire: the PBQ.⁵ Brockington gave Yoshida (one of the authors of this paper) permission for the Stafford Interview to be translated into Japanese. We translated this section of ‘Mother–infant relationship’ and two portions from preterm sections, ‘Response to conception’, and ‘Well-being of the unborn child’ to identify bonding disorders.

As for screening bonding questionnaires, in the current study, another 10-item questionnaire of bonding named the Japanese version of the Mother–Infant Bonding Scale: the MIBS-J,⁶ instead of the PBQ, was used because of its frequent use at the setting of community perinatal services in Japan. It was developed based on the preliminary study of 44 women’s explanations about maternal feelings towards their babies by Kumar and his colleagues, which is another study of bonding disorders. After revision in certain items, it was translated into Japanese by one of the authors Yoshida.^{6,7} The correlation of the MIBS and the PBQ was confirmed.⁸ And later, one of our authors also indicated the similar correlation.⁹

According to the systematic researches by using the Stafford Interview and bonding questionnaires,^{1,5,10–15} they found that from 10% to 30% of mothers with psychiatric symptoms referred to the specialised hospital at perinatal period had Emotional rejection. Brockington estimated from the result of his own research that Emotional rejection was found about 1% from the study of Birmingham and Christchurch. Nevertheless, as Brockington mentioned in the same paper, there is a dearth of fully described cases of typical Emotional rejection. Brockington speculated that this is the reason why the disorder has been so little recognised yet.³ Hereby, the aim of this study is to report a full single clinical case with Emotional rejection and Pathological anger by using the Japanese version of the Stafford Interview. To our knowledge this is the first report demonstrating the details of the interview, in which the diagnostic classification was confirmed, and treatment strategy was described.



© BMJ Publishing Group Limited 2019. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Nishikii Y, Suetsugu Y, Yamashita H, et al. *BMJ Case Rep* 2019;**12**:e228696. doi:10.1136/bcr-2018-228696

CASE PRESENTATION

The subject was a 29-year-old primiparous mother. She was referred from a hospital for maternity and children to our mental health clinic, because of her depression.

She was living prosperously with her husband and their baby. Her parents were happy to provide support in terms of baby care. She had a history of eating and anxiety disorders in her teens. After she graduated from university, she worked for a company for several years, got married and then became pregnant soon thereafter. She was hospitalised for urgent risk of premature delivery at the 32 weeks of pregnancy. She always had been upset during the hospital stay of 4 weeks. She gave birth to a healthy baby girl with no paediatric complications. After discharge, the subject mother returned to her parent’s home with her baby, which is the traditional method of baby care in Japan. However, as the mother became anxious and irritable, she asked midwives obsessively about her baby’s health and growth every time she visited the outpatient clinic of that hospital for routine postnatal care. From 2 weeks postpartum, she suffered from depressive mood, insomnia and feeling tired. All these symptoms were worst at 3 weeks postpartum.

At the 1-month postpartum check-up midwives found that she had higher scores on the Edinburgh Postnatal Depression Scale: the EPDS (the total score was 28 points, the cut-off point for the Japanese women is 9 or more)^{16 17} and the MIBS-J (the total score was 21 points, most Japanese women score 3 or less, the higher score is to be concerned).⁶ She was therefore referred to our psychiatric clinic at 1-month postnatal. At the initial psychiatric assessment, the subject mother complained of depressed mood, anhedonia, uneasiness and restlessness, and insomnia. She also complained that her sleep was frequently disturbed by her baby’s crying. The subject mother reported that her baby sometimes continued crying for 7 or 8 hours every night during the first-month postnatal. She was diagnosed as having postnatal depression. Consequently, she was prescribed sertraline 50 mg/day then increased up to 75 mg/day. After she had recovered partially from her depressive mood with pharmacotherapy at 4 months, she was still hard to cope with her crying baby on her own, which became her main distress.

At 5 months’ postnatal, her depressive symptoms had declined, and her daily function improved to the degree that she was able to manage housework. As for the baby’s development, the baby gained weight and had normal development. Although the subject mother found that her baby was smiling, laughing well, and sleeping more at night until 5 months, she often still felt distressed by baby care. At 5 months’ postnatal, the subject mother moved back from her mother’s house to her own home with her baby. Even after she returned home, the grandmother (ie, the subject’s mother) visited her home instead several days a week to give intensive continuous baby care support. At 7 months postnatally, she was still anxious about her baby cry and scared of it regardless of her much improved daily activities.

INVESTIGATIONS

Both postpartum and prepartum sections of the Stafford Interview were conducted together in this study at 7 months postnatally to analyse emotional responses to her infant. In parallel, we also conducted the EPDS and the MIBS-J, which were standardised self-report questionnaire surveys, at 4 and 7 months postnatal to follow the clinical course of this case.

The result from the questionnaires

Compared with the scores on the MIBS-J, there was little change in scores on each item of those both questionnaires during the period from 4 to 7 months, while the total scores on the EPDS at the both 4 and 7 months decreased to 10 and 11 points, respectively. Each of the relevant items of the EPDS to depressive symptoms, which was ‘depressed mood’ and/or ‘loss of interest or pleasure’, the scores changed better to all point at the both times. The total scores on the MIBS-J of the mother remained high (7 points at both 4 and 7 months) and two items for anger and rejection were also high at both times: the item number 3 ‘I feel resentful towards my baby’, the item number 5 ‘I feel angry with my baby’.

The result from the Stafford Interview

Evidences from the narrative records and the conclusive codes for the interview items are shown in [tables 1 and 2](#).

Table 1 Items regarding the current pregnancy within the Stafford Interview			
Items on the Stafford Interview		Evidence for the rating of the current case	Code*
(1) Response to conception			
No.3	Planning of pregnancy	Not planned, but pleased	2
No.4	Unacknowledged pregnancy	Did not deny the pregnancy	0
No.5	Mother’s reaction to conception	Positive (pleased), not so strong	1
No.6	Reaction of baby’s father to pregnancy	Positive (pleased), slightly strong, but not ecstatic	1
No.7	Response of other important person to pregnancy	Her mother; positive (pleased), not so strong	1
No.8	Ideas about termination	Never considered	0
(2) Well-being of the unborn child			
No.34	Medical concern about unborn child	No concern	0
No.35	Social concern about unborn child	No concern	0
No.36	Attitude to gender of unborn child	Happy to know that the fetus was a girl	0
No.37	Interaction with the fetus (‘affiliation’, ‘prenatal bonding’)	Too embarrassing to talk and sing to the baby on her own; only when with her husband	2
No.38	Practical preparations for the new born	No equipment for baby care had been prepared	3
No.39	Mental and emotional readiness	Had only the faintest idea that life with a baby would be fun	2
No.40	Fetal abuse	No fetal abuse	0

*The code of each item is provided within the Stafford Interview. 2 trained raters make code through discussion after each item is rated at the range of three-point Likert scale (from 0 to 2) to six codes (from 0 to 5). A higher rating indicates worse in maternal emotional response, attitudes, or behaviours to her infant.

Table 2 Items on the 'Mother–infant relationship' section within the Stafford Interview

Items on the Stafford Interview		Evidence for the rating of the current case	Code*
(1) Infant characteristics and maternal involvement in care			
No.158	Baby's temperament	The baby cried a lot at night, but somehow could be pacified	2
No.159	Other problems with baby	Constipation: It distressed the mother to stimulate her baby's anus using a cotton swab	1
No.160	Infant development	Normal	1
No.161	Mother's involvement in infant care	Often transferred the care of the baby to her mother at night	2
No.162	Mother's emotional over-involvement in infant care	No emotional over-involvement	0
No.163	Quality of emotional involvement (play and cuddling)	No enjoyment from her baby until 5 months postnatally	3
(2) Mother's emotional response to her infant			
No.164	Timing of positive feelings for the baby	5 months postnatally	20 weeks
No.165	Feeling of estrangement	Just after delivery, felt the baby was not her own	1
No.166	Nature and strength of feelings for infant (historic)	Anger and rejection	4
No.167	Nature and strength of feelings for infant (present)	Ambivalent (both positive and negative feelings)	2
No.168	Ideas of transferring care or escaping from maternal duties	Temporary transfer had already taken place	4
No.169	Fantasies of infant loss	No such ideas	0
(3) Anger and abuse			
No.170	Angry response to infant	Screamed at the baby and stamped her foot besides the baby's bed several times	4
No.171	Frequency of maternal anger	Most of the time	3
No.172	Coping with maternal anger	Leave the baby crying	2
No.173	Child abuse	Abuse has not occurred	0
No.174	Child neglect	No neglect	0
No.175	Filicidal impulses and activity	No thoughts of filicide	0

*The code of each item is provided within the Stafford Interview. 2 trained raters make code through discussion after each item is rated at the range of 3-point Likert scale (from 0 to 2) to six codes (from 0 to 5). A higher rating indicates worse in maternal emotional response, attitudes or behaviours to her infant.

The prepartum section

(1) Summary of the section 'Response to conception'

The subject learnt about her pregnancy, which was unplanned, at only 2 months after marriage. She was not prepared emotionally for the pregnancy and feared the forthcoming delivery (tokophobia). On the other hand, both her mother and her husband, who were important people in regard to baby care, were happy to hear the news and did not experience any negative emotions (table 1).

(2) Summary of the section 'Well-being of the unborn child'

The subject experienced neither negative nor positive feelings towards her fetus during her pregnancy. She had only minimal interaction with the fetus, but her husband frequently spoke to

the fetus with her. She had only the faintest idea that life with a baby would be fun. She had not prepared any baby care equipment before she was admitted to the hospital for a threatened premature delivery at 32 weeks of gestation; her husband had made all the preparations (table 1).

The postpartum section

(1) Summary of the section 'Infant characteristics and maternal involvement in care'

The subject suffered from insomnia and became more depressed because of her baby cry. She conceived the idea that her baby's nursing had become poor and everything was starting to work against her. She returned to her mother's home with her baby, which is the traditional method of baby care in Japan, and often transferred the care of her baby to her mother (ie, a baby's grandmother), during the night time when she was too confused and tired. All that time, she received no enjoyment from her baby care (table 2).

(2) Summary of the section 'Mother's emotional response to her infant'

Just after the birth, the subject said, 'My baby doesn't look like me at all. It looks like someone else's'. She wished that someone else would start temporarily caring for the baby instead because it was too difficult for her. Such feelings continued for 3 months postnatally. She never experienced any positive maternal affection towards her baby until 5 months postnatal, when her baby began sleeping more at night, smiling and laughing. However, even at 7 months postnatal, she continued to have thoughts of escaping from baby care when she was tired (table 2).

(3) Summary of the section 'Anger and abuse'

The subject felt angry with her baby continuously until 7 months postnatal, with the feelings of anger peaking during the first few months. At the peak, she often lost emotional control and transferred the care of her baby to her mother. She confessed at the interview that the worst thing she did during that time was to scream at her baby, 'Why don't you sleep?! I can't stand you anymore!' In addition, she stamped her foot beside the baby's bed on several occasions. At 7 months postnatal, she still became angry when her baby stayed awake at night or disturbed her housework. She had to tell herself to control her anger, and sometimes just let her baby cry continuously. However, she did not admit to any abusive impulses, incidents or neglect (table 2).

OUTCOME AND FOLLOW-UP

The subject had received medication for her postnatal depression for 1 year postnatally and her depression was cured, she had some positive maternal affection. However, the mother still visited our outpatient clinic, and she still felt anger towards her baby. The psychiatrist supported that she did childcare in cooperation with her mother.

DISCUSSION

In the current study, we found that the subject mother had diagnoses of bonding disorders coexisting with postnatal depression.

Bonding disorders are overlooked because symptoms of them may be considered as part of depressive symptoms. As Brockington stated that the roots of bonding disorders already exist in the early puerperium, even during pregnancy, and the symptoms and signs can be evident within days or weeks of the birth.¹⁸ The diagnosis of bonding disorders including their subcategories was confirmed by using the Stafford Interview in this study. Looking

Novel diagnostic procedure

at the following evidences mentioned in tables 1 and 2, the subject mother felt too early to pregnant and was not prepared emotionally for having the baby, did only minimal interaction. She had no affection to her baby at birth, but negative feeling to babies. As some cases Brockington had described,¹⁸ the subject mother was found to have bonding disorders primarily before the onset of depression.

The subcategories of bonding disorders of our case were also clarified. The subject mother suffered more than bonding delay. As the evidences in tables 1 and 2, she had estrangement, aversion and a wish to escape from and transfer the care of the baby to her mother. Moreover, she often felt annoyed with her infant to the point of screaming and stamping her foot and experienced a loss of control to a dangerous degree. Based on these results, she was diagnosed with 'Threatened Rejection and Mild Pathological Anger' according to the criteria regarding bonding problems among mothers.¹

Furthermore, in the Stafford Interview, it is required to ask the whole clinical course and the worst timing of the bonding problems. In this case, the worst point in time was the period of the first few months, when the subject mother had uncontrollable anger, desire to escape from the baby care and then temporally transferred the care to her mother without positive maternal emotional response towards her baby. Even at 7 postnatal months, the mother's anger towards baby and feeling of escape from baby care still existed.

At the same time, we used the MIBS-J to follow the clinical course of maternal emotional responses towards her baby at 1, 4 and 7 months postnatal. In our case, too high score of the MIBS-J at 1 month after delivery may not indicate severe bonding disorders itself, which highly influenced by peak time symptoms of depression of this case. There are some studies to demonstrate that the scores on the EPDS and each bonding questionnaires, such as the MIBS-J or the PBQ, associate each other. Kumar and Robson illustrated in the study of 112 interviewed mothers that lacking of affection or initial indifferent after birth was related to depression.^{18 19} Even anger towards baby in this case, was influenced by sleep disturbance as a symptom of depression, although mothers' subjective feeling of sleep problems was due to being annoyed by baby cry.

Therefore, the priority of treatment of the subject mother should be first addressed her depressive symptoms, as high scores on the MIBS-J at 1 months postnatally should carefully be monitored parallelly with depressive symptoms. From the view of psychiatric treatment, antidepressant treatment for depression is sometimes effective sufficiently by itself to improve bonding problems as well.²⁰ These findings suggested that improvement of depressive mood and negative cognition of mothers could contribute to improve maternal emotional response to her infant and change of maternal behaviours in terms of sensitivity and responsiveness. However, it is not necessary applicable to all cases, including our case having primarily bonding problems. Postnatal depression in this case had almost typical clinical course.²¹ After depressive symptoms of our case including sleep disturbance improved by the time of 7 months postnatally, we now needed to make treatment plan to treat remained bonding disorders.

We carried out the Stafford Interview in a single setting at 7 months after delivery in this study to grasp the clinical course of bonding disorders mentioned above, because when her depressive symptoms improved, but bonding problems stayed. We have not yet had the evidence for optimal schedule of clinical assessments for bonding disorders. The results from the systematic researches introduced in Background section of this paper, in

which the interview conducted ranged from 3 days to 15 months after birth depends on research design,^{15 10-15} didn't clarify the optimal time point of the interview. According to the general instruction of the Stafford Interview published as the latest version, the whole interview can be conducted in the community or in the clinical setting anytime up to 1 year after childbirth.⁴

At the first step for treatment of bonding disorders, as Brockington suggested, the mother must be relieved of the irksome burden of baby care in early days after birth to protect her from all negative aspects of care.³ Fortunately, in our case, we found that the subject's mother played a key therapeutic role from the early days after birth by not only taking over the care of the baby at night-time, but also accepting her feelings, especially anger: she screamed at the baby and stamped her foot besides the baby's bed several times. The subject's mother learnt about her psychological problems and depressed mood, and supported her emotionally. Subsequently, abuse or neglect was protected. After the subject's depression improved, the authors summarised her bonding problems which were confirmed by the result of the Stafford Interview, and as the feedback we gave the summary with our comments to the subject mother, her mother and her husband, which was also a part of ongoing treatment. It was important for them to understand more about the subject mother's distress due to bonding disorders without stigma.

The role of the psychiatrist in this whole treatment course was simply to confirm that the subject's mother was providing much-needed support. Her mother worked very much like a co-therapist. Based on these findings, the major point of our intervention is to let the subject mother feel comfortable, not to be pressurised by the baby care and to encourage the grandmother of the infant to support her emotionally and practically, which is actually in line with the treatment principal presented by Brockington.³ The grandmother's support for baby care was also accepted culturally. Many Japanese mothers stay at their parent's home around perinatal period with their babies, which is referred to as 'Satogaeri (returning home town or village) bunben (to deliver a baby there)' and has been quite common in Japan for centuries.²² Whereas the stay is commonly finished 1 month after delivery, in this case it was prolonged up to 5 months postnatal. Even after the period, the grandmother still offered emotional and practical

Learning points

- ▶ For the clinical staff of perinatal mental health services, it is important to recognise maternal bonding problems, especially emotional rejection towards her baby. To detect it is priority to support postnatal mothers with baby care difficulty, otherwise bonding disorder could be overlooked in a shadow of postnatal depression.
- ▶ The Stafford Interview is useful in detecting and assessing the mother's real feelings and to plan treatment strategies.
- ▶ To relieve the mother's psychological and practical burden of childcare is essential in treating bonding disorder.
- ▶ It is to be noted that in Japan, due to cultural differences of perinatal support system in which the new mothers return to their family of origin home, the grandmothers of the babies could easily play a significant role as the cotherapist. In other countries, having learnt from this case, it is beneficial for mothers with bonding disorders to receive emotional and practical support of baby care from the persons who are close to the mothers or professional staff.

support for the subject, which worked finely for the treatment plan in this case.

In conclusion, the present case demonstrated that the Mother–infant relationship section of the Stafford Interview is applicable to Japanese mothers by making a full assessment of bonding disorders. This can help mental health staff to recognise maternal emotional problems systemically. Additionally, this case illustrates the vital role played by the grandmother during the perinatal period in Japan.

Acknowledgements We would like to thank Professor Brockington for allowing us to use the Stafford Interview for this study. We also would like to thank Drs Kaneko and Nagata at Nagoya University, who translated the prior version of 5th Birmingham Interview into Japanese and collaborated with us for the new version.

Contributors List of authors YN, YS, HY and KY. Conception and design: YN, YS, HY and KY. Acquisition of data or analysis and interpretation of data: YN, YS and KY. Drafting the article or revising it critically for important intellectual content: YN and KY. Final approval of the version published: YN and KY. Agreement to be accountable for the article and to ensure that all questions regarding the accuracy or integrity of the article are investigated and resolved: YN, YS, HY and KY.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

REFERENCES

- 1 Brockington IF, Aucamp HM, Fraser C. Severe disorders of the mother–infant relationship: definitions and frequency. *Arch Womens Ment Health* 2006;9:243–51.
- 2 Kumar RC. “Anybody’s child”: severe disorders of mother-to-infant bonding. *Br J Psychiatry* 1997;171:175–81.
- 3 Brockington I. Emotional rejection of the infant: status of the concept. *Psychopathology* 2016;49:247–60.
- 4 Brockington IF, Chandra P, Bramante A, et al. The Stafford interview a comprehensive interview for mother–infant psychiatry. *Arch Womens Ment Health* 2017;20:107–12.
- 5 Brockington IF, Fraser C, Wilson D. The postpartum bonding questionnaire: a validation. *Arch Womens Ment Health* 2006;9:233–42.
- 6 Yoshida K, Yamashita H, Conroy S, et al. A Japanese version of mother-to-infant bonding scale: factor structure, longitudinal changes and links with maternal mood during the early postnatal period in Japanese mothers. *Arch Womens Ment Health* 2012;15:343–52.
- 7 Taylor A, Atkins R, Kumar R, et al. A new mother-to-infant bonding scale: links with early maternal mood. *Arch Womens Ment Health* 2005;8:45–51.
- 8 Wittkowski A, Wieck A, Mann S. An evaluation of two bonding questionnaires: a comparison of the mother-to-infant bonding scale with the postpartum bonding questionnaire in a sample of primiparous mothers. *Arch Womens Ment Health* 2007;10:171–5.
- 9 Suetsugu Y, Honjo S, Ikeda M, et al. The Japanese version of the postpartum bonding questionnaire: examination of the reliability, validity, and scale structure. *J Psychosom Res* 2015;79:55–61.
- 10 Brockington IF, Oates J, George S, et al. A screening questionnaire for mother–infant bonding disorders. *Arch Womens Ment Health* 2001;3:133–40.
- 11 Loh C-C, Vostanis P. Perceived mother–infant relationship difficulties in postnatal depression. *Infant Child Dev* 2004;13:159–71.
- 12 Siu WM, Ip P, Chow HMT, et al. Impairment of Mother–infant relationship validation of the Chinese version of postpartum bonding questionnaire. *J Nerv Ment Dis* 2010;198:174–9.
- 13 Palacios Hernández B. Comparative study of the factors involved in mother–infant bonding in women with and without postpartum depression. *Ph D thesis, Universitat Autònoma de Barcelona* 2015.
- 14 Chandra PS, Bhargavaraman RP, Raghunandan VNGP, et al. Delusions related to infant and their association with mother–infant interactions in postpartum psychotic disorders. *Arch Womens Ment Health* 2006;9:285–8.
- 15 Vengadavaran A, Bharadwaj B, Sathynarayanan G, et al. Translation, validation and factor structure of the Tamil version of the postpartum bonding questionnaire (PBQ-T). *Asian J Psychiatr* 2019;40:62–7.
- 16 Okano T, Murata M, Masuji F, et al. Validation and reliability of Japanese version of EPDS (Edinburgh postnatal depression scale). *Arch Psychiatr Diagn Clin Eval* 1996;7:525–33.
- 17 Yamashita H, et al. Postnatal depression in Japanese women detecting the early onset of postnatal depression by closely monitoring the postpartum mood. *J Affect Disord* 2000;58:145–54.
- 18 Brockington IF. Disorders of the mother–infant relationship. In: Brockington IF, ed. *Motherhood and mental health*. Oxford: Oxford University Press, 1996: 327–66.
- 19 Robson KM, Kumar R. Delayed onset of maternal affection after childbirth. *Br J Psychiatry* 1980;136:347–53.
- 20 Poobalan AS, Aucott LS, Ross L, et al. Effects of treating postnatal depression on mother–infant interaction and child development: systematic review. *Br J Psychiatry* 2007;191:378–86.
- 21 Cox JL, Murray D, Chapman G. A controlled study of the onset, duration and prevalence of postnatal depression. *Br J Psychiatry* 1993;163:27–31.
- 22 Yoshida K, Yamashita H, Ueda M, et al. Postnatal depression in Japanese mothers and the reconsideration of ‘Satogaeri bunben’. *Pediatr Int* 2001;43:189–93.

Copyright 2019 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <https://www.bmj.com/company/products-services/rights-and-licensing/permissions/>
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

Customer Service

If you have any further queries about your subscription, please contact our customer services team on +44 (0) 207111 1105 or via email at support@bmj.com.

Visit casereports.bmj.com for more articles like this and to become a Fellow