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Special topic

Mother-Baby psychiatric units (MBUs): National data collection in France and in Belgium (1999–2000)*

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Summary

The French version of the Marcé checklist was used to collect data for 176 joint admissions to 11 psychiatric mother-baby units in 1999 and 2000. Mean age of the babies at admission ranged from 4 to 16 weeks. Two units also admitted older children. Mothers admitted were diagnosed with schizophrenia or chronic delusional disorders (n = 44), acute transitory psychosis "Bouffée délirante" (n = 20), bipolar disorders (n = 20), depressive illness (n = 38), personality disorders or intellectual disability (n = 39), and other disorders (n = 15). The mean duration of hospitalisation was 11 weeks. Units that also offered day-care admission in the same or a near-by unit had shorter mean admissions. More than half the women's partners (or babies' fathers) had mental health problems. Women with schizophrenia or chronic delusional disorders and personality disorders or intellectual disability remained hospitalised longer, improved less, and were more often separated from their babies, or discharged with supervision, than women admitted with other diagnoses.

Keywords: Mother-baby unit; postpartum psychiatric disorders; separation; national database.

Introduction

Joint mother-baby treatment in a Mother-Baby Unit (MBU) is aimed not only at treating the mother's disorder but also at facilitating and enhancing a secure mother-baby attachment and promoting the child's development. Even when separation from the mother and placement at discharge is ultimately necessary for the child's safety, a joint admission in a MBU provides the time to arrange the best possible child placement, and help the mother to accept this outcome.

Reports from individual centres have been published in England (Kumar et al., 1995), France (Cazas et al., 1990; Durand et al., 1994; Poinso et al., 2002), Australia (Buist et al., 1990; Milgrom et al., 1998) and New Zealand (Wilson and Macdonald, 2000).

Systematic national data collection at MBUs in England, France and Belgium makes it possible to describe the care in MBUs (Glangeaud-Freudenthal et al., 2002; Salmon and Appleby, 2000; Salmon et al., 2003). French and Belgium data collection started in 1999 and is now still going on in eleven MBUs in France and in two MBUs in Belgium. The child's development and the mother-child interaction during their joint hospitalisation are also important subjects that are being addressed in research currently underway in France and in Belgium, based on a "child" questionnaire and an interaction grid (Durand et al., 1999). All the instruments used by the MBU-SMF research group (cf. note 1) have undergone continued development since 1996 in regular multidisciplinary group discussions of the Francophone Marcé Society and in a unit of the National Health Research Institute. The data presented in this paper were collected systematically in 11 MBUs in France and Belgium in 1999 and 2000. Analysis of data is focused on the characteristics of the patients admitted to MBUs, the pathways to such admission and the outcome for mother and child.

* The material was presented during a symposium on "Mother-Baby joint admission for mental health care in different countries" at the Marcé Society International Biennial Scientific Meeting in Sydney (Australia) in 2002 (25–27 September 2002).

Methods

Sample

The study included all women who were admitted to a MBU with their babies, and who met the following inclusion criteria: full-time joint admission of a mother, with a child aged less than one year, for an admission longer than one week in one of the MBUs participating in the research. The study met all relevant ethical standards and was thus approved by the French Commission for Computers and Privacy (CNIL). The database analysed in this paper consists of 176 cases: 147 from 8 French MBUs and 29 from 3 Belgium MBUs.

Note 1

"Mother Baby Unit-Société Marcé Francophone (MBU-SMF) working group". Participating members were (in decreasing order of number of files included in the 2002 data base). *France*: C. Da Mota-Mattonet, V. Lafont, J. L. Couchot, L. Morisseau, P. Chardeau (Montesson)*; B. Durand, C. Libert & G. Yehezkieli (Créteil)*; M.-A. Zimmerman*, B. Fischer & A. Danion-Grilliat* (Strasbourg)*; A.-L. Sutter & S. Dorian (Bordeaux)**; O. Cazas & F. Delain (Villejuif)*; C. Rainelli et F. Souchaud (Limoges)*; M. Blazy & A. Debourg (Le Vesinet)**; F. Poinso (Marseille)*; S. Nezelof (Besançon)*; R. Cammas & M. Champion (Paris)*; N. Elbaz-Cuoq (Lyon)*; M. Maron, P. Thomas & P. Delion (Lille)***. *Belgium:* E. Titeca & M. E. Klopfert (Bruxelles)*; P. Tielemans (Ottignies)*; D. Lerminiaux (Liège)*. Other clinicians working with mothers and their babies *in other institutions than MBUs* were also active in the MBU-SMF working group: J.-J. Chavagnat (Poitiers), M. Dugnat (Montfavet), P. Marcelin (St Denis), O. Rosenblum (Bourg-la Reine).

*Data was collected since January 1999, **since January 2001, and ***since January 2003.

Procedures and instruments

With the agreement of the authors of the "Marcé checklist" (Appleby and Friedman, 1996; Salmon and Appleby, 2000), this instrument was adapted to the health care and child protective systems in France and in Belgium. The French Marcé questionnaire was extended by questions that seemed to us important to study (childhood of both parents, characteristics of the baby's father, more detailed diagnosis and treatment) (Cazas and Glangeaud-Freudenthal, in this issue; Glangeaud-Freudenthal et al., 1999).

The French questionnaire was completed for each consecutive admission by the physician directing the MBU units. The first part of the questionnaire was completed at the time of admission and the second at discharge or when the joint admission ceased for more than a few days. This paper focuses on several dimensions: social and demographic characteristics of the sample, legal status of the women and their babies at admission and at discharge, source of the request for admission, the women's disorders and outcome at discharge.

Statistical analysis

The analysis examined the characteristics at admission described in Table 2 according to country (France/Belgium) and outcomes according to the distribution of maternal disorders (Table 4). The statistical analysis, using SAS software, compared the significance of associations with the Chi-square test or, when appropriate, Fisher's exact test. The significance level was set at $p = 0.05$.

Results

Admission characteristics

The 176 admissions, to the 11 MBUs in 1999 and 2000, occurred primarily in the early postpartum, before 8 weeks (51% of admissions). The mean age of babies at admission was 10.6 weeks (range: 4.4 to 15.6 weeks; one Belgium unit located in a paediatric department and one in France may admit children over 1 year of age) and the mean age of the mothers was 30 years (range: 26 to 32 years). Overall, the most frequent principal reasons for admission were a first episode of acute mental distress (27%), a relapse or acute episode of a chronic mental illness (28%) or need for assessment of mothering skills and abilities during mental disorder (25%). Early dysfunction in the interaction between mother and child was the principal reason in 10% of cases and the need to assess parenting skills was the sole reason in 7% of admissions.

Table 1 reports the socio-demographic characteristics of women admitted with their baby and the distribution of their pathology. Compared with women with schizophrenia or other delusional disorders, women with acute transitory delusional disorders are more often living with a partner (90% cf. 68%) and more often employed or looking for a job (76% cf. 36%). This result will be discussed later. The distribution of maternal pathology may differ according to location and historical context of each unit. The number of cases in our sample is too small to statistically analyse all these differences. We note that more than half the partners (or fathers) are known to have, or have had, a mental health disorder (Table 1).

Referral for admissions to MBUs and the legal status of mothers and children there differ substantially in France and Belgium (Table 2). Maternal legal status at admission was almost exclusively voluntary in France, with only a few involuntary admissions at the request of third parties and there were no court-ordered admissions. In Belgium, however, requests by social service and child protection departments and sometimes by courts

Table 1. Characteristics of mothers admitted to a MBU and partners' mental health (in 1999–2000; N = 176)

	Frequency % (number of cases)
Women's age (years)	
< 25	19 (33)
25–35	64 (113)
> 35	17 (30)
Living with a partner	76 (134)
Women's occupational status before admission	
Professionally active	29 (134)
Unemployed, looking for a job	24 (43)
Student or in job training	22 (38)
Not working because of disability	14 (24)
Other	11 (20)
Distribution of women's disorders[a]	
Schizophrenia and other chronic delusional disorders	25 (44)
Acute transitory delusional episode: "Bouffée délirante"	11 (20)
Bipolar affective disorder	11 (20)
Depressive illnesses	22 (38)
Personality disorders and intellectual disability	22 (39)
Other disorders	9 (15)
Partner[b] **mental health past or present problems**	
No mental disorders known	47 (82)
Psychiatric disorder (in-patient)	8 (14)
Mental health problems (out-patient)	3 (5)
Mental health problems not treated	11 (20)
Other disorders	10 (18)
No data	21 (37)

[a] Diagnosis confirmed at discharge.
[b] Or baby's father when there is no partner known; data collected during mother-baby admission.

were more frequent. Similar differences exist for the legal status of infants.

The mean length of hospitalisation was 11 weeks, and the normal range in most units was 5 to 17 weeks. It reached 22 weeks in the one unit that admits women with children over one year of age. In some other units, located very near outpatient mother-baby daycare facilities and working closely with them (units in Marseille, Strasbourg and in Limoges), mother and child may spend less time as inpatients before becoming outpatients on a daycare basis.

Outcomes for mothers and their babies

In more than 65% of cases, the mother's condition improved: she either became symptom-free or showed a considerable improvement in mental health status. In 20% of cases a slight improvement was observed. In more than 14%, however, symptoms either did not improve or became worse and thus required a different type of management (Table 3).

Problems among the children, as reported by caregivers in the French Marcé questionnaire, did not appear more frequent at admission than at discharge. There was a broad range of psychomotor, emotional and physical developmental problems that concerned approximately a quarter of the children (Table 3); these were often transitory problems.

Important concerns during mother-baby hospitalisation are the child's safety and his or her development in the mother's care. The French Marcé questionnaire, like the English Marcé checklist, collects information about harm to the child. The English Marcé checklist differentiates between thought of non-fatal action, actual non-fatal action and infanticide. It also mentions the timing of actual non-fatal injury or infanticide. In the French Marcé questionnaire, we added questions to differentiate harm to the child due to maternal neglect (33

Table 2. Comparison of referral and legal status of mother and child at admission in MBUs France and in Belgium (in 1999–2000)

	France (N = 147) % (no. cases)	Belgium (N = 29) % (no. cases)	*p*
Referral agency on admission			
– General or psychiatric hospital or community psychiatrist	70 (103)	34 (10)	
– GP/paediatrician/maternity unit	18 (26)	10 (3)	
– Social services or court	2 (3)	38 (11)	*<0.001*
– Other	10 (15)	17 (5)	
Maternal legal status			
– Voluntary commitment	95 (140)	52 (15)	
– Request of a third person or court-ordered commitment	5 (7)[a]	48 (14)	*<0.001*
Infant legal status			
Under care order	10 (14)	28 (8)	*0.01*

[a] No court-ordered commitment in 1999–2000 data for France.

Table 3. Outcomes at discharge from a joint admission in a MBU (in 1999–2000; N = 176)

	Frequency (no. cases)
Mental maternal health improvement	
Symptom-free or considerably improved	65 (115)
Slightly improved	20 (36)
No improvement	14 (25)
Nurses report on child health status	
Good, or no problems reported	76 (133)
Emotional problems	9 (16)
Psychomotor problems	11 (19)
Somatic or nutritional problems	5 (8)
Harm to the child since birth (before or during admission)	
No harm reported	60 (105)
Thoughts only	14 (24)
Significant neglect	19 (33)
Non-fatal harm (no infanticide observed in data 1999–2000)	8 (14)
Maternal skills problems discharge (% calculated for each skill)[a]	
% Significant practical problems in baby care	18 (32)
% Significant problems of emotional response	41 (71)
% Risk of harm to child	31 (54)
Child legal status at discharge	
With mother, no formal referral	65 (115)
With mother, on 'at risk' register	7 (12)
With social service supervision (protection or care order)	13 (23)
Voluntary foster care or statutory care	15 (26)

[a] As reported by staff at discharge.

cases) from harm due to non-fatal actions (14 cases, among them 4 women with schizophrenia or other chronic delusional disorders and 5 women with personality disorders or intellectual disability). The number of cases did not allow a statistical analysis according to maternal pathology. We also note that three-quarters of these reported cases involved non-fatal harm performed during the first ten weeks after childbirth. No infanticide was observed during the study period in the participating MBUs.

The level of maternal skills are estimated by the clinical team at discharge and reported in the French Marcé questionnaire (Table 3). The frequency of problems in emotional response and of risk of harm differ according to maternal diagnosis (both $p < 0.001$) and range from very low percentages for women admitted with bipolar affective disorders or with ‘‘bouffée délirante’’ (acute transitory delusional episode) to high percentages for women admitted with a final diagnosis of schizophrenia or other chronic delusional disorders and personality disorders or intellectual disability. The sample size was again too small for more detailed analysis.

At the end of the joint admission, most children left the unit with their mother (85% of discharges). In some of these cases, the joint discharge included referral to child protective departments (‘at-risk register’) who were to ensure follow-up in the community. In some cases children were physically with the mother but under legal custody of a judge. The other 26 children were separated from their mother: they were placed in institutions (n = 15), with members of their own family (n = 8) or in foster-care (n = 3), just after the joint admission (Table 3). Among the 26 cases of separation, 12 cases were in the group of women with schizophrenia or other chronic delusional disorders and 9 cases in the group of women with personality disorders or intellectual disability and we observed only one case of mother-baby separation in the group of women with acute transitory delusional disorders.

Outcomes differed according to the women's pathology (Table 4). The women with schizophrenia or other chronic delusional disorders and those with personality disorders or intellectual disability improved significantly less often and were discharged under supervision or

Table 4. Frequency (and number of cases) of positive outcomes at discharge in each diagnostic category (in 1999–2000; N = 176)

Maternal pathology	Mother symptom-free or much improved at discharge	No mother-child separation or referral	No significant problems of emotional response reported[a]	No risk of harm to child reported[a]
Schizophrenia or other chronic delusional disorders (N = 44)	52 (23)	45 (20)	43 (19)	61 (27)
Acute transitory delusional episode: ‘‘Bouffée délirante’’ (N = 20)	87 (17)	80 (16)	90 (18)	90 (18)
Bipolar affective disorders (N = 20)	90 (18)	85 (17)	95 (19)	95 (19)
Depressive illnesses (N = 38)	76 (29)	84 (32)	71 (27)	82 (31)
Personality disorders or intellectual disability (N = 39)	51 (20)	49 (19)	33 (13)	41 (16)
p	*<0.005*	*<0.001*	*<0.001*	*<0.001*

[a] As reported by staff at discharge.

separated from their babies at discharge more often than the women with other pathologies (bipolar affective disorders, ‘‘bouffées délirantes’’ or, to a lesser degree, depressive illnesses).

Discussion

This paper describes the patients and the characteristics of admissions to MBUs in France and Belgium, as well as the outcomes for mother and baby after MBU care. Most women (85%) were discharged with their babies and their mental health improved considerably. These results agree with those presented in this issue from other countries that have joint mother-baby care. Good outcomes are not universal, however, and in this paper we have tried to look at results that may help explain these failures.

Women admitted to MBUs have a mean age (30 years old) similar to those in a perinatal national survey of a representative community sample (N = 13,718) of women who delivered live babies during one week of 1998 in French maternity units (29 years) (Blondel et al., 2001). The MBU admissions differed from the ‘‘maternity units sample’’ with an excess of primiparous women (62% cf. 43%) and of women not working because of disability (14% cf. 1%) or of women who were unemployed and looking for a job (24% cf. 12%). Our sample also included fewer women living with a partner (76% cf. 93%).

In our paper we looked separately at pathology, described in MBUs in France – acute brief transitory delusional episodes or ‘‘bouffées délirantes’’ (diagnosis confirmed at discharge with no past history of psychotic disorders). Because outcome and context at discharge are different, this pathology should be studied separately from others during the perinatal period. Even though the admission of these women may have been urgent (because of maternal delusional symptoms) outcomes are more positive at discharge. Barnett and Morgan in their review (1996) also note the Bardon et al. report (1968), that ‘‘the seeming paradox that women with ‘unequivocal puerperal psychosis’, particularly those with stable marital relationship, fared better and required shorter admissions than those with chronic neurotic or personality problems’’. Statistical tests will be done on a broader sample to confirm these results. A follow-up is needed to know the natural history and outcome of this pathology.

We found that women with schizophrenia or chronic delusional disorders and women with personality disorders or intellectual disability were the two groups most at risk for lacking skills to care for their children. While our sample was too small to analyse actual harm to the child according to pathology, we did observe cases of harm mainly in these two groups. This finding points in the same direction as our results that mothers with these disorders are more often separated from the child at discharge than mothers in other diagnostic categories. The type of maternal disorder, as described above, was not the only variable related to some unfavourable outcomes. As Salmon et al. stress in their paper in this issue, schizophrenia is not an isolated risk factor and the social and family context should also be taken into consideration in deciding on separation or choosing the type of follow-up needed to ensure the safety and health of mother and child. Results presented in this paper should be confirmed in a broader sample and include studies on interaction between risk-factors.

We observed that in more than half of the admissions the woman’s partner, or baby’s father, also had mental health problems. Their characteristics should also be considered when outcomes are discussed. Other authors have discussed mental health problems or difficulties in the ‘transition to fatherhood’ (Ballard et al., 1994; Matthey et al., 2000; Poinso and Soulayrol, 1998)

Although similar questions were used to collect data in France, Belgium, England and New Zealand, it is nonetheless difficult to compare these results because MBUs in these different countries are connected to different mental health and perinatal care systems (e.g. different referrals at admission and different networks at discharge). Moreover, they do not provide for the same types of patients (cases may involve more psychiatric or more psycho-social diagnoses; different level of severity of disorders).

Mother-baby units aim to provide protection for the child, care for the mother-child relationship, and time and expertise to detect potential risk factors for the child. They work on the ‘transition to parenthood’ and enhance mother-infant relationships during admission. When separation is necessary at discharge, care includes psychological and practical preparation of the mother and the child.

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References

Appleby L, Friedman T (1996) The Marcé Clinical Check-list: the basis of multicentre audit and research in severe postnatal illness. Proc International Marcé Society Biennial Conférence.

Ballard CG, Davis R, Cullen PC, Mohan RN, Dean C (1994) Prevalence of postnatal psychiatric morbidity in mothers and fathers. Br J Psychiatry 164: 782–788.

Bardon D, Glaser YIM, Prothero D, Weston DH (1968) Mother and baby unit: psychiatric survey of 115 cases. Br Med J 2: 755–758.

Barnett B, Morgan M (1996) Postpartum psychiatric disorder: who should be admitted and to which hospital? Aust NZ J Psychiatry 30: 709–714.

Blondel B, Norton J, du Mazaubrun C, Bréart G (2001) Evolution des principaux indicateurs de santé périnatale en France métropolitaine entre 1995 et 1998. Résultats des enquêtes nationales périnatales. J Gynécol Obstét Biol Reprod 30: 552–564.

Buist AE, Dennerstein L, Burrows GD (1990) Review of a mother-baby unit in a psychiatric hospital. Aust NZ J Psychiatry 24: 103–108.

Cazas O, Dhote A, Bouttier D, Ginestet D (1990) L'hospitalisation de la mère et de son nourrisson dans un service de psychiatrie adulte. Psychiatr Enfant 23: 635–674.

Durand B, Levy P, Amzallag C, Sarfaty J (1994) Analyse rétrospective de 130 dossiers cliniques d'une unité d'hospitalisation conjointe mère-enfant. Information Psychiatrique 70: 9–15.

Durand B, Yehezkieli G, Glangeaud-Freudenthal N M-C, Clerc C, Amzallag C, MBU Discussion-Group (1999) Instrument for weekly nursing assessment of mother-baby interaction. Arch Womens Ment Health 2: 127.

Glangeaud-Freudenthal N M-C, Cazas O, MBU Working-Group (1999) Proposal for international comparative data collection about Mother-Baby Units, using the "Marcé Clinical Checklist". Arch Womens Ment Health 2: 128.

Glangeaud-Freudenthal N M-C, Salmon M, Groupe UMB-SMF (2002) Résultats du questionnaire "Marce-Mère" en France et Belgique et du questionnaire "Marce-Check-List" en Grande-Bretagne sur les hospitalisations conjointes mère-bébé temps plein. 5e journées européennes des unités d'hospitalisation Mère-Bébé en psychiatrie, Limoges 1: 22–27.

Kumar R, Marks M, Platz C, Yoshida K (1995) Clinical survey of a psychiatric mother and baby unit: characteristics of 100 consecutive admissions. J Affect Disord 33: 11–22.

Matthey S, Barnett B, Ungerer J, Waters B (2000) Paternal and maternal depressed mood during the transition to parenthood. J Affect Disord 60: 75–85.

Milgrom J, Burrows GD, Snellen M, Stamboulakis W, Burrows K (1998) Psychiatric illness in women: a review of the function of a specialist mother-baby unit. Aust NZ J Psychiatry 32: 680–686.

Poinso F, Gay MP, Glangeaud-Freudenthal N M-C, Rufo M (2002) Care in a Mother-Baby Psychiatric Unit: analysis of Separation at Discharge. Arch Womens Ment Health 5: 49–58.

Poinso F, Soulayrol R (1998) La place du père dans une unité d'hospitalisation parents-enfants. Psychiatr Périnatale: 377–390.

Salmon MP, Appleby A (2000) Predictors of clinical outcome, other outcomes and risk of harm to babies using data from the National Audit of mother and baby admissions to psychiatric hospitals. Arch Womens Ment Health 3: 107.

Salmon MP, Abel KM, Cordingley L, Friedman T, Appleby L (2003) Clinical and parenting skills outcomes following joint mother baby psychiatric admission. Aust NZ J Psychiatry 37: 556–562

Wilson D, Macdonald E (2000) The Christchurch Mothers and Babies Service Mothers and Babies. Infant Ment Health J 21: 394.

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