

Short Communication

Psychological and Psychosocial Interventions Promoting Mother-Infant Interaction on Mother and Baby Units in the United Kingdom

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- Psychological/psychosocial intervention
- Mother-infant-interaction
- Service evaluation survey

Abstract

Background: Specialist Mother and Baby Units exist for the admission of women with their babies, when a mother requires assessment and intervention because of mental illness or significant mental health difficulties. The promotion of the mother-baby bond has been a priority in MBU settings given that severe maternal mental illness can compromise this relationship. This service evaluation was conducted to explore which psychological and/or psychosocial interventions promoting mother-infant interaction were being offered to women admitted to Mother and Baby Units (MBUs) in the United Kingdom (UK) and to explore the measures used to assess the quality of the mother-infant relationship.

Method: As part of this questionnaire-based survey, all 18 Mother and Baby Units (MBUs) in the United Kingdom were contacted and asked to provide information on the psychological and psychosocial interventions currently being offered in their service to promote mother-baby interaction and, where applicable, the measures used to capture their benefits.

Results: Sixteen (89%) MBUs completed the survey and provided information. The findings suggest that psychological and psychosocial interventions were offered in various ways, by different members of staff to mothers on their own or to mothers and their babies or the whole family unit, including the father.

Conclusions: Although all of the 16 MBUs offered psychological and psychosocial interventions, the findings indicate the varied nature of intervention availability and application across MBUs in the UK, which may reflect the needs of the service user group each MBU caters for alongside regional variations and staff preferences and training backgrounds. Staff time, training and related costs were mentioned as obstacles for improved service delivery.

INTRODUCTION

The birth of a child and the postnatal period has been described as a significant life-changing time for women [1]. It is seen as a vulnerable period, increasing the risk for the development of maternal mental illness [2]. Approximately 10-20% of women develop a mental illness during pregnancy or within the first year after having a baby [3]. In addition, perinatal depression, anxiety and psychosis were found to carry a total long-term cost to society of about £8.1 billion per year [3].

One to two women in every 1000 who give birth are estimated to develop psychosis after childbirth (also called postpartum psychosis) with a further two women experiencing other serious mental health difficulties, often requiring inpatient admission [4,5]. The negative impacts of maternal mental health difficulties on child development has been extensively documented in the literature and highlighted in various UK government reports [6,7]. For example, parents who experience

significant mental health difficulties have been shown to be less able to provide social and emotional stability to their child, which increases the possibility of adverse experiences that negatively affect their child's development. Since severe mental illness can compromise the mother-infant relationship and intervening becomes more complex and expensive the later it is attempted, the promotion of mother-infant interaction and the reduction of maternal mental health difficulties through interventions early on should be considered a priority [6,7]. Kumar and colleagues [8] had emphasised this point in 1995 when they examined models of care and assessments used across different perinatal services. They also advised that studies should aim to compare the appropriateness of measures and the effectiveness of different interventions in order to establish guidelines that help professionals to reach balanced decision making processes between mothers' wishes and needs, and the future safety and welfare of the infant [8].

Specialist Mother and Baby Units (MBUs) provide expert

treatment and support formothers and their infants, through a joint admission of mother and baby [4,5]. Women admitted to a MBU often present with moderate to severe mental health difficulties that pose a degree of risk of harm to themselves or their baby, which cannot be managed by crisis or mental health treatment teams in the community [4,5]. Clinical guidelines [5] recognise that women present with different needs and with mental health difficulties of varying severity and complexity in the perinatal period and state that psychological and psychosocial interventions should be offered by trained clinical personnel.

A survey of 12 of the 13 MBUs in the England in 2009 noted that 58% were offering psychological interventions (particularly individual cognitive behaviour therapy; CBT) and that all units provided occupational therapy alongside psychiatric and nursing care [9]. In a systematic review of 23 studies reporting on the psychological outcomes following MBU admission across the world, Gillham and Wittkowski [10] identified that admission appears to have had positive effects on maternal mental health and the mother-baby-relationship, despite variations in methodological quality, designs used and in the outcomes reported. Nine papers specified the type of psychological interventions being offered, with CBT being the most common. CBT continues to be suggested as a suitable psychological intervention in the perinatal period for women presenting with depression, anxiety disorders and severe mental illness [5]. However, improvements in a mother's mental health through psychological interventions like CBT may not necessarily lead to improvements in the mother-baby-relationship or indeed the baby's mental health [e.g.,11,12]. Consequently, some MBU settings have also explored the benefits of video feedback on mother-baby-interaction [e.g. 13]. A meta-analysis of 29 studies demonstrated that video feedback, combined with other psychotherapeutic approaches, can lead to significant positive effects on the development of the child and parenting behaviour, but less strong evidence was found in relation to parents in high-risk groups (e.g., those experiencing mental illness) [14].

As the provision of psychological and psychosocial interventions to promote the mother-baby-interaction has been a focus for innovation on UK MBUs recently [15], the current survey aimed to identify a) what type of psychological and psychosocial interventions were offered directly to mothers admitted to MBUs across the United Kingdom (UK) and b) the psychological measures used to assess the mother-baby interaction or relationship.

MATERIALS AND METHODS

The survey

Having been granted approval from the local National Health Service (NHS) audit department, we devised a questionnaire asking for information on a) the service (e.g., number of beds, average length of stay and the main psychological difficulties that lead to admission in their service), b) the psychological and psychosocial interventions being offered (e.g., type, nature, etc.) and c) if any measures or assessments were being used to capture change.

Procedure and data analysis

Between October and December 2014, the 18 UK MBUs were

contacted by telephone, e-mail or fax, with a letter explaining the rationale behind this survey. Responses were gathered and tabulated; only descriptive statistics were calculated.

RESULTS

Of the 18 MBUs contacted, 16 (89%) replied. Surveys were mostly completed by ward managers, nurses, consultant psychiatrists or clinical psychologists. The mean number of beds across these services was 8, with a range of 5 to 13 beds. The average length of stay was around 7 weeks (ranging from 4 to 12).

The reported mental health or psychological difficulties leading to MBU admission covered the full spectrum of perinatal mental illness and diagnoses (as first episodes or relapses), including postpartum psychosis, postpartum depression, bipolar disorder, anxiety, post-traumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD), personality disorders, tokophobia, bonding difficulties or other disruptions in the parent-child relationship, self-harming behaviours, intrusive thoughts regarding harming the baby, concerns about parenting, severe affective disorder and other non-psychotic conditions.

Psychological and psychosocial interventions

Table (1) provides an overview of the types of psychological and psychosocial interventions offered directly to mothers and/or babies.

Seven MBUs (43.75%) offered interventions tailored to specific problems, such as bonding difficulties in the context of comorbid difficulties or previous trauma. Four (25%) offered general interventions to all mothers and five (31.25%) offered a mixture of both. The psychological interventions most frequently offered were individual psychology/psychotherapy sessions (37.5%) and CBT (25%). Video feedback and its adaptations were also offered on five units (31.25%). Depending on the mother's ability to engage with these interventions, they were offered to the mother only, the baby only, both mother and baby or to mother, baby and father. When the mother was too unwell to take part in any interventions, then MBU staff would still engage the baby.

The following professionals were responsible for delivering psychological interventions directly: clinical psychologists (75%), nursery nurses (75%), psychiatric nurses/nursing staff/trained nurses (50%), occupational therapists (25%), psychotherapists/therapists (12.5%), art therapists (12.5%), movement/dance therapists (12.5%), child psychotherapists (6.25%), developmental psychologists (6.25%), music therapists (6.25%), consultant psychiatrists (6.25%), child/health care practitioners/assistants (18.75%), doctors (6.25%), trainee clinical psychologists (6.25%), ward managers (6.25%), key workers (6.25%), nursing therapists (6.25%) and 'Mama Babylist' teachers (6.25%).

All MBUs consulted offered their interventions on an individual basis (100%); some of them also offered group-based (68.75%), ward-based (50%), community-based (43.75%) and/or family (6.25%) interventions. Some MBUs enabled mothers to engage in interventions offered in the community; for example,

Table 1: Psychological and psychosocial interventions promoting mother-baby interaction and relationship.

Psychological/Psychosocial interventions	Ψ	Ψ Social	Both	Offered to
Specific psychological approaches				
Individual psychology sessions including psychotherapy with the mother	6			M, M+B
VIG/ adapted versions of VIG	5			M+B
Cognitive Behavioural Therapy (CBT)	4		1	M, M+B
Infant psychology/psychotherapy	3			M+B, B
Mindfulness/Mindfulness play	2	2		M, M+B
Compassion focused therapy	1			M
Intensive behavioural therapy (IBT)			1	M, M+B
Baby Triple P Positive Parenting Programme	1			M, M+B
Parent-infant psychotherapy	1			M, M+B
Attachment and bonding	1			M, M+B
'Incredible Years' programme		1		M, M+B
Watch, wait and wonder approach	1			M, M+B
General psychosocial activities				
Baby massage or baby yoga / Massage	10	4		M+B, M+B+F, B
Mother-infant creative/play activities/group	7	4		M+B, M+B+F, B
Tailored group activities(bonding/discussion/work)	6	5	1	M, M+B
Relaxation (individual/group)	2	1		M
Art therapy	2	1		M, M+B
Movement interaction / Movement/ dance therapy	2			M, M+B
Buggy walks / Walks	2	2		M+B
Swimming/Bathing	1	2		M, M+B, B
Music therapy	1			M+B+F
Non-structured/individual work/tasks with mothers		2	1	M+B, M
Multi-sensory room activities (sensory play, mother-infant relaxation)		3		M, M+B, B
Tai-Chi		1		M
Exercise/Fitness sessions		2		M
Aromatherapy		1		M
Occupational Therapy/Psycho-educational tailored activities (group/individual)		8		M, M+B
Solihull Approach		1		M, M+B
Abbreviations: M: Mother; B: Baby; F: Father				

by facilitating attendance at sessions based at local children centres.

Baby massage/yoga (87.5%), joint mother-baby-activities (68.75%) and tailored group activities (68.75%) were the most cited psychosocial interventions, offered by nursery nurses (68.75%), occupational therapists (50%), psychiatric nurses/nursing staff/trained nurses (43.75%), clinical psychologists (25%), child/health care practitioners/assistants (18.75%), art therapists (12.5%), trainee clinical psychologists (12.5%), family therapists (6.25%), music therapists (6.25%), doctors (6.25%), psychiatry trainee (6.25%) and social workers (6.25%). Most MBUs (62.5%) made their psychosocial interventions accessible to all mothers, while the remaining six (37.5%) targeted them to specific problems. Interventions were delivered in individual or group formats.

Measures

Information on the potential benefits of engaging in psychological and/or psychosocial interventions was reported mostly in clinical notes, ward round reviews, or was taken as evident from maternal self-report. Ten MBUs (62.5%) routinely assessed mother-baby interaction, but only one MBU (6.25%) carried out a formal assessment at admission and discharge using videotaped play sessions. The following measures were being used: the Bethlem Mother-Infant Interaction Scale (BMIS) [16] (25%); the Louis MACRO Scale [17] (18.25%); the CARE Index [18] (12.5%); the Postpartum Bonding Questionnaire (PBQ) [19] (12.5%) and the Mother and Baby Interaction Scale (MBIS) [20] (6.25%). The 25-item PBQ [19] was designed to detect disorders of the mother-baby-relationship, while the 10-item MBIS [20] can be used as a screening measure to assess the quality of the

mother-infant relationship. Both measures are completed by the mother.

In contrast, the BMIS [16] is completed by staff, based on observations of one week, to obtain an overall picture of disturbances in the mother-baby-interaction. The Louis MACRO [17] is also completed by staff. It offers a framework for assessing risk and interpreting the impact of maternal mental illness on children taking into account illness severity, parenting practices, and child contribution to outcome.

Only trained coders can use the CARE-Index [18] as a method for evaluating the quality of adult-infant interaction or dyadic synchrony, based on a short, videotaped play interaction of 3-5 minutes. The mother's behaviors and affect are rated on three scales (sensitivity, control and unresponsiveness) and the infant is assessed in terms of cooperativeness, compulsivity, difficultness, and passivity. The use of the CARE Index requires intensive training, accreditation and regular supervision.

In general, use of a measure was reported to be helpful because it provided evidence of the recovery process for the mothers and facilitated staff discussion. Issues in relation to staff training, staff time and costs and inter-rater reliability were among some of the most frequently pointed out restrictions of their use.

DISCUSSION

This study obtained information on the diverse range of current psychological and psychosocial interventions being offered directly to mothers admitted to MBUs in the UK. Our response rate of 89% was excellent for a survey.

Whilst Elkin and colleagues in 2009 [9] lamented that 42% of their 12 surveyed MBUs did not offer any psychological interventions, all of the 16 MBUs, which took part in our survey, offered psychological and psychosocial interventions. Whilst the range and delivery formats of interventions on MBUs appeared to be diverse, most psychological interventions (e.g., psychotherapy, CBT, etc.) were still being offered predominantly to the mother and, where appropriate, to the mother and baby. Not all interventions used were specifically designed to target mother-baby interactions, but responders indicated that the mother-baby-relationship was being influenced through individual psychology sessions targeting maternal mental health or strengthened through joint psychosocial activities. In addition, MBU team members have assigned roles based on their training and expertise which influence what interventions can be offered at a particular MBU.

The use of measures was considered valuable in providing staff with information for discussion in ward rounds and in communicating progress to mothers, yet there was little consistency in the measures used. This inconsistency was highlighted in a recent review on MBU reported outcomes [10]. However, the findings of the current survey also stressed the importance of staff training and supervision in the systematic use of assessment tools, which was recognised by MBU staff as beneficial for clinical practice but can be costly and time-consuming. Furthermore, self-report measures require a mother to be well enough for responses to be valid, hence not all mothers admitted to a MBU will be capable of completing questionnaires.

Whilst all MBUs were approached via their ward managers, we did not systematically record who completed the survey. We do know that other staff members contributed to the completion of the survey. Furthermore, we did not enquire about psychological interventions being offered indirectly via a multi-disciplinary MBU approach, if all mothers were offered the interventions available or if interventions were started during admission and continued via outpatient services after discharge.

Interestingly, some units did not clearly distinguish between the two types of interventions: some MBUs regarded some interventions as psychological, while others deemed them to be psychosocial. Both types of interventions have some common theoretical underpinnings and differentiating them can appear to be arbitrary. Furthermore, in MBU settings within multi-disciplinary teams differentiating between 'psychosocial' and 'psychological' may no longer be clinically practical or sensible. For example, through their training, clinical psychologists in the UK would include psychosocial information in their formulation and treatment approaches [21].

Whilst the reported complexity and diversity of the maternal mental health difficulties reported by these 16 MBUs is comparable to those reported in the literature [e.g.22], length of admission appears to have decreased in the UK from 56 [9] to approximately 49 days. An average admission of seven weeks means that any intervention being offered has to be relatively brief and possibly tailored to the mother's needs. Indeed 43.75% of MBUs in this survey offered tailored interventions addressing specific problems, which may require a high degree of expertise in the professional offering these [23]. In the United Kingdom, given their specialist training, perinatal clinical psychologists would be best placed to do this [23] using a formulation-driven intervention approach [21], which is not only feasible given the admission window but also pragmatic because it would consider clinical complexity and refer for further psychological intervention when indicated.

In conclusion, this survey captured the variety of interventions being offered to promote and improve the mother's mental wellbeing alongside the mother-baby relationship and interaction. The fact that different interventions are offered in different MBUs is a strength if it draws on staff expertise and interests in interventions which are then tailored to the mother's or dyad's difficulties, in line with a formulation-driven approach.

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