

**HEALTH VISITOR INTERVENTION IN POSTNATAL DEPRESSION.
AN EVALUATION OF THE OUTCOME FOR MOTHERS AND BABIES.**

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Introduction

Over the past fifteen years there has been considerable interest in the subject of postnatal depression from both research and primary care perspectives.

During the 1980's a number of prospective studies of community samples were conducted to examine the prevalence, nature and course of postnatal depression, and the pattern of variables associated with its occurrence (see Cooper et al., 1991, for a review). This work showed that about 10 - 15% women experience an episode of clinical depression in the early months following delivery. These episodes are indistinguishable in terms of their presentation from those occurring at other times in the life cycle. Thus, in addition to pervasive low mood, symptoms of anxiety, irritability, loss of energy, guilt and feelings of worthlessness may be present. Most episodes remit spontaneously within six months of onset, although a minority follow a chronic course. Factors that have been consistently identified as being associated with the disorder include a lack of a close confiding relationship and social support, financial hardship and housing problems, and a previous psychiatric history.

More recently, attention has turned to the possible impact of postnatal depression on the mother-child relationship. Most studies have focused on mother-infant face-to-face interactions, and these have shown depressed women to have difficulties in sensitively attuning their responses to the infant (Field, 1984; Field et al, 1988; Cohn et al, 1990; Murray et al, 1993). Rather little is known about the effects of postnatal mood disorder on general aspects of caretaking,

Further work indicates possible long term effects of postnatal depression and associated difficulties in the mother-child relationship on child development. For example, there have been reports of poorer cognitive outcome, behavioural difficulties and more insecure attachments in the one and a half to four year old children of postnatally depressed mothers (Cogill et al, 1986; Murray, 1992; Sharp et al, 1995). Notably, such associations with the postnatal mood disorder are found even when depression occurring beyond the postpartum period is taken into account.

This body of work clearly raises important questions about treatment. Previous reports suggest that, in the normal course of events, in spite of regular contacts between primary health care workers and postpartum women, postnatal depression often goes undetected (Briscoe 1986; Marks et al, 1979). Furthermore, even when detected, there is no evidence that routine care, either in the form of health visitor contacts, or the psychotropic medication usually prescribed by general practitioners, is effective in alleviating either the depressive mood or the difficulties depressed mothers experience with their infants.

One of the most important areas for research in this area therefore concerns the evaluation of various interventions. Previous studies have shown that health visitors, given brief training in the detection and support of women suffering from depression, can have a significant impact on the course of the disorder (Holden et al, 1989; Gerard et al, 1993). However, to date, there is no evidence of the impact of such intervention on depressed mothers' relationships with their infants, or on the adverse outcomes that are otherwise associated with this postpartum mood disorder.

A series of inter-related studies is presented here that were conducted to address the following questions:

- i) *Maternal experience of infant care*: whether the experience of difficulties in the general care of the infant differs between postnatally depressed and well women
- ii) *Health visitor awareness of postnatal depression*: whether, in the ordinary course of health visitor practice, women experiencing postnatal depression are identified as depressed and offered more help than non-depressed women; and
- iii) *Intervention study*: whether training health visitors in the detection and management of postpartum depression has benefits, not only in terms of maternal mood, but also the mother's experience of both caring for, and relating to, her infant.

Method

i) *Maternal experience of infant care*

A consecutive series of women who had delivered at the local maternity hospital in Cambridge was screened at six weeks postpartum using the Edinburgh Postnatal Depression Scale or EPDS (Cox et al, 1987). Those whose scores indicated possible depression were subsequently interviewed using the mood section of the Structured Clinical Interview for DSM diagnoses (Spitzer, 1989). A sample of 40 women was thereby identified satisfying DSM III-R (APA, 1982) criteria for major depressive disorder. A random sample of 40 non-depressed women from the same postnatal population was selected as controls. The experience of infant care was assessed in all 80 women, at eight weeks postpartum, using a structured interview specifically designed for this purpose. All interviews, carried out in the women's own homes, covered practical aspects of infant care, such as sleeping and feeding, as well as aspects of the mother's experience of her relationship with her infant.

Table 1 contains a summary of the main areas of difference between the two groups. It is apparent that, compared to the non-depressed group, the depressed mothers were significantly more likely to report a range of difficulties with their infant. These included disturbances in sleeping, excessive crying, feeding and digestion problems, and difficulties combining managing the infant's demands for attention while trying to get on with other activities.

		Depressed (n=40)	Control (n=40)
Sleep			
m	difficulties in settling	43%	18%
b	distressed on waking	40%	15%
Crying			
m	difficult for mother	73%	35%
b	prolonged (15+ mins)	83%	50%
Relationship			
m	difficulty doing chores	58%	13%
b	discontented alone	60%	33%
Digestion			
b	already weaned	30%	5%
b	evening colic	59%	14%
m = mother			
b = baby			

ii). **Health visitor awareness of postnatal depression**

In order to examine health visitors' awareness of postnatal depression and their response to it, an examination was made of the case notes of postnatally depressed women from the same sample pool as that described above who were resident in Cambridge Health Authority area (numbering 25), together with well controls on the same health visitor registers.

This information was used to determine, for the first six months postpartum, the level of contact with the health visitor, (i.e. the number of clinic and home contacts), and any particular difficulties which had been recorded.

The health visitors responsible for these 50 mothers were also contacted and interviewed. In particular, they were asked to give their own assessment of the early months of :

- the degree to which the infant had been difficult to manage
- the mothers' difficulties experienced with the infant and
- the mother's mood.

The results are summarised in Table 2 opposite. They show that:

- the babies of depressed mothers are rated by health visitors as significantly more "difficult" than those of non-depressed mothers
- depressed mothers are rated by health visitors as having experienced significantly more difficulties coping with their babies than non-depressed mothers
- depressed mothers did not either attend clinic more frequently or receive more home visits than well mothers. If anything they made less use of clinics than did well women.

	Depressed (n=25)	Non-Depressed (n=25)	
Baby management difficulties	16	7	*
Difficult baby	12	3	*
Average home contacts	5.4	4.3	N.S.
Average clinic contacts	6.1	6.9	N.S.

(* Significant: p < 0.05)

The lack of additional support given overall to the group of mothers who were depressed appears to have come about because maternal depression was not detected in a substantial proportion of cases (Table 3). Of the 25 depressed women in the current sample 11 (40%) were not seen to be depressed by their health visitors.

HV Classification:	EPDS-based diagnosis:		Total
	Depressed (n=25)	Non-depressed (n=25)	
Depressed	14 (5.1)*	8 (5.7)*	22
Non-depressed	11 (4.6)*	17 (3.6)*	28

* = no. of home visits

In fact, the health visitors were more accurate in identifying well women. Of the 25 non-depressed women, 17 were correctly identified and received the least visiting (average number of home visits - 3.6), but the 8 well women incorrectly identified as depressed received the most visits (5.7).

iii) *The intervention study*

There were 2 components to the study:

- health visitors were trained to detect and treat postnatal depression; and
- Assessments of maternal mood (EPDS) and perceptions of the extent of difficulty experienced over a range of common problems (problem sheet) were made both at the time of diagnosis and after supportive treatment.

Health Visitor Training

The Cambridge Health Authority approved a training programme for all health visitors which comprised six half days over a period of six weeks. All health visitors in post at the time of the start of the study attended at least five of the sessions. The course was run 3 times. The course was led by a British Association for Counselling-accredited counsellor who was an experienced trainer, already familiar with working with postnatally depressed women, together with a health visitor (SS).

Before formal training started all the health visitors were invited to an introductory meeting at which their knowledge of, and attitude to, postnatal depression was explored.

The aims of the training course were :

- to provide education on the nature and prevalence of postnatal depression; and
- to raise awareness of the value to the mother and infant of providing treatment.

In addition, training was provided in the assessment of mood to enable detection of postpartum depression, and in the management of postpartum depression by use of simple counselling and cognitive behavioural techniques.

The details of the training course can be obtained from the first author.

Briefly, training in the detection of depression involved instruction in the use of the Edinburgh Postnatal Depression Scale, together with guidelines on specific areas which need to be addressed in interview with those identified by the questionnaire as potentially depressed.

Training in the management of postnatal depression and associated difficulties with the infant proceeded on two fronts:

- basic counselling skills were imparted, using Egan's (1982) model of 'active reflective listening' and
- basic cognitive behavioural skills were presented derived from Cognitive Behaviour Therapy for Adult Psychiatric Disorders (Hawton et al, 1989). The focus here concerned the mother's depressive thoughts, as well as any problems she was experiencing either in managing her infant and/or difficulties she was experiencing in her relationship with her infant.

For practical reasons it was not possible to carry out a controlled clinical trial. Instead, information was collected in the period before the health visitor training, when

women were receiving routine primary care (i.e. the control group), and then again after training (i.e. the health visitor treated group).

For each of these groups assessment of maternal mood was made using the EPDS, followed by further enquiries to confirm a diagnosis of depression. These concerned the extent of the mother's low mood over the past two weeks, her interest in activities she previously enjoyed, and any feelings of worthlessness or guilt. Where more disturbance was present permission was sought from the mother for referral, either to the GP or Community Psychiatric Nurse.

In addition to the assessment of maternal mood, an evaluation of the mother's experience of infant care was made using a self-report questionnaire (the problem sheet) covering infant behaviour problems (feeding and sleeping problems, excessive infant crying) and difficulties in the mother-infant relationship (infant demands for attention, separation problems, play and affection).

The level of depressed mood and the rate of infant behavioural and relationship problems was compared for these two groups of women at six weeks postpartum and again eight to ten weeks later. For the group identified as depressed after the health visitor training, regular supportive visits were negotiated with the mother. Usually hour-long, weekly visits were made by the mother's health visitor at the mother's home for up to eight weeks. Depressed women declining supportive help at this time nevertheless had, at the time when the EPDS was administered, the opportunity to express their feelings and have them acknowledged (as did well women). Following a two month induction period, formal evaluation of the treatment programme was conducted over six months.

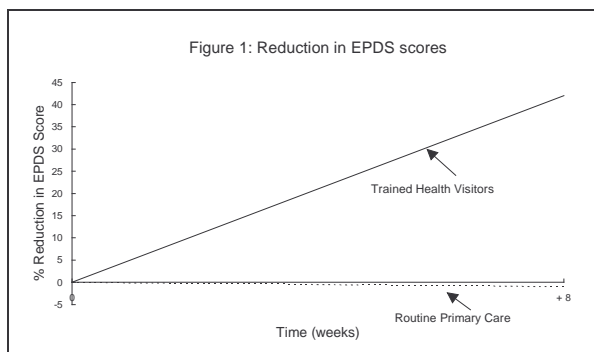
During these visits the mother was encouraged to explore her feelings, often about her changed role as a mother (whether or not for the first time), while the health visitor maintained a non-judgmental and uncritical stance, using the counselling skills of active reflective listening. Conventional health visitor advice was withheld during these visits. Where appropriate, simple cognitive techniques such as problem solving were introduced, for instance where the mother was overwhelmed by the practical problems of caring for the baby.

In the period before health visitor training, 90% of women delivering at the Cambridge maternity hospital were screened at six weeks using the EPDS, and where diagnosed as depressed they also completed the problem sheet. These two items were also completed at four months postpartum. Those resident in the city of Cambridge (n=30) comprise the control group for the present study.

Following training, 92% mothers were screened postpartum using the EPDS, of whom 9.3% were found to be suffering from postpartum depression. All these women were offered the programme of supportive visits from their health visitor. During the two month induction period 72% women accepted the offer of intervention; whereas in the last month of the study 95% of those offered help accepted it. Data are presented for the 70 depressed women who were seen by their health visitors during the evaluation period.

Results

Maternal depression

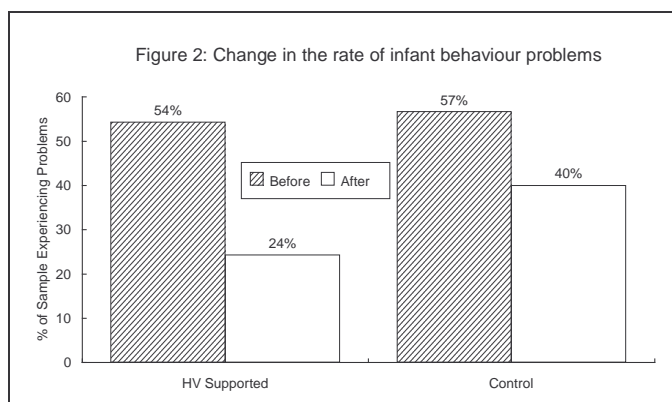


It can be seen from Figure 1 that the group of mothers who received the post-training health visitor intervention experienced, on average, a 42% reduction in EPDS score over the subsequent eight weeks. This compares with an average **increase** of 1 % in depressive symptom scores in the pre-training control group. The difference between the intervention and the control group, with respect to

EPDS score change, is highly statistically significant ($t=6.07$ $df=98$, $p<0.001$).

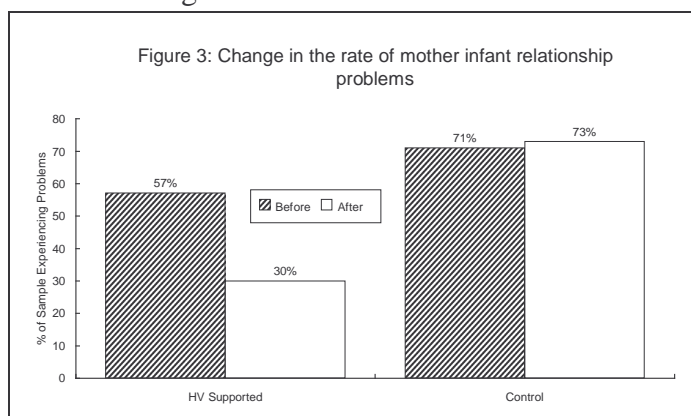
Infant behaviour

It can be seen from figure 2 that reports of significant problems in the mother's experience of infant care (sleeping problems, feeding difficulties and infant crying) reduced substantially in both the routine primary care control group and the group receiving intervention following training. There was no statistically significant difference between the two groups in the degree of improvement.



Mother-baby relationships

It is clear, however, from Figure 3 that, with respect to maternal reports of problems in the relationship with the infant, there was a significant benefit of health visitor intervention following training. For the control group the high rate of such problems did not reduce from six weeks to four months postpartum; whereas for the group receiving the health visitor intervention the rate of these difficulties was halved over this period. The rate of



relationship problems at four months was significantly lower in the intervention than in the control group ($X^2 = 13.3$, $df=1$, $p<0.001$). This difference was not simply due to the greater improvement in maternal mood arising from the intervention: when the level of the mother's depressive symptoms (as assessed by the EPDS score) was taken into account (using logistic regression), the difference between the proportions of women in the two groups reporting relationship problems at four months remained highly significant ($X^2 = 10.7$, $df = 1$, $p<0.001$).

Health visitor experiences of the study.

An attempt was made to assess health visitors' perceptions of the experience of screening and intervention. A questionnaire was sent to all the health visitors who participated ($n=46$) and 32 were anonymously returned. Overall, the training in both the detection and management of postnatal depression was very well received. The EPDS was felt to be a helpful tool which the health visitors saw as assisting them in detecting women with depression whom they would otherwise miss. It was also perceived as a means of facilitating discussion of maternal feelings, often with mothers' partners and families as well as with health visitors. There were felt to be improvements in the health visitors' relationships with their clients. The training in therapy skills, both counselling and cognitive behavioural techniques, was also much appreciated - many health visitors finding increased confidence in other areas of their work. However, reservations were expressed that the systematic assessment and the sometimes difficult content of the intervention itself could generate stress and a workload additional to normal practice.

Conclusions

The results of this series of studies show that postnatally depressed women represent a group of mothers who are at risk for experiencing significant difficulties in their relationship with, and care of, their infants. In the course of routine primary care a substantial proportion of those experiencing depression go undetected, and, moreover, such women receive no additional input from the health care services set up to serve their needs. Nevertheless, with the provision of modest resources, health visitors can be trained in the detection and management of postnatal depression and associated difficulties in the mother-infant relationship, and can deliver an intervention that is both effective and highly acceptable to depressed mothers.

We have reason to believe that these benefits of intervention may be sustained: a follow up study of similarly treated postnatally depressed mothers in Cambridge showed that at eighteen months significantly fewer child behaviour problems were reported by mothers receiving brief interventions compared to those receiving routine care (Cooper and Murray, 1995).

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