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Antenatal Identification of Women Liable to Have Problems in Managing Their Infants

By EVA A. FROMMER and GILLIAN O'SHEA

Introduction

The investigation which is reported here was designed as a pilot project for a possible later research programme into the prevention of emotional disturbance in mothers and young children. The idea came through the clinical experience gained by one of us (E.A.F.) during eight years' work in a Day Unit for disturbed children under five and their families at St. Thomas' Hospital, London (Frommer, 1967). It had become clear over the years that many of the mothers of such children had themselves experienced a disrupted childhood, with separations from their parents or siblings, mental and physical ill-health of family members, and even cruelty and physical violence to themselves or a parent or sibling.

Despite the work of Harlow and his colleagues (1969), there has apparently been no prospective study of the effects of family disruption on future family building among human beings, though there has been a great deal of retrospective research (Rutter, 1966; Wolff and Acton, 1968). There has been some research into the incidence of depression following childbirth among women, but apparently none into the effects of such an illness upon the child, or the rest of the family (Pitt, 1968). Clinical experience has, however, shown that an atypical puerperal depression (Pollitt, 1965) seems often to precede the evolution of a particularly difficult relationship between a mother and one of her children. It is also known, or assumed, that depression in a wife may lead to a particularly difficult marital relationship, either because there is a loss of libido, so that the sexual relationship becomes difficult or impossible, or because of the general loss of efficiency which results and may bring about a disintegration of the whole family routine.

It seemed to us that one way to prevent at least some of these problems from arising would be by the early identification of vulnerable mothers at antenatal clinics. Intensive support for them during the first year of the life of their infant might then be an economical way to use present available manpower, i.e. family doctors and health visitors, who are in a position to offer such support once they know that it is needed. For this we required a simple questionnaire that could be used by any pupil midwife in an antenatal clinic without too much loss of time. It would not have been appropriate in such a setting to demand lengthy interviews which would exactly establish the mother's antecedents. Such research is certainly needed, but would not have met our requirements at this point.

The women came from the three antenatal clinics which then belonged to the obstetric service of St. Thomas' Hospital. We confined our enquiries to married British-born primigravidae in order to avoid too many variables.

Operational definition of childhood separation

When an adult is asked about the amount of separation experienced when a child, one may try to get an objective statement about the duration of separation, its degree, its distribution in short or long periods over the years etc. To proceed in this way leads to laborious and time-consuming questioning, which prejudices the friendly relationship between enquirer and subject, and leaves one at the end with the task of making an arbitrary yes/no classification. Much more important from our point of view was whether the expectant mother being questioned *felt* that she had been separated from one or both parents during her childhood. As we had no other real evidence about what

could constitute a traumatic separation with long emotional and psychological after-effects, we contented ourselves with the questions as shown in Fig. 1. We did not futher discriminate among the 'separated' women for the purposes of this study, but simply accepted as probands all those who said that either parent had died before they were eleven, or that they had been separated from either or both parents before this age, and we labelled these as 'separated'. We took the age of eleven as our upper age limit, because there is some evidence that children whose parents separate or otherwise leave them are usually within the younger age groups, while there is, of course, a random distribution of parental deaths (Costello, personal communication).

FAMILIES RESEARCH PROJECT

Would nurse in Antenatal Clinic please complete this section.

(*The questions only apply to British married primigravidae*).

Name — Hospital No.

Christian Names — Housing (please tick)

Address — Own house / Maisonette / Flat / Rooms / With in-laws

G.P.'s Name and Address

E.D.D.

Please ask first as follows: We are doing a research study on how first babies grow up in this area. Would you be prepared to co-operate with this? It would mean a visit from one of our staff every few months for an interview at your home. We want to learn how things are for mothers with first babies.

If yes—continue:—

(1) Are both your parents alive? Yes No
If No—
Did either of them die before you were 11 years old? Yes No

(2) Were you separated from either or both of your parents before you were 11 years old? Yes No
If Yes—
Did *you* have to go away? Yes No
Or did either of your parents go away? Yes No
Was it for long? Yes No
Was it often? Yes No
It is necessary for the purpose of this research to get as accurate an estimate as possible of the duration of these separations, i.e. in terms of months rather than years.
For how long were you separated from your parents?

(3) Are both your husband's parents alive? Yes No
If No—
Did either of them die before your husband was 11 years old? Yes No

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Social Class .....
Age at Booking .....
Separated/Not Separated .....
Group given A B C A = Not separated, but in Study.
B = Separated. Not visited.
C = Separated. Visited.

FIG. 1.

PROCEDURE

The questionnaire shown in Fig. 1 was administered consecutively to all married British-born primigravidae who were booked and currently attending any one of the three antenatal clinics of the hospital's Department of Obstetrics during the period of our sample intake from April to June 1969. Their expected dates of delivery stretched from the beginning of May 1969 to the end of that year. Details of age and husband's work were noted routinely in the antenatal case-schedules and were copied out. In order to avoid burdening the staff of two of the clinics with extra paperwork, we employed a social worker to administer our brief questionnaire. She attended the clinic sessions for one month at each of two of the hospital's clinics, taking two months in all over the collection of the sample from these two sources. Women in the third clinic were interviewed for us by the resident social worker during this time. All women who came within our criteria during the months of May and June of that year and who attended the Obstetric Department, were thus invited to participate. Completed questionnaires from those who agreed were available for our use as needed. Case-finding aimed at obtaining a total sample of the clinics' British-born married primigravidae during this period. From the non-separated we sought our controls.

'Separated' women who agreed to participate were accepted into our study consecutively from the three antenatal clinics. *These were matched* from the much larger available number of women who had answered our questions in the negative. *Criteria for matching* were firstly age: the probands were grouped into those aged 17–20, 21–24, 25–28, 29–32, 33+, and matched within these groupings; and secondly according to the Registrar General's classification of occupations. Social classes 1 and 2 were matched together, then social class 3, divided into non-manual and manual, and social classes 4 and 5 together (see Fig. 2). It had

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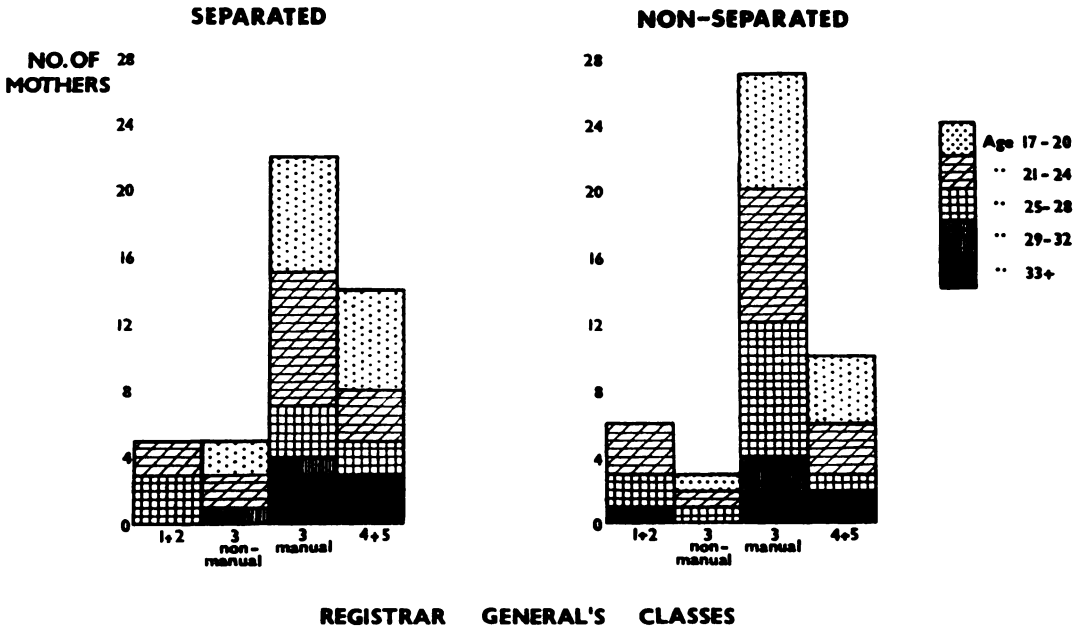

FIG. 2.—Age and social class structure of the sample.

been hoped also to take housing into consideration in matching, but this proved impracticable.

Most of the finding and matching of the controls was carried out by the social worker who had administered the intake questionnaire, and who subsequently had no further connection with the project. Some of the later probands were matched by one of us (E.A.F.), who never saw any of the women until long after the research had been concluded. Owing to miscarriages and other unforeseen events, such as sudden removal from the area, several women in the control group had to be replaced from the available pool before the research was properly under way. This matching was done by that one of us (E.A.F.) who would have no other connection with the women. For this reason there appear to have been more controls than probands involved in the original total sample. Clearly the controls were not in consecutive order once they had entered the study. However, the eventual matching gave fairly satisfactory pairs, and Fig. 2 corresponds closely to the distribution of age and social class in the obstetric clinics as a whole (Personal communication, Professor P. Rhodes).

Refusals

During the two months in question our questionnaire was administered to 220 women. Of these, 19 refused to take part in the investigation. Of the rest 59 had told us that they had been separated, 142 not. We therefore had a refusal rate of 10 per cent for our first questionnaire. We matched by age and social class 58 of the separated mothers with 58 controls, chosen as nearest in expected date of delivery, age, and social class. Of the latter, 10 dropped out before any further investigation was possible, largely because of miscarriages, or the removal of their family, and these were replaced from the remaining available controls. During the project altogether there were 20 controls and 13 separated women who dropped out; of these 22 can be regarded as refusers, i.e. a further 10 per cent of the original sample; of which 15 were controls and 7 came from the separated group.

Method

The same individual (G.O'S.) carried out the subsequent interviews which form the substance of the project. She had no knowledge throughout as to which of the mothers belonged to the separated and which to the control group.

Interview schedules were devised by us, which explored the mother's feelings towards her child and her husband, her state of subjective health, both physical and mental, the housing situation, and then, in detail, the behaviour of her infant, the amount of sleeping, waking, crying, any feeding problems and their nature, methods of feeding, and the infants' achieve-

ment of the normal milestones. Where possible the researcher also saw the baby and assessed the mother's manner of coping. The questionnaires were designed both to elicit and in some degree to quantify the mother's and infant's behaviour objectively, also to give the observer the opportunity to make an assessment of each aspect into which she was enquiring (she was an experienced social worker), and to give the women opportunity to expand on their feelings about child and husband. The resulting answers are thus in three categories: one, as objective as possible, about the child's behaviour and the physical measures that were taken by the mother for its care, e.g. methods of feeding, visits to the doctor, etc.; one, subjective for the mother, her description of how she is feeling and how she perceives her own health, or her marriage—replies which were rated by the enquirer according to a prearranged scale; and the third category consists of the interviewer's assessment of aspects of the situation, again on fixed rating scales.

An additional questionnaire was devised for use with each mother whom it proved possible to see before the infant was born, and was concerned with her attitude to the pregnancy, plans for the baby, the mother's health, and financial effects of having the baby.

Times of interview and numbers interviewed

As many women as possible were interviewed antenatally. The interviewer then visited when the baby was about 2–3 months, 6–7 months, 9–10 months, and about 13 months old. At each interview the sample is slightly different, because for various reasons not all the women still present in the final sample were available for each interview. We have included in the final analysis all those who were seen for three or more interviews after the baby was born.

The interviews were conducted strictly according to the schedules, and written up immediately afterwards. In addition, the social worker wrote out a longhand account of each interview which was also kept with the records.

The data were punched on cards, and, once the code was broken at the end of the study, all the items were compared between the two groups by a chi-square analysis, where necessary using Yates' correction.

Results

Table I gives the result of enquiring into the attitudes of the women to their pregnancy, and their mood state. Slightly more of the controls were anxious about their ability to cope with the baby, but twice as many of the proband group were very depressed. Only 70 of the sample were seen at this stage.

Table II shows that at the first post-natal interview nearly half as many again of the proband group had attempted to breast feed,

TABLE I
The antenatal interview

Item	Separated N = 40		Non-separated N = 30	
	No.	%	No.	%
Pleased about pregnancy	30	75	20	67
Anxious about ability to cope with baby ..	10	25	10	33
Depressed: Minor ..	16	40	15	50
Major ..	8	20	3	10

TABLE II
Feeding: methods and weaning pattern

	Item	Separated		Non-separated	
		No.	%	No.	%
1PN	Still breast-feeding	5	10	5	10
	Tried but gave up	22	45	15	29
	Never tried it ..	22	45	31	61
2PN	Baby no longer has a bottle ..	1	2	0	0
*	Baby propped with bottle to feed self	19	42	8	17
3PN	Baby no longer has a bottle ..	9	20	2	4
	Baby propped with bottle	12	26	6	13
4PN	Baby no longer has a bottle ..	16	36	8	18
	Total number of feeding problems in the first year:				
*	Minor	19	41	8	18
	Major	8	17	2	5

* Statistically significant by χ^2 test with Yates' correction where appropriate at 0·05 level or less.

Please note throughout these tables:
1PN—Infant aged 2 to 3 months.
2PN— ,, ,, 6 to 7 months.
3PN— ,, ,, 9 to 10 months.
4PN— ,, ,, 12 to 13 months.

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or were still doing so. By the second postnatal interview a statistically significant number of mothers in the proband group leave their infant to feed himself by propping him with a bottle. More 'separated' mothers have completely weaned their infant from a bottle by the third interview, though this does not reach statistical significance. The 'separated' women's behaviour to their infant seems to be more readily polarized into either over-anxiety to be a 'perfect mother' or lack of care, than that of the controls.

The severity of feeding, sleeping and crying problems was assessed by the interviewer and regarded as *minor* if there was *repeated but slight interrupted difficulty*, *major* if the *whole household was persistently upset*. Major feeding difficulties did, however, also depend upon the physical health of the infant. As there were several sick babies in both groups, this measure is not relevant to the present investigation of emotional upset, sleeping problems being rather considered here (Table V).

Table III is concerned with reporting abnormalities in the mothers' health. It is difficult to

TABLE III
Maternal depression, anxiety and physical complaints

	Symptoms	Separated		Non-separated		Total no. of women affected	Total interviewed
		No.	%	No.	%		
AN	Slight depression in pregnancy	16	40	15	50	31	
	Serious depression in pregnancy	8	20	3	10	11	70
	Physical complaints	2	5	0	0	2	
1PN	Mother seems depressed to observer ..	4	8	0	0	4	
	Physical complaints	16	33	11	22	27	100
2PN	Mother feels anxious/depressed	8	18	4	9	12	
	Mother anxious about baby	8	18	3	6	11	92
	Physical complaints	7	16	6	13	13	
3PN	Mother feels depressed	10	22	8	17	18	
	Mother not reporting depression but appearing depressed to observer ..	7	15	2	4	9	93
	Physical complaints	8	17	5	11	13	
4PN	(a) Mother sometimes feels depressed ..	27	60	28	64	55	
	(b) Mother always feels depressed ..	11	24	6	14	17	
	(c) Mother sometimes/always feels hopeless	17	38	11	25	28	89
*	Mothers not reporting depression/ serious depression but appearing depressed/seriously depressed to observer (a)+some (c)	29	64	15	34	44	
	Physical complaints	5	11	0	0	5	

* Statistically significant; $p < 0{\cdot}05$.

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gauge degrees of depression, and we had to be content with assessing how badly the mother was feeling from her reports about herself. There is a marked increase of depressed mood among the 'separated' women, which reaches statistical significance at the fourth interview. In order to try and obtain a more objective picture of the mothers' health, more detailed questions were asked in this interview, and Table IV shows that this only served to highlight the difference between the two groups.

An investigation of the clinic attendance of the women showed that by the time that the baby was 6–7 months old a quarter of the probands had stopped attending. Throughout the study their complaints about the clinics run like a refrain, probably because they felt vulnerable rather than because of any specially unsatisfactory situations that had arisen.

TABLE IV
Mother's health—4PN

Symptoms	Separated N = 45		Non-separated N = 44	
	No.	%	No.	%
Appetite change ..	19	42	10	23
* Always has aches and pains	8	18	1	2
* Does not feel well ..	24	53	9	20
* Irritable	37	82	26	58
Not enough sleep, always tired	9	20	2	4

* Statistically significant $p < 0.05$.

The problems with the baby continue to burden the proband group more than the controls. There are significantly more major sleeping problems in the 'separated' group's babies at the second post-natal interview (Table V), and at a year significantly more of their toddlers had more than one temper tantrum per day (defined in the questionnaire as crying in a temper).

Tables VI, VII and VIII show some of the data that were collected about the marital situation in the families. It is interesting that despite apparently adequate knowledge about contraception such a large number of 'separated' women were already pregnant again by the time of the first child's first birthday. The strains that can arise in their marriage are shown by the fact that no less than six husbands had been separated temporarily or permanently from their wives in the proband group, i.e. either the wife or the husband had moved out of the marital home (Table VII). Table VIII shows that significantly more marriages among the controls were without sexual problems.

DISCUSSION

We were looking for a simple question that would define at least a proportion of vulnerable women who were expecting their first baby, in the hope that it might in time be possible to do preventive case-work, and avoid the development of the kind of family problems that had been seen in mothers of disturbed children under five attending the St. Thomas' Child Psychiatric Day Hospital. The results of our pilot study

TABLE V
Incidence of major and minor sleeping problems of the baby at each interview

Time of interview	Major				Minor				No. of women interviewed
	Separated		Non-separated		Separated		Non-separated		
	No.	%	No.	%	No.	%	No.	%	
1st post-natal ..	4	8	1	2	4	8	7	14	100
2nd post-natal ..	9	20	2	4	8	18	7	15	92
3rd post-natal ..	5	11	5	11	10	22	13	28	93
4th post-natal ..	6	13	5	11	12	27	9	21	89

* Statistically significant; $p < 0.05$.

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TABLE VI
Pregnancies and use of contraceptives at 4PN

Item	Separated N = 45		Non-separated N = 44	
	No.	%	No.	%
* Pregnant	12	27	3	7
Of these:				
Planned 2nd pregnancy	8	67	2	67
Unplanned 2nd pregnancy	4	33	1	33
	N = 33		N = 41	
Of those not pregnant:				
Not using contraceptives ..	4	12	7	17
Using pill/coil, cap	10	30	16	39
Using condom/ withdrawal/safe period	18	55	16	39
Not known ..	1	3	2	5

* Statistically significant $p < 0.05$.

TABLE VII
Marital problems during the first year of the infant's life

Item	Separated N = 46		Non-separated N = 44	
	No.	%	No.	%
Separated temporarily/ permanently	6	13	0	0
Major strain	4	9	3	7
Minor strain	6	13	5	11

show that a simple, even naive, question about childhood separations can discover at least a proportion of such vulnerable women. Of course, not all women in this group had problems. The interesting fact emerged that many had prepared for their expected family far more efficiently than the control group. More were in their own flats, as opposed to rooms, more had their husband present at their delivery and more tried to breast-feed their child. However, where things went wrong in their housing, infant

TABLE VIII
Sex problems in the marriage during the first year of infant's life

Problems	Separated N = 45		Non-separated N = 44	
	No.	%	No.	%
Minor	14	31	9	21
Major	12	27	6	14
* None	19	42	29	66

* Statistically significant $p < 0.05$.

management or marriage, they went more severely awry, as is shown by the highlights of differences in the tables here. As a group their behaviour tended to polarize more into positive and negative aspects.

We were also fascinated to find the high incidence of observed depression (Table III) among the probands. It may be that it was their depression that led them originally to answer our question about childhood separations positively, and to be so co-operative in remaining in the study and so anxious to be 'good mothers'. However that may be, the fact remains that our simple questions did pick out a group of women many of whom were consistently in difficulties over very many areas of their life. Moreover, these women were not receiving any effective help with their difficulties from the statutory services, probably because they were themselves unaware of their real needs at the time and unable to formulate their anxieties. Had they been notified as possible 'at risk' cases to their family doctors and health visitors, it might have been possible to detect sources of strain and alleviate them before pathology had become established. The health workers would have known what areas to probe. Most of the problems had not reached the point of clinical prominence, and were, so to speak, *in statu nascendi*. This applies particularly to depression. Table III shows that many more women seem to be suffering from depressive symptoms than are aware that their discomfort might be due to such an illness. Depression is an eminently treatable condition with modern antidepressant drugs, and it is probable that early diagnosis and efficient treatment of it in

these women would go far to prevent later family problems.

To be able to elicit the difficulties under which the mothers in this sample, particularly those in the separated group, were labouring, it is necessary to be aware of the possibility of their existence, and to be willing to ask the right questions. This would seem to be work for which the forewarned health visitor is eminently fitted. If she were to arrange monthly home visits to such a vulnerable family, instead of relying on the mother's appearance in the clinic, much effective preventive work could certainly be done by her. She would also be able to build up a relationship with the family that would make it easier for them to come for help should a problem suddenly arise.

In conclusion we would say that, while we are fully aware of the shortcomings of this study, a way to standardize concepts of childhood separations that is both clinically meaningful and statistically satisfactory has not as yet been found to our knowledge. In the meantime the sufferer's perception of such an event may be as useful a starting point as any. This investigation has shown that a simple question such as we used will define a vulnerable group, though clearly not all vulnerable women. As it should not take too long to ask, we would suggest its incorporation in all routine antenatal case-schedules, along with other factors that make the woman an 'at risk' case. This may help to give a guide to a more efficient and thorough investigation in due course.

Summary

A group of British-born married primigravidae who had been separated temporarily or permanently from one or both parents before the age of 11, were matched for age and social class by a group of controls who denied such separations.

Interviews were carried out at three-monthly intervals during the first year of the baby's life, and the mother's mental and physical health, marital problems and management of the baby were explored.

Statistically significant differences were found between the two groups in many respects. Some of the findings are reported in detail.

It is suggested that a question about the mother's childhood should be incorporated in antenatal case schedules. This should help to pinpoint women who need special support from their family doctor and health visitor.

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References

Costello, J. Personal communication.

Frommer, E. A. (1967). 'A day hospital for disturbed children under five.' *Lancet*, *i*, 377–79.

Harlow, H. F., and Harlow, M. K. (1969). 'Effects of various mother-infant relationships on rhesus monkey behaviour', in *Determinants of Infant Behaviour*, IV (ed. Foss, B. M.). London: Methuen.

Pitt, B. (1968). 'Atypical depression following childbirth.' *Brit. J. Psychiat.*, 114, 1325–35.

Pollitt, J. (1965). *Depression and its Treatment*. London: Heinemann.

Rhodes, P. Personal communication.

Rutter, M. (1966). *Children of Sick Parents*. Maudsley Monograph No. 16. London: Oxford University Press.

Wolff, S., and Acton, P. (1968). 'Characteristics of parents of disturbed children.' *Brit. J. Psychiat.*, 114, 593–601.

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Eva A. Frommer, M.B., B.S., M.R.C.Psych., *Child Psychiatric Department*,
Gillian O'Shea, B.Soc.Sc., *Obstetric Department*,
St. Thomas' Hospital, London, S.E.1

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