

Influence of psychiatric disorder on the controlling behaviour of mothers with 1-year-old infants

A study of women with maternal eating disorder, postnatal depression and a healthy comparison group[†]

ALAN STEIN, HELEN WOOLLEY, LYNNE MURRAY, PETER COOPER, SANDRA COOPER, FIONA NOBLE, NICKY AFFONSO and CHRISTOPHER G. FAIRBURN

Background Certain styles of parental controlling behaviour influence child development. Work with mothers with eating disorders suggests that they may be particularly controlling of their infants.

Aims To examine the nature and specificity of maternal controlling behaviour in mothers with eating disorders compared with mothers who had experienced postnatal depression and a healthy comparison group.

Method Mothers with eating disorders ($n=34$), postnatal depression ($n=39$) and a healthy comparison group ($n=61$) and their 12-month-old infants were observed during play and mealtimes, and blind ratings made of verbal and non-verbal control exerted by the mother.

Results Mothers in the eating disorder group used more verbal control, especially strong control. There were no differences between the groups on gentle verbal control and physical contact. Maternal dietary restraint was the one feature of eating disorder psychopathology associated with the use of verbal control. Marital criticism was also associated with the extent of verbal controlling behaviour.

Conclusions Aspects of maternal control of infants were found to be specific to maternal eating disorder psychopathology.

Declaration of interest The study was funded by the Wellcome Trust.

There is a large body of literature, dating back to the 1960s, examining the role of parental controlling behaviour in children's development. Baumrind's early studies of pre-school children developed the concept of parental controlling behaviour patterns (Baumrind, 1971). Baumrind found that parental controlling behaviour had important effects on children's development: authoritative parenting, where parents exert control and are receptive to the child's communication while sharing with the child their reasoning, was related to positive development in the children, such as cooperation with adults and peers, psychosocial maturity and academic success. On the other hand, an authoritarian parenting style, where parents are highly demanding and low in responsiveness, was associated with a poorer child outcome. Other researchers have classified controlling behaviour in slightly different ways, notably Hinde and colleagues, who helpfully divided parental controlling behaviour into strong controlling (e.g. command/forbid) and gentle controlling (e.g. prompt/guide/suggest) behaviour (Hinde *et al*, 1992). While the precise conceptualisation of these parenting practices still remains a matter for debate, a range of studies have confirmed the predictive validity of Baumrind's categorisations in relation to child outcome; see Darling & Steinberg (1993) for review. There is now evidence that parental control is also important at mealtimes, where Birch's findings indicate that excessive parental control over child feeding in the early years of life may impair the child's ability to regulate energy intake (Birch & Fisher, 1998).

Psychiatric disorder and parental controlling behaviour

The studies above have largely been concerned with healthy samples. Less attention has been paid to the way in which parental

psychiatric disorder influences parental controlling behaviour, yet this is important given the evidence that parental psychiatric disorder is associated with adverse child outcome (Rutter, 1989). Our own work (Stein *et al*, 1994, 1999) with mothers with eating disorders suggests that the mother's mental state is related to parental control. In particular, we found that when interacting with their 1-year-old infants during mealtime, mothers with eating disorders expressed more negative emotion towards the infant and were less facilitating and more intrusive than comparison mothers; this was associated with mealtime conflict and growth faltering. However, the nature of this parental control in this sample needs further exploration.

Eating disorders and control

Self-control plays an important part in eating disorder psychopathology, and in a new cognitive-behavioural formulation of anorexia nervosa Fairburn *et al* (1999) argue that people suffering from the disorder have an extensive need for self-control that is manifested in the domain of eating control. They argue that in Western societies the evaluation of self-worth in terms of shape and weight becomes superimposed on this. This may apply equally to eating disorders in general. The question is raised as to whether such control generalises to other areas of social functioning such as parenting behaviour with young children. The issue is especially important because eating disorders are relatively common, affecting 2–4% of young women (Hoek, 1993).

Specificity of parental controlling behaviour

If controlling behaviour is a feature of the parenting style of mothers with eating disorders, it is important to establish whether this pattern is specific to eating disorders or is common to mothers with other psychiatric disturbance. In mothers of infants, this question can be addressed by comparing the parenting styles of women with eating disorders to those with postnatal depression; while people with eating disorders commonly experience significant affective psychopathology, particularly depression, their central cognitions and behaviours are specific and quantifiable. Thus, by using a comparison

[†]See editorial, pp. 93–94, this issue.

group of mothers who have experienced a postnatal depressive disorder, it is possible to take account of the effects on parenting of the non-specific (affective) symptoms and separate them out from the effects of these specific symptoms of eating psychopathology. A number of studies of depression, including postnatal depression, have observed control issues in the interactions between depressed mothers and their children (see Tronick & Field, 1986). For example, in one study mothers with depression looked away from their offspring more, and were angrier and more intrusive than a comparison group of healthy mothers (Cohn *et al*, 1986). The researchers divided the mothers with depression into four groups: disengaged, intrusive, positive or mixed. Similarly, Murray *et al* (1993) found that mothers with depression were more self-oriented, critical and controlling of their 2-month-old babies than a comparison group. The elucidation of parental control in the context of postnatal depression is important in its own right because the disorder is common, with a prevalence of 10–15% (Cooper & Murray, 1997).

Thus, the principal purposes of this study were (a) to examine in detail the influence of maternal eating disorder psychopathology on maternal controlling behaviour, (b) to establish whether the pattern of controlling was specific to eating disorders, and (c) to elucidate whether particular aspects of maternal mental state might be particularly important in influencing parenting control over young children.

METHOD

Subjects

The subjects in the study were originally recruited as part of two interrelated studies conducted in Oxford and Cambridge (Stein *et al*, 1996). Study 1 was an investigation of the influence of maternal eating disorders on infant development (Stein *et al*, 1994); study 2 was conducted as a parallel study of infant growth and feeding in the context of postnatal depression (Badenoch, 1994). The samples in the two studies had a similar social class structure.

Study 1 recruited 34 women with eating disorders during the postnatal year, of whom 18 fulfilled operational criteria for a DSM-III-R diagnosis of an eating disorder (American Psychiatric Association, 1987):

6 had bulimia nervosa, and 12 had an eating disorder not otherwise specified (EDNOS), of whom 4 had a history of bulimia nervosa. The remaining 16 women had sub-threshold conditions; 3 had a history of bulimia nervosa and 1 a history of EDNOS (see Stein *et al*, 1994 for more detail). Eight of the 13 women who fulfilled criteria for bulimia nervosa also had a history of anorexia nervosa. All of these mothers showed extreme concerns about body shape and weight of clinical severity during the first year of the child's life, and all manifested significant associated behavioural disturbance. Twenty-four healthy comparison mothers were selected from a community sample of young women, balanced for social class, maternal age and the child's gender. For the second study, 44 women were recruited with a primary DSM-III-R diagnosis of depressive disorder in the 6 weeks following childbirth, together with 42 healthy mothers without depression balanced for child gender, social class and maternal age (Badenoch, 1994). Thirty-nine cases and 37 comparison mothers were reassessed at follow-up when their children were 1 year of age. Two families had declined to participate further, two did not complete all the assessments, and six had moved out of the region. Thus, the overall sample across both studies comprised 34 mothers with an eating disorder, 39 mothers who had experienced postnatal depression and 61 healthy comparison mothers, together with their children.

All the assessments were conducted in the family home when the infants were aged 12–14 months. A number of visits were made. At the initial visit the study was explained to the families, and then a second visit was made to the family home to familiarise the mothers and children with the observational procedures. Three subsequent assessment visits were made.

Measures

Mother's mental state and marital relationship

The women were interviewed using the Eating Disorder Examination (Fairburn & Cooper, 1993). This standardised investigator-based interview assesses in detail the full range of the characteristic psychopathology of eating disorders. It measures the key behavioural and attitudinal features, including overeating, dieting, self-induced vomiting, laxative misuse,

and concerns about eating, shape and weight. In order to assess other aspects of the mother's mental state, the Symptom Check List (SCL) was administered, a self-report measure of general psychiatric symptoms (Derogatis *et al*, 1973). The level of perceived marital criticism was measured using a scale devised by Hooley & Teasdale (1989). This aspect of the marital relationship was selected because it is most likely to reflect controlling issues and because the scale has been shown to have predictive validity in research with subjects with psychiatric disorders (Hooley & Teasdale, 1989).

Observations of mother and child

The children were observed and videotaped in two situations – at play and at a mealtime – using a modification of the procedure described by Skuse *et al* (1992) and within 3 weeks of the maternal mental state interviews. The play session consisted of five 2.5-minute consecutive sessions of structured play; in the first two sessions the mother was handed a toy and asked to play with the infant using the toy in any way that she liked. During the final three sessions the mother was given three toys, each in turn, and asked whether she would show the infant how the particular toy worked; it was explained that this was not a test. The general aim was to examine the way in which the mothers helped their children and the extent of their mutual cooperation, enjoyment and conflict. The last three tasks were designed to be a little too difficult for children of 12–14 months, as we wanted to observe how the mother responded to such a situation and, particularly, how she helped the child enjoy the toys while maintaining the child's attention and interest. The second videotaped situation was the main meal of the day. No other family member was present in either situation.

Coding of videotapes

The videotapes were rated by a researcher who was blind to the mother's group membership. The first involved event sampling, in which a specified event/behaviour was predefined, and each event was then counted and expressed as a rate per hour. The second method involved time sampling, in which particular behaviours were rated on predefined scales, every 2.5 minutes in the case of play and every 2 minutes in the case of the mealtime. The areas assessed were chosen on the basis of pilot

work and on hypotheses concerning the processes likely to mediate between the mother's psychiatric disorder and potential disturbances in mother-child interaction and child development. The observational procedures were based in part on instruments developed by Skuse and colleagues (Wolke *et al*, 1990; Skuse *et al*, 1992) and Hinde (Hinde *et al*, 1992). Only items for which satisfactory reliability were obtained were included (i.e. where kappa values were greater than 0.70 or raw percentage agreements were greater than 75%, for time-sampled or event-sampled ratings respectively).

Ratings

The following ratings were made:

- (a) Maternal verbal control (event-sampled): first rated as 'controlling', and then divided into 'strong' verbal control (e.g. commands, prohibits, forbids, cautions or corrects) or 'gentle' verbal control behaviour (e.g. suggests, guides, prompts). Non-controlling verbal utterances were also coded (e.g. comments). This provided three verbal control

variables: strong verbal control, gentle verbal control, and a ratio of controlling statements (gentle plus strong controlling) to total statements (controlling plus non-controlling statements).

- (b) The extent of mother-infant physical contact (time-sampled), including instrumental and affectionate contact.

For time-sampled ratings, the interrater reliability κ ranged from 0.74 to 0.91. The event-sampled behaviours occurred sporadically and therefore raw percentage agreements were calculated, their range being 78-93%.

Data analysis

The distributions of each of the outcome variables were examined and those that were not normally distributed were transformed by logarithms.

Given that the key question was whether the three groups of mothers differed in their controlling behaviour and in their pattern of control across play and mealtimes (and as each variable was measured in an identical way across both situations), a repeated

measures analysis of variance was performed with the situation providing the repeated measures aspect. Thus, the three groups were compared across the two situations (play and mealtimes); if a significant difference was found, *post hoc* pairwise comparisons were performed to establish where the differences lay.

The next question was whether particular aspects of the mother's mental state influenced parental controlling behaviour. Thus a number of variables were added to the repeated measures analysis of variance. These included maternal eating concern, shape concern and dietary restraint (taken from the Eating Disorder Examination), depression (sub-scale taken from the SCL), as well as perceived marital criticism and the child's gender.

RESULTS

Table 1 shows the demographic features of the three groups: they were similar in terms of social class distribution, maternal age and the child's gender.

Table 2 provides a summary of the maternal eating disorder psychopathology and depression scores and those of perceived marital criticism. There were significant between-group differences in the global Eating Disorder Examination scores ($F=9.81, P<0.001$), with the eating disorder group scoring significantly higher than both the postnatal depression group and the healthy comparison group. As far as the depression scores were concerned, there were significant between-group differences ($F=12.79, P<0.001$), with both the postnatal depression group and the eating disorder group scores being significantly higher than the comparison group. The postnatal depression group scores were higher than

Table 1 Demographic characteristics of the sample

	Eating disorder group (n=34)		Postnatal depression group (n=39)		Control group (n=61)	
Social class (n (%))						
Non-manual (I, II, III, NM)	18	(52.9)	24	(61.5)	37	(60.7)
Manual (III, IV, V)	16	(47.1)	15	(38.5)	24	(39.3)
Child's gender (n (%))						
Boys	16	(47.1)	22	(56.4)	36	(59.0)
Girls	18	(52.9)	17	(43.6)	25	(41.0)
Maternal age, years (mean (range))	28.3	(21-42)	28.0	(18-40)	28.4	(20-41)

M, manual; NM, non-manual.

Table 2 Maternal eating disorder psychopathology, depression and marital criticism scores

	Eating disorder (e) group		Depression (d) group		Comparison (c) group		ANOVA F	Post hoc contrasts
	Mean	(s.d.)	Mean	(s.d.)	Mean	(s.d.)		
Global EDE scores	1.53	(1.27)	0.93	(0.82)	0.64	(0.79)	9.81**	e > c e > d
Depression scores (from SCL)	0.85	(0.75)	1.03	(0.78)	0.44	(0.36)	12.79**	d > c e > c
Perceived marital criticism scores	4.36	(2.56)	5.08	(2.44)	4.15	(2.10)	1.87	

** $P < 0.001$.

ANOVA, analysis of variance; EDE, Eating Disorder Examination; SCL, Symptom Check List.

the eating disorder group scores, but this was not statistically significant, indicating significant depressive symptomatology in the eating disorder group. There were no group differences in terms of perceived marital criticism.

The results of the repeated measures analysis of variance are presented in Table 3. Although some of the variables needed to be transformed for the analysis, raw means and standard deviations are presented in order to facilitate inspection of the actual values of each variable for each group. A number of additional columns represent: between-subject (group) differences, i.e. comparison across three groups; interactions between group and situation; and *post hoc* pairwise comparisons which were performed when significant differences between groups were found in order to establish where specific differences existed between two groups.

As can be seen from Table 3, between-group differences were found on a number of variables. There were significant differences in strong verbal control ($F=7.74$, $P<0.01$) with *post hoc* pairwise comparisons showing that the mothers with eating disorders scored higher than the postnatal depression group and the comparison group, although there were no significant differences between the depression and comparison groups. In addition, there was a significant group \times situation

interaction effect, indicating that the pattern of differences between the groups differed across play and mealtime ($F=3.35$, $P<0.05$). It seems that this interaction was due to the especially high levels of strong verbal control expressed by the mothers with eating disorders during play compared with the other two groups.

There was no significant difference between the groups on gentle verbal control. On the composite measure of controlling behaviour, the ratio of verbal control (gentle and strong) to all speech (controlling and non-controlling statements), there was a trend for a between-group difference ($F=2.70$, $P=0.07$), and the *post hoc* pairwise comparison indicated that the eating disorder group scored significantly higher than the normal healthy comparison group. There was also a significant group \times situation interaction which, from inspection of the means, again appeared to be due to the high levels of verbal control exercised by the eating disorder group during play. In contrast, the mealtime scores of the three groups were very similar.

Mothers scored higher during play compared with mealtimes on all the measures of controlling behaviour. Thus, all within-subject (play *v.* mealtime) comparisons were significant, e.g. strong verbal control ($F=172.65$, $P<0.001$ – not in the table). The most likely explanation for these findings is that they reflect the nature of

the structured play task which, as noted earlier, required mothers to show their infants how a particular toy worked. The toys were selected because they were slightly too difficult for children aged 12–14 months. This resulted in the mothers in all groups using a variety of controlling strategies.

Finally, where variables were found to have significant between-group and/or group \times situation interactions, the following covariates were added: body shape concern, eating concern, dietary restraint, depression, marital criticism and child gender. When these covariates were added to the repeated measures analysis of variance for strong verbal control, dietary restraint was found to be significant ($F=4.79$, $P<0.05$). The group variable, however, remained significant ($F=4.78$, $P=0.01$), indicating that the original between-group effect held. When the covariates were added to the repeated measures analysis of variance for the percentage of verbal controlling to total statement variable, dietary restraint was again found to be a significant predictor of the outcome variable ($F=7.35$, $P<0.01$). Marital criticism was also found to be a predictor of this variable ($F=3.84$, $P=0.05$). The group variable was no longer significant ($F=1.1$).

In order to examine whether the differences between the eating disorder group and the postnatal depression group might

Table 3 Comparison of maternal controlling behaviours across the three groups

	Eating disorder (e) group		Depression (d) group		Comparison (c) group		Between subjects (groups)		Group \times situation interactions		Post hoc contrasts ¹
	Mean	(s.d.)	Mean	(s.d.)	Mean	(s.d.)	F(2, 131)	P	F(2, 131)	P	
Event-sampled observations											
Strong verbal control (rate/hour)											
Play	178.87	(84.31)	112.25	(75.73)	127.63	(81.25)	7.74	<0.01	3.95	<0.05	e > c
Mealtime	56.30	(37.17)	38.42	(33.05)	45.19	(33.64)					e > d
Gentle verbal control (rate/hour)											
Play	119.44	(56.50)	139.94	(58.03)	139.83	(67.08)	1.91	NS	0.60	NS	
Mealtime	37.01	(21.36)	44.31	(24.26)	44.65	(22.18)					
Maternal speech (% controlling/total statements)											
Play	51.32	(10.07)	44.12	(11.13)	44.33	(10.29)	2.70	0.07	3.11	<0.05	e > c
Mealtime	27.30	(11.48)	27.85	(12.52)	26.00	(10.27)					
Time-sampled observations											
Frequency of mother–infant physical contact (1=nil, 9=contact throughout session)											
Play	2.92	(1.48)	3.17	(1.44)	3.11	(1.56)	1.18	NS	0.91	NS	
Mealtime	1.87	(0.67)	2.03	(1.61)	2.30	(1.39)					

1. Significant at least at $P<0.05$ level. All points on the rating scales are defined.

be accounted for by systematic differences between the samples recruited from the two geographical areas, further analyses were undertaken. The comparison groups were split into those recruited from the two sites, and were then compared on the variables that were found to distinguish the eating disorder and postnatal depression groups. No statistically significant differences were found. For example, on the composite variable measuring percentage of maternal controlling statements to total statements, F was 0.04 (not significant).

DISCUSSION

The principal purpose of this paper was to examine whether maternal psychiatric disorder influences the nature of parenting control behaviour with 1-year-old infants, and to explore whether specific aspects of psychopathology might have a particular influence on the process. It was found that, compared with both the other groups, the mothers with eating disorders used more strong verbal control and were overall more verbally controlling, especially during play. There were no significant differences between the groups on measures of gentle verbal control or physical contact. The mothers in all three groups were generally more controlling during structured play than during mealtimes. The aspect of maternal mental state most strongly associated with strong verbal control and overall controlling speech was maternal dietary restraint. Thus, it was evident that this pattern of parental control was specifically related to aspects of maternal eating disorder psychopathology. There was some evidence that where high levels of marital criticism existed, mothers exerted more verbal control with their children. It was, however, also evident that there was considerable variation within all the groups on the outcome measures.

Strengths and limitations

The study has a number of strengths; in particular, careful observations were made of mothers and babies interacting on two separate occasions in two different situations in a naturalistic setting (family home). Detailed assessments were made of the mothers' verbal and non-verbal controlling behaviour and the ratings were made blind to maternal mental state. Furthermore, it is important to the interpretation of the findings that two psychopathological groups were studied.

This study also has a number of limitations: in particular its cross-sectional nature limits the identification of causal processes, and the sample sizes were relatively small. In addition, no direct evidence of other influences on the mothers' controlling behaviour was obtained; in particular the fathers were not seen, although an assessment of the perceived marital criticism was made.

Furthermore, the study used data from two interrelated investigations based in two sites. Using data in this way can lead to difficulties in that there are potentially systematic differences between the two sites that could account for the findings. A number of steps were taken to minimise this problem, in that the subjects on the two sites were recruited from areas with a similar social class structure and the background characteristics of the sample were comparable in terms of social class and maternal age. Furthermore, the mother-child assessment procedures were identical and the videotapes were rated blind by the same rater using the same rating scales. In addition, analyses were undertaken to examine whether the differences between the eating disorder and the postnatal depression group, in terms of maternal parenting style, could be accounted for by differences between the sites. Thus, the healthy comparison subjects recruited from each site were compared on the variables that were found to distinguish the groups. No statistically significant differences were found. None the less, caution should still be exercised in interpreting the findings.

Control issues

The central findings of the study were that, when interacting with their infants, mothers with eating disorders used more controlling (especially strong controlling) speech than either of the other two groups; and that mothers' own level of dietary restraint was particularly associated with such controlling behaviour. As dietary restraint is a prominent feature of most eating disorders, and is the element of eating disorder psychopathology that is hypothesised to be the direct expression of the person's need for self-control, the findings of this study suggest that the mothers' need to control themselves extended to exerting control in the parenting domain. Thus, mothers who exert strong control over their food intake and thereby their body weight and shape may be at risk of being especially

controlling of their infants, hence providing support for the thesis that control is a central psychopathological feature of eating disorders. While the hypothesis put forward by Fairburn *et al* (1999) concerned anorexia nervosa, it is likely to apply to other eating disorders as well.

Control during play

The finding that the mothers with eating disorders were particularly controlling of their infants during play is also of interest. It suggests that their need for control goes beyond mealtimes and may be stronger in other areas. It may be that, as a group, the mothers with eating disorders are particularly liable to resort to controlling strategies when they perceive themselves to be put under pressure, as occurred during the structured play tasks.

Postnatal depression

It is of note that the mothers who had experienced a postnatal depression were no different from the healthy comparison group in terms of controlling behaviour. The lack of difference, in terms of verbal controlling behaviour, between the depression and comparison groups is somewhat at variance with the findings of some other studies in the field, which suggest that mothers with depression may be more critical and controlling of their infants (Murray *et al*, 1993). However, depression is not a stable or uniform state. It is characterised on the one hand by withdrawal and on the other by hostility, and both these symptoms may be present in the same person at different times. It may be that this variability in mental state accounts for our findings, as suggested by some of the work of Cohn *et al* (1986). It should also be noted that this study focused particularly on one aspect of parenting behaviour and that there is good evidence from several other studies that postnatal depression interferes with a number of other important parenting domains (Murray & Cooper, 1997).

In conclusion, the focus of this study was deliberately narrow – to examine whether maternal psychopathology is related to parental controlling behaviour. It was found that particular features of parental psychopathology, specifically dietary restraint, are most likely to have an impact on this aspect of parenting. Given the importance of the capacity for negotiation and the need for parents to appreciate the infant's perspective, these findings may have important

clinical implications. Parents with eating disorders may need help in attending to their infant's cues and in modulating their intervention and interactions with their infants. Given that these controlling patterns of parental interaction are evident so early in the child's life, prevention and early intervention should be a priority with health care planners and clinicians.

ACKNOWLEDGEMENTS

The study was funded by a grant from the Wellcome Trust (035035). Alan Stein was supported by both the Wellcome Trust and Tedworth Charitable Trust, Christopher Fairburn by a Principal Research Fellowship from the Wellcome Trust (046386) and Lynne Murray by a Senior Research Fellowship from the Medical Research Council. We are most grateful to all the children and mothers who participated in this study, to Adrienne Garrod, Anji West, Marion Badenoch, Colette McNeil and Bernice Slagel for all their help, and to Robert Blizard and Matthew Woolgar for statistical advice.

REFERENCES

American Psychiatric Association (1987) *Diagnostic and Statistical Manual of Mental Disorders* (3rd edn, revised) (DSM-III-R). Washington, DC: APA.

Badenoch, M. (1994) Postnatal depression, the mother–infant feeding relationship and infant growth. PhD thesis, University of Cambridge.

Baumrind, D. (1971) Current patterns of parental authority. *Developmental Psychology Monograph*, **4**, 1–103.

Birch, L. L. & Fisher, J. O. (1998) Development of eating behaviours among children and adolescents. *Paediatrics*, **101**, 539–549.

Cohn, J. F., Matias, R., Tronick, E. Z., et al (1986) Face-to-face interactions of depressed mothers and their infants. In *Maternal Depression and Infant Disturbance* (eds E. Z. Tronick & T. Field), pp. 31–44. San Francisco: Jossey-Bass.

Cooper, P. J. & Murray, L. (1997) Prediction, detection and treatment of postnatal depression. *Archives of Disease in Childhood*, **77**, 97–99.

Darling, N. & Steinberg, L. (1993) Parenting style as context: an integrative model. *Psychological Bulletin*, **113**, 487–496.

Derogatis, L. R., Lipman, R. S. & Covi, L. (1973) SCL-90: an outpatient psychiatric rating scale – preliminary report. *Psychopharmacology Bulletin*, **9**, 13–28.

Fairburn, C. G. & Cooper, Z. (1993) The Eating Disorder Examination (12th edn). In *Binge Eating: Nature, Assessment and Treatment* (eds C. G. Fairburn & G. T. Wilson), pp. 317–360. New York: Guilford.

—, **Shafan, R. & Cooper, Z. (1999)** A cognitive behavioural theory of anorexia nervosa. *Behaviour Research Therapy*, **37**, 1–13.

Hinde, R. A., Tamplin, A. & Barrett, J. (1992) Individual characteristics, child–mother and child–younger sibling interactions of 4 year olds. *Early Development and Parenting*, **1**, 97–108.

CLINICAL IMPLICATIONS

■ Eating disorder psychopathology makes some mothers vulnerable to using higher levels of control when responding to their infants.

■ Mothers with eating disorders may need help to prevent the extension of the control they exert over themselves to their interactions with their infants.

■ While postnatal depression has been shown to impair various aspects of parenting, this study indicates that parenting control when the child is 1 year old is not generally affected.

LIMITATIONS

■ The cross-sectional nature of the study limits the degree to which causality can be attributed.

■ The number of subjects was relatively small and the findings require replication.

■ Combining data from samples recruited on different sites means that some caution is needed when interpreting the findings.

ALAN STEIN, FRCPsych, HELEN WOOLLEY, BA, Leopold Muller Centre for Child and Family Mental Health, Department of Paediatrics and Child Health, Royal Free and University College Medical School, London; LYNNE MURRAY, PhD, PETER COOPER, PhD, Department of Psychology, University of Reading; SANDRA COOPER, Leopold Muller Centre for Child and Family Mental Health, Department of Paediatrics, Royal Free and University College Medical School, London; FIONA NOBLE, MRCPsych, NICKY AFFONSO, MRCPsych, Park Hospital for Children, Oxfordshire Mental Healthcare NHS Trust, Oxford; CHRISTOPHER G. FAIRBURN, FRCPsych, Department of Psychiatry, University of Oxford, Oxford, UK

Correspondence: Professor Alan Stein, Leopold Muller Centre for Child and Family Mental Health, Department of Paediatrics and Child Health, Royal Free and University College Medical School, Royal Free Site, Rowland Hill Street, London NW3 2PF, UK. Fax: +44 (0)20 7447 3789; e-mail: Astein@tavi-port.org

(First received 3 July 2000, final revision 2 August 2000, accepted 8 August 2000)

Hoek, H. W. (1993) Review of the epidemiological studies of eating disorders. *International Review of Psychiatry*, **15**, 61–74.

Hooley, J. M. & Teasdale, J. D. (1989) Predictors of relapse in unipolar depressives: expressed emotion, marital distress, and perceived criticism. *Journal of Abnormal Psychology*, **98**, 229–235.

Murray, L., Kempton, C., Woolgar, M., et al (1993) Depressed mothers' speech to their infants and its relation to infant gender and cognitive development. *Journal of Child Psychology and Psychiatry*, **34**, 1083–1101.

— & **Cooper, P. J. (1997)** Effects of postnatal depression on infant development. *Archives of Disease in Childhood*, **77**, 99–101.

Rutter, M. (1989) Psychiatric disorder in parents as a risk factor for children. In *Prevention of Mental Disorder, Alcohol and Other Drug Use in Children and Adolescents* (eds D. Shaffer, I. Phillips & N. B. Enger), pp. 157–189. Rockville, MD: Office for Substance Abuse, US Department of Health and Human Services.

Skuse, D., Wolke, D. & Reilly, S. (1992) Failure to thrive: clinical and developmental aspects.

In *Child and Youth Psychiatry: European Perspectives. Vol. II: Developmental Psychopathology* (eds H. Remschmidt & M. Schmidt), pp. 46–71. Gottingen: Hogrefe & Huber.

Stein, A., Woolley, H., Cooper, S., et al (1994) An observational study of mothers with eating disorders and their infants. *Journal of Child Psychology and Psychiatry*, **35**, 733–748.

—, **Murray, L., Cooper, P. J., et al (1996)** Infant growth in the context of maternal eating disorders and maternal depression: a comparative study. *Psychological Medicine*, **26**, 569–574.

—, **Woolley, H. & McPherson, K. (1999)** The evolution of conflict between mothers with eating disorders and their infants during mealtimes. *British Journal of Psychiatry*, **175**, 455–461.

Tronick, E. Z., Field, T. (eds) (1986) *Maternal Depression and Infant Disturbance*. San Francisco: Jossey-Bass.

Wolke, D., Skuse, D. & Mathisen, B. (1990) Behavioural style in failure to thrive infants – a preliminary communication. *Journal of Pediatric Psychology*, **15**, 237–254.