Expressed emotion and depression

A longitudinal study

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Background Previous studies show that criticism by relatives during acute depressive illness predicts relapse over nine months, but the course of criticism over time and its relation to the course of illness, have not been examined in depressed patients.

Method Thirty-nine depressed patients and their partners, were interviewed separately at three-monthly intervals over about one year. Illness was assessed by Research Diagnostic Criteria and Hamilton Depression Rating Scale. Criticism was measured by the Camberwell Family Interview.

Results Criticism when patients were most depressed predicted neither remission nor subsequent relapse. Patients who fully recovered, with or without later relapse, had partners who were consistently uncritical, or critical only at presentation. Patients with residual symptoms during remission had more persistently critical partners.

Conclusions The nature of the association between criticism and depression could not be unequivocally established, although it appeared likely that continuing criticism was a result of continuing depression. Relatives' understanding of the illness may mediate between levels of criticism and the course of depression.

Many studies have reported an association between high levels of expressed emotion (EE) at the time of an acute illness in the families of schizophrenic patients and the patients' subsequent relapse (Hooley, 1985; Kuipers, 1992). Only four studies have reported results for depressed patients and only two of these have found a clear positive association between EE during acute illness and subsequent relapse. Vaughn & Leff (1976*a*) found that the presence of two or more criticisms best predicted relapse. In a replication, Hooley and colleagues (Hooley *et al*, 1986; Hooley & Teasdale, 1989) reported similar findings, although patients' perception of their partners' criticism and poor marriage also predicted relapse. The other studies are difficult to interpret. Goering *et al* (1992) found such low recovery rates that prediction of relapse was not possible. Criticism did not predict rate of recovery. Among Egyptian patients (Okasha *et al*, 1994; Okasha, 1995) high criticism was found to predict relapse, but unlike the previous studies, these included patients with bipolar as well as those with unipolar disorder, and other relatives as well as spouses were interviewed when patients were in remission rather than acutely ill. There have been no reports of the stability of EE over time in the families of depressed patients. In the case of schizophrenia, continuing high EE seems to be an important mediating factor in relapse (Leff *et al*, 1982; Stirling *et al*, 1993). The present study followed a group of depressed patients over a period of about one year, in order to examine: (a) the relations between EE and the outcome of depression; (b) changes over time in EE and the associated course of depression; and (c) the content of criticisms expressed by relatives, and their view of the patients' illness.

METHOD

Sample

Subjects were 39 depressed patients and partners, a subset of 64 consecutive patients satisfying Research Diagnostic Criteria (RDC; Spitzer *et al*, 1978) for definite primary unipolar major depression, who took part in a larger prospective study of the role of psychosocial factors in the course and outcome of depression (Ramana *et al*, 1995; Paykel *et al*, 1995, 1996, where methods are fully described). Four patients failed to remit during the period of the study and could therefore not provide information about course post-remission, and three could not be followed-up after remission. Since studies of EE in depression have primarily involved marital partners, only patients who at each time point had a spouse or partner who was willing to be interviewed were included in the examination of the effects of EE. Subjects thereby excluded were: three who lived alone; 10 who lived with friends, parents or offspring; two with partners who were unwilling to be interviewed; and three who separated from their partner in the first three months of the study and did not have another partner. This left a sample of 39 couples. The mean age of the sample was 42.4 years and the mean length of marriage was 16.5 years. Sixty-two per cent of the patients were women, 72% were in-patients, one-third in their first episode of depression, with a mean time since onset of 7.4 months.

Patient interviews

Patients were interviewed when depressed by a clinical psychologist (Z.C.) or psychiatrist (R.R.), then at three-monthly intervals until remission, and three-monthly for one year or a little more (Ramana *et al*, 1995). Information derived from these patient interviews used in the present analysis included Clinical Interview for Depression (CID; Paykel, 1985), 17-item Hamilton Rating Scale for Depression (HRSD; Hamilton, 1967), and categorisation of remission and relapse by RDC major depression criteria. Remission was defined as a two-month period below RDC definite major depression, rated at the time of interview for the preceding period, and relapse was the meeting of criteria for RDC major depression for one month, rated similarly. Although this meant that some subjects who were still symptomatic were regarded as remitted, this was the method adopted in the previous studies of EE and depression and, in practice, patients are often discharged from active treatment at this point. Patients' perception of their partners as critical was measured on a 10-point analogue scale anchored at the end-points with the statements 'not at all critical' and

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'very critical indeed' (Hooley & Teasdale, 1989). Marital adjustment over the preceding three months was assessed on a global rating scale from 1 ('excellent') to 7 ('marriage on the point of breaking down') (Paykel *et al*, 1996).

Relative interviews

The partners of these patients were interviewed within a few days of the patient's interview on each occasion, by a psychologist (H.H.) trained in the use of the abbreviated form of the Camberwell Family Interview (CFI; Vaughn & Leff, 1976*b*). Interviews were tape-recorded and later coded for number of critical comments, number of positive remarks and ratings of warmth, hostility and emotional over-involvement. Ten randomly selected initial interview tapes were coded for criticisms by an independent trained rater (S.V.). Interrater agreement was satisfactory (r=0.86, P=0.002). Following the CFI, relatives were asked directly how distressing they found symptoms (rated from 0 'not at all' to 3 'extremely difficult to tolerate'), and how far they thought they were under the patient's control (rated from 0 'not at all' to 3 'certain that the patient could control the symptom').

RESULTS

Initial interviews lasted 76.6 minutes on average (range 45–130, s.d. 19.1). As the number of criticisms at the initial interview was not related to the length of interview (r=0.27, P=0.10), criticisms throughout the whole interview were analysed. Criticisms ranged from zero to seven with a mean of 2.6 (s.d. 2.0). Eight (21%) relatives made five or more criticisms, while only four (10%) made none. Perceived criticisms showed a mean of 4.5 (range 1–10, s.d. 2.2).

Prediction of outcome from initial criticism

Following previous studies, patients were divided into those whose partners made two or more critical comments at the initial interview, and those with less critical partners. Level of initial criticism predicted neither speed of remission, nor time to relapse, using Kaplan–Meier survival analysis. The occurrence of relapse was unrelated to level of initial criticism: relapses occurred among 10 (40%) of the 25 patients whose relatives made two or more critical comments, and among six (36%) of the 14 patients whose relatives were less critical than this. No other cut-off point distinguished those who relapsed from those who did not. Perceived criticism also failed to predict relapse. These results were confirmed by t-tests (see Table 1).

Associations between measures at presentation

Level of criticism at presentation was unrelated to any measure of severity of illness at that time, but there was a trend towards a positive association between number of criticisms and length of current illness (r=0.30, P=0.07). Perceived criticism was not related to expressed criticism. Perceived criticism was associated with poorer marital adjustment (r=0.36, P=0.03), although there was no association between marital adjustment and expressed criticism.

Prediction of relapse from criticsm at remission

By remission, levels of criticism had decreased markedly, the mean value being only 1.1 (range 0–6, s.d. 1.5), with 17 (44%) of partners making no critical comment, and only one (3%) making five or more. Criticism at remission did not predict either presence of residual symptoms at remission (defined as a Hamilton score of eight or more), or later relapse. Perceived criticism had decreased to a lesser extent (mean 3.8, s.d. 2.02), but again no effect on either residual symptoms or relapse was found; t-tests (Table 1) confirm these results.

Changes in criticism over time

Number of criticisms declined significantly over the first five three-monthly interviews, covering one year after initial interview (full data available for 35 patients, see Fig. 1). Repeated measures analysis of variance yielded F=12.95, $P<0.001$, and Newman–Keuls tests showed that this was because there was a significant decline between the first interview and the second and subsequent ones, which did not differ from one another.

The course of criticism over the five interviews was examined for each individual, yielding four patterns:

(a) scores of 2 or more at all interviews (n=5);

(b) scores fluctuating around 2 at all interviews (n=13);

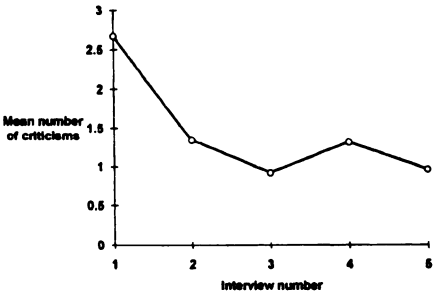


Fig. 1 Mean number of criticisms over five three-monthly interviews.

Table 1 Levels of criticism at initial and remission interviews

	Relapse (n=16)	No relapse (n=23)	t[1]	With residual symptoms (Hamilton score ⩾8) (n=13)	Without residual symptoms (Hamilton score ⩽7) (n=26)	t[1]
Initial interview						
Mean number of criticisms	2.3	2.8	0.81	2.9	2.4	0.61
Mean perceived criticism	4.1	4.8	0.99	4.2	4.6	0.54
Remission interview						
Mean number of criticisms	1.1	1.1	0.14	1.6	0.9	1.60
Mean perceived criticism	3.9	3.8	0.14	3.8	3.9	0.11

1. All NS.

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(c) scores at or above 2 at the first interview, declining below 2 thereafter (n=11); and

(d) scores below 2 at all interviews (n=6).

Since numbers were small, groups were combined, making a 'persistently critical' group (a+b) who showed consistently high, or more than just initially high criticism, and an 'uncritical' group (c+d) who showed only initially high criticism or none at all. These two groups were indistinguishable at presentation except that partners who turned out to be persistently critical attributed more control over their symptoms to the patients (P=0.04). By remission, in addition to the expected difference in level of criticism (P=0.001), patients with persistently critical relatives had higher Hamilton scores ($P<0.001$), and in fact at this time they scored higher on every item of the Hamilton scale, except late insomnia, reaching significance at $P \leqslant 0.02$, for guilt, work and activities, early insomnia, weight loss and somatic anxiety. Persistently critical partners themselves noticed more symptoms (P=0.03) and were more distressed by them (P=0.05), but no longer attributed more control over symptoms to the patients.

Course of illness over time

Since the criterion for remission, namely no longer fulfilling RDC criteria for major depression, had allowed the inclusion of some relatively symptomatic patients, a further analysis contrasted full recovery with the presence of residual symptoms through remission. Hamilton scores at each interview were categorised, 8 or more indicating the presence of residual symptoms, 7 or less showing full recovery. Eighteen patients were fully recovered for a period of at least six months (i.e. three or more consecutive interviews), of whom four later relapsed, leaving 17 with shorter periods of full recovery or none at all, 10 of whom later relapsed (χ^2=3.5, P=0.06).

Association between persisting criticism and continuing residual depression

A significant positive association was found between continuing criticism and lack of full recovery, in that 14 (82%) of the 17 patients with persisting residual symptoms had persistently critical partners, compared with only four of 18 (22%) of those who made a full recovery (χ^2=10.4, P=0.001).

Further investigation of the nature of this association was handicapped by the low levels of criticism found and the small number of patients in the study. Correlations between depression and criticism at each interview, and at preceding and following interviews, produced no clear-cut pattern. The results of the full study (Paykel *et al*, 1995) had shown that residual symptoms at remission were the only significant predictor of later relapse. This suggestion that residual symptoms of depression account for most of the variance in predicting subsequent relapse is supported by a repeated measures analysis of variance of the criticism score over five interviews, including Hamilton score as covariate. This showed that while there was a small independent effect of time on criticism (F=2.45, P=0.05), this was outweighed by the effect of illness (F=7.8, P=0.006).

Content of criticism and partners' view of symptoms

The final objective of the study was to investigate the content of criticism and partners' views of patients' illness, as shown in Table 2.

Criticisms were predominantly concerned with behaviour such as dependency, indecision, lack of interest, social withdrawal, irritability and socially undesirable behaviour such as drinking and lying. In only two instances, irritability (CID) and suicidal ideas (HRSD), were there both sufficient criticisms and available measures of the patients' behaviour to allow an examination of any relationship between criticisms and symptoms but no significant associations were found. Partners reported fewer symptoms than were assessed clinically to be present (mean 5.8 compared with 10.7) and not all of these distressed them (mean 3.8). There were no significant intercorrelations among these measures. Nineteen relatives considered that their patient partner had control over at least one symptom (ranging from 1 to 5), while 20 considered that no symptoms were under the patient's control.

DISCUSSION

Initial criticism and relapse

This study has not confirmed previous findings that high levels of criticism by partners while patients are suffering from major depression predict subsequent relapse after remission. Such negative findings are consistent with the results of the wider study (Ramana *et al*, 1995; Paykel *et al*, 1996) of which this is a part. In that study no significant psychosocial predictors of relapse were found, and the only predictor of subsequent relapse was the level of residual symptoms at remission. This conclusion is similar to that from a study on psychosocial factors and the outcome of depression reported by Andrew *et al* (1993). Both studies attributed the lack of effect to the nature of the patients sampled. Patients admitted to hospital under current treatment patterns, compared with those of the 1970s and 1980s, tend to have more severe and recurrent illnesses, which have failed to respond to earlier treatment. It may be that psychosocial factors influencing outcome in less severe illness do not operate among such patients.

Comparison with earlier studies

The present group showed an unexpectedly low level of criticism (mean 2.6) compared with values found in other studies (7.2 for Vaughn & Leff, 1976*a* and 8.3 for Hooley *et al*, 1986). A reduced range of criticism may mean insufficient variability for any relationship between criticism and relapse to emerge in a small sample but since previous studies used similar sample sizes a lack of power had not been foreseen. Patients in this sample appear comparable with both earlier samples in respect of background variables such as gender ratio, age, social class, number of previous depressions and length of marriage, and all three studies used similar criteria for recovery and relapse. Reported mean values may obscure wide variations. In Vaughn & Leff's study (1976*a*) one-quarter of relatives of depressed patients made no criticisms, while one-eighth made 28 or more, though the same effect was found when those making more than 10 criticisms were excluded (C. Vaughn, personal communication). The present sample with its range of 0 to 7 was relatively unskewed and lacked any extremely critical relatives. It may be simply that different samples vary widely according to the chance inclusion of some unusually critical relatives.

Relation of illness and criticism over time to relapse

The results do suggest that over time levels of criticism vary in ways which can be linked with the course of patients' illness. Levels of criticism decline markedly as patients remit and this appears to be largely accounted for by the reduction in depression. Links

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Table 2 Content of criticisms at initial interview

Category of criticism	Number of criticisms	Number (%) of partners making such criticisms	Number (%) of partners making any such criticisms
Somatic			8 (21)
Eating difficulty	2	2 (5)	
Sleeping difficulty	1	1 (3)	
Loss of memory or concentration	1	1 (3)	
Lethargy, tiredness, slowness	7	7 (18)	
Depressed			15 (39)
Depressed mood	6	6 (15)	
Dependence	5	5 (13)	
Indecisiveness, loss of confidence	6	6 (15)	
Lack of interest, social withdrawal	7	6 (15)	
Anxiety	3	2 (5)	
Hostile			16 (41)
Undesirable behaviour (violence, drinking, lying, etc.)	13	10 (26)	
Irritability	13	9 (23)	
Unusual			17 (44)
Odd behaviour (less offensive to partner than 'undesirable behaviour')	16	10 (26)	
Obsessions	2	1 (3)	
Suicidal thoughts	6	6(15)	
Rejecting			6 (15)
Rejecting remarks such as *"I can't imagine spending the rest of my life with her"*	8	6 (15)	
Concerning illness			5 (13)
Remarks concerning the illness as a whole	5	5 (13)	
Total	101		

between illness and criticism appear most clearly when the detailed pattern of illness is examined. Where episodes of illness are separated by clear spells of improvement, then criticism may emerge when the illness is acute, disappearing as symptoms decline. Where the illness is less clearly demarcated and continues in chronic form, with patients showing a high level of residual symptoms even after remission, then criticism levels remain higher. While levels of illness and criticism appear to vary together, it seems likely that it is the level of ongoing residual symptoms that is fundamental.

Relationships between illness and nature of criticism

The interrelationships of patients' illness and partners' behaviour in this situation are difficult to disentangle. Criticism did not appear to reflect poor marital relationships. The only feature found at presentation to distinguish those relatives who would remain critical from those who would become less critical was that the former appeared to assume that their partners had more control over their symptoms than the latter did, which is consistent with Brewin *et al*'s (1991) finding for relatives of people with schizophrenia. In general there appeared to be no simple match between patients' reported symptoms, the symptoms which relatives observed and found distressing, and the aspects of behaviour which relatives disliked. The relatives who were persistently critical tended initially to criticise irritable, antisocial and unusual behaviour by the patients, which might be seen as under their control, rather than somatic, more obviously illness-related, symptoms (Vaughn, 1977; Bledin *et al*, 1990). It is not clear from this study to what extent patients actually displayed such behaviours.

CONCLUSION

It is not possible from the present data to be conclusive about the nature of the association beteen criticism and depression. It may also be that underlying processes differ with varying amounts of criticism. However it is suggested that a likely explanation is that continuing depression results in increased dissatisfaction and criticism. The results support an interpretation that the crucial factor mediating the relationship between illness and persisting criticism is relatives' understanding of the nature of the illness. Persisting criticism by partners of patients who continue to be unwell may reflect their difficulty in coping with an unpredictable and long-lasting situation which they do not fully understand, as is evident in their belief that the patient is in control of symptoms, and is supported by the tendency for criticisms at presentation to be higher where episodes are longer. In cases where the patients' illness has a clear and predictable pattern it may be easier for relatives to distinguish the 'illness' as separate from the person and to appreciate that patients may have little control over their symptoms, and hence to respond by being less critical.

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CLINICAL IMPLICATIONS

- Relatives' criticism at presentation did not predict relapse in depression.
- Persisting criticism was associated with high levels of residual depression during remission.
- Criticism appears to be the result of living with a person who remains unwell over a considerable period of time.

LIMITATIONS

- Sample size was relatively small, though not smaller than other comparable studies.
- Low levels of criticism limited investigation of the role of criticism in depression.
- It is not clear how relatives' criticism is related to patients' behaviour.

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