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Expressed emotion and Milan systemic intervention: a pilot study on families of people with a diagnosis of schizophrenia

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This article presents the results of a pilot study carried out on families of people with a diagnosis of schizophrenia (high-frequency users of psychiatric services) using a standardized version of systemic family intervention based on the Milan Approach ('Circular Interview'). We used expressed emotion (EE) to compare and assess two homogeneous samples of families, a treatment group (n = 10) and a control group (n = 8). We found that families participating in circular interviews showed a reduction in criticism, while 30% of their members with a diagnosis of schizophrenia relapsed. Families not receiving treatment showed no changes in EE levels, while 62.5% of their members with a diagnosis of schizophrenia relapsed. Although the difference in relapse rates is not statistically significant, these results justify further studies on the use of nondirective systemic intervention with families of people with a diagnosis of schizophrenia.

Introduction

The Milan approach to systemic therapy, although widely used in clinical practice, has received poor experimental validation. The published work by the original Milan Group (Selvini Palazzoli *et al*., 1978) and subsequent teams (Boscolo *et al*., 1987) has mostly described therapy methods and given case histories. Such a lack of evidence led to the abandonment of the Milan approach for the

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treating of severe mental illness, although the method described in *Paradox and Counterparadox* (Selvini Palazzoli *et al*., 1978) was aimed at treating 'families in schizophrenic transaction'. Contemporary therapeutic guidelines recommend family treatment as one of the interventions of choice for schizophrenia, but emphasize the need to avoid all 'blaming' family therapies, Milan-type therapy presumably being among them (Lehman *et al*., 1998).

This study aims to investigate the possible efficacy of a nondirective and nonprescriptive family intervention based on the Milan approach for families of people with a DSM IV diagnosis of schizophrenia. Family evaluation was performed using the expressed emotion (EE) index (Leff and Vaughn, 1985).

Empirical studies of Milan systemic therapy

The first investigations of Milan systemic therapy, based on case studies (Tomm, 1984; Selvini Palazzoli, 1986), were strongly criticized for their poor methodology by researchers such as Carol Anderson (1986). In later years, other researchers have approached Milan-based therapies, trying to quantify their outcome. In two different studies, Bennun (1986, 1988) made a comparison of families treated using Milan systemic therapy with families treated using cognitive-behavioural therapy. The study revealed no significant differences between the two groups so far as changes in symptoms and family satisfaction were concerned, but the Milan approach did seem to have a more significant effect upon family functioning. Conversely, Coleman (1987) observed that the Milan approach achieved positive results in only 40% of families, while 'structural-strategic therapy' when applied to the control group achieved 88%.

Manor (1989) investigated the referring social workers' perception of the efficacy of Milan systemic therapy in reducing risk for multi-problem families. Outpatient family therapy, in association with residential treatment where necessary, was associated with a lowered rating of perceived risk. Simpson (1991) compared the effects of Milan therapy and standard individual therapy on families with difficult children. Milan systemic therapy showed the same effects as other therapies on child symptoms, but was more effective in other family members' perceived family functioning, which in turn was correlated with symptomatic improvement. In a study by Fitzpatrick *et al*. (1990), families who received either Milan or 'standard family therapy' were rated on their perception of treatment efficacy. In both

groups, three-quarters of families reported a definite symptomatic improvement.

Green and Herget (1989a, 1989b, 1991) reported positive effects of a single Milan approach family consultation session during ongoing systemic-strategic therapy with families. The effectiveness of such consultations was assessed using a self-administered scale. After one month, the families who had attended the family consultation session seemed more convinced that their objectives had been achieved than the families who had continued with their usual therapy (Green and Herget, 1989a). A three- and five-year follow-up showed that the same families had succeeded in sustaining what had been achieved (Green and Herget, 1989b, 1991). Mashal *et al*. (1989) found that 56% of parents and 89% of identified patients had improved as a result of Milan approach therapy, although it should be noted that 68% of fathers and 59% of mothers sought further treatment.

According to Carr's review of ten empirical studies of Milan systemic family therapy, 'findings indicate that Milan family therapy may lead to symptomatic change in two thirds to three quarter cases, and to systemic change in half the treated cases' (Carr, 1991,p. 237). Many methodological doubts remained, though, in nearly all studies: inconsistent family sampling (sample groups contained families with a range of different problems), insufficient assessment procedures (these being based mostly on self-assessment failed to pick up changes that relatives or even therapists do not always perceive), and lack of a precise description of intervention methods.

We can agree with Carr when he states:

> Throughout the review, I have referred to MFT [Milan family therapy] as if it were a homogeneous and uniform therapeutic intervention. It is not. . . . In each of the studies reviewed here, what was assessed was the process or outcome of MFT, as practised by clinicians with varying levels of experience, in different cultural contexts, at different points in the evolution of MFT. In no study was an attempt made to ensure that the quality of therapy was uniform across cases.
>
> (Carr, 1991, p. 256)

It is possible that the very difficulty of obtaining an adequate standardization of Milan systemic techniques has led to the absence of empirical investigation of this treatment modality in the past decade. In designing our study, we wanted, first of all, to know exactly what any therapist was doing, which meant we had to standardize the family intervention process.

A standardized circular interview

In this study, we considered that the mediating factor of Milan systemic family therapy is the kind of question the therapist asks, the so-called 'circular questions'. In designing our study, we modified the usual therapeutic format, which we have defined as a 'circular interview', since it is based on circular questioning.[1] According to the original Milan Group, any session has one or more therapists in the therapy room under the supervision of a team behind a one-way mirror, in audiovisual contact (Selvini Palazzoli *et al*., 1978). Each session is divided into three phases: in the first, the therapists mainly ask questions; in the second, they leave the therapy room and join the remainder of the team to discuss the session with their colleagues; finally, in the third phase, they terminate the session, either by simply fixing the date of the next meeting, offering a reframing, or prescribing tasks or rituals. However, the observation team may call out the therapist at any time to discuss the management of the session or suggest new questions.

In their seminal paper on the conducting of the session (Selvini Palazzoli *et al*., 1980a), the original Milan team speculated: 'The present phase of our research has brought us to face a new problem. Can family therapy produce change solely through the negentropic effect of our present method of conducting the interview without the necessity of making a final intervention?' (Selvini Palazzoli *et al*., 1980a, p. 11).

Subsequent work by the different Milan-oriented teams has suggested an affirmative answer, but to date no research has been published assessing whether this may be demonstrated empirically (see Cecchin, 1987; Cecchin *et al*., 1992; Boscolo and Bertrando, 1996). In this study, our aim was to show the utility of the circular interview by specifying as precisely as possible the nature of such an interview and applying it in the context of a randomized treatment study.

The kinds of questions we judged appropriate for the circular interview are the following:

[1] The term 'circular questions' does not appear in the original paper (Selvini Palazzoli *et al*., 1980) where these kinds of questions were first described. It was adopted later on by Peggy Penn (1982) and Karl Tomm (1985), after discussion with Luigi Boscolo and Gianfranco Cecchin.

1 *Triadic questions (behavioural)*. In the original paper, they were defined as 'investigation of a dyadic relationship as it is seen by a third person', specifically 'interactive behaviour in specific circumstances (and not in terms of feelings or interpretations)' (Selvini Palazzoli, 1980a, b). For example: 'What did your husband do when your son started hearing voices?'
2 *Triadic questions (introspective)*. This category was not present in the original paper, but was introduced later by Boscolo and Cecchin (see Boscolo *et al*., 1987). It may be further divided into questions in which a third person is asked to speak about two other people's thoughts ('What does your son think of his brother's eccentric behaviour?') and questions in which a third person is asked to speak about two other people's feelings and emotions ('How do you think your daughter feels when you argue with your wife?').
3 *Difference questions*. Defined as 'differences in behaviour and not in terms of predicates supposedly intrinsic to the person' (Selvini Palazzoli, 1980a), this category includes such questions as 'Who do you think can help your family most with your problems?'
4 *Ranking questions*. 'Ranking by various members of the family of a specific behaviour or a specific interaction' (Selvini Palazzoli, 1980a).
5 *Change questions*. 'Change in the relationship (or better in behaviour indicative of change in the relationship) before and after a precise event (diachronic investigation)' (Selvini Palazzoli, 1980a).
6 *Future questions*. These kinds of open questions in the future (not restricted by an hypothesis) were suggested by Penn (1985), and Boscolo and Bertrando (1993, p. 172):

   > Future questions are totally open and totally unrestricted, apart from inevitable restrictions imposed by actual 'reality.' They allow clients to construct possible future worlds by exploring the temporal horizon of the family and any discrepancies there may be between the times of individual members. 'What will your life be like in ten years' time?' 'How long will the present situation remain unchanged?' 'When will your daughter be ready to leave home?' 'When will her parents accept that she is able to go?' and so on.

7 *Hypothetical questions*. Questions about 'differences in respect to hypothetical circumstances' were proposed by Selvini Palazzoli and co-workers (1980a). Boscolo and Bertrando (1993, p. 172) distinguish them from future questions, arguing that:

hypothetical questions about the future place a limit on the number of possible futures that can be imagined: they present clients with a possible world subject to constraints imposed by the therapy team itself. The therapist includes one or more possible futures in hypothetical questions and presents clients with a stimulating hypothesis. This enables him or her to challenge their premises quite openly.

According to Tomm (1985), future questions may be defined as descriptive questions, and hypothetical questions as reflexive questions. For the present purposes, hypothetical questions were distinguished in three categories: (1) hypothetical questions in the past, such as: 'If your parents had divorced, as planned, five years ago, where would the members of your family be today?' (2) hypothetical questions in the present, such as: 'If your son decided to stop taking medication, do you think your wife would get on with him better?' (3) hypothetical questions in the future, such as: 'If you decide to leave home next year, which of your relatives do you think will be more sorry?'

It is very difficult to prescribe the course of a circular interview because its procedures cannot be standardized as in psychoeducational intervention (see McFarlane, 1991). Every member of the intervention team was therefore instructed to use the above-type questions within any session whenever it seemed clinically appropriate. Of course, the use of linear questions was not excluded. Comments during the course of the session were not excluded either, but they had to be restricted at the very least. Although we retained the usual three stages of the session (interview, discussion, conclusion), we avoided prescribing tasks or rituals and devoted all conclusions to a short reframing.

As far as the reframing component of the interviews is concerned, one general rule was to emphasize the relational aspects of all observed and narrated behaviours, both by patients and by other family members, avoiding any form of blame. The therapists tended to accept all definitions of the presented problems (e.g. both when patients spoke of their own behaviours as 'existential choices', and when other relatives defined those same behaviours as 'symptoms''). Of course, therapeutic choices by members of the psychiatric staff were always positively connoted as well. The main task of the family therapists, then, was to make a relational sense out of the different behaviours of all family members (and staff members too).

For example, in one session the main theme had been the problems of a patient Dario, who searched continually for demanding jobs, only to find them too hard for him to keep. The final reframing was:

> 'We find that you, Dario, in the past felt kind of belittled by your father's criticism, and that led you to accept the job as a bank clerk, which your father has found for you, and that you had said in the past did not interest you in the least. You wanted to show your father that you could be successful! But we fear that such an attitude might lead you to refuse other kinds of jobs, jobs that, at present, maybe are more fit for you.'

This kind of reframing not only encourages the patient to adjust to a kind of job more suitable to his present condition (and also to his preferences), but gives also a motivation, different from schizophrenic symptoms, to his working failure at the bank. Moreover, the reframing, apparently addressed to Dario alone, was in fact a message also to the parents, especially the father. Subsequent family events proved that this reframing was effective in triggering some modifications in the father–son relationship.

Adherence to the circular interview format by members of the intervention team was guaranteed through monthly supervision with a very experienced member of the research team (G.C.).

Aims of the study

The aim of this study was to assess whether a standardized version of the Milan systemic approach could have a positive effect on families of persons with a diagnosis of schizophrenia. The subjects of the study (patients and families) were 'high-frequency users' of healthcare and social services, to which they turned for various kinds of intervention and support. Psychiatric and family assessment was made by independent raters with no knowledge of the therapeutic procedures that had been followed. Specifically, families were assessed using the expressed emotion (EE) scales (Leff and Vaughn, 1985) whose utility has been demonstrated in a number of studies of schizophrenia (see Butzlaff and Hooley, 1998; Kuipers, 2006) and which have been shown to be adaptable to the Italian setting (Bertrando *et al.*, 1992).

We aimed to assess the effectiveness of the intervention on several levels: (1) individually, by charting changes in subjects' clinical symptoms; (2) relationally, by recording variations in family EE; (3) institutionally, by documenting hospitalization rates, and the demands patients and families made on psychiatric services. This report will present preliminary data from the first year of follow-up in categories (2) and (3).

Materials and methods

Sample

In Italy psychiatric help is organized at local authority level. Every area has its own psychiatric unit (*Unità Operativa di Psichiatria* (UOP)) supplying a range of services, each with separate staff: a psychosocial centre (*Centro Psico-Sociale* (CPS)), a psychiatric ward in a general hospital, and residential or semi-residential facilities for the rehabilitation of chronic patients. We carried out our study in a psychiatric unit in a small town on the outskirts of Milan. The unit has a fifteen-bed psychiatric ward, a psychosocial centre and a non-residential facility providing rehabilitation and vocational training. It treats about 500 patients in a catchment area of 120,000 inhabitants. The staff includes a chief psychiatrist, three psychiatrists, three assistant psychiatrists, twenty-five nurses, two rehabilitation nurses, two psychologists and a social worker. No patient receives family intervention.

Thirty families of people with a diagnosis of schizophrenia were selected from the psychiatric unit's population. The patient sample had been randomly selected from patients attending the clinic who met the following criteria:

1 DSM IV diagnosis of schizophrenia (American Psychiatric Association, 1994); all diagnoses were made by a single member of the research team using the structured clinical interview for DSM IV (SCID) (First *et al*., 1997);
2 at least five years of illness;
3 more than thirty-five hours of face-to-face contact with relatives;
4 age over 14.

Patients' treatments varied, although all of them received antipsychotic medication. For example, one patient in our sample was intermittently hospitalized without receiving any rehabilitation support apart from the hospital stay itself. Another patient mainly attended the psychosocial centre, and another attended the semi-residential facility daily. Some used both services, yet were repeatedly hospitalized.

Ten families refused to take part, so twenty families were eventually enrolled in the study. Ten families (group 1) were randomly assigned to the intervention, with the other ten forming the control group (group 2). We included in the study all relatives who agreed to take part in the initial EE assessment interview. Two families of group 2 refused the preliminary evaluation after the assignment, so this group

was reduced to eight. All patients lived with their family of origin, except one patient in group 2, who was married and was living with her marital family. The sample characteristics are summarized in Table 1.

All patients were receiving neuroleptic medication when they were admitted to the study. Since this was a 'field' study, it was impossible to standardize medication, although the overall medication levels ranged from 4 to 12mg of Haloperidol per day or an equivalent of new generation neuroleptics (mainly Risperidone). Three patients in group 1 and four patients in group 2 were receiving long-acting neuroleptics. There were no significant differences in medication levels between the two groups. With regard to other treatment, no patient was receiving individual psychotherapy or family intervention; five patients in group 1 and four in group 2 were undergoing rehabilitation treatment.

TABLE 1 *Sample characteristics*

		Group 1	Group 2
Patients		(n = 10)	(n = 8)
Sex	Male	6	5
	Female	4	3
Age	x ± 50	30.90 ± 7.16	29.38 ± 4.50
Education	years; x ± 50	11.00 ± 3.33	10.37 ± 4.37
Occupation	Employed	2	3
	Unemployed	5	4
	Non-professional*	3	1
Age of onset	x ± SD	21.10 ± 4.15	22.75 ± 6.96
Relatives		(n = 20)**	(n = 12)***
Fathers		6	5
Mothers		9	6
Brothers		1	/
Sisters		4	/
Spouses		/	1
Age	x ± 50	58.25 ± 9.27	53.58 ± 6.68
Occupation	Employed	3	3
	Unemployed	/	/
	Non-professional*	17	9

Notes
*Student/retired
**18 refused assessment
***5 refused assessment

Some relatives in both groups refused to be interviewed. Following Leff and Vaughn (1985), we were able to interview all parents and the only spouse within the sample. Group 1 comprised forty-eight subjects: ten with a diagnosis of schizophrenia, six fathers, nine mothers, twelve brothers and eleven sisters. Of the relatives, we were able to assess all the parents and five siblings who consented; two of the siblings were living with the patients and the others were living away from the home. Only five of the eighteen siblings who were not assessed were living with the patient. All parents were living with the patients.

Group 2 comprised twenty-five subjects: eight with a diagnosis of schizophrenia, five fathers, six mothers, one spouse and five brothers. All the parents and the spouse were assessed, while none of the brothers consented. Of the five brothers who were not assessed, four were living with the patients and one was living outside the home. All the parents and the spouse were living with the patients.

Family assessment

All the families admitted to the study were assessed using the Camberwell Family Interview which was then rated using the expressed emotion scales (Leff and Vaughn, 1985). The interview lasted about an hour, and was audiotaped and then assessed by a trained expert (Dr Jutta Beltz). Ratings are made on five scales: Criticism; Positive remarks; Hostility; Emotional over-involvement (EOI) and Warmth; the first two scales consist of a count of the number of comments (critical, positive) made during the interview while the latter three parameters are considered 'global scales' assessed on the basis of the rater's overall understanding of relatives' behaviour during interviews. EOI and Warmth ratings range from 0 to 5, Hostility from 0 to 3.

In most studies, family EE assessment has been based mainly on Criticism, Over-involvement and Hostility, considered as predictive of relapse. If respondents exceed threshold levels on any of these three scales they are rated as high EE. The thresholds used in our study were 6+ for Criticism, presence/absence of Hostility and 4+ for EOI. These thresholds have proved effective in predicting relapse of schizophrenia in a previous Italian research study (Bertrando *et al*., 1992). Any family with at least one high EE member was assigned to the high EE group.

Procedure

Baseline patient assessment. After the admission of each patient to the study, basic data were collected. All patients were in a phase of remission of schizophrenic symptoms, which were evaluated using the BPRS (Overall and Gorham, 1962).

Baseline family assessment. When the psychiatrists at the unit had contacted and briefed the families, consenting relatives were administered a CFI. CFI administration and EE assessment were performed by researchers who did not participate in the intervention phase, and were blind as regards the intervention process and results. Therapists participating in the intervention phase were, in turn, blind as regards the EE status of the families. We decided that an assessment of all the parents and spouses would be sufficient to carry out the present study using the standards proposed by Leff and Vaughn (1985). Cooperation between the researchers and clinic staff was good, and no attempt was made to coordinate family treatment and drug treatment.

Family intervention (FI). The circular interview sessions were conducted by seven therapists (P.B., F.B., M.C.C., G.G., C.P., L.P., A.S.), all trained at the Milan Family Therapy Centre, who had no knowledge of the patients' EE evaluations. Therapists were randomly assigned to families: P.B. and G.G. interviewed two families each, the remaining therapists interviewed one family each (C.P. was scheduled to interview family 3, which dropped out of treatment). Two other therapists were behind the one-way mirror as observing team. All families received a total of six circular interview sessions at monthly intervals, as is usual in the Milan approach (see Selvini Palazzoli, 1980). A session lasted for approximately ninety minutes to two hours, team discussion included. To ensure that the aims of our circular interviews were being achieved, we held monthly meetings of all therapists in the presence of the supervisor. Extracts from video-recordings of the sessions were played and discussed to make interviews conducted by different therapists as consistent as possible, and therapists behind the mirror were usually given the task of preventing the active therapist from deviating from the circular interview format.

Follow-up. Evaluating symptomatic relapse (in terms of appearance or reappearance of specific symptoms or exacerbation of existing symp-

toms) proved to be very difficult, in spite of the bimonthly telephone interviews with relatives conducted by members of the research team: sometimes relatives' reports were unreliable and their psychiatrists were not always able to supply clinical assessments because some patients were not attending the unit regularly. We therefore decided to use the number of hospitalizations as a relapse indicator for the purposes of our study. Italy's National Health Service now has a standard hospital admissions policy. Generally speaking, patients are admitted (typically for a period of one week) only if they are overtly symptomatic and have typical symptoms. Only patients in urgent need of care are admitted: even overburdened relatives have no right to a hospital bed for their relative, unless the patients' symptoms are worsening noticeably. This follow-up procedure, which has been used already in previous Italian EE studies (Bertrando *et al*., 1992), is likely to result in fairly conservative estimates of relapse.

Final family evaluation. All relatives evaluated at baseline were approached twelve months after the end of treatment to take part in a second CFI to assess changes in their EE status. Five of the relatives (three mothers and two fathers) were unwilling to take part in this second interview. Baseline data were used to replace missing data at follow-up to allow for an intention-to-treat analysis for the main analysis of change.[2]

Results

Adherence to the standardized interview format

In order to determine whether the therapists, in the circular interview sessions, adhered to the style of interviewing defined at the beginning of the study, ten videotapes (one for each family) were selected; the sample tapes were chosen to represent different stages of therapy in different families. The tapes were rated by a member of the research team, who categorized each question asked by the therapists during the session using the scheme described earlier. As shown in Table 2, the behaviour of the therapists within the session conformed to the prescribed format of the interview: the therapists regularly asked

[2] This may have led to a somewhat conservative estimate of change, but is likely to be a better reflection of actual change, particularly as all five 'missing' relatives at follow-up had been rated as high EE at baseline, and excluding them from the analysis would artificially increase the proportion of low EE families.

TABLE 2 *Interview format*

Family	1	2	4	5	6	7	8	9	10
Session	1	1	2	3	3	4	5	6	6
Therapists' questions (total)	28	36	26	39	25	36	20	18	24
Clients' questions	7	7	2	6	5	0	1	0	0
Typology of therapists' questions									
>circular	4	5	6	5	3	9	8	12	5
>hypothetical	0	2	0	0	1	0	0	0	2
>linear	24	29	20	34	18	17	12	5	17
>future	0	0	0	0	3	10	5	10	4
Therapists	P.B.	G.G.	M.C.C.	F.B.	C.P.	P.B.	G.G.	L.P.	A.S.

questions in the session (ranging from a minimum of eighteen to a maximum of thirty-six). Although linear (i.e. 'ordinary') questions were the most numerous, especially in the initial sessions, circular questions were regularly used. Future questions tended to appear mostly in the final sessions, and hypothetical questions were rare.

Change in EE levels

Table 3 shows the result of the EE evaluation of the thirty-two relatives in the eighteen families, at baseline and at follow-up. Most relatives showed high EE levels at the beginning of the study (23/32 = 71.8%), which led to fifteen out of eighteen (83.3%) families being classified as high EE. At follow-up the overall number of relatives available for assessment decreased. Of the twenty-seven remaining relatives, fourteen (51.9%) were rated as high EE, although this still meant that twelve out of fifteen families continued to be classified as high EE. When the five 'missing' relatives are included in the analysis using baseline data, 59.4% of relatives and 72.2% of families are classified as high EE at follow-up.

EE levels in the relatives in the two treatment groups were then compared. No significant difference was found on any of the EE variables at the initial assessment and there was a similar proportion of relatives classified as high EE in the two groups at the beginning of the study. As shown in Figure 1, at the end of the study we see a decrease in the ratings of EE in the relatives in the FI Group with eight out of twenty (40%) rated as high EE while in the control group no change was observed with ten out of twelve still rated as high EE (83%) ($p < 0.02$, Fisher test). Looking at changes on the individual EE scales,

TABLE 3 *Expressed emotion in the two treatment groups*

		Family intervention group													
		EE1							EE2						
Patient	Relative	EOI	CR	H	W	PR	EER	EEF	EO1	CR	H	W	PR	EER	EEF	Relapse
1	Mother	2	4	0	3	2	***L***	***L***	1	0	0	2	3	***L***	***L***	NO
	Father	2	3	0	2	1	***L***		2	0	0	3	0	***L***		
2	Mother	5	0	0	3	1	***H***	***H***	3	1	0	1	1	***L***	***L***	NO
	Father	3	1	0	3	0	***L***		3	1	0	3	0	***L***		
3	Mother	2	2	0	2	0	***L***	***L***	3	1	0	3	1	***L***	***L***	NO
4	Mother	2	12	1	0	0	***H***	***H***	1	7	2	0	0	***H***	***H***	YES
	Father	0	11	3	1	1	***H***		1	12	3	0	1	***H***		
5	Mother	3	7	1	2	1	***H***	***H***	Not evaluated						***L***	NO
	Father	1	2	0	2	2	***L***		1	1	0	2	1	***L***		
6	Mother	3	22	1	1	2	***H***	***H***	4	11	3	1	0	***H***	***H***	YES
	Brother	4	8	0	4	0	***H***		3	0	0	2	0	***L***		
	Sister	4	11	1	3	1	***H***		4	14	1	2	2	***H***		
7	Mother	4	3	0	3	2	***H***	***H***	3	0	0	4	3	***L***	***L***	NO
	Father	3	7	0	3	0	***H***		2	2	0	2	0	***L***		
8	Mother	4	13	1	3	1	***H***	***H***	4	7	0	2	0	***H***	***H***	NO
9	Brother	2	1	0	3	1	***L***	***H***	3	1	0	3	1	***L***	***H***	NO
	Sister	5	6	0	3	1	***H***		5	3	0	4	2	***H***		
	Sister	3	5	0	2	1	***H***		4	3	0	5	3	***H***		
10	Mother	4	7	0	4	2	***H***	***H***	4	6	0	4	1	***H***	***H***	YES
	Father	4	5	0	3	0	***H***		3	2	0	3	0	***L***		

TABLE 3 *Continued*

		Control group													
		EE1							EE2						
Patient	Relative	EOI	CR	H	W	PR	EER	EEF	EO1	CR	H	W	PR	EER	EEF	Relapse
11	Mother	5	19	1	2	0	***H***	***H***	4	11	3	2	2	H	**H**	YES
12	Mother	3	12	0	1	1	***H***	***H***			Not evaluated				**H**	YES
13	Husband	3	3	0	3	0	***L***	***L***	2	13	1	0	0	H	**H**	NO
14	Father	2	9	1	1	2	***H***	***H***			Not evaluated				**H**	YES
15	Mother	3	17	1	2	0	***H***	***H***	4	13	1	2	1	H	**H**	NO
	Father	3	21	3	0	0	***H***									
16	Mother	4	8	0	3	3	***H***	***H***	5	7	0	1	1	H	**H**	YES
	Father	4	5	1	2	1	***H***		3	7	3	0	2	H		
17	Mother	4	4	0	3	1	***H***	***H***	3	2	0	2	2	L	**L**	NO
	Father	0	4	0	0	0	***L***		2	1	0	1	0	L		
18	Father	3	9	0	4	0	***H***	***H***	1	8	0	2	0	H	**H**	YES
	Mother	5	4	0	4	0	***H***				Not evaluated					

Notes
EOI = Emotional overinvolvment
CR = Criticism
H = Hostility
W = Warmth
PR = Positive remarks
H = High EE
L = Low EE
EER = Expressed emotion of relatives
EEF = Expressed emotion of families
EE1 = baseline rating
EE2 = follow-up rating

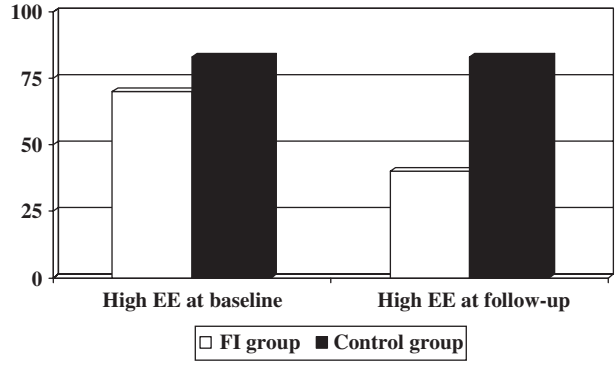

Figure 1. Changes in percentage of high EE families following treatment.

there were no differences between the two groups at baseline, but at follow-up the FI group had lower levels of Criticism ($Z = -2.66$; $p = 0.007$, Mann-Whitney's U test) and higher levels of Warmth ($Z = 2.238$; $p = 0.02$, Mann-Whitney's U test) compared to the control group.

Relapse rates

The results indicate a significant correlation between families' EE levels and patients' relapse. As shown in Table 4, if we compare families rated as high EE both at baseline and at the end of the study with families that were either low EE throughout or shifted from high EE to low EE after the intervention we observe that eight out of twelve (66.6%) patients living in high EE families relapsed, while in the six low EE families no patient relapsed ($p = 0.01$, Fisher test). When the two treatment groups are compared, the control group shows twice the rate of relapse to the FI group 1 (62.5% vs. 30%), although the result is not statistically significant.

Discussion

The sample we were able to use for this study was small, due to the structure of Italian psychiatric services, which does not permit the creation of large psychiatric units with a high population of patients. We decided, anyway, to carry out a pilot study to pave the way for future investigations based on larger samples.

TABLE 4 *Categorical EE rating of families, its changes over treatment and its relationship to relapse*

	Circular interview group		Control group	
EE category	Relapse	No relapse	Relapse	No relapse
High = > High	3	3	5	1
Low = > Low or high = > Low	0	4	0	2

In order to perform our study, we had to devise a specific intervention, and to train therapists to adhere to a comparatively structured protocol. The results of our preliminary investigation show that the therapists were able to adhere to the protocol and conduct the intervention according to the guidelines provided (this was probably due also to the amount of supervision received). This is consistent with other studies (e.g. Jones and Asen, 2000; Pote *et al*., 2003) which have shown the feasibility of using manualized versions of systemic therapy without compromising the therapist's flexibility or efficacy.

Our main purpose was to determine whether a systemic, non-directive intervention in families of people with a diagnosis of schizophrenia might promote changes in relatives' expressed emotion, and the effect this might have on patients' relapses. The follow-up results support at least the first hypothesis, although the findings have to be treated with caution given the relatively small sample of families in the study. During the year following the end of treatment, relatives who underwent the family intervention showed a significant decrease in Criticism and an increase in Warmth. The correlation between high expressed emotion and relapse, as one would expect from previous research, was also found in our sample. The small size of the sample makes it difficult to draw firm conclusions about the impact of treatment on outcome. While the rates of relapse were twice as high in the control group as in the family intervention group, the difference was not statistically significant. Nevertheless, our findings that a family intervention using a circular interview format significantly diminished one of the main risk factors for relapse in schizophrenia, namely levels of expressed emotion, is promising, and indicates the importance of conducting further research with larger samples.

Clinical histories, as reported by the psychiatrists, seem to indicate that some changes in family interactions have occurred. These suggest that subjects who participated in the family intervention displayed 'better', 'more adaptive' interactions with their psychiatric services,

although this is only a clinical judgement and needs empirical confirmation. Sometimes, the systemic intervention was clearly beneficial for some family members, but not for others.

During follow-up interviews all families in the family intervention group, except one, reported informally that they were quite satisfied with the work done by the therapists. Conversely, the control group families mostly felt they had been abandoned, although the psychiatrists at the clinic had consistently given all the families involved in the study the same amount of attention. Unfortunately, we did not design a specific tool for observing the therapeutic alliance or to collect systematic data about experience of treatment. After these observations, we recommend such an evaluation for future studies.

Comparison of our results with those reported by psychoeducational therapists also gives food for thought (McFarlane *et al*., 2003). Although systemic intervention succeeded, like psychoeducation though in a different way, in altering EE patterns, the two types of intervention are, in fact, radically different both in content and procedure. Psychoeducation is highly directive and illness-centred (Strachan, 1986); our systemic intervention neither emphasized its therapeutic nature, nor defined the illness, nor offered neat solutions to the problems presented. Thus it is very difficult to claim that programme content is what produced changes in the family, since content was so markedly different in each case.

At present, two hypotheses seem possible: (1) the two methods act on different family structures in different ways; (2) the two methods act on similar structures in similar ways. Since the former seems extremely complicated and difficult to verify, we prefer the latter, especially if we assume that both interventions have a similar effect not on behaviour, but at a higher level, i.e. explaining disorders that seem to make no sense to family members. The interventions are still different, though, because their underlying concepts of disorder are different: psychoeducational intervention stresses the biological determinants of illness and the need for the patient to 'be a patient', whereas systemic intervention attempts to relocate symptoms in a network of relationships and to reinstate them in the family's story and development. In both cases, however, family members' emotions can be given a name and a meaning, and so be modified or reduced. Moreover, any kind of family intervention implies the presence of nonspecific factors, such as contact between trained experts and the family, a feeling of security, enjoying the experts' undivided attention, the presence and image therapists have (even if they do not present

themselves as such) and so on (Hubble *et al*., 1999). All these elements are present in both methods. Only comparative researches (e.g. systemic vs. psychoeducational intervention) could discriminate the specific effects of each treatment.

In conclusion, we would like to make an important point about this study. We said earlier that our circular interviews were 'non-therapeutic' (we propose them to families as 'research' rather than therapy), which may have created the impression that we are offering 'miraculous' interventions for psychiatric pathologies that can dispense with the support of other therapies or appropriate medication. This has certainly not been our intention. On the contrary, we believe our intervention succeeded because of the types of families and patients we worked with: they were high-frequency users of services, and so accustomed to demanding and receiving abundant therapy. Our 'non-therapy' may have been effective in this setting because, in addition to their six months of circular interviews, the patients also enjoyed the support of a therapeutic network that could monitor their clinical status and take appropriate action in cases of emergency. Any family intervention for schizophrenia needs this basic setting to achieve optimum results.

All in all, we can say that the results of this pilot study support at least the possibility of using a systemic nondirective intervention in families for people with a diagnosis of schizophrenia. Future studies on the subject should be addressed to: (1) determine whether such an intervention is effective on relapse rates and/or other psychosocial patient variables; (2) investigate the specific mechanism of action of the intervention; (3) determine whether the present format is the most appropriate for such a population, or whether some different parameters have to be introduced.

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