Clinical Psychology and Psychotherapy
Clin. Psychol. Psychother. **17**, 463–481 (2010)
Published online 25 February 2010 in Wiley Online Library (wileyonlinelibrary.com). **DOI**: 10.1002/cpp.687

Does Family Interrelating Change Over the Course of Individual Treatment?

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Interrelating is a combination of each person's relating towards a specified other and each person's view of the other's relating towards him/her. Negative interrelating is a maladaptive form of interrelating. The study aims to (1) compare the negative interrelating within the families of neurotic and psychotic psychotherapy outpatients; (2) examine whether individual treatment has a beneficial effect upon negative interrelating; (3) examine whether the improvement extends beyond the patients' interrelating with their parents (i.e., between the parents and the patients' sibling and between the parents themselves); and (4) make similar comparisons within a sample of non-patients. The negative interrelating between the psychotic patients and their parents was more marked than that between the neurotic patients and their parents. The negative interrelating between the patients and their parents dropped significantly over the course of therapy. There were also significant changes in the interrelating between the patients' siblings and their parents and between the parents themselves even though they had not been involved in the therapy. Many of the end of therapy scores of the patients and their parents approached more those of the non-patients. Copyright © 2010 John Wiley & Sons, Ltd.

Key Practitioner Message:

- It is useful to measure both the negative relating of patients and the negative interrelating between patients and other family members.
- The patients' therapy appears also to benefit the interrelating between those family members who were not involved in the therapy.
- These findings may be more marked in Greek families, in which young adults stay closer to their parents.

Keywords: Relating Theory, Individual Therapy, Psychiatric Outpatients, Maladaptive Family Relationships, Family Members' Interrelating Questionnaires (FMIQ), Couple's Relating to Each Other Questionnaires (CREOQ)

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INTRODUCTION

Goldfried, Greenberg and Marmar (1990) considered that understanding those factors that influence mental health (e.g., maladaptive intra-familial relationships) enables us to devise appropriate psychotherapeutic interventions for converting negative (maladaptive) interpersonal relationships into positive (adaptive) ones. This paper is one of a series of studies exploring the association between aspects of therapy and negative relating and interrelating. These terms will be defined in the course of this introduction.

The study is organized around relating theory (Birtchnell, 1996, 2002a), which proposes that humans strive to attain four basic relating objectives that are considered to carry advantages for the individual. These can be represented as the four poles of two intersecting axes: a horizontal, close versus distant one, and a vertical, upper versus lower one. Close concerns involvement/intimacy, distant concerns separation/privacy, upper concerns control/power and lower concerns needfulness/reliance upon others. All four poles are considered to be necessary for effective relating, and no pole is considered to be preferable to any other. Placed between these four poles are four intermediate positions that represent a blending of the poles to either side of them. Together, the poles and the intermediate positions form a theoretical structure that is called the interpersonal octagon. Each octant of the octagon has a two-word name, the first word applying to the vertical axis, and the second applying to the horizontal one. For each of the four polar positions, the word 'neutral' has been inserted to indicate an absence of relating associated with the other axis. Moving around the octagon in a clockwise direction, the names of the octants are upper neutral (UN), upper close (UC), neutral close (NC), lower close (LC), lower neutral (LN), lower distant (LD) and upper distant (UD). The octants are always represented in this sequence. Relating theory proposes that we are born only with a disposition to each position and that we need, during the course of maturation, to acquire the competence and the confidence to relate effectively in each position. Competent/confident relating is called positive, and relating that falls short of this is called negative. Positive and negative forms of each position have been fully defined (Birtchnell, 1996). Summaries of the definitions are shown in Figure 1.

There are certain similarities between relating theory and attachment theory, which proposes that children form bonds with parents and caregivers early in life, which may influence their future behavior and relationships with others. Although some research has found no positive association between infant attachment and later attachment (Weinfield, Sroufe, & Egeland, 2000), a considerable literature suggests that internal working models and attachment security may be carried over into later life and be predictive of a person's later interpersonal adaptations with peers and adults (Waters, Merrick, Treboux, Crowell, & Albersheim, 2000; Waters, Weinfield, & Hamilton, 2000). Children, who form close and secure attachments with their parents, grow up to view the world as a safe place, form and maintain trustworthy and loving relationships with others, and have greater emotional stability (Bowlby, 1969). Unsatisfactory early attachments with parents may lead to unsatisfactory later relationships. Ambivalent children may become preoccupied with close involvement with others, and avoidant children may become reluctant to share feelings, thoughts, and emotions with others (Ainsworth, Blehar, Waters, & Wall, 1978).

Relating theory was developed after attachment theory, but it is not a derivative of attachment theory. In fact, it has more in common with interpersonal theory (Birtchnell, 1994). Attachment theory was developed in order to define the relationship between the young child and its mother, so essentially it is constructed around issues of lower closeness. It was later modified to define adult romantic relationships (Hazan & Shaver, 1987). It draws no clear distinction between positive and negative forms of relating. Bartholomew (1990) developed what she called a four-group model of attachment styles in adulthood, but Bartholomew's four groups are very patchy and do not entirely match up with the four poles of the interpersonal octagon. Her secure attachment would correspond with positive closeness. Her dismissing attachment would correspond with negative distance. Her preoccupied attachment would correspond with negative lower closeness and her fearful attachment would correspond with negative lower distance. The important upperness–lowerness dimension is entirely lacking from the attachment schema and the possibility of there being such a thing as positive distance is never acknowledged.

One aim of psychotherapy is to reduce negative relating and increase positive relating (Birtchnell, 2002a). We need to emphasize here that those measures that are based upon relating theory are always measures of negative (i.e., maladaptive) relating, and, second, that there are two kinds

DOI: 10.1002/cpp

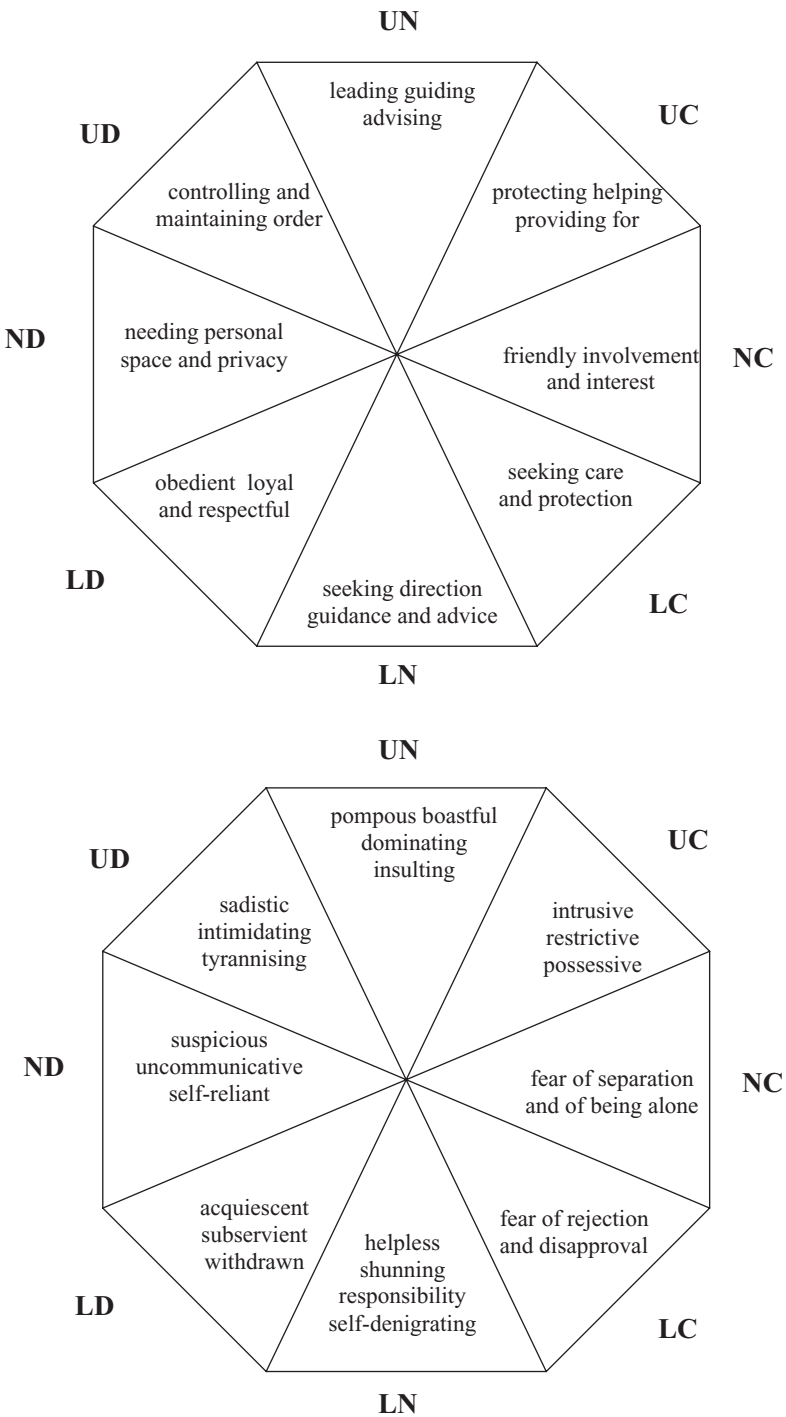

Figure 1. Examples of positive (upper diagram) and negative (lower diagram) forms of relating for each octant The initials are abbreviations for the full names of the octants given in the text.
Source: Birtchnell, J. The interpersonal octagon: An alternative to the interpersonal circle. *Human Relations, 47*, 518, 524. Copyright © The Tavistock Institute, 1994. Reproduced with permission.

DOI: 10.1002/cpp

of such measures: the one concerning a person's general negative relating tendencies, as would be represented by versions of the Person's Relating to Others Questionnaire (PROQ) (Birtchnell & Evans, 2004; Birtchnell, Shuker, Newberry, & Duggan 2009; Kalaitzaki & Nestoros, 2003), the other concerning the negative interrelating between two specified others. The PROQ has been extensively researched. Mean PROQ2 scores have been shown to be higher in patients seeking psychotherapy than non-patients (Birtchnell & Evans, 2004), and in prisoners admitted to a therapeutic community than in non-prisoners (Birtchnell et al., 2009). The mean PROQ scores of psychotherapy patients have been shown to drop significantly over the course of psychotherapy (Birtchnell, 2002b), as have the mean PROQ scores of prisoners in a therapeutic community (Birtchnell et al., 2009).

The PROQ measures only a person's general relating tendencies, but it is possible that a person's way of relating to a specified other person may differ from the way that he/she relates to people in general. Because of this, the present study will be concerned not with general relating tendencies, but with the interrelating between two specified family members. Interrelating measures are always specific to a particular relationship, and always concern both each person's assessment of his/her relating towards the other and each person's view of the other's relating towards him/her. This requires there to be four separate questionnaires. The earliest developed interrelating measure was the Couple's Relating to Each Other Questionnaires (CREOQ). It concerned the interrelating between marital partners (Birtchnell, 2001; Birtchnell, Voortman, Dejong, & Gordon, 2006). A derivative of this is the Family Members' Interrelating Questionnaires (FMIQ), which concerns young adults' interrelating with their parents (Kalaitzaki, Birtchnell, & Nestoros, 2009). Both interrelating measures will be used in the present study. Mean CREOQ scores have been shown to be significantly higher for couples seeking marital therapy than for non-therapy couples (Birtchnell et al., 2006). They have also been shown to be significantly higher for the parents of psychotherapy patients than for the parents of non-patients (Kalaitzaki et al., 2009). Mean FMIQ scores have been shown to be significantly higher for psychotherapy patients and their parents than for (1) the patients' siblings and their parents and (2) a sample of non-patients and their parents (Kalaitzaki et al., 2009). The present study will carry these explorations a stage further by examining, by means of the FMIQ, whether negative interrelating is more marked in neurotic psychotherapy patients and their parents than in psychotic psychotherapy patients and their parents.

It has not yet been determined whether interrelating scores drop over the course of either individual or family psychotherapy. Systemic family therapy has been shown to have beneficial effects in a number of studies of psychiatric patients. An extensive literature review and meta-analyses of such studies for adults were included in Carr (2009). The findings strongly support the effectiveness of such treatment. Bressi, Manenti, Frongia, Porcellana and Invernizzi (2008) compared the effectiveness of the Milan systemic model for the treatment of schizophrenic patients with a control group of patients receiving routine psychiatric treatment. The findings were limited to the benefits achieved at an individual level (e.g., fewer relapses and better compliance with pharmacotherapy). Bertrando et al. (2006) compared a group of the families of schizophrenic patients receiving the Milan systemic model with a control group who were not, in terms of the expressed emotion index (EE). The treated families showed significant improvement in criticism (one component of EE), compared with the control group.

There are fewer studies comparing the effects of individual and family therapy. Beynon, Soares-Weiser, Woolacott, Duffy and Geddes (2008) examined the effectiveness of psychosocial interventions for the prevention of relapse in bipolar disorder. They found family therapy to be as effective as individual psychosocial therapy and crisis management. Brent et al. (1997) compared individual cognitive behaviour therapy, systemic behaviour family therapy, and individual nondirective supportive therapy provided to 107 adolescent patients with major depressive disorder. Cognitive behaviour therapy resulted in more rapid relief, in a higher rate of remission and in a lower rate of major depressive disorder at the end of treatment compared with the others.

The present study will examine whether (1) individual treatment has a beneficial effect upon the negative interrelating between the patients and their parents, and (2) the improvement extends beyond the patient's interrelating with his/her parents (e.g., to the parents–siblings' interrelating and between the parents' themselves). The possibility will also be examined that comparable changes might occur in a sample of non-patients over a comparable time period. The FMIQ will be administered to a sample of psychotherapy

DOI: 10.1002/cpp

patients and their parents at the start and at the end of therapy. A sample of non-patients have completed the FMIQ at the start and at the end of a comparable time period. The patients completed tests of psychopathology at the start and at the end of therapy. The CREOQ was administered to the parents of the patients at the start and at the end of therapy. A sub-sample of the patients' siblings and their parents was similarly tested.

Aims of the Present Study

The study aims to examine whether: (1) the negative interrelating within the families of psychotic patients differed from that within the families of neurotic patients; 2) over the course of therapy, the psychopathology scores of the patients changed significantly; (3) using the FMIQ, the negative interrelating between the patients and their parents changed significantly over the course of therapy; (4) such changes were greater than those between the patients' parents, as measured by the CREOQ; (5) the negative interrelating between the patients and their parents changed to a significantly greater extent than (a) that of the patients' siblings and their parents and (b) that of the sample of non-patients and their parents over a comparable period; (6) by the end of therapy, the scores of the patients and their parents still differed significantly from those of the non-patients. It would have been interesting to have compared separately the scores of the psychotic patients and the neurotic patients over the course of therapy, but because of the smallness of the size of the neurotic sample, we would not have been confident of the significance of the difference.

From the outset it has to be acknowledged that a substantial proportion of the patients were prescribed drugs at times during the course of the psychotherapy. Thus, we will not be in a position to conclude that any changes that are recorded were exclusively the result of the psychotherapy.

Predictions

It is predicted that (1) the psychotic patients will demonstrate greater negative interrelating than the neurotic patients, because it is likely that psychotic patients would be more disruptive within a family setting; (2) the psychotic patients will be more distant than the neurotic patients, because psychotic patients tend to withdraw into themselves and interact less with others; (3) the level of the patients' psychopathology will drop significantly over the course of therapy; (4) the level of the negative interrelating of the patients and their parents will change over the course of therapy, although negative interrelating will not be directly addressed in therapy; (5) the patients' negative relating to their parents will drop more than that of their parents' negative relating to them; (6) the negative interrelating between the patients and their parents will be significantly worse than that between the patients' parents; (7) the negative interrelating of the patients' siblings and their parents will be unchanged over the patients' therapy; (8) the negative interrelating between the non-patients and their parents will be unchanged over a comparable time span; and (9) by the end of the therapy, even though the negative interrelating between the patients and their parents may have improved substantially and that between the patients' parents may have improved to a lesser degree, it may still be worse than that between the non-patients and their parents and between the non-patients' parents.

METHOD

The Samples

Several samples will be used in this study. A sample of 115 psychotic patients will be compared with a sample of 56 neurotic patients. Because the samples were of different sizes and there was no assessment of severity, the results will be interpreted cautiously. A sample of 59 patients (44 psychotic patients and 15 neurotic patients), recruited from these two samples, will be used to examine changes over the course of therapy. The start and end of therapy scores of the 59 patients will be compared with those of a sample of 80 non-patients, in order to examine whether, by the end of therapy, their scores will have approached those of the non-patients. The scores of the 59 patients will be compared with those of a sample of 55 non-patients, recruited from the larger sample of 80, at three time points, so as to compare the changes of the patients with those of the non-patients over a comparable period. The accumulation of these samples will be more fully described under 'Attrition'.

The 115 psychotic patients comprised 71 men and 44 women, and the 56 neurotic patients comprised 28 men and 30 women. The patients and their families were all Greek. All patients attended weekly, individual psychotherapy sessions, conducted by an experienced psychiatrist/psychotherapist (J.N.N.). The duration of psychotherapy

DOI: 10.1002/cpp

ranged from 12 to 18 months. The mean number of sessions was 41.3. The mean age of the psychotic patients was 27.4 (standard deviation; SD = 7.7). The majority (79.3%) were single and 68.6% were living with their parents. They included 71 (61.7%) paranoid schizophrenics and 44 (38.3%) with schizoaffective disorder. The mean age of the neurotic patients was 29.8 (SD = 7.3). Fewer (69.2%) were single and 42.4% were living with their parents. They included 35 (62.5%) with anxiety and 21 (37.5%) with mood disorder. Diagnosis of both the psychotic and the neurotic patients was defined by the DSM-IV, and confirmed by the Symptom Checklist (SCL-90) (Derogatis, Lipman, & Covi, 1973).

The comparison of the start and end of therapy scores was restricted to the 59 patients for whom subsequent scores became available (*see* Attrition). Of these, 44 were psychotic patients (24 men and 20 women), and 15 were neurotic patients (5 men and 10 women). Their mean age was 25.9 (SD = 6.2). They exhibited the same kinds of disorders as the entire group, but in different percentages. They were mostly single (84.2%) and living with their parents (62.8%). Thirty siblings (14 men and 16 women) of the 59 patients were also included in the study; their gender distribution did not necessarily correspond with that of the patients. The siblings were required to be symptom free, according to a number of demographics questions, among which were whether they were suffering from a psychiatric disorder, or receiving psychotherapy and/or pharmacotherapy, or had been hospitalized for a psychiatric disorder. The mean age of the siblings was 27.7 (SD = 6.3).

A general population sample of 80 non-patients (17 men and 63 women, with a mean age of 22.3, SD = 8.7), and their families were used as a control group. This sample was collected for an earlier study (Kalaitzaki et al., 2009). They were tested at the start of the arbitrary time period. They were sent further questionnaires after 3 months and after approximately 1 year, in order to make them comparable with the psychotherapy sample, but only 55 of them returned completed questionnaires at these two later time points. Those who did comprised 14 men and 41 women, and they had a mean age of 26.1 years (SD = 11.0). A small number were psychology students. The remainders were their friends and relatives. Even though the sample was not chosen specifically for the purpose of the present study, and for this reason it might not have been considered an ideal control group, it was in fact matched with the patients' sample. The students were asked to seek out families in which the parents had at least one young adult child. Almost all of them (92.3%) were single and 66.3% were living with their parents, the majority of whom (92.3%) were married. This made them similar to the patients' samples. Neither the controls nor their families (parents and siblings) exhibited psychiatric symptoms, as ascertained by relevant demographic questioning.

The study design has been restricted to those patients who have completed both therapy and the study questionnaires. We acknowledge that this sample may differ from a randomized sample.

The Psychotherapy Model

The form of psychotherapy used in the study is an individual integrative one, called synthetiki psychotherapy (Nestoros, 1997, 2001). Beyond normal psychotherapeutic strategies, it includes problem solving, fear and anxiety reduction, cognitive reframing, dialectical reasoning, interpreting dreams, exploring the cognitive and emotional determinants of behaviour, valuing patients' virtues and creativity, promoting self-efficacy and self-attributive behaviour, and developing self-control and autonomy. It acknowledges the importance of maladaptive and dysfunctional family relationships in maintaining symptomatic behaviour.

Attrition

The study draws upon 181 psychotic patients and 71 neurotic patients and their families, who were recruited for two earlier studies (Kalaitzaki, 2000, 2005). The patients, their siblings and their parents were all sent the relevant questionnaires at the start of therapy. If any of the 12 questionnaires (parents and grown-up child × 4 questionnaires each) had more than seven missing responses, or any of the questionnaires was blank, or any family member omitted to return his/her questionnaires, despite being sent a reminder letter, the family was eliminated from the study. There were also a few instances where the patients had prematurely terminated therapy, or the family was not sent the questionnaires. All these cases were excluded from the sample. The comparison of the psychotic and neurotic patients was restricted to 115 psychotic and 56 neurotic patients (63.5% and 78.9% of the eligible sample, respectively), who themselves and their parents had completed the FMIQ, and whose parents had completed the CREOQ. Three months

DOI: 10.1002/cpp

after the start of therapy, 76 psychotic patients (66.1%) and 49 neurotic patients (87.5%) were still in therapy and had completed all the questionnaires. At the end of therapy, 44 psychotic patients (57.9%) and 15 neurotic patients (30.6%) were still in therapy and had completed the questionnaires. Only 30 siblings of the final eligible sample completed the appropriate questionnaires. We do not know whether those who completed the end of therapy questionnaires had done better in therapy than those who did not. We do know, however, that more psychotic patients than neurotic patients failed to complete the questionnaires.

The general population sample initially comprised 140 non-patients. They were the friends and relatives of psychology students. The students were responsible for administering the collection of the questionnaires and reminding the sample members to return them. At the arbitrary starting point, only 85 non-patients had returned completed questionnaires (60.7%); five were excluded because they admitted to minor psychiatric symptoms (e.g., anxiety, insomnia), or had been prescribed tranquillizers. By the end of a year, 55 non-patients had completed the questionnaires.

The Measures

A detailed description of the study questionnaires, the FMIQ and the CREOQ, will follow, but the better known SCL-90 and Brief Psychiatric Rating Scale (BPRS) will only be briefly referred to.

The CREOQ

This is a set of four, 96-item questionnaires, for measuring the negative interrelating between two partners (Birtchnell, 2001; Birtchnell et al., 2006). It measures each partner's self-rating to the other and each partner's perception of how the other relates to him/her. In the naming of the questionnaires, the letters M and W refer to the man and the woman, and S and P refer to the self and the partner. For example, MS is the man's relating to the woman and MP is the man's perception of how the woman relates to him. The wording of the questionnaires differs only in respect of gender. The randomly distributed items contribute to eight scales, which correspond to the eight octants of the octagon. Each scale has 12 items, two of which refer to positive relating, and are not normally scored, and 10 refer to negative relating. Each item has a score of 3, 2, 1 and 0, which corresponds to the four response options of *mostly yes, quite often, sometimes and mostly no*. Thus, the maximum score for each scale is 30, and for the entire questionnaire, it is 240. The questionnaires are scored by computer, and the scores are represented both numerically and graphically (as shaded areas of octants). The CREOQ has been shown to have good psychometric properties, as assessed in an English population sample, a couple therapy sample, in a sample of Dutch community couples (Birtchnell et al., 2006), and in Greek samples of psychotherapy patients and non-patients (Kalaitzaki et al., 2009). The mean alpha reliabilities of the eight scales of the four CREOQ questionnaires for the population sample ranged from 0.68 to 0.88 and for the couple therapy sample, from 0.68 to 0.90 (Birtchnell et al., 2006). They were lower in the Dutch (Birtchnell et al., 2006) and the Greek samples (Kalaitzaki et al., 2009). Adequate test–retest reliability was found in both Greek samples (Kalaitzaki et al., 2009). The validity of the questionnaires was confirmed in the English, Dutch and Greek samples by the positive correlations between the self-ratings of one partner and the partner-ratings of the other. The questionnaires and the scoring instructions can be downloaded from http://www.johnbirtchnell.co.uk.

The FMIQ

The FMIQ is a modified version of the CREOQ for measuring the interrelating of an adult with a parent. It has four questionnaires, which are structurally similar to those of the CREOQ. Most of its items are the same as those of the CREOQ, but nine items for the 'self' questionnaire and 6 items for the 'other' questionnaire have been slightly altered to make them more appropriate. It may be scored by the same scoring program as the CREOQ. In the naming of the questionnaires, the initials Fa, Mo, So and Da stand for father, mother, son and daughter, respectively. When the initials Se are included in the title of a questionnaire, it concerns the person's self-assessment. When they are not, it concerns the person's assessment of the other. Thus, FaSeSo refers to the father's relating to his son. The remaining seven self-assessment questionnaires are FaSeDa, MoSeSo, MoSeDa, SoSeFa, SoSeMo, DaSeFa and DaSeMo. The FaSo refers to the father's view of his son's relating to him. The remaining seven other-assessment questionnaires are FaDa, MoSo, MoDa, SoFa, SoMo, DaFa and DaMo. Data on the psychometric properties of both the self-rating and other-rating scales are available from the Greek version of the FMIQ (Kalaitzaki et al., 2009). The mean alphas ranged from 0.47 to 0.82 for the sample of non-patients and from 0.59

DOI: 10.1002/cpp

to 0.85 for the sample of psychotherapy patients. The correlations between the self-ratings of one family member (e.g., parent) and the other-ratings of the other family member (e.g. child) were less satisfactory than those produced for the CREOQ, but they were acceptable.

In the present study, the FMIQ and the CREOQ were administered to the patients and their parents at the start of therapy, after 3 months (mean number of sessions: 10.9), and at the end of therapy, which was about 1 year later (mean number of sessions: 41.3). They were also administered to the non-patients on three separate occasions; at the start of the arbitrary time, 3 months later and 1 year later.

The SCL-90

The SCL-90 (Derogatis et al., 1973) is a 90-item self-report inventory that covers a range of psychopathological symptoms. In the present study, a Greek translation was used (Ntonias, Karageorge, & Manos, 1991), which has been found to be valid and reliable (Ntonias et al., 1991).

The BPRS

The BPRS (Overall & Gorham, 1962) is an 18-item interview, to be conducted by a trained clinician, for measuring intensity, duration and interference with normal activities of psychiatric symptoms. In the present study a Greek translation was used (Nestoros, 1992). Its psychometric properties and the underlying factor structure are well established (Hedlund & Vieweg, 1980).

In the present study, the SCL-90 and the BPRS were administered to the patients on admission to therapy, 3 months later and at the end of therapy.

Procedure/Data Collection

The questionnaires were sent to the patients and their families through the post. A large envelope included smaller ones with the questionnaires and instructions for completion for each family member. Ethics and confidentiality were guaranteed, and a signed informed consent was obtained from all participants (American Psychological Association, 1992). Anonymity was strictly protected with the use of a code posted in the cover of the questionnaires. Since the participants were instructed to create the code themselves, they were the only ones who could decode it. All family members completed a short, demographic questionnaire. The parents were requested to complete the appropriate CREOQ questionnaires, and the patients and their parents were invited to complete the appropriate FMIQ questionnaires. The same procedure was repeated with one sibling of the patient and his/her parents. The questionnaires were all placed in a sealed envelope, which the patient delivered to the therapist by hand. A similar procedure was followed for the non-patients, and the sealed envelopes were collected by the psychology student who had delivered them. The final response rate was 92.3% for the patients and 81.3% for the non-patients.

The Analyses

Mean scores and standard deviations were calculated for all samples and at all stages. Independent-samples *t*-tests were used to compare FMIQ and CREOQ scores between samples and paired-samples *t*-tests were used to compare scores of the samples between two intervals. A p-value of <0.05 was considered to be statistically significant at a two-tailed level of significance. SPSS version 16 was used (SPSS, Inc., Chicago, IL, USA).

Because the presentation of the comparisons of fathers, mothers, sons and daughters takes up so much space, the genders of the patients, parents, siblings and non-patients have been combined both in the text and in the tables. The mean octant scores of the FaSeSo, FaSeDa, MoSeSo and MoSeDa questionnaires refer to the parents' relating to the patients, and the mean octant scores of the FaSo, FaDa, MoSo and MoDa questionnaires refer to the parents' view of the patients/non-patients' relating to them. There were comparable sets of scores for the patients/non-patients' relating to their parents (mean of the SoSeFa, SoSeMo, DaSeFa, and DaSeMo), and the patients/non-patients' view of their parents' relating to them (mean of the SoFa, SoMo, DaFa and DaMo). Separate gender comparisons were also carried out, but because of limitations of space, they are not represented here. They are, however, available from the senior author.

Presentation of Results

We would wish to stress again that both the CREOQ and the FMIQ measure only negative, i.e., undesirable forms of interrelating. Thus high scores indicate interrelating difficulties. The results will be presented in four parts: Part 1 will compare the FMIQ scores of the neurotic and the psychotic patients; part 2 will compare the SCL-90, the BPRS

DOI: 10.1002/cpp

and the FMIQ scores of the patients and non-patients at the start of therapy, 3 months later and at the end of therapy; part 3 will present a similar set of comparisons for the parents of the patients (CREOQ) and for a sibling of the patients; and part 4 will present, for a sample of non-patients, the CREOQ and FMIQ changes over three comparable time periods and will also compare these scores before and after therapy with the scores of non-patients at the start of the arbitrary time.

RESULTS

Part 1: Comparing the FMIQ Scores of the Psychotic Patients and the Neurotic Patients

In Table 1, it will be seen that the relating of the psychotic patients to their parents was significantly worse than that of the neurotic patients to their parents on LC, ND and the total score. The psychotic patients' parents' view of the patients' relating to them was significantly worse than the neurotic patients' parents' view on NC, LD, ND, UD and the total score. The psychotic patients parents' relating to them was significantly worse than the neurotic patients' parents' relating to them on UN, NC, LD, ND, UD and the total score. The psychotic patients' view of their parents' relating to them was significantly worse than the neurotic patients' view on UN, UC, NC, LC, LD and the total score. It may be concluded from this that there was significantly more negative interrelating between the psychotic patients and their parents than between the neurotic patients and their parents.

Part 2: The Change of Patients' Scores over the Course of Therapy

The Patients' SCL-90 and BPRS Scores

Three months after the start of therapy, the SCL-90 and BPRS total scores had both been significantly reduced (t = -4.8, p = 0.01; t = –5.3, p = 0.01, respectively). The BPRS' *anxiety-depression* scale score (t = –3.7, p = 0.02), the BPRS' *anergia* scale score (t = 4.5, p = 0.01) and the SCL-90' *anxiety*

Table 1. Mean FMIQ scores for the psychotic (n = 115) and the neurotic (n = 56) patients

		UN	UC	NC	LC	LN	LD	ND	UD	Total
Patients' relating to parents	Psychotic	12.1	8.4	9.6	13.5	13.6	14.5	14.3	12.3	98.3
	SD	7.2	5.8	7.0	7.5	7.6	7.7	8.3	6.5	35.5
	Neurotic	10.6	7.6	8.0	6.8	12.6	12.4	9.8	10.4	78.2
	SD	6.7	4.5	5.2	4.1	9.1	6.5	2.9	6.2	29.5
	t	1.3	0.9	1.5	6.2	0.8	1.8	3.9	1.8	3.7
	p	0.19	0.37	0.13	**0.00**	0.45	0.08	**0.00**	0.07	**0.00**
Parents' view of patients' relating to them	Psychotic	11.1	8.6	12.2	14.2	14.0	13.6	12.3	13.5	99.5
	SD	6.4	5.7	7.9	5.8	7.3	5.6	7.5	6.5	31.7
	Neurotic	9.2	7.3	9.3	12.4	12.9	7.6	4.1	7.7	70.5
	SD	6.7	8.4	5.1	7.6	6.8	5.5	3.1	8.4	44.3
	t	1.8	1.2	2.5	1.7	0.9	6.6	7.9	5.0	4.9
	p	0.07	0.24	**0.01**	0.09	0.35	**0.00**	**0.00**	**0.00**	**0.00**
Parents' relating to patients	Psychotic	9.5	15.1	13.3	11.3	11.1	14.7	10.9	12.8	98.7
	SD	6.4	6.3	6.3	5.3	6.2	5.3	5.4	7.2	29.1
	Neurotic	6.1	13.7	7.6	9.6	11.8	10.9	6.7	6.9	73.3
	SD	3.2	5.3	3.2	5.6	4.5	5.0	7.1	3.7	22.4
	t	3.7	1.4	6.4	1.9	0.8	4.5	4.3	5.8	5.8
	p	**0.00**	0.15	**0.00**	0.06	0.45	**0.00**	**0.00**	**0.00**	**0.00**
Patients' view of parents' relating to them	Psychotic	12.6	15.6	9.8	11.7	9.1	11.4	10.1	13.6	93.9
	SD	8.8	7.4	7.0	7.2	6.2	6.3	7.2	9.7	41.0
	Neurotic	5.6	7.8	3.2	5.8	9.0	12.4	8.8	9.4	62.0
	SD	3.6	5.9	2.8	2.5	6.4	6.4	6.3	4.9	15.1
	t	5.7	6.9	6.8	6.0	0.1	–1.0	1.2	3.1	5.6
	p	**0.00**	**0.00**	**0.00**	**0.00**	0.92	0.33	0.25	**0.00**	**0.00**

The gender of the parents and the patients has been combined. Significant (<0.05) differences are in bold type.
FMIQ = Family Members' Interrelating Questionnaires. UN = upper neutral. UC = upper close. NC = neutral close. LC = lower close. LN = lower neutral. LD = lower distant. ND = neutral distant. UD = upper distant. SD = standard deviation.

DOI: 10.1002/cpp

Table 2. The FMIQ interrelating between the patients and their parents (n = 59) at the start and the end of therapy

		UN	UC	NC	LC	LN	LD	ND	UD	Total
Patients' relating to parents	Start	12.7	7.4	4.2	10.6	9.1	12.8	16.2	12.3	85.3
	SD	8.1	5.2	4.3	6.4	5.8	6.2	7.9	7.1	30.6
	End	10.3	7.1	3.9	9.7	9.2	11.9	15.0	11.4	78.5
	SD	7.2	5.1	4.1	6.9	6.7	6.8	8.1	7.3	29.3
	t	1.9	0.7	0.7	3.8	–0.1	1.4	1.6	2.0	2.9
	p	0.07	0.49	0.51	**0.00**	0.89	0.17	0.11	**0.05**	**0.01**
Parents' view of patients' relating to them	Start	9.2	7.0	8.0	12.7	11.9	12.7	11.5	9.8	82.7
	SD	6.6	6.1	6.5	6.5	6.2	5.8	7.6	7.0	31.8
	End	7.4	5.4	7.2	11.4	11.0	11.1	9.8	9.0	72.4
	SD	6.0	5.0	5.3	6.3	5.6	5.0	6.3	7.1	28.5
	t	2.8	2.6	1.1	1.9	1.0	2.4	2.0	1.2	3.2
	p	**0.01**	**0.01**	0.27	0.07	0.33	**0.02**	**0.05**	0.23	**0.00**
Parents' relating to patients	Start	8.2	13.4	10.7	10.0	9.6	11.9	9.7	10.4	84.0
	SD	5.7	6.6	5.7	5.6	4.7	5.3	6.5	6.8	29.6
	End	6.5	11.0	8.5	9.8	10.8	11.1	8.9	8.6	75.0
	SD	6.2	7.2	5.7	5.6	5.2	5.8	6.5	6.2	33.6
	t	2.8	3.6	3.0	0.4	**–1.7**	1.3	1.1	2.2	3.0
	p	**0.01**	**0.00**	**0.00**	0.67	0.10	0.21	0.27	**0.04**	**0.00**
Patients' view of parents' relating to them	Start	10.7	12.7	8.3	11.6	9.7	11.2	11.9	12.3	88.3
	SD	9.8	7.9	6.4	7.2	5.1	6.0	6.8	10.4	40.4
	End	8.3	10.8	6.2	9.4	9.0	10.9	10.7	8.5	73.6
	SD	7.9	7.8	5.2	6.5	5.1	6.2	6.7	8.2	36.7
	t	2.5	2.6	3.3	3.3	1.4	0.6	1.6	3.4	4.1
	p	**0.02**	**0.01**	**0.00**	**0.00**	0.17	0.58	0.11	**0.00**	**0.00**

The gender of the parents and the patients has been combined. Significant (<0.05) differences are in bold type.
FMIQ = Family Members' Interrelating Questionnaires. UN = upper neutral. UC = upper close. NC = neutral close. LC = lower close. LN = lower neutral. LD = lower distant. ND = neutral distant. UD = upper distant. SD = standard deviation.

scale score (t = –2.9, p = 0.03) had also dropped significantly. By the end of therapy, these drops had been sustained. The SCL-90' score on *depression* (t = –3.0, p = 0.05), *paranoid ideation* (t = –4.7, p = 0.01) and *psychoticism* (t = –5.1, p = 0.01) had improved significantly. There was also a significant drop on the BPRS *thought disturbance* (t = –3.6, p = 0.02), *activitation* (t = –4.8, p = 0.01) and *hostile suspiciousness* (t = –3.7, p = 0.02) subscales.

The Patients/Parents' FMIQ Scores

By 3 months after the start of therapy, there had been no improvements on the FMIQ, but by the end of therapy there had been. Table 2 compares the FMIQ scores of all the patients (psychotic plus neurotic patients) at the start and at the end of therapy (with the genders of the patients and the parents combined). Considering first the patients' relating to the parents: there had been a significant drop on the LC and UD scales and on the total score. On the parents' view of the patients relating to them measure, there had been a significant drop on a wider range of scales: UN, UC, LD, ND and the total score. On the parents' relating to the patients measure, there had been a significant drop on UN, UC, NC, UD and the total score. On the patients' view of the parents' relating to them measure there had been a significant drop on UN, UC, NC, LC, UD and the total score. Thus, the parents viewed the patients as improving on a broader range of scales than the patients viewed themselves as improving. There was a much closer agreement between the parents and the patients concerning the improvement of the parents' relating to the patients—which had indeed been considerable.

Part 3: The Change of Patients' Parents and Siblings' Scores over the Course of Therapy

The Parents' CREOQ Scores

Three months after the start of therapy, there had been no improvement on the parents' CREOQ scores, but by the end of therapy, there had been. Table 3 compares the CREOQ scores between the patients' parents at the start and at the end of therapy. For the fathers' relating to the mothers (MS), there had been a significant drop only on UC and the total score. For the mothers' view of

DOI: 10.1002/cpp

Table 3. The CREOQ interrelating scores between the parents (n = 59) at the start and the end of therapy

		UN	UC	NC	LC	LN	LD	ND	UD	Total
Father's relating to mother (MS)	Start	11.1	10.9	10.6	13.0	15.2	12.5	9.4	11.3	93.9
	SD	6.7	5.8	5.5	5.6	7.1	5.9	7.6	6.0	29.7
	End	10.4	9.8	10.3	12.4	14.4	11.8	8.6	11.1	88.8
	SD	6.3	5.8	5.1	5.3	6.7	6.0	7.3	5.1	28.5
	t	1.9	2.2	0.8	1.6	1.8	1.8	1.9	0.5	2.9
	p	0.07	**0.03**	0.42	0.13	0.07	0.08	0.06	0.64	**0.01**
Mother's view of father's relating to her (WP)	Start	10.1	10.3	11.7	13.1	12.0	10.0	7.9	11.4	86.4
	SD	7.7	6.7	5.5	6.3	6.5	4.5	7.3	9.2	32.4
	End	9.1	9.7	11.5	12.3	11.6	10.0	7.7	10.9	82.7
	SD	7.5	6.7	5.6	6.9	6.4	4.5	6.8	8.6	32.7
	t	2.9	2.0	0.4	2.4	1.2	0.1	0.4	1.3	3.3
	p	**0.01**	**0.05**	0.71	**0.02**	0.25	0.90	0.70	0.21	**0.00**
Mother's relating to father (WS)	Start	9.1	11.4	9.4	11.5	14.5	13.2	10.3	10.7	90.2
	SD	5.2	5.1	5.0	6.8	5.8	5.5	7.1	5.6	24.0
	End	8.9	10.8	9.2	11.2	14.4	12.5	9.4	10.4	86.8
	SD	5.1	4.7	5.2	6.6	5.8	5.3	7.1	5.3	24.2
	t	0.7	2.6	0.6	0.8	0.6	1.6	1.7	1.1	2.4
	p	0.48	**0.01**	0.58	0.43	0.55	0.11	0.09	0.27	**0.02**
Father's view of mother's relating to him (MP)	Start	11.6	14.1	13.0	14.2	14.2	11.3	9.5	13.5	101.4
	SD	9.4	7.2	7.3	6.9	6.6	5.3	8.4	9.3	42.6
	End	10.8	13.3	12.7	13.3	14.2	11.0	8.8	12.6	96.6
	SD	8.9	6.6	7.3	7.0	6.7	5.7	7.8	8.7	40.6
	t	2.1	1.5	1.0	1.9	0.0	0.7	1.7	2.1	2.3
	p	**0.04**	0.15	0.34	0.07	0.96	0.48	0.10	**0.04**	**0.02**

Significant (<0.05) differences are in bold type.
CREOQ = Couple's Relating to Each Other Questionnaires. UN = upper neutral. UC = upper close. NC = neutral close. LC = lower close. LN = lower neutral. LD = lower distant. ND = neutral distant. UD = upper distant. SD = standard deviation. MS = man's self-rating. MP = man's partner rating. WS = woman's self-rating. WP = woman's partner rating.

the fathers' relating to them (WP), there had been a significant drop on UN, UC, LC and the total score. For the mothers' relating to the fathers (WS), there had been a significant drop on UC and on the total score. For the fathers' view of the mothers' relating to them, there had been a significant drop on UN, UD and the total score. As with the FMIQ comparisons, the fathers and mothers had viewed their partners as improving on a broader range of scales than they had viewed themselves. Although the drops were less marked for the CREOQ than for the FMIQ, there had been some improvement in the parents' interrelating, even though they had not themselves been involved in the therapy.

The Parents and Siblings' FMIQ Scores

Table 4 shows the start and end of therapy FMIQ interrelating scores for the parents and the patients' siblings. As would have been expected, there were no significant changes in the siblings' relating to the parents scores, but, surprisingly, the parents' relating to the siblings scores did improve significantly on UN, LD, UD and the total score. The parents' view of the siblings' relating to them also improved, on UC, ND and UD, as did the siblings' view of the parents' relating to them, on LC and LN. These findings were similar for both the male and female siblings.

A Graphic Representation of the FMIQ Score Change in a Typical Patient's Family

Figures 2a and b are the computer-generated printouts of a woman patient's (C1) and her well brother's (C2) interrelating with their father and their mother, at the start (Figure 2a) and at the end (Figure 2b) of therapy. In each octant of an octagon, the size of the score is represented by the extent of the shading. In effect, the octagons are arranged in two concentric circles, the inner circle depicting the person's self-relating to the other and the outer circle depicting his/her perception of the other's relating to him/her. The octagons are arranged in four sets of four, the upper two concerning the patient, and the lower two concerning her brother; the two to the left concerning the mother, and the two to the right concerning the father.

DOI: 10.1002/cpp

Table 4. The FMIQ interrelating between the parents and the patient's siblings (n = 30) at the start and the end of therapy

		UN	UC	NC	LC	LN	LD	ND	UD	Total
Sibling's relating to parents	Start	6.4	5.5	2.4	6.9	12.5	10.6	11.1	7.7	63.0
	SD	4.3	3.5	3.4	5.9	7.5	5.7	8.4	6.9	29.5
	End	6.3	4.8	2.1	7.5	10.7	9.6	12.1	6.8	60.0
	SD	5.5	4.0	3.3	7.3	6.6	5.4	8.1	5.6	28.0
	t	0.1	1.1	0.6	–0.8	1.9	0.9	–0.7	0.7	1.1
	p	0.92	0.28	0.55	0.42	0.07	0.35	0.52	0.49	0.28
Parents' view of sibling's relating to them	Start	5.0	6.2	5.5	6.1	6.6	9.8	7.9	5.8	52.9
	SD	2.1	3.1	4.7	3.7	3.3	4.0	5.5	3.6	14.7
	End	4.9	4.1	6.4	5.9	6.9	10.5	6.2	4.7	49.5
	SD	2.0	3.9	4.8	3.7	5.4	2.9	5.0	3.7	21.0
	t	0.2	3.0	–1.4	0.4	–0.3	–1.0	2.1	2.1	1.3
	p	0.86	**0.01**	0.19	0.70	0.76	0.34	**0.04**	**0.04**	0.21
Parents' relating to sibling	Start	4.2	6.9	8.6	10.9	14.7	12.7	7.8	5.9	71.7
	SD	1.8	6.0	4.8	6.7	7.5	5.0	6.1	2.3	23.9
	End	3.0	5.8	7.5	9.7	13.6	9.5	7.3	4.6	61.1
	SD	2.7	5.7	6.3	6.9	7.7	5.4	4.4	3.7	29.1
	t	2.7	1.6	1.2	1.6	1.2	4.7	0.5	2.7	3.6
	p	0.01	0.13	0.23	0.12	0.25	**0.00**	0.63	**0.01**	**0.00**
Sibling's view of parents' relating to them	Start	7.9	8.3	6.1	8.1	8.1	8.3	5.3	8.2	60.2
	SD	5.7	8.4	7.0	3.9	3.1	3.0	4.5	6.4	28.0
	End	7.6	8.6	6.6	6.1	6.4	8.2	5.2	8.5	57.2
	SD	6.9	9.4	7.2	4.6	2.4	3.0	5.1	8.7	34.8
	t	0.3	–0.4	–0.6	2.5	3.1	0.1	0.1	–0.2	0.8
	p	0.80	0.71	0.54	**0.02**	**0.00**	0.92	0.94	0.81	0.43

Significant (<0.05) differences are in bold type.
FMIQ = Family Members' Interrelating Questionnaires. UN = upper neutral. UC = upper close. NC = neutral close. LC = lower close. LN = lower neutral. LD = lower distant. ND = neutral distant. UD = upper distant. SD = standard deviation.

In Figure 2a, the interrelating scores between the patient and her parents are very high, but this is not the case for the patient's sibling. In Figure 2b, the scores are much lower. It is noteworthy that the patient's relating to her parents has remained more or less constant, but there are marked improvements in the patient's parents' relating to her and their view of her relating to them. The patient's view of her parents' relating to her has also improved. The sibling's relating to his parents is similar to that of Figure 2a, but the parents' negative relating to the sibling has been reduced.

Part 4: Comparing the Patients and Their Parents' Scores with (a) the Siblings' and Their Parents' Scores and (b) with the Non-Patients' Scores

Are the Patient–Parent Score Changes Comparable with the Sibling–Parent Scores Changes?

A comparison was made of the start and end of therapy FMIQ scores between the patients and their parents and between the patients' siblings and their parents. This was done in order to determine whether the patients' after therapy scores had come closer to those of their siblings. At the start of therapy, all but two of the octant scores of the patients' relating to their parents were significantly higher than those of their siblings' relating to their parents. By the end of therapy, only three octant scores and the total score were significantly higher. At the start of therapy, all but two of the scores of the parents' view of the patients' relating to them were significantly higher than those of the parents' view of the siblings' relating to them. By the end of therapy, all but three of these scores were still significantly higher. At the start of therapy, four octant scores and the total score of the parents' relating to the patients were significantly higher than those of the parents' relating to the siblings. By the end of therapy, five of these scores were still significantly higher. All but three of the start of therapy scores of the patients' view of their parents' relating to them were significantly higher than those of the siblings' view of their parents'

DOI: 10.1002/cpp

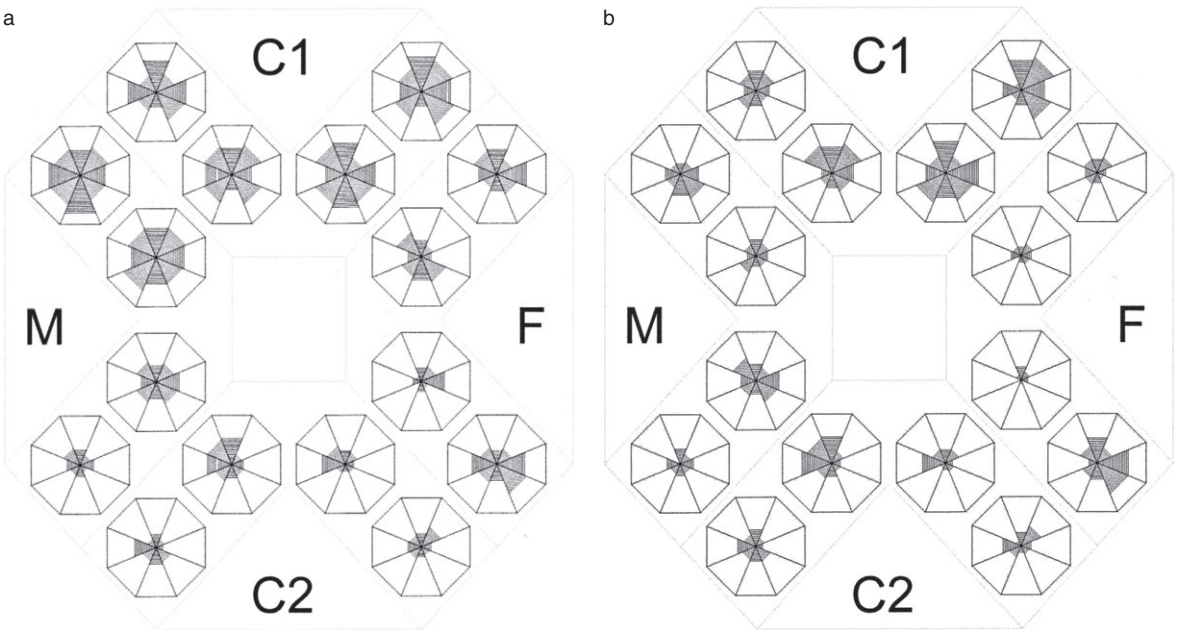

Figure 2. (a) The FMIQ interrelating scores of a patient (C1) with her brother (C2), her father (F) and her mother (M) before therapy; (b) the same set of scores at the end of therapy
The inner circle of octagons concern the person's relating to another; the outer circle concern the person's perception of how the other relates to him/her.

relating to them. By the end of therapy, four of these scores were not significantly higher.

The Non-Patients' FMIQ and CREOQ Score Changes over a Comparable Time Period

For the sample of 55 non-patients who had completed questionnaires at 3 months and a year after the arbitrary starting point, there was no significant change on any scale of either the FMIQ (a total of 96 scales) or the CREOQ (a total of 32 scales) at the end of 3 months. By the end of a year, there was a significant change on only one scale: the fathers' UC rating of their sons' relating to them (i.e., FaSeSo) had increased significantly ($t = -2.56$, $p = 0.05$).

Comparing the Patients' and Their Parents' Score Changes over the Course of Therapy with the Non-Patients' Scores at the Start of the Arbitrary Time Period

The patients' FMIQ score changes. The patients' start and end of therapy scores were compared with those of the 80 non-patients from an earlier study (Kalaitzaki et al., 2009). Significant differences were found (Table 5). Although the patients' relating to their parents total score was significantly higher than that of the non-patients before therapy (85.3 versus 68.7, $t = 3.4$, $p = 0.00$), it had become non-significant by the end of therapy (78.5 versus 68.7, $t = 1.8$, $p = 0.07$). The LD score also become non-significant by the end of therapy. The parents' view of the patients' relating to them before therapy was significantly higher than that of the non-patients on UN, LC, ND and the total score, but by the end of therapy, these differences had become non-significant. The parents' relating to the patients' scores before therapy were significantly higher than that of the non-patients for UC, LN, LD, ND and the total score, but they were no longer significantly different by the end of therapy. The patients' view of the parents' relating to them scores were significantly higher than those of the non-patients before therapy on UC, LC and the total score, but not by the end of therapy. Therefore, many of the patients' and their parents' scores came much closer to those of the non-patients and their parents' over the course of therapy.

The parents' CREOQ score changes. The start and end of therapy CREOQ interrelating scores between the parents of the patients were compared

DOI: 10.1002/cpp

Table 5. Comparison of the FMIQ scores between the patients and their parents (n = 59) at the start and the end of therapy with the non-patients' scores at the arbitrary starting point (n = 80)

		UN	UC	NC	LC	LN	LD	ND	UD	Total
Patients' relating to parents	Start	12.7	7.4	4.2	10.6	9.1	12.8	16.2	12.3	85.3
	End	10.3	7.1	3.9	9.7	9.2	11.9	15.0	11.4	78.5
	Non-patient	8.0	6.8	5.9	8.6	12.4	9.8	9.4	7.8	68.7
	t (Start)	4.2	0.3	2.6	1.9	2.9	2.8	6.7	4.9	3.4
	p	0.00	0.73	0.01	0.06	0.00	0.01	0.00	0.00	0.00
	t (End)	2.2	0.7	3.1	1.0	2.7	1.9	5.4	3.8	1.8
	p	0.03	0.49	0.00	0.31	0.01	0.06	0.00	0.00	0.07
Parents' view of patients' relating	Start	9.2	7.0	8.0	12.7	11.9	12.7	11.5	9.8	82.7
	End	7.4	5.4	7.2	11.4	11.0	11.1	9.8	9.0	72.4
	Non-patient	6.4	6.3	6.7	9.9	8.8	11.2	8.1	5.6	62.8
	t (Start)	3.0	0.7	1.3	2.6	3.2	1.8	3.2	4.8	3.8
	p	0.00	0.47	0.18	0.01	0.00	0.07	0.00	0.00	0.00
	t (End)	1.1	1.0	0.6	1.4	2.4	0.1	1.8	3.8	1.9
	p	0.26	0.31	0.57	0.17	0.02	0.90	0.08	0.00	0.06
Parents' relating to patients	Start	8.2	13.4	10.7	10.0	9.6	11.9	9.7	10.4	84.0
	End	6.5	11.0	8.5	9.8	10.8	11.1	8.9	8.6	75.0
	Non-patient	6.9	9.9	9.5	9.6	11.8	10.1	7.0	8.9	73.6
	t (Start)	1.7	3.6	1.4	0.5	2.3	2.1	2.7	1.5	2.1
	p	0.10	0.00	0.18	0.63	0.02	0.04	0.01	0.13	0.04
	t (End)	0.5	1.1	1.1	0.2	1.0	1.1	1.9	0.3	0.3
	p	0.63	0.29	0.26	0.81	0.31	0.27	0.06	0.75	0.79
Patients' view of parents' relating	Start	10.7	12.7	8.3	11.6	9.7	11.2	11.9	12.3	88.3
	End	8.3	10.8	6.2	9.4	9.0	10.9	10.7	8.5	73.6
	Non-patient	5.5	9.1	7.7	8.9	8.3	9.8	6.3	6.0	61.6
	t (Start)	4.3	3.3	0.6	2.4	1.6	1.6	6.1	4.8	4.0
	p	0.00	0.00	0.52	0.02	0.12	0.11	0.00	0.00	0.00
	t (End)	2.7	1.6	1.8	0.5	0.8	1.2	4.9	2.2	18.7
	p	0.01	0.12	0.07	0.64	0.44	0.22	0.00	0.03	0.06

The *p*-values that were significant (<0.05) before therapy and are no longer significant after therapy have been underlined.
FMIQ = Family Members' Interrelating Questionnaires. UN = upper neutral. UC = upper close. NC = neutral close. LC = lower close. LN = lower neutral. LD = lower distant. ND = neutral distant. UD = upper distant.

with the start of the arbitrary time period scores of the parents of the non-patients. As anticipated, there were only minimal differences between the parents' interrelating scores over the course of patients' therapy; these referred only to the LD and ND scores for the husband's relating to wife (MS).

DISCUSSION

The present study is a sequel to a previous one by Kalaitzaki et al. (2009), which, using the same measures, showed that the negative interrelating between the parents of psychotherapy patients and between psychotherapy patients and their parents was significantly worse than that between the parents of non-patients and between non-patients and their parents. It was also shown to be worse for the patients and their parents than for the patients' siblings and their parents. An obvious next step was to determine whether these interrelating deficiencies actually improved over the course of therapy, and the study has shown that it did.

In a study such as this, it is impossible to say whether the patients' psychiatric condition was a cause or a consequence of the negative interrelating between the patients and their parents, or whether the negative interrelating and psychiatric condition were both facets of the same condition. The striking findings of the present study may well have been contributed to by the relatively high proportion of patients who have continued to live with their parents. The negative interrelating is likely to have been more marked for the patients who actually lived with their parents, though here again, it is not possible to say whether they lived with their parents as a consequence of their psychiatric condition or their condition had been a cause of or been made worse by their living with their parents. It was found that a higher proportion of the psychotic patients than of the neurotic patients lived with their parents (68.6% compared

DOI: 10.1002/cpp

with 42.4%), and also that the negative interrelating was significantly more marked for the psychotic patients than for the neurotic patients. These two facts may well be related.

The study could only be carried out upon those patients (and non-patients) who did not drop out of the study. We acknowledge that there could have been differences between those who stayed in and those who dropped out. Even though we have no way of knowing what these differences were, the dropouts could have had an effect upon the outcome of the study. Because of this, we cannot say whether those patients who have discontinued therapy were more disturbed and therefore less able to handle therapy or had more marked negative interrelating with their parents, or whether the therapy was efficacious enough for it to be completed earlier than anticipated. We also cannot say whether the parents who failed to complete the questionnaires had or had not worse relationships with the patients. They might have failed to complete them either because they did not participate in therapy or because they had underestimated their value in the patients' therapy.

Since psychosis is commonly assumed to have both a genetic and a neurophysiological basis, its link with disorderly family relationships might be expected to have been less than for neurosis. In fact, it was greater. A possible explanation for this is that psychosis can be more disruptive of family relationships than neurosis. Because the numbers were so small, we were not able to compare the recovery rates of the psychotic and the neurotic patients, but it seems likely that as the psychosis receded, the family interrelating would have improved.

An unfortunate though unavoidable feature of the study is that besides receiving psychotherapy, many of the patients, in both categories, were also receiving medication. Thus, it is impossible to say what part the therapy had played in their recovery. However, irrespective of what had caused the improvement, the important point is that the negative interrelating within the psychiatric patients' families had been significantly reduced, and such a finding has not been previously demonstrated.

The scale that mostly clearly differentiated between the neurotic and the psychotic patients was LC. It was almost twice as high for the psychotic patients. In the PROQ, a measure of general negative relating, this scale has been shown to differentiate significantly between forensic and non-forensic men (Birtchnell et al., 2009), and between psychotherapy patients and general population samples (Birtchnell & Evans, 2004). It has also been shown to have high correlations with all 10 of the Personality Diagnostic Questionnaire-IV scales (Birtchnell & Shine, 2000), and a significant association with committing sex offences (Shine & Birtchnell, 2002). The LC scale of the FMIQ, a measure of interrelating, might also be considered a measure of general psychopathology. The psychotic patients also scored significantly higher than the neurotic patients on the ND scale, a measure of distancing. This is in accord with the tendency of psychotic patients to withdraw into themselves and to associate less with others.

Patients and Parents' Change over the Course of Therapy

The patients/parents' FMIQ scores and also the parents' CREOQ scores were significantly higher at the start of therapy than those of the non-patients. By the end of therapy, the patients' relating to their parents' scores had dropped significantly on two scales and on the total score (Table 2). The score of one of these scales and the total score were no longer significantly higher than those of the non-patients (Table 5). Before therapy, the parents' relating to the patients' scores differed significantly on four scales compared with the non-patients' parents' relating to them. By the end of therapy, one of these scores and three others had dropped significantly. The four scores that distinguished between the patients' parents and the non-patients' parents before therapy had come closer to those of the non-patients' scores after therapy.

The patients' relating to their parents scores did not change very much over the course of therapy. We should bear in mind that the treatment was not directed specifically at the patients' interrelating, though this might well have been touched upon from time to time. While it might have seemed likely that the patients' symptomatic improvement would have contributed to an improvement in their relating to their parents, it could have taken time for such improvement to have taken place, because it involved more than one person. While the scores did not improve after 3 months of therapy, some patients did show improvement after 1 year. A treatment strategy that focuses predominantly upon improving relating and/or interrelating might have been more effective. Alternatively, those family members who had been identified as possibly contributing to dysfunctional relating/interrelating could have been invited into the therapy. Individual resistance can sometimes be reduced when problems are identified as family

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ones rather than individual ones. These had been recognized and relevant treatment strategies had been devised and incorporated into the psychotherapeutic model in its more recent development (Kalaitzaki & Nestoros, 2006).

It is noteworthy that more other-rating than self-relating scores dropped over the course of therapy, both for the patients and for their parents. That both the patients and the parents admitted improvement on more scales referring to their view of others' relating to them than their relating to others may in fact be true. Because the psychotic symptoms did improve significantly, it would seem unlikely that the psychotic patients' self and other perception would have been affected by their mental state. In fact, the parents admitted relating improvements on the very same scales that the patients had perceived them as having improved on—though the patients reported changes on more scales. This effect was also apparent for the parents: they perceived more changes in the patients than the patients admitted to themselves. Cognitive theory would have it that behavioural changes could be a result of altering emotions and cognitions. Thus, it would be that the view of the other's relating changes first, and this in turn affects the way the person relates towards the other.

An unexpected finding was that the parents' relating to the patients had improved significantly more than the patients' relating to the parents (four scales versus two), even though the parents had not themselves been involved in the therapy. It could be that the patients' change can affect the whole family, and especially those family members who are in closer contact with them. The parents also perceived more changes than the patients admitted to (four versus two). This could mean that the parents actually viewed changes in the patients' relating to them that the patients were not yet able to perceive in themselves.

The Interrelating between the Parents of the Patients and the Parents of Non-Patients

The CREOQ is a measure of the negative interrelating between marital partners. In an earlier study (Birtchnell et al., 2006), it was shown that the CREOQ scores of couples who were seeking couple therapy had significantly higher mean scores than couples who were not. In the present study, it was considered unlikely that the negative interrelating between the parents of the individuals who were seeking therapy would be more marked than that between the parents of the individuals who were not; but in fact it was, though the difference was not as marked as that between the patients and their parents and the non-patients and their parents. It may be that the interrelating between the parents of psychotherapy patients has been influenced by the patients' psychiatric condition. Alternatively, the maladaptive interrelating already exists between the parents of psychotherapy patients, and this was simply part of a general familial discord. This would further lead to the emergence or deterioration of the patients' psychiatric symptoms. Finally, it was not expected that the patients' parents' CREOQ scores would change over the course of therapy, as they were not involved in patients' treatment; but in fact they did. They actually improved, though not to the extent that the parent–patient FMIQ scores did. Thus, a secondary effect of therapy would have been that the patients' parents got on better together. This finding is in agreement with the study of Robin, Siegel and Moye (1995). They compared the effectiveness upon family relations of behavioural family systems therapy (BFST) and ego-oriented individual therapy (EOIT) in 22 adolescents with anorexia nervosa, who were also receiving a common medical and dietary regimen. Individual psychotherapy (EOIT) resulted in a significant reduction in negative communication and parent-adolescent conflict, even though the family members were never involved in the therapy. These findings were comparable to those in the BFST. When the study was repeated in a sample of 37 adolescents, the results were similar (Robin et al., 1999).

Of course we cannot say what caused the improvement in the parents' interrelating. It could have been that the improvement in the patients' interrelating with their parents had caused the parents' negative interrelating between themselves to be reduced; or it might have been that the improvement in patients' psychological condition had caused the parents to get on better together because the tensions within the family had been reduced. Because the therapy had not been directed at reducing the maladaptive family relationships, but had been focused mainly on the patients' individual difficulties, we are inclined to conclude that it was the improvements in this area that had resulted in the improvement of parents' interrelating.

Parents and Siblings' Change over the Course of Therapy

Applying the FMIQ to the patients' siblings and their parents over the course of therapy was

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intended to be a control measure, and the expectation was that where the FMIQ scores would show improvement for the patients, they would not show improvement for the siblings. Although the siblings' relating to their parents did not change, surprisingly, the parents' relating to the siblings and their view of the siblings' relating to them did. Also, the siblings' view of their parents' relating to them did change. In particular, the parents viewed themselves as less distant and the siblings as improved on the upper/distant scales. Thus, the therapy had improved not only the parents' relating with the patients, but also the parents' relating with the patients' siblings.

Is There a Relationship between Symptomatic Improvement and Improvement in Family Relationships?

The study showed that the patients' symptomatology, as measured by the SCL-90 and the BPRS had improved over the course of therapy. Thus, at the symptom level at least, the therapy had been a success. It could have been assumed that the symptomatic improvement would in some way have been related to the recorded improvement in the patients' family relationships, but the association could have gone either way, or the therapy could have brought about the improvement in both the symptoms and the relationships. It is possible that not all of the patients had shown a substantial clinical improvement, so it would have been interesting to see whether the patients who improved most on the two symptomatology measures had shown the most improvement on the FMIQ scales; but there were not sufficient numbers for us to test this.

An important conclusion of the present study, which covers ground that has not been previously explored, is that the therapy of individual patients may have positive repercussions within the patient's entire family. Of course, the reverse may also be the case, that a patient's interpersonal difficulties, and perhaps even also his/her presenting psychopathology, may be viewed, in part, as a consequence of the interpersonal difficulties that exist within their families. The results of this study also indicate that our measures of interrelating might prove useful as a measure for systemic family therapists to use.

Improvements that Could Be Made to the Research Strategy

More rigorous data collection would have ensured that the samples were more completely representative of the entire patient pool. Larger samples would have been an advantage in order to permit more reliable gender comparisons and to ensure a greater generalisability of the results. Intermediate assessments would have been useful to identify the time in therapy when the change in scores occurred.

A possible extension of this work would have been the administration of the CREOQ to married, individual patients, who were in therapy, and to their partners, who were not in therapy. The expectation would have been that, although only the one member of the marriage was being treated, if the therapy was being successful, the quality of the patient's marital relationship would also have improved. Although the value of individual therapy is that the patient is offered a special and exclusive relationship with his/her therapist, there may, in the light of the present findings, be times when it might be appropriate, with the patient's agreement, to invite one or more other family members to enter into the therapy situation, at least for some of the sessions, or for the therapist to meet separately one or more family members. These principles have been recently incorporated in the recent advancement of the synthetiki psychotherapy (Kalaitzaki & Nestoros, 2006).

It would have been clinically useful to have had accounts of the family members' comments on any changes that had occurred in the family interrelating during the course of the patients' treatment. A further possibility is that the treatment might have brought about improvements in the family interrelating in the absence of improvement in psychiatric symptoms. It would be of interest to repeat the present study in a culture in which smaller percentages of patients lived with their parents. The assumption would be that the changes within the patients' families would have been less dramatic. Applying a psychotherapy model that would have been especially focused on rectifying the patients' maladaptive relating/interrelating might have produced greater improvements.

ACKNOWLEDGEMENTS

We wish to acknowledge that this paper is based upon the results of two PhD studies (Kalaitzaki, 2000, 2005). J.N.N. was the main supervisor of the first and the local supervisor of the second of these. We thank the psychology students for their assistance in the recruitment of the sample of non-patients and their families. We also acknowledge the contribution of Bill Birtchnell for designing the

DOI: 10.1002/cpp

software used for the graphic representations of the family presented in Figure 2.

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DOI: 10.1002/cpp