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This study evaluates personality changes, after successful completion of long-term group-analytic psychotherapy, in an outpatient day treatment unit (Athens Open Psychotherapy Centre).[1] *Test-retest method was applied in thirty-nine patients, who were assessed by the MMPI test and the Rorschach projective technique. The results indicate that group-analytic treatment appears to have an impact on functional and certain structural dimensions of the patient personality. More specifically, a significant decrease of clinical symptomatology, improved social adaptation, more controlled and better-adjusted emotional expressions, maturity of internalized representations and ability to establish and maintain personal relationships are observed.*

Key Words: group analysis outcome, group psychotherapy outcome, MMPI and Rorschach tests, personality changes, psychological assessment, test-retest method

Introduction

There has been much recent discussion about the approaches and research methods for the evaluation of group psychotherapy effects (Karterud, 1992; Seligman, 1995; Froyd et al., 1996; Ogles et al., 1996). As argued by Persons (1991), psychotherapy effects are often difficult to evaluate because outcome studies are sometimes conceptually incompatible with the models of psychotherapy evaluated.

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Also, the question of the validity of criteria chosen to evaluate change as a result of therapy is extremely complex and involves epistemological issues. Change criteria may be: social and occupational adjustment, behavioral or test data, subject's own evaluation, or therapist's judgments.

'One tactic that has been employed to evaluate the outcome of psychotherapy through objective criteria (test data), involves an inferential test-retest model' (Exner and Andronikof-Sanglade, 1992: 60). According to this model, the same tests are given at the beginning of treatment, some cases during it, and certainly after completion of therapy or after a certain period of time, as a follow-up.

In this test-retest model of evaluation, personality inventories are used in most cases (i.e. Defense Style Questionnaire, Inventory of Interpersonal Problems, Minnesota Multiphasic Personality Inventory, Social Adjustment Scale-Self Report, Symptom Checklist-90, etc.) and occasionally projective techniques, such as the Rorschach test, alone or in combination with a questionnaire. However, Graves et al. (1991) observe that most questionnaires investigate specific characteristics or certain dimensions of personality. On the other hand, the development of personal relations cannot be approached through questionnaires, because these mainly focus on behavior. This author also declares that the answers to questionnaires are controlled by the responder, who may consciously embellish or dramatize his/her condition. In contrast, the contribution of projective techniques may be more substantial to the investigation of the structural and functional characteristics of personality, the type of emotional expression, as well as internalized representations of relating to others. For these reasons, Rapaport recommends 'the use of a battery of tests, including personality inventories and projective techniques, especially Rorschach' (Rapaport et al., 1986: 268).

At the Open Psychotherapy Centre (O.P.C.), since 1980 we have adopted the test-retest model. This model involves the systematic administration of a battery of tests (personality inventories as well as projective techniques), before entering therapy and six months after completion of therapy. MMPI[2] and Rorschach[3] are always included in this battery. As to the choice of specific tests, our practice is consistent with Exner's attitude:

> Many clinicians are prone to administer both the MMPI and the Rorschach on their clients on the premise that they are complementary, but offer data derived

> from different task sources (i.e. self-report and cognitive-perceptual activity). (Exner, 1993: 63, parentheses in the original)

The review of literature, on the subject of assessing the results of group psychotherapy, did not reveal any research based on the combined use of MMPI and Rorschach tests. However, there are studies based on each test separately, i.e. either on MMPI (Acevedo et al., 1995) or Rorschach (Wode-Helgodt et al., 1988; Weiner and Exner, 1991; Exner and Andronikof-Sanglade, 1992).

Regarding the outcome studies in group-analytic psychotherapy (Dick, 1975; Sigrell, 1992; Tschuschke et al., 1992; Tschuschke and Dies, 1994; Tschuschke and Anbeh, 2000; Lorentzen et al., 2002), they are mainly based on therapists' and patients' reports, or on the use of inventories, but none of these studies had used the MMPI and Rorschach tests.

A test-retest study, based on MMPI and Rorschach tests had previously been conducted at the O.P.C. in order to examine personality changes after a successful completion of group-analytic psychotherapy in a patient sample with Mood Disorder (Economou et al., 1995). This was a pilot study, aimed at illustrating changes of personality and personal relations in quantitative parameters, beyond the subjective evaluations of changes that may be noticed by the patient him/herself, the therapist and mainly his/her therapeutic group. In that previous study we confirmed that:

1. changes after long-term group-analytic psychotherapy can be demonstrated through personality tests from different task sources (i.e. self-report and cognitive-perceptual activity) such as MMPI and Rorschach tests, and,
2. patients with mood disorder achieve a higher emotional stability.

The present study concerns an ongoing prospective research focusing on the evaluation of personality changes in patients who completed group-analytic psychotherapy successfully. According to the demographic characteristics and the diagnosis of the heterogeneous sample, we investigate:

a) the type and extent of changes occurring in patient personality as these have appeared in test data and
b) the factors which determine these changes (age, sex, diagnosis, duration of therapy, and group-analytic group alone or in combination with a psychotherapeutic community).

Method

a) Sample

The study concerns all patients (n = 39) who completed therapy successfully in a 2-year time period (1998 and 1999).[4] As successful completion of therapy we consider those patients who were in a good clinical condition (no active psychopathology) and had satisfying interpersonal relationships for a long time during their therapy in a group-analytic group, had completed their therapy 'properly', and, afterwards, had not requested therapy for a 2-year period.[5] 'Proper' completion of therapy means that the 'farewell period' (two months) has been respected and the whole group, including the conductors, has agreed to the termination of therapy. All patients had been administered a psychological assessment before entering therapy and a reassessment six months after its completion. Both assessments included the MMPI and Rorschach tests. Research data were obtained from the archives of the Therapeutic Department of the O.P.C.

b) Characteristics

The baseline sample consisted of men (28.2%) and women (71.8%), between 18 and 51 years old (mean: 28.8), who were not married (66.7%), had completed secondary education (48.7%) and were employed (87.2%).

Regarding the duration of therapy, 69.2% remained in therapy for 5-7 years (mean 5.9 years), 53.8% of patients completed their therapy in a group-analytic group, whereas 46.2% of patients had combined[6] therapy (group-analytic group at the initial phase of their treatment, participation in a psychotherapeutic community, for 1-2 years). The diagnoses according to DSM-IV, axis 1 (American Psychiatric Association, 1994) were: 61.5% mood disorder, 23.1% anxiety disorder, 7.7% schizophrenic or other psychotic disorder, 5.1% somatoform disorder and 2.6% adjustment disorder. The initial diagnoses were reviewed by two psychiatrists and some minor discrepancies have been resolved by a third psychiatrist.

c) Therapeutic model

Treatment in group-analytic groups at the O.P.C. is in accordance with the Foulkesian model (Foulkes, 1948; 1975; Foulkes and

Anthony, 1957), as it has been specifically developed by the Institute of Group Analysis, Athens (Tsegos, 1993; 1995; 1996a; 1999a; 2002). The group-analytic group is a slow-open, mixed group (as regards demographic characteristics and diagnoses), which consists of 5–12 members, including a conductor and a co-conductor, and meets once a week for one and a half hours. The duration of treatment is not determined, but there is an established farewell period. The conductors usually have completed their training in group analysis and the co-conductors are trainees at the Institute of Group Analysis (Athens), under regular supervision.

The psychotherapeutic community of the O.P.C. is a non-residential Therapeutic Community (T.C.), which operates according to the group-analytic model (Tsegos, 1982; 1996b; 1999b; 2002) and covers the whole range of psycho-dynamic and socio-dynamic activities (small socio-therapeutic groups, psychodrama, large group, community meeting, etc.). Each group meets once a week, for one and a half hours, and has a main therapist and a co-therapist. The patients participate in at least three groups weekly. The two conductors have been trained or are trainees in group analysis or in Sociotherapy-Psychodrama, in the corresponding training institutes (Institute of Group Analysis of Athens and Institute of Sociotherapy-Psychodrama of the O.P.C.).

All therapists work or have their clinical practice at the same clinical organization (O.P.C.), participate in the weekly staff groups and in the monthly sensitivity group of the organization, which is guided by a common therapeutic philosophy (Tsegos, 2002; Kostopoulos et al., 2003).

d) Instruments

1) *The Minnesota Multiphasic Personality Inventory (M.M.P.I.)* is a standardized questionnaire that elicits a wide range of self-descriptions, scored to give a quantitative measurement of an individual's level of emotional adjustment and attitude toward test taking. It consists of 566 items, which deal largely with psychiatric, psychological, neurological, or physical symptoms, and the type of answer is 'true', 'false' or 'no answer'. The raw scores are converted into normalized standard scores (T scores). The MMPI has a total of thirteen (13) standard scales, of which three (3) relate to validity and ten (10) to clinical or personality indices. Although the scales were originally designed to differentiate normal from

abnormal behavior, it is generally regarded as more useful to consider that the scales indicate clusters of personality variables (Groth-Marnat, 1990).[7]

For this study, the analysis of the MMPI concerns the T scores of the three validity scales (L: Lie, F: Validity or Infrequence, K: Correction), as well as the eight clinical scales: 1: Hypochondriasis (Hs), 2: Depression (D), 3: Hysteria (Hy), 4: Psychopathic Deviate (Pd), 6: Paranoia (Pa), 7: Psychasthenia (Pt), 8: Schizophrenia (Sc), 9: Hypomania (Ma). The scales 5: Masculinity-Femininity (Mf) and 0: Social Introversion (Si) are not considered as clinical scales, therefore they have not been included in the study.

2) The *Rorschach* test is a projective technique consisting of a set of ten bilaterally symmetrical inkblots. Subjects are requested to tell the examiner what the inkblots remind them of. The overall goal of this technique is to assess a client's personality structure, with particular emphasis on understanding how he/she responds to and organizes his/her environment. The central assumption of the Rorschach test is that stimuli from the environment are organized by a person's specific needs, motives, conflicts and certain perceptual 'sets'. This need for organization becomes more exaggerated, extensive and conspicuous when subjects are confronted with ambiguous stimuli, such as inkblots (Groth-Marnat, 1990). The interpretation of the protocol is based on the quantitative and qualitative analysis of the given responses, which are categorized and coded by the examiner. According to Exner (1993: 45), 'reliability of this test has been proved by temporal consistency of responses in repeated testing'.

For the Rorschach test, we studied the following nine primary variables, which are the most researched and are considered as the most representative for the cognitive/perceptive integration of the environment, emotional expression, ego functioning, internalized representations of relating, socialization, adaptation, etc.: the whole responses (W%), the detailed responses (D%), the form responses (F%), the positive form responses (F+%), the human movement (M), the responses with human content (H%), the popular responses (P%), the sum of shading responses (SumY) and the sum of chromatic responses (SumC).[8]

For the purpose of this study, the Rorschach protocols have been re-coded blindly, by two psychologists, other than those who had conducted the initial and final psychological assessment and with

special training in the above test. Some minor discrepancies have been resolved by a third psychologist.

In both the MMPI scale scores and the scores of the above Rorschach variables, a comparison will be made between the initial mean value (test) and the final mean value (retest). No pathological or normal values will be mentioned because this study investigates the differences between the initial and final condition.

For the interpretation of MMPI, we consulted the following manuals: Butcher et al. (1989), Graham (1993), Duckworth and Anderson (1986), Groth-Marnat (1990). For the interpretation of Rorschach parameters, we consulted the following authors: Rorschach (1947), Klopfer et al. (1956), Beck (1961), Anzieu and Chabert (1983), Rapaport et al. (1986), Groth-Marnat (1990) and Exner (1991; 1993).

e) Statistical analysis

1) *Paired sample t-test* was performed on the test to retest scores for MMPI scales and Rorschach parameters.

2) *Multiple linear regression models* were used with MMPI or Rorschach retest scores as a dependent variable. The following variables were considered as independent: sex (females as reference, males); age (years); duration of therapy (years); diagnosis (two indicator variables for the categories: a) mood disorders, b) anxiety and/or somatoform and/or adjustment disorders, and c) schizophrenic or other psychotic disorders, with the first category as reference); therapy (only group-analytic group as reference, combined therapy, i.e. group-analytic group and participation in the psychotherapeutic community); and corresponding test scores. All models were adjusted for the corresponding test scores, sex, age, duration of therapy, the two indicator variables for diagnosis and therapy.

Results

a) Paired sample t-test analysis

1. MMPI test (see Table 1): Statistically significant differences were observed in nine of the eleven scales of MMPI, that were studied; particularly, in two of the validity scales (F, K) and in seven of the eight clinical scales (Hs, D, Hy, Pd, Pa, Pt, Sc).

TABLE 1
Mean values and standard deviations of test and retest MMPI scales, mean and standard deviations of paired differences

MMPI scales	Test		Retest		Mean paired differences		Paired t	p value (two-tailed)
	Mean	(s.d.)	Mean	(s.d.)		(s.d.)		
L	44.10	(10.02)	45.82	(8.61)	–1.72	(9.41)	–1.14	0.26
F	63.79	(16.18)	51.97	(13.17)	11.82	(19.90)	3.71	$\leq 10^{-3}$
K	46.08	(10.25)	54.90	(13.55)	–8.82	(11.72)	–4.70	$< 10^{-3}$
Hs	59.67	(13.19)	53.62	(11.81)	6.05	(14.47)	2.61	0.01
D	64.49	(11.97)	51.46	(11.54)	13.03	(15.72)	5.18	$< 10^{-3}$
Hy	64.72	(13.55)	58.28	(11.62)	6.44	(16.65)	2.41	0.02
Pd	64.74	(12.23)	57.97	(10.38)	6.77	(12.27)	3.45	$\leq 10^{-3}$
Pa	58.03	(10.98)	49.92	(8.51)	8.10	(11.84)	4.27	$< 10^{-3}$
Pt	65.10	(13.93)	51.95	(12.24)	13.15	(16.93)	4.85	$< 10^{-3}$
Sc	67.10	(16.04)	52.77	(11.06)	14.33	(16.58)	5.40	$< 10^{-3}$
Ma	56.44	(9.41)	53.33	(9.28)	3.10	(10.67)	1.82	0.08

- Validity scales: the difference in F scale (decrease in scores) indicates a reduction of incapability and self-depreciation feelings, and an improvement of self-image. The difference in K scale (increase in scores) indicates an improvement in the function of defense mechanisms and a reinforcement of ego strength.
- Clinical scales: the differences in clinical scales (decrease in scores) suggest an overall reduction of symptoms and psychopathology, in particular, a decrease in concern with illness and disease (Hs), depressive emotions (D), conversion of psychological conflicts into physical complaints and the defensive denial of emotional or interpersonal difficulties (Hy), acting out, deviate and antisocial behavior, feelings of alienation from family and authority figures (Pd), paranoid processes, suspiciousness, misinterpretation of motives of others and interpersonal rigidity (Pa), compulsions, obsessions, unreasonable fears, excessive doubts (Pt), and, finally, paradoxical and unusual thoughts or behaviors, social alienation, inability to cope, poor family relations (Sc).

No statistically significant differences are observed between test-retest: a) in L scale: the initial score suggests an honest attitude towards the test (a personality trait), therefore, it is assumed to remain unchanged, b) in Ma scale (euphoria–hyperactivity): the

mean value tends to drop at retest, whereas we would anticipate a rising tendency (Economou et al., 1995). Furthermore, different studies of MMPI mention that usually Ma and D scales are negatively correlated (Groth-Marnat, 1990). In our sample, while the initial low score in Ma scale may be considered as anticipated due to the high score in D scale (depressive emotions are predominant), at retest, the decrease in D scale keeps the Ma scale at the same level (in fact, there is a slight drop). As a result, we may conclude that after therapy we observe a balance between depressive and euphoric emotions, between their passive and active expression.

2. Rorschach test: Among the nine parameters of the Rorschach test that we studied, a statistically significant difference is observed only in the Popular (P) responses. The increased score in this parameter suggests that, after therapy, the ability to perceive reality according to common sense is improved, as well as the ability for social adaptation and the ability to establish and maintain personal relationships.

We also observe differences, at a trend level,[9] in Whole (W) responses (a tendency for improved development of the intellectual potential and the ability to cope with problems of everyday life in general), Sum Y responses (a tendency for decrease of depressive emotions and anxiety) and Sum C responses (a tendency for more controlled and adjusted emotional expression).

In other parameters, such as Human (H) responses, there is no

TABLE 2
Mean values and standard deviations of the test and retest Rorschach parameters, mean and standard deviations of paired differences

Rorschach parameters	Test		Retest		Mean paired differences		Paired t	p value (two-tailed)
	Mean	(s.d.)	Mean	(s.d.)		(s.d.)		
W	32.56	(18.22)	38.39	(19.87)	–5.82	(19.76)	–1.84	0.07
D	59.39	(16.85)	56.36	(19.48)	3.03	(19.22)	0.98	0.33
F	54.85	(15.45)	58.95	(19.44)	–4.10	(22.89)	–1.12	0.27
F+	71.41	(14.36)	75.62	(17.64)	–4.21	(20.39)	–1.29	0.21
P	27.54	(11.11)	35.54	(14.12)	–8.00	(13.32)	–3.75	$\leq 10^{-3}$
H	22.21	(12.61)	21.82	(10.65)	0.39	(14.41)	0.17	0.87
M	2.87	(2.56)	2.51	(1.76)	0.36	(2.22)	1.01	0.32
Sum Y	2.95	(3.72)	1.83	(1.46)	1.12	(3.84)	1.82	0.08
Sum C	2.82	(2.33)	2.05	(1.74)	0.77	(2.65)	1.81	0.08

difference (statistically significant or nearly significant) between test-retest, but the initial mean score indicates a certain degree of interest in people and personal relationships. This characteristic is probably a good prognostic factor for group psychotherapy outcome (Kakitsis, 2000).

b) Multiple Linear Regression Models

1. MMPI test: Following the use of multiple linear regression models with MMPI retest scales as dependent variable (partial regression coefficient (b) and p values are mentioned in parentheses), we observe:

a) An association between sex and score in scale D (Depression) at retest ($b = 8.79$, $p = 0.05$): males, compared with females, show an increase of score in D scale at retest, after controlling for the other independent variables.
b) An association between therapy and score in scale D (Depression) at retest ($b = -10.35$, $p < 0.01$): patients treated with combined therapy, compared to patients treated only with group-analytic group, show a decrease of score in D scale at retest, after controlling for the other independent variables.
c) An association between diagnosis and D (Depression) ($b = -12.13$, $p < 0.01$), Pt (Psychasthenia) ($b = -9.30$, $p = 0.03$) and Sc (Schizophrenia) ($b = -7.72$, $p = 0.05$) scales: patients diagnosed with anxiety, adjustment and somatoform disorders, compared to patients diagnosed with mood disorders, have a decrease of score in the above scales at retest, after controlling for the other independent variables.
d) We also found an association between corresponding test and retest in scales L (Lie) ($b = 0.36$, $p = 0.02$), K (Correction) ($b = 0.75$, $p \leq 10^{-3}$), Pd (Psychopathic Deviate) ($b = 0.34$, $p = 0.03$) and Ma (Hypomania) ($b = 0.36$, $p = 0.03$) after controlling for the other independent variables: We presume that the final score in the above scales is determined by the initial performance of the patient in the corresponding scales, i.e. the initial traits: i) degree of honesty towards the test, extent and type of defense and level of insight (L and K), and ii) level of psychopathic (Pd) and hypomanic (Ma) ways of behaving, determine the level of his/her personality change in the above parameters.

2) Rorschach test (see Table 2): Following the use of multiple linear regression models with Rorschach retest parameters as dependent variables (partial regression coefficient (b) and p values are mentioned in parentheses), we observe:

a) Sex seems to be a determinant of parameters F (Form) ($b = -15.62$, $p = 0.05$) and Sum Y (Shading) ($b = 1.90$, $p < 10^{-3}$) retest scores. This means that males, compared to females, have a decrease in the F retest scores and an increase in the Sum Y retest scores, after controlling for the other independent variables. These two parameters are usually considered as negatively correlated. It is reminded that the F parameter indicates the degree and quality of control on impulse tendencies and behavior and the impact of emotional factors on intellectual functioning, while the Sum Y indicates the way through which the individual copes with anxiety and depressive feelings, and also how anxiety prevails over reasonable organization of stimuli. Consequently, in our sample, women seem to achieve an improved balance between reasoning and emotional control, following their group-analytic treatment.
b) Duration of therapy appears to be a determinant of parameters H (Human responses) and M (Movement responses) retest scores: every additional year of therapy duration increases the H responses ($b = 2.23$, $p = 0.02$) and the M responses ($b = 0.38$, $p < 0.01$) retest score. These parameters seem to be complementary. It is reminded that H responses reflect an interest in other human beings and indicate the capacity of self-representation in a system of human relationships, however this interest does not necessarily imply capacity for warm and close interpersonal relationships. M responses presuppose H responses (and not vice versa) and indicate a wealthier inner fantasy life with regard to the outside world, a strong internalization of action and a better ego functioning, i.e. ability to plan, impulse control and ability to withstand frustration. Hence, in our sample, it seems that long-term therapy is essential to achieve these changes and to promote development of internalized representations of relationships. At the same time, the fact that the initial mean score suggests an interest in other human beings and interpersonal relationships may lead to a longer duration of therapy.
c) Patients diagnosed with anxiety, adjustment and somatoform

disorders, compared with patients diagnosed with mood disorders, have a decrease in the D parameter (Detail responses) ($b = -14.01$, $p = 0.06$) at retest score, after controlling for the other independent variables. It is also to be noted that a high score in the D parameter means a focus on the safe, obvious and concrete aspects of situations, rather than probing into the unusual. So, these patients, compared with patients of other diagnostic categories, have a higher decrease in the partial perception and organization of the environment and integrate the stimuli more synthetically as a whole.

d) We also found an association between the corresponding test and retest in parameters W (Whole responses) ($b = 0.42$, $p = 0.03$), M (Movement responses) ($b = 0.22$, $p = 0.04$) and P (Popular responses) ($b = 0.22$, $p < 0.05$), i.e. the final score in the above parameters, depends on the initial score. This means that changes achieved during therapy are determined by the patient's initial state of maturity in the above parameters. More specifically, the extent of maturity in the ability of perceptional integration as a whole (W), internalized representations of relationships (M) and good deal with common sense, social adaptation and ability to establish and maintain personal relationships (P), will be determined by the initial balance between health and pathology.

Discussion

We have attempted to study the impact of successful long-term group-analytic therapy on the patient's personality, on the basis of test data from a sample of thirty-nine patients with different diagnoses.

The observations which have arisen from the statistical analysis are the following: the first statistical method showed statistically significant differences in most MMPI scales and only in one of the Rorschach parameters (P). This is possibly due to the nature of the tests that were used; the Rorschach parameters are actually an attempt to quantify and objectify the free qualitative answers. So, the answers are not predetermined by the creator of the test, as in MMPI for example, where the subject is obliged to choose between three preset options: 'true', 'false', 'no answer'. In addition, both the MMPI scales and Rorschach parameters mostly explore personality traits (Gilberstadt and Duker, 1965; Exner, 1993). However, a

self-report questionnaire examines traits in quite a different way than the unstructured projective technique. In the first case, the responder's answers include complaints, symptoms, state and traits, whereas in the second case traits are more clearly demonstrated. As concerns the necessity of assessing through different types of psychological tests (self-report structured questionnaire and cognitive-perceptual projective technique), this has been the subject of an extensive discussion (Graves et al., 1991; Exner, 1993).

Moreover, besides theories which claim that Rorschach mainly investigates structural aspects of personality, findings from many studies have demonstrated that the majority of Rorschach basic parameters are very stable and do remain consistent over time (Exner, 1993: 45–51). So, these studies prove that the Rorschach test explores personality structure. Furthermore, according to the same author, the use of the Rorschach test-retest model as an indirect measure of change is based on this logic. In view of the stability of parameters, in our study statistical significance in P parameter and significance at a trend level in W, Sum Y and Sum C parameters has important implications, and these changes may be considered a result of the therapeutic method.

Regarding the methodology, the results are based on a comparison of the test-retest and not a comparison of the sample tested versus a control group, which is a limitation of this study. However, in a prospective study such as this, it is almost impossible to form: a) *a non-patient control group,* because it is practically impossible to predict in advance the characteristics of the group that would complete therapy successfully, b) *a control group of diagnosed patients,* because it is evident that it is unethical to leave patients untreated in order to have a control group. The following methods seem more feasible, although each one presents with its own specific difficulties: a) to form *a control group of patients who have not completed their therapy,* b) to form *a control group consisting of patients with a different model of therapy*, and c) to form *a control group of patients treated with a different type of therapy at the same organization.* At the O.P.C., although group analysis is regarded as the main therapeutic method, there are cases treated only with pharmacotherapy, or in a psychotherapeutic community, or with psychodrama; however, usually these are not long-term treatments.

Another limitation of the study is that, in addition to the seven variables that we reviewed, there are other important variables that need to be considered, such as life events, previous and/or parallel

treatments (dyadic psychotherapy, pharmacotherapy, family therapy), therapeutic experience of the therapist, etc. However it was not feasible to include other variables due to the size of our sample.

An advantage of our research is that the evidence of change is based on test data which, according to Exner and Andronikof-Sanglade (1992: 60), are objective criteria.

Another important asset is that personality changes in our patients occurred through a homogeneous group-analytic therapy, with therapists of the same training and clinical practice, in an organization guided by a common therapeutic philosophy (group-analytic and therapeutic community theory and practice).

Conclusion

Long-term group-analytic psychotherapy leads to a significant reduction of symptoms and psychopathology, more controlled and adjusted emotional expression, ability for social adaptation, for establishing and maintaining personal relationships, more flexible defense mechanisms, reinforcement of ego strength and a trend for a change in the synthetic perception of the environment.

Women show a greater reduction in depressive symptoms and achieve a higher level of internal control. Patients diagnosed with anxiety, adjustment and somatoform disorders show a higher decrease in symptomatic manifestations. This finding is consistent with other investigators (Kaminski, 2001). These patients also improve their ability to organize experiences as a whole. The longer duration of group-analytic therapy results in an improved ability to internalize the representations of relationships (structural element of personality) and reduce the egocentrism. Conjoint therapy has a greater effect on depressive symptoms. The occurring changes seem to be determined by the initial degree and type of defensiveness, the maturity of internalized representations of relationships, the social adjustment and the way of perceiving the environment. Age did not seem to be a determinant.

The above personality changes suggest that long-term group-analytic treatment has an effect on psychopathological, functional and some structural dimensions of personality. In particular, the duration of treatment appears to influence exclusively structural factors of personality, which are related to the maturation of self-image and the representations of interpersonal relationships.

Notes

1 The O.P.C. (est. 1980) is an autonomous, self-sufficient, non-profit psychiatric day centre, in close collaboration with the Institute of Group Analysis (Athens).
2 Since its development in 1940, the MMPI has become the most widely used clinical personality inventory and is often used as a measurement device in research studies (over 8,000 published research references) (Groth-Marnat, 1990).
3 This test stands as the most useful and the most widely used tool of its kind in diagnostic personality testing (Rapaport et al., 1986) and remains a well-respected assessment device, despite attacks from both within and outside the field of psychology (Groth-Marnat, 1990).
4 During this 2-year period, in a total of 146 patients who participated in 19 group-analytic groups, 39 successfully completed therapy, 31 unexpectedly or prematurely dropped out, while 54 patients were new members. It is reminded that the duration of the participation in a group-analytic group therapy varies.
5 The changes in personality and treatment effects tend to be maintained after six months and our clinical experience is that they are enduring during the time after therapy. None of these patients asked for help in the next two years after therapy. Many studies had similar observations (Robinson et al., 1990; Sherman, 1998).
6 Those with a more severe psychopathology, accompanied by functional impairment, had combined treatment.
7 In 1989, a re-standardization of the first form was created and nowadays the form M.M.P.I.–2 is in use. The M.M.P.I.–1 is still administered in Greece, since the validation of MMPI–2 has not been completed yet. In Greece there are two standardized versions of MMPI–1 (Kokkevi et al., 1981; Manos and Butcher, 1982). For the purpose of this study we used the first Greek standardization.
8 We use Beck's list and coding because a pilot standardization has been performed in an Athenian population (Georgas and Vassiliou, 1967).
9 The criterion of $P \leq 0.05$ was chosen to minimize the probability of a type I error (finding a significant difference when one does not exist). Yet, it does not protect us from a type II error (failure to find a difference when the difference does exist). Increasing type I error, a type II error decreases, so that indications of a *trend* can be shown.

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