

The effects of short-term group psychodynamic psychotherapy on the personality traits of patients treated in a day ward

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Summary

Aim. In the literature, there is no research that would indicate how a change in specific personality elements may affect the therapeutic effect of short-term group psychodynamic psychotherapy (STGP). The aim of the study was to evaluate the effect of short-term group psychodynamic psychotherapy on personality traits in a population of patients with neurotic and personality disorders in a day ward of neurosis treatment.

Method. The study involved 139 people with anxiety and personality disorders, including 110 who participated in the control measurements. The dimensions of personality (neuroticism, extraversion, psychoticism, lie) were assessed on the basis of the Eysenck Personality Questionnaire (EPQ) adapted to the Polish conditions. The measurements were made at two time points: (1) before treatment, (2) after 12 weeks of treatment.

Results. During therapy the level of neuroticism, extraversion, psychoticism and lie did not change significantly in the group of neurotic patients. In the group of people with personality disorders, the level of neuroticism significantly decreased ($p = 0.0008$), whereas the level of extraversion increased ($p = 0.037$). The values for psychoticism and lie did not change significantly in the course of psychotherapy in any group of patients.

Conclusions. The dynamics of changes in neuroticism and extraversion under the influence of short-term group psychodynamic psychotherapy (STGP) in a day ward of neurosis treatment seems to be an important marker for assessing the effectiveness of the treatment in people suffering from personality disorders. There is a need to develop more precise parameters for the assessment of recovery in the group of people with anxiety disorders.

Key words: psychodynamic psychotherapy, clinical effectiveness

Introduction

The aim of the study was to evaluate the effect of short-term group psychodynamic psychotherapy on the structure of personality in the population of patients with neurotic and personality disorders in a day ward of neurosis treatment (DWNT).

Day wards of neurosis treatment are a traditional form of therapy for neurotic and personality disorders. The first wards were founded in Poland in the early 1960s in Krakow by Professor Jerzy Aleksandrowicz, in Wroclaw by Doctor Henryk Szydlik and in Pruszkow by Professor Stefan Leder. Currently, the framework for the functioning of day wards of neurosis treatment is established by the National Health Fund (NFZ); they are registered and contracted as hospital departments. In accordance with the requirements of the National Health Fund, patients of a day ward of neurosis treatment benefit from group psychotherapy, which is the main method of treatment in these units. The treatment time is limited to 12 weeks; there are certain minimum requirements for personnel, which mostly consist of psychologists and psychotherapists.

The theoretical principles of group psychodynamic psychotherapy was developed by a psychiatrist and psychoanalyst Wilfred Bion [1], then, they were extended and complemented by the generations of psychoanalytic and psychodynamic psychotherapists [2]. Short-term group psychodynamic psychotherapy uses the phenomenon of group process where group members meet together; at the beginning they are strangers to each other, but during the course of therapy they get to know each other and establish relationships. They also create a common mental object called the group, to which they belong, and establish relationships both with the group and with the therapists. Because initially the therapists withdraw and are hardly active, in the face of the contact with unknown group participants develop a very deep regression and start to manifest defensive schizoparanoic processes. The state of regression allows for the disclosure of previously unconscious transference and its correction – even very early developmental cathexis, when activated and projected onto the group and therapists, as the therapy continues has an opportunity to be analyzed and understood.

Psychodynamic group psychotherapy is an effective treatment of neurotic and personality disorders. In the form of short-term psychotherapy, however, it may be insufficient for some patients, besides it requires a certain capacity for social relationships (oedipal). Patients with deep needs of dyadic relationships may react with a considerable fear or envy, which prevents taking advantage of the therapy. This often happens in the case of some personality disorders (paranoid, antisocial, narcissistic), anorexia and substance abuse.

A significant symptomatic improvement in the mental condition of patients depends on many factors and is generally well-understood [3, 4]. It is also confirmed by experimental studies [5]. It is not clear, however, whether short, 12-week therapy has an effect on the personality structure [6]. The results of the study show that a symptomatic improvement maintains for at least one year after the end of therapy, which lets assume a change of the personality structure. However, this is not certain, particularly given the results of the study conducted by Lorentzen et al. [6] who demonstrated the difference in the response to the treatment with short-term therapy compared to the

long-term treatment. The data collected in studies on the effectiveness of short-term group psychodynamic psychotherapy in the treatment of personality disorders and anxiety does not explain the case and indicate the need for research in this area [7, 8].

The study used the Eysenck Personality Questionnaire EPQ-R to assess changes in the structure of personality [9]. It was a full version containing 100 questions relating to the 3 basic dimensions of personality: Neuroticism (N), Extraversion (E) and Psychoticism (P).

The elevated level of neuroticism, as a phenomenon associated with the activity of the limbic system, is characterized by the increased activation and the lower threshold of excitability of the subcortical structures. The elevated level of neuroticism with the reduced dimension of extraversion was observed in anxiety disorders, such as generalized anxiety disorder, obsessive-compulsive disorder, agoraphobia and anxiety disorders with panic attacks [10]. In the comprehensive meta-analysis of 175 studies published between 1980 and 2007, Kotov et al. [11] confirmed the strong relationship of personality traits, including, especially, neuroticism and extraversion, with anxiety disorders, depression and addiction.

It has been indicated that the relationship between the level of neuroticism and depressiveness and anxiety, which was confirmed in literature, reflects a deeper functional aspect of these disorders. This is manifested by a better predictive value of neuroticism compared to the psychopathology subscales for these disorders (depression, anxiety) [12].

Neuroticism and extraversion are important dimensions of personality increasingly gaining in importance as risk factors in the progress and development of anxiety and depressive disorders [13], and more recently as pathoplastic factors in the development or acceleration of dementia [14]. In the context of public health associated with professional activity, the described dimensions of personality proved to be predictors of work absenteeism, both among “healthy” employees, and those struggling with mental illnesses [15].

The scale of lie had originally only an auxiliary meaning providing the information on how well the subject filled in the questionnaire, however, the way of controlling answers by asking obvious questions, for example, “Have you ever stolen anything in your life?” approaches the scale of lie to the dimension of social desirability as in the Marlowe–Crowne Social Desirability Scale (MCSDS) [16]. The scale assesses whether subjects react truthfully, or they adjust responses to improve their self-presentation.

Material

The study enrolled 139 people, including 110 who participated in two control measurements. 29 patients (20.9%) refused further participation in the study or were inaccessible due to a change of address. The age ranged from 19 to 57 years, in the group with neurotic disorders (ND) it was 36.82 ± 10.29 years, which was significantly different from the mean age in the group of subjects with personality disorders (PD, mean 30.26 ± 8.62 ; $p = 0.0007$) (Table 1). The differences were demonstrated in the proportion of men (31/28.2%) to women (79/71.8%) in the group which completed

the study ($p = 0.0028$) (Table 2). 39 people were given psychopharmacotherapy during the treatment at a day ward of neurosis treatment (35.5%).

Table 1. Age and education [in years] broken down by ND and PD diagnosis

	ND	PD	p
Mean age	36.82	30.26	0.000742
SD age	10.29	8.62	
Mean education	13.94	14.23	0.56
SD education	2.65	2.36	

Table 2. Sex broken down by diagnosis ($\chi^2(df = 1)$; $p = 0.0028$)

	males	females	Total
ND	12(10.91%)	55(50%)	67
PD	19(17.27%)	24(21.28%)	43
Total	31(28.18%)	79(71.82%)	110

The diagnosis of personality disorders and neurotic disorders was based on ICD-10 diagnostic criteria. Clinicians (clinical psychologists and psychiatrists) used a method of diagnosis objectification – long-term patient observation, in this case it was 12-week observation at the Day-care Unit for Neurosis Treatment. Diagnosis was discussed in a therapeutic team to match patient's symptoms to ICD-10 criteria.

67 patients were diagnosed with neurotic disorders, 43 with personality disorders, including 15 patients (13.6%) diagnosed with both neurotic and personality disorders. In 3 patients (2.7%) depression coexisted with personality disorders (Table 3). Due to the naturalistic nature of the study all these subjects were included in the study group.

Table 3. The study group with neurotic (ND) and personality disorders (PD) broken down by the ICD-10 classification

ND diagnosis	Number of patients	Percent (%)	PD diagnosis	Number of patients	Percent (%)
F32.0	3	2.73	F60.0	2	1.82
F40.0	4	3.64	F60.1	1	0.91
F40.1	3	2.73	F60.3	10	9.09
F40.1 F10.2	1	0.91	F60.4	3	2.73
F41.0	9	8.18	F60.5	1	0.91
F41.1	5	4.56	F60.6	2	1.82
F41.1 F45.3	1	0.91	F60.7	4	3.64
F41.2	18	16.36	F60.8	8	7.27
F41.2 F50.1	1	0.91	F60.9	10	9.09
F41.3	6	5.45	F61	2	0.91

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F42.0	3	2.73			
F42.2	1	0.91			
F43.2	5	4.56			
F43.2 F10.1	1	0.91			
F45.0	3	2.73			
F45.3	1	0.91			
F48.0	1	0.91			
F50.2 F41.2	1	0.91			

All patients were treated at the Day-care Unit for Neurosis Treatment of the Mental Health Care Centre in Wrocław. The treatment included 12-week group therapy in a closed psychotherapy group. The meetings were held every day on weekdays, in the form of two ninety minute sessions. The group consisted of 10 to 12 patients and two psychotherapists. The session started with the individual work of one of the patients, who came into contact with the therapist of his choice, and the group was watching his work at that time. Another 45 minutes was a time for reflection and discussion between patients on the topic of the first half of the session with occasional comments from therapists. Therapists in their interventions focused on unconscious emotions, thoughts and behaviors that patients were unable to perceive. Psychodynamic interventions based on confrontation, clarification, and interpretation were the main way to exert a therapeutic effect on patients. Each week one day was devoted to psychodrama with minimal therapists' activity. If there were such indications, drugs were prescribed – 39 patients (35.5%) used psychotropic drugs, mainly selective serotonin reuptake inhibitors.

Method

The Eysenck Personality Questionnaire EPQ-R in the Polish adaptation of Brzozowski and Drwal [9], purchased for the study in the Psychological Test Laboratory, was the basic questionnaire for evaluation in this study. It was a full version containing 100 questions relating to the 3 basic dimensions of personality: Neuroticism (N), Extraversion (E) and Psychoticism (P), which also assess the severity of the described disorders in a dimensional manner. The dimensional approach is widely used in research in the field of psychiatry and social psychology. In this publication, we do not present symptomatic questionnaires as it concerns the relationship between diagnosis, personality traits and the effect of the therapy. The scale of Lie (L), which is a control scale, makes it possible to assess the tendency to present oneself in better light and susceptibility to social approval.

The personality concept of Hans Eysenck was based on the assumption of the interaction between genotype and environmental factors, which together produce phenotypic properties of the organism, including anatomical and physiological characteristics of the nervous system. The nervous system together with the environment determines basic personality traits and behavior.

The subjects were divided into two groups: patients diagnosed with neurotic disorder without a diagnosis of personality disorders and patients with a diagnosis of personality disorder. If both conditions occurred together, the assignment to a certain group was determined on the presence of personality disorders. It was assumed that the change in the structure of personality, if any, will be greater, or at least different in patients with a diagnosis of personality disorder than in people diagnosed with neurotic disorders.

At the time when Eysenck created his questionnaire the concept of personality disorders was not used and patients with mental health problems were treated as “neurotic”. The current division (viewed from the point of the psychodynamic theory) extends in such a way that in personality disorders the pathology is more significant and visible in a daily life than in neurotic disorders.

The study aimed to determine whether and to what extent the therapy had an impact on the personality traits measured in the EPQ-R, and whether it influenced the two groups of disorders to the same extent. The measurements were performed immediately (within a few days) before and immediately after the completion of treatment. The Student’s *t*-test for dependent variables was used for the statistical comparison of the mean measurements of the EPQ-R scales before and after the treatment. The impact of a diagnosis of personality disorders on the mean evaluations in the EPQ-R scales was determined by using ANOVA for dependent variables.

Results

Patients treated using short-term group psychodynamic psychotherapy in a day ward of neurosis treatment due to neurotic disorders (ND) showed slight and non-significant dynamics in reduction of the level of neuroticism. Similarly, there was no clear change in the level of extraversion after short-term group psychodynamic psychotherapy performed in this group of patients. Also other EPQ scales, i.e., Psychoticism and Lie, had stable values over the observed period of time in people with anxiety disorders (Table 4).

Table 4. Personality dimensions measured using the EPQ-R in the group with neurotic disorders before and after the therapy (*t*-test for dependent variables)

Neurotic disorders	Mean	SD	N	Difference	p	Confidence interval L	Confidence interval P
Neuroticism1	18.28	4.73	67	0.31	0.55	-0.72	1.35
Neuroticism2	17.97	4.56					
Extraversion1	10.28	5.57	67	-0.55	0.26	-1.52	0.42
Extraversion2	10.84	5.12					
Psychoticism1	7.00	3.58	67	0.00	1.00	-0.78	0.78
Psychoticism2	7.00	3.16					

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Lie1	9.69	4.10	67	-0.48	0.26	-1.32	0.36
Lie2	10.16	4.24					

SD – standard deviation

A different dynamics was reported in a group of people with a diagnosis of personality disorders (PD) before and after the therapy. There was a clear statistically significant reduction in the value of neuroticism scale for this study population. The level of extraversion in the group of patients with personality disorders measured by an appropriate scale of the EPQ significantly increased after short-term group psychodynamic psychotherapy in a day ward of neurosis treatment. However, there were no significant changes in the dimensions of psychoticism and lie in the group of people with personality disorders.

Figures 1–4 show a response to the treatment with a division into groups with and without personality disorders. Statistically significant differences between the groups concerned the following scales: neuroticism, psychoticism and lie. In the case of neuroticism, patients with neurotic disorders did not change their ratings, whereas in the group with personality disorders there was a reduction in the level of neuroticism by almost 3 units on average, from a value greater than in the group with neurotic disorders to lower than in the group with neurotic disorders. The mean scores increased in both groups in the scale of extraversion; in the case of the group with personality

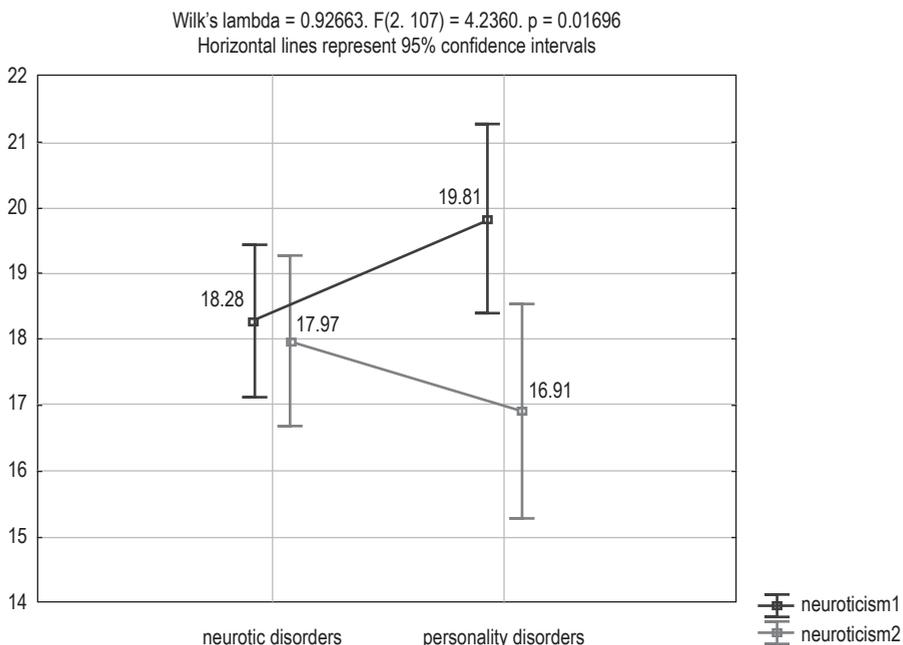


Figure 1. Neuroticism before and after short-term group psychodynamic psychotherapy

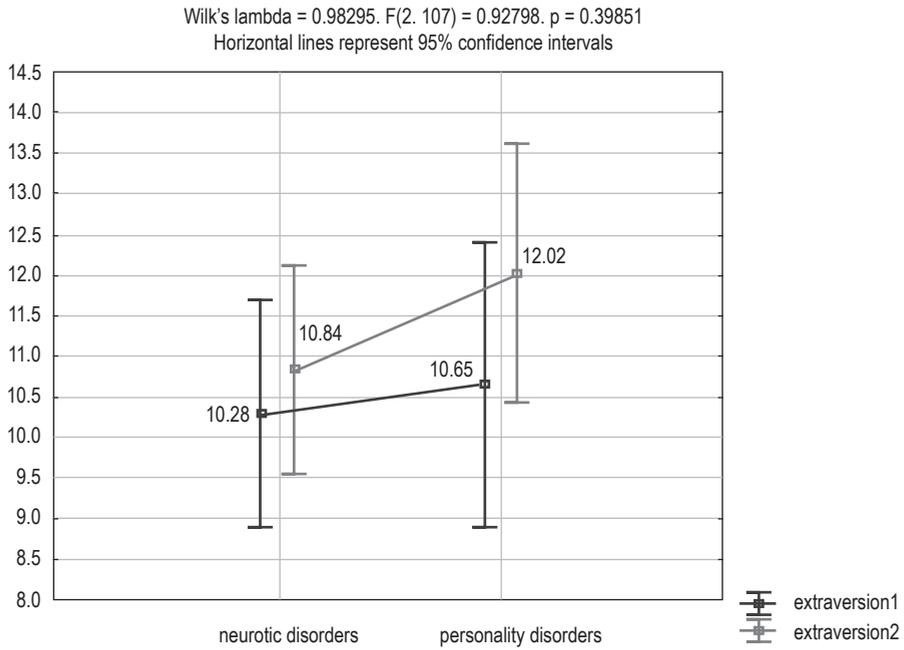


Figure 2. Extraversion before and after short-term group psychodynamic psychotherapy

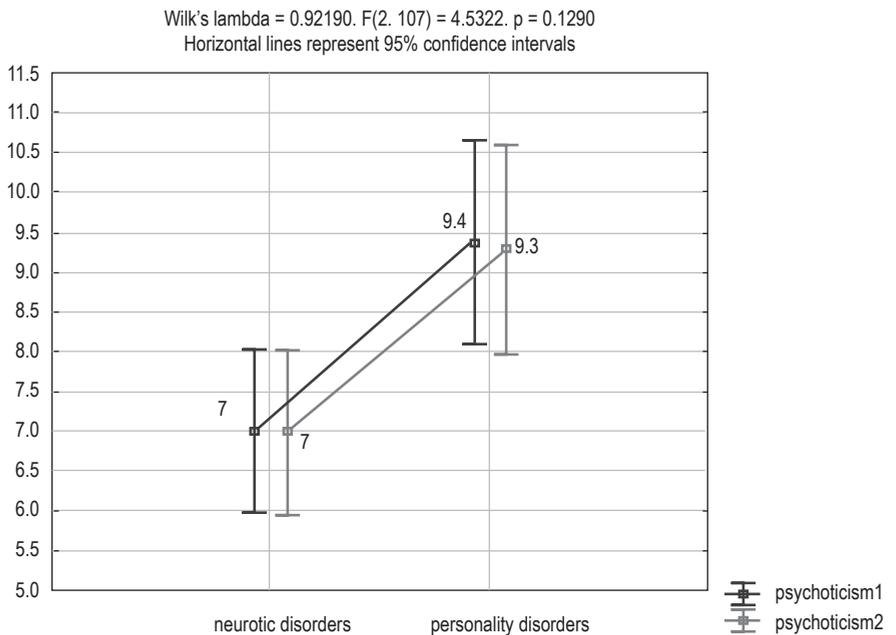


Figure 3. Psychoticism before and after short-term group psychodynamic psychotherapy

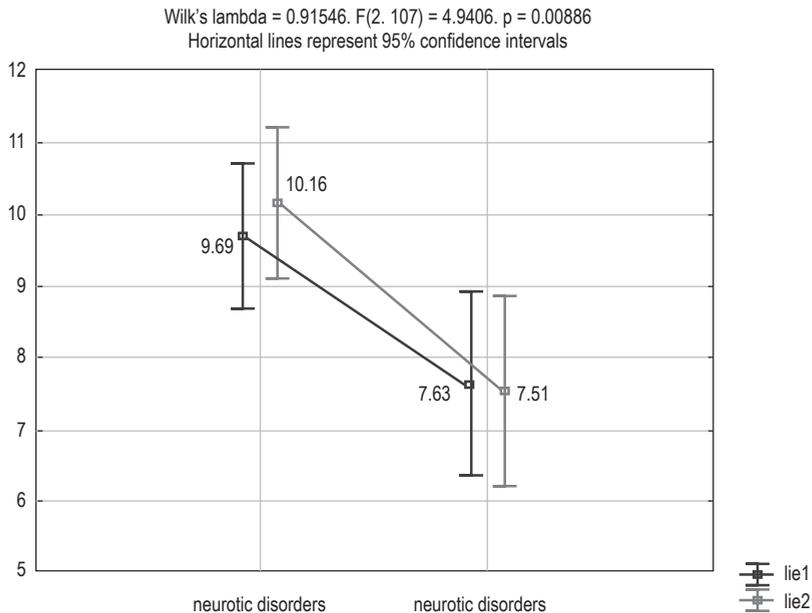


Figure 4. Lie before and after short-term group psychodynamic psychotherapy

disorders, an increase was statistically significant, but a response to the treatment did not differ statistically between the groups. The mean results have hardly changed in both groups in the scale of psychoticism, but in the group with personality disorders they were significantly higher than in the group with neurotic disorders. The reverse situation was in the lie scale, where the mean results almost did not change in both groups, but they were significantly higher in the group with neurotic disorders.

Discussion

The effectiveness of short-term group psychodynamic psychotherapy in a day ward of neurosis treatment is an important aspect of both clinical and public health. The broad meta-analysis conducted by Driessen et al. [17], consisting of 54 studies, including 33 clinical randomized studies, with a total of 3,946 patients, showed that short-term group psychodynamic psychotherapy was more effective than other therapeutic interventions in reducing anxiety, as revealed by the measurement performed after the treatment and during the follow-up.

Studies indicate that people with personality disorders have an elevated level of neuroticism which positively correlates with the severity of disorders. This was confirmed, among others, for borderline personality disorders and avoidant personality disorder [18]. This observation is consistent with the results of our study, with reduced severity of neuroticism in the group with personality disorders as a result of short-term group psychodynamic psychotherapy.

Short-term group psychodynamic psychotherapy had also an evident and favorable impact on the level of extraversion in patients with personality disorders. In clinical trials of patients with personality disorders extraversion showed a clear link with the impairment of the interpersonal relations, turning out to be the best construct in this area [19]. The dynamics of changes in this dimension of personality seems to be an important indicator of both clinical and functional improvement.

The presented findings are even more interesting in the context of the results of neuroimaging studies conducted by the group of Chinese scientists [20]. They observed a negative relationship between the level of extraversion and the gray matter volume (GMV) in the brain areas responsible for emotional, social and cognitive processes, including bilateral amygdala and hippocampal gyrus, the left superior frontal gyrus and the right middle temporal lobe. This would indicate the neurofunctional background of extraversion with its role in the affective processing and the relationship not only with fear, but also with mood. The level of neuroticism significantly correlated with GMV in the right hemisphere of the cerebellum, which is responsible for the coordination of the negative affect. The researchers have also observed the negative relationship between the intensity of neuroticism and GMV in the area of the left superior frontal gyrus.

The lack of statistically significant changes in the level of neuroticism and extraversion in patients with neurotic disorders, as shown in this study, may be related to the influence of sociodemographic variables, such as gender and age.

The study demonstrated the numerical superiority of women. Blankstein et al. [21] reported that in the female population the level of extraversion and neuroticism negatively correlated with GMV in the middle frontal lobe, but positively correlated with GMV in the anterior cortex of the cingulate gyrus (these authors observed the reverse relationships in these areas of the brain in the group of men).

The study showed a significant difference in age between the groups of patients with neurotic and personality disorders. Age, on the one hand, has a negative effect on GMV, and on the other, personality represented by its dimensions may interact with the influence of age on the brain structures [22]. Given the potential impact of gender and age as confounding variables, the authors of this study conducted statistical analysis of covariance using ANCOVA, which showed that the differences before and after the treatment do not significantly depend on gender or age.

The meta-analysis conducted by Kotov et al. [11] is worth mentioning in terms of factors which do not depend on the methodology of this study and are relevant to the lack of dynamics of extraversion before and after short-term group psychodynamic psychotherapy in patients with neurotic disorders. Its results show that an increase in the level of extraversion turns out to be more a protective factor against persistent mood disorders (dysthymia) or social anxiety than other anxiety disorders. Given the previously cited reports on a clear link between extraversion and the parameters of clinical and functional improvement in patients with personality disorders [19], this could explain the lack of dynamics of the main EPQ personality dimensions in the group of patients with neurotic disorders in contrast to personality disorders.

Studies concerning the effectiveness of therapy in terms of reduction of neuroticism and elimination of suicidal ideation in the population of patients of day

wards of neurosis treatment, are very important in both clinical and mental health context [23].

Randomized controlled trial comparing intensive 12-week psychodynamic psychotherapy with intensive behavioral-cognitive therapy and wait-list control group, conducted at day ward, has been constructed by Suszek et al. [24]. Another Polish research group assessed dynamics of symptomatic changes in the context of personality functioning, taking into consideration neurotic symptoms (assessed with the use of the Symptom Checklist KO“O”), and changes in personality traits typical for neurotic disorders (measured by the Neurotic Personality Inventory KON-2006). They observed a significant reduction in both neurotic and personality disorder symptoms in the studied population caused by short-term, intensive group psychodynamic psychotherapy with individual approach [25].

Cyranka et al. [26], in one of the most recent studies, confirmed changes in personality functioning in the course of short-term, complex psychoanalytical therapy in persons suffering from neurotic and personality disorders treated in day wards, measured with the personality inventory MMPI-2. The authors list the following tools as the most important and commonly used for more detailed evaluation of the functioning of the human personality in many dimensions: the 16 PF Questionnaire by Cattell, the EPQ, the TCI, the NEO-FFI and the NEO-PI-R, as well as the MMPI. These researchers observed significant improvement in the course of 12-week therapy in all dimensions of personality functioning measured by this relatively new tool in Polish psychotherapy research.

To sum up our research, the results can be interpreted in such a way that certain elements of the personality structure, which are associated with neuroticism and extraversion, have changed in the group with personality disorders. Other, related to the scales of lie and psychoticism, have not changed. It can therefore be concluded that there is a limited impact of short-term group psychodynamic therapy on the mental structure. Because the scales of neuroticism and extraversion are associated with the susceptibility to depression, short-term group psychodynamic therapy clearly reduced its incidence in patients with personality disorders, however, it had a very small, statistically insignificant effect on patients with neurotic disorders. Therefore, we can conclude that a symptomatic improvement in patients with neurotic disorders had a different cause than the change in the structure of personality.

One of the limitations of this study is lack of instrument for measuring symptomatology of neurotic and personality disorders (e.g., Symptom Checklist KO“O”), which have been applied in majority of research projects concerning this area. As a consequence, the reasoning process related to the change in symptoms and influence upon personality functioning may be to some extent impaired.

We have also not attempted to evaluate (using objective method) neurotic symptoms in patients diagnosed as having personality disorders. Such assessment could be performed using the Polish Neurotic Personality Inventory KON-2006. This is not only a tool for making diagnosis, but it also allows for observation and making empirical verification of changes in occurrence and intensity of personality traits coexisting or responsible for neurotic disorders [27]. Literature data indicate that in

persons diagnosed with personality disorders (F61, F60.9 or F60.8) intensity of neurotic symptoms is similar to that observed in patients with neurotic disorders. In such a case it would be worth considering to make two diagnoses (as a solution alternative to the imperfect ICD-10).

Another limitation of our study is a limited number of patients with specific personality disorders (60.1–F60.7). This fact, to some extent, impairs a possibility of extrapolation of the results to wider population in that particular subgroup of patients.

Conclusions

1. 12-week short-term group psychodynamic psychotherapy influenced the dimensions of personality, such as neuroticism and extraversion in the group of patients with personality disorders.
2. There were no changes in the levels of any of the three personality dimensions of the EPQ (neuroticism, extraversion, psychoticism) in patients with neurotic disorders.
3. The level of psychoticism and lie in both groups did not change in the measurement performed after short-term group psychodynamic psychotherapy compared with pre-treatment measurements. This may indicate the presence of other factors associated with these dimensions, on which short-term group psychodynamic psychotherapy had no effect.

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