

The Role of Personality Functioning in Treatment Outcomes during the Long-term Treatment with Atypical Antipsychotics in Stable Schizophrenia Patients

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Abstract

Schizophrenia is a complex neurobehavioral disorder for which there are many promising new treatments. Although most attention was previously paid to psychopathology, current outcome parameters such as cognitive and occupational performance, emotional stability, quality of life and psychosocial functioning are recognized as important determinants of treatment success. In this study, the long-term course of remission was observed in 130 schizophrenia patients with good response to atypical antipsychotics. The impact of the level of personality functioning on treatment outcomes in the long-term observation was described. The definition of personality functioning was given. Conclusions: the level of personality functioning significantly affects the treatment outcomes as the patients with different levels showed the substantial difference in treatment outcomes even if their diagnoses, stages of illness at the beginning of the observation and treatment modalities were similar, with good treatment response (at least absence of relapse) and tolerability.

Keywords: Personality functioning; Treatment outcome; Schizophrenia; Remission

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Introduction

Recent analysis of the literature on treatment of schizophrenia shows a shift from acute psychotic symptoms to the quality of remission and functionality of patients. As a result, the Remission in Schizophrenia Working Group defined operational criteria for remission in 2005 [1]. Impact of residual symptoms in remission on daily living of a patient and the factors affecting the rate of reintegration of a patient into society are of particular interest [2-6]. Further patient-oriented movement is seen in the concept of recovery that focuses on patient's ability to cope with life's challenges and to manage symptoms [7]. During the last years, more and more publications have presented descriptions of the effects of illness management programs, methods of assessment of recovery [8-10], and impact of patient's personality on functioning and well-being [11-14].

The combined concept of recovery and remission could be an approach to evaluating the treatment outcome, more relevant to the real life of a patient. In the concept of remission we consider signs of patient's dysfunction and in the concept of recovery—personal resources to overcome them. The personal resources

can't be assessed directly. They manifest themselves through personality functioning. We suggest that personality functioning could be a separate dimension of the quality of remission and recovery along with symptoms, social functioning, and cognitive dysfunction.

Aim of the Study

The aim of this study—to describe the role of personality functioning in treatment outcomes in stable schizophrenia patients treated with atypical antipsychotics.

Materials and Methods

One hundred and ninety five patients suffering from paranoid schizophrenia with episodic course (295.3 by DSM IY-R) [15] were included in the study, particularly those with a remission just forming after psychotic episode and with an acceptable tolerability of atypical antipsychotics (olanzapine, risperidone, paliperidone, aripiprazole). Remission was defined in terms of the routine clinical practice, i.e., outpatient status and both lifestyle and vocational activities returning back to normal.

The patient group included 73 women (37.4%) and 122 men (62.6%). The average age was 43 ± 17.3 years. The mean duration of illness was 16.2 ± 5.7 years. The follow-up period varied from 4.2 to 7.4 years. The patients were seen monthly by the investigators. Evaluation of the patients was based on clinical interviews. Those patients who developed signs of deterioration that required hospitalization or other significant interventions were excluded from the study. Thus, in the final analysis 130 patients (46 women, 35.4%; 84 men, 64.6%) were included. The data were analyzed qualitatively.

Definition of personality functioning and mental representation of the disease

The term “personality is functioning” has not been well-defined. In this study we use this term as follows: the ability to form a hierarchy of values, the ability to develop hobbies, have interests beyond the basic needs, the ability to live independently, to care for important others, to establish relations with the family members and outside the family, planning and implementation capacity. In our study we considered the ability to construct the well-developed the mental representation of the disease as one of the most important manifestations of personality functioning.

Mental representation of the disease

Russian psychologists formed a structured concept of subjective part of the illness named “mental representation of the disease”. This concept differs from the widely used concepts of “insight” and “abnormal illness behavior” [15]. Unlike insight, the inner picture of disease does not concentrate on the conventional (medical) part of the patient’s attitude towards his illness. And in contrast to abnormal illness behavior, it is not based on sociological concepts but implies subjective representation of the disease.

According to this concept, the patient’s mental representation of the disease has different levels of psychological reflection of the illness: sensory, emotional, intellectual and motivational [16-19]. The biological part of the disease interferes with the individual’s activity, determined by mental resources. The result of this interaction influences the course of the disease. It may facilitate the process of recovery [20] or confront the treatment, slowing down the progress of rehabilitation and resulting in persistent disability [21].

Levels of personal functioning

In spite of the similar diagnoses, the course and the stage of the illness, the patients included into the study had substantial differences in the personal functioning. Three levels of personal functioning appeared to be sufficient to group these differences.

The concept of levels of personality organization, which to some extent overlaps our understanding of personality functioning, is widely explored and elaborated by the psychodynamically oriented researchers [22]. As in this study we did not use psychodynamical treatment techniques, we could not apply their definitions of the levels and had to develop our own ones.

1. **High level:** Of personality functioning supposes a culturally accepted hierarchy of values, conventionally

understandable hobbies and interests, the ability to live independently most of the time, to maintain existing relationships and acquire new ones outside the family structure, to care for the dependent family members (e.g., children), to form stable relationships with a sexual partner, with sex drive close to normal, the ability for long-term planning and at least a partial implementation of the plans, and to present differentiated mental representation of the disease although fluctuating with respect to motivation and, hence, treatment compliance.

2. **Moderately reduced level:** The hierarchy of values is heterogeneous and includes both conventional and autistic elements; no hobbies; interests are of an autistic nature; no ability to take care or maintain relationships outside the family structure; unstable relationship with sexual partners, sex-role identification often unstable as well; reduced sex drive; unstable ability to live independently; plans are stereotyped and/or unrealizable; mental representation of the disease is not fully developed: the emotional and intellectual levels are not well-divided, the intellectual level is primitive or absent, motivational level is present but not always adequate for consistently high compliance.

3. **Low level:** Of personality functioning: no signs of a hierarchy of values, no hobbies; interests, if any, are extremely autistic; an autonomous existence is virtually impossible, social network is limited; family interactions are mostly symbiotic by nature; there is no need for a sexual partner (sex drive is weak and very infantile); plans and objectives are set by external factors; mental representation of the disease is undeveloped, diffuse and primitive: the emotional level is ambivalent, the intellectual level is undetectable, motivation is either ambivalent or absent, and compliance is maintained from the outside (by family members/doctor).

Results

At the beginning of observation, about a half of patients (54.8% of the total group) had residual psychotic symptoms such as stereotyped fragmentary hallucinations and/or sustainable rudimentary delusions. The others (45.2% of cases) demonstrated residual signs of disorganization, anxiety or phobias. All patients had the negative symptoms of varying severity.

The variability of treatment outcomes: four subgroups

During the first six months of the study, clinical condition of patients had been changing persistently and uniformly. The patients showed gradual reduction in severity of asthenia and avolition, enrichment of the emotional repertoire, increase in appropriateness of emotional reactions and growth of paraverbal communication. The volume and intelligibility of speech increased. All patients demonstrated the increase in socially oriented activities, with both conventional and odd manifestations. A trend toward greater autonomy in everyday

life was typical for all patients and exerted an impact upon their relations with important others in a contradictive way. Some signs of independency were acceptable for caregivers but others led to conflicts. These conflicts were significant stressful factors for the patients, provoking episodes of depression, despair, anxiety, and phobias in them. In most of the cases, reactive lability, described by Die [23], became the prominent feature of remission.

During the further observation it became obvious that the changes in clinical features of remission were not uniform any longer. The differences broke up the group into subgroups.

Subgroup one: The first subgroup was formed by the patients with continuous residual psychotic symptoms. The most important specific feature of this subgroup was a change in the meaning of residual hallucinations for the patients. Previously counterattractive hallucinations now played the important role in structuring and regulating their routine activity (including drug treatment), and helped to cope with anxiety, feeling of loneliness or uncertainty. We named these hallucinations "regulatory". Simultaneously, patient's social activity, the ability to live independently and subjective well-being significantly increased. Later on, along with reduction in severity or complete disappearance of residual psychotic symptoms, increase in severity of apathy, decrease in social contacts and ability for autonomous living and self-care was observed. The direct temporal relationship of these processes suggested probable causal association between "regulatory" hallucinations and the ability for self-regulation. The level of personality functioning in this subgroup of patients was low.

Subgroup two: The patients with episodic residual psychotic symptoms formed the second subgroup. As opposed to the first subgroup, the psychotic experience in them remained clearly negative throughout the observation. The changes concerned the psychological context in which the psychotic symptoms appeared. With the lapse of time, previously spontaneous residual psychotic symptoms gained link to the stressful events. In other words, the psychotic symptoms were increasingly embedded in the overall reactive lability. By the end of the observational period, together with a significant reduction in severity of the residual psychotic symptoms, there was a significant increase in adequacy of emotional reactions, ability to live autonomously, capacity for purposeful activity and social contacts. The level of personality functioning was moderately reduced. The gradual increase in some of its aspects (e.g., professional growth) was seen throughout the observation.

Subgroup three: The patients without residual psychotic symptoms demonstrated the third pattern of changes in remission. The most typical features in this subgroup were bizarre behavior, subjective feeling of mental disorganization and deterioration of cognition. These patients had difficulty grasping the context of communication and took that for impaired attention and/or memory. Cognitive disorganization increased when the patients established new social contacts. Afterwards, tension and depersonalization with regard to some aspects of thinking appeared. Complaints of difficulty concentrating, memory problems, reduced intelligence, and slow thought processes

contradicted the results of cognitive testing, which demonstrated relatively intact cognitive functioning. This phenomenon looked like a special form of hypochondria. We named it "cognitive hypochondria." Gradually, the patients started to report feeling of improvement in the process of thinking ("easier to focus, it seems easier to articulate what I want to say"). Besides, they demonstrated significant decrease of tension in social contacts and increase in the volume of social network. To the end of the study, these patients showed stable subjective satisfaction with the quality of thinking and confidence in social interactions. Educational and professional growth was objectively seen. The level of personality functioning in this subgroup of patients was moderately reduced but had a tendency to improve, primary in professional field.

Subgroup four: The fourth subgroup was formed by the patients without residual psychotic symptoms but with a wide range of anxiety symptoms in remission. Two simultaneous processes were observed throughout the study: stabilization of the mental condition restored professional level and social relations were accompanied with increased severity of anxiety, hypochondria and phobias. There was a discordance between sufficient subjective energy, on one side, and decrease in social and/or previously pleasurable activities, avoidance of strong emotions and diminish of professional, educational or personal plans, on the other. The deliberate stagnation in all fields of life they explained as a defense from exacerbation. They retained the capacity for autonomous existence in a stable social situation. In stressful situations the ability for autonomous existence became unstable. However, the level of personality functioning of these patients was still high with the slight tendency to decrease to the end of the study.

Initial differences in status of patients in subgroups

In order to look for the initial differences in mental status of patients from different subgroups, we performed a retrospective analysis of the period of forming remission after the acute psychotic episode (the beginning of the observation). The mental status of all patients comprised elements of residual positive, affective or anxiety symptoms, negative symptoms, features of personality disorders interlaced with personality changes due to the illness, and the signs of personality resources to withstand the life difficulties, in particular the impact of the illness. In spite of the great individual variability it appeared that the patients from one subgroup had specific constellations which distinguished them from the patients from other subgroups. In the first subgroup, the mental status was characterized by bizarre ideas, residual hallucinations, social isolation, apathy and a limited emotional repertoire, predominance of schizoid personality traits, and reduced personality resources; this manifested as the low level of the personality functioning. For the patients from the second subgroup, paranoid ideation increased in situation of important social interactions; inadequate emotional reactions, emotional instability and egocentrism were typical. The personality functioning was moderately decreased.

The subgroup three was characterized by a complex of inadequate and poor emotional reactions, signs of disorganization, the violation of a sense of appropriate-inappropriate in relationships with other people and misunderstanding of the inner meaning of a situation of interaction [24], dependence, infantilism, particularly when justifying their plans and actions, egocentrism and moderately decreased level of the personal functioning.

For the patients from the subgroup four, the predominance of hypochondriac anxiety and subdepressive symptoms, the narcissistic personality traits with high level of anxiety in interpersonal relationships and professional situations, sometimes reaching levels of social phobia, were salient features. The level of personal functioning was high.

Discussion and Conclusion

The long-term follow-up of patients with similar diagnoses, stage of illness at the beginning of the observation (emerging remission after an acute psychotic episode), similar treatment (atypical antipsychotics as monotherapy), good treatment response (at least absence of relapses) and good tolerability showed the substantial difference in the treatment outcomes. In 60s and 70s, predominance of certain negative and/or residual positive symptoms was the most important criterion of remission type, associated with the treatment outcome [25-28]. Later, assessment of treatment response in remission was enriched with new aspects, i.e., changes in cognitive dysfunction and in a level of social functioning [29-32]. This approach contained the idea of active role of personality in social adaptation, however in latent form.

The recovery concept elucidated the importance of functioning of a patient inside the disease and in spite of symptoms. The active role of a patient in forming the treatment response became more explicit [33]. Lysaker and Davis showed that differences in personality features along with the symptoms and neurocognitive deficits could affect improvement of the social functioning as an aspect of recovery process in patients with schizophrenia [33].

We suggest that the personality functioning as a reflection of personal resources can be considered a predictor of treatment outcomes, which is as important as signs of dysfunction

(symptoms). Adequate treatment provides a patient with additional resources. Depending on the level of the personality functioning, the patient can use them more or less successfully, modifying the treatment outcome.

In our study, the patients with the low level of the personality functioning formed a subgroup (subgroup one), where the most impressive feature was the U-shaped changes in hallucinations and social functioning. Maximum achievable quality of remission was observed when the residual hallucinations were transformed into "regulatory hallucinations" as the most effective instrument of self-regulation in such patients. This phenomenon could be considered as a clinical illustration of the hypothesis of Huber and Gross about secondary psychotic symptoms related to the process of regressive regulation of mental activity [34]. Decrease in severity of hallucinations occurred simultaneously with increase of apathy. In the patients with moderately reduced levels of the personality functioning (subgroup two), decrease of psychotic symptoms was accompanied with increased social functioning and adaptation.

In other patients with moderately reduced level of personality functioning (subgroup three), the growth of social functioning was seen in parallel with the significant reduction in residual symptoms of disorganization.

In the fourth subgroup of patients with a high level of the personality functioning, the expected increase in social functioning was blocked by the stable hypochondriac anxiety resulting in development of avoidance behavior.

Thereby, the ability of patients to utilize the treatment resource, which might be called the "pharmacological credit", depends on the level of the personality functioning. The patients with the low and high levels took less advantage from this "credit" than the patients with the moderately reduced level. For patients with low level of personality functioning, the main obstacle was lack of ability to sustain the only possible primitive form of self-regulation, meanwhile patients with high level of personality functioning ended up developing rigid defense mechanisms. For the patients with moderately reduced levels of personality functioning, the "credit" complemented their own resources and was utilized productively.

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