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Recovery of patients with schizophrenia diagnosis in a day rehabilitation psychiatric ward

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Abstract

Aim of the study: The main aim of the study was to examine how patients' initial levels of psychopathology and general functioning affected their recovery during treatment in a day rehabilitation psychiatric ward.

Material and methods: Demographic and clinical data were collected during patients' hospitalization in a day rehabilitation psychiatric ward. Sixty patients were included. The variables were measured at baseline (Pretest) and at the end (Posttest). The study included the following tools: the Positive and Negative Syndrome Scale (PANSS), the Global Assessment of Functioning Scale (GAF) and the Illness and the Recovery Management Scale (IMRS).

Results: The results showed a significant improvement in patients' subjective experiences of illness management and recovery between the Pretest and Posttest. In addition, an initial lower level of psychopathology and better general functioning, as assessed by clinicians, improved treatment outcomes. Treatment led to a reduction of psychopathological symptoms and improved daily functioning in the day rehabilitation unit.

Discussion: The findings of this study support the importance of multidimensional rehabilitation approaches for schizophrenia treatment, thus emphasizing the need for thorough diagnostic assessment before treatment to ensure a more personalized approach.

Conclusion: This study provides preliminary conclusions on the legitimacy of implementing the assumptions of programs focused on recovery in psychiatric care and proves that the therapeutic effects provided within them are effective.

schizophrenia; recovery; rehabilitation

INTRODUCTION

Schizophrenia, despite significant progress in diagnosis, pharmacotherapy and rehabilitation methods, is still treated as a severe disease with a decidedly unfavorable course, often leading to repeated hospital stays and inability to function independently [1]. In recent years, however, there have been some changes in this area due not only to new, more effective therapeutic interventions, but also to changes in how people think about schizophrenia and its treatment [2].

In many countries around the world, psychiatric health care is gradually moving away from a model based solely on symptom reduction, instead beginning to pay more attention

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to patients' health resources and putting emphasis on launching developmental processes [3–5]. Changes in thinking about the treatment and recovery of patients with schizophrenia imply the need to transform assumptions into evidence-based interventions that will serve patients [6,7]. In the case of serious diseases such as schizophrenia, pharmacological treatment plays a fundamental role and is the cornerstone of therapy. However, symptom relief alone is not sufficient—equally important is supporting the patient in rebuilding or acquiring the skills necessary for independent functioning. A holistic approach to the patient and their disease emphasizes the role of not only pharmacology but also the psychosocial functioning of the individual [8].

The Polish psychiatric health care system is also beginning to introduce this new paradigm in certain areas [9]. The essence of the Recovery-oriented Model [10] is the use of broadly understood therapeutic effects (psychotherapy, pharmacotherapy, social therapy, psychoeducation, etc.) in order to improve the social functioning of patients as much as possible, as well as to increase their well-being and quality of life. The element of the health care system that should play an important role in this model is day units. This work is a description of research carried out in the General Psychiatric Rehabilitation Unit – Kraków Podgórze. The philosophy of recovery and social rehabilitation is also inscribed in the changes taking place in the Polish psychiatric health care system [11].

The aim of the study was to assess the extent to which treatment in the General Psychiatric Rehabilitation Unit – Kraków Podgórze contributes not only to the improvement of psychopathological condition, but also to the discovery and development of patients' pro-health resources, such as taking responsibility for their healing process.

METHOD

Participants

The study received a positive opinion from the Bioethics Committee at the A.F. Modrzewski Academy in Krakow. All patients were recruited from the General Psychiatric Rehabilitation Unit – Kraków Podgórze while hospitalized. The selection of study participants was preceded by an assessment of mental health by the medical team in the unit. The following inclusion criteria were distinguished: age over 18 years, diagnosis of schizophrenia in the inactive phase of the disease, the ability to give informed consent, and patients' insight into the state of their mental health that would enable reliable answers about mental functioning. All participants were asked to sign informed consent to participate in the study and were informed about its progress and the rules of participation. Furthermore, all patients were informed about the purpose of the study, the possibility of withdrawing from the continuation of it without giving a reason, and were assured of the confidentiality of the data obtained during the study. Socio-demographic information was collected by clinicians on the basis of medical records. The research was conducted on a group of 60 patients, including 22 women and 38 men, who were admitted to the day rehabilitation unit. The survey was conducted from March 2018 to February 2019.

TOOLS

Recovery. The Illness and Recovery Management Scale (IMRS) was used to assess progress in the recovery process in the form of two analogous 15-item questionnaires. The first is intended for the patient (IMRS-P) and the second is for the clinician (IMRS-C). Both the patient and the clinician respond to the statements on a five-point scale, where higher scores indicate better disease management and recovery. The questionnaire assessed important areas of the patient's life (personal goals, knowledge of mental illness, involvement of others in treatment, functioning, symptoms, coping with stress and illness, hospitalization, relapse prevention, hospitalization, pharmacotherapy, and alcohol and drug use) [12]. The usefulness of this tool has been confirmed by a number of studies, e.g., Salyers et al. (2007) and Sklar et al. (2012). The questionnaire is addressed to patients diagnosed with more than one serious mental disorder. The psychometric properties of the original version of the questionnaire were satisfac-

tory (the internal consistency of the tool ranged from α Cronbach = 0.68–0.72 in the patient version to Cronbach α = 0.71–0.80 in the clinician version, while the reliability of the test-retest was 0.81 for both scales) [13].

Psychopathology. The Positive and Negative Syndrome Scale (PANSS) was used to assess the patients' psychopathological state. This tool is used to assess 30 symptoms of schizophrenia on three subscales: positive, negative and general symptoms. The scale is a basic tool for assessing the dynamics of disorders in clinical trials of drug effects. The Polish version of the scale was used in the study.

General functioning. The Global Assessment of Functioning Scale (GAF) was used to assess overall functioning (Pedersen et al., 2007). This tool is designed for mental health professionals to assess the need for professional support and to demonstrate improvements and changes occurring during illness. It makes it possible to assess the level of social, professional and psychological functioning of patients on a scale from 1 to 100, where a lower score represents worse functioning. The scale is an independent measure of overall disability caused by mental factors [14]. In this study, GAF was used to assess subjective patients' general functioning based on clinicians' observations of them during their stay in the day rehabilitation unit. Assessments based only on observations of patients' functioning during their stay in the unit may be biased because they do not include overall functioning in all areas of life.

Procedure

Patients were examined twice using IMRS-P: at the beginning (within the first two weeks, i.e., Pretest), and at the end of 16-week hospitalization in the unit (in the last week, i.e., Posttest). The results included only those patients who stayed for the entire 16-week period (without drop-outs). For the IMRS-C, the PANSS and the GAF questionnaires. The patients' level of functioning was evaluated directly by the clinicians, based on their own observations and ratings at the beginning and end of the study. In total, there were three clinicians (a psychiatrist and two psychotherapists).

The General Psychiatric Rehabilitation Unit – Kraków Podgórze

The aim of the General Psychiatric Rehabilitation Unit – Kraków Podgórze is to provide comprehensive diagnostics and therapy of mental disorders. Daily care, i.e., a stay from 8:00 to 14:00 each day, gives the possibility of diagnostics and therapy whose intensity and effectiveness is comparable to a stay in an inpatient ward. Doctors, therapists, and nurses are provided with the possibility of daily contact between patient and staff. Doctors have the opportunity to conduct medical and psychiatric examinations, while psychologists and psychotherapists conduct psychological tests and psychotherapy. The patient has access to additional examinations and specialist consultations. What is most valuable is primarily the observation of the patient's functioning in the group.

In addition to the daily therapeutic community and macramé workshops, two psychotherapeutic groups are conducted in parallel: cognitive-behavioral and psychodynamic. The division of patients into groups is a result of methods adapted to the diagnosis, the dynamics of the development of the disease, the patient's intellectual level and cognitive abilities, and the level of social functioning. Patients also have the opportunity to undertake individual psychotherapy.

The diagnostic and therapeutic offer resulting from the nature of the facility covers a wide spectrum of disorders: schizophrenia and other psychotic disorders, depressive disorders, neurotic disorders, personality disorders, impairments and organic disorders.

Statistical analysis

Firstly, descriptive statistics was used in order to develop socio-demographic data. Subsequently, Pearson's correlations between initial variable scores (Pretest) and final variable scores (Posttest) were tested. Next, a mixed-effects model with random effects was used in the analysis model, implemented in the "lme4" package in the R software [15]. The dependent variables considered were recovery scale, patient rating (IMRS-P), and clinician rating (IMRS-C). The mixed model incorporated random effects

to account for the repeated-measures study design, with random intercepts specified for individual participants. The selection of random effects was guided by an analysis of the variance components, i.e., the variance attributable to potential random effects was compared with the residual variance.

RESULTS

Socio-demographic characteristics of the sample are presented in Table 1. The sample comprised 60 patients (36.7% women; 63.3% men). Average age of participants was M = 38.82 [19, 60], SD = 10.75. The descriptive statistics for all variables are shown in Table 2.

Table 1. Socio-demographic characteristics (N = 60).

Variable		N	%	Mean (M)	Ranges
Gender					
	Women	22	36.7		
	Men	38	63.3		
Age				38.82	19-60
Education					
	Primary	12	20		
	Vocational	14	23.3		
	Secondary	24	40		
	High	10	16.7		
Marital status	Married	12	20		
	Divorced	6	10		
	Widow/widower	1	1.7		
	Single	41	68.3		
Age of diagnosis				27.57	15-47
Residence	With partner and children	9	15.0		
	With partner without children	7	11.7		
	Alone with children	3	5.0		
	With parents	37	61.7		
	Alone	4	6.7		
Source of income	Work	7	11.7		
	Pension	47	78.3		
	Allowance	3	5.0		
	Family income	3	5.0		

Table 2. Means, standard deviations and Shapiro-Wilk test results.

Variable	Pretest				Posttest			
	M	SD	W	P	M	SD	W	p
IMRS-C	32.37	6.26	0.98	0.34	45.29	6.98	0.89	<0.001***
IMRS-P	33.22	6.73	0.98	0.31	44.95	7.19	0.91	<0.001***
PANSS	60.78	16.55	0.93	0.0019**	45.29	6.98	0.89	<0.001***
GAF	6.32	1.01	0.64	<0.001***	8.71	1.11	0.49	<0.001***

Table 3. Pearson's correlations between initial variable scores (Pretest) and final variable scores (Posttest).

Variable	Pretest			Posttest		
	IMRS-C	PANSS	GAF	IMRS-C	PANSS	GAF
IMRS-P	0.85***	-0.2	0.14	0.97***	-0.07	0.64***
IMRS-C		-0.22	0.23		-0.11	0.62***
PANSS			-0.8***			-0.59***

* p < 0.05; ** p < 0.01; *** p < 0.001

In the Pretest, the Pearson's correlation analyses revealed a strong positive significant relationship between IMRS results reported by patients and clinicians. Moreover, a negative significant correlation was observed between the PANSS and the GAF assessment. On the other hand, in the Posttest, apart from a stronger positive correlation between the IMRS results in patients and clinicians, the analyses revealed a weaker negative correlation between the PANSS and the GAF correlation than in the Pretest. Additionally, positive correlations between the GAF and the IMRS results were observed in both versions. The Pearson's correlations between initial variable scores (Pretest) and final variable scores (Posttest) for all variables are shown in Table 3.

Next, the mixed linear model was fitted to the data. The model fulfilled the following assumptions: normality at the level of the residuals (W = 0.99, p = 0.56); independence of the residuals (r = 0.051, p = 0.59); homoscedastic (F[1, 112] = 3.17, p = 0.078). The conditional R^2 of the model was 0.58, while the marginal R^2 was 0.52. The regression coefficients are presented in Table 1 of the supplementary materials. The adjusted ICC was 0.064 (unadjusted ICC = 0.029). Table 4 shows the effect of the model fitting. The results revealed that the IMRS-P scores were not statistically significant in the Pretest, but they were in the Posttest. The average recovery score among patients increased from M = 33.22 to M = 44.95. (Tab. 2). Moreover, an interaction between the Test (difference between initial level and final level) and the GAF scale was observed (fig. 1).

Table 4. Variance analysis of recovery effect assessed by patients (Test) and covariance.

Variable	Sum of squares	df	Mean of squares	F	p
Test	**235.87**	**1**	**235.87**	**6.71**	**0.011***
PANSS	31.65	1	31.65	0.9	0.34
GAF	136.07	1	136.07	3.87	0.052
Gender	10.89	1	10.89	0.31	0.58
Age	0.16	1	0.16	0.0046	0.95
Test x PANSS	67.08	1	67.08	1.91	0.17
Test x GAF	**179.52**	**1**	**179.52**	**5.11**	**0.026***

Bold – significant statistical effect

Table 5 shows results of variance analysis of PANSS. The linear model was fitted to the data. The IMRS-C and the GAF scale in the Pretest and Test (difference between initial level and final level) were used as predictors. The model obtained a satisfying fit and was homoscedastic (BP[12] = 6.07, p = 0.91); the residuals had normal distribution (W = 0.98, p = 0.69) and were independent (r = 0, p = 1). The analysis revealed that changes in the level of psychopathological symptoms (PANSS) from the beginning to the end of the study were associated with the initial level of general functioning (GAF) (β = 11.7). Likewise, changes in recovery throughout the

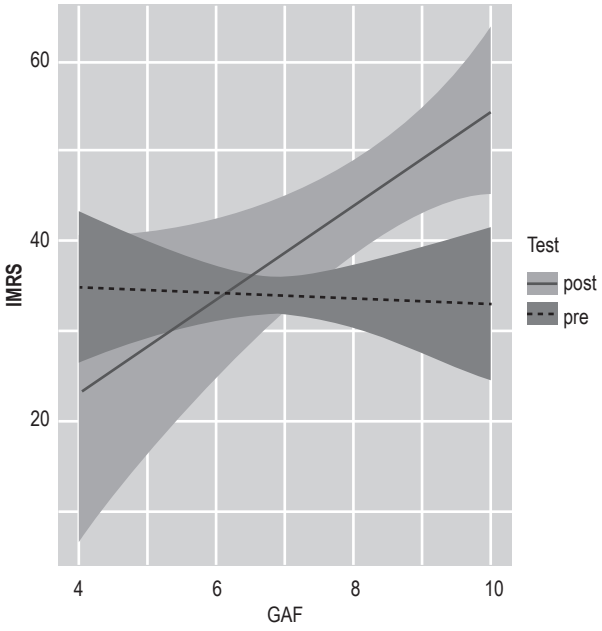

Figure 1. Effect of Test and GAF scale on IMR scale.

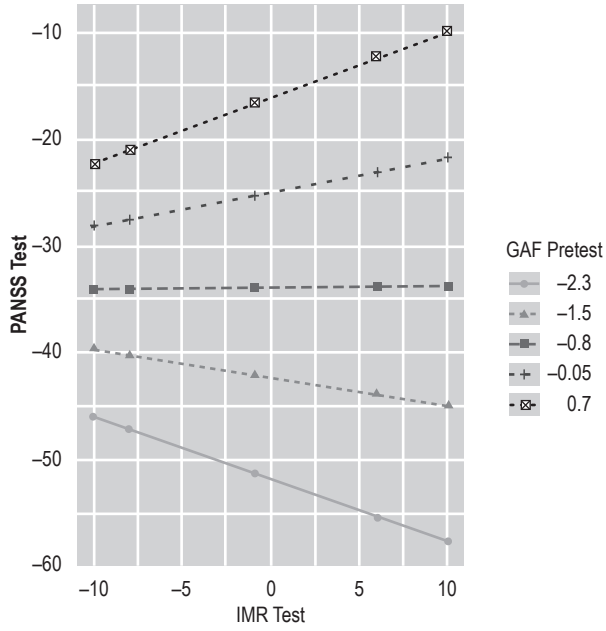

Figure 2. Interactions effect of changes in IMRS (Test) and baseline GAF (Pretest) on changes in PANSS (Test). All variables are centered on the means.

study (Test) were associated with the initial level of psychopathological symptoms (PANSS) (β = 0.23). Moreover, changes in recovery throughout the study, as assessed by the clinicians (IMRS-C), was dependent on the level of general functioning (GAF) (fig. 2).

Table 5. Variance analysis of PANSS.

Variables	Sum of squares	df	Mean of squares	F	p
IMRS-C (Pretest)	245.55	1	245.55	3.16	0.083
IMRS-C (Test)	**2486.27**	**1**	**2486.27**	**31.97**	**< 0.001 *****
GAF (Pretest)	**6424.49**	**1**	**6424.49**	**82.61**	**< 0.001 *****
GAF (Test)	14.49	1	14.49	0.19	0.67
Gender	15.43	1	15.43	0.2	0.66
Age	123.63	1	123.63	1.59	0.21
IMRS-C (Pretest) x IMRS-P (Test)	292.87	1	292.87	3.77	0.059
IMRS-C (Pretest) x GAF (Pretest)	**509.69**	**1**	**509.69**	**6.55**	**0.014 ***
IMRS-C (Pretest) x GAF (Test)	91.22	1	91.22	1.17	0.28
IMRS-C (Test) x GAF (Pretest)	**467.14**	**1**	**467.14**	**6.01**	**0.018 ***
IMRS-C (Test) x GAF (Test)	304.48	1	304.48	3.92	0.054
GAF (Pretest) x GAF (Test)	75.7	1	75.7	0.97	0.33
Residuals	3421.88	44	77.77		

Bold – significant statistical effect

Table 6 presents the results of variance analysis of GAF. The linear model was fitted to the data. As predictors, the IMRS-C and the PANSS scales in Pretest (initial level) and Test (difference between initial level and final level) were used. The model obtained a satisfying fit and was homoscedastic (BP[12] = 16.73, p = 0.16); the residuals had normal distribution (W = 0.96, p =

0.078) and were independent (r = 0, p = 1). The analysis revealed that changes in level of general functioning (GAF) from the beginning to the end of the study were associated with the initial level of psychopathological symptoms (PANSS) (β = – 0.044). Furthermore, changes in recovery (IMR Test) throughout the study were associated with the initial level of psychopathological symptoms (PANSS). Moreover, recovery progress throughout the study, as assessed by clinicians (IMRS-C), was dependent on changes in recovery (IMR Test) (β = 0.0013), as well as with changes in psychopathological symptoms (PANSS) (β = – 0.082).

Table 6. Variance analysis of GAF.

Variable	Sum of squares	df	Mean of squares	F	p
IMRS-C (Pretest)	0.7	1	0.37	0.71	0.4
IMRS-C (Test)	**3.47**	**1**	**3.47**	**6.66**	**0.013 ***
PANSS (Pretest)	**16.13**	**1**	**16.13**	**30.93**	**< 0.001 *****
PANSS (Test)	**6.19**	**1**	**6,19**	**11.86**	**0.0013 ****
Gender	0.27	1	0.27	0.52	0.47
Age	0.044	1	0.044	0.084	0.77
IMRS-C (Pretest) x PANSS (Test)	0.54	1	0.54	1.03	0.31
IMRS-C (Pretest) x PANSS (Pretest)	0.25	**1**	0.25	0.47	0.49
IMRS-C (Pretest) x PANSS (Test)	0.05	1	0.05	0.096	0.76
IMRS-C (Test) x PANSS (Pretest)	0.78	**1**	0.78	1.5	0.23
IMRS-C (Test) x PANSS (Test)	1.12	1	1.12	2.15	0.15
PANSS (Pretest) x PANSS (Test)	0.043	1	0.043	0.082	0.78
Residuals	22.95	44	0.52		

Bold – significant statistical effect

DISCUSSION

A significant recovery effect was observed as a result of therapeutic interventions. A number of studies, including randomized trials, have confirmed that interventions show significant changes in self-management skills during treatment [16] when IMRS is used to measure their results, thus it is an effective tool for measuring progress in the treatment of patients [17]. Currently, IMRS is a universal tool for measuring recovery-oriented treatment effects in many treatment programs [5]. This study confirms that the recovery-focused therapeutic interventions offered to patients within the General Psychiatric Rehabilitation Unit – Kraków Podgórze make their ways of coping with the disease more effective and have a positive effect on functioning and development, thus assisting the healing process. Moreover, the results show that patients accurately assess treatment outcomes during their stay in the day rehabilitation unit, as patients' and clinicians' assessments correlated strongly with each other. Patients' assessments are similar to those of clinicians, thus confirming in some way that the acquired ability to manage the disease is accompanied by insight or vice versa, but this aspect requires further evaluation. Additionally, the high consistency between clinician and patient ratings indicates that they assess patients' condition in a very similar way. This suggests that relying on patient ratings alone is sufficient for monitoring their state throughout treatment, making the process more cost-effective and time-efficient.

The aim of treatment at the General Psychiatric Rehabilitation Unit – Kraków Podgórze is not only to reduce the symptoms of the disease, but also to improve the following areas: recognizing and naming one's own emotional states, tol-

erating contradictory feelings without having to play them out in relationships and in everyday life, improving self-esteem and social functioning, and the ability to recognize and accept one's own limitations and to see one's strengths and use them in everyday functioning. The goals of treatment are mainly aimed at enabling the patient to return to better functioning in the world and with others, which is often limited by a severe mental illness and its consequences, such as hospitalization.

In addition to strictly psychotherapeutic interventions (individual and group therapy), patients participate in psychoeducation groups that are adapted to the specificity of the patient's illness (e.g., separate groups for patients diagnosed with schizophrenia and with a diagnosis of severe affective disorders), art therapy (psychodrawing, music therapy, bibliotherapy, choreotherapy) and various social and professional activities, e.g., gardening and cooking classes, ceramics workshops. Between scheduled classes, patients can use the macramé workshop and are encouraged to do joint physical activity, e.g., walks in the hospital park.

A stay in the day rehabilitation unit is aimed at psychiatric treatment, psychological help, cognitive development and acquisition of new skills, as well as social development through joint activities, duties, and membership in specific groups and the entire community. There is also an atmosphere of reciprocity and free contact between medical staff and patients in the department. Day trips to interesting places are regularly organized, in which patients and staff participate.

Research on the efficiency and effectiveness of treatment in day rehabilitation units in Poland is relatively rarely undertaken due to the heterogeneity of the techniques used and the fact that patients with various chronic and recurrent diseases (most often serious mood disorders or schizophrenia) are often treated in these wards. Specific treatment methods, e.g., social skills training, psychoeducation [18] or elements of positive psychotherapy [19], are more often observed and verified. In the case of studies on people with chronic schizophrenia and the effectiveness of their treatment, a study was conducted in 2002 that compared the effectiveness of two groups: social skills training and a group with elements of psychoeducation. The results revealed that there was an increase in knowledge about coping with symptoms in both groups, but it was greater for those who attended the social skills training.

In previous research, associations between subjective quality of life and acquired knowledge have not been observed [20]. In the research of Kasperek-Zimowska et al. [21], the effect of positive psychotherapy (PPP) on the increase in subjective well-being in patients with schizophrenia in a rehabilitation day unit was analysed, and a positive effect of the interventions was observed. Other studies have reported that art therapy techniques, such as bibliotherapy, have a positive effect on creating a narrative about oneself and other people and help organize thinking in people with chronic schizophrenia [22]. This shows the multitude of possible methods and techniques of treating patients and strengthening and developing their resources and coping strategies, which in various ways affect not only objective improvement but also subjective improvement (better well-being). This also makes it clear that the greatest effects can be achieved by using different methods and techniques in various configurations.

The growing popularity of medical services aimed at recovery, especially psychiatric services, contributes to an increasing number of studies testing the effectiveness recovery models [23]. Evidence-based psychosocial activities such as psychoeducation, cognitive behavioral therapy, cognitive rehabilitation, and activation techniques such as healthy lifestyle focus, physical activity, and seeking and developing social support have been used in psychiatric rehabilitation for decades but reach a small number of service recipients [24]. This study is the first in Poland inspired by the assumptions of programs focused on recovery in day rehabilitation units that aim not only to restore the optimal level of psychosocial functioning of patients but also to increasingly focus on equipping patients with skills and resources that will help them reduce the number of subsequent hospitalizations and strengthen disease management strategies. In this research, significant reductions in psychopathological symptoms (PANSS) were influenced by the initial level of overall functioning (GAF Pretest) and the increase in recovery

(IMRS-P Test). The better the overall level of functioning of patients observed in the day rehabilitation unit before the start of therapeutic interventions, the better the effects of the therapeutic impact on the reduction of psychopathological symptoms. A better level of functioning of patients at the start of treatment allows them to benefit from the effects to a greater extent and translates into a reduction in psychopathological symptoms during treatment. Based on the results, it should be considered whether stays in day units should be dedicated to people with serious illnesses such as schizophrenia. This applies not only to those following intensive hospitalization in an inpatient ward but, more importantly, to those in remission. During remission, patients' cognitive abilities, social functioning, and insight are improved, allowing them to benefit more fully from the proposed interventions and maximize their effects. On the other hand, research conducted by Grant et al. (2017) revealed that patients with less-chronic diseases recovered more quickly. After 12 months of cognitive-behavioral therapy focused on recovery, the effects of treatment were visible. In patients with greater chronicity, the effects were noticeable only after 24 months. Thus, length but also intensity seems to be important in the case of treatment.

The situation is similar in the case of the initial level of psychopathological symptoms (PANSS Pretest), where patients' initial level of psychological symptoms was associated with changes occurring in the level of general functioning (GAF) during treatment. The lower the severity of psychopathological symptoms before the start of the measurement, the greater the increase in the level of general functioning (GAF) during the measurement. In addition, a reduction of psychopathological symptoms (PANSS Test) from the start of the measurement to the time of its completion was associated with an increase in the level of general functioning (GAF). The same was true in the case of therapeutic interactions (IMRS-P Test): changes occurring as a result of therapeutic interactions were associated with the level of general functioning (GAF). Patients with less-severe baseline psychopathological symptoms experienced a greater increase in the level of general functioning during stay in the day rehabilitation unit. Patients who achieved improvements in functioning and whose level of psychopathological symptoms had decreased by at the end of treatment had better rates of overall functioning.

Overall, these findings are in accordance with findings reported in previous studies. The GAF scale measures both symptoms and functioning, while PANSS measures only symptoms. In Rabinowitz et al.'s [26] study, the GAF and the PANSS results were also related: patients with a higher level of symptoms in PANSS manifested a worse general level of functioning (measured by GAF). Besides, Samara et al. [27] also revealed such a correlation, but even in patients with a low PANSS score (lack or low severity of symptoms), these symptoms were often related with worse level of general functioning (measured by GAF). This means that in chronic illnesses a deterioration of general functioning can be observed despite minimal symptoms.

In our study, stronger associations between all scales were observed after the intervention than at the beginning. This may indicate that improvement in the scope of general functioning (measured by GAF) enables improvement in more-complex areas (measured by IMRS), generally understood as personal recovery (connectedness, hope, identity, meaning and purpose, and empowerment).

The recovery-oriented model also includes a personalized approach to pharmacology that is used in patients with schizophrenia, with an emphasis on cognitive functioning. In the General Psychiatric Rehabilitation Unit – Kraków Podgórze, the assumptions of such an approach are implemented, therefore the goal, in addition to reducing symptoms, is to obtain long-term benefits. Recovery from serious mental illnesses such as schizophrenia is not limited to removing positive and negative symptoms and stabilizing the patient's emotional state; it is also associated with subjective changes in one's experiencing of oneself, one's identity and one's own agency [28]. By establishing a trusting relationship between doctor and patient, patient involvement in their own treatment is fostered. The importance of this attitude in the recovery process has long-term benefits in the form of regularity in the use of medications, prevention of side effects, etc. [29]. Many studies have found a positive effect of services focused on recovery, such as reduced

hospitalizations or increased involvement in education or work [30]. Psychotherapeutic methods such as recovery-oriented cognitive-behavioral therapy improve mood, reduce negative symptoms, and improve functioning [31].

LIMITATIONS

The study has many limitations. First of all, it does not include a control group, so it is difficult to clearly assess whether the effects of the therapeutic interactions resulted from the techniques used or were the result of other variables that were uncontrolled during the study, e.g., the placebo effect. In addition, the study outlines the techniques used within the day department, which are based on an internal program. At the same time, IMRS is used as a potential indicator of recovery outcomes for other psychiatric care and rehabilitation programs in many places around the world [5]. Similarly, in this study, IMRS was used to assess the effects of interactions within a day unit offering patients a holistic treatment program based on strengthening their sense of coping, psychoeducation, pharmacotherapy, psychotherapy and social training. Third, the study did not perform a blind assessment of psychopathological symptoms, and the effects of therapeutic effects were assessed by the same clinicians who applied them, so it cannot be excluded that their assessments were biased. For this reason, only the recovery scale in the physician's assessment (IMRS-C) was used in the more advanced analyses. Fourth, the study group was very heterogeneous and included patients with different follow-up outcomes. Fifth, the study did not measure patients' insight into their disease, so the results, especially declarations in the assessment of treatment effects, should be treated rather as patients' subjective experiences. Sixth, it was noted that that assessment of general functioning included only clinicians' observations, thus possibly introducing subjectivity into the assessment. However, patients during their day rehabilitation unit stay are encouraged to engage in various activities and are also part of the community. They also participate in various activities in smaller groups. Moreover, there is a tradition in the unit to celebrate important events in the lives of patients, e.g., birthdays. Clinicians do not have direct access to how patients function outside the unit, but the questionnaires included in the study, e.g., the IMRS scale, include questions about the time, quality and satisfaction of time spent with other people outside the unit, e.g., family, friends, etc., as well as time spent on various duties, e.g., at home and at work. It should be noted, however, that these are subjective assessments because patients base them on their own feelings and experiences.

CLINICAL IMPLICATIONS

The results of this study support the assumption that promoting recovery not only clinically but also psychosocially should be the goal of nationwide changes in the health care system. Activities at the level of so-called Mental Health Centers create the possibility of access to an extended range of medical services and therapeutic interventions that not only serve clinical improvement but may also affect other areas of patients' lives, which pharmacotherapy alone is not able to significantly improve. Through access to the support of professionals and the therapeutic and activation techniques they offer, patients can acquire the skills to independently cope with the challenges of everyday life, learn to recognize and prevent relapse, and can strengthen their faith in their own agency. The activities of inpatient wards should also focus on providing services to patients in remission in the case of serious mental disorders, because during this period they are able to acquire the most skills and benefit most intensively from the proposed interactions.

CONCLUSIONS

The results confirm the legitimacy of using a holistic approach to the treatment of schizophrenia in which pharmacological stabilization, psychosocial facilities and the patient's own work play a significant role. All these factors influence each other, building and developing the capacity of the individual to manage the disease, redirect attention towards resources and contribute to re-

covery. This study provides preliminary conclusions on the legitimacy of implementing the assumptions of programs focused on recovery in psychiatric care and shows that the therapeutic effects provided by them are effective. The conclusions promisingly confirm the legitimacy of exploring and implementing programs as part of community treatment.

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