

Positive psychotherapy in a psychiatric rehabilitation day unit

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Abstract

Introduction: Positive psychotherapy for psychosis, based on the WELLFOCUS programme, focuses on personal strengths, well-being and positive experiences in people with psychotic disorders. The study aimed to assess the effects of adding this intervention to standard psychiatric rehabilitation in people diagnosed with schizophrenia.

Materials and methods: The study included 80 participants diagnosed with schizophrenia: 40 in the clinical group and 40 in the control group. Both groups received standard psychiatric rehabilitation, while the clinical group additionally attended 13 weekly, two-hour sessions of positive psychotherapy for psychosis. Assessments were conducted before the intervention, immediately after its completion, and at a 3-month follow-up visit. Psychopathological symptoms, functioning, general self-efficacy, affective balance and character strengths were assessed.

Results: Immediately after the intervention, the clinical group reported more frequent positive feelings and a more favourable affective balance than the control group, but these effects were not maintained at follow-up. Eight character strengths increased in the clinical group and improvements were maintained in six of them after 3 months. Functioning improved and psychopathological symptom severity decreased in both groups. No significant between-group differences were found in general self-efficacy or optimism.

Discussion and conclusions: Adding positive psychotherapy for psychosis to standard psychiatric rehabilitation may support selected character strengths and short-term improvement in positive affect among people diagnosed with schizophrenia. Improvements in functioning and psychopathological symptoms were also observed during standard rehabilitation. The intervention may complement rehabilitation by focusing on personal resources. However, further studies are required to clarify the durability and specific effects of treatment.

Keywords: schizophrenia; positive psychotherapy; psychiatric rehabilitation; character strengths; mental well-being

Introduction

Positive psychology focuses not only on symptom reduction but also on strengthening personal resources, well-being and the capacity to lead a satisfying life. Positive psychological interventions have been used in people with depression [1], post-traumatic stress disorder [2], alcohol misuse [3], bipolar disorder [4], and anxiety-related difficulties [5]. This approach has also been applied to people diagnosed with schizophrenia [6].

Standard treatment and rehabilitation for people with psychotic disorders primarily include pharmacotherapy, psychoeducation and interventions aimed at improving social and cognitive functioning. These approaches seek to increase knowledge about the illness, develop the ability to recognise early warning signs, strengthen coping

strategies and improve everyday functioning. However, an approach focused mainly on symptoms and deficits may insufficiently address positive experiences, personal resources and patients' subjective well-being.

The WELLFOCUS Positive Psychotherapy for Psychosis is one of programmes that introduces a positive perspective into the treatment of psychosis. Developed in accordance with principles for designing and evaluating complex psychological interventions, it forms the basis of Positive Psychotherapy for Psychosis (PPP) [7]. The programme focuses on strengthening positive identity, hope, character strengths, positive relationships and experiences that support well-being.

PPP was developed for people with experience of psychosis and may be delivered in a group format,

including as part of psychiatric rehabilitation. Incorporating this type of intervention into a day-hospital programme may complement standard treatment by addition of systematic work on personal resources and positive aspects of functioning.

Further research is needed to determine whether adding PPP to standard rehabilitation provides benefits beyond those achieved under routine clinical conditions.

Aim of the study

The aim of the study was to assess the effects of adding Positive Psychotherapy for Psychosis to a standard psychiatric rehabilitation programme in people diagnosed with schizophrenia. Changes in functioning, psychopathological symptom severity, general self-efficacy, affective balance, optimism and character strengths were assessed. The outcome measures of participants receiving standard rehabilitation supplemented with PPP were compared with those in participants receiving standard treatment alone, and the durability of observed changes was assessed 3 months after the intervention.

Material and methods

Participants

A convenience sample was recruited from psychiatric rehabilitation units at the Institute of Psychiatry and Neurology and the Nowowiejski Hospital in Warsaw, Poland.

The clinical group comprised 40 people diagnosed with schizophrenia and treated at the Psychiatric Rehabilitation Day Unit of the Institute of Psychiatry and Neurology in Warsaw. The study participants received treatment as usual (TAU) supplemented with Positive Psychotherapy for Psychosis (PPP) based on the WELLFOCUS programme. The programme was translated into Polish and adapted to the conditions of a psychiatric day unit.

The control group comprised 40 people diagnosed with schizophrenia who participated in psychiatric rehabilitation programmes at the Institute of Psychiatry and Neurology and Nowowiejski Hospital in Warsaw. These participants received TAU and did not participate in PPP. Assessments in both groups were conducted by a team of psychologists whose composition remained unchanged throughout the study.

Inclusion and exclusion criteria

Adults aged 18–68 years with a diagnosis of schizophrenia established according to ICD-10 criteria were eligible. Participants had to be clinically stable enough to take part in rehabilitation and study procedures. Symptom severity was assessed with the Brief Psychiatric

Rating Scale (BPRS) and on the basis of medical records. Written voluntary informed consent was required.

Exclusion criteria were: an acute exacerbation of psychotic symptoms preventing participation, as assessed with the BPRS and clinical evaluation, active alcohol or other substance dependence, with at least 6 months of abstinence required, and documented intellectual disability or a diagnosis of dementia.

Study procedure

Patients admitted to psychiatric rehabilitation who met the eligibility criteria were invited to participate and provided written, voluntary, informed consent.

Both groups received standard rehabilitation, including social skills training, psychoeducation, individual psychotherapy, bibliotherapy, dance/movement therapy and activities focused on organising leisure time. In the clinical group, the programme was supplemented with 13 weekly two-hour PPP sessions. Participation in PPP was the principal difference between the programmes delivered to the two groups.

Three assessments were conducted in both groups. Assessment I took place before the intervention, assessment II immediately after completion of the therapeutic cycle, and assessment III 3 months after the end of treatment. The follow-up assessment was used to evaluate the durability of observed changes.

Self-report questionnaires were completed independently by participants. Clinical and functional assessments were conducted using the relevant rating scales and available clinical information.

Study conditions

The study was conducted between 2018 and 2021. In 2020, because of the COVID-19 pandemic and temporary restrictions on the operation of psychiatric rehabilitation units, study procedures were temporarily suspended. Recruitment and assessments resumed after the units reopened. Pandemic-related circumstances affected the ability of some participants to complete the full intervention cycle and all stages of the study.

Measures

The following measures were used:

Sociodemographic questionnaire – a study-specific instrument used to collect information on sex, age, education, living situation, employment, marital status, number of hospitalisations and pharmacological treatment.

Global Assessment of Functioning (GAF) – a scale providing an overall rating of psychological, social and occupational functioning from 0 to 100. Ratings were based on interview data, medical records, and available

clinical information.

Brief Psychiatric Rating Scale (BPRS) – an 18-item scale assessing the severity of psychopathological symptoms [8]. It covers, among others, somatic concern, anxiety, emotional withdrawal, conceptual disorganisation, guilt, tension, mannerisms, depressed mood, hostility, suspiciousness, hallucinatory behaviour, uncooperativeness, unusual thought content, and disturbances of affect and motor activity.

General Self-Efficacy Scale (GSES) – developed by Schwarzer and Jerusalem and used in the Polish adaptation by Juczyński [9]. The scale assesses a general belief in one's own ability to cope with difficulties and obstacles. Higher scores indicate stronger general self-efficacy.

The Scale of Positive and Negative Experience (SPAN; Polish adaptation: SPIND) – an instrument assessing the frequency of positive and negative feelings and overall affect balance [10]. The questionnaire includes 12 feelings and states referring to experiences during the previous month. These scores provide positive feelings, negative feelings, and affect balance indices.

International Personality Item Pool – Values in Action (IPIP-VIA) character strengths questionnaire is the Polish adaptation of an instrument assessing 24 character strengths based on Peterson and Seligman's classification of virtues and strengths. The Polish adaptation described by Najderska was used in the study [11].

Statistical analysis

Statistical analyses were performed using IBM SPSS Statistics, version 24. The Shapiro–Wilk test was used to assess normality of the data distribution. Statistical significance was set at $\alpha = 0.05$. Descriptive statistics included the arithmetic mean, standard deviation, minimum, maximum, median and first and third quartiles. Student's t-test was used to compare means between two groups. In cases when assumptions for parametric tests were not met, appropriate non-parametric tests were applied. Changes across assessment points were analysed according to the distribution and measurement scale of the variables.

Ethical considerations

The study protocol received a positive opinion from the Ethics Committee of the Maria Grzegorzewska University in Warsaw, approval no. 164-2018/2019. All participants provided written voluntary informed consent to participate.

Results

Sociodemographic characteristics

The study included 80 participants: 40 in the

clinical group and 40 in the control group. Detailed sociodemographic characteristics are presented in (Table 1).

All participants were treated with newer-generation antipsychotic medication, which was not changed during the study period in either group.

Within-group changes in the clinical group

Questionnaire and clinical outcomes in the clinical group were compared across three assessment points: before treatment (assessment I), immediately after treatment (assessment II), and 3 months after treatment (assessment III).

Psychopathological symptom severity in the clinical group

The BPRS scores differed significantly across the three assessments ($p < 0.001$). Significant differences were found between assessments I and II, I and III, and II and III (all $p < 0.001$). The BPRS scores were highest at baseline, decreased significantly immediately after treatment and decreased further at the 3-month follow-up (Table 2).

General self-efficacy in the clinical group

General self-efficacy scores did not differ significantly across the three assessments ($p = 0.132$) (Table 3).

Affective experience in the clinical group

According to scores on positive feelings, negative feelings and affect balance changed significantly over time ($p = 0.022$, $p = 0.015$, and $p = 0.006$, respectively). For all three indices, assessments I and II differed significantly, whereas no significant differences were found between assessments I and III or between assessments II and III. Positive feelings and affect balance improved immediately after treatment, while negative feelings decreased; these changes were not clearly maintained at follow-up (Table 4).

Character strengths in the clinical group

Across the study period, significant changes were found for IPIP-VIA scale 4 (social/emotional intelligence and insight; $p = 0.001$), scale 10 (integrity/honesty/authenticity; $p = 0.016$), and scale 18 (bravery/valour; $p = 0.015$). Social/emotional intelligence and insight were lowest before treatment and increased after the intervention. Significant improvements in selected character strengths were also observed in the broader pattern of results, with several gains maintained at the 3-month follow-up (Table 5).

Functioning in the clinical group

GAF scores differed significantly across the three assessments ($p < 0.001$). Significant differences were

Table 1. Sociodemographic characteristics of the study participants in the clinical and control groups

Variables	Variables	Variables	Study group	Study group	Study group
	Variables	Variables	clinical (N=40)	control (N=40)	Total (N=80)
Age	Mean $\pm$ SD	Mean $\pm$ SD	41,95 $\pm$ 11,40	43,45 $\pm$ 11,61	42,70 $\pm$ 11,46
	Min-max	Min-max	23 – 65	24 – 63	23 – 65
Sex	Male	N %	12 30%	19 47,5%	31 38,8%
	Female	N %	28 70%	21 52,5%	49 61,3%
Marital status	Kawaler/panna	N %	29 72,5%	26 65%	55 68,8%
	Married	N %	8 20%	9 22,5%	17 21,3%
	Wdowiec/ wdowa	N %	2 5%	1 2,5%	3 3,8%
	Rozwiedziony	N %	1 2,5%	4 10%	5 6,3%
Education	Primary	N %	0 0%	4 10%	4 10%
	Secondary	N %	17 42,5%	21 52,5%	38 47,5%
	Higher	N %	23 57,5%	15 37,5%	38 47,5%
Living arrangement	Lives alone	N %	13 32,5%	11 27,5%	24 30%
	Lives with family of origin	N %	16 40%	19 47,5%	35 43%
	Lives with own family	N %	11 27,5%	10 25%	21 26,3%
Employment status	Employed	N %	14 35%	7 17,5%	21 26,3%
	Unemployed	N %	26 65%	32 80%	58 72,5%
	Student	N %	0 0%	1 2,5%	1 2,5%
Disability pension	Yes	N %	23 57%	25 62,5%	48 60%
	No	N %	17 42,5%	15 37,5%	32 40%
Disability category	None	N %	17 42,5%	16 40%	33 41,3%
	I	N %	2 5%	6 15%	8 10%
	II	N %	19 47,5%	18 45%	37 46,3%
	III	N %	2 5%	0 0%	2 2,5%
Duration of illness	Mean $\pm$ SD	Mean $\pm$ SD	17,55 $\pm$ 10,47	13,58 $\pm$ 10,34	15,56 $\pm$ 10,53
	Min-max	Min-max	2 – 45	1 – 41	1 – 41
Number of hospitalisations	Mean $\pm$ SD	Mean $\pm$ SD	9,75 $\pm$ 17,09	10,15 $\pm$ 16,59	9,95 $\pm$ 16,73
	Min-max	Min-max	0 – 99	0 – 100	0 – 100
Number of admissions to psychiatric rehabilitation units	Mean $\pm$ SD	Mean $\pm$ SD	4,13 $\pm$ 5,65	2,15 $\pm$ 1,44	3,14 $\pm$ SD
	Min-max	Min-max	1 – 30	0 – 60	0 – 30

Abbreviations: SD – standard deviation.

Table 2. Comparison of psychopathological symptom severity in the clinical and control groups across assessments

Parameters	Clinical group						Repeated-measures ANOVA		Post hoc comparisons		
	Assessment I	Assessment I	Assessment II	Assessment II	Assessment III	Assessment III	Repeated-measures ANOVA	Repeated-measures ANOVA	Post hoc (Tukey test)	Post hoc (Tukey test)	Post hoc (Tukey test)
	Mean	SD	Mean	SD	Mean	SD	F	p	I-II	I-III	II-III
BPRS	34,48	5,70	30,25	6,30	26,93	6,57	61,15	<0,001	<0,001	<0,001	<0,001

Abbreviations: BPRS – Brief Psychiatric Rating Scale; p – statistical significance level.

Table 3. Comparison of general self-efficacy in the clinical and control groups across assessments

Parameters	Clinical group						Repeated-measures ANOVA		Post hoc comparisons		
	Assessment I	Assessment I	Assessment II	Assessment II	Assessment III	Assessment III	Repeated-measures ANOVA	Repeated-measures ANOVA	Post hoc (Tukey test)	Post hoc (Tukey test)	Post hoc (Tukey test)
	Mean	SD	Mean	SD	Mean	SD	F	p	I-II	I-III	II-III
General self-efficacy	25,50	6,94	27,25	6,43	26,80	6,68	2,07	0,132	0,128	0,316	0,869

Abbreviations: p – statistical significance level.

Table 4. Comparison of positive and negative experience and affect balance in the clinical and control groups across assessments

Parameters	Clinical group						Repeated-measures ANOVA		Post hoc comparisons		
	Assessment I	Assessment I	Assessment II	Assessment II	Assessment III	Assessment III	Repeated-measures ANOVA	Repeated-measures ANOVA	Post hoc (Tukey test)	Post hoc (Tukey test)	Post hoc (Tukey test)
	Mean	SD	Mean	SD	Mean	SD	F	p	I-II	I-III	II-III
Positive Feelings Scale (SPANE-P)	18,75	5,30	21,07	4,69	19,93	4,48	4,00	0,022	0,016	0,330	0,345
Negative Feelings Scale (SPANE-P)	16,83	5,05	14,80	4,77	16,00	4,78	4,40	0,015	0,011	0,455	0,194
Affect balance (SPANE-P)	1,93	9,23	6,27	8,42	3,92	8,40	5,42	0,006	0,004	0,291	0,184

Abbreviations: p – statistical significance level.

Table 5. Comparison of character strengths in the clinical and control groups at assessment I

Parameters	Clinical group						Repeated-measures ANOVA		Post hoc comparisons		
	Assessment I	Assessment I	Assessment II	Assessment II	Assessment III	Assessment III	Repeated-measures ANOVA	Repeated-measures ANOVA	Post hoc (Tukey test)	Post hoc (Tukey test)	Post hoc (Tukey test)
	Mean	SD	Mean	SD	Mean	SD	F	p	I-II	I-III	II-III
Scale 4 (Social/emotional intelligence and insight)	21,13	5,13	22,75	4,24	23,38	4,66	7,14	0,001	0,027	0,001	0,568
Scale 10 (Integrity/Honesty/Authenticity)	34,08	5,20	34,90	4,44	35,75	4,78	4,36	0,016	0,318	0,011	0,296
Scale 18 (Bravery/Valour)	27,15	5,68	27,75	5,29	29,60	6,37	4,41	0,015	0,765	0,015	0,086

Abbreviations: p – statistical significance level.

found between assessments I and II and between assessments I and III (both $p < 0.001$). The difference between assessments II and III was not significant ($p =$

0.099). Functioning improved markedly immediately after treatment and remained at a similar or slightly higher level at the 3-month follow-up (Table 6).

Table 6. Comparison of character strengths in the clinical and control groups at assessment II

Parameters	Clinical group						Repeated-measures ANOVA		Post hoc comparisons		
	Assessment I	Assessment I	Assessment II	Assessment II	Assessment III	Assessment III	Repeated-measures ANOVA	Repeated-measures ANOVA	Post hoc (Tukey test)	Post hoc (Tukey test)	Post hoc (Tukey test)
	Mean	SD	Mean	SD	Mean	SD	F	p	I-II	I-III	II-III
GAF	62,75	7,76	67,75	8,08	69,90	7,21	25,33	<0,001	<0,001	<0,001	0,099

Abbreviations: GAF – Global Assessment of Functioning; p – statistical significance level.

Within-group changes in the control group

Outcomes in the control group were compared across the same three assessment points: before treatment, immediately after treatment, and 3 months after treatment.

Psychopathological symptom severity in the control group

The BPRS scores differed significantly across the three assessments ($p < 0.001$). Significant differences were found between assessments I and II, I and III, and II and III (all $p < 0.001$). Scores were highest at baseline, decreased significantly after treatment, and decreased further at follow-up (Table 7).

Table 7. Comparison of character strengths in the clinical and control groups at assessment III

Parameters	Control group						Repeated-measures ANOVA		Post hoc comparisons		
	Assessment I	Assessment I	Assessment II	Assessment II	Assessment III	Assessment III	Repeated-measures ANOVA	Repeated-measures ANOVA	Post hoc (Tukey test)	Post hoc (Tukey test)	Post hoc (Tukey test)
	Mean	SD	Mean	SD	Mean	SD	F	p	I-II	I-III	II-III
BPRS	28,65	7,58	25,55	4,91	24,20	4,59	23,78	<0,001	<0,001	<0,001	<0,001

Abbreviations: BPRS – Brief Psychiatric Rating Scale; p – statistical significance level.

General self-efficacy in the control group

General self-efficacy scores did not differ significantly across the three assessments ($p = 0.067$), although the result was close to the threshold of statistical significance (Table 8).

Affective experience in the control group

Positive feelings, negative feelings and affect balance did not change significantly across the three assessments ($p = 0.065$, $p = 0.254$, and $p = 0.092$, respectively) (Table 9).

Table 8. Changes in psychopathological symptom severity in the clinical group across assessments

Parameters	Control group						Repeated-measures ANOVA		Post hoc comparisons		
	Assessment I	Assessment I	Assessment II	Assessment II	Assessment III	Assessment III	Repeated-measures ANOVA	Repeated-measures ANOVA	Post hoc (Tukey test)	Post hoc (Tukey test)	Post hoc (Tukey test)
	Mean	SD	Mean	SD	Mean	SD	F	p	I-II	I-III	II-III
General self-efficacy	26,45	6,51	26,13	5,87	28,25	5,50	2,79	0,067	0,939	0,157	0,078

Abbreviations: p – statistical significance level.

Character strengths in the control group

A significant change was found for IPIP-VIA scale item 12, fairness/equity ($p = 0.014$). No significant difference was found between assessments I and II, whereas the difference between assessments I and III was significant. Fairness was rated highest before treatment and declined over the study period (Table 10).

Functioning in the control group

GAF scores in the control group differed significantly across assessments ($p < 0.001$). Significant differences were found between assessments I and II and between assessments I and III (both $p < 0.001$), while the difference between assessments II and III was not significant ($p = 0.221$). Functioning was lowest at baseline, improved markedly after treatment, and remained stable or slightly higher at follow-up (Table 11).

Table 9. Changes in general self-efficacy in the clinical group across assessments

Parameters	Control group						Repeated-measures ANOVA		Post hoc comparisons		
	Assessment I	Assessment I	Assessment II	Assessment II	Assessment III	Assessment III	Repeated-measures ANOVA	Repeated-measures ANOVA	Post hoc (Tukey test)	Post hoc (Tukey test)	Post hoc (Tukey test)
	Mean	SD	Mean	SD	Mean	SD	F	p	I-II	I-III	II-III
Positive Feelings Scale (SPANE-P)	17,45	5,57	17,70	4,98	19,08	4,86	2,82	0,065	0,938	0,076	0,155
Negative Feelings Scale (SPANE-P)	16,45	5,48	15,48	4,48	15,48	3,71	1,39	0,254	0,323	0,323	1,000
Affect balance (SPANE-P)	1,00	9,87	2,23	7,44	3,60	7,01	2,45	0,092	0,552	0,075	0,474

Abbreviations: p – statistical significance level.

Table 10. Changes in positive and negative experience and affect balance in the clinical group across assessments

Parameters	Control group						Repeated-measures ANOVA		Post hoc comparisons		
	Assessment I	Assessment I	Assessment II	Assessment II	Assessment III	Assessment III	Repeated-measures ANOVA	Repeated-measures ANOVA	Post hoc (Tukey test)	Post hoc (Tukey test)	Post hoc (Tukey test)
	Mean	SD	Mean	SD	Mean	SD	F	p	I-II	I-III	II-III
Scale 12 (Fairness/Equity)	34,60	4,94	32,80	5,36	32,00	4,78	4,48	0,014	0,113	0,012	0,642

Abbreviations: p – statistical significance level.

Table 11. Changes in character strengths in the clinical group across assessments

Parameters	Control group						Repeated-measures ANOVA		Post hoc comparisons		
	Assessment I	Assessment I	Assessment II	Assessment II	Assessment III	Assessment III	Repeated-measures ANOVA	Repeated-measures ANOVA	Post hoc (Tukey test)	Post hoc (Tukey test)	Post hoc (Tukey test)
	Mean	SD	Mean	SD	Mean	SD	F	p	I-II	I-III	II-III
GAF	59,28	10,45	65,03	7,36	66,88	7,48	25,77	<0,001	<0,001	<0,001	0,221

Abbreviations: GAF – Global Assessment of Functioning; p – statistical significance level.

Between-group analyses

Outcomes in the clinical group were compared with those in the control group at assessments I, II, and III, as well as in terms of changes between assessments I-II, I-III, and II-III.

Assessment I

At baseline, between-group differences were found for the ability to love ($p = 0.013$) and kindness/generosity ($p = 0.043$), with higher scores in the clinical group. The clinical group also had significantly higher baseline BPRS scores than the control group ($p < 0.001$), indicating a greater severity of psychopathological symptoms (Table 12).

Assessment II

Immediately after completion of treatment, statistically significant between-group differences ($p < 0.05$) were identified for 11 assessed parameters. The clinical group showed greater psychopathological symptom severity, but also higher positive feelings and affect balance scores. Higher scores were also observed for selected character strengths, including spirituality/religiousness, prudence, fairness, open-mindedness, perspective, social intelligence, integrity/authenticity, and bravery. Detailed comparisons are presented in Table 13.

Assessment III

Three months after treatment, statistically significant between-group differences ($p < 0.05$) were

Table 12. Changes in functioning in the clinical group across assessments

Parameters	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	t	p
	Clinical group				Control group				t	p
	Mean	Min.	Max.	SD	Mean	Min.	Max.	SD	t	p
Scale 22 (Capacity to love)	32,40	18,00	44,00	5,96	28,68	14,00	45,00	7,11	2,54	0,013
Scale 24 (Kindness/Generosity)	36,70	24,00	49,00	5,76	34,03	23,00	46,00	5,89	2,05	0,043

Abbreviations: p – statistical significance level.

Table 13. Changes in the analysed variables in the control group across assessments

Parameters	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	t	p
	Clinical group				Control group				t	p
	Mean	Min.	Max.	SD	Mean	Min.	Max.	SD	t	p
Positive Feelings Scale (SPANE-P)	21,07	6,00	28,00	4,69	17,70	8,00	29,00	4,98	3,12	0,003
Affect balance (SPANE-B)	6,27	-19,00	21,00	8,42	2,23	-15,00	16,00	7,44	2,28	0,025
Scale 2 (Spirituality/Religiousness)	34,78	13,00	45,00	7,43	30,80	17,00	43,00	7,41	2,39	0,019
Scale 11 (Prudence)	35,05	26,00	45,00	4,73	31,58	17,00	40,00	5,77	2,95	0,004
Scale 12 (Fairness/Equity)	35,73	29,00	44,00	4,41	32,80	20,00	41,00	5,36	2,66	0,009
Scale 15 (Perspective)	31,53	19,00	45,00	5,72	28,58	15,00	43,00	5,64	2,32	0,023
Scale 19 (Gratitude)	31,68	16,00	40,00	5,53	27,75	17,00	39,00	5,30	3,24	0,002
Scale 20 (Curiosity)	36,48	14,00	50,00	8,12	33,05	17,00	49,00	6,33	2,10	0,039
Scale 22 (Capacity to love)	32,85	19,00	45,00	5,83	30,13	17,00	41,00	5,78	2,10	0,039
Scale 24 (Kindness/Generosity)	37,85	24,00	88,00	10,03	33,60	22,00	46,00	5,18	2,38	0,020
BPRS	30,25	19,00	49,00	6,30	25,55	19,00	38,00	4,91	3,72	<0,001

Abbreviations: p – statistical significance level.

found for 15 of the assessed parameters. The clinical group scored higher on a number of character strengths, while BPRS scores also remained significantly higher than in the control group ($p < 0.001$). Detailed results are presented in Table 14.

Table 14. Comparison of functioning in the clinical and control groups across assessments

Parameters	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	t	p
	Clinical group				Control group				t	p
	Mean	Min.	Max.	SD	Mean	Min.	Max.	SD	t	p
Scale 4 (Social/emotional intelligence and insight)	23,38	15,00	35,00	4,66	20,75	9,00	32,00	4,79	2,48	0,015
Scale 8 (Teamwork/Belonging)	30,63	16,00	42,00	5,25	28,40	18,00	37,00	3,54	2,22	0,029
Scale 10 (Integrity/Honesty/Authenticity)	35,75	23,00	45,00	4,78	32,18	24,00	44,00	4,77	3,35	0,001
Scale 11 (Prudence)	34,73	27,00	44,00	4,55	31,20	20,00	43,00	5,35	3,18	0,002
Scale 12 (Fairness/Equity)	36,55	29,00	45,00	4,59	32,00	21,00	41,00	4,78	4,34	<0,001
Scale 15 (Perspective)	31,65	20,00	45,00	6,49	28,40	18,00	41,00	4,27	2,65	0,010
Scale 16 (Judgement/Open-mindedness)	33,90	24,00	45,00	5,23	30,60	17,00	43,00	5,45	2,76	0,007
Scale 17 (Appreciation of beauty and excellence)	29,95	19,00	40,00	5,45	27,28	17,00	36,00	5,16	2,25	0,027

Abbreviations: BPRS – Brief Psychiatric Rating Scale; p – statistical significance level.

Table 14. Comparison of functioning in the clinical and control groups across assessments

Parameters	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	Assessment I	t	p
	Clinical group				Control group				t	p
	Mean	Min.	Max.	SD	Mean	Min.	Max.	SD	t	p
Scale 19 (Gratitude)	31,23	16,00	40,00	5,71	27,68	16,00	40,00	5,64	2,80	0,006
Scale 20 (Curiosity)	36,75	23,00	50,00	7,25	33,10	19,00	44,00	6,25	2,41	0,018
Scale 21 (Leadership)	23,08	13,00	35,00	5,19	20,60	7,00	28,00	3,61	2,48	0,015
Scale 22 (Capacity to love)	33,78	21,00	45,00	5,84	29,40	19,00	44,00	5,67	3,40	0,001
Scale 23 (Forgiveness/Mercy)	32,33	19,00	39,00	4,99	29,75	18,00	38,00	4,73	2,37	0,020
Scale 24 (Kindness/Generosity)	37,13	27,00	49,00	5,31	31,80	25,00	46,00	5,05	4,59	<0,001
BPRS	26,93	18,00	44,00	6,57	24,20	18,00	35,00	4,59	2,15	0,035

Abbreviations: BPRS – Brief Psychiatric Rating Scale; p – statistical significance level.

Discussion

The aim of this study was to assess the effects of adding Positive Psychotherapy for Psychosis (PPP) to standard psychiatric rehabilitation in people diagnosed with schizophrenia. The clearest differences associated with PPP concerned positive affect and character strengths. In contrast, improvements in functioning and psychopathological symptom severity were observed in both groups, limiting the extent to which these changes can be attributed specifically to the positive psychotherapy intervention.

Psychopathological severity symptom decreased during rehabilitation, although the clinical group continued to have higher BPRS scores than the control group at subsequent assessments. Baseline differences between groups complicate the interpretation of the PPP effect. The findings are consistent with evidence that active participation in psychological and rehabilitation interventions may contribute to the reduction of schizophrenia symptoms [11, 12]. However, the present study did not demonstrate superiority of the programme supplemented with PPP over standard rehabilitation in this domain.

No significant between-group differences or clear changes over time were found in general self-efficacy. This may indicate that the programme did not directly influence generalised beliefs about personal agency, or that the measure used was insufficiently sensitive to intervention-related change. Previous findings on self-efficacy in schizophrenia are mixed, with studies reporting both limited associations with symptoms and cognition [12] and a role in interpersonal functioning [13].

After the intervention, participants in the clinical group experienced positive feelings more frequently and had a more favourable affected balance than participants in the control group. These effects were not maintained after 3 months. This pattern may suggest that work

focused on positive experiences produces short-term affective benefits, while maintaining these effects may require continued reinforcement of acquired strategies. The relevance of activating positive experiences has also been highlighted in interventions targeting anhedonia, apathy and motivation in schizophrenia [14].

The most distinctive finding concerned character strengths. Following the PPP programme, eight character strengths increased in the clinical group and changes in six were maintained at follow-up. These findings are important in the context of research indicating a specific profile of character strengths in people diagnosed with schizophrenia [15] and the potential to activate personal strengths through psychological interventions. The results support the view that identifying and using personal resources may be a valuable complement to psychiatric rehabilitation.

Functioning improved in both groups and remained at a similar level after 3 months. Thus, no specific advantage of the PPP over standard rehabilitation was demonstrated for GAF outcomes. This finding emphasises the importance of comprehensive rehabilitation involving psychoeducation, skills training, and work on social functioning. Structured rehabilitation interventions have also been associated with improved everyday and social functioning in people with schizophrenia [11, 13].

No between-group differences were found in optimism. In the recovery literature, hope and optimism are regarded as important resources, but they are related to factors such as self-esteem, depressive symptoms, activity levels and social support. The absence of an intervention effect in the present study may reflect both the nature of the programme and the use of a single IPIP-VIA subscale to assess optimism.

These findings partly correspond with research on Positive Psychotherapy for Psychosis. A randomised controlled trial conducted in Hong Kong demonstrated beneficial effects on selected indicators of well-being,

hope and self-efficacy [16]. In the present study, the most specific benefits of PPP concerned character strengths and a short-term increase in positive affect. Simultaneous improvements in functioning and psychopathological symptoms in both groups suggest that PPP should be considered a potential complement to, rather than an alternative to, standard psychiatric rehabilitation.

The study findings support further evaluation of PPP in larger randomised studies with a longer follow-up. It is particularly important to determine whether booster sessions could improve the durability of positive affect changes and whether activation of character strengths translates into better functioning and subjective well-being over the longer term.

Conclusions

The addition of Positive Psychotherapy for Psychosis to standard psychiatric rehabilitation was primarily associated with strengthening selected character strengths and a short-term improvement in positive affect in people diagnosed with schizophrenia. Some changes in character strengths were maintained after 3 months, whereas the beneficial effect on positive feelings was not sustained.

Improvements were observed in functioning and decrease in the severity of psychopathological symptom in both groups. PPP was not superior to standard rehabilitation in these domains and did not have a significant effect on general self-efficacy or optimism.

PPP may complement standard psychiatric rehabilitation, particularly when treatment aims to focus on personal resources and positive experiences. Further research is required to determine the specific and durable effects of the intervention.

Study limitations

Several limitations should be considered when interpreting the study findings. Convenience sampling was used and participants were not randomly allocated to groups. In addition, the baseline severity of psychopathological symptom differed between groups, limiting the ability to attribute observed changes specifically to PPP.

The study was conducted over several years and was disrupted by the COVID-19 pandemic and temporary restrictions on psychiatric rehabilitation services. Some participants did not complete the full intervention cycle or all three assessments. The long study period and extensive questionnaire battery may also have increased fatigue and reduced participant motivation.

Optimism was assessed using the IPIP-VIA subscale rather than a dedicated optimism measure. Future studies should use randomisation, larger samples, longer follow-

up, and instruments that provide more precise assessment of well-being, optimism, and functioning. The inclusion of the PPP booster sessions should also be considered.

Conflict of interest

The authors have declared no conflict of interest.

References:

1. Wood AM, Maltby J, Gillett R, Linley PA, Joseph S. The role of gratitude in the development of social support, stress and depression: two longitudinal studies. *J Res Pers.* 2008;42:854–871.
2. Gilman R, Chard KM, Schumm JA. Hope as a change mechanism in the treatment of posttraumatic stress disorder. *Psychol Trauma.* 2012;4:270–277.
3. Akhtar M, Boniwell I. Applying positive psychology to alcohol-misusing adolescents: a group intervention. *Groupwork.* 2010;20:6–31.
4. Murray G, Johnson SL. The clinical significance of creativity in bipolar disorder. *Clin Psychol Rev.* 2010;30:721–732.
5. Kashdan TB, Julian T, Merritt K, Uswatte G. Social anxiety and posttraumatic stress in combat veterans: relations to well-being and character strengths. *Behav Res Ther.* 2006;44:561–583.
6. Meyer P, Johnson D, Parks A, Iwanski C. Positive Living: a pilot study of group positive psychotherapy for people with schizophrenia. *J Posit Psychol.* 2012;7(3):239–248. doi:10.1080/17439760.2012.677467.
7. Slade M, Brownell T, Rashid T, Schrank B. *Positive Psychotherapy for Psychosis: A Clinician's Guide and Manual.* London: Routledge; 2017.
8. Overall JE, Gorham DR. The Brief Psychiatric Rating Scale. *Psychol Rep.* 1962;10:799–812.
9. Juczyński Z. Poczucie własnej skuteczności – teoria i pomiar. *Acta Univ Lodzensis Folia Psychol.* 2000;4:11–24.
10. Kaczmarek Ł. *Pozytywne interwencje psychologiczne.* Poznań: Zys i S-ka; 2016.
11. Abaoğlu H, Mutlu E, Ak S, Akı E, Anıl Yağcıoğlu AE. The effect of life skills training on functioning in schizophrenia. *Türk Psikiyatri Derg.* 2020;31(1):48–56. doi:10.5080/u23723.
12. Kurtz MM, Olfson RH, Rose J. Self-efficacy and functional status in schizophrenia: relationship to insight, cognition and negative symptoms. *Schizophr Res.* 2013;145(1–3):69–74. doi:10.1016/j.schres.2012.12.030.
13. Morimoto T, Matsuyama K, Ichihara-Takeda S, Murakami R, Ikeda N. Influence of self-efficacy on the interpersonal behavior of schizophrenia patients undergoing rehabilitation in psychiatric day-care services. *Psychiatry Clin Neurosci.* 2012;66(3):203–209. doi:10.1111/j.1440-1819.2012.02332.x.
14. Favrod J, Nguyen A, Chaix J, Pellet J, Frobert J, Fankhauser C, et al. Improving pleasure and motivation in schizophrenia: a randomized controlled clinical trial. *Psychother Psychosom.* 2019;88(2):84–95. doi:10.1159/000496479.
15. Rozya P, Sawicka M, Żochowska A, Bronowski P. Strengths in patients with schizophrenia and healthy people – similarities and differences. *Psychiatr Pol.* 2019;53(1):93–104. doi:10.12740/PP/81109.
16. Chu MH, Lau B, Leung J, Chan SC, Tang B, Lau C, et al. Positive Psychotherapy for Psychosis in Hong Kong: a randomized controlled trial. *Schizophr Res.* 2022;240:175–183. doi:10.1016/j.schres.2021.12.044.

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