



Functional Impact of a Psychosocial and Functional Rehabilitation Intervention in Colombian Patients with Severe Mental Illness and Related Factors.

Martha P Saavedra^{1,2}, Ana Melisa Cordoba Sastoque¹, Diana C Zamora^{1,2}, Jairo M González-Díaz^{2,3,4}, Rodrigo N Córdoba^{1,2}

Abstract

Introduction: Serious mental illness (SMI) is characterized by disorders that cause severe dysfunction in daily life, affecting autonomy and social interaction. Its origins are complex and often lead to frequent hospitalizations. Previously considered incurable, recent research shows that up to 25% of patients can fully recover, and 40-45% can achieve social independence with appropriate interventions.

Objective: Assess the impact of the interventions of the "Established Mental Disorder Program - EMD-P" on clinical severity, functionality, hospital resource usage, and treatment adherence.

Methods: A longitudinal, naturalistic, single-arm study was conducted with patients attending the EMD-P of the Nervous System Research Center (Grupo Cisne) in Bogotá, Colombia. All subjects were evaluated by a psychiatrist at the institution between July 2012 and December 2022, and interdisciplinary interventions were performed for 52 weeks. Patients included had diagnoses of schizophrenia spectrum disorder, bipolar disorder, depression disorders, and obsessive-compulsive disorder.

Results: A statistically significant decrease in Clinical Global Impression (CGI) scores was observed, with a median decrease from 4 (IQR=5) to 3 (IQR=5) (Wilcoxon test; $Z=-6.674$; $p<0.001$). Additionally, Global Assessment of Functioning (GAF) scores improved significantly by 10 points, from a median of 55 (IQR=50) to 65 (IQR=50) (Wilcoxon test; $Z=-7.306$; $p<0.001$). Personal and Social Performance (PSP) scores also showed a significant improvement, with a median increase from 51 (IQR=45) to 66.5 (IQR=60) (Wilcoxon test; $Z=-7.370$; $p<0.001$).

Conclusions: Patients with severe mental disorders benefit from interdisciplinary interventions, demonstrating improved clinical severity, functionality, reduced hospital resource usage, and better adherence to pharmacological treatment.

Keywords: Mental Health; Severe Mental Illness; Psychosocial Interventions; Functional Recovery; Psychosocial Rehabilitation.

Introduction

Serious mental illness (SMI) has been a recognized term since 1987, introduced by the National Institute of Mental Health (NIMH). However, its definition varies and several interpretations exist [1-3]. A point in common is

Affiliation:

¹Grupo Cisne, Bogotá, Colombia

²UR Center for Mental Health, School of Medicine and Health Sciences, Universidad del Rosario, Bogotá, Colombia

³Department of Medicine, School of Medicine and Health Sciences, Universitat de Barcelona, Barcelona, Spain

⁴Clínica Nuestra Señora de la Paz - OHSJD, Bogotá, Colombia

*Corresponding author:

Martha P. Saavedra, UR Center for Mental Health, School of Medicine and Health Sciences, Universidad del Rosario, Bogotá, Colombia, Postal address: Calle 173 a # 65 – 75, Bogotá, Colombia

Citation: Martha P Saavedra, Ana M Córdoba, Diana C Zamora, Jairo M González-Díaz, Rodrigo N Córdoba. Functional Impact of a Psychosocial and Functional Rehabilitation Intervention in Colombian Patients with Severe Mental Illness and Related Factors. *Journal of Psychiatry and Psychiatric Disorders*. 9 (2025): 82-90.

Received: February 27, 2025

Accepted: March 10, 2025

Published: March 24, 2025

the impact on functionality affecting the activities is the impact on functionality, which limits activities of daily living. The Substance Abuse and Mental Health Services Administration (SAMHSA) and the American Psychiatric Association define serious mental illness as mental, behavioral, or emotional disorders resulting in severe functional impairment, substantially interfering with major life activities [4,5].

Mental illness is characterized by complex origins and is often associated with a variety of cognitive impairment and negative symptoms. It results in several hospitalizations over the course of a lifetime, which impacts on impaired daily living function, including: poor personal hygiene, low motivation, lack of self-care, dependence on others, and poor social skills [9-11]. Additionally, disability-adjusted life years related to mental illness have increased by over 10% in the last 25 years, closely linked to poverty and poor mental health. In Latin America, 82% of individuals with disabilities live in poverty, and approximately 90% are unemployed or excluded from the labor force [12].

Historically, SMI were viewed as chronic, incurable, and deteriorating. Recent research indicates that individuals with these diagnoses can significantly improve or recover with psychosocial interventions. Improvements in health, employment, income, frequency of hospitalization, dependence on public care systems and stigma in the community have been demonstrated [12]. Approximately 20-25% of individuals achieve full recovery, defined as the absence of psychotic symptoms and a return to the level of functioning that existed prior to the onset of illness and 40%-45% achieve social recovery, i.e. economic and residential independence [13]. Therefore, individuals with a disabling illness or condition may benefit not only from interventions aimed at reducing symptoms, but also from interventions aimed at preventing and/or modifying functional impairment and contextual barriers [4].

Reducing the disability associated with this type of psychiatric diagnosis is one of the major goals in the development of treatments for severe mental illness [14]. However, very few programs and studies have focused on demonstrating outcomes in the rehabilitation of these patients. For this reason, the aim of this study is to know the impact of the interventions of the “Established Mental Disorder Program – EMD-P” on the clinical severity, the functionality of the participants, the impact on the use of hospital resources and the therapeutic adherence.

Methodology

Study Design and Participants

This longitudinal, naturalistic, single-arm study included patients aged 16 to 65 with a GAF score below 60, with the following diagnoses according to DSM-IV criteria [15]: schizophrenia spectrum disorders (SCH), bipolar disorder

(BD), depressive disorders (DD), and obsessive-compulsive disorder (OCD), attended the EMD-P of the Nervous System Research Center (Grupo Cisne) in Bogota, Colombia. Patients with cognitive impairment, mental disorders secondary to physical conditions, moderate or severe intellectual disabilities, major neurocognitive disorders, active psychoactive substance use, severe personality disorders, or those lacking a support network were excluded. All patients were assessed by a multidisciplinary team, including psychiatrists, neuropsychologists, social workers, and occupational therapists, and followed for 52 weeks with quarterly evaluations (T1, T2, T3, and T4), during which the initial tools are used to monitor changes that occur during the care process. Details of the intervention are described in a previous article [16].

Assessment Instruments

All subjects were evaluated by a psychiatrist between July 2012 and December 2022. An ad hoc questionnaire collected sociodemographic information and medical histories. At all visits, clinical severity was assessed using a specific scale for each of the disorders included, namely:

In the case of schizophrenia spectrum disorders, the PANSS Structured Clinical Interview-Positive and Negative Syndrome Scale (SCI_PANSS) was used: it is a test that assesses the severity of symptoms and monitors the response to treatment. It is a test consisting of 30 items that are scored from 1 - absent - to 7 extremes. It is composed of 4 subscales (PANSS-Positive (7 items)), (PANSS-Negative (7 items)), PANSS-PG-General Psychopathology (16 items) and PANSS-C-Composite (subtract positive symptoms from negative symptoms) [19-21].

In the case of Obsessive Compulsive Disorder, the Yale-Brown Obsessive Compulsive Disorder Scale (Y-BOCS): this instrument is used to assess the severity of OCD symptoms. It is used to measure the severity of OCD as well as changes after treatment [22-24].

For bipolar disorder and depressive disorders, the Montgomery-Asberg Depression Rating Scale (MADRS) has been used to assess the change in intensity of depressive symptomatology as a result of therapeutic intervention. It is a 10-item applied scale that evaluates cognitive and mood alteration symptoms. For each item the scale contemplates 7 levels of intensity/severity, scored from 0 to 6, of which 4 (0-2-4-6) are predefined and the remaining 3 (1-3-5) are reserved for intermediate situations in which it is not possible to clearly assign the degree of symptomatic intensity to any of the previous levels. The total score is obtained by adding the values of the selected options, the range of possible values being between 0 and 60 [25,26].

For bipolar disorders, the Young's Mania Scale was used: it quantifies mania symptoms through 11 items with

5 response options, indicating different levels of symptom intensity. Severity levels are determined by the patient's subjective report over the previous 48 hours and by clinical observation during the interview. The items are to be scored by the clinician based on the patient's report and his or her own observation. Scoring ranges from 0 to 4 for some items and from 0 to 8 for items 5, 6, 8, and 9. The total score ranged from 0 to 60 points, the higher the score, the greater the severity of the manic condition [27-29].

In all cases the Clinical Global Impression was also evaluated, this scale is divided into two scales the Severity of Illness (CGI-S) and Global Improvement (CGI-I). The main objective of the test is to assess treatment-related changes in disease progression that can be analyzed prospectively. The response system is a 7-point Likert scale, with 1 being normal and 7 being severe. The time frame for assessing acute episodes is the previous week. To obtain the measure of change induced by therapy, the subtraction between the baseline score and the final score must be performed [30,31].

Functionality was assessed using Personal and Social Functioning (PSP) and Global Assessment of Functioning (GAF). PSP is a clinician-rated instrument that assesses the patient's functioning in the following 4 areas: a) self-care; b) usual social activities, including work and study; c) personal and social relationships; and d) disruptive and aggressive behaviors. The 4 areas are scored on a 6-point Likert severity scale ranging from 1 (absent) to 6 (very severe). Areas 1-3 share the same operational criteria, while area 4 has its own operational criteria to help clinicians assess the severity of the patient's presenting difficulties. PSP scoring is a three-step process: a) first, using the operational criteria, clinicians rate the severity of presenting difficulties in the 4 areas; b) second, using a scoring algorithm, these 4 scores are transformed into a score with a 10-point interval ranging from 1-10 (lack of autonomy for basic functioning) to 91-100 (excellent functioning in the 4 main domains); and c) third, taking into account functioning in a ratio of 9 other life domains, a specific score is selected from the 10-point interval. In the overall score, higher values reflect better personal and social functioning [32].

Global Assessment of Functioning (GAF): consists of a single item that is scored on a scale ranging from 100 (satisfactorily engaged in a wide range of activities, never seems overwhelmed by the problems of his life, is valued by others because of his many positive qualities) to 1 (manifest expectation of death). The time frame of reference is the current time frame [33].

Finally, hospital resources were assessed with a time frame of the last year through three questions: How many times did you consult psychiatry? How many psychiatric emergencies did you have? How many days were you hospitalized for

psychiatric reasons? The questions are reported on a trimestral basis, evaluating the behavior of the days of hospitalization in the year before entering the program compared to the days of hospitalization during the year of permanence in the program.

Data Analysis Plan

Data were tabulated in Microsoft® Excel® spreadsheets for Windows and subsequently analyzed in the IBM SPSS statistical packages for Windows version 25 and in R version 4.3.2 for Windows. Although several scales were used to evaluate this variable (PANSS, MADRS, YMRS and YBOCS), the CGI variable was taken into account as it was present in all participants (each of these variables was measured for the corresponding diagnosis), allowing its inter-diagnostic evaluation. To corroborate that the CGI could be used for this purpose, the correlation between this and each of the specific variables (in the baseline measurement) was explored, finding that it was an acceptable measurement for the described purpose (CGI vs. YMRS: $r_s=0.081$, $p=0.656$; vs. MADRS: $r_s=0.559$, $p<0.001$; vs. PANSS: $r_s=0.550$, $p<0.001$; vs. YBOCS: $r_s=0.196$, $p=0.614$). It should be emphasized that the YMRS and YBOCS scales showed no apparent correlation, but this is likely due to low statistical power due to a relatively small n compared to the other diagnostic groups.

Qualitative data were reported as absolute and relative frequencies (percentages). The distribution of quantitative variables was examined using Kolmogorov-Smirnov or Shapiro-Wilk statistics, depending on the sample size. If they showed a parametric distribution, they were reported as averages and standard deviations; if they showed a nonparametric distribution, they were reported as medians and interquartile ranges (IQR). The chi-square test (χ^2) was used for bivariate analysis of categorical variables and for continuous variables Student's t-test, Mann-Whitney U (U) or Kruskal-Wallis (H) tests were used according to the distribution of the data in the case of independent samples. Repeated measurements over time of the variables of interest were examined using the Wilcoxon test for variables with nonparametric distributions.

Ethics Committee Approval

The present study complied with all relevant ethical standards. The research protocol was reviewed and approved by the Ethics Committee of the Nervous System Research Center ("Grupo Cisne"), which ensured that the design and conduct of the study complied with international regulations for research involving human subjects, as laid down in the Declaration of Helsinki and local ethical guidelines. Participants signed an informed consent form prior to their inclusion in the study, and confidentiality of personal data was assured at all times.

Results

To date, 312 subjects have participated in the program. Of these, 103 (33%) did not complete the process due to administrative issues (13.7%), relocation (5.9%), family or economic reasons (9.8%), labor market reinsertion (22.5%), or non-adherence (48%). A total of 154 subjects (49.4%) completed the program, while 55 (17.6%) remain active. Of the total number of subjects, 92 participants (29.5%) decided not to take part in the present study. The baseline characteristics of subjects evaluated at any time during the program (n=220) are as follows:

The results regarding the subjects who completed the entire program are presented below. The relationship between the variables of interest at baseline (CGI, GAF, PSP, use of hospital resources and adherence) and insurer and gender was examined, but no statistically significant differences were found. Marital status was found to be associated with the number of emergency department visits in the year prior to program entry, being higher in patients with a partner (median [IQR] without a partner = 1[6] vs. with a partner = 1[7]; $Z=-2.060$; $p=0.039$). Similarly, the relationship between the same variables of interest and the degree of adherence was examined, and it was found that better adherence was

Table 1. Sociodemographic characteristics and background of participants

Baseline Variable	Category	Follow-up		Total	χ^2	p
		Incomplete	Complete			
		(n=112, 50,9%)	(n=108, 49,1%)			
Gender	Female	56	46	102	1,213	0,283
	Male	56	62	118		
Marital Status	No partner	87	90	177	1,118	0,312
	With partner	25	18	43		
Diagnosis	Schizophrenia and Schizoaffective Disorder	52	56	108	1,519	0,678
	Bipolar Disorder	26	27	53		
	Obsessive-Compulsive Disorder	6	5	11		
	Depressive Disorder	28	20	48		
ECT Pre-Program	No	109	108	217	N/A	N/A
	Yes	3	0	3		
Pre-Program Psychotherapy	No	110	108	218	N/A	N/A
	Yes	2	0	2		
Pre-Program Rehabilitation	No	109	108	217	N/A	N/A
	Yes	3	0	3		
Pre-Program Psychoeducation	No	110	108	218	N/A	N/A
	Yes	2	0	2		
	Adequate	31	44	75		
Adherence	Poor	81	64	145	4,175	0,047*
	Adequate	31	44	75		
Hospitalizations	No	33	22	55	2,425	0,161
	Sí	79	86	165		

ECT: Electroconvulsive therapy, * $p<0.05$.

associated with a higher total PSP score (median [IQR] poor adherence = 50[41] vs adequate = 60[36]; $Z=-2.242$; $p=0.025$) and a lower number of emergency department visits in the year prior to program entry (median [IQR] poor therapeutic adherence = 1[7] vs adequate = 1[4]; $Z=-2.049$; $p=0.040$). On the other hand, the behavior of these variables of interest among the different diagnoses was explored, finding differences in their functioning measured both with GAF (median [IQR] GAF SCH=50[45] vs GAF BD=60[25] vs GAF OCD=50[30] vs GAF DD=60[40]; $Z=10.080$; $p=0.018$) as with PSP (median [IQR] PSP SCH=50[40] vs PSP BD=60[35] vs PSP OCD=50[30] vs PSP DD=60[31]; $Z=7.457$; $p=0.059$).

A statistically significant decrease in CGI score was observed after one year of intervention, from a median of 4 points (IQR=5) to 3 points (IQR=5) (Wilcoxon test; $Z=-6.674$; $p<0.001$). This effect over time was maintained, except for OCD, although this result should be interpreted with caution as this group is underrepresented in the sample. However, there were no statistically significant differences between one diagnosis or another at the end of the intervention ($H=5.406$; $p=0.144$). (Figure 1)

A statistically significant improvement of 10 points in the GAF was observed after one year of intervention, from a median of 55 points (IQR=50) to 65 points (IQR=50) (Wilcoxon test; $Z=-7.306$; $p<0.001$). This effect over time was maintained when disaggregated by diagnosis, with no statistically significant differences between one diagnosis or

another at the end of the intervention ($H=4.535$; $p=0.209$). (Figure 1). A statistically significant improvement in PSP was also observed after one year of intervention, from a median of 51 points (IQR=45) to 66.5 points (IQR=60) (Wilcoxon test; $Z=-7.370$; $p<0.001$). This effect over time was maintained when disaggregated by diagnosis, with a significantly lower score for OCD at the end of the intervention ($H=8.680$; $p=0.034$). (Figure 1).

Finally, a statistically significant decrease in hospital resource use was observed in the intervention year compared with the immediately preceding year. Total outpatient consultations decreased from 3 (IQR=12) to 0 (IQR=12) (Wilcoxon test; $Z=-7.719$; $p<0.001$), emergency visits decreased from 1 (IQR=7) to 0 (IQR=1) (Wilcoxon test; $Z=-7.942$; $p<0.001$), and hospital days decreased from 21 (IQR=730) to 0 (IQR=15) (Wilcoxon test; $Z=-8.068$; $p<0.001$). This effect over time was maintained when disaggregated by diagnosis (with the exception of OCD in emergency consultations and hospital days), without finding statistically significant differences between one diagnosis or another at the end of the intervention (Consultations: $H=0.847$; $p=0.838$; Emergency: $H=0.482$; $p=0.923$; Days of hospitalization: $H=0.864$; $p=0.834$).

Therapeutic adherence also improved significantly in the whole group after the intervention ($\chi^2=35.558$; $p<0.001$), with no statistically significant differences between diagnoses after the intervention ($\chi^2=1.986$; $p=0.575$).

Table 2: Relationship between variables of interest at baseline (CGI, GAF, PSP, use of hospital resources and adherence) and sociodemographic characteristics of participants.

		CGI	GAF	PSP	Use of hospital resources				Adherence
					Consultations	Emergencies	Days of hospitalization		
Gender	U	12,45,500	12,10,000	13,11,500	13,56,500	13,90,500	11,77,500	χ^2	2,845
	Z	-1,169	-1,383	-0,729	-0,436	-0,234	-1,551	p	0,114
	P	0,242	0,167	0,466	0,662	0,815	0,121		
Marital status	U	7,10,500	7,93,000	7,20,500	6,83,000	5,74,000	7,66,500	χ^2	0,491
	Z	-0,855	-0,144	-0,756	-1,058	-2,060	-0,360	p	0,603
	p	0,393	0,885	0,450	0,290	0,039	0,719		
Adherence	U	13,32,500	12,73,000	10,86,000	13,55,000	10,98,500	13,46,000	χ^2	N/A
	Z	-0,492	-0,870	-2,063	-0,335	-2,390	-0,390	p	N/A
	p	0,623	0,384	0,039	0,738	0,697	0,697		
Dx	H	5,023			2,595	2,086	3,495	χ^2	2,507
	p	0,170			0,458	0,555	0,321	p	0,474

* Median Poor Therapeutic Adherence: 50, RIQ=40; Median Adequate Therapeutic Adherence: 60, IQR=36.H, Kruskal-Wallis H; p, p-value; U, Mann-Whitney U; Z, Z-value.

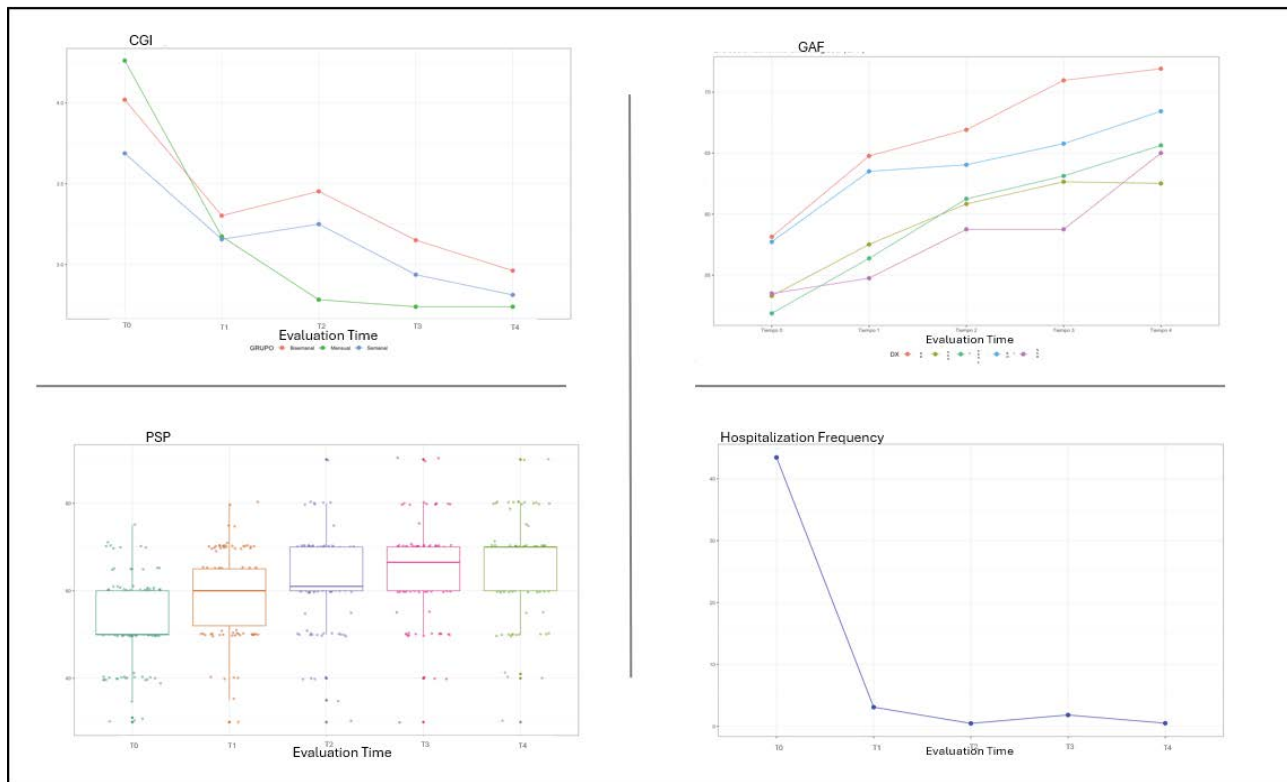


Figure 1: Relationship between the variables of interest (CGI, GAF, PSP and use of hospitalization frequency) and assessment times.

Discussion

The aim of this study was to evaluate the impact of the “EMD- P” intervention on the clinical severity and functionality of the participants, as well as the impact of the intervention on the use of hospital resources and therapeutic adherence in a group of Colombian patients with SMI. Our results suggest that patients with severe mental disorders benefit from the interdisciplinary interventions of this program by showing a clear improvement in clinical severity and functionality.

In this study, a statistically significant decrease in clinical severity as measured by the scaled CGI score was observed after one year of intervention. Studies that have also assessed recovery-remission rates of SMI have found that, of people with a lifetime history of severe mental illness, approximately 33% reported being in recovery-remission for at least the previous 12 months and, although not assessed in our study, age was the only demographic variable associated with recovery-remission, with a decreasing rate of recovery-remission up to the age of 32 years, followed by a gradual increase to 58% at the age of 65 years [34].

Community-based studies aimed at improving psychiatric care include improvements in clinical symptoms, particularly for frequent users of community services and first episode patients (9). Other studies aim to evaluate the effectiveness of

self-management interventions for adults with serious mental illness and conclude that there is evidence that providing self-management interventions alongside standard care improves outcomes for people with SMI [35].

In terms of functionality, a statistically significant improvement was observed on both the GAF and PSP scales after one year of intervention. Several studies have evaluated functionality through the scales evaluated in this study [14,36,37], but few have been conducted in people with SMI. On the other hand, numerous studies support the postulate that severe mental illness requires long-term rehabilitation to alleviate functional impairment, maintain disease stability and improve quality of life [9].

As a result to be highlighted, in our study we observed a statistically significant decrease in the use of hospital resources during the year of intervention as compared to the year immediately preceding the intervention. The literature shows that most psychiatric rehabilitation models are individual-centered, focusing on the development of individual-level skills (emotional, social, self-management and vocational) to enhance successful community reintegration [38]. Likewise, other studies show that community interventions increase employment, income from competitive employment, self-esteem and community integration, and decrease hospitalizations, dependence on public care systems and

stigma in the community [12]. In addition, prolonged stays in acute inpatient beds awaiting transfer to a rehabilitation setting have been found to be counter-therapeutic [36].

An additional finding was that adherence also improved significantly in the whole group after the intervention. These data can be correlated with other studies showing improved adherence in people who have undergone rehabilitation; medication non-adherence is significantly higher in the experimental group (17.9%) compared with the control group (2.5%) [9]. According to the literature, some strategies recommended by expert consensus guidelines to address adherence problems in patients with severe and persistent mental illness are: discussion with family or caregivers, use of self-report scales, and monthly compliance assessments, with additional assessments if there is a noticeable symptomatic change [39].

These findings highlight the importance of interdisciplinary interventions that address the complexity of severe mental disorders by providing a multifaceted treatment approach that includes a range of psychosocial strategies, in which rehabilitation plays a key role [40-42].

Some limitations to be considered in this study were mainly related to difficulties in maintaining follow-up due to a significant loss of patients, which could lead to a possible bias due to loss of participants. Although we were able to establish the cause of dropout, this could affect the overall results. A subgroup analysis was performed to minimize the risk of loss. An additional limitation is that the scales were not always applied by the same professional, since during the measurement period there was a change of personnel within the institution. Even so, all the personnel were trained in the application of the scales. On the other hand, although several measurement scales were used, only the scale corresponding to each subject's diagnosis was applied, which limited the comparative analysis, since it could only be carried out between subjects who had the same scales applied; this was resolved by using transdiagnostic scales. Finally, there are the limitations inherent to naturalistic studies, such as the lack of experimental control and selection bias, and those of single-arm studies, such as the lack of a control group and the impossibility of comparing effectiveness. Likewise, this study does not have the statistical power or methodological characteristics to establish clear causal relationships. Nevertheless, it is the first longitudinal study in Colombia with these characteristics, focusing on symptomatic and functional recovery and reduction in hospital resource use in people with SMI. In addition, there are few functional recovery programs in Latin America.

Conclusion

In conclusion, our results suggest that patients with serious mental disorders benefit from interdisciplinary interventions. This can be observed in the follow-up of

EMD-P, where patients have a clear improvement in clinical severity, functionality, reduced use of hospital resources and better adherence to pharmacological treatment. In addition, these results are a significant contribution to the literature on the impact of psychosocial rehabilitation programs and the influence that such programs have on the improvement of functioning and its impact on important life activities. To the best of our knowledge, this is the first study in patients with SMI in Colombia, in addition to the scarce literature found on the subject.

Acknowledgement

We thank Marcela Alzate and Carlos Pedraza for their contributions to the program design and Catalina Gamboa, Nathalia Cubillos, and Erika Bermeo for participant care and follow-up.

Disclosures

Financial disclosure statement: This manuscript was financed by Laboratorio Franco Colombiano Lafranco S.A.S., a company of the Abbott group of companies, who were not involved in the writing of this manuscript.

DCZ has been a consultant, has received honoraria and has been part of the board of speakers/advisors of Janssen. JGD has been a consultant to, received honoraria from, and served on the speaker/advisory board of Janssen, Eurofarma, Servier, Sanofi, Lilly, and Pfizer. RNC has consulted for, received honoraria from, and served on the speakers/advisors board for Janssen, Eurofarma, Servier, Sanofi, Lilly, and Pfizer. The remaining authors report no biomedical financial interests or potential conflicts of interest. We declare no conflicts of interest other than those listed above.

Author Contributions

MPS and RNC were responsible for conceptualization, methodology, participated in research and resources. AMC, DCZ and JGD participated in research, formal analysis and writing - original draft and review and editing. All authors have read and approved the final version submitted and take public responsibility for all aspects of the work.

Références

1. Zumstein N, Riese F. Defining Severe and Persistent Mental Illness—A Pragmatic Utility Concept Analysis. *Front Psychiatry* 6 (2020): 11.
2. Ministerio de trabajo y asuntos sociales. Modelo de atención a las personas con enfermedad mental grave. 1st ed. Ministerio de Trabajo y Asuntos Sociales, Secretaría de Estado de Servicios Sociales F y D, Instituto de Mayores y Servicios Sociales (IMSERSO), editors. Madrid: Instituto de Mayores y Servicios Sociales (IMSERSO); 1 (2007): 11-169 p.

3. American Psychiatric Association. What is serious mental illness?. (2024).
4. Carmona-Huerta J, Durand-Arias S, Cárdenas-García E, et al. Comprehensive rehabilitation and job reintegration of people with severe mental illness in a Latin American country: REINTEGRA study protocol. *BMC Psychiatry* 23 (2023).
5. American Psychiatric Association. 2024. What is serious mental illness? .
6. Van Duin D, De Winter L, Oud M, et al., The effect of rehabilitation combined with cognitive remediation on functioning in persons with severe mental illness: Systematic review and meta-analysis. Vol. 49, *Psychological Medicine*. Cambridge University Press 49 (2019): 1414–1425.
7. Green CA, Nancy Perrin MA, Leo MC, et al., Recovery From Serious Mental Illness: Trajectories, Characteristics, and the Role of Mental Health Care. *Psychiatric Services* 64 (2013): 1203-1210.
8. Wiersma D. Needs of people with severe mental illness. *Acta Psychiatr Scand* [Internet] (2006): 115–119.
9. Cheng JF, Chen CY, Lin MC, et al., To explore the efficacy of community rehabilitation for facilitating daily function among patients with mental illness. *Perspect Psychiatr Care* 54 (2018): 580-585.
10. Baena BG, Ignacio J, Navarro V, et al., Percepción social y estigma de la enfermedad mental. *Implicaciones en su atención* 14 (2018): 12153.
11. Heriberto Méndez Salas, Nicole L. Ramos Áviles, et al., El transtorno mental y sus implicaciones psicosociales. *Revista Icono* [Internet]. (2018).
12. Cubillos L, Muñoz J, Caballero J, et al., Addressing severe mental illness rehabilitation in Colombia, Costa Rica, and Peru. *Psychiatric Services* 71 (2020): 378-384.
13. Green CA, Nancy Perrin MA, Leo MC, et al., Recovery From Serious Mental Illness: Trajectories, Characteristics, and the Role of Mental Health Care. *Psychiatric Services* 64 (2013): 1203-1210.
14. Brown MA, Velligan DI. Issues and developments related to assessing function in serious mental illness [Internet]. (2016).
15. Pierre Pichot, Juan J López-Ibor Aliño, Manuel Valdés Miyar. *DSM-IV manual de diagnóstico y estadístico de los trastornos mentales* Masson (1995): 909 p.
16. Martha Patricia Saavedra, Marcela Álzate, Ana Melisa Córdoba, et al., Propuesta de un programa de rehabilitación psicosocial y funcional en pacientes con enfermedad mental establecida en Bogotá, Colombia. *Revista Latinoamericana de Psiquiatría* [Internet] 23 (2024): 25–34.
17. Ferrando L, Bobes J, Gibert M, et al., Mini International Neuropsychiatric Interview. Madrid (1998).
18. Organización Panamericana de la Salud. Clasificación estadística internacional de enfermedades y problemas relacionados con la salud. Ginebra: OPS, Oficina Sanitaria Panamericana, Oficina Regional de la Organización Mundial de la Salud (2008).
19. Peralta V, Cuesta MJ. Validación de la escala de síntomas positivos y negativos (PANSS) en una muestra de esquizofrénicos españoles. *Actas Luso Españolas de Neurología Psiquiátrica* 4 (1994): 44–50.
20. Quintero CA, Alzate M. Medición De Los Síntomas Positivos Y Negativos De La Esquizofrenia Por Medio De La Escala.
21. Kay SR, Flszbeln A, Qpjer LA. The Positive and Negative Syndrome Scale (PANSS) for Schizophrenia [Internet] 13 (1967).
22. Sal y Rosas HJ, Vega Dienstmaier JM, Mazzotti Suarez G, et al., Validación de una versión en español de la Escala Yale-Brown para el trastorno Obsesivo-Compulsivo. *Actas Españolas Psiquiatría* 20 (2002).
23. Yacila GA, Cook-Del Aguila L, Sanchez-Castro AE, et al., Traducción y adaptación cultural del Yale-Brown Obsessive Compulsive Scale (Y-BOCS) para trastornos obsesivos compulsivos Spanish translation and cultural adaptation of Yale-Brown Obsessive Compulsive Scale (Y-BOCS). *Acta Med Peru* 33 (2016): 253–258.
24. HJ Sal y Rosas, JM Vega-Dienstmaier, G Mazzotti Suárez, et al., Validación de una versión en español de la EscalaYale-Brown para el Trastorno Obsesivo-Compulsivo. *Actas Esp Psiquiatr* (2002).
25. Lobo A, Chamorro L, Luque A, Dal-Ré R, Badía X, Baró E, et al. Validación de las versiones en español de las Escalas Montgomery-Asberg Depression Rating Scale y Hamilton Anxiety Rating Scale para la evaluación de la depresión y de la ansiedad. *Medicina Clínica* 118 (2002): 493-499.
26. Paketci S. Interpretation of the Montgomery-Åsberg Depression Rating Scale (MADRS). Vol. 219, *British Journal of Psychiatry*. Cambridge University Press (2021): 620–621.
27. Colom F, Vieta E, Martinez-Arán A, et al., Versión española de una escaña de evaluación de la manía: validez y fiabilidad de la Escala de Manía de Young. *Medicina Clínica* 119 (2002): 366-371.
28. Apiquian R. Validity and confiability of Mania Rating Scale [Internet]. (1997).

29. Colom F, Vieta E, Martínez-Arán A, et al., Spanish version of a scale for the assessment of mania: Validity and reliability of the Young Mania Rating Scale. *Med Clin (Barc)* 119 (2002): 366-371.
30. Haro JM, Kamath SA, Ochoa S, et al., The Clinical Global Impression-Schizophrenia scale: a simple instrument to measure the diversity of symptoms present in schizophrenia. *Acta Psychiatrica Scandinavica* 107 (2003): 16–23.
31. Vieta Pascual E, Torrent Font C, Martínez-Arán A, et al., Escala sencilla de evaluación del curso del trastorno bipolar: CGI-BP-M. *Actas Españolas de Psiquiatria* 30 (2002):301-304.
32. Garcia-Portilla MP, Saiz PA, Bousoño M, et al., Validation of the Spanish Personal and Social Performance scale (PSP) in outpatients with stable and unstable schizophrenia. *Rev Psiquiatr Salud Ment* 4 (2011): 9-18.
33. Bobes J, García-Portilla MP, Bascarán MT, et al., Banco de instrumentos básicos para la práctica de la psiquiatría clínica. *Revista de Ciencias Médicas* (2002).
34. Salzer MS, Brusilovskiy E, Townley G. National estimates of recovery-remission from serious mental illness. *Psychiatric Services* 69 (2018): 523-528.
35. Lean M, Fornells-Ambrojo M, Milton A, et al., Self-management interventions for people with severe mental illness: Systematic review and meta-analysis. *British Journal of Psychiatry*. Cambridge University Press; 214 (2019): 260-268.
36. Ryan T, Carden J, Higgo R, Poole R, Robinson CA. An assessment of need for mental health rehabilitation amongst in-patients in a Welsh region. *Soc Psychiatry Psychiatr Epidemiol* 51 (2016): 1285-1291.
37. Cano JF, Ortégón-Valencia J, Pedraza-Perez C, et al., Functionality During the First Five Years After the Diagnosis of Schizophrenia. A Cohort Study in a Colombian Population. *Rev Colomb Psiquiatr* 51 (2022): 183-191.
38. Thekkumkara SN, Jagannathan A, Jadhav P, et al., 'Family centric rehabilitation' for persons with mental illness in India: Conceptual framework using evidence-based case studies'. *Asian J Psychiatry* (2020): 54.
39. Velligan DI, Weiden PJ, Sajatovic M, et al., Strategies for addressing adherence problems in patients with serious and persistent mental illness: Recommendations from the expert consensus guidelines. Vol. 16, *Journal of Psychiatric Practice*. (2010): 306-324.
40. Bellack AS. Skills Training for People with Severe Mental Illness.
41. Carlos M Muñiz. El abordaje interdisciplinario de la salud mental. Situación actual a partir de la ley 26.657 y el decreto 603/2013. Argentina; (2014)
42. Ministerio de sanidad y política social. Guía de práctica clínica de intervenciones psicosociales en el trastorno mental grave : versión resumida. Ministerio de Ciencia e Innovación (2009).



This article is an open access article distributed under the terms and conditions of the [Creative Commons Attribution \(CC-BY\) license 4.0](https://creativecommons.org/licenses/by/4.0/)