

Subjective recovery in severe mental illnesses: Associations with self-stigma and clinical insight

Selda Ozturk Kaygan¹, Aysel Incedere²

ABSTRACT

Objectives: This study examined how self-stigmatization and insight affect subjective recovery in individuals with severe mental illness.

Methodology: This cross-sectional descriptive study included 131 patients with severe mental illness who were admitted to the Psychiatry outpatient clinic of a university hospital between April 2018 to May 2022. Data were collected using a demographic form, Subjective Recovery Assessment Scale, Clinical Global Impression-Severity, Self-Stigma Inventory for Patients, and Schedule for Assessment of Three Components of Insight.

Results: Linear regression analysis revealed that income, self-stigma, and insight significantly predicted subjective recovery. Higher income and insight were linked to higher recovery, whereas self-stigma reduced it. Patients with schizophrenia reported higher recovery levels than those with bipolar disorder; despite more severe symptoms and lower insight. Female patients and those who did not attempt suicide also showed higher recovery rates.

Conclusion: The findings highlight the multidimensional nature of subjective recovery and emphasize the need for person-centered, holistic interventions that address stigma, financial stability, and psychosocial empowerment alongside clinical care.

KEYWORDS: Severe mental illness, Subjective recovery, Self-stigma, Insight.

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INTRODUCTION

Severe mental illnesses are chronic and relapsing conditions that impair functioning and often begin early in life. Although previously considered non-recoverable, current evidence shows that meaningful recovery is possible. Recovery includes clinical recovery (symptom reduction and functional improvement) and subjective recovery, which emphasizes living a meaningful life with hope, autonomy, and personally defined goals regardless of symptoms.¹⁻⁴

Subjective recovery is influenced by psychological, social, and clinical factors such as hope, empowerment, stigma, social support, and illness acceptance.^{5,6} Among these, insight and self-stigma are key determinants. While insight is generally associated with better treatment adherence and outcomes,^{7,8} it may also have complex psychological effects on subjective recovery. Heightened awareness of illness may enhance clinical engagement while concurrently diminishing perceived recovery in certain individuals.

Self-stigma is consistently linked to lower self-esteem, hopelessness, and poorer recovery outcomes.^{5,9}

Socioeconomic factors also play an important role by improving access to care and enhancing perceived control over life.¹⁰

However, the interaction between insight, self-stigma, and socioeconomic variables remains insufficiently understood. In particular, the relationship between insight and subjective recovery may not be linear, suggesting a complex psychosocial mechanism.

Therefore, this study aimed to examine subjective recovery in individuals with severe mental illness and investigate its associations with self-stigma and clinical insight. The study addressed the following research questions:

- What is the level of subjective recovery?
- How are insight and self-stigma related to recovery?
- Which factors predict subjective recovery?

METHODOLOGY

This cross-sectional study included 131 patients diagnosed with schizophrenia (n=80) and bipolar disorder (n=51) based on the DSM-5 criteria, all in remission and without language or intellectual impairments, who admitted to the outpatient psychiatry clinic at a university hospital between April 2018 and May 2022. Sample size was determined using Ipci et al.¹¹ as reference, ensuring 95% confidence,

80% power, and 5% tolerance. The participants were informed about study aims and procedures, and written consent was obtained. Data were collected using demographic information forms, Subjective Recovery Assessment Scale (SubRAS), Clinical Global Impression-Severity (CGI-S), Self-stigma Inventory for Patients (SSI-P), and Schedule for Assessment of Three Components of Insight (SAI).

Ethical approval: It was obtained by the Trakya University Non-Interventional Clinical Research Ethics Committee (TUTF-BAEK 2018/141; dated April 2, 2018).

Information form: The form consists of 16 questions: eight on sociodemographics (age, gender, education, etc.) and eight on illness details (diagnosis, onset, duration, hospitalizations).

Subjective Recovery Assessment Scale (SubRAS): Yildiz et al.¹² developed a 17-item Likert-type self-report scale to measure patients' subjective perceptions of their own recovery. Each item had a score ranging from one to five, and the evaluation was determined by adding all scores. Higher scores indicate higher levels of reported improvement. In this study, Cronbach's alpha coefficients were found to be 0.94.

Clinical Global Impression - Severity (CGI-S): The Clinical Global Impression Severity of Illness Scale is a seven-point Likert-type scale developed by the

Table-I: The characteristics of the participants (n=131).

Characteristic	Schizophrenia (n=80)	Bipolar Disorder (n=51)	Statistical Value
Age (Mean ± SD)	36.75 ± 7.79	39.49 ± 11.60	-1.617 / 0.129*
Years of Education (Mean ± SD)	11.26 ± 3.29	8.98 ± 3.32	3.852 / 0.000*
Income per Capita (Mean ± SD)	1152.25 ± 917.77	994.12 ± 588.18	1.095 / 0.276*
Gender / Male (%)	54 (67.5%)	21 (41.2%)	8.818 / 0.003**
Marital Status / Single (%)	58 (72.5%)	16 (31.2%)	25.635 / 0.000**
Employment Status / Unemployed (%)	47 (58.8%)	28 (54.9%)	16.748 / 0.005**
Living With Family (%)	50 (62.5%)	21 (41.2%)	11.780 / 0.019**
Age of Onset of Illness (Mean ± SD)	22.93 ± 6.26	27.33 ± 10.36	-3.036 / 0.003*
Duration of Illness in Years (Mean ± SD)	13.94 ± 7.67	12.14 ± 9.89	1.167 / 0.245*
Number of Hospitalizations (Mean ± SD)	2.68 ± 2.36	2.59 ± 2.10	0.213 / 0.831*
Smoking (Mean ± SD)	13.55 ± 15.13	11.24 ± 11.24	0.939 / 0.349**
Family History of Mental Illness (%)	21 (26.2%)	19 (37.3%)	10.786 / 0.029*
Full Family Support (%)	69 (86.3%)	30 (58.8%)	14.963 / 0.001*
History of Physical Violence (%)	33 (41.3%)	4 (7.8%)	17.150 / 0.000*
Suicide Attempts (%)	24 (30.0%)	11 (21.6%)	1.131 / 0.288*
Legal Issues (%)	10 (12.5%)	2 (3.9%)	2.754 / 0.097*

*Mann-Whitney U test,** Chi-square test, p<0,05.

Table-II: Total Scores of the Scales.

	<i>Schizophrenia (n=80)</i>	<i>Bipolar Disorder (n=51)</i>	<i>Statistical Value</i>
SubRAS	67.92±15.49	62.76±14.92	Z: -1.944 p=0.052
CGI-S	3.55±0.84	2.57±0.76	Z: -5.851* p<0.001
SAI	9.45±5.97	17.33±1.47	Z: -7.945* p<0.001
SSI-P	38,51±18.96	43.58±18.92	Z: -1.856* p=0.063

* Z= Mann-Whitney U test; SubRAS: Subjective Recovery Assessment Scale; CGI-S: Clinical Global.

American National Institute of Mental Health in 1976. The patient was evaluated between one and

seven points based on the severity of the illness at the time the scale was completed. Higher scores indicate

Table-III: The relationship between SubRAS and Demographic and Clinical Characteristics.

		<i>SubRAS</i>	
		<i>Statistics</i>	<i>p</i>
Age		-0.068*	0.439
Years of Education		0.044*	0.618
Income per Capita		0.201*	0.021
Age of Onset of Illness		-0.215*	0.014
Number of Hospitalizations		-0.001*	0.992
Duration of Illness in Years		0.131*	0.137
Smoking		-0.077*	0.383
CGI-S		-0.006*	0.943
SAI		-0.212*	0.015
SSI-P		-0.855*	0.000
Gender	Female: 68.98±13.79	-2.123**	0.034
	Male: 63.62±16.25		
Suicide Attempts	Yes: 59.51±17.63	-2.535**	0.011
	No: 68.25±13.91		
Marital Status		1.555**	0.460
Employment Status		5.650**	0.342
Living With Family		0.966**	0.915
Diagnosis		-1.944**	0.052
Family History of Mental Illness		2.915**	0.572
Full Family Support		5.308**	0.070
History of Physical Violence		-0.095**	0.925
Legal Issues		-0.539**	0.590

*Spearman Correlation, **Mann Whitney U test, CGI-S: Clinical Global Impression - Severity, SAI: Schedule for Assessment of Three Components of Insight, SSI-P: Self-stigma inventory for patients, p<0,05.

more severe illness. In this study, Cronbach's alpha coefficients were found to be 0.78.

Self-stigma inventory for patients (SSI-P): Yildiz et al.¹³ developed a Likert scale with 17 items. The three elements of perceived devaluation, internalized stereotypes, social disengagement, and illness concealment accounted for 63.5% of the scale. Stigmatization increased with higher scores. In this study, Cronbach's alpha coefficients were found to be 0.84.

Schedule for Assessment of Three Components of Insight (SAI): David et al.'s¹⁴ SAI assesses insight using an eight-item semi-structured scale: symptom recognition, illness knowledge, and treatment commitment. Higher scores indicated greater insight. In this study, Cronbach's alpha coefficients were found to be 0.76.

Statistical analysis: Data were analyzed using SPSS 22.0. Descriptive statistics included the mean, standard deviation, and minimum and maximum values. Normality was tested with the Kolmogorov-Smirnov test, and as distributions were non-normal, the Mann-Whitney U test was used for binary comparisons. Spearman's test assessed correlations, interpreted as low (<0.29), moderate (0.30-0.49), or high (>0.50). Linear regression identified predictors of the Subjective Recovery Assessment Scale (SubRAS). Multicollinearity was assessed using variance inflation factor (VIF) and tolerance values. VIF values below five indicated no multicollinearity. Regression assumptions were tested prior to analysis. Statistical significance was accepted at $p < 0.05$ for all analyses.

RESULTS

The demographic and clinical characteristics of patients diagnosed with schizophrenia and bipolar disorder are presented in Table-I. The means and comparisons of the patients' subjective recovery, clinical severity, insight, and self-stigma scores are

presented in Table-II. Accordingly, the severity of illness in patients with schizophrenia was significantly higher than that in those with bipolar disorder ($p < 0.05$). When we evaluated the insight scores, we found that patients with bipolar disorder had significantly higher insight scores than those diagnosed with schizophrenia ($p < 0.05$). While subjective recovery scores were higher in patients with schizophrenia, internalized stigma scores were higher in those with bipolar disorder ($p > 0.05$). Impression - Severity; SAI: Schedule for Assessment of Three Components of Insight; SSI-P: Self-stigma inventory for patients, $p < 0.05$.

A comparison of patients' subjective recovery scores with their demographic and clinical characteristics is presented in Table-III. A negative relationship was found between subjective recovery and internalized stigma, insight, and age at illness onset, whereas a positive relationship was found between subjective recovery and per capita income. Accordingly, as internalized stigma, insight, and age at illness onset increased, perception of subjective recovery decreased. Conversely, as per capita income increased, the perception of subjective recovery also increased. Female sex and no history of suicide attempts were also identified as factors that positively influenced the subjective recovery perception.

A multiple linear regression analysis was conducted to examine the variables predicting the SubRAS score (predictors: gender, diagnosis, per capita income, age at disease onset, suicide attempt, SAI, and SSI-P). The overall model was significant, $F(7, 123) = 59.86$, $p < .001$, and explained 77.3% of the variance in the dependent variable ($R^2 = .773$).

When the predictors were examined, per capita income significantly and positively predicted the SubRAS score ($B = 0.003$, $t = 2.95$, $p = .004$). The SAI score was negatively associated with SubRAS and was a significant predictor ($B = -0.423$, $t = -3.01$, $p =$

Table-IV: Linear regression results of factors predicting the SubRAS score.

Variables	B	T	P	Collinearity Statistics		F	Model (p)	R ² (%95 GA)
				Tolerance	VIF			
Gender	2.775	1.936	.055	.875	1.142	59.858	0.000	0.773
Diagnosis	1.082	.584	.560	.714	1.401			
Per capita income	.003	2.947	.004	.923	1.084			
Age of disease onset	-.021	-.240	.811	.841	1.189			
Suicide attempt	-1.783	-1.109	.269	.859	1.164			
SAI	-.423	-3.011	.003	.706	1.417			
SSI-P	-.650	-17.101	.000	.843	1.187			

* SAI: Schedule for Assessment of Three Components of Insight; SSI-P: Self-stigma inventory for patients, $p < 0.05$.

.003). SSI-P also negatively and strongly predicted the SubRAS score ($B = -0.650$, $t = -17.10$, $p < .001$). In contrast, gender ($p = .055$), diagnosis ($p = .560$), age at disease onset ($p = .811$), and suicide attempt ($p = .269$) were not significant predictors of the SubRAS score.

DISCUSSION

Psychosocial factors, particularly self-stigma, insight, and income, primarily shape subjective recovery in severe mental illness, as demonstrated by this study. Consistent with previous research, self-stigma emerged as the strongest negative predictor of subjective recovery, highlighting its detrimental effects on hope, empowerment, and self-perceived functioning.^{5,9,15}

A key finding of the present study is the complex relationship between insight and subjective recovery. While correlation analysis showed a negative association, regression analysis indicated that insight remained a significant predictor when controlling for other variables. This apparent inconsistency may reflect shared variance between insight and self-stigma. As reported in previous studies, higher insight may increase awareness of illness-related limitations and social consequences, potentially reducing subjective recovery despite its clinical benefits.^{3,14} Therefore, insight should not be interpreted in isolation but within a broader psychosocial framework.^{7,16}

The model's relatively high explanatory power indicates that subjective recovery is strongly influenced by interrelated psychosocial concepts. This may stem from conceptual overlap among recovery-related concepts such as self-stigma, empowerment through insight, and acceptance of the illness.^{5,12,13} Similar findings have been reported in previous studies emphasizing the multidimensional nature of recovery.^{2,17}

Another significant finding is that, despite exhibiting greater clinical severity and diminished levels of insight, patients with schizophrenia report elevated levels of subjective recovery in comparison to those with bipolar disorder. This supports the idea that subjective recovery is determined not directly by symptom severity but rather by meaning-making processes, coping strategies, and psychosocial adjustment.^{1,17,18}

Income has also been identified as an important positive predictor of subjective recovery. In the same way, Fu et al.⁷ found that people with higher incomes were more likely to recover, while Pai et al.¹⁹ found that having a job helped people recover more than getting help from the government. Income affects mental health by increasing hope, purpose, and empowerment, which helps people get better.

Overall, these findings reinforce the conceptualization of recovery as a multidimensional process that extends beyond the reduction of symptoms, consistent with established recovery frameworks.²⁰

Limitations: It was conducted in a single hospital. Furthermore, due to the COVID-19 pandemic during the data collection period, the data collection over a prolonged period may have introduced temporal variability in responses, which is another significant limitation of this study. Additionally, only patients in remission were included, which may limit applicability to acute populations.

CONCLUSION

Subjective recovery in severe mental illness is primarily shaped by psychosocial factors, especially self-stigma and socioeconomic status. Clinical severity plays a limited role in subjective recovery perceptions. The findings highlight the central role of self-stigma and the complex nature of insight in recovery processes. Interventions should focus on stigma reduction, empowerment, and socioeconomic support alongside clinical treatment.

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Authors' Contribution:

SOK, AI: Conceived, designed and did statistical analysis & editing of manuscript, is responsible for integrity of research, did data collection and manuscript writing, did review and final approval of manuscript.