INTERNATIONAL JOURNAL OF INNOVATIONS IN PUBLIC HEALTH PRACTICE AND POLICY

# TREATMENT OUTCOMES AMONG PATIENTS WITH SCHIZOPHRENIA IN SOUTHEASTERN NIGERIA: PREDICTIVE ROLES OF PERCEIVED STIGMA, ILLNESS AWARENESS, AND PERCEIVED SOCIAL SUPPORT

**Chimezie K. Iwuoha[1,2], Sylvester N. Madu[2], Chinwe I. Onyemaechi[2], Okechukwu C. Onuoha[3,4]**

[1]Mental Health and Addiction Service Saskatchewan Health Authority, Canada
[2]Department of Psychology, Chukwuemeka Odumegwu Ojukwu University, Igbariam, Nigeria
[3]Department of Psychology, Nnamdi Azikiwe University, Awka, Nigeria
[4]Centre for Counselling and Career Development, Nnamdi Azikiwe University, Awka, Nigeria

**Corresponding Author**: Chimezie K. Iwuoha, Mental Health and Addiction Service Saskatchewan Health Authority, Canada, Department of Psychology, Chukwuemeka Odumegwu Ojukwu University, Igbariam, Nigeria. Email: kizitociwuoha@gmail.com

**DOI: https://doi/10.5281/zenodo.21654550**

## ABSTRACT

Treatment outcomes among individuals with schizophrenia remain suboptimal, with high rate of relapse, despite advances in pharmacological and psychosocial interventions. Hence, necessitating this study that examined the predictive roles of perceived stigma, illness awareness, and perceived social support on treatment outcomes among patients with schizophrenia. A cross-sectional correlational study was conducted, involving 160 clinically stable outpatients living with schizophrenia. Participants were purposively recruited from three psychiatric facilities in southeastern Nigeria. Four standardized instruments: the Scale to Assess Unawareness of Mental Disorder, the Internalized Stigma of Mental Illness (ISMI) Scale, the Multidimensional Scale of Perceived Social Support (MSPSS) and the Behavior and Symptom Identification Scale–24 (BASIS-24) were used. Data were analyzed using Pearson product-moment correlation and multiple linear regression. The findings showed that perceived stigma was significantly and negatively associated with treatment outcome $\beta = -.27$, $p = .002$, whereas illness awareness $\beta = .24$, $p = .004$, family support $\beta = .39$, $p = .001$, friends' support $\beta = .29$, $p = .001$, and support from significant others $\beta = .31$, $p = .001$ significantly and positively predicted treatment outcome. The findings stress the importance of integrating stigma reduction, and psychoeducation for improved illness awareness; as well as family, and community-based support interventions into routine schizophrenia care to optimize treatment adherence, recovery, and long-term functional outcomes.

**Keywords:** Perceived Stigma; Illness awareness; Social support; Treatment outcome; Schizophrenia

## INTRODUCTION

Schizophrenia is a severe chronic psychiatric disorder that remains a major global public health concern because of its recurrent course, profound functional impairment, and substantial social and economic burden on affected individuals, families, and healthcare systems (Christopher et al., 2024). Although advances in pharmacological and psychosocial interventions have improved symptom management, treatment outcomes remain heterogeneous, with many patients continuing to experience poor medication adherence, recurrent relapse, persistent psychosocial dysfunction, and diminished quality of life (World Health Organization [WHO], 2024; Correll & Schooler, 2020). Contemporary evidence suggests that psychological factors could be critical in shaping treatment engagement, adherence, recovery trajectories, and overall functional outcomes among individuals with schizophrenia (Lamarca et al., 2024; Izci et al. 2024; Swistak et al., 2024; Wang et al., 2025). Nevertheless, limited empirical attention is given to the role of socio-cognitive well-being on treatment outcomes among people living with schizophrenia; as most focus are on psychopharmacology interventions and psychotherapies. The need to address this observed lacuna necessitated this study that examined the predictive roles of perceived stigma, illness awareness, and perceived social support on treatment outcome among people living with schizophrenia.

### *Perceived Stigma and Treatment Outcome*

Perceived stigma refers to an individual's belief that society holds negative stereotype and discriminatory attitudes toward people living with mental illness (Fernandez et al., 2023; Ordu, 2023). Among individuals with schizophrenia, perceived stigma represents one of the most significant psychosocial barriers to effective treatment and recovery (Sartorious, 2023). Fear of rejection, discrimination, and social exclusion often discourages patients from seeking professional help, disclosing their illness, adhering to prescribed medication, or participating fully

in psychosocial rehabilitation programmes (Thornicroft, 2022). Persistent exposure to stigma also contributes to low self-esteem, hopelessness, social withdrawal, internalized shame, and reduced self-efficacy, all of which negatively affect treatment engagement and recovery (Fernandez et al., 2023). Recent evidence indicates that stigma operates through both public stigma and self-stigma, creating substantial obstacles to early intervention, continuity of care, and long-term functional improvement (Corrigan et al., 2021; Thornicroft et al., 2022; World Health Organization, 2022; Clement et al., 2015).

Interventions aimed at reducing stigma have been shown to improve treatment adherence, recovery attitudes, and social integration; hence, could improve overall clinical outcomes (Clement et al., 2015; Livingston et al., 2023; Thornicroft et al., 2022). Thus, the importance of addressing stigma as a critical psychosocial determinant of recovery become relevant for optimal positive treatment outcome among schizophrenic patients (World Health Organization, 2022); aimed at enhancing illness awareness.

***Illness Awareness and Treatment Outcome***

Another important factor among people living with schizophrenia is illness awareness; commonly referred to as insight in schizophrenia research (Amador, 2022). Illness awareness in mental health means an individual's ability to recognize that they have a mental disorder, understand the nature and consequences of their illness, and acknowledge the need for treatment, as well as correctly attribute psychotic experiences to the disorder rather than to external causes (Davis, 2023). Impaired illness awareness is one of the hallmark features of schizophrenia, affecting approximately 50 to 80% of patients across different stages of the illness (Howes, 2024). Unlike simple denial, poor insight is increasingly recognized as a neuropsychological deficit associated with abnormalities in executive functioning, self-reflection, and metacognitive processes (David,

2023). Consequently, patients with limited illness awareness often underestimate the severity of their symptoms, reject psychiatric diagnoses, and discontinue treatment prematurely, thereby increasing their vulnerability to relapse and poor functional outcomes (Lysaker et al., 2019). Contemporary recovery models therefore regard illness awareness as a fundamental component of successful long-term management of schizophrenia (Lincoln et al., 2022; World Health Organization, 2022).

According to Lysaker et al. (2019), enhanced illness awareness could improves symptom control, better psychosocial functioning, improve treatment satisfaction, and higher recovery rates. Equally, poor insight would lead to non-adherence, prolonged duration of untreated psychosis, recurrent relapse, aggressive behaviour, and poor quality of life (Lysaker et al., 2023). Consequently, interventions aimed at improving illness awareness could be an essential aspect of comprehensive schizophrenia care because they will enhance treatment engagement and optimize recovery outcomes (Correll et al., 2022; McCutcheon et al., 2023).

***Perceived Social Support and Treatment Outcome***

Perceived social support refers to an individual's subjective belief that adequate emotional, informational and instrumental support is available for them when in need (Zimet et al., 1988). In schizophrenia research, perceived social support has emerged as a critical psychosocial resource that enhances resilience, facilitates adaptive coping, and promotes recovery (Samuel et al., 2022). Contemporary evidence suggests that individuals whose perceived social support is strong are more likely to adhere to prescribed medications, maintain regular contact with mental health services, participate in psychosocial rehabilitation, and experience improved psychological well-being and functioning (Salehi et al., 2019; Terry et al., 2019). The availability of supportive relationships also reduces feelings of loneliness, hopelessness, and psychological distress, thereby

enabling individuals with schizophrenia to cope more effectively with the long-term demands of the illness (Mutschler et al., 2022). Furthermore, perceived social support serves as a protective factor against stress and contributes to improved quality of life by strengthening patients' confidence in managing their condition (Leigh-Hunt et al., 2017; Rajkumar, 2020).

Recent evidence indicate that patients who perceive greater support from family, friends, and significant others generally report better treatment adherence, fewer psychotic relapses, lower rates of psychiatric hospitalization, and greater functional recovery than those with limited social support (Wang et al., 2018; Salehi et al., 2019). Family support, in particular, has been shown to encourage medication compliance, facilitate early recognition of symptom relapse, and improve engagement with mental health services, while support from friends and significant others could promote community integration and emotional stability (Terry et al., 2019). Therefore, promoting strong social support networks seems to be an essential component of comprehensive schizophrenia treatment and long-term recovery.

**Statement of the Problems**

Despite significant advances in pharmacological and psychosocial interventions, treatment outcomes among patients with schizophrenia remain suboptimal, with many individuals continuing to experience persistent symptoms, poor medication adherence, frequent relapse, repeated hospitalization, and impaired psychosocial functioning (Lamarca et al., 2024; Liu et al., 2024). Although previous studies have established that perceived stigma, illness awareness, and perceived social support are associated with treatment engagement and recovery, empirical findings remain inconsistent regarding the magnitude and direction of these relationships across different populations and healthcare settings (Swistak et al., 2024; Wang et al., 2025). More importantly, there is limited documented empirical evidence on the impact of perceived stigma,

illness awareness, and perceived social support on treatment outcome among schizophrenic patients in southeastern Nigeria. Hence, the present study seeks to examine the predictive roles of perceived stigma, illness awareness, and perceived social support on treatment outcome among schizophrenic patients.

## CONCEPTUAL FRAMEWORK

**Fig 1**

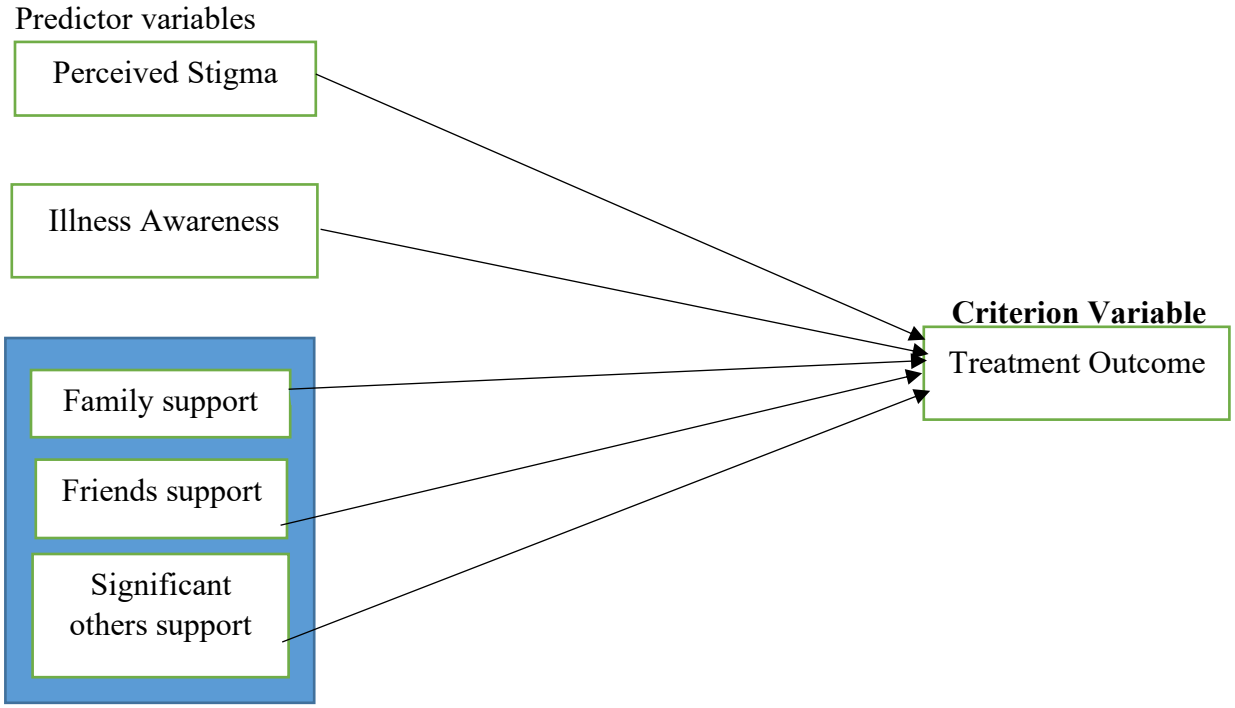



Figure 1 showed with illustration, the conceptual framework of the study. It showed that perceived stigma, illness awareness, and perceived social support (family support, friends support, and support from significant others) are to be investigated as predictor variables in this study; while treatment outcome is the criterion variable. The framework proposes an increase in predictor variables (perceived stigma, illness awareness, and perceived social support) will result to rather an increase or decrease in treatment outcome among individuals living with schizophrenia. Thus,

these factors are expected to function either as protective factors, or hamper positive treatment outcome of schizophrenic patients.

**Theoretical Framework**

This study is anchored on the Social Cognitive Theory (SCT) developed by Bandura (1986), which posits that human behaviour is shaped through the dynamic and reciprocal interaction of personal cognitive factors, environmental influences, and behavioural processes, a concept known as reciprocal determinism. The theory emphasizes that individuals' beliefs, expectations, self-efficacy, and interpretation of social experiences influence health-related behaviours and subsequent outcomes. Within the context of schizophrenia, perceived stigma represents an adverse environmental influence capable of undermining treatment engagement by fostering self-stigma, social withdrawal, and reduced confidence in recovery. Conversely, illness awareness reflects a cognitive process through which patients recognize their condition, appreciate the need for treatment, and develop adaptive coping strategies, while perceived social support constitutes a positive environmental resource that reinforces treatment adherence, enhances self-efficacy, and promotes recovery-oriented behaviours. From a social cognitive perspective, treatment outcomes are therefore not determined solely by the severity of psychopathology but by the continuous interaction between patients' cognitive appraisals and their social environment. This theory provides a robust explanatory framework for understanding how perceived stigma, illness awareness, and perceived social support influences treatment outcomes among patients with schizophrenia, making it particularly appropriate for this present study.

**Hypotheses**

In line with literature review, four hypotheses were postulated for this study, they are:

1. High perceived stigma will significantly predict low treatment outcome among schizophrenia patients.
2. High illness awareness will significantly predict high treatment outcome among schizophrenia patients.
3. High perceived social support (perceived support from family, friends, and significant others) will significantly predict high treatment outcome among schizophrenia patients.

## Method

### *Participants*

The participants comprised 160 individuals living with schizophrenia. They were recruited from Neuropsychiatric Hospital Nawfia, Federal Neuropsychiatric Hospital Enugu, and Synapse Centre for Psychological Medicine, all located in southeastern Nigeria. Participants ages ranged from 19 to 70 years (M = 33.36, SD = 11.25). Of the participants, 105 (65.6%) were male and 55 (34.4%) were female. Furthermore, 110 (68.8%) were married, whereas 50 (31.3%) were single. All participants had a confirmed diagnosis of schizophrenia, had received treatment, and were attending outpatient follow-up clinics at the participating psychiatric facilities.

### *Inclusion Criteria*

Participants were eligible for inclusion if they:

1. Were 18 years or older;
2. Had a confirmed clinical diagnosis of schizophrenia;
3. Were clinically stable and in contact with reality at the time of data collection;
4. Had completed inpatient treatment and were receiving outpatient follow-up care; and

5. Were registered as outpatients in one of the participating psychiatric hospitals.

**Instruments**

***The Scale to Assess Unawareness of Mental Disorder (SUMD)***

Illness awareness was assessed using the Scale to Assess Unawareness of Mental Disorder (SUMD) developed by (Amador et al., 1993). The SUMD is a clinician-rated instrument designed to evaluate the extent to which individuals recognize that they have a mental disorder, understand the effects of medication, and appreciate the social and clinical consequences of their illness. The scale contains items rated on a five-point Likert scale, with higher scores indicating poorer illness awareness. For this present study, the scoring was coded on reversed so that high score indicated high illness awareness for easy coding and interpretation of the research findings. Previous studies have demonstrated good psychometric properties, with inter-rater reliability coefficients ranging from .80 to .98 and satisfactory construct validity among individuals with schizophrenia. In the present study, the instrument demonstrated good internal consistency (Cronbach's $\alpha = .87$).

***The Internalized Stigma of Mental Illness (ISMI) Scale***

Perceived stigma was measured using the Internalized Stigma of Mental Illness (ISMI) Scale developed by (Ritsher et al., 2003). The ISMI consists of 29 items rated on a four-point Likert scale, ranging from 1 (strongly disagree) to 4 (strongly agree). The instrument assesses alienation, stereotype endorsement, discrimination experience, social withdrawal, and stigma resistance. Higher scores indicate greater perceived internalized stigma. The ISMI has consistently demonstrated excellent reliability across different psychiatric populations, with Cronbach's alpha coefficients ranging from .90 to .94. In the current study, the overall reliability coefficient was .91.

### *The Multidimensional Scale of Perceived Social Support (MSPSS)*

Perceived social support was assessed using the Multidimensional Scale of Perceived Social Support (MSPSS) developed by (Zimet et al., 1988). The MSPSS comprises 12 items assessing support received from family, friends, and significant others. Responses are rated on a seven-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). Higher scores reflect greater perceived social support. The MSPSS has demonstrated excellent internal consistency and construct validity across clinical and community samples, with Cronbach's alpha coefficients typically exceeding .85. In this study, Cronbach's alpha was .89.

### *The Behavior and Symptom Identification Scale–24 (BASIS-24)*

Treatment outcome was assessed using the Behavior and Symptom Identification Scale–24 (BASIS-24) developed by Eisen et al. (2004). The BASIS-24 is a 24-item self-report measure assessing symptoms and functioning across domains including depression/functioning, interpersonal relationships, self-harm, emotional liability, psychosis, and substance abuse. Responses are rated on a five-point Likert scale, with lower total scores indicating better treatment outcomes. In this study, the coding was reversed, and higher score indicated higher treatment outcome. The instrument has demonstrated strong reliability and validity among psychiatric populations, with Cronbach's alpha coefficients ranging from .76 to .91. In the present study, the overall Cronbach's alpha coefficient was .88.

### *Design*

This study adopted a cross-sectional correlational research design to examine the predictive roles of perceived stigma, illness awareness, and perceived support from family, friends, and significant others on treatment outcome among people living with schizophrenia.

***Procedure***

Ethical approval was obtained from Neuropsychiatric Hospital Nawfia, with reference number NPHN/Research/COOU/2100 before the commencement of the study. Purposive sampling method was employed to recruit participants who met the inclusion criteria from the three participating psychiatric facilities. The purpose and procedures of the study were explained to all eligible participants, after which written informed consent was obtained.

A total of 190 copies of the questionnaire were distributed over a period of six weeks across the three participating psychiatric hospitals. Of these, 183 copies were returned, representing a response rate of 96.3%. Following careful screening for completeness and accuracy, 160 questionnaires were found to be properly completed and suitable for analysis. The data were coded and entered into IBM SPSS Statistics for statistical analysis.

***Ethical considerations***

Participation in this study was completely voluntary and the instruments for data collection were anonymized, excluding any means of identification. However, codes were used for each participant. Participants' right to quit at any stage of the exercise was also explained to the participants, as well as what the research findings will be used for (academic purposes, and publication).

***Data Analysis***

Data were analysed using IBM SPSS Statistics. Pearson product–moment correlation analysis was conducted to examine the relationships among perceived stigma, illness awareness, perceived social support, and treatment outcomes. Subsequently, multiple linear regression analysis was performed to determine the independent predictive roles of perceived stigma, illness awareness,

and the three dimensions of perceived social support (family, friends, and significant others) on treatment outcomes among individuals living with schizophrenia.

## RESULTS

**Table 1**

*Pearson Product–Moment Correlations among Perceived Stigma, Illness Awareness, Perceived Social Support, and Treatment Outcome*

| Variables | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Treatment outcome | 1 | | | | | |
| 2. Perceived stigma | -.34*** | 1 | | | | |
| 3. Illness awareness | .28*** | -.29*** | 1 | | | |
| 4. Perceived family support | .42*** | -.32*** | .41*** | 1 | | |
| 5. Perceived friends support | .36*** | -.27*** | .39*** | .30*** | 1 | |
| 6. Perceived support from significant others | .38*** | -.23** | ,32*** | .26*** | .22** | 1 |

Note. **$p < .01$. ***$p < .001$.

A Pearson product–moment correlation was conducted to examine the relationships among perceived stigma, illness awareness, perceived social support (family, friends, and significant others), and treatment outcome. The results indicated that perceived stigma was significantly and negatively associated with treatment outcome ($r = -.34$, $p < .001$). Illness awareness was significantly and positively associated with treatment outcome ($r = .28$, $p < .001$). Likewise, perceived family support ($r = .42$, $p < .001$), perceived friends' support ($r = .36$, $p < .001$), and perceived support from significant others ($r = .38$, $p < .001$) were all positively and significantly associated with treatment outcome.

**Table 2**

*Multiple Regression Analysis Predicting Treatment Outcome from Perceived Stigma, Illness Awareness, and Perceived Social Support*

| Predictor Variables | Adjusted $R^2$ | df1(df2) | F | β | T | Sig |
|---|---|---|---|---|---|---|
| Model 1 | .145 | 5(154) | 6.40 | | | |
| Perceived stigma | | | | -27 | -3.28 | .002 |
| Illness awareness | | | | 24 | 2.96 | .004 |
| Perceived Family support | | | | 39 | 3.62 | .001 |
| Perceived Friends support | | | | 29 | 3.42 | .001 |
| Perceived support from significant others | | | | 31 | 3.48 | .001 |

Note. $^{**}p < .01$. $^{***}p < .001$.

Multiple regression analysis revealed that perceived stigma significantly and negatively predicted treatment outcome ($\beta = -.27$, $t = -3.278$, $p = .002$). Illness awareness significantly and positively predicted treatment outcome ($\beta = .24$, $t = 2.964$, $p = .004$). Furthermore, perceived family support ($\beta = .39$, $t = 3.621$, $p = .001$), perceived friends' support ($\beta = .29$, $t = 3.423$, $p = .001$), and perceived support from significant others ($\beta = .31$, $t = 3.478$, $p = .001$) each significantly and positively predicted treatment outcome. These findings indicate that greater illness awareness and stronger perceived social support are associated with better treatment outcomes, whereas higher perceived stigma is associated with poorer treatment outcomes.

## Discussion

This study examined the predictive roles of perceived stigma, illness awareness, and perceived social support on treatment outcome among people living with schizophrenia. The findings

demonstrated that perceived stigma negatively predicted treatment outcome, whereas illness awareness and perceived social support from family, friends, and significant others positively predicted treatment outcome. These findings provide empirical evidence that socio-cognitive factors significantly influence recovery among individuals with schizophrenia.

The findings are consistent with Bandura's Social Cognitive Theory (SCT), which posits that health behaviours and outcomes are products of reciprocal interactions among personal cognitive factors, behavioural responses, and environmental influences (Bandura, 1986). Within this framework, illness awareness represents an important cognitive factor, perceived stigma reflects a negative environmental influence, while perceived social support constitutes a positive environmental resource that shapes adaptive treatment behaviours and ultimately influences treatment outcome.

The first hypothesis revealed that perceived stigma significantly and negatively predicted treatment outcome among people living with schizophrenia. This finding suggests that patients who perceive themselves as stigmatized are less likely to experience favourable treatment outcomes than those who report lower levels of stigma. The result supports the proposition of Social Cognitive Theory that negative environmental experiences influence cognitive beliefs and behavioural responses. Individuals who repeatedly experience discrimination, rejection, or social exclusion may internalize these experiences; which could lead to low self-efficacy, diminished hope for recovery, poor treatment adherence, and avoidance of mental health services (Bandura, 1997). Consequently, these maladaptive behavioural responses would contribute to poorer treatment outcomes. This finding corroborates previous studies reporting that perceived or internalized stigma predicts medication non-adherence, delayed help-seeking, poor quality of life, increased relapse, and reduced recovery among individuals with schizophrenia (Livingston &

Boyd, 2010; Rüsch et al., 2014; Yanos et al., 2015). Similarly, Corrigan et al. (2014) observed that stigma constitutes one of the greatest barriers to psychiatric recovery because it undermines patients' confidence, willingness to seek treatment, and social participation.

The study further found that illness awareness positively and significantly predicted treatment outcome. This finding indicates that patients with greater awareness and understanding of their mental illness are more likely to experience positive treatment outcomes than those with limited insight. This finding is consistent with Social Cognitive Theory, which emphasizes the importance of cognitive processes in influencing health-related behaviour. Inferring from Bandura (2001), individuals who possess accurate knowledge regarding their health condition develop positive outcome expectations and are more likely to engage in behaviours that facilitate recovery. In schizophrenia, greater illness awareness enhances patients' recognition of symptoms, acceptance of diagnosis, appreciation of the need for treatment, and adherence to medication and psychosocial interventions. This present finding agrees with previous empirical evidence indicating that insight into illness is associated with improved medication adherence, reduced relapse, fewer psychiatric admissions, and enhanced psychosocial functioning (Lincoln et al., 2007; Lysaker et al., 2018; Belvederi Murri et al., 2015).

Another important finding of this study was that perceived social support from family, friends, and significant others positively predicted treatment outcome. Specifically, family support emerged as the strongest predictor of treatment outcome, followed by support from significant others and friends. This finding supports Social Cognitive Theory, which identifies supportive social environments as important determinants of self-efficacy and adaptive health behaviour (Bandura, 1986). Supportive interpersonal relationships provide emotional reassurance, practical assistance, treatment encouragement, and positive reinforcement that strengthen patients' confidence in

managing their illness and adhering to treatment recommendations. Conversely, inadequate social support may increase emotional distress, reduce motivation, and contribute to poor treatment adherence.

This finding is consistent with previous systematic reviews demonstrating that perceived social support improves medication adherence, community integration, psychological well-being, quality of life, and recovery among people living with severe mental illnesses (Salehi et al., 2019; Terry et al., 2019; McDonald et al., 2022).

**Recommendation**

Based on the research findings, the researchers recommended as follows:

1. That there is need for public awareness on anti-stigma against people living with schizophrenia so as to improve, and maintain positive treatment outcome.
2. Psychoeducation is seriously recommended for individuals living with schizophrenia so as to enhance insight and adequate awareness of their health condition as well as expected behaviours that can improve positive treatment outcome
3. Family psychoeducation and peer support is also recommended for positive support network of people living with schizophrenia, aimed at enhanced treatment outcome.

**Conclusion**

This study examined the predictive roles of perceived stigma, illness awareness, and perceived social support on illness outcome among people living with schizophrenia. The study demonstrates that perceived stigma, illness awareness, and perceived social support were associated with treatment outcome among people living with schizophrenia. Specifically, higher levels of illness awareness and perceived support from family, friends, and significant others were associated with better treatment outcomes, whereas greater perceived stigma was associated with poorer treatment

outcomes. These findings underscore the importance of an integrative approach that could address these socio-cognitive factors during treatment of schizophrenia; aimed at enhancement of positive and long lasting treatment outcome.

## References

Amador, X. F. (2022). *I'm Not Sick, I Don't Need Help! How to Help Someone with Mental Illness Accept Treatmen*t (20th anniversary ed.). Vida Press.

Amador, X. F., Strauss, D. H., Yale, S. A., Flaum, M. M., Endicott, J., & Gorman, J. M. (1993). Assessment of insight in psychosis. *American Journal of Psychiatry*, 150(6), 873–879.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52(1), 1–26.

Belvederi Murri, M., Amore, M., Respino, M., Alexopoulos, G. S., Innamorati, M., Pompili, M., & Serretti, A. (2015). The association between poor insight and adverse clinical outcomes in schizophrenia: A meta-analysis. *Schizophrenia Research*, 165(1), 37–47.

Christopher, O. G., & Obi-Nwosu, H., & Onuoha, O. C. (2024). Effects of Cognitive Behaviour Therapy (CBT) and Dance Movement Therapy (DMT) on Anhedonic Behaviour, among Schizophrenic Patients. *International Journal of Health Sciences*, 7, 8, 64-76.

Clement, S., Schauman, O., Graham, T., Maggioni, F., Evans-Lacko, S., Bezborodovs, N., Morgan, C., Rüsch, N., Brown, J. S., & Thornicroft, G. (2015). What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. *Psychological medicine*, 45(1), 11–27.

Correll, C. U., & Schooler, N. R. (2020). Negative symptoms in schizophrenia: A review and clinical guide for recognition, assessment, and treatment. *Neuropsychiatric Disease and Treatment*, 16, 519–534.

Correll, C. U., Rubio, J. M., & Kane, J. M. (2022). What is the risk–benefit ratio of long-term antipsychotic treatment in people with schizophrenia? World Psychiatry, 21(2), 149–160.

Corrigan, P. W., Druss, B. G., & Perlick, D. A. (2014). The impact of mental illness stigma on seeking and participating in mental health care. *Psychological Science in the Public Interest*, 15(2), 37–70.

Corrigan, P. W., Druss, B. G., & Perlick, D. A. (2021). The impact of mental illness stigma on seeking and participating in mental health care. *Psychological Science in the Public Interest*, 22(2), 20–45.

David, A. S. (2023). Insight in psychosis: Recent advances and future directions. *Schizophrenia Bulletin,* 49(2), 247–255.

Eisen, S. V., Normand, S. L. T., Belanger, A. J., Spiro, A., & Esch, D. (2004). The revised Behavior and Symptom Identification Scale (BASIS-24): Reliability and validity. *Medical Care*, 42(12), 1230–1241.

Fernández, D., Grandón, P., López-Angulo, Y., Vladimir-Vielma, A., Peñate, W., & Díaz-Pérez, G. (2023). Internalized stigma and self-stigma in people diagnosed with a mental disorder: One concept or two? A scoping review. *International Journal of Social Psychiatry*, 69(8), 1888–1902.

Howes, O. D., Bukala, B. R., & Beck, K. (2024). Schizophrenia: From neurochemistry to circuits, symptoms and treatments. *Nature Reviews Neurology*, 20(1), 22–35.

İzci, F., Fidan, Y., Çallı, S., & Aslan, M. (2024). Stigma, perception of social support, and functionality levels of schizophrenia patients with and without legal guardianship. *Psychiatry and Clinical Psychopharmacology*, 34(1), 74–81.

Lamarca, M., Espinosa, V., Acuña, V., Vila-Badia, R., Balsells-Mejia, S., Moritz, S., Berna, F., König, C., Gawęda, Ł., Group, P., Barajas, A., & Ochoa, S. (2024). Reducing self-stigma in psychosis: A systematic review and meta-analysis of psychological interventions. *Psychiatry Research*, 342, 116262.

Leigh-Hunt, N., Bagguley, D., Bash, K., Turner, V., Turnbull, S., Valtorta, N., & Caan, W. (2017). An overview of systematic reviews on the public health consequences of social isolation and loneliness. *Public Health*, 152, 157–171.

Lincoln, T. M., Lüllmann, E., & Rief, W. (2007). Correlates and long-term consequences of poor insight in patients with schizophrenia: A systematic review. *Schizophrenia Bulletin*, 33(6), 1324–1342.

Lincoln, T. M., Lüllmann, E., & Rief, W. (2022). Correlates and long-term consequences of insight in schizophrenia: An updated review. *Schizophrenia Research*, 245, 12–21.

Liu, Y., Liu, H., Chen, S., Ren, J., & Tian, X. (2024). Association between social support and the severity of positive symptoms in rural community-dwelling patients with schizophrenia during the COVID-19 pandemic. *BMC Psychiatry*, 24, 124.

Livingston, J. D., & Boyd, J. E. (2010). Correlates and consequences of internalized stigma for people living with mental illness: A systematic review and meta-analysis. *Social Science & Medicine*, 71(12), 2150–2161.

Livingston, J. D., Milne, T., Fang, M. L., & Amari, E. (2023). The effectiveness of interventions for reducing stigma related to mental illness: An updated systematic review. *Social Psychiatry and Psychiatric Epidemiology*, 58(3), 381–397.

Lysaker, P. H., Kukla, M., Vohs, J. L., Schnakenberg Martin, A. M., Buck, K. D., & Hasson Ohayon, I. (2019). Metacognition and recovery in schizophrenia: From research to the development of metacognitive reflection and insight therapy. Journal of Experimental Psychopathology, 10(1), Article 2043808718814992. https://doi.org/10.1177/2043808718814992

Lysaker, P. H., Hasson-Ohayon, I., Pattison, M. L., & Leonhardt, B. L. (2023). Metacognition, insight, and recovery in schizophrenia: Current evidence and future directions. *Schizophrenia Research*, 252, 40–47.

Lysaker, P. H., Pattison, M. L., Leonhardt, B. L., Phelps, S., & Vohs, J. L. (2018). Insight in schizophrenia spectrum disorders: Relationship with behavior, mood and treatment outcomes. *World Psychiatry*, 17(1), 5–13.

McCutcheon, R. A., Reis Marques, T., & Howes, O. D. (2023). Schizophrenia: An overview. *JAMA*, 329(3), 245–256.

McDonald, K., Badovinac, S., & Townley, G. (2022). Social support and recovery among people living with serious mental illness: A systematic review. *Community Mental Health Journal*, 58(6), 1075–1088.

Mutschler, C., Lichtenstein, S., Yan, S., Blair, F., Davidson, L., Mihalakakos, G., & Kidd, S. A. (2022). Personal recovery in the postdischarge period for individuals with schizophrenia spectrum diagnoses: The role of community integration and social support. *Psychiatric Rehabilitation Journal*, 45(2), 176–182.

Ordu, F. (2023). Evaluation of stigma of mental illnesses: A review. *Current Approaches in Psychiatry*, 15(1), 38–49.

Rajkumar, R. P. (2020). COVID-19 and mental health: A review of the existing literature. *Asian Journal of Psychiatry*, 52, 102066.

Ritsher, J. B., Otilingam, P. G., & Grajales, M. (2003). Internalized stigma of mental illness: Psychometric properties of a new measure. *Psychiatry Research*, 121(1), 31–49.

Rüsch, N., Müller, M., Lay, B., Corrigan, P. W., Zahn, R., Schönenberger, T., Bleiker, M., Lengler, S., Blank, C. & Rössler, W. (2014). Emotional reactions to stigma and their effects on help-seeking among people with mental illness. *Schizophrenia Bulletin*, 40(2), 338–345.

Salehi, A., Ehrlich, C., Kendall, E., & Sav, A. (2019). Social support for people living with severe mental illness: A systematic review. *Issues in Mental Health Nursing*, 40(9), 803–818.

Samuel, T., Nigussie, K., Mirkena, Y., & Azale, T. (2022). Relationship between social support and schizophrenia relapse among patients with schizophrenia on follow-up at Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia: A case-control study. *Frontiers in Psychiatry*, 13, 980614.

Sartorius, N. (2023). Stigma and mental health: Continuing challenges and opportunities. *World Psychiatry*, 22(1), 1–3.

Swistak, Z., Sookoo, S., & Jewell, T. (2024). Integrating subjective recovery and stigma resistance in individuals with schizophrenia: A narrative review and theoretical integration. *Issues in Mental Health Nursing,* 45(6), 537–551.

Terry, R., Townley, G., Brusilovskiy, E., & Salzer, M. S. (2019). The role of social support in promoting community integration among people with serious mental illness: A systematic review. *Community Mental Health Journal*, 55(8), 1265–1277.

Thornicroft, G., Sunkel, C., Alikhon Aliev, A., Baker, S., Brohan, E., el Chammay, R., Davies, K., Demissie, M., Duncan, J., Fekadu, W., Gronholm, P. C., Guerrero, Z., Gurung, D., Habtamu, K., Hanlon, C., Heim, E., Henderson, C., Hijazi, Z., Hoffman, C., ... Winkler, P. (2022). The Lancet Commission on ending stigma and discrimination in mental health. *The Lancet*, *400*(10361), 1438-1480.

Wang, J., Mann, F., Lloyd-Evans, B., Ma, R., & Johnson, S. (2018). Associations between loneliness and perceived social support and outcomes of mental health problems: A systematic review. *BMC Psychiatry*, 18, 156.

Wang X., Hu J., Wang X., Liu J. & Wang Y. (2025) Prevalence of stigma among patients with schizophrenia: a multi-country systematic review and meta-analysis. *Frontier Psychol*. 16:1673832.

World Health Organization. (2022). *World mental health report: Transforming mental health for all*. Retrieved from https://www.who.int/publications/i/item/9789240049338 on 12th April, 2026.

World Health Organization. (2024). *Schizophrenia.* Retrieved from https://www.who.int/news-room/fact-sheets/detail/schizophrenia on 13th April, 2026.

Yanos, P. T., Lucksted, A., Drapalski, A. L., Roe, D., & Lysaker, P. H. (2015). Interventions targeting mental health self-stigma: A review and comparison. *Psychiatric Rehabilitation Journal*, 38(2), 171–178.

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, 52(1), 30–41.