

COMPARATIVE STUDY OF QUALITY OF LIFE AND SOCIAL ADJUSTMENT AMONG PATIENTS WITH SCHIZOPHRENIA AND BPAD

Abstract

Background: People with schizophrenia and bipolar disorder have to face many challenges. They struggle with the symptoms and disabilities that occur due to the disorder. An important consequence of improve social adjustment would be to improve the quality of life of people who have psychiatric illnesses. **Aim:** To assess and compare the quality of life and social adjustment among the schizophrenia and BPAD patients. **Methods:** The study has been conducted at the outpatient department (OPD) of CIIMHANS, Dewada, Rajnandgaon. The total sample size was 60 patients of schizophrenia and bipolar affective disorders through purposively sampling technique in accordance of inclusion and exclusion criteria. Socio-demographic and clinical details of the entire patients were assessed through socio-demographic datasheet and clinical datasheet, Quality of life was assessed by The World Health Organization Quality of Life and Social adjustment was assessed by Social Adjustment Scale Self-Report. **Results:** The result shows that more quality of life and social adjustment among patients with BPAD as compared patients with schizophrenia and there was significant difference in overall quality of life and social adjustment between both groups. **Conclusion:** People with psychiatric disorders frequently felt that their social adjustment and quality of life were inadequate. These people confront social adjustment challenges, employment prospects that are limited, and discrimination on a global scale. It was connected to their standard of living.

Key word: Quality of life, Social adjustment, schizophrenia and

INTRODUCTION

Schizophrenia and bipolar disorders are among the most common severe psychiatric disorders. Although the nature and severity of these disorders might vary, many patients present as severe and disabling long-term psychiatric conditions (Judd et al., 2005). According to Kao et al. (2011), schizophrenia is a chronic, severe mental

Rakhi Sharma¹, Rohit Kumar Turi²

1.M.Phil Scholar, Department of Clinical psychology, Central India Institute Dewada, Rajnandgaon, Chhattisgarh, India. Email:- rakhidineshk@gmail.com

2.Assistant Professor, Department of Clinical psychology, Central India Institute of Mental Health and Neuro Sciences, Dewada, Rajnandgaon, Chhattisgarh, India.

Correspondence Address:

Rohit Kumar Turi Assistant Professor, Department of Clinical psychology, Central India Institute of Mental Health and Neuro Sciences, Dewada, Rajnandgaon, Chhattisgarh, India.

Email:- rohitkumarturi@gmail.com

Received: 07.08. 2022

Revised: 08.14. 2022

Accepted: : 06.10. 2022

Published: : 10.11. 2022

Access this Article online

Website :
www.jpsw.co.in

DOI : <https://dx.doi.org/10.55242/JPSW.2022.3206>

Quick Response Code



How to cite: Sharma, R., Turi, R,K(2022). Comparative Study of Quality of life and Social adjustment among patients with Schizophrenia and BPAD. Journal of Psychosocial Wellbeing 3(2):23-29.

illness that is characterized by delusions, hallucinations, disorganized speech, severely disorganized or aberrant motor behaviour, and negative symptoms. Bipolar affective disorder (BPAD) is a condition characterized by recurrent episodes of depression, mania, mixed mood, and hypomania. The National Mental Health Survey estimates that India now has a 0.5% lifetime prevalence of schizophrenia and a 1.4% lifetime prevalence overall. In India, the prevalence of BPAD is 0.3% for recent experience and 0.5% for lifetime experience (Gururaj et al., 2016).

The quality of life concept is based mainly on the self-assessment of the patients about how they feel, what has happened to them, and how they enjoy their life activities. Several research studies aimed at determining the quality of life in bipolar disorder and schizophrenic patients indicate a reduced quality of life compared to that in healthy control groups (Holubova et al., 2016; Sidlova et al., 2011). The quality of life is perhaps more important in those disorders which run in a chronic and debilitating course seen in schizophrenia and bipolar disorder. The key challenge is to improve the quality of life for these types of illnesses (Ritsner & Grinshpoon, 2015). People who have had psychiatric disease for a long time experience internalized stigma, which significantly affects their self-esteem, quality of life, and length of illness (Gupta et al., 2022).

Social adjustment is a form of social capital that individuals rely upon to help them cope with daily stressors of life. Researchers have repeatedly found a strong association between social support and psychological well-being in both adults and children (Newman et al., 2007). With explanatory intensity ranging from 9% in survival time to relapse to 13% in number of relapses, the quality of global social support and contentment with support have been found to be protective factors from frequency and duration of hospital hospitalizations (Vázquez Morejón et al., 2018). One of the key components that play a crucial part in preserving elderly people's wellbeing is social support. Physical and mental health issues are caused by a lack of social support (Willhite et al., 2008)

Social interactions play a key role in an active

environment, which is a crucial factor of older persons' subjective wellbeing, including their perception of their level of happiness in life. (Rusch and others, 2005)

The majority of studies on quality of life and social adjustment were carried out abroad. However, there are relatively few studies conducted in India and even fewer that compare these disorders while they are in clinical remission. Therefore, this study was conducted to close this knowledge gap in order to better understand the quality of life and social adjustment in schizophrenia and bipolar disorder.

Objective of Study

1. To assess and compare the quality of life among the patients with bipolar affective disorder and schizophrenia.
2. To assess and compare the social adjustment among the patients with bipolar affective disorder and schizophrenia.

METHODS AND MATERIALS

The study was cross-sectional hospital based study. It was conducted at the outpatient department of Central India Institute of Mental Health and Neuro Sciences (CIIMHANS), Dewada, Rajnandgoan, Chhattisgarh, India. The sample of the study was 60 patients of schizophrenia and bipolar affective disorders, which was further divided into 30 patients of schizophrenia and 30 patients of BPAD. The sample was selected purposively in accordance of inclusion and exclusion criteria of the study.

Inclusion and Exclusion Criteria

Inclusion criteria: Patients diagnosed with schizophrenia and bipolar affective disorder as per ICD-10, age range minimum 20-50 years, gender (both male and female), duration of illness at least one year. Educated at least primary level and are able to comprehend the instruction, Patient who will give consent for study, Patient who are cooperative and patient who are in remission.

Exclusion criteria: Uncooperative or unwilling to give consent, history of severe medical problem, patient age below 20 years or above 50 years and comorbid substance dependence (except nicotine & caffeine).

Brief Information about the Tools

Socio-Demographic and clinical Data Sheet:- A semi structured Performa design for the study has been used for socio-demographic variable like age, sex, marital status, education, occupation, religion, domicile and monthly family income of the subjects. It also includes information related to clinical variables such as diagnosis, course of illness, duration of illness etc.

The World Health Organization Quality of Life -BREF (WHOQOL-BREF, 1996):- The WHOQOL-BREF in Hindi is a translation of the original World Health Organisation Quality of Life scale. The WHOQOL-BREF scale in Hindi was adopted by Saxena et al. (1998). The WHOQOL-BREF is a condensed version of the WHOQOL-100 items. The WHOQOL-BREF has been evaluated in 15 locations, including Chennai and New Delhi in India. The WHOQOL-BREF has 26 questions that assess four primary areas of life quality: physical health, psychological health, social relationships, and environment. This measure places more emphasis on the respondents' subjective experiences than their actual living circumstances. The factor loading of the item ranges from 0.52 to 0.84, and the alpha score of all domains ranges from 0.59 to 0.87 according to the Cronbach alpha. The WHOQOL-BREF version has excellent cross-cultural validity.

The Social Adjustment Scale Self-Report:- The Social Adjustment Scale Self-Report (SAS-SR; Weissman, 1999) is a paper-and-pencil self-report scale that measures instrumental and expressive role performance over the past 2 weeks in adults. The 54-item assessment covers six areas of functioning, including work (either as a paid worker, unpaid homemaker, or student), social and leisure activities, relationships with extended family, role as a marital partner (if applicable), parental role (if applicable), and role within the family unit (including perceptions of economic functioning). The items within each of the six areas cover four types of content, including extended family, marital partners, parental roles, and family unit.

Procedure

A total 60 patients with schizophrenia and bipolar disorders were selected for the study, those who fulfilled

family, marital partners, parental roles, and family unit.

A total 60 patients with schizophrenia and bipolar disorders were selected for the study, those who fulfilled the inclusion criteria. After that, researchers explained the purpose of the study to all participants. Informed consent was obtained from each participant before data collection. After providing sufficient instructions, patients with schizophrenia and bipolar disorders were interviewed to collect the socio-demographic data. Thereafter, the World Health Organization Quality of Life and Social Adjustment Scale Self-Report were administered to patients with schizophrenia and bipolar disorders. The questionnaires were scored as per the test manual and the data was tabulated and analyzed.

Statistical Analysis

The statistical analysis was done using IBM Statistical Packages for the Social Science (SPSS) software package for windows, Version 25.0. Armonk, New York, United States: IBM Corp. Descriptive statistics such as frequency, percentage, mean, and standard deviation were employed for socio-demographic data (SD). For testing the variance, chi square test and student "t" test were used. At the start of the investigation, the significance levels was $p < 0.05$, $p < 0.01$ and $p < 0.001$ were determined.

RESULTS

Table 1 describes the comparison of two groups (N=60) in their categorical variables by using Chi square analysis. Majority of 66.7% patients of schizophrenia and 60% patients with BPAD were age between 31 to 40 years. In gender, the majority of 70% patients with schizophrenia and 53.3% patients with BPAD were female. The majority of 53.7% patients with schizophrenia and 60% patients with BPAD were educated up to primary level. In marital status, the majority of 66.7% patients with schizophrenia and 60% patients with BPAD were married. In occupation, the majority of 33.3% schizophrenia patients was work as private job and while 30.1% BPAD patients were government job. In domicile, the majority of 70% patients with schizophrenia and 53.3% patients with BPAD were belonged to rural areas. The majority of 43.3% schizophrenia patient's duration of illness was 3 to 5 years and 56.7% schizophrenia patient's duration of illness was 3

3 to 5 years. In this table was used Chi-Square Test and found that there was no significant difference in age ($\chi^2=0.605$, $p=0.739$), gender ($\chi^2=1.763$ $p=0.184$), education ($\chi^2=0.784$, $p=0.676$), marital status ($\chi^2=0.287$, $p=0.592$), occupation ($\chi^2=0.739$, $p=0.628$), domicile ($\chi^2=0.077$, $p=0.781$), and duration of illness ($\chi^2=0.677$, $p=0.262$), between both the group.

Table-1: Comparison of socio-demographic variables between patient with schizophrenia and BPAD

Variables		Group (N= 60)		df	χ^2	p
		Schizophrenia	BPAD			
Age	20 to 30 years	3 (10.0%)	5 (16.7%)	2	0.605	0.739 NS
	31 to 40 years	20 (66.7%)	18 (60.0%)			
	40 to 50 years	7 (23.3%)	7 (23.3%)			
Gender	Male	9 (30.0%)	14 (46.7%)	1	1.763	0.184 NS
	Female	21 (70.0%)	16 (53.3%)			
Education	Primary to secondary	16 (53.3%)	18(60.0%)	2	0.784	0.676NS
	Higher secondary to Graduation	10 (33.3%)	10 (33.3%)			
	PG to above	4 (13.3%)	2 (6.7%)			
Marital Status	Married	20(66.7%)	18 (60.0%)	1	0.287	0.592NS
	Unmarried	10 (33.3%)	12 (40.0%)			
Occupation	Govt. Job	5 (16.7%)	9 (30.1%)	3	1.739	0.628NS
	Private job	10(33.3%)	7(23.3%)			
	Others	7(23.4%)	7(23.3%)			
	Unemployed	8 (26.6%)	7(23.3%)			
Domicile	Rural	9 (30.0%)	10 (33.3%)	1	0.077	0.781NS
	Urban	21 (70.0)	20 (66.7%)			
Duration of illness	1 to 2 years	11(36.7%)	17 (56.7%)	2	2.677	0.262NS
	3 to 5 years	13(43.3%)	10(33.3%)			
	More than 5 years	6(20.0%)	3(10.0%)			

df=Degree of freedom, NS=Not significant, BPAD=Bipolar affective disorder, N= Number

Table-2 Shows mean score and SD of the Quality of life among the patients with schizophrenia and bipolar affective disorder. The Quality of life among the patients with schizophrenia in physical health was 11.66 ± 2.70 , psychological health was 12.23 ± 1.81 , social health was 10.56 ± 1.43 , and environment health was 11.13 ± 2.23 whereas in the patients with bipolar affective disorder in physical health was 12.30 ± 2.68 , psychological health was 13.93 ± 3.08 , social health was 12.26 ± 3.61 and environment health was 12.70 ± 4.18 . The total mean score in Quality of life among patients with schizophrenia was 45.60 ± 5.95 and in patients with bipolar affective disorder was 51.20 ± 6.19 . Result reveals that there was significant difference found in psychological health ($t=2.602$, $P \leq 0.05$), social health ($t=2.393$, $P \leq 0.05$) and all over quality of life ($t=3.531$, $P \leq 0.01$). No significant difference was found on physical health ($t=0.910$, $P \geq 0.05$) and environmental health ($t=1.807$, $P \geq 0.05$) of quality of life scale among patients with schizophrenia and bipolar affective).

Table-2: Comparison of quality of life among patients with Schizophrenia and Bipolar affective disorder

Variables	Group (N= 60)		t	df	p
	Schizophrenia	BPAD			
Physical Health	11.66 ± 2.70	12.30 ± 2.68	0.910	58	0.366NS
Psychological Health	12.23 ± 1.81	13.93 ± 3.08	2.602	58	0.012*
Social Health	10.56 ± 1.43	12.26 ± 3.61	2.393	58	0.020*
Environmental Health	11.13 ± 2.23	12.70 ± 4.18	1.807	58	0.076NS
Overall Quality of Life	45.60 ± 5.19	51.20 ± 6.95	3.531	58	0.001**

** . Significant at the 0.01 level, SD = Standard Deviation, df= degree of freedom, N= Number

Table 3 shows the mean score and SD of the social adjustment among the patients with schizophrenia and BPAD groups. The total Mean±SD score in social adjustment among patients with schizophrenia was 72.50 ± 11.40 and in BPAD groups was 79.96 ± 12.72 . The result shows that there was significant difference between patients with schizophrenia and BPAD groups in terms of their social adjustment ($t= 2.393$ and $p < 0.05$).

Table-3: Comparison of Social Adjustment among patients with schizophrenia and BPAD

Variables	Group (N= 60)		t	df	p-value
	Schizophrenia	BPAD			
Social Adjustment	72.50 ± 11.40	79.96 ± 12.72	2.393	58	0.020*

Significant at the 0.05 level, SD = Standard Deviation, df= degree of freedom, N= Number

DISCUSSION

The present study also revealed more quality of life among patients with BPAD as compared patients with schizophrenia and there was significant difference in overall quality of life between both groups. The present study is consistent with the finding of Prabhakaran et al. (2021), who found that patients with schizophrenia had significantly higher scores for environmental health than the bipolar group. Additionally, they discovered a statistically significant difference in the psychological and social health categories of quality of life between patients with schizophrenia and bipolar illness (Çelik et al., 2022).

The majority of researches in the literature have discovered a difference in remission patients' quality of life across both patient groups (Hofer et al., 2017; Tan et al., 2019). On the other hand, some studies have emphasized that individuals with schizophrenia have lower quality of life than those with BD during the state of remission. It was found that both patient groups in remission had similar QOL in all domains, which was contradictory to the current study. (Latalova et al., 2011; Brissos et al., 2008; Sum et al., 2015).

The present study noted that more social adjustment among patients with BPAD as compared patients with schizophrenia and there was significant difference in social adjustment between both groups. Some previous studies also suggested similar findings, Singh and Kishor (2018) reported that patients with schizophrenia had lower social adjustment compared to patients in the bipolar disorders, but both disorders had lower social support. Kumar et al (2021) reported that poor social adjustment in patients with schizophrenia and bipolar disorder is associated with multiple hospitalizations and significant difference in social adjustment between both groups (Kumar et al., 2018; Prabhakaran et al 2021). Singh et al (2014) found that more bipolar disorder received poor social support from careers, friends and others and frequent relapses are also due to a decrease in social adjustment. Mahmoud et al (2017) found that previous hospitalization has a significant impact on the level of social adjustment of psychiatric patients. Munikanan et al (2017) reported that people with schizophrenia had a poor perception of social support, and support from others was the lowest, followed by support from friends and family members.

LIMITATIONS

The first limitation was that the sample size should have been larger in order to demonstrate significant difference more clearly. Only male and female patients were included as study subjects. Future research may include comparing female bipolar and schizophrenia patients. The study can also include additional executive function testing. Premorbid functioning was not assessed, and other general elements like intellect, personality, etc. that might have had a significant impact on the study's variables were not

included. The sample was not chosen at random. Medication effects could not be managed.

CONCLUSION

The finding of present study suggests that more quality of life and social adjustment among patients with BPAD as compared patients with schizophrenia and significant difference in quality of life and social adjustment among both groups. This knowledge can be effectively applied by mental health professionals who work with the psychosocial environment to enhance treatment outcomes and reduce readmissions. The results of this study will aid in the preparation of an appropriate management strategy and enable the various mental health experts and patients' cares deal with it effectively.

REFERENCES

- Brissos, S., Dias, V. V., Carita, A. I., & Martinez-Arán, A. (2008). Quality of life in bipolar type I disorder and schizophrenia in remission: clinical and neurocognitive correlates. *Psychiatry research*, 160(1), 55-62.
- Çelik, H. E. A., Ceylan, D., Bağci, B., Akdede, B. B., Alptekin, K., & Özerdem, A. (2022). Quality of Life of Individuals with Bipolar Disorder and Schizophrenia. *Noro-Psikiyatri Arsivi*, 59(4), 309-314.
- Gururaj, G., Varghese, M., Benegal, V., Rao, G. N., Pathak, K., & Singh, L. K. (2016). National Mental Health Survey of India, 2015–16 (NIMHANS, editor). *NIMHANS Publication, Bengaluru*.
- Judd, L. L., Akiskal, H. S., Schettler, P. J., Endicott, J., Leon, A. C., Solomon, D. A., ... & Keller, M. B. (2005). Psychosocial disability in the course of bipolar I and II disorders: a prospective, comparative, longitudinal study. *Archives of general psychiatry*, 62(12), 1322-1330.
- Gupta P. R., Ranjan L. K., Panday R, Kumar N. (2022). Association between Internalized Stigma and Self Esteem among Chronic Patients with Psychiatric Disorders. *Journal of Psychosocial Wellbeing*, 3(1):25-32.

- Hofer, A., Mizuno, Y., Wartelsteiner, F., Fleischhacker, W. W., Frajo-Apor, B., Kemmler, G., ... & Uchida, H. (2017). Quality of life in schizophrenia and bipolar disorder: The impact of symptomatic remission and resilience. *European Psychiatry*, *46*, 42-47.
- Holubova, M., Prasko, J., Latalova, K., Ociskova, M., Grambal, A., Kamaradova, D., ... & Hruby, R. (2016). Are self-stigma, quality of life, and clinical data interrelated in schizophrenia spectrum patients? A cross-sectional outpatient study. *Patient preference and adherence*, *265-274*.
- Kao, Y. C., Liu, Y. P., Chou, M. K., & Cheng, T. H. (2011). Subjective quality of life in patients with chronic schizophrenia: relationships between psychosocial and clinical characteristics. *Comprehensive Psychiatry*, *52*(2), 171-180.
- Kumar, A., Srivastava, M., Ranjan, L. K., & Bhattacharjee, D. (2021). Perceived Social Support and Self-Stigma among Schizophrenia and BPAD Patients with Psychiatric Hospitalization. *International Journal of Indian Psychology*, *9*(1).
- Kumar, V., Singh, B., Singh, P., & Rathee, S. (2018). Expressed Emotion and Social Support in Rehospitalized Psychiatric Patients. *Indian Journal of Psychiatric Social Work*, *9*(2), 91-97.
- Latalova, K., Prasko, J., Diveky, T., Kamaradova, D., & Velartova, H. (2011). Quality of life in patients with bipolar disorder—a comparison with schizophrenic patients and healthy controls. *Psychiatria Danubina*, *23*(1.), 21-26.
- Mahmoud, A. S., Berma, A. E., & Gabal, S. A. A. S. (2017). Relationship between social support and the quality of life among psychiatric patients. *Journal of Psychiatry and Psychiatric Disorders*, *1*(2), 57-75.
- Munikanan, T., Midin, M., Daud, T. I. M., Rahim, R. A., Bakar, A. K. A., Jaafar, N. R. N., ... & Baharuddin, N. (2017). Association of social support and quality of life among people with schizophrenia receiving community psychiatric service: a cross-sectional study. *Comprehensive Psychiatry*, *75*, 94-102.
- Newman BM, Newman PR, Griffen S, et al. (2007) The relationship of social support to depressive symptoms during the transition to high school Adolescence;42:441e59
- Prabhakaran, S., Nagarajan, P., Varadharajan, N., & Menon, V. (2021) Relationship Between Quality of Life and Social Support Among Patients with Schizophrenia and Bipolar Disorder: A Cross-Sectional Study. *Journal of Psychosocial Rehabilitation and Mental Health*, 1-9.
- Ritsner, M. S., & Grinshpoon, A. (2015). Ten-year quality-of-life outcomes of patients with schizophrenia and schizoaffective disorders: the relationship with unmet needs for care. *Clinical Schizophrenia & Related Psychoses*, *9*(3), 125-134A.
- Rusch, N., Angermeyer, M. C., & Corrigan, P. W. (2005). Mental illness stigma: Concepts, consequences, and initiatives to reduce stigma. *European Psychiatry*, *20*, 529-539.
- Saxena, S., Chandiramani, K., & Bhargava, R. (1998). WHOQOL-Hindi: A questionnaire for assessing quality of life in health care settings in India. *National Medical Journal of India*, *11*, 160-165.
- Sidlova, M., Prasko, J., Jelenova, D., Kovacsova, A., Latalova, K., Sigmundova, Z., & Vrbova, K. (2011). The quality of life of patients suffering from schizophrenia—a comparison with healthy controls. *Biomedical Papers of the Medical Faculty of Palacky University in Olomouc*, *155*(2).
- Singh, B., Verma, A. N., & Singh, A. R. (2014). Psychosocial characteristics of rehospitalization among bipolar affective disorder patients. *Indian Journal of Health & Wellbeing*, *5*(12).
- Singh, N. K., & Kishore, A. (2018). A Comparative Study of Perceived Social Support among Persons with Schizophrenia and Mania. *Indian Journal of Psychiatric Social Work*, *9*(1), 24-28.
- Sum, M. Y., Ho, N. F., & Sim, K. (2015). Cross diagnostic comparisons of quality of life deficits in remitted and unremitted patients with schizophrenia and bipolar disorder. *Schizophrenia research*, *168*(1-2), 191-196.
- Tan, X. W., Seow, E., Abidin, E., Verma, S., Sim, K., Chong, S. A., & Subramaniam, M. (2019). Subjective quality of life among patients with schizophrenia spectrum

- sectional study. *Comprehensive Psychiatry*, 75, 94-102.
- Newman BM, Newman PR, Griffen S, et al. (2007) The relationship of social support to depressive symptoms during the transition to high school Adolescence;42:441e59
- Prabhakaran, S., Nagarajan, P., Varadharajan, N., & Menon, V. (2021) Relationship Between Quality of Life and Social Support Among Patients with Schizophrenia and Bipolar Disorder: A Cross-Sectional Study. *Journal of Psychosocial Rehabilitation and Mental Health*, 1-9.
- Ritsner, M. S., & Grinshpoon, A. (2015). Ten-year quality-of-life outcomes of patients with schizophrenia and schizoaffective disorders: the relationship with unmet needs for care. *Clinical Schizophrenia & Related Psychoses*, 9(3), 125-134A.
- Rusch, N., Angermeyer, M. C., & Corrigan, P. W. (2005). Mental illness stigma: Concepts, consequences, and initiatives to reduce stigma. *European Psychiatry*, 20, 529-539.
- Saxena, S., Chandiramani, K., & Bhargava, R. (1998). WHOQOL-Hindi: A questionnaire for assessing quality of life in health care settings in India. *National Medical Journal of India*, 11, 160-165.
- Sidlova, M., Prasko, J., Jelenova, D., Kovacsova, A., Latalova, K., Sigmundova, Z., & Vrbova, K. (2011). The quality of life of patients suffering from schizophrenia-a comparison with healthy controls. *Biomedical Papers of the Medical Faculty of Palacky University in Olomouc*, 155(2).
- Singh, B., Verma, A. N., & Singh, A. R. (2014). Psychosocial characteristics of rehospitalization among bipolar affective disorder patients. *Indian Journal of Health & Wellbeing*, 5(12).
- Singh, N. K., & Kishore, A. (2018). A Comparative Study of Perceived Social Support among Persons with Schizophrenia and Mania. *Indian Journal of Psychiatric Social Work*, 9(1), 24-28.
- Sum, M. Y., Ho, N. F., & Sim, K. (2015). Cross diagnostic comparisons of quality of life deficits in remitted and unremitted patients with schizophrenia and bipolar disorder. *Schizophrenia research*, 168(1-2), 191-196.
- Tan, X. W., Seow, E., Abidin, E., Verma, S., Sim, K., Chong, S. A., & Subramaniam, M. (2019). Subjective quality of life among patients with schizophrenia spectrum disorder and patients with major depressive disorder. *BMC psychiatry*, 19(1), 1-10.
- Vázquez Morejón, A. J., León Rubio, J. M., & Vázquez Morejón, R. (2018). Social support and clinical and functional outcome in people with schizophrenia. *International Journal of Social Psychiatry*, 64(5), 488-496.
- Weissman, M. M. (1999). *Social adjustment scale-self report (SAS-SR): User's manual*. Multi-Health Systems Incorporated.
- Willhite, R. K., Niendam, T. A., Bearden, C. E., Zinberg, J., O'Brien, M. P., & Cannon, T. D. (2008). Gender differences in symptoms, functioning and social support in patients at ultra-high risk for developing a psychotic disorder. *Schizophrenia research*, 104(1-3), 237-245.
- World Health Organization. (1996). WHOQOL-BREF: introduction, administration, scoring and generic version of the assessment: field trial version, December 1996 (No. WHOQOL-BREF). *World Health Organization*.