Original paper

Archives of Psychiatry Research 2023;59:251-258
DOI:10.20471/dec.2023.59.02.08
Received Nov 12, 2022, accepted after revision Jan 09, 2023

The Insight of Patients and Their Parents Differ in the Early Phase of Psychosis

Lada Goršić[1,2], Sandra Caratan[1], Sandra Kocijan-Lovko[1,3], Helena Goršić[1],Ivan Požgain[2],Branka Restek-Petrović[1,3]

[1]University Psychiatric Hospital Sveti Ivan, Zagreb, Croatia, [2]Faculty of Medicine, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia, [3]Faculty of Dental Medicine and Health, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

Abstract – The aim of this cross-sectional study was to investigate whether the insight of patients and their parents differ in the early phase of psychosis. Target population were the patients hospitalized with the diagnosis of the psychotic spectrum (F20- F29; ICD- 10th; disease duration ≤ 5 years), both sexes, with average age M = 25.4 (SD = 3.56, C = 25, min = 18, max = 32) and their parents. Insight into illness in patients was assessed using the Scale to assess Unawareness of mental Disorder (SUMD) abbreviated version. Parents' insight into illness was assessed with a modified version of the SUMD with question rephrased to probe parents' understanding of patients' illness. The expression, structure and severity of psychotic symptoms was assessed by The Positive and Negative Syndrome Scale of Schizophrenia (PANSS- Five factor models) and Clinical global impression scale (CGI- s). The results indicated a statistically significant ($Z = 2.99$; $p < 0.01$) higher mean value on General Awareness of patients (M = 6.1, SD = 3.26) compared to parents (M = 5.0, SD = 2.99. A significant difference was obtained by the sex of parents too ($z = -2.07$, $p < 0.05$): fathers had better insight (M = 2.0, SD = 1.15) than mothers (M = 1.5, SD = 0.89). The results call for necessity to develop innovative and comprehensive program for early family interventions.

Key words: psychotic disorders; awareness; psychopathology; early medical intervention

e-mail: apr.kbcsm@gmail.com • www.http://apr.kbcsm.hr

Introduction

The ability of a person to reflect upon his illness is called insight into illness [1]. Clinically insight is a multifaceted phenomenon related to acceptance of one's condition as being psychiatrically ill, recognition of symptoms as pathological, recognition of the social consequences of illness and treatment acceptance [2]. The common features of psychotic disorders are symptoms classified through several dimensions: positive symptoms (delusions, hallucinations), negative symptoms (affective blunted, social withdrawal, alogia, anhedonia, avolition), cognitive symptoms (impairments of attention, abstract thinking and executive functions), affective symptoms (anxiety, depression) and psychomotor symptoms (catatonia, bizarreness, agitation or sluggishness, resistance) [3]. These symptoms often cause impaired reality testing and poor insight.

Early phase of psychosis is defined as period within five years from the onset of symptoms and the beginning of treatment when it

Correspondence to:
Lada Goršić, MD, University Psychiatric Hospital Sveti Ivan, Jankomir 11, 10 090 Zagreb, Croatia, Phone: + 385 91 3349 211
E-mail: gorsiclada766@gmail.com

is possible to influence the course and the outcome of illness and to prevent chronic forms of illness through specific and individualized therapeutic procedures [4,5]. Impaired insight is common during early stage of psychosis with its prevalence ranging from around 30 - 50 % and may cause treatment delays, more severe symptoms, poorer treatment adherence, involuntary admissions, potentially aggressive behaviour, poorer social functioning and outcomes [6-11]. According to Kam there is a significant positive correlation of impaired insight with stronger positive and negative symptoms, disorganization, and cognitive impairment [6]. Belvederi Murri found a negative correlation between insight and depressive symptoms [12]. Insight is directly related to the severity of psychotic symptoms and inversely related to depression scores, so-called "insight paradox" [13,14]. Ellemers and associates have pointed out that when facing a first episode of psychosis, patients do not only need to cope with the symptoms of the disorder, but also with the emergence of a new identity and a possible loss of old one. This identity transformation is very important for the evolution of functional outcomes [15]. Contrary to traditional view that insight is independent sign of psychopathology, recent studies indicate that insight does not predict the outcome, it changes over time and is dependent on the trajectory of individual's illness as well as on social and cultural context. This finding suggests that "insight" may be an attempt at coping with the devastating effects of mental disorder which calls for multifaceted and nuanced understanding of the issue [16]. Considering that the first symptoms of psychosis often appear in young adulthood while the affected still live with their parents, we believe that the role of parental insight is important in recognizing the signs and medical treatment. Critical attitude and negativism of the immediate family may cause lower insight, greater self-stigma resulting in depressed mood, even suicidal behaviour [17,18]. Brent and associates have pointed out that caregivers' emotional characteristics and levels of insight into illness may be related to insight into illness in patients making family psychoeducational approaches necessary [19]. Aim of this study is to investigate level of patient's and parent's insight into early psychosis.

Subjects and Methods

Study design

We performed a cross-sectional study during 2020/2021 at Psychiatry Clinic "Sveti Ivan", Zagreb, Croatia, on a consecutive sample of 105 patients in the early phase of a psychosis (disease duration ≤ 5 years) and their parents. The research encompassed diagnoses of psychotic disorders spectrum (codes from F20 to F29) according to ICD -10 made by psychiatrists [20]. The study was approved by Ethics Committee of Psychiatric Clinic "Sveti Ivan" and Ethics Committee of the Faculty of Medicine, "J.J. Strossmayer" University of Osijek, Croatia. The study complied with the World Medical Association Declaration of Helsinki 2013 [21]. The study was carried out on patients after initiative stabilization of acute phase of psychosis and after they were relocated to a psychotherapeutic and socio-therapeutic ward for patients with psychotic disorders where they were subjected to group psychotherapeutic and socio-therapeutic treatment, both in psychodynamic and cognitive behavioural form altogether with anti-stigma workshops and medical treatment [22]. Patients were tested during these special psychotherapeutic/socio-therapeutic program which is part of the early intervention program RIPEPP [23,24]. Parents were not included in complete program due to the Covid - 19 pandemic epidemiologic restrictions, but they were invited separately to interviews and fulfilling the questionnaires. Their identities were concealed by assigning numerical codes. The purpose and objectives of the research were explained to all participants, and as they've signed informed consent they were subjected to a clinical interview, questionnaires and measurement scales.

Instruments and assessments

The instruments used for patients: sociodemographic questionnaire, The Scale to Assess Unawareness of Mental Disorder - Abbreviated version (SUMD), The Positive and Negative Syndrome scale (PANSS) - The Five factor models, Clinical Global Impression severity scale (CGI - S) [25-31]. The instrument used for parents: Sociodemographic ques-

tionnaire, The Scale to Assess Unawareness of Mental Disorder (SUMD) - modified version for parents with question rephrased to probe parents' understanding of patients' illness. The data source was a sociodemographic questionnaire designed specifically for this research: sex, age, education level, marital status, number of children, work status. The following data showed other descriptive variables of the patients' psychiatric diagnosis (ICD - 10th), duration of untreated psychosis (DUP), number of previous hospitalizations and suicide attempt. Insight was assessed with the Scale to assess Unawareness of Mental Disorder (SUMD), semi-structured interview to evaluate global awareness of having mental disorder and its social consequences, needs for medication, and awareness of insight of specific symptoms and their attribution to the mental disorder. These dimensions of insight were rated with regard to the present level of insight on a 5-point Likert scale (1," aware" to 5, "unaware"), with higher scores indicating poorer awareness. This version has shown good reliability and validity. Due to the comprehensiveness of the scale and the possibility of "smooth rejection" we used the first awareness subscale of the General awareness of Mental Disorder. Validation studies confirmed the adequacy of its psychometric characteristics [14,25-27]. Psychopathology, i.e. expression and structure of symptoms of psychosis was assessed by The Positive and Negative Syndrome Scale (PANSS) - Five factor models based upon 20-items, categorised into: Positive, Negative, Disorganised/ Cognitive, Affective or Depressive symptoms and Rejection/Exited symptoms. Five factor models of PANSS showed better characteristic in identifying patients with higher functional and cognitive outcomes as well as remission level, so it was suitable for our research. The Positive and Negative Syndrome Scale (PANSS) is widely used instrument that assesses the level of positive, negative and general psychopathology symptoms (GPS) associated with psychosis. It consists of 30 items scored on 1 (absent) to 7 (extreme) scale and a higher score reflects greater psychopathology. Validation studies confirmed the adequacy of its psychometric characteristics [28,29]. Overall clinical status was evaluated by the CGI - S scale [31].

Study population

Targeted population were the patients who were hospitalized within the diagnosis of the psychotic spectrum (F20 - F29) according to ICD - 10^{th} (disease duration $\leq$ 5 years), of both sexes, 18-35 years old, and were able to complete the questionnaires, as well as their parents. Exclusion criteria were: severe brain damage, mental retardation, severe drug dependence, acute suicidality and inability to complete research questionnaires. Inclusion criteria for parents were: living in a joint household with affected child and at least minimal care for the child defined as having contact with a psychiatrist who manages the treatment of their child. In every pair of parents who met the inclusion criteria we included the parent who had closer relationship with the child or took care of the child's treatment more often. Exclusion criteria for parents were: moderate or severe mental retardation or other functional limitations that would make it impossible to answer the questionnaire independently.

Sample size

This research was carried out as part of doctoral thesis. A stratified consecutive sample of patients and their parents from the target population was selected over a period of two years according to the order of admissions. Stratification of the sample was done according to the number of previous hospitalizations grouped as follows: 1) first hospitalization, 2) two to three previous hospitalizations, 3) more than three hospitalizations. Multivariable linear regression analysis with a target statistical power of 80 %, a statistical significance level of a two-way test $p < 0.05$, three independent variables and 17 covariates was performed. Initially, the required sample size was 98 patients, but in order to select an equal number of participants in all three strata according to the number of hospitalizations, a sample size of 105 participants was chosen, with a total of 35 participants in each stratum. The required sample size was calculated using PASS 2021 Power Analysis and Sample Size Software (2021).

Treatment outcomes

The primary outcome was the analysis of the subscale of General awareness of Mental Disorder, The Scale to Assess Unawareness of Mental Disorder - Abbreviated version (SUMD). This General awareness subscale consists of three items: 1) awareness of mental disorder, 2) awareness of the social consequences of mental disorder, 3) does the patient/parent believe that psychopharmacological treatment is necessary?

Secondary outcome were presence and structure of psychotic symptoms (the positive, negative, affective, cognitive symptoms and resistance) at the time of the patient's inclusion measured by The Positive and Negative Syndrome Scale of Schizophrenia PANSS-the Five factor model and severity of the disease measured by the Clinical global impression scale - severity (CGI-s).

Results

In total 105 patients and their parents were included in the study: 43 (41.0 %) female patients, and 62 (59 %) male patients, mothers 70 (66.7 %) and 35 (33.3 %) fathers; 69.5 % had acute and transient psychotic disorder, 12.4 % had non-specific non-organic psychosis and 18.1 % others, with average DUP of 74 days. All demographic data are presented in (Table 1) and clinical data in (Table 2).

The results in the (Table 3) indicate the highest prevalence of symptoms on the scale of affective symptoms (M = 3.2; SD = 0.90), followed by positive symptoms (M = 2.5; SD = 0.69), then negative (M = 2.1; SD = 0.82), cognitive (M = 1.7; SD = 0.54) and resistance (M = 1.4; SD = 0.46). Overall global clinical impression (CGI-S) = 4.2 (SD = 0.73). Testing the normality of the distributions with the Kolmogorov Smirnov test showed that all distributions were significantly different from the normal distribution ($Z = 0.09$; $p < 0.01$; $Z = 0.12$; $p < 0.01$; $Z = 0.13$; $p < 0.01$ and $Z = 0.21$; $p < 0.01$) except for affective symptoms ($Z = 0.08$; $p > 0.05$). After that the Friedman test was used, which showed that there was a statistically significant difference in the in-

Table 1. Baseline patient and parent demographic data

N = 105	Patients N (%)		Parents N (%)	
Sex				
female	43	(41.0)	70	(66.7)
male	62	(59.0)	35	(33.3)
age (years); M (SD)	25.4	(3.56)	55.6	(5.38)
Education level				
primary school	4	(3.8)	15	(14.3)
secondary	77	(73.3)	41	(39.0)
bachelor's degree	11	(10.5)	20	(19.0)
master's degree	13	(12.4)	25	(23.8)
PhD	0	(0.0)	4	(3.8)
Marital status				
marriage	2	(1.9)	64	(61.0)
extramarital union	3	(2.9)	8	(7.6)
single	96	(91.4)	7	(6.7)
divorced	4	(3.8)	17	(16.2)
widow/widower	0	(0.0)	16	(15.2)
Children				
none	103	(98.1)	0	(0.0)
one	2	(1.9)	21	(20.0)
two	0	(0.0)	53	(50.5)
three or more	0	(0.0)	31	(29.5)
Work status				
employed	24	(22.9)	63	(60.0)
employed seasonally	20	(19.0)	7	(6.7)
unemployed	21	(20.0)	3	(2.9)
student	37	(35.2)	5	(4.8)
retired	0	(0.0)	13	(12.4)
disability pension	2	(2.0)	10	(9.5)
other	1	(1.0)	4	(3.8)

Table 2. Baseline patients' clinical characteristics

N = 105	Patients N (%)	
Psychiatric diagnosis (ICD-10)		
schizophrenia	7	(6.7)
schizotypal disorder	1	(1.0)
persistent delusional disorder	1	(1.0)
acute and transient psychotic disorders	73	(69.5)
schizoaffective disorders	10	(9.5)
nonspecific nonorganic psychosis	13	(12.4)
Treatment duration (from 1st hospitalization)		
less than 1 year	37	(35.2)
1 year	22	(21.0)
2 years	15	(14.3)
3 years	15	(14.3)
4 years	12	(11.4)
5 years	4	(3.8)
Previous hospitalization		
0	35	(33.3)
1	21	(20.0)
2	14	(13.3)
3	9	(8.6)
4	16	(15.2)
5 or more	10	(9.6)
Suicide attempt (yes)	32	(30.5)

Table 3. Descriptive statistics for PANNS scale factors and Overall Clinical Global Impression (CG)

VARIABLE	M	C	D	SD	Skewness	Kurtosis
Overall positive symptoms	12.3	12.0	12.0	3.44	0.45	0.35
Average positive symptoms	2.5	2.4	2.4	0.69	0.45	0.35
Overall negative symptoms	14.5	14.0	17.0	5.75	0.68	- 0.03
Average negative symptoms	2.1	2.0	2.4	0.82	0.68	- 0.03
Overall cognitive symptoms	13.2	12.0	15.0	4.34	1.15	1.55
Average cognitive symptoms	1.7	1.5	1.9	0.54	1.15	1.55
Overall affective symptoms	15.9	16.0	12.0	4.50	0.23	- 0.43
Average affective symptoms	3.2	3.2	2.4	0.90	0.23	- 0.43
Total resistance	5.6	5.0	4.0	1.84	1.75	3.63
Average resistance	1.4	1.3	1.0	0.46	1.75	3.63
CG	4.2	4.0	4.0	0.73	- 0.52	- 0.45

M - arithmetic mean, C - central value, D - dominant value, SD - standard deviation, Skewness - curvature, Kurtosis - flatness.

dividual results of the PANNS test (χ^2 (4) = 255.54; $p < 0.01$).

Subsequent individual Wilcoxon tests show that all differences are statistically significant ($Z = -4.47$; $p < 0.01$; $Z = -8.68$; $p < 0.01$; $Z = -5.89$; $p < 0.01$; $Z = -8.84$; $p < 0.01$; $Z = -5.80$; $p < 0.01$; $Z = -7.62$; $p < 0.01$; $Z = -6.53$; $p < 0.01$; $Z = -8.58$; $p < 0.01$; $Z = -4.64$; $p < 0.01$ and $Z = -8.85$; $p < 0.01$), that is, the significantly highest score is on affective, then positive and negative symptoms. They are followed by significantly lower cognitive symptoms and the lowest resistant score.

The results in the (Table 4) indicate a higher mean value on General awareness of patients compared to parents. Total awareness of patients was (M = 6, 1; SD = 3.26), while total awareness of their parents was (M = 5.0; SD = 2.99). Both measured variables have distributions of results different from the normal distribution based on the Kolmogorov Smirnov test ($Z = 0.21$; $p < 0.01$ and $Z = 0.29$; $p < 0.0$), so when calculating the statistical significance of the difference, the Mann Whitney U test was used which showed ($Z = 2.99$; $p < 0.01$) that this difference is statistically significant,

Table 4. Descriptive statistics for the SUMD General Awareness scale for patients and parents

VARIABLE	M	C	D	SD	Skewness	Kurtosis
Total awareness of patients	6.1	5.0	3.0	3.26	1.14	0.63
Average awareness of patients	2.0	1.7	1.0	1.09	1.14	0.63
Total awareness of parents	5.0	3.0	3.0	2.99	1.41	1.19
Average awareness parents	1.7	1.0	1.0	1.00	1.41	1.19

M - arithmetic mean, C - central value, D - dominant value, SD - standard deviation, Skewness - curvature, Kurtosis - flatness.

that is, patients are more aware of mental disorders than their parents.

Here we were also interested in whether patients and parents differed in the mean value of General awareness depending on the number of hospitalizations (1 hospitalization, 2-3 hospitalizations, more than 3 hospitalizations), and the Kruskal - Wallis test showed that the difference was not statistically significant even for patients' awareness ($H(2) = 2.94$; $p > 0.05$) nor for parents' awareness ($H(2) = 1.36$; $p > 0.05$).

As for the correlation of awareness with different demographic variables, Spearman's correlation coefficient showed that there was no connection between the patient's insight and their age ($r = 0.11$; $p > 0.05$), education ($r = -0.09$; $p > 0.05$), nor the size of the DUP ($r = -0.11$; $p > 0.05$). The difference among sexes ($z = -1.05$; $p > 0.05$) was also not statistically significant. There was no connection between parents' insight with their age ($r = 0.06$; $p > 0.05$), education ($r = 0.02$; $p > 0.05$), nor with the patient's DUP ($r = -0.05$; $p > 0.05$). The obtained difference among sexes of parents was statistically significant ($z = -2.07$; $p < 0.05$) - fathers had better insight ($M = 2.0$; $SD = 1.15$) than mothers ($M = 1.5$; $SD = 0.89$).

Discussion

In this unicentric cross-sectional study we investigated clinical insight that encompasses three fundamental features: awareness of suffering from a mental illness, understanding possible social consequences and recognizing the need for treatment. The results showed that patients were more aware of their mental disorder than were their parents. There are several possible explanations for these findings. Firstly, at the time of the patients' inclusion in the study the acute phase of psychosis subdued as they were transferred to a psychotherapy and socio-therapy ward. In the psychotherapy ward they have participated in psychodynamic oriented median group psychotherapy once a week, small groups three times a week, cognitive behavioural therapy in a form of once a week psychoeducational workshops with seven different topics: self-concept, emotional recognition and understanding, negative emotions and how to deal with them, communication with others and relationship, planning and goal achievements, stress and coping with stress as well as anti – stigma workshops once a week. Twice a week, patients were engaged in work and occupational therapy as well as recreational therapy [22]. Such an intensive program for patients resulted in improvement of the psychotic symptoms. The findings were supported by the results of the five - factors PANSS scale – affective symptoms were more pronounced than positive and negative symptoms, cognitive and resistance. These results are in consistence with previous researches that there were a significant positive correlation of impaired insight with stronger positive and negative symptoms, disorganisations, and cognitive impairment and inversely correlation with depressive symptoms [6,12-14,16]. Psychodynamic oriented group psychotherapy enabled patients to share their psychotic experiences (e.g. delusions and hallucinations) and to give meaning to their symptoms; it helped them to work through that experience and eventually achieve some insight [22].

Secondly, the research was conducted during the Covid-19 pandemic. Before the pandemic parents were also attending the program through outpatient psychoeducational workshops and family group psychotherapy where they shared their experience with their ill child and other parents [23,24]. During the pandemic era the outpatient part of program for parents was temporarily suspended for epidemiologic reasons. While the children participated in the hospital therapy program, the parents were invited separately to interview by the research conductor. Given that the parents did not complete the entire program due to the epidemic, it is possible that their results were affected, that is, they had a weaker insight than children, also weaker than we expected. In previous studies parents had better insight then affected children especially if they had shown a lower level of criticism and expressed fewer negative attitudes toward the

illness, but bear in mind that they had many years of experience of illness [17,18]. Thirdly, there is evidence that impaired cognition was correlated with gross insight impairments [32]. When facing a first episode of psychosis, patients do not only need to cope with the symptoms of disorder, but also with the emergence of a new identity process and possible loss of old ones [15]. This requires time and the support of both medical service and the family, requiring the active involvement of the family in the treating process [15,16]. We are of the opinion that the whole family have to undergo an identity-transformation process. Therefore the early phase of treatment should be comprehensive, consisting of parents' and family interventions [22-24]. After all, insight is a relational concept that can be meaningfully explored only in the person facing the illness – "No one can enter another's mind" [33]. According to Jaspersian phenomenology through self-reflection, an individual "manages to see himself, think about himself, and influence himself through training". In contrast to biological reductionism, Jaspers believes that insight is not a permanent state but rather a complex, fluid phenomenon, never constant and changeable as a stream of consciousness, like the life in which we exist [33]. That could explain the results of previous study, which are often surprising and inconsistent.

The study also showed that insight among the patients and parents were not related to age, level of education, working status, number of previous hospitalizations, nor to the duration of untreated psychosis (DUP). A statistically significant difference in insight was found between mothers and fathers. Fathers had better insight than mothers possibly due to lack of objectivity in mothers and greater tendency for symbiotic fusion [17,18]. We also point out several limitations to the study. Due to the cross – sectional design of the study we cannot draw definitive conclusions regarding causality. Secondly, patients and parents had to have sufficiently good insight to consent to take part in the study. Finally, we performed this study in the single Centre in a highly urbanized country capital and in a specialized psychiatric hospital which is a part of Referential Centre for Psychotherapy, Psychosocial treatments and Early Intervention for psychotic disorders (Ministry of Health, Croatia).

Nevertheless, our study highlights the necessity of developing innovative and comprehensive program for family interventions. It would reduce negative attitudes and prejudices towards mental illnesses and improve insight in parents as well in patients.

Acknowledgments

None.

Conflict of Interest

None to declare.

Funding Sources

None.

References

1. Mythri SV, Ebenezer JA. Insight in Psychosis: An Integrated Perspective. In: Irtelli F, editor. Psychosis - Biopsychosocial and Relational Perspectives. London (UK): Intechopen; 2018.
2. David AS. Insight and psychosis: the next 30 years. Br J Psychiatry. 2020;217:521-3.
3. Begić D. Psihopatologija. Četvrto dopunjeno izdanje. Zagreb (HR): Medicinska naklada; 2021.
4. Arciniegas DB. Psychosis. Continuum (Minneap Minn). 2015;21:715-36.
5. Correll CU, Galling B, Pawar A, Krivko A, Bonetto C, Ruggeri M, et al. Comparison of early intervention services vs treatment as usual for early-phase psychosis: a systematic review, meta-analysis, and meta-regression. JAMA Psychiatry. 2018;75:555-65.
6. Kam TK, Lui TT, Lau FC, Chan KW, Lee HM, Hui LM, et al. Clinical and psychological correlates of insight dimensions in patients with early psychosis. Early Interv Psychiatry. 2022;16:527-32.
7. Souaiby L, Gaillard R, Krebs MO. Duration of untreated psychosis: a state-of-the-art review and critical analysis. Encephale. 2016;42:361-6.
8. Murru A, Carpiniello B. Duration of untreated illness as a key to early intervention in schizophrenia: a review. Neurosci Lett. 2018;669:59-67.

9. Campos MS, Garcia-Jalon E, Gilleen JK, David AS, Peralta VM, Cuesta MJ. Premorbid personality and insight in first-episode psychosis. Schizophr Bull. 2011;37:52-60.
10. Schandrin A, Norton J, Raffard S, Aouizerate B, Berna F, Brunel L, et al. A multi-dimensional approach to the relationship between insight and aggressiveness in schizophrenia: Findings from the FACE-SZ cohort. Schizophr Res. 2019;204:38-45.
11. Cuesta MJ, Peralta V, Campos MS, Garcia-Jalon E. Can insight be predicted in first-episode psychosis patients? A longitudinal and hierarchical analysis of predictors in a drug-naïve sample. Schizophr Res. 2011;130:148-56.
12. Murri MB, Respino M, Innamorati M, Cervetti A, Calcagno P, Pompili M, et al. Is good insight associated with depression among patients with schizophrenia? Systematic review and metaanalysis. Schizophr Res. 2015;162:234-47.
13. Krupchanka D, Katliar M. The Role of insight in moderating the association between depressive symptoms in people with schizophrenia and stigma among their nearest relatives: a pilot study. Schizophr Bull. 2016;42:600-7.
14. Vidović D, Brečić P, Vilibić M, Jukić V. Insight and self-stigma in patients with schizophrenia. Acta Clin Croat. 2016;55:23-8.
15. Klaas HS, Clémence A, Marion-Veyron R, Antonietti JP, Alameda L, Golay P, et al. Insight as a social identity process in the evolution of psychosocial functioning in the early phase of psychosis. Psychol Med. 2017;47:718-29.
16. Jacob KS. Insight in psychosis: an indicator of severity of psychosis, an explanatory model of illness, and a coping strategy. Indian J Psychol Med. 2016;38:194-201.
17. Macgregor A, Norton J, Bortolon C, Robichon M, Rolland C, Boulenger JP, et al. Insight of patients and their parents into schizophrenia: Exploring agreement and the influence of parental factors. Psychiatry Res. 2015;228:879-86.
18. Gigante AD, Castel S. Insight into schizophrenia: a comparative study between patients and family members. Sao Paulo Med J. 2004;122:246-51.
19. Brent BK, Giuliano AJ, Zimmet SV, Keshavan MS, Seidman LJ. Insight into illness in patients and caregivers during early psychosis: a pilot study. Schizophr Res. 2011;127:100-6.
20. World Health Organisation (WHO). International Statistical Classification of Diseases and Related Health Problems 10th Revision [Internet]. Genewa (CH): WHO; 2016 [updated 2016, cited 2022 Sept 20]. Available from: https://icd.who.int/browse10/2016/en#/
21. World Medical Association. World Medical Association Declaration of Helsinki: ethical principles for medical research involving human subjects. JAMA. 2013;310:2191-4.
22. Mayer N, Petrović BR, Grah M, Lovretić V, Filipčić I. Treatment of patients in early phase of psychosis on psychotherapeutic inpatient unit - presentation of the therapeutic programme and evaluation of some aspects. Psychiatr Danub. 2017;29:447-51.
23. Restek-Petrović B, Mihanović M, Grah M, Molnar S, Bogović A, Agius M, et al. Early intervention program for psychotic disorders at the Psychiatric Hospital 'Sveti Ivan.' Psychiatr Danub. 2012;24:323-32.
24. Restek-Petrović B, Majdančić A, Molnar S, Grah M, Ivezić E, Filipčić I, et al. Early intervention programme for patients with psychotic disorders in 'Sveti Ivan'. Psychiatric Hospital (RI-PEPP) - sociodemographic and baseline characteristics of the participants. Psychiatr Danub. 2017;29:162-70.
25. Amador XF, Strauss DH, Yale SA, Flaum MM, Endicott J, Gorman JM. Assessment of insight in psychosis. Am J Psychiatry. 1993;150:873-9.
26. Michel P, Baumstarck K, Auquier P, Amador X, Dumas R, Fernandez J, et al. Psychometric properties of the abbreviated version of the Scale to Assess Unawareness in Mental Disorder in schizophrenia. BMC Psychiatry. 2013;13:229.
27. Dumas R, Baumstarck K, Michel P, Lançon C, Auquier P, Boyer L. Systematic review reveals heterogeneity in the use of the Scale to Assess Unawareness of Mental Disorder (SUMD). Curr Psychiatry Rep. 2013;15:361.
28. Kay SR, Fiszbein A, Opler LA. The Positive and Negative Syndrome Scale (PANSS) for Schizophrenia. Schizophr Bull. 1987;13:261-76.
29. Shafer A, Dazzi F. Meta-analysis of the positive and Negative Syndrome Scale (PANSS) factor structure. J. Psychiatry Res. 2019;115:113-20.
30. Lim K, Peh OH, Yang Z, Rekhi G, Rapisarda A, See YM, et al. Large-scale evaluation of the Positive and Negative Syndrome Scale (PANSS) symptom architecture in schizophrenia. Asian J Psychiatry. 2021;62:102732.
31. Busner J, Targum SD. The clinical global impressions scale: applying a research tool in clinical practice. Psychiatry (Edgmont). 2007;4:28-37.
32. Keshavan MS. Impaired insight in psychotic disorder: an unmet need in treatment. Schizophr Res. 2019;206:2-3.
33. Park SC. Karl Jaspers' General Psychopathology (Allgemeine Psychopathologie) and its implication for the current psychiatry. Psychiatry Investig. 2019;16:99-108.