

INFLUENCE OF PSYCHO-SOCIAL FACTORS ON THE EMERGENCE OF DEPRESSION AND SUICIDAL RISK IN PATIENTS WITH SCHIZOPHRENIA

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SUMMARY

Background: The aim of this study was to investigate the influence of certain psychosocial factors – insight, psycho-education, family and social support, loneliness and social isolation – on the appearance of depression and suicidal risk in schizophrenia.

Subjects and methods: This was a cross-sectional study that comprised hospitalized patients with schizophrenia in the initial remission phase. The assessment of depression and suicidal risk was made by applying a semi-structured psychiatric interview that included scrutinized factors (insight, psycho-education, family and social support, loneliness and social isolation), Positive and Negative Syndrome Scale (PANSS), and Calgary Depression Scale for Schizophrenia (CDSS). On the basis of the assessment results, the sample was divided into two groups: Group of patients with depression and suicidal risk in schizophrenia (N=53) and Control group (N = 159) of patients with schizophrenia without depression and suicidal risk.

Results: In the Group of patients with depression and suicidal risk, compared with the Control group, there was significantly higher frequency of insight in the mental status ($\chi^2=31.736$, $p<0.001$), number of patients without psycho-education ($\chi^2=10.039$, $p=0.002$), deficit of family support ($\chi^2=13.359$, $p=0.001$), deficit of social support ($\chi^2=6.103$, $p=0.047$), loneliness ($\chi^2=6.239$, $p=0.012$), and social isolation ($\chi^2=47.218$, $p<0.001$). Using the model of multi-variant logistic regression, insight, deficit of psycho-education and social isolation ($p<0.05$) were identified as predictors of depression and suicidal risk in schizophrenia.

Conclusions: This study shows that considered psycho-social factors – insight in the mental status, lack of psycho-education, as well as social isolation – could be predictors for appearance of depression and suicidal risk in schizophrenia.

Key words: psychosocial factors - depression in schizophrenia - suicidal risk - schizophrenia

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INTRODUCTION

Modern concept of schizophrenia including five-dimension model encompasses three groups of symptoms, i.e. dimensions: 1) positive symptoms, 2) negative symptoms, 3) cognitive symptoms, 4) aggressiveness/impulsiveness, and 5) depressiveness/anxiety (Paunović 2004). According to this model, depression in schizophrenia can be seen as integral part of disorder itself, or one of its dimensions. On the other hand, depression in schizophrenia can also be seen as a reaction to disorder that appears in patients with better insight in the mental status and internalization of stigma (Jašović-Gašić 1997). Emergence of depression in schizophrenia also entails a suicidal risk. Approximately 25% of patients with schizophrenia have at least one suicide attempt during lifetime, while 9-13% commit suicide (Shrivastava et al. 2010).

The concept of cognitive insight has been introduced in order to describe mental capacities of psychotic patients to distance themselves from their psychotic

experiences (Riggs et al. 2012). Loneliness and social isolation in patients with schizophrenic disorder are bad prognostic signs. The findings of some studies speak in favor of the fact that along with the work on better pharmacotherapeutic compliance and re-socialization, an integral treatment of both depression and suicidal risk in schizophrenia is obligatory (Avgustin 2009, Valencia et al. 2013, Hode 2013, Lysaker et al. 2013).

The aim of the study was to explore the influence of certain psychosocial factors – insight, psycho-education, family and social support, loneliness and social isolation – on emergence of depression and suicidal risk in schizophrenia.

SUBJECTS AND METHODS

This was a cross-sectional study. The sample included patients of both genders with schizophrenia (F20), diagnosed by the ICD-10 classification criteria (WHO 1992). Patients were in the initial remission phase, hospitalized for psychiatric treatment in the

Clinic for Mental Disorders “Dr Laza Lazarević” in Belgrade, during 2013. The study was approved by Ethics Committee of the Clinic where it was carried out, and all patients signed informed consent. To objectively assess actual severity of disorder, the Clinical Global Impression Scale – Severity Subscale – CGI-S was used (Guy 2000). In this study, the referent score was 3 or less (3 – mildly ill, 2 – borderline mentally ill, 1 – normal, not at all ill). The age span of the study subjects was 18–60 years. The study exclusion criteria were comorbidity with severe 1) neurological disease, and 2) somatic disease.

The Positive and Negative Syndrome Scale – PANSS (Kay et al. 1989) was used in order to objectively assess severity and structure of the clinical presentation of schizophrenia. Reference values in this study were from 4 – mild, to 7 – extreme, for the following items: G3 – guilt feelings, G6 – depression, and G16 – active social avoidance (assessment of depressive symptoms in schizophrenia); item G12 – lack of judgment and insight (reference values from 1 – non present, to 5 – moderate severe) was used for assessment of the insight in the mental status.

The Calgary Depression Scale for schizophrenia – CDSS was instrument also used in the study. This scale is specific for depression in schizophrenia (Addington et al. 1994). The score on this scale of 6 points or more refers to clinically severe depression in schizophrenia. Based on the results on CDSS scale for assessment of depression and suicidal risk in schizophrenic patients, the sample was divided in two groups: Group of patients with depression and suicidal risk in schizophrenia (CDSS score 6 points or more), $N = 53$, and Control group – patients with diagnosed schizophrenia without depression and suicidal risk (CDSS score less than 6 points), $N=159$. Suicidal risk was estimated based on 8 CDD items (Mild suicidal risk – suicidal ideation; moderate suicidal risk – suicidal ideation with planning without attempt; clear suicidal risk – suicide attempt). After that, both groups of patients were subjected to semi-structured interview, which included scrutinized psychosocial factors: insight, psycho-education, family and social supports, loneliness and social isolation.

Statistical Analyses

The descriptive statistics, including numbers and percentages of categorical variables were used to characterize the study sample. Univariate association between depression and suicidal risk within dependent variables was evaluated using Pearson’s chi-square tests. Multivariate logistic regression models were implemented in order to determine predictors of depression and suicidal risk as dependent variable, with insight, psycho-education, family support, social support, loneliness and social isolation as independent variables. Statistical analyses were performed using SPSS for Windows, version 21. In all the analyses, the significance level was set at 0.05.

RESULTS

In the Group of patients with depression and suicidal risk in schizophrenia, compared with the Control group, the number of patients with insight in the mental status was of significantly higher frequency ($\chi^2=31.736$, $p<0,001$). Total insight in the mental status was detected in 66% of the Group of patients with depression and suicidal risk in schizophrenia, while in the Control group it was found in 25% only.

The number of patients who went through psycho-education was significantly lower in the Group of patients with depression and suicidal risk in schizophrenia than in the Control group ($\chi^2=10.039$, $p=0.002$). In the Group of patients with depression and suicidal risk in schizophrenia 79% of patients have not gone through psycho-education.

Lack of family support was significantly higher in the Group of patients with depression and suicidal risk in schizophrenia than in the Control group ($\chi^2=13.359$, $p=0.001$). Family support deficit was present in 62% of the Group of patients with depression and suicidal risk in schizophrenia and in 36% of the Control group patients, respectively.

Lack of social support was also significantly higher in the Group of patients with depression and suicidal risk in schizophrenia than in the Control group ($\chi^2=6.103$, $p=0.047$). Deficit of social support was detected in 85% of patients of the Group of patients with depression and suicidal risk in schizophrenia.

Loneliness was significantly more frequent in the Group of patients with depression and suicidal risk in schizophrenia than in the Control group ($\chi^2=6.239$, $p=0.012$). Loneliness was present in the 23% of the Group of patients with depression and suicidal risk in schizophrenia, and in 9% of the Control group patients.

In the Group of patients with depression and suicidal risk in schizophrenia, social isolation was significantly more present than in the Control group ($\chi^2=47.218$, $p<0.001$). Social isolation was detected in 77% of patients of the Group of patients with depression and suicidal risk in schizophrenia and in 25% the Control group patients.

The findings of this study, based on the multi-variant logistic regression, show that insight, lack of psycho-education, and social isolation ($p<0.05$) are predictors of depression and suicidal risk (Table 1, Table 2).

DISCUSSION

The study results suggest that the patients with depression and suicidal risk in schizophrenia have better insight in their mental status than those in the Control group. These findings are in accordance with the results of the most recent studies, in which better insight in disease is seen as a risk factor for occurrence of depression in schizophrenia. Negative estimation of

Table 1. Psycho-social factors in the Group of patients with depression and suicidal risk in schizophrenia and in the Control (without depression and suicidal risk) group

	Group of patients with depression and suicidal risk in schizophrenia n (%)	Control group n (%)	p
N	53	159	
Insight			
Have insight	35 (66)	40 (25)	
Partial insight	18 (34)	95 (60)	<0.001
No insight	0 (0)	24 (15)	
Psycho-education			
Yes	11 (21)	72 (45)	0.002
No	42 (79)	87 (55)	
Family support			
Satisfactory	14 (27)	87 (55)	
Deficient	33 (62)	57 (36)	0.001
Absent	6 (11)	15 (9)	
Social support			
Satisfactory	2 (4)	27 (17)	
Deficient	45 (85)	113 (71)	0.047
Absent	6 (11)	19 (12)	
Loneliness			
Yes	12 (23)	15 (9)	
No	41 (77)	144 (91)	0.012
Social isolation			
Yes	41 (77)	39 (25)	<0.001
No	12 (23)	120 (75)	

Table 2. Predictors of depression and suicidal risk in the Group of patients with depression and suicidal risk in schizophrenia - Multivariate logistic regression model

	B	SE	p	OR (95% CI)
Insight				
Have insight			<i>0.000</i>	
Partial insight	-4,304	0,930	<i>0.000</i>	0.014 (0.002-0.084)
No insight	-23,689	7754,748	0.998	0.000
Psycho- education	-2,829	1,019	<i>0.006</i>	0.059 (0.008-0.435)
Family support				
Satisfactory			0.382	
Deficient	0,504	0,726	0.488	1.655 (0.399-6.865)
Absent	-0,824	1,197	0.491	0.439 (0.042-4.584)
Social support				
Satisfactory			0.223	
Deficient	1,231	0,932	0.187	3.426 (0.551-21.30)
Absent	0,215	1,294	0.868	1.24 (0.098-15.65)
Loneliness	-0,243	0,688	0.724	0.78 (0.203-3.02)
Social isolation	-2,073	0,578	<i><0.001</i>	0.126 (0.04-0.39)

Statistically significant values are in italic

disease with its psychopathological consequences, such as sense of worthlessness and depression, is also associated with elevated suicidal risk (Acosta et al. 2013). Better insight may be desirable only if it appears during the psychotherapeutic process only if there is a professional support and psycho-education of the patient and his family (Aqhababion et al. 2011, Riggs et al.

2012). In that context, the results of the study also imply that, compared with the Control group, the Group of patients with depression and suicidal risk in schizophrenia contained significantly lower number of patients who went through psycho-education.

The Group of patients with depression and suicidal risk in schizophrenia had less family support, in

comparison with the Control group. It is very important to educate the patient's family on adequate expression of emotions, family cohesion, external locus of control, and sociability of family with more democratic family style. To teach how to find sense in the role of caregiver of the patient with depression in schizophrenia is probably even more delicate task. The central point is to find right measure between feeling of love and responsibility. It is necessary that family members accept the dissimilarity of the patient, his needs, as well as uncertainty of the course of illness; and all of that is a psychological process that requires expert assistance (Dadić-Hero et al. 2013, Navidan et al. 2012).

According to the results of the study, loneliness is more frequent in the Group of patients with depression and suicidal risk in schizophrenia. Loneliness can cause depression and suicidal risk if the patient feels lonely, lives alone, has no family or is rejected by family. Sense of loneliness diminishes self-esteem, increases social anxiety and impact of stressful life events and intensifies sense of worthlessness. What especially stands out is association of the sense of worthlessness and suicidal risk (Suttajit & Piakanta 2011).

According to the obtained study results, social support deficit is more frequent in the Group of patients with depression and suicidal risk in schizophrenia than in the Control group. Social support deficit was based both, on the objective observation of the patient's social relations, as well as on his subjective feeling of dissatisfaction with social support. These results confirm importance of psychosocial interventions aiming to give adequate support to lonely patients; but social support is also needed for patients who have family, in order to overcome demoralization and stigmatization (Avgustin 2009).

The findings of the study note that social isolation is significantly more present in patients with depression and suicidal risk in schizophrenia than in those of the Control group. This result can also be interpreted by phenomenology of schizophrenia and depression itself. Patients diagnosed with depression in schizophrenia feel rejected by their community and deprived of their needs; this leads to additional social isolation and creation of a vicious cycle between their perception of surrounding world and behavioral sphere. Stigmatization is also a significant cause of social isolation of these patients. Reflecting social needs of the patient and his family, de-stigmatization programs that bring patient back in social milieu should also encompass development of adequate social networks, jointly with professional support, in order to serve as a support to de-stigmatization. Adequate support of family and society has a huge role, since good compliance with therapy also depends upon it. This means that an integrative pharmacotherapy, psychosocial interventions and rehabilitation are necessary requirements for modern, comprehensive treatment (Charpenter et al. 2009, Krevnbuhol et al. 2010).

There are several limitations that need to be mentioned. Patients included in this study were admitted and treated in a tertiary referral hospital, only. They were in the initial remission phase and it seems that they suffer from more severe disorder than the outpatients. This might make our findings less generalizable to other settings and to overall population of subjects with schizophrenia. Finally, patients with depression and without suicidal risk were not including in the study.

CONCLUSIONS

Psychosocial factors, such as insight in the mental status, deficit of psycho-education, as well as social isolation, appear to be predictors for the occurrence of depression and suicidal risk in schizophrenia. It is necessary to point out that treatment of patients with schizophrenia who have clinically significant depression and suicidal risk should be integral, which implies meticulous choice of pharmacotherapy, psychotherapy and social interventions.

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References

1. Acosta FJ, Aquilar EJ, Cejas MR, Gracia R: Beliefs about illness and their relationship with hopelessness, depression, insight and suicide attempts in schizophrenia. *Psychiatr Danub* 2013; 25:49–54.
2. Addington D, Addington J, Maticka-Tyndale E: Specificity of the Calgary Depression Scale for schizophrenia. *Schizophr Res* 1994; 11:239–244.
3. Avgustin B: Depression in schizophrenia – literature overview. *Psychiatr Danub* 2009; 21 (Suppl 1):93–7.
4. Aghababion V, Auquier P, Baumstarch-Barrau K, Lancon C: Relationship between insight and quality of life among schizophrenic patients. *Encephale* 2011; 37:162–71.
5. Charpenter A, Goudemand M, Thomas P: Therapeutic alliance, a stake in schizophrenia. *Encephale* 2009; 35:80–9.
6. Dadić-Hero E, Ruzić K, Palijan TZ, Graovac M, Siuc-Valković D, Knez R, et al.: Relationship between the course of illness, family history of schizophrenia and family functioning in persons with schizophrenia. *Coll Antropol* 2013; 37:47–55.
7. Guy W: Clinical Global Impression (CGI) Scale. Modified from: Rush J, et al.: *Psychiatric Measures*, APA, Washington DC, 2000.
8. Hode Y: Psychoeducation of patients and their family members during psychosis. *Encephale* 2013; 39:S110–4.
9. Jašović-Gašić M (ed): *Depresija u shizofreniji*, Medicinski fakultet Univerziteta u Beogradu, Beograd, 1997.
10. Kay SR, Opler LA, Lindenmayer JP: The Positive and Negative Syndrome Scale (PANSS): rationale and standardization. *Br J Psychiatry* 1989; Suppl (7):59–67.

11. Krevenhuhl J, Buchanon RW, Dickorson FB, Dixon LB: *The Schizophrenia Patient Outcomes Research Team (PORT): updated treatment recommendations 2009*. *Schizophr Bull* 2010; 36:94–103.
12. Langdon R, Still M, Connors MH, Ward PB, Catts SV: *Attributional biases, paranoia, and depression in early psychosis*. *Br J Clin Psychol* 2013; 52:408-23.
13. Lysaker PH, Vohs J, Hillis JD, Kukla M, Popolo R, Salvatore G, Dimaggio G: *Poor insight into schizophrenia: contributing factors, consequences and emerging treatment approaches*. *Expert Rev Neurother* 2013; 13:785–93.
14. Navidian A, Kermansaravi F, Riqi SN: *The effectiveness of a group psycho-educational program on family caregiver burden of patients with mental disorders*. *BMC Res Notes* 2012; 5:399.
15. Paunovic VR (ed): *Shizofrenija na razmeđu milenijuma*. Medicinski fakultet Univerziteta u Beogradu, Beograd, 2004.
16. Riggs SE, Grant PM, Perivoliotis D, Beck AT: *Assessment of cognitive insight: a qualitative review*. *Schizophr Bull* 2012; 38:338–50.
17. Shrivastava A, Johnston ME, Shah N, Innamorati M, Stitt I, Thakar M, et al.: *Persistent suicide risk in clinically improved schizophrenia patients: challenge of the suicidal dimension*. *Neuropsychiatr Dis Treat* 2010; 6:633–8.
18. Suttajit S & Piakanta S: *Prevalence of and factors associated with depression in patients with schizophrenia in a University hospital: a post-hoc analysis*. *CMJ* 2011; 50:115–121.
19. Valencia M, Fresan A, Jurez F, Escamilla R, Saracco R: *The beneficial effects of combining pharmacological and psychosocial treatment on remission and functional outcome in outpatients with schizophrenia*. *J Psychiatr Res* 2013; 47:1886–92.
20. *World Health Organization: The ICD-10 classification of mental and behavioral disorders: Clinical Descriptions and Diagnostic Guidelines*. World Health Organization, Geneva, 1992.

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