

PSYCHOPATHOLOGICAL CHARACTERISTICS OF PATIENTS WITH FIRST-EPISODE PSYCHOSIS AND CHRONIC SCHIZOPHRENIA: A DESCRIPTIVE COMPARISON

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SUMMARY

Only few studies have compared the psychopathological features in first episode psychosis (FEP) and chronic schizophrenia (CS) patients. The aim of our study was to compare sociodemographic and clinical aspects of FEP and CS inpatients using the Positive and Negative Syndrome Scale (PANSS) and the Brief Psychiatric Rating Scale (BPRS) in order to better characterize FEP. We did not find significant socio-demographic differences between the two groups apart from age and nationality. About PANSS we found that conceptual disorganization, poor rapport and lack of insight items scores were significantly higher in patients with FEP. Related to BPRS the items of somatic concerns, grandiosity and motor hyperactivity were significantly higher in the CS group; uncooperativeness was significantly higher in FEP group. Our study offers a characterization of FEP patients that confirms evidence and adds some information from the current literature. FEP patients seem to be more uncooperative with a worse interpersonal empathy and insight into the illness than CS patients; this could reduce their compliance with the treatment.

Key words: first-episode psychosis - chronic schizophrenia – PANSS – BPRS – insight – uncooperativeness - poor rapport - conceptual disorganization - grandiosity

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INTRODUCTION

Schizophrenia and related psychotic disorders are disabling mental illnesses with high financial and social burden worldwide (Altamura 2014). Delusions, hallucinations, disorganized thinking (speech), grossly disorganized or abnormal motor behaviour (including catatonia) and negative symptoms are the domains shared by schizophrenia spectrum disorders (APA 2014). The variety of psychopathological features make these pathologies complex and heterogeneous (van Os 2009). Onset can be acute or insidious; indeed psychotic symptoms can appear suddenly or along several months or years (Häfner 1999) with difficulties in the diagnosis and delayed treatments (Subramaniam 2014, Gelber 2003). During the decades, diagnoses of psychotic disorders usually made for patients at their first episode psychosis change and turn into schizophrenia at later states of the disorders (Kampman 2004, Chen 1996). Moreover during the last decades, FEP research has been using clinical scales validated in chronic schizophrenia patients (CS) (Fulford 2014) trying to better characterize this phase of the disorder. However homogeneous criteria for FEP are not provided yet (Zipursky 2012) and only few studies compared psychopathological features in both groups (Reininghaus 2012).

The aim of our study is to assess FEP and CS inpatients using Positive and Negative Syndrome Scale (PANSS) and Brief Psychiatric Rating Scale (BPRS) and compare sociodemographic and clinical aspects in

order to investigate psychopathological features characterizing FEP.

This could help in elucidating the early course of schizophrenia spectrum disorders, reducing diagnostic and therapeutic uncertainty that burdens families, patients and health-care professionals. According to the existing literature, we expect to find a lower prevalence of negative symptoms between FEP patients, since they are supposed to develop later in the course of the illness (Moller 2000) and a minor insight in the same group, since it seems to be poorer in patients at their first hospitalisation (Thomson 2001).

METHODS

Setting and sample

The present study was conducted in the Psychiatric Inpatient Unit of University / General Hospital Santa Maria della Misericordia, Perugia, Umbria, Italy. The sample included patients with a diagnosis of Schizophrenia spectrum disorders admitted from January 2015 to April 2016. We divided participants into two groups; the FEP group inclusion criteria were: (1) first admission due to psychotic symptoms, (2) no psychopharmacological treatment in the last 6 months. Patients with diagnosis of schizophrenia and related psychotic disorders who did not meet criteria for FEP were included in the CS group. We excluded patients with substance dependence, mental retardation or other medical illness confounding diagnosis.

Procedures

In this comparative study we carried out a retrospective review of patients' medical records; we extracted sociodemographic and clinical data from the case notes. Patients were assessed using PANSS and BPRS (Italian version of BPRS 4.0); the scales were proposed to the whole sample, but some patients refused to undergo them. Despite not administering the scales, we included these patients in the sample anyway for socio-demographic analysis. Data were included in a structured dataset. During their hospitalization, all patients gave their informed consent for the participation

in clinical studies by a specific form provided in the medical chart.

Analyses

Statistical analysis consisted in descriptive statistics, used to summarize qualitative and quantitative variables first; afterwards, bivariate analyses were conducted using Chi-square test and t-test for independent samples in order to test significant differences between qualitative variables and means, respectively (level of significance $p < 0.1$). IBM Software Statistic Package for Social Science (SPSS) 20.0 was used for all analyses.

Table 1. Sociodemographic Correlates of First Episode Psychosis versus Chronic Schizophrenia patients, Bivariate Tests, $n=147$

Variable	FEP (n=31)	CS (n=116)	Test Statistics
Male gender (86/147; 58.5%)	19 (61.3%)	67 (57.8%)	$\chi^2=0.13$, $df=1$, $p=0.72$
Age, in years	36.7 \pm 16.02	44.7 \pm 12.32	$t=-2.97$, $df=145$, $p=0.003$
Marital Status			
Currently married (18/147; 12.2%)	6 (19.4%)	12 (10.3%)	$\chi^2=1.85$, $df=1$, $p=0.17$
Not married	25 (80.6%)	104 (89.7%)	
Foreign citizens (31/147; 21.1%)	14 (45.2%)	17 (14.7%)	$\chi^2=12.68$, $df=1$, $p<0.001$
Nationality			
Italian	17 (54.8%)	99 (85.3%)	
African	7 (22.6%)	9 (7.8%)	
Other countries	7 (22.6%)	8 (6.9%)	

Table 2. Clinical Correlates of First Episode Psychosis versus Chronic Schizophrenia patients, Bivariate Tests, $n=147$

Variable	FEP (n=31)	CS(n=116)	Test Statistics
Admission			
Voluntarily (81/147; 54.1%)	14 (45.2%)	67 (57.8%)	$\chi^2=1.58$, $df=1$, $p=0.21$
Involuntarily	17 (54.8%)	49 (42.2%)	
Reason of Hospitalization			
Psychomotor agitation	11 (35.5%)	18 (15.5%)	$\chi^2=14.82$, $df=12$, $p=0.25$
Acute psychosis	11 (35.5%)	48 (41.4%)	
Behavioural disturbances	5 (16.1%)	21 (18.1%)	
Suicide attempt	3 (9.7%)	8 (6.9%)	
Mixed state	0 (0.0%)	1 (0.9%)	
Hypomania/mania	0 (0.0%)	3 (2.6%)	
Depressed mood	0 (0.0%)	1 (0.9%)	
Catatonia	1 (3.2%)	0 (0.0%)	
Drugs change/adequation	0 (0.0%)	7 (6.0%)	
Social recovery	0 (0.0%)	1 (0.9%)	
Anxiety	0 (0.0%)	1 (0.9%)	
Low compliance in treatment	0 (0.0%)	6 (5.2%)	
Discharge diagnosis			
Schizophrenia	7 (22.6%)	58 (50%)	
Schizoaffective disorder, bipolar type	3 (9.7%)	35 (30.2%)	
Schizoaffective disorder, depressive type	1 (3.2%)	3 (2.6%)	
Delusional disorder	3 (9.7%)	13 (11.2%)	
Brief psychotic disorder	7 (22.6%)	4 (3.4%)	
Unspecified Schizophrenia spectrum and other psychotic disorder	10 (32.3%)	3 (2.6%)	
Psychiatric comorbidity	6 (19.4%)	14 (12.1%)	$\chi^2=1.10$, $df=1$, $p=0.29$

RESULTS

Prevalence of First Episode Psychosis and Chronic Schizophrenia

Patients with FEP and CS admitted to Psychiatric Inpatient Unit of University / General Hospital Santa Maria della Misericordia, Perugia, Umbria, Italy, from January 2015 to April 2016 were a total of 147. Of these 31 (21.1%) met the inclusion criteria for FEP, whereas 116 (78.9%) were included in the CS group.

Socio-demographic characteristics

Socio-demographic characteristics of the patients are presented in Table 1. The whole sample included 147 psychiatric inpatients. In the FEP group, 19 patients (61.3%) were male, 12 (38.7%) were female; in the CS group, 67 (57.8%) were male and 49 (42.2%) were female. Patients were aged between 18 and 77; mean age in FEP group was 36.8, in CS 44.7. In relation to marital status, 6 patients in FEP group (19.4%) were currently married, whereas in CS group they were 12 (10.3%). About nationality, in FEP group 14 patients (45.2%) came from another country, while in CS they were 17 (14.7%). Patients coming from a foreign country were mostly from Africa, 7 (22.6%) in FEP and 9 (7.8%) in CS group. The number of foreign patients in FEP group was significantly higher than in the CS ($p < 0.001$). The two groups differed significantly in age as well ($p = 0.003$). No other statistically significant differences in socio-demographic characteristics were found.

Clinical features

Clinical characteristics of the patients are presented in Table 2. Involuntary admitted patients were 17 (54.8%) in FEP group, 49 (42.2%) in CS group. Most

common reasons of hospitalisation were agitation and acute psychosis (both 35.5%) for the FEP group, acute psychosis (41.4%) for the CS group. Most detailed information about the reason of hospitalization and discharge diagnosis are provided in Table 2. No significant differences in clinical features were found between the two groups.

Positive and Negative Syndrome Scale (PANSS)

The scale was administered to 17 (54.8%) FEP and to 84 (72.4%) CS patients. PANSS medium total score was 92.9 in FEP, 86.2 in CS. We did not find significant differences in PANSS total score and in positive, negative and general psychopathology subscales between the two groups. Items of conceptual disorganization ($p = 0.069$), poor rapport ($p = 0.018$) and lack of insight ($p = 0.081$) were scored significantly higher in patients with FEP (see Table 3).

Brief Psychiatric Rating Scale (BPRS)

The scale was administered to 26 (83.9%) patients in the FEP group and to 101 (87.1%) in the CS group.

Items of somatic concerns ($p = 0.062$), grandiosity ($p = 0.003$) and motor hyperactivity ($p = 0.067$) were significantly higher in CS group; uncooperativeness ($p = 0.013$) was found to be significantly higher in FEP group (see Table 4).

DISCUSSION

This study analyzed socio-demographic, clinical and psychopathological differences between a group of FEP patients and a group of CS patients admitted to a psychiatric inpatient unit of an Italian hospital during an 18 months period of time. Our hypotheses were in part confirmed by the obtained results.

Table 3. PANSS significant items medium scores of FEP versus CS, t-Student Tests, n=101

Variable	FEP (n=17)	CS (n=84)	t	t-Test df	p
Conceptual disorganisation	3.8±1.3	3.1±1.5	1.840	99	0.069
Poor rapport	2.9±1.4	2.2±1.1	2.400	99	0.018
Lack of judgement&insight	5.2±1.2	4.6±1.4	1.763	99	0.081
Positive Scale	22.6±6.4	21.8±7	0.463	99	0.644
Negative Scale	20.9±6.1	18.9±5.2	1.453	99	0.150
General Psychopathology Scale	49.3±8.3	45.4±9.6	1.565	99	0.121
PANSS total score	92.9±14.7	86.2±17.4	1.486	99	0.135

Table 4. BPRS significant items medium scores of FEP versus CS, t-Student Tests, n=127

Variable	FEP (n=26)	CS (n=101)	t	t-Test df	p
Uncooperativeness	3.7±1.8	2.7±1.8	2.511	125	0.013
Grandiosity	1.2±1.0	2.2±1.6	-2.984	125	0.003
Somatic concerns	1.5±1.6	2.2±1.7	-2.008	125	0.047
Motor hiperactivity	1.3±0.8	1.9±1.4	-2.175	125	0.032

As we expected, we found an older age in the CS group. The number of patients coming from another country (mostly from Africa) was significantly higher in the FEP group (see Table 1); this finding can be in part explained by the refugee crisis, with more of 320.000 immigrants arriving in Italy from the sea during the years 2014-2015 (ISMU 2016). Furthermore, several studies showed higher frequency of schizophrenia among immigrants, especially in asylum-seekers (Bhugra 2000) and refugees (Lie 2002), compared to native populations (Claassen 2015).

We did not find significant differences in clinical features between FEP and CS groups (see Table 2).

The two groups did not differ significantly in PANSS total score; this could be explained by the fact that patients in both groups were hospitalized, presenting acute phases of their illnesses. FEP and CS groups had similar positive, negative and general psychopathology subscales PANSS scores. This result is different from the expected for what concerns negative symptoms, which according to some authors develop later in the course of the pathology and are not usually seen in first episodes of psychosis (Moller 2000); they can increase as side effects of antipsychotics drugs and because of the low effectiveness of these drugs in their treatment (Kalisz 2016). A twenty-year follow-up study by Strauss et al. found that primary negative symptoms had a low prevalence during FEP (Strauss 2010). However, findings about negative syndrome in FEP are not homogeneous in the literature; during the last years, researchers tried to assess those symptoms in patients at their first hospitalisation due to psychotic features and during the following years; some authors found that negative symptoms' prevalence decreased during first years of illness after FEP and that their prevalence during the following years was not characterized by stability (Galderisi 2013, Kalisz 2016). Moreover, instruments for evaluation of negative symptoms change within the different studies, so results are not fully comparable (Kalisz 2016). These considerations could partially explain the finding of no significant differences in negative symptoms within FEP and CS patients. FEP patients differed from CS patients on several psychopathological characteristics, measured by PANSS and BPRS. We will discuss the items scored higher in FEP patients, trying to provide a better description of the group. About conceptual disorganization, this belongs to the "cognitive disorganization" factor of the PANSS, which represents one of the scale's main psychopathological domains in addition to positive, negative and affective ones (Good 2004). Along with conceptual disorganization, the items difficulty in abstract thinking, mannerisms and posturing, disorientation, stereotyped thinking, preoccupation and poor attention are considered to be informative about the disorganization factor (Good 2004, Reininghaus 2012). The disorganization factor has not been largely studied in first

episode psychosis samples (Good 2004); this could represent the reason why our findings do not seem to be consistent with the literature. Nevertheless, according to some authors, conceptual disorganization seem to be one of the first clinical features supporting the identification of the illness and it is also associated with a shorter duration of untreated psychosis (DUP); this could be consistent with the significantly higher prevalence of this clinical feature in inpatients at their first episode of psychosis, who are usually drug-naive (Moller 2000).

Poor insight is considered to be a common characteristic of schizophrenia (De Hert 2009). It has been defined as the lack of self-awareness of suffering of a mental disorder, of the need for treatment and the ability to recognize mental events such as delusions and hallucinations as pathological (McGorry 1999, Tirupati 2007). It is considered as a multidimensional and continuous construct which has different degrees and can be related to the severity of psychotic psychopathology (McGorry 1999, Koren 2013). Some authors observed improvement of insight from admission to discharge from hospital (Kempt 1995, Weiler 2000). Instead Thompson et al. found that first-episode patients with a diagnosis of schizophrenia spectrum disorder had less insight into illness than multi-episode patients and that awareness of delusions or hallucinations was not related to the severity of symptoms (Thompson 2001). These results confirm our observation of major lack of insight in FEP patients than CS patients who do not differ in severity of positive, negative or general psychopathology symptoms. About the PANSS item "poor rapport", this is defined as "lack of interpersonal empathy, openness in conversation, and sense of closeness, interest, or involvement with the interviewer" (Kay 1987). Some authors hypothesize the association of poor rapport and poor therapeutic alliance (Rihele 2015); this has been confirmed by some studies (Lavelle 2015, Ramseyer 2011). Moreover therapeutic alliance seems to be directly associated with insight (Lysaker 2011, Barrowclough 2010).

Related to BPRS, the item uncooperativeness was significantly higher in patients with FEP. Siu et al. found that CS patients with poor insight in addition to a higher subjective life satisfaction were most likely to be uncooperative and non compliant with treatment (Siu 2015). This suggests that lack of insight and uncooperativeness are related; anyway, to our knowledge no studies have examined this feature by comparing FEP and CS patients.

CONCLUSION

Our study offers a characterization of FEP patients, whose differentiation from CS seem to be made especially by some psychopathological features determined by common-use clinical scales. FEP patients show

greater uncooperativeness, with a worse interpersonal empathy and insight into the illness than CS patients; this could be related to a lower compliance to treatment.

The present study shows some limitations. First of all, the analyzed sample is small and it should be extended in order to improve the statistical power of our analyses. Secondly, we conducted a retrospective study by review of clinical records; a prospective study would have probably allowed us to better recruit patients and address our goals. In addition, we did not use standard structured or semi-structured interviews for making the diagnosis of schizophrenia and related disorders; anyway, the diagnosis were always made by a senior psychiatrist of the Unit. In the end, we did not consider duration of untreated psychosis in the study, which should help us to stratify subpopulations of patients at their first episode psychosis. Additional research is needed to clarify the early course of schizophrenia spectrum disorders in order to recognize the onset of the illness and start the treatment as soon as possible.

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