Schizophrenia: Social Cognition as a Predictive Factor of Social Performance?

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Objectives: Schizophrenia is one of the conditions that affect social cognition and social functioning. These aspects are particularly important when assessing the prognosis and evolution of the disease. The main objective of the present study was to examine the role of social cognition for social functioning. We hypothesized that social cognition influences directly social functioning in schizophrenia.
Material and method: We assessed 31 subjects who have been admitted for the first time to the Timişoara Psychiatric Clinic between 1998 and 2007 and who have had within the last five years a stable diagnosis of schizophrenia according to ICD-10. The following parameters were analyzed: socio-demographic (gender, age of onset, level of schooling, marital and professional status), clinical symptoms (Brief Psychiatric Rating Scale), social cognition (Social Cognition Rating Scale for Psychosis) and social functioning (Social Functioning Scale).
Results: The analysis of socio-demographic features show values similar to those cited in the international literature (gender distribution approximately equal, mean age of onset of 26.2 years, mean level of schooling of 11.77; 22.6% were married and all of the subjects were retired). BPRS scores indicated average values. Most of the subjects also had a social cognition and social functioning deficit. There is a direct correlation between social cognition and social functioning (r=0.46).
Conclusions: The deficit of social cognition in schizophrenia generates a decrease of social functioning.

Keywords: schizophrenia, social cognition, social performance, predictive factor

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Introduction

Schizophrenia is a severe psychiatric illness that affects social performance in daily life situations, commonly affected domains being self-care, work performance, and social relationships. These domains are usually summarized by the term social functioning or social performance. Social functioning is one of the important features involved in the assessment of the evolution and the prognosis of schizophrenia.

Social functioning is influenced by several factors: socio-demographic aspects, clinical symptoms, medical therapy. More recently, neurocognition and social cognition have also been added to these features. Neurocognition and social cognition differ in that the latter is a mediator between neurocognition and social functioning.

Social cognition consists of a mental operation involving the capacity to perceive the intention and disposition of others in a certain context. This includes abilities in emotional and social perception, attribution of causality and empathy, and reflects the influence of the social context [1,2]. It has been several times demonstrated that in schizophrenia there is a direct correlation between social cognition (emotion perception and theory of mind) and social functioning, meaning that a severe social cognition deficit is associated with a lower social functioning [3].

The main objective of the present study is to examine the role of social cognition for social functioning. We hypothesized that social cognition has a direct influence on social functioning in schizophrenia.

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Material and methods

1. Subjects and sample features

Subjects in the current study were recruited from patients admitted to the Psychiatric Clinic of Timişoara between 1998 and 2007 for a first psychotic episode. All of the subjects have had a stable diagnosis of schizophrenia within the last five years, according to ICD-10. Due to the low number of subjects, the selection was based on inclusion/exclusion criteria, without the use of statistical methods.

Inclusion criteria

1. Patient admitted to the Psychiatric Clinic of Timişoara
2. First psychotic episode between 1998 and 2007
3. Current diagnosis is schizophrenia, according to ICD-10.
4. Out-patients in the Clinical Ambulatory of Timişoara.
5. Subjects agree to participate in the study.

Exclusion criteria

1. Presence of personality disorders or mental retardation
2. Presence of a disease caused by drug use or an organic disorder

We mention that all the subjects have been assessed in clinical remission and it was an incomplete remission for most of the cases.

2. Assessments

2.1. Clinical symptoms measures

The expanded version of the Brief Psychiatric Rating Scale (BPRS) was used to assess the current level of symptoms of the subjects. The BPRS contains 24 items, which cover a wide-range of psychiatric symptoms. The BPRS is rated on a 1 to 7 Likert scale, where 1 indicates no pathology and 7 indicates a severe pathology. For this study the BPRS total score for each group was examined.

2.2. Social functioning

Social functioning was assessed with the Social Functioning Scale (SFS). The scale is a measure for the social functioning of subjects with schizophrenia and has good psychometric properties. The social functioning scale consists of seven sub scales: social engagement/withdrawal (time spent alone, initiation of conversations, and social avoidance), interpersonal behavior (number of friends, whether the subject has a partner, and quality of communication), independence and competence (ability to perform skills necessary for independent living), independence and performance (performance of skills necessary for independent living), recreation (engagement in a range of common hobbies, interests etc.), pro-social behaviour (engagement in a range of common social activities), and employment (engagement in structured employment or structured program of daily activity).

2.3. Social cognition

The Social Cognition Rating Scale for Psychosis (SCRSP) was applied for the evaluation of social cognition. This scale is composed of 15 items which evaluate basic cognitive functions and social cognition. Every item of the scale, rated by the patient, has 5 degrees: 1 – never, 2 – rarely, 3 – usually, 4 – often, 5 – frequently. The first 7 items rate basic cognitive functions and the last 8 items evaluate social cognition.

2.3. Analyzed parameters

1. socio-demographic data: gender, the average age at onset and educational, marital and professional status
2. clinical data: current score of BPRS
3. social functioning: SFS score
4. social cognition: SCRSP score

Due to the low number of subjects, no statistical processing of data was carried out, but only a simple results analysis.

Results

1.Socio-demographic characteristics of the sample

The number of subjects included in this study was 31 (16 female and 15 male). The average age of onset was 26.2 years (SD 7.02). The mean level of education was 11.77 years (SD 1.35). In terms of marital status 22.6% of the schizophrenic subjects were married and regarding professional status all the subjects were retired at the time of the study.

Table I. Assessment of social functioning

Social functioning scale	Scale range	Mean	SD
Social engagement	0–15	8.76	2.25
Interpersonal communication	0–9	6.25	1.71
Independence-performance	0–39	28.63	6.02
Recreation	0–45	21.26	4.81
Social activities	0–69	39.51	9.17
Independence-competence	0–39	23.45	5.23
Occupation	0–10	1.64	0.34
Total score	0–226	129.5	29.53

2. Clinical aspects

The average score obtained using the BPRS scale was 37.4. The obtained scores are low due to the fact that all subjects were in remission.

3. Social functioning scale (SFS)

Social functioning scale revealed relatively low values meaning a poor social functioning.

4. Social cognition evaluation

The application of Social Cognition Rating Scale for Psychosis revealed these high values: 64.8% of the subjects obtained a score between 50–75 points and the other 35.2% a score between 25–50 points. These scores show that practically all subjects have an impairment of social cognition.

5. The correlation between social cognition and social functioning

The correlation between the values obtained for the two tests show that high values on the SCRSP scale correlate directly with low values on the SFS scale (r=0.46).

Discussions

Socio-demographic features revealed that the number of male and female subjects are almost equal, but this has no clinical significance due to the reduced number of sub-

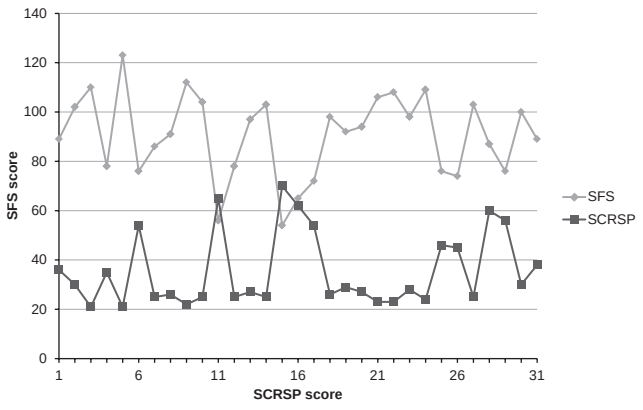

Fig. 1. SFS/SCRSP correlation

jects in both samples [4]. In general, socio-demographic features are similar to those cited in the international literature: young age of onset, reduced level of schooling and a reduced number of unmarried subjects compared to the married ones [5,6,7]. There is a difference regarding professional activity as we compare it to international studies, because all of our subjects were retired. This aspect needs to be pointed out and we need to keep also into account the socio-economic status of our country [8].

The assessment of clinical symptoms shows relatively low values because the subjects have been assessed during remission. We have to mention that the subjects entered into this study were not in a complete remission at the time of assessment. When assessing social cognition and social functioning, it is important that the subjects are in remission (even if it is not a complete remission), because these features are influenced by clinical symptoms. There are studies suggesting that the social cognition deficit is also present in the remission period [9].

There has been a growing interest over the years for the study of social cognition impairments in schizophrenia. These studies analyzed social cognition in individuals at ultra-high risk to develop psychosis (especially schizophrenia), the first psychotic episode and chronic schizophrenia [10,11]. The study sample we have chosen includes subjects that fit the chronic schizophrenia diagnosis. As expected, the assessment of social cognition outlined a deficit in most of the subjects. This deficit varied from moderate to severe.

Over the time, researchers have tried to determine if factors such as neurocognition, social cognition, premorbid functioning or gender can influence social functioning. The models described for social functioning are based on the impairment of the neurocognitive functioning and the mediator between these elements is social cognition. Social cognition is a part of cognition that enables the individual to adapt to group or social life. Impairments in social cognition result in difficulties in the social functioning of individuals with schizophrenia. Social functioning assessment revealed a decrease in all the SFS items, especially in recreation and professional functioning features. The correlation between social cognition and social functioning show a deficit of social cognition correlated with a low social functioning.

It is important to assess social cognition, because currently there are two different types of interventions that are centered on its development. The first, called "target intervention", seeks to stimulate only one specific domain of social cognition. The second, named "broad-based interventions", consists of more eclectic and complex programs, which incorporate multiple domains [12]. With the help of this practical intervention we can achieve a growth of the social functioning in patients with schizophrenia. This is an important aspect that concerns the entire psychotic pathology.

The limitations of this study are represented by the small number of subjects, the use of a single scale to assess social cognition (although it includes different components) and the evaluation of social functioning was realized only based on the beliefs of the patient without having the opinion of another member of the family.

Conclusions

1. Our results suggest that most of the subjects with a schizophrenic pathology have a deficit in social cognition and social functioning.
2. Social cognition deficit correlates directly with a lower social performance.

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