

## CO-MORBID SOCIAL PHOBIA IN SCHIZOPHRENIA

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**ABSTRACT**

**Background:** The co-morbid occurrence of anxiety disorders and schizophrenia has recently begun to be investigated. Social anxiety may be especially important to diagnose and manage among patients with schizophrenia.

**Aim:** To investigate the prevalence and correlates of social phobia in patients with schizophrenia.

**Method:** Diagnosis of schizophrenia and schizoaffective disorders as well as co-morbid anxiety disorders was established according to DSM-IV and the Structured Clinical Interview for Diagnosis (SCID-P Hebrew version). Severity of psychotic symptoms and social anxiety symptoms was assessed with the Positive and Negative Symptom Scale (PANSS) and the Liebowitz Social Anxiety Scale (LSAS).

**Results:** The cohort studied included 117 patients with schizophrenia. Thirteen patients were diagnosed as suffering from co-morbid social phobia (11%). There was a tendency for patients with co-morbid social phobia to have higher severity PANSS total score. There was a significant correlation between the score of the LSAS 'fear' and PANSS positive subscales. Avoidance scores were higher among patients with negative signs.

**Conclusion:** Co-morbidity of schizophrenia and social anxiety disorder is not rare among patients with schizophrenia. Treatment implications need be further investigated.

Key words: social anxiety, schizophrenia, fear, co-morbidity

**INTRODUCTION**

The literature concerning co-morbidity of psychiatric disorders with schizophrenia deals mostly with alcohol and drug abuse as well as post-psychotic depression, while other Axis I disorders are far less investigated (Cassano *et al.*, 1998). One of the reasons for this paucity of data may be the difficulties inherent in the validation of additional diagnoses in patients suffering from either acute psychotic state or pronounced negative symptomatology. Negative symptoms may be confounded with depressive symptomatology, akathisia with anxiety, psychotic withdrawal with phobia and obsessive rituals with mannerism.

Epidemiological studies have shown that psychiatric co-morbidity is frequent in patients suffering primarily from psychotic disorders. Kendler *et al.* (1996) performed the national co-morbidity survey in the USA and found that among subjects diagnosed as suffering from non-affective psychosis, the lifetime co-morbidity of any anxiety disorder is 71%. Cassano *et al.* (1998) found that the total lifetime frequency of psychiatric co-morbidity in hospitalized schizophrenia spectrum disorder patients was 58% in this population. Panic disorder and obsessive-compulsive disorder (OCD) were the most frequent (24%) co-morbid conditions, while the frequency of social phobia was 18% and that of simple phobia was 7.3% among the subjects examined (Cassano *et al.*, 1998).

Anxiety disorders and psychoses have been traditionally thought of as opposite poles in psychiatric classification. The advent of better investigative tools, treatment targeted at specific anxiety disorders and the unmasking of the impact of co-morbidity on outcome, suicidality and quality of life of schizophrenia patients all emphasized the need to study co-morbid anxiety disorders in this population (Braga *et al.*, 2005). Pilkonis *et al.* (1980) reported that schizophrenia patients express nervousness and anxiety during social interactions. Subsequently, Penn *et al.* (1994) suggested that social anxiety is more frequent in schizophrenia patients than in non-psychiatric controls. The relationship between negative symptoms and social dysfunction with special emphasis on apathy, affective blunting and social withdrawal have been correlated with diminished quality of life (Packer *et al.*, 1997). Davidson *et al.* (2000) showed that impaired social functioning might even predict the future development of schizophrenia. Moreover, Goldberg and Schmidt (2001) showed significantly more shyness, lower sociability and more history of childhood social problems in schizophrenia patients compared to controls, concluding that shyness traits, impaired sociability and more childhood social problems could be predictors of schizophrenia.

Regardless of the hypothesis adopted, the rates of social phobia among schizophrenia patients are reported to be in the range of 15–36% (Cassano *et al.*, 1998; Cosoff & Hafner, 1998; Pallanti *et al.*, 2004). These significant rates warrant further investigation as to their association with positive or negative symptoms. Thus, the aim of the present study was to replicate the prevalence and correlates of social phobic symptoms in schizophrenia patients employing methodology similar to that used by Braga *et al.* (2005) and Pallanti *et al.* (2004).

## METHODS

### Subjects

The Abarbanel Mental Health Centre, Bat-Yam, Israel is a large urban, university-affiliated psychiatric hospital. There were 550 inpatient beds and 110 day-patients as well as a large outpatient clinic in the centre when the study was conducted. Patients were recruited during their first week of inpatient stay. Screening interviews were carried out independently by two senior psychiatrists.

The study was approved by the institution review board of the Abarbanel Mental Health Centre. All participants (or their legal guardian) gave written informed consent after the nature of the study was fully explained to them.

Inclusion criteria were:

1. SCID-diagnosed schizophrenia
2. Age: 18–65 years
3. No current alcohol or drug abuse
4. No disfiguring disorders

Exclusion criteria were:

1. Severe cognitive impairment
2. Psychotic symptoms secondary to acute intoxication or withdrawal from alcohol or other substances

### Procedure

Diagnoses of schizophrenia as well as co-morbid anxiety disorders were established according to DSM-IV criteria for all participants. All participants were interviewed using the Structured Clinical Interview for Diagnosis (SCID-P), to establish their diagnosis (Spitzer *et al.*, 1990).

Severity of psychotic symptoms was assessed in all patients with the Positive and Negative Symptom Scale (PANSS) (Kay *et al.*, 1987). Severity of social phobia symptoms in all patients (both fear and avoidance) was evaluated and rated according to the Liebowitz Social Anxiety Scale (LSAS) (Liebowitz, 1987).

## RESULTS

We approached 150 schizophrenia patients, consecutively admitted to the centre, as possible participants in the study. Of these, 20 refused to participate and 14 were excluded due to not fulfilling inclusion criteria. Thus, the study sample included 116 schizophrenia inpatients (75 male, 41 female), aged 20–69 years (mean  $\pm$  SD: 40.7  $\pm$  13.2). Mean disease duration was 17.0 years (SD  $\pm$  9.3). The clinical and demographic characteristics of the 34 patients not included in this study did not differ significantly from those analyzed. Thirteen patients were diagnosed by SCID-P as suffering from co-morbid social phobia (11%).

The mean total PANSS score was 84.1 (SD  $\pm$  13.2); positive subscale mean score was 24.2 (SD  $\pm$  5.4), negative subscale mean score was 25.6 (SD  $\pm$  4.3) and the general subscale mean score was 39.8 (SD  $\pm$  6.8). The LSAS mean scores for the whole sample were: 'fear' subscale mean score 38.5 (SD  $\pm$  10.4) and 'avoidance' subscale mean score 37.7 (SD  $\pm$  8.8).

As a group ( $n = 116$ ), avoidance scores were higher among patients with negative signs ( $p < 0.05$ ). Patients with 'negative symptoms' were defined as having a PANSS negative subscale score of 30 or higher. The Pearson correlation performed between the LSAS and the PANSS subscales scores revealed a significant positive correlation between the LSAS 'fear' subscale and the PANSS positive subscale ( $r = 0.43$ ,  $p = 0.04$ ). Patients with co-morbid social phobia had higher PANSS total scores than patients without social phobia. However, this increase did not reach statistical significance ( $p = 0.71$ ).

## DISCUSSION

The present study suggests that social phobic symptoms and different clinical signs in patients suffering from schizophrenia may be correlated. The rate of social anxiety disorder in the range of 10% herein reported is consistent with results of previous publications (Rocha *et al.*, 2005).

Our findings demonstrate that the 'fear' component of social anxiety may be associated with positive symptomatology of schizophrenia. It seems that patients in an acute phase of their disease

suffer from a higher degree of alertness, anxiety and sensitivity to their surroundings, while the chronic stage of the disease is associated with avoidance. It may be that in the acute psychotic phase of schizophrenia we are indirectly rating similar aspects of psychosis through the PANSS positive scale and the fear component of the LSAS. This needs careful elucidation in future studies. It must be emphasized, nevertheless, that the present study may lack sufficient statistical power to provide more distinct findings. Our conclusions need to be cautiously interpreted because the number of patients with co-morbid social phobia is small. In addition, the present study lacks a control contrast group.

The distinction between avoidance behaviour and negative signs is not easy. It was shown that negative signs and not positive signs are most strongly associated with low sociability in stable community-dwelling outpatients with schizophrenia (Dikerson *et al.*, 1999). Penn *et al.* (1994) investigated the relationship between social anxiety and positive and negative symptoms. Positive symptoms were related to fear in a number of self-report domains (i.e. social and agoraphobic). Negative symptoms were related to global observational ratings of anxiety during role play as well as specific behaviours associated with self-reported social anxiety (i.e. speech rate and fluency).

The relationship between schizophrenia and anxiety disorders may be conceptualized as relating to the severity of anxiety, as shown by recent studies demonstrating that clinically meaningful anxiety is associated with more severe hallucinations and poorer psychosocial function (Lysaker & Salyers, 2007). Thus, in a way, social phobia in schizophrenia can be considered as a realistic reaction of the schizophrenic patient to their lack of social interactions, as well as to the social stigma they have to face. Different types of treatment were proven to be beneficial for schizophrenia patients with co-morbid social anxiety disorder (Kingsep *et al.*, 2003), cautiously leaving room for optimism.

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