Abstract

Background: Schizotypy, or schizotypal personality disorder (SPD) has been proposed to represent a milder expression of the schizophrenia genotype, manifesting milder forms of neurocognitive and social behavioural deficits that resemble schizophrenia. Schizotypy appears to be a multidimensional construct, with positive schizotypy (PS) and negative schizotypy (NS) shown to have differential profiles of neurocognitive performance, and NS suggested to represent more closely the genetic liability to schizophrenia. This study aimed to explore, in a population of first-degree relatives of schizophrenia patients, whether cluster analysis could generate similar clusters of schizotypy as previous studies in non-clinical populations. The study also aimed to examine the neurocognitive and social behavioural performance of relatives with NS.

Methods: In the first phase of this study, cluster analysis was performed on 194 first-degree relatives of patients with schizophrenia using the Chapman Psychosis Proneness Scales. Twenty-eight of the relatives belonging to the NS group from this phase were then recruited into the second phase of the study, along with 29 patients with schizophrenia and 33 healthy controls. Neurocognitive measures, including verbal, visual and working memory, sustained attention and executive functions were assessed and compared among the three groups. Theory of mind (ToM) performance and social and occupational functioning were also examined.

Results: Cluster analysis yielded four schizotypy cluster groups, namely negative schizotypy (NS), mixed schizotypy (MS), positive schizotypy (PS) and low schizotypy (LS). It was found that the NS relatives were significantly impaired in visual memory, working memory and affective ToM compared to healthy controls, and their

performance did not differ significantly from schizophrenia patients. The NS relatives were also found to have impaired social and occupational functioning.

Conclusions: These findings support the idea that NS in first-degree relatives of schizophrenia patients manifest some neurocognitive deficits that resemble patients with schizophrenia, and may represent an underlying heightened genetic liability to schizophrenia.