

## Abstract

**Background:** Facial emotion recognition is implicated as relevant to impaired social functioning in schizophrenia. Its deficit has been recognized in patients among Western countries. While studies have highlighted cultural variations in shaping accuracy of recognition in both clinical and healthy samples, Chinese data is relatively lacking.

**Aims:** This study was designed to i) examine the performance of facial emotion recognition in local Chinese patients with schizophrenia at onset and chronic stage of illness, ii) explore the relationship of deficits with disease progression, iii) investigate the pattern of identification and of error in specific facial emotions, and iv) evaluate the correlation of facial emotion recognition with demographics, intelligence and illness factors in schizophrenia.

**Methods:** 50 stabilized outpatients with first-episode schizophrenia, 51 with chronic schizophrenic illness, together with 26 and 28 controls matched to these two patient groups respectively in age and sex were recruited. All participants were tested on the level of nonverbal intelligence and underwent diagnostic examination. The performance in facial emotion recognition for six universal emotions was examined using locally validated colored photographs from the Japanese and Caucasian Facial Expressions of Emotion set. The severity of illness and rating of mood were assessed with standardized instruments.

**Results:** Chinese patients with schizophrenia, at both first-episode and chronic stage, performed significantly worse than their control counterparts on overall facial emotion recognition, with

specific impairment in identifying expressions of surprise, fear and disgust. The level of deficit was similar for patients from the two phases of illness. In comparing pattern of errors, patients and healthy controls differed only in the misidentification of angry faces. Nonverbal intelligence was shown to contribute partially to the accuracy in facial emotion perception.

**Conclusion:** Impairment in facial emotion recognition was essentially replicated in Chinese patients with schizophrenia. This deficit did not appear to worsen with disease progression and may represent a stable trait of the illness.