

according to birth place in a major city (level 5 of a 5-level rural-urban scale), length of residence in urban location, and length of residence during three critical 5 year periods, birth - 15 years. We studied effects on our 4 psychosis phenotypes of (i) urban birth, (ii) urban living, (iii) critical times of exposure to urban environment, (iv) putative etiological risk factors, before and after adjusting for depression. We investigated associations between etiological risk factors and urban exposures.

**Results:** We identified 2,143 (5.4%) participants above a determined cut-off for psychoticism, 2,081 (5.3%) for paranoia, 760 (1.9%) with schizotypal symptoms, and 53 (0.1%) with schizophrenia. Effects of urban exposure on our psychosis phenotypes were only revealed following adjustments for depression in our models: Urban birth was associated with Paranoia (1.46, 1.24–1.70), schizotypal symptoms (1.90, 1.48–2.42), and schizophrenia (2.30, 1.14–4.63), but not psychoticism. All four phenotypes were associated with 10–15 years of exposure to urban living, but not shorter periods. Only schizophrenia was associated with critical timings of total exposures of 1–3 years and 4–5 years during the first 5 years of life to an urban environment. There were no associations or negative associations between putative etiological factors and urban exposures.

**Discussion:** We confirmed that urban birth and living were associated with PEs and schizophrenia in this large sample of Chinese university students, but these findings only emerged after adjusting for depression. Depression is more prevalent in rural Chinese samples and previous studies may have been confounded by effects of PEs secondary to depression. There was a gradient of association between paranoia, schizotypal symptoms and schizophrenia, the latter showing strongest effects in association with urban exposures of birth and length of time in an urban environment. Only schizophrenia showed effects of critical timing of exposure to urban environment during infancy. Finally, we could not identify what exposures in the urban environment contributed to psychosis in our sample - although we could identify the etiological factors that did not. Among Sichuan students, there was no indication that urban effects were due to increased risk from demographic factors of male sex, lower family income, increased genetic risk, or child maltreatment, although these factors showed some effects on psychosis across the entire sample which included previous rural residents.

### M133. DISCRIMINATION PHENOMENA AND THE LEVEL OF SCHIZOTYPY

Baptiste Pignon<sup>\*1</sup>, Franck Schürhoff<sup>2</sup>, Jean-Romain Richard<sup>1</sup>, Aziz Ferchiou<sup>1</sup>, Andrei Szöke<sup>3</sup>  
<sup>1</sup>INSERM; <sup>2</sup>APHP GH Mondor; INSERM; UPEC University Paris-Est; Fondation Fondamental; <sup>3</sup>APHP GH Mondor; INSERM; Fondation Fondamental

**Background:** Several have suggested a link between discrimination phenomena and psychotic disorders. Since this is a potentially modifiable factor, it seems important to clarify the links between discrimination and psychotic disorders. In the hypothesis of the psychotic continuum, schizotypal features in the general population are intermediate phenotypes in schizophrenia studies. In this study, the aim was to study the links between discrimination and level of schizotypy in the general population. We assumed that exposure to discrimination experiences is associated with increased levels of schizotypy.

**Methods:** Subjects from the general population (N = 1456), without psychotic disorders, were recruited in 17 cities and 6 countries (Brazil, Spain, France, Holland, Italy, UK). Each subject completed the Community Assessment of Psychic Experiences (CAPE), a autoquestionnaire considered to assess the level of psychometric schizotypy (with positive, negative and depressive dimensions) and the 20-item Perceived Discrimination Scale developed by Williams et al. Linear regression analyzes were used with discrimination as an explanatory variable and CAPE scores as variables to be explained.

**Results:** We show that an increase in the perceived discrimination score was associated with significantly higher levels of schizotypy, in the positive

( $p = 1.7.10^{-10}$ ), negative ( $p = 3.4.10^{-10}$ ) and the depressed dimensions ( $p = 2.1.10^{-10}$ ). In more than half of the subjects who reported discrimination experiences, the reason for the discrimination invoked was not one of the reasons given. Ethnicity remains, however, a major cause of reported discrimination.

**Discussion:** The stress-vulnerability model could explain the link between discrimination and schizotypy, though dysregulation of the hypothalamo-pituitary axis and cortisol secretion in subjects with schizotypy, preventing them from responding adaptively to social stress. Psychological and social factors also seem to play a role in stress management.

### M134. MISMATCH NEGATIVITY IS REFLECTIVE OF DISEASE PROGRESSION RATHER THAN SYMPTOMATIC RECOVERY IN FIRST-EPISODE PSYCHOSIS

Silvia Lho<sup>\*1</sup>, Minah Kim<sup>1</sup>, Wu Jeong Hwang<sup>2</sup>, Jun Soo Kwon<sup>1</sup>  
<sup>1</sup>Seoul National University College of Medicine; <sup>2</sup>Seoul National University College of Natural Science

**Background:** Whether mismatch negativity (MMN) is associated with clinical status or reflects the disease progression in first-episode psychosis (FEP) patients has not been established. We aimed to investigate whether the change in MMN impairment fluctuates with the change in clinical status during 1-year.

**Methods:** MMN and the clinical status of 25 patients with FEP were measured at baseline and reassessed after 1 year. MMN of 25 matched healthy controls (HCs) were measured at baseline. Repeated-measures analysis of variance (ANOVA) was used to compare MMN at baseline among the groups, and paired t-tests were utilized to compare baseline and 1-year MMN amplitude of FEP. To identify the association between MMN impairment change and symptomatic, cognitive or functional change during 1-year, this study used multiple regression analysis controlling possible confounders.

**Results:** MMN amplitudes at baseline were significantly attenuated in FEP patients compared to HC. One-year follow-up MMN amplitude decreased significantly at Fz electrode site in FEP group. Also, the change in MMN amplitudes significantly correlated with the worsened TMT-B but did not with the symptomatic or functional recovery.

**Discussion:** These results suggest that MMN impairment may be more closely related to cognitive deficits reflecting disease progression than the currently apparent symptoms and functional status during the beginning of a psychotic episode. Future studies are needed to elucidate the relationship with the disease pathophysiology of psychosis and MMN.

### M135. DEVELOPMENT OF VISUAL SCANPATH PATTERN ANALYSIS BASED ON FACIAL EMOTION PERCEPTION ENHANCEMENT TRAINING PROGRAM IN SCHIZOPHRENIA PATIENTS

Beomwoo Nam<sup>\*1</sup>, Yeseul Kim<sup>2</sup>, Soo Rim Noh<sup>2</sup>, Taehyun Kim<sup>3</sup>  
<sup>1</sup>Konkuk University; <sup>2</sup>Chungnam National University; <sup>3</sup>Gongju National Hospital

**Background:** Facial expression is an important non-verbal way of expressing the person's emotional state. If the process of perceiving facial features is impaired, the ability to recognize the emotional state of others is degraded, which may make it difficult to maintain interpersonal and social communications. Many studies have reported on the association between deficit of facial emotion perception (FEP) and the social functioning in schizophrenia. Therefore, we developed visual scanpath pattern analysis based FEP enhancement training program in schizophrenia.