

characterized with more serious medical or psychiatric conditions, experience of loss and instability, as well as family disruption and violence. Their personality traits were characterized by low interpersonal skills, while controls were described as more “high-functioning”.

**Discussion:** The current study partially replicated previously published findings and provided detailed description of the characteristics of environment, functioning and personal traits of people who experienced first outbreak of psychotic disorder, in the years before the outcome. Unlike most of the studies that focused on premorbid period, the current study used unique premorbid data and a combination of in-depth qualitative analyses, performed blinded to outcome, and novel machine learning techniques.

### T130. ASSOCIATIONS BETWEEN DIFFERENT TYPES OF CHILDHOOD ADVERSITY AND 5-YEAR OUTCOMES IN FIRST-EPISEODE PSYCHOSIS PATIENTS

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**Background:** Little is known about the impact of different forms of childhood adversity (CA) on outcomes in first episode psychosis (FEP) patients beyond the first year of treatment. We investigated associations between different types of CA and 5-year outcomes in a well-characterised sample of FEP patients.

**Methods:** A total of 237 FEP cases aged 18–65 years were followed on average for 5 years after first presentation to psychiatric services in South-London, UK. CA was assessed at service entry using the Childhood Experience of Care and Abuse Questionnaire. Using electronic clinical notes, extensive information was collected on clinical and social outcomes, service use, and self-injurious behaviours. As case analysis with missing data provides the most severely biased results we conducted multiple imputations to handle the missing data. We imputed the missing values using multiple imputations by chained equations (MICE). MICE has been shown to be a robust method for dealing with missing data across empirical and longitudinal studies.

**Results:** 72.1% of the sample reported at least one form of CA. Childhood parental separation was associated with greater likelihood of non-compliance with antipsychotic medications (OR=2.44, 95% CI=1.11–5.39), compulsory admission (OR=2.40, 95% CI=1.32–4.37), and living alone (OR=1.99, 95% CI=1.04–3.81) by the end of the follow-up. Institutional care was associated with longer total length of inpatient stay (IRR=1.34, 95% CI=1.01–1.79); parental death was associated with compulsory admissions (OR=2.87, 95% CI=1.02–8.05) during the follow-up.

**Discussion:** Our findings suggest some specificity in the detrimental impact of CA on service use and social functioning over a 5-year period following first contact with mental health services for psychosis. Clinicians should screen patients for CA and tailor interventions accordingly to improve outcomes.

### T131. INCIDENCE OF FIRST-EPISEODE PSYCHOSIS IN THE CATCHMENT AREA OF RIBEIRÃO PRETO, BRAZIL

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**Background:** In the study “Schizophrenia and Other Psychoses Translational Research: Environment and Molecular Biology” (STREAM), we estimated the incidence of first-episode psychosis (FEP) in the catchment area of Ribeirão Preto, Brazil, and investigated the role of environmental and biological factors in the aetiology of the psychoses. STREAM is part of the international consortium “European Network of National Schizophrenia Networks Studying Gene-Environment Interactions” (EU-GEI).<sup>1</sup> Here, we describe the incidence of FEP in this Brazilian catchment area according to some demographic characteristics of the population.

**Methods:** Twenty-six counties compose the catchment area under study. Ribeirão Preto is the main city of the region, with a population of 604,682 inhabitants, population density of 929.8 inhabitants/Km<sup>2</sup>, per capita gross intern product (GIP) of US\$ 9,143.20 and human development index (HDI) of 0.800, ranked 40th among 5,570 Brazilian municipalities. The population of the remaining 25 counties varied from 1,953 to 110,074 inhabitants (median=23,862), median population density of 75.0 inhabitants/Km<sup>2</sup> (interval 13.2–308.4 inhabitants/ Km<sup>2</sup>), median GIP of US\$5,254.80 (interval US\$2,234.80–US\$20,747.40), and HDI values ranging from 145th to 2,282nd in the national ranking. The sample was composed by individuals aged 16 to 64 years old, and with a first contact with mental health services due to psychotic symptoms in a 3-year period (1st April 2012 – 31st March 2015). Statistical analyses were carried out using Stata 13 software. We used the estimated population during the 3-year period based on the 2010 Brazilian Census to calculate person-years at risk. Incidence rates were estimated by sex, age, self-reported skin colour, and city of living.

**Results:** We identified 588 FEP patients over 3 years. The incidence rate of psychosis was higher in male (21.8, 95%CI=19.5–24.4) than female (18.1, 95%IC=16.1–20.5), non-white (20.9, 95%IC=18.1–23.9) than white patients (15.8, 95%IC=14.1–17.6), and those living in counties (22.3, 95%IC=20.1–24.5) other than the main city, Ribeirão Preto (17.3, 95%IC=15.2–19.6). The incidence rate of FEP declined with age.

**Discussion:** The proportion of patients reporting themselves as white (52.1%) was lower than that described for the catchment area under study (66.3%), confirming the higher risk of psychosis among those from minority groups.<sup>2</sup> The incidence rates of FEP observed in the Ribeirão Preto catchment area are roughly similar to those reported in São Paulo city<sup>3</sup> and in a large city in Southern Italy<sup>4</sup>, but lower to those described in large urban centres in some European countries<sup>5</sup>, which converges to the heterogeneity of the incidence of psychosis worldwide. We found a lower incidence rate of FEP in the main city of the catchment area, in comparison with the remaining cities of the region, which have a lower population density, but worse socioeconomic indicators. These preliminary results suggest an effect of socioeconomically deprived contexts in the incidence of psychosis in Brazil, as described in developed countries.<sup>6</sup> Further studies are needed to explore the environmental risk factors associated with differences in the incidence of psychosis in low and middle-income countries.

#### References:

1. van Os et al. *Schizophr Bull.* 2014; 40(4):729–36.
2. Jongsma et al. *JAMA Psychiatry*, in press.
3. Menezes et al. *Br J Psychiatry Suppl.* 2007;51:102–6.
4. Mulé et al. *Soc Psychiatry Psychiatr Epidemiol.* 2017;52(2):155–62
5. Kirkbride et al. *Arch Gen Psychiatry.* 2006;63(3):250–8.
6. Kirkbride et al. *Am J Psychiatry.* 2017;174(2):143–53.

### T132. ASSESSMENT OF CROSS-NATIONAL EQUIVALENCE OF THE COMMUNITY ASSESSMENT OF PSYCHIC EXPERIENCES (CAPE)

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**Background:** The Community Assessment of Psychic Experiences (CAPE) is a self-report questionnaire that has been developed to measure the dimensions of psychosis in the general population. The cross-national equivalence of a questionnaire allows the comparability of a scale across different populations in different countries, i.e., using different versions of the scale according to the considered language. In this study, our aim was to investigate the equivalence of the CAPE across different countries.

**Methods:** Data were drawn from the European Union Gene-Environment Interaction (EU-GEI) study. Participants (incident case of psychotic disorder, controls and siblings of cases) were recruited across in six countries: United Kingdom, the Netherlands, Italy, Spain, Brazil and France. To analyse the cross-national equivalence of the dichotomised version of the CAPE, we used the multigroup categorical confirmatory factor analysis (MCCFA). The cross-national equivalence can be stated after the establishment of three invariances characterised by increased constraints: the configural invariance, the metric invariance and the scalar invariance across the multiples groups.

**Results:** The configural invariance model fits well, providing evidence for identical factor structure across countries. The assumption that factor loadings are identical across countries is granted based on the negligible change in the fit indices in the metric invariance model. Moreover, the fit indices suggest that the CAPE shows scalar invariance across countries.

**Discussion:** These findings suggest that comparisons across countries of factor and observed means of the CAPE are possible. Thus, differences observed in scores between samples from different countries can be considered as different levels of psychosis.

### T133. MENTAL HEALTH OF ASYLUM SEEKERS AT THE HUMANITARIAN CAMP IN PARIS

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**Background:** Asylum seeker status is associated to higher prevalence of psychiatric disorders due to not only pre-migration events but also to the trajectory of migration and post-migration adversities. Mental problems and need of care may vary according to these different stages. In France, after the cleaning of the “Calais jungle” in October 2016, most asylum seekers moved to Paris, where they live as homeless. An asylum seeker center (CPA- Centre Premier accueil) was then created a few weeks later, to allow rapid access to asylum seeker procedure, shelter, and medical care (including mental health).

**Methods:** We will analyze 1- year data (socio-demographic characteristics, migration history, psychiatric symptoms, hospital admissions and medical prescriptions) of about 1000 recently arrived asylum seekers who consulted for psychiatric examination in the refugee camp (CPA). Prevalence and bivariate analyses will be done. Factors associated with mental health problems will be identified using multivariate analyses.

**Results:** Findings will be discussed in the light of the French/European immigration policy and the organization of the public mental health system.

**Discussion:** The results of our study will contribute to the identification of mental health problems and correlates at the arrival of asylum seekers in France, in the aim to develop adequate service planning, prevention and support.

### T134. EXPOSURE TO NITROGEN DIOXIDE DURING CHILDHOOD IS ASSOCIATED WITH INCREASED RISK OF SCHIZOPHRENIA

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**Background:** Urban-rural differences in schizophrenia incidence have been reported from numerous published studies. Though as yet unknown, the underlying causes responsible for these differences have been postulated to include urban-rural differences in pollution, diet, infections, stress, or selective migration. Exposure to the air pollutant nitrogen dioxide (NO<sub>2</sub>) has been linked with increased rates of mortality, lung cancer, and psychotropic medication prescribing. However, no study to date has examined whether NO<sub>2</sub> exposure during early childhood is associated with schizophrenia risk.

**Methods:** Utilizing individual-level information in the rich Danish population-based registers enriched with longitudinal information on residential exposure to air pollution, we investigated the putative link between NO<sub>2</sub> exposure during childhood and schizophrenia risk. For each cohort member, exposure to NO<sub>2</sub> was estimated longitudinally from birth to 10th birthday, expressed as mean of daily exposures at residence across the first 10 years of life. Incidence rate ratios per 10µg/m<sup>3</sup> increase in mean NO<sub>2</sub> exposure were estimated using survival analysis techniques. Air pollutant exposures were modelled using the UBM model in 1\*1km grids covering Denmark from 1979 onwards.

**Results:** We observed a dose response relationship between childhood NO<sub>2</sub> exposure and elevated risk for developing schizophrenia. Risk increased 1.36 fold (95%CI: 1.31–1.41) per 10µg/m<sup>3</sup> increase in mean NO<sub>2</sub> exposure during childhood. This association remained materially unaltered when adjusted for potential confounders such as family socioeconomic position and history of severe mental disorders. In absolute risk terms, at age 35 a person exposed to more than 25µg/m<sup>3</sup> mean NO<sub>2</sub> faced a 1.4% risk of schizophrenia whereas persons exposed to less than 10µg/m<sup>3</sup> per day faced a 0.8% risk.

**Discussion:** This is the first population-based study demonstrating that exposure to NO<sub>2</sub> during childhood is linked with elevated schizophrenia risk. The potential mechanism of NO<sub>2</sub> on the risk of schizophrenia remains to be identified, however, if causality is proven this finding offers great potential for prevention of some cases of schizophrenia.

### T135. NEIGHBORHOOD-LEVEL PREDICTORS OF AGE AT ONSET AND DURATION OF UNTREATED PSYCHOSIS IN FIRST-EPIISODE PSYCHOSIS

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**Background:** Recently, there has been increasing interest in the role of the social environment in the development and outcomes of schizophrenia. We investigated whether or not several neighborhood characteristics would be associated with two important prognostic factors in early-course psychosis, age at onset of psychosis (AOP) and duration of untreated psychosis (DUP). It is known that certain risk factors such as gender, family history, and history of cannabis use are associated with an earlier AOP and other risk factors such as history of being incarcerated, history of cannabis use, and mode of onset of psychosis (MOO) are associated with longer DUP. We sought to determine whether neighborhood characteristics would also be risk factors for these two prognostic indicators.

**Methods:** Data were collected as part of the Atlanta Cohort on the Early Course of Schizophrenia project, which included patients hospitalized for a first episode of a schizophrenia-spectrum disorder. Diverse variables were obtained from interview-based measures, data from chart reviews, and informant/family member collateral interviews, including gender, family history of psychosis, history of cannabis use, history of incarceration, MOO, patient-level residential mobility, Neighborhood Disorder Scale (NDS), AOP, and DUP. We retrieved 13 neighborhood characteristics