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Evidence indicates that migrant and ethnic minority groups have an elevated risk of psychosis in a number of countries. Social disadvantage is one of the hypotheses put forward to explain these findings. The aim of this study is to investigate main effects, association and synergism between social disadvantage and migration on odds of psychotic experiences. We collected information on social disadvantage and migration from 332 patients and from 301 controls recruited from the local population in South London. Two indicators of social disadvantage in childhood and six indicators of social disadvantage in adulthood were analyzed. We found evidence that the odds of reporting psychotic experience were higher in those who experienced social disadvantage in childhood (OR= 2.88, 95% CI 2.03–4.06), social disadvantage in adulthood (OR= 9.06, 95% CI 5.21–15.74) and migration (OR= 1.46, 95% CI 1.05–2.02). When both social disadvantage and migration were considered together, the association with psychosis was slightly higher for social disadvantage in childhood and migration (OR 3.46, 95% CI 2.12–5.62) and social disadvantage in adulthood and migration (OR 9.10, 95% CI 4.63–17.86). Migrant cases were not more likely than non-migrant cases to report social disadvantage ( $p=0.71$ ) and no evidence of an additive interaction between migration and social disadvantage was found (ICR 0.32 95% CI –4.04–4.69). Preliminary results support the hypothesis that the association between social disadvantage and psychosis is independent of migration status.

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#### w044

### Trauma and migration in first episode psychosis

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*Introduction* Researches show that the period of migration, or the migration process itself, may confer an increased risk for psychosis. Some studies have addressed whether the high rates of psychosis found in migrants could be due to higher genetic or environmental risk factors. Facing severe or chronic stress such as trauma, social isolation, low socio-economic status, late-life social adversity may result in long term, sometimes permanent, alterations of the biological stress response system, leading to the onset of psychosis.

*Objectives* This study aims to examine, in a large sample of first episode psychosis patients, whether negative social experiences like stressful life events and difficulties, trauma and isolation have significantly higher frequencies in migrants with respect to natives.

*Methods* The present study is conducted within the framework of the EUGEI (European Network of National Schizophrenia Networks Studying Gene Environment Interactions) study, a Europe-wide

incidence and case-control study of psychosis conducted in 12 centers chosen to include areas with large first and subsequent generation migrant populations.

Data about age, gender, migration history, trauma, life events, ethnicity, social class and family history of mental disorders have been collected.

*Results* Preliminary data on the relationship between trauma and migration in first episode psychosis will be presented.

*Conclusions* Since migration is an important stressful life event, and difficulties in integration in host countries may remain chronic, it is important to identify in each context the most vulnerable minority groups in order to implement targeted prevention interventions.

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#### W045

### The social defeat hypothesis of schizophrenia: an update

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Research provides strong evidence of an elevated risk for developing psychotic symptoms and psychotic disorder among various ethnic and other minority groups. Furthermore, ethnicity may modify the risk for autism-spectrum disorder, but the evidence of this is still thin. Misdiagnosis, selective migration and other methodological artefacts are implausible explanations for the findings on psychotic disorder. Instead, we propose that 'social defeat', defined as the chronic experience of being excluded from the majority group, may increase the risk for psychotic disorder by sensitizing the mesolimbic dopamine system. Future challenges lie in connecting the underlying biological mechanisms to behavioral expression in socially excluded groups, as well as in bridging the gap with the clinical field and the wider society by stimulating the implementation of strategies that strengthen the position of minority populations.

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#### W046

### Migration history and the onset of psychotic disorders

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*Introduction* Research has established that there are high rates of first episode psychosis (FEP) in immigrant populations. These findings could indicate that socio-environmental risk factors, such as individual social class, social capital, early trauma, life events, neighborhood deprivation could be relevant in explaining the differences in incidence rates observed between migrants and natives, following the socio-developmental model of Morgan et al. (2010). Some preliminary results also indicate that migration history itself versus ethnicity could implicate higher risk of the onset of psychotic disorders.

**Aims** To present preliminary findings from the EUGEI European Network of National Schizophrenia Networks Studying Gene Environment Interactions study.

**Methods** Population based FEP incidence/case control study. Comparison of the incidence rate of FEP and of the distribution of several risk factors (e.g. substance abuse, neighborhood deprivation, urbanicity and trauma) in natives and migrants in different countries across Europe.

**Results** Preliminary results of the EUGEI study will be discussed in comparison with previous evidences.

**Conclusion** The EUGEI study allows a deeper understanding of the excess of FEP found among migrants in Europe.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

#### Further reading

European Network of National Networks studying Gene-Environment Interactions in Schizophrenia (EU-GEI), van Os J, Rutten BP, et al. Identifying gene-environment interactions in schizophrenia: contemporary challenges for integrated, large-scale investigations. *Schizophr Bull.* 2014 Jul;40(4):729–36.

Tarricone I, Boydell J, Kokona A, Triolo F, Gamberini L, Sutti E, Marchetta M, Menchetti M, Di Forti M, Murray RM, Morgan C, Berardi D. Risk of psychosis and internal migration: Results from the Bologna First Episode Psychosis study. *Schizophr Res.* 2016 May;173(1-2):90–3.

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## Workshop: Treatment-resistant schizophrenia: Epidemiology, clinical course and innovative treatments, with special reference to m-RESIST project

### W047

#### Definition, epidemiology, clinical course and outcomes in treatment-resistant schizophrenia

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Based on a systematic review on TRS 285 studies were included regarding definitions of TRS ( $n = 11$ ), genetics (18), brain structure and functioning (18), cognition (8), other neurobiological studies (16), medication (158), psychotherapy and cognitive rehabilitation (12), electroconvulsive therapy (ECT) and repetitive transcranial magnetic stimulation (rTMS) (15), prognosis (21), and other miscellaneous studies (8). Definitions of TRS varied notably. TRS was associated with 3 to 11-fold higher healthcare costs than schizophrenia in general. One-fifth to one-third of all patients with

schizophrenia were considered to be resistant to treatment. Based on limited evidence of genetics, brain structure and functioning and cognition, TRS may present as a different disorder with different etiology compared to non-TRS. Clozapine, olanzapine, risperidone, ECT and cognitive-behavioral therapy have shown effectiveness, although the number of studies and quality of research on interventions is limited. About 40% to 70% of TRS patients had an unfavorable prognosis. Younger age, living in a rural or less urban area, primary education level, more psychiatric hospital treatment days in the year before first schizophrenia diagnosis, inpatient at first schizophrenia diagnosis, paranoid subtype, comorbid personality disorder and previous suicide attempt may be risk factors associated with TRS.

TRS is a poorly defined, studied and understood condition. To create a framework of knowledge for TRS, as a basis to develop innovative studies on treatment, there is a need for a consensus on the definition of TRS. Prospective long-term prognostic and novel treatment intervention studies are needed [1].

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

#### Reference

[1] Seppälä A, et al. *Psychiatria Fennica* 2016.

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### W048

#### Emerging sensor-based m-health interventions in the assessment of psychotic symptoms

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This speech aims to overview ongoing research trends on the integration of mobile health and sensors based behavioral analysis in therapeutics programs for subjects with mental health symptoms or disorders. The variety of easily acquirable personal data by smartphones and wearables in a transparent and unobtrusive way, offers the opportunity to describe the person in terms of his/her lifestyle and behavior at physical, cognitive and environmental level. An appropriate management of these data may initiate a new line in healthcare management characterized by tailored and timely interventions. However, despite the huge amount of data that could be acquired, an effective contribution of such information to the improvement of the quality of care in mental health is still not sufficiently explored. The sensors and data which have been used in studies on mental status include accelerometer, gyroscope, GPS, microphone, calls, messages, screen, apps usage, environmental light, heart rate, skin conductance, and temperature. The primary outcomes build on correlations between sensor data and mental health status/severity of symptoms. These data are provided from studies on bipolar disorders and depression, using validated clinical scales (Patient Health Questionnaire-9; Hamilton Rating Scale for Depression; Young Mania Rating Scale; Center for Epidemiologic Studies Depression Scale; etc.).

m-RESIST consortium is fully aware of the importance to describe behavioral patterns of patients with schizophrenia that could be used to setup remotely based therapeutic tool. m-RESIST is setting up a framework for the creation of a Clinical Decision Support System based on a mobile therapeutic intervention for treatment-resistant schizophrenia.

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