Results: Most publications were made in 2020. The United Kingdom, the United States, Canada, and Australia have the highest number of publications, citations, and international cooperation. Additionally, "mental health" is one of the most used keywords in the studies.
Conclusions: The findings show the importance of empowering nurses working in this field, especially in determining the needs related to mental health services for refugees. The increased migration rates and the growing need for refugee health care highlighted the importance of investment in nursing research within this field. Nurses and researchers should aim to establish partnerships and share best practices with the leading countries. Furthermore, nurses require specialized training to competently evaluate and provide nursing care and mental health services to this vulnerable population. Policymakers must prioritize international collaboration, equitable healthcare, and the integration of mental health services within healthcare systems to improve refugee health and reduce barriers between them and health services.

Disclosure of Interest: None Declared

Neuroimaging

EPV0615

Reduced resting-state gamma-band power correlate with unaltered glutamate + glutamine levels in patients at clinical-high risk of psychosis

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Introduction: There is growing evidence of excitation / inhibition (E/I) balance abnormalities in schizophrenia, which might be associated with abnormal gamma frequency oscillations and glutamate concentrations. However, to the best of our knowledge, only one multimodal study have examined such associations between EEG and metabolite characteristics in patients at clinical-high risk of psychosis (CHR) so far.
Objectives: We aimed to investigate potential associations between GLX (glutamate + glutamine) levels and resting-state gamma-band power in CHR individuals and healthy controls (HC).
Methods: Twenty right-handed male patients (16-27 years, mean age 19.9 ± 2.7) fulfilling CHR criteria and 19 healthy male controls (16-27 years, mean age 21.6 ± 3.6) underwent resting-state EEG (16 leads; 10−20 system) and MR spectroscopy at 3T MRI scanner with voxels of 30×30×30mm located in left and right medial prefrontal cortex. Spectral analysis with estimation of gamma-band power (30-45 Hz) were conducted. MEGA-PRESS acquisitions were analyzed with jMRUi (ver. 5.1 Alpha), levels of GLX were calculated as a ratios to creatine + phosphocreatine (GLX/Cr). Gamma-band (30-45 Hz) spectral power and GLX/Cr were compared between groups. Correlations between EEG and metabolite data were analyzed with regression model including age and chlorpromazine equivalents as covariates.
Results: Compared to healthy controls, patients showed reduced spectral gamma-band power in 6 leads (Table). No alterations in GLX/Cr were detected. Positive correlations between altered gamma-power in all leads (except Cz) and GLX/Cr in left medial prefrontal cortex were revealed in CHR (F3: r=0.51, p=0.006; F8: r=0. 54, p=0.004; C3: r=0.37, p=0.037; Pz: r=0.51, p=0.039; P4: r=0.56, p=0.009). No correlations in HC group were found. Chlorpromazine equivalents did not correlate with GLX/Cr of gamma power in CHR group.

Table. Results of between-group comparisons corrected for multiple comparisons

Lead	CHR Mean ±SD	HC Mean ±SD	p-value	F	Cohen's d	Cohen's d CI 95%
F3	0.97±0.62	1.4±0.64	0.0097	7.2	-0.69	-1.22 -0.16
F8	0.84±0.61	1.45±1.03	0.0072	7.8	-0.71	-1.24 -0.19
C3	0.97±0.55	1.44±0.64	0.0026	9.9	-0.79	-1.32 -0.27
Cz	1.03±0.61	1.42±0.52	0.0074	7.7	-0.70	-1.22 -0.18
Pz	1.17±0.7	1.62±0.63	0.0098	7.1	-0.68	-1.2 -0.16
P4	1.04±0.66	1.53±0.66	0.0051	8.5	-0.74	-1.27 -0.22

Conclusions: The findings suggest that clinical-high risk of psychosis is associated with widespread alterations in resting-state gamma-band power. Positive correlations of such alterations with GLX/Cr and absence of such correlations in HC group are presumably indicative of disturbances in the excitation / inhibition balance in CHR individuals.
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Disclosure of Interest: None Declared

EPV0616

Widespread cortical and subcortical gray matter loss and an increase of globus pallidus volume in treatment-resistant schizophrenia

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Introduction: It is still being discussed whether treatment-resistant schizophrenia (TRS) is a biological subtype which differs from non-treatment-resistant schizophrenia or is it a more severe condition that affects brain worse than non-treatment-resistant schizophrenia. However, there are few and heterogeneous studies and the etiology of TRS remains quite unclear.
Objectives: This study aimed to explore cortical and subcortical morphometric characteristics in TRS patients and its associations with the clinical features. The pilot stage comprises the comparison to the mentally healthy subjects.
Methods: 21 right-handed male patients (mean age 28.99 ± 8.08 years) fulfilling TRS criteria and 21 matched healthy controls

(mean age 29.35 ± 7.41 years) underwent T1-weighted structural MRI at 3T Philips scanner and clinical examination. Images were processed using FreeSurfer 7.1.1. Cortical thickness and area, volumes of subcortical structures and separately volumes of the amygdala nuclei and hippocampal subregions were compared between groups. The morphometry data, PANSS (Positive and Negative Syndrome Scale), CDSS (Calgary Depression Scale for Schizophrenia) and daily chlorpromazine equivalent doses of antipsychotics were included in correlational analysis. Results were considered significant if they retained significance after correction for multiple comparisons.

Results: Compared to healthy controls, TRS patients showed decreased gray matter thickness in frontal, temporal, parietal, occipital, cingulate and insular regions (Figure 1). The temporal lobe showed the most prominent thinning of the cortex. The volumes of the amygdala, hippocampus (Figure 2) and nucleus accumbens, a number of amygdala nuclei and hippocampal subregions bilaterally were also decreased in TRS patients. The volume of the right globus pallidus, on the contrary, was increased (Figure 2). No correlations between altered cortical thickness, PANSS (positive, negative, general psychopathology scales and total score), CDSS and chlorpromazine equivalent doses of antipsychotics were found.

Image:

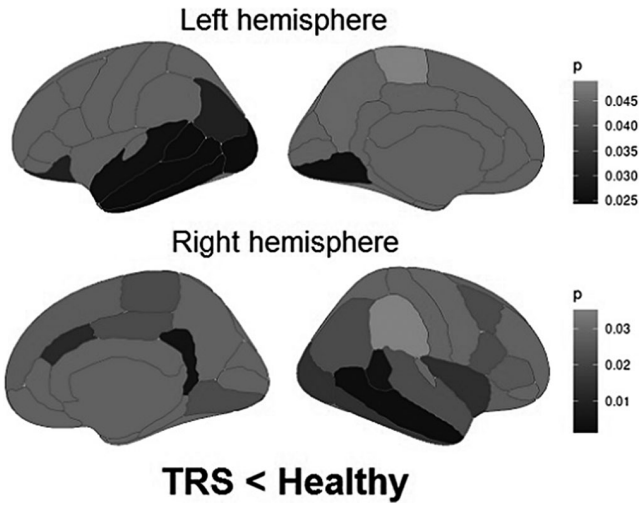
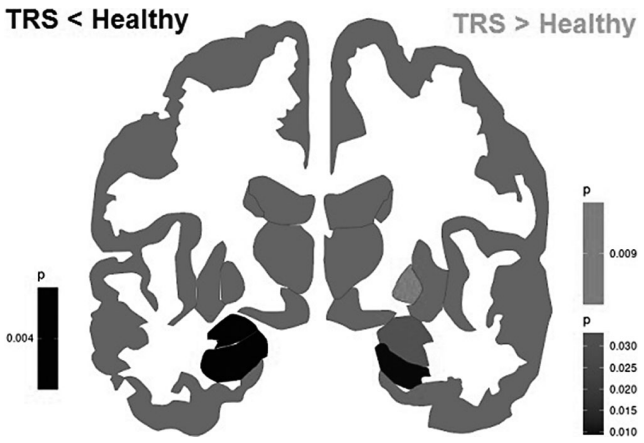


Image 2:



Conclusions: The widespread gray matter cortical and subcortical loss in TRS finds confirmation in the literature. The increased globus pallidus volume is an unexpected and intriguing result. Other studies demonstrated conflicting results on that point. Some studies reported possible therapy influence, others suggested possible associations with symptoms. We did not find any correlations with psychometric or therapy characteristics. It is possible that there are non-linear relationships or relationships that exist only at a certain stage of the disease. As for therapy, patients took individual medication, consisting of various antipsychotics and drugs from other pharmacological groups, and such heterogeneity could affect the results of the study. Further research is going to be carried out.

Disclosure of Interest: None Declared

EPV0617

Brain activity behind the negative and positive emotions: an experimental setting with functional near-infrared spectroscopy (fNIRS)

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Introduction: The fNIRS is an optical brain monitoring technique which uses near-infrared spectroscopy for the purpose of functional neuroimaging. Using fNIRS, brain activity is measured by using near-infrared light to estimate cortical hemodynamic activity which occurs in response to neural activity. In the aspect of psychiatry fNIRS is a tool that can potentially facilitate the clinical diagnostic process and identify stages of psychiatric illnesses by providing objective and quantifiable evidences of brain changes. However, this will require specific cerebral haemodynamic patterns to be validated in larger clinical populations with specific psychiatric disorders.

Objectives: Our team decided to set a fNIRS system to find out the difference in prefrontocortical (PFC) activity pattern between healthy and anhedonic population. This abstract has been created for introduce our first findings about the difference in PFC activity under emotionally positively or negatively coloured stimuli in healthy population.

Methods: We have measured 5 healthy adults, non-anhedonic participants under emotionally different visual and acustic stimuli with the use of NIRX/NIRScout system with the view of our prefronto-temporo-parietal montege.

Fig 1 We devided our experimental tools into 4 individual 20 second long parts:

Passive neutral visual or acustic stimuli for baseline (watching a black dot or scilence)

Passive visual stimuli (watching a single picture)

Active visual stimuli (choosing from photo collage) to detect contrast of cortical background activation

Passive acustic stimuli (listening sounds)

In total, we defined emotionally, two neutral, four positive and four negative stimuli in our experimental setting.

Softwares: We used *HOMER3* for analyzing our datas and estimate hemodinamic reponse factor (HRF) using general linear matrix