T128. ATTACHMENT REPRESENTATIONS IN CHILDREN AT FAMILIAL HIGH RISK OF SEVERE MENTAL DISORDERS. ASSOCIATIONS WITH PSYCHOPATHOLOGY, LEVEL OF FUNCTIONING, AND PSYCHOTIC EXPERIENCES

Maja Gregersen1, Ditte Vestbjerg Ellersgaard1, Anne Sondergaard1, Camilla Christiani1, Nicole Hemager1, Katrine Soborg Spang2, Birgitte Klee Burton2, Md Jamal Uddin1, Jessica Ohland1, Ditte Gantrias3, Aja Greve1, Ole Mors1, Kerstin Jessica Plessen1, Merete Nordenstoft1, Lars Clemmensen1, Jens Richardt Mollegaard Jepsen1, Anne Amalie Elgaard Thorup2

1CORE - Copenhagen Research Centre for Mental Health, Mental Health Services in the Capital Region of Denmark, Mental Health Centre Copenhagen; 2Mental Health Services in the Capital Region of Denmark, Child and Adolescent Mental Health Centre; 3Aarhus University Hospital; 4University Hospital, Lausanne; 5Center for Telepsychiatry, Mental Health Services, Region of Southern Denmark

Background: There is evidence of higher rates of insecure and disorganized attachment in infancy in children born to parents with severe mental disorders, but evidence on attachment in middle childhood for these children is lacking. This study aims to explore attachment representations in seven-year-old children born to parents with schizophrenia or bipolar disorder. We also aim to explore possible associations between attachment and psychopathology, level of functioning, and psychotic experiences in these children.

- We expect that children at familial high risk will have the highest levels of insecure and disorganized attachment. We expect that population based controls will have the lowest levels of insecure and organized attachment and higher levels of security than children at familial high risk.
- We expect higher levels of insecure and disorganized attachment to be associated with an increased risk of psychopathology, and psychotic experiences and with lower levels of functioning, whereas we expect higher levels of secure attachment to be associated with a lower risk of psychopathology, and psychotic experiences, and with higher levels of functioning.

Methods: The Danish High Risk and Resilience Study VIA 7 is a prospective cohort study of 522 seven-year-old children born in Denmark. The cohort consists of children where one or both parents have been diagnosed with a schizophrenia spectrum disorder (N=202), children where one or both parents have been diagnosed with bipolar affective disorder (N=120) and children where neither of the parents have been diagnosed with these disorders (N=200). Attachment representations were assessed with the Story Stem Assessment Protocol whereas psychopathology, level of functioning, and psychotic experiences were assessed with K-SADS.

Results: Data analyses are ongoing but preliminary results indicate that there are no significant differences in attachment representations between the three groups of children, but that there are associations between higher rates of insecure and disorganized attachment and a higher risk of psychopathology. Results will be presented at the SIRS-conference.

Discussion: There are clear gender differences in the clinical presentation of FEP which are modified by exposure to illicit substances. These findings highlight a need to better understand the impact of gender on clinical presentation and treatment outcomes in psychosis, and to ensure that clinicians are aware of how gender differences in presentation could be modified by illicit substance use.

T129. PHARMACOLOGICAL INTERVENTIONS IN TRIALS OF PEOPLE WITH SCHIZOPHRENIA: A REGISTER-BASED CLASSIFICATION OF SEVENTY YEARS OF RESEARCH

Farhad Shokraneh1

1School of Medicine, University of Nottingham

Background: Drug development is a billion dollar business globally. It is crucial to stay up to date on drug developments all over the world any repetition will be irreversible waste of resources. The only way to keep up with all the development is to keep a living database of all trials running for each condition and covering all studies from every country in any language. An Information Specialist collects and classifies all pharmaceutical interventions from all schizophrenia trials.

Methods: Cochrane Schizophrenia’s Study-Based Register was developed and used as the source of trials, Emtree and MeSH for synonyms, AdisInsight and CT.gov for research drugs and WHO ATC for marketed drugs. This research took four years from 17 December 2014 and 6 January 2019 and involved 18,500 randomized controlled trial from 90 countries in 23 languages.

Results: One third of tested interventions on patients with schizophrenia are pharmacological (816; belonging to 106 clinical classes) with antipsychotic drugs being the most researched (15.1%). Only 528 of these medications are listed in WHO ATC. Around one third of these drug interventions are seen only in research (236; from 21 pharmacological/ biochemical classes). Within the pharmacological evaluations we identified 28 ‘qualifiers’ including dose, route, and timing of drug delivery. Using Data Science approaches, this research revealed unique antipsychotic drugs that are being prescribed only in certain countries such as Japan but the West is not aware of them. This research is also revealed all the research drugs and current trends in developing drugs in pharmaceutical companies.

Discussion: Classification of medication interventions from trials requires use of many sources of information none of which are inclusive of all drugs. Without a global search in all languages the pharmaceutical companies and researchers are missing important successful developments from non-English speaking world. The cycle of developing research/withdrawn drugs does not stop and may end in veterinary medicine, doping agents in sports, and illicit drug market.

T130. A SURVEY OF MENTAL HEALTH LITERACY USING THE INTERNET IN JAPAN

Taiju Yamaguchi1, Yoshiyo Oguchi2, Yasutaka Ojio3, Ryoichi Mori4, Minako Ooka1, Yoko Baba1, Tomoyuki Funatogawa1, Naoyuki Katagiri1, Naohisa Tsujino1, Takahiro Nemoto1, Masafumi Mizuno1

1School of Medicine, Toho University; 2St. Marianna University School of Medicine; 3National Institute of Mental Health, National Center of Neurology and Psychiatry; 4Tokai University

Background: Insufficient mental health literacy (MHL) of the general public is one of the major factors that prevent early intervention for mental illness. Insufficient MHL may exacerbate the stigma attached to people with mental illness. In Japan, there have been few large-scale surveys to
determine the MHL level of the general public. Hence, we conducted a large-scale internet-based survey of 3000 citizens, to clarify the knowledge, attitudes and behaviors of the general public with respect to “prevention of and recovery from mental illness.”

**Methods:** We conducted a survey of 3000 citizens (aged 18 to 79 years, 1483 males and 1517 females) to determine their MHL level, using a questionnaire posted on the internet. The survey consisted of 22 questions about MHL, grouped into 8 categories.

**Results:** The results of our survey were as follows:

1. **Impression of mental illness:** Regarding the question on their impression of mental illness, more than 70% of the respondents answered, “I think it is scary.” This answer was especially likely to be given by younger respondents.

2. **Knowledge of mental illness:** Regarding the question on whether mental illness is related to the living environment and also to suicide, more than 90% of the respondents answered, “I think so.” However, a small proportion of the respondents were aware that mental illness begins in adolescence (65.0%) and that only physical symptoms manifest in some cases of mental illness (40.2%).

3. **Awareness of the importance of mental health:** Regarding the importance of mental health, 94.1% of the respondents answered, “I think so.”

4. **Attitudes and behaviors toward people with mental illness:** Of the respondents, 20% to 30% had interacted with people with mental illness at home, school, workplace or in their neighborhood. Of these, 62.0% thought that they could maintain friendship with them. However, 39.6% of the respondents did not want to live with them, 25.2% did not want to work with them, and 32.0% did not want to live near them; thus, many of the respondents had negative thoughts about establishing close relationships with people with mental illness. The percentage of respondents with such negative thoughts increased with age.

5. **Identification by the subjects of depression, schizophrenia, anxiety disorder and eating disorder using vignettes:** The identification rates of the diseases were as follows: depression (27.3%), schizophrenia (33.7%), anxiety disorder (63.5%), and eating disorder (82.2%). The identification rate of schizophrenia was higher in respondents between the ages of 20s to 40s and decreased in older age groups.

**Discussion:** It was found that in Japan, many citizens were aware of the importance of mental health, but that there was still a stigma attached to people with mental illness. In addition, they were found to be still poorly aware of representative mental illnesses, such as depression and schizophrenia. For improving these aspects, the MHL level of the general public needs to be further improved. In Japan, it has been pointed out that education on mental health as a course on “prevention of and recovery from mental illness” is expected to be started in high schools in 2022. This would be expected to further improve the MHL level of the general public in the near future.

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**T131. EVENT RELATED POTENTIALS (ERPs) DURING FREE VIEWING OF IMAGES WITH INCREASING SEMANTIC COMPLEXITY IN SUBJECTS’ AFFlicted WITH SCHIZOPHRENIA**

Christ Devía1, José Egaña1, Rocío Mayol-Troncoso1, Griciel Orellana Vidal1, Pedro Maldonado1

1University of Chile

**Background:** Currently, the diagnosis of schizophrenia is made solely based on interviews and behavioral observations by a trained psychiatrist. Technologies such as electroencephalography (EEG) are used for differential diagnosis and not to support the psychiatrist’s positive diagnosis. Here, we show the potential of EEG recordings as biomarkers of the schizophrenia syndrome. EEG (electroencephalography) differences between patients with schizophrenia (SCZ) and controls have been reported. Tasks used are complex and specialized, not necessarily resemble natural stimuli/environment to which the brain is adapted. We tested if SCZ global cognitive deficits could be described by EEG features using an ecological and simple approach.

**Methods:** We recorded EEG while schizophrenia patients freely viewed natural scenes, and we analyzed the average EEG activity locked to the image onset. We compared occipital ERPs obtained from 11 subjects with SCZ and 9 aged—matched healthy controls (HC) during free—exploration of images. Image categories included Plain Gray, Pink Noise and Landscapes (n=10 each). ERPs locked to image onset were obtained from occipital electrodes after ocular artifacts rejection (by ICA decomposition).

**Results:** We found significant differences between patients and healthy controls in occipital areas approximately 500 ms after image onset. These differences were used to train a classifier to discriminate the schizophrenia patients from the controls. The best classifier had 81% sensitivity for the detection of patients and specificity of 59% for the detection of controls, with an overall accuracy of 71%. We observed a positive wave after NS (natural scenes) landscape image onset, with late differences between the SZ patients and HCs. After visual inspection of the ERPs from each area (frontal, central, parietal, and occipital), we found significant differences only in the occipital ERP. It had two positive peaks in the HCs but a reduced second peak in the SZ patients. The median ERP at 0.4–0.6 s after image onset for the HCs was 4.14 μV and 1.55 μV for the SZ patients. The patients had a significant decrease in their ERP amplitude compared to the HCs (p = 0.01, Z = 2.35, T = 82, WRS test). Only the occipital electrodes showed differences in this period with the NS images. No other differences between the HC and SZ groups were found at other locations or time periods. We found significant differences between HC and SZ groups at the occipital electrodes only for the NS. Neither gray (p = 0.29, Z = −1.06, T = 101, WRS test) nor pink noise images (p = 0.93, Z = −0.07, T = 114, WRS test) showed significant differences between the HCs and SZ patients at any group of electrodes at this or any other time period.

**Discussion:** This study shows that EEG features can differentiate between SCZ and HC in a simple, instruction–free visual task. Differences in late potentials (>300 ms) and in more complex images suggests deficits in top–down (cognitive) rather than bottom–up (perception) mechanisms. These results indicate that EEG signals from a free-viewing paradigm discriminate patients from healthy controls and have the potential to become a tool for the psychiatrist to support the positive diagnosis of schizophrenia.

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**T132. RETINAL GANGLION CELLS DYSFUNCTIONS IN SCHIZOPHRENIA PATIENTS**

Florent Bernadin1, Thomas Schützer2, Vincent Laprevote1, Raymund Schwan1

1Centre Psychothérapie de Nancy; 2Centre Psychothérapie de Nancy, INSERM U1114, Fédération de Médecine Translationnelle de Strasbourg, Centre Hospitalier Régional Universitaire de Strasbourg

**Background:** Structural and functional retinal anomalies are documented in neurologic, substance use and psychiatric disorders. In schizophrenia, flash electroretinogram (fERG) measures have revealed photoreceptors, bipolar cells and retinal ganglion cells (RGC) dysfunctions. To date, no study has explored RGC using a pattern electroretinogram (pERG) protocol as recommended by the International Society for Clinical Electrophysiology of Vision (ISCEV) standards for RGC measurements. We aim to study