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 the survey 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 is insufficient. However, 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.

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

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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-exploitation of images. Image categories included Plain Gray, Pink Noise and Landscapes (n=10 each). ERPs locked to image onset were obtained from occipital electrodes ader 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 = 2.5, 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.

With an accuracy of 71% we are able to classified subjects. We performed 1350 cross-validation leaving 4 subjects out (two SCZ and two controls), 70.5% of the subjects with schizophrenia were correctly detected.

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.

T132. RETINAL GANGLION CELLS DYSFUNCTIONS IN SCHIZOPHRENIA PATIENTS

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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
T133. NEURAL CORRELATES OF EMOTIONAL PROCESSING IN PSYCHOSIS RISK AND ONSET – A SYSTEMATIC REVIEW AND META-ANALYSIS OF FMRI STUDIES

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Background: Behavioural findings suggest that the emotion processing abnormalities typically observed in established schizophrenia are already present in patients with a first episode of psychosis (FEP). Evidence has been less consistent in people at clinical high risk for psychosis (CHRp). While several studies have reported unaltered behavioural performance on emotion identification in people at CHRp compared to healthy controls, some studies have shown poorer negative emotion recognition. A growing number of functional magnetic resonance (fMRI) studies have investigated brain response to emotion processing to elucidate the mechanisms underlying these processes in FEP patients and CHRp individuals. Despite the marked expansion of this field over the last two decades, to date, no systematic review or meta-analysis has attempted to synthesise the evidence on the neural bases of emotion processing in these groups as potential markers of psychosis vulnerability and expression.

Methods: The PubMed and Ovid MEDLINE databases were searched for published English-language articles applying an emotion processing task during fMRI in a FEP and/or a CHRp sample compared to healthy controls. References of included papers were also screened. For CHRp studies, only those including participants by the basic or attenuated symptom presentation criteria were included. Individual study methodology and results were extracted and systematically reviewed. In addition, at present, statistical parametric mapping contrast maps (‘T-maps’) are being collected from study authors and will be meta-analysed using the Seed-based d Mapping method. The contrasts meta-analysed will be the ones most commonly reported in the studies identified, i.e., of all emotion over comparison conditions and of negative emotion over neutral conditions. These will be meta-analysed separately, as behavioural evidence suggests that emotion recognition performance in these populations might be valence specific.

Results: For the systematic review, 4,389 papers were identified through the search. 19 relevant fMRI papers were identified and their references were screened. 17 articles were included after full-text screening. Six out of twelve fMRI studies in the FEP population reported lower brain activation to emotion processing tasks compared to healthy controls. Four articles reported region-specific hyper- and hypoactivations and two studies found no significant difference. Of the seven studies in the CHRp population, one study reported lower brain response to emotion relative to healthy controls, two studies found hyperactivations, one study found region-specific increases and decreases, and two studies reported no significant difference. The most consistent finding across studies was lower amygdala activation in FEP participants (n=6). Conversely, in the CHRp population one article found an increase in amygdala response to emotion with age, consistently with one other article but contrasting with another study showing activity decreases in this region.

Discussion: To our knowledge, no previous systematic review or meta-analysis has synthesised the fMRI findings of emotion processing in both people at CHRp and a FEP. The present systematic review shows that while more consistent hypoactivations are found in the FEP population, results are less consistent in CHRp studies. The undergoing meta-analysis will quantitatively synthesise these findings. Elucidating the nature of emotion processing aberrances in early psychosis may help understand the functional changes across both vulnerability and symptom emergence phases and inform molecular investigations into its underlying mechanisms.

T134. THE ROLE OF THE DEFAULT MODE NETWORK IN SCHIZOPHRENIA AND AUDITORY VERBAL HALLUCINATIONS – AN INVESTIGATION OF DYNAMIC FMRI RESTING STATE CONNECTIVITY

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Background: There is a wealth of evidence showing aberrant functional connectivity (FC) in schizophrenia but with considerable variability in findings across studies. Dynamic FC is an extension of traditional static FC, in that such analyses allow for explorations of temporal changes in connectivity. Thereby they also provide more detailed information on connectivity abnormalities in psychiatric disorders such as schizophrenia.

Methods: The current study investigated dynamic FC in a sample of 80 schizophrenia patients and 80 matched healthy control subjects. Furthermore, relationships with auditory verbal hallucinations (AVH), a core symptom of schizophrenia, were explored. Two measures of AVH were used, one measure of current AVH severity assessed on the day of scanning, and one trait-measure where AVH were assessed repeatedly over the course of one year.

Results: Compared to healthy controls, schizophrenia patients showed increased dwell times in states with high connectivity within the default mode network (DMN). Current AVH severity did not show a significant relationship with dynamic FC. However, the trait-measure of AVH proneness over one year showed a significant relationship with dynamic FC. Patients with high AVH proneness spent less time in connectivity states characterized by strong anti-correlation between the DMN and task-positive networks.

Discussion: The results provide further evidence for a DMN dysfunction in schizophrenia, which could be linked to thought disturbances in relation to an increased internal focus of cognitive processing. The effects of