

**Background:** People with schizophrenia and related psychotic illnesses have poor physical health and are at an increased risk of developing long-term physical health conditions such as diabetes and heart disease. While this may be due to unhealthy lifestyles, such as lack of physical activity, circadian rhythm problems may also play a part. It is therefore important to be able to measure physical activity and sleep patterns in schizophrenia. This study aims to assess for feasibility by comparing ActiGraph accelerometer data, mobile phone app data and questionnaire data.

**Methods:** A cross-sectional comparison of different assessment methods of sleep and general activity was used. Assessment methods included:

- ActiGraph wGT3X-BT accelerometers worn on the waist and wrist for 7 days.
- Lenovo A Plus smartphone apps 'SleepBot' and 'Google Fit' installed for the purposes of gathering data on sleep and physical activity patterns for 7 days.
- Simple Physical Activity Questionnaire taken at baseline and on day 7.

At the seven-day assessment participants were interviewed using a topic guide covering their experiences. This explored the feasibility and acceptability of the measures and possible barriers for implementation.

**Results:** 14 out of a planned 30 participants who met DSM IV-R criteria for schizophrenia spectrum psychoses have been recruited across Greater Manchester from wards and in the community. All participants were retained for the 7-day study duration. Preliminary assessment has shown concordance between the different measures. 3 out of the 14 participants engaged in vigorous physical activity during the 7 days. All 14 participants spent more than 50% of their time sedentary during the 7 days. Participants showed fragmented sleep with a high number of awakenings.

**Discussion:** Using mobile phones and accelerometers are inexpensive and unobtrusive methods for measuring sleep and physical activity. These measures are feasible and acceptable to people with schizophrenia and are therefore suitable for implementation in routine clinical care. The measures can also be used by service users themselves to enhance their ability to monitor their own physical health. Such self-management and monitoring may encourage goal setting and improve autonomy, which have been found to be associated with increased levels of physical activity.

#### S164. "AT-RISK MENTAL STATES" PROGRAM IN LAUSANNE: INFLUENCE OF RECRUITMENT STRATEGIES ON THE RATE OF FALSE POSITIVES

Alessandra Solida<sup>\*1</sup>, Martine Cleusix<sup>1</sup>, Carline Zorzi<sup>1</sup>, Carina Ferrari<sup>1</sup>, Kim Q. Do<sup>1</sup>, Philippe Conus<sup>1</sup>

<sup>1</sup>Lausanne University Hospital (CHUV)- CH

**Background:** Various strategies have been proposed to improve recruitment of "at risk mental state" patients; they may have an impact on the type of patients who reach such programs. We describe the clinical program for "at-risk" patients implemented in 2014 in Lausanne and the characteristics of referrals over the years.

**Methods:** Help seeking patients aged 14 to 35 were initially referred by health care providers for a specialized evaluation in case of suspicion of a potential "prodromal psychotic state" and more recently selected by PQ-16 (Ising et al. 2012) (cut-off: 6/16).

At-Risk Mental State (ARMS) was defined according to the Basic Symptoms criterion (COPER-COGDIS criteria) from the Schizophrenia Proneness Instrument – Adult version (SPI-A) and to the Clinical High Risk criteria of the Structured Interview for Prodromal Syndromes (SIPS). ARMS patients underwent an extensive clinical evaluation (including Mini-SCID, SOFAS, MARDS, Yung Mania Scale, etc.) and were followed-up every 6 months over 3 years.

**Results:** Within a catchment area of 260 000 inhabitants, 110 patients have been referred to our center since 2014 and 100 completed the investigation.

29 (29%) fulfilled ARMS criteria, 52 (52%) didn't and 19 (19%) were already psychotic.

The proportion of true ARMS patients decreased progressively over the years from 45% in 2014 and 2015, to only 22 and 13.9% in 2016 and 2017. In our sample of help-seekers, the group of patients ARMS-negative received mostly a schizophrenia spectrum diagnosis (26/52 patients, 50%), associated with low psychosocial functioning, even when not in the precise range of at-risk criteria.

**Discussion:** The global prevalence (29%) of ARMS patients in our sample over the 4 years is marginally lower than previous reports on similar tertiary centers, which ranges from 33 to 51% (Kline E., 2014). Our lower prevalence of ARMS patients within the sample may be linked to the limited resources we had to conduct an information strategy and our focus on psychologists and psychiatrists working at our department. The introduction in 2016 of more intense screening strategy based on the use of the PQ-16 lead to an increase in referral numbers but decreased the rate of ARMS among referred patients.

Our results confirm the influence of the recruitment strategy and information campaigns on the prevalence of at-risk patients within a population of help-seekers. The prevalence of schizophrenia spectrum diagnosis in our group of patients ARMS-negative also suggests that a larger "vulnerability" model for psychosis, more sensitive to functioning and negative symptoms and not narrowed on the focus of the risk of imminent acute psychosis, may better fit patients' needs.

#### S165. ALTERED ASSOCIATION BETWEEN PARIETAL GRAY-MATTER VOLUME AND DISSOCIATIVE SYMPTOMS IN SCHIZOPHRENIA: A VOXEL-BASED MORPHOMETRY STUDY

Huai-Hsuan Tseng<sup>\*1</sup>, Chui-de Chiu<sup>2</sup>, Kao Chin Chen<sup>1</sup>, I Hui Lee<sup>1</sup>, Po See Chen<sup>1</sup>, Yen Kuang Yang<sup>1</sup>

<sup>1</sup>National Cheng Kung University; <sup>2</sup>The Chinese University of Hong Kong

**Background:** The presence of dissociative symptoms has been constantly reported in patients with schizophrenia. Dissociative-like experience is also part of the prodromal symptoms in those who have higher risk for psychosis. While the underlying neurobiological causes of dissociative symptoms in patients with schizophrenia remains unclear, a history of trauma seems to be related to their dissociative symptoms, as is seen in dissociative disorders. The traumatic experience has been linked to volumetric alterations in patients with schizophrenia. The current study aimed to explore the associations between past traumatic experience, brain volume alteration and the presence of dissociative symptoms in patient with schizophrenia.

**Methods:** We employed voxel-based morphometry (VBM) to compare the distributions of gray matter volumes (GMV) in 20 patients with schizophrenia (SCZ, 10 Male) and 26 age- and sex-matched healthy volunteers (HV, 11 male). All participants underwent high resolution T1-weighted anatomical images on a 3T MRI system. Past traumatic experience was examined by Brief Betrayal Trauma Survey (BBTS), and the dissociative symptoms were measured by Traumatic Dissociation Scale (TDS).

**Results:** We found a significant GMV reduction in right thalamus area in SCZ relative to HV group ( $p=0.01$ , whole-brain FWE corrected). The GMV in thalamus was negatively associated with high-betrayal traumatic experience in SCZ group ( $r=-0.48$ ,  $p=0.033$ ), but not in HV ( $r=-0.08$ ,  $p=0.71$ ). While examining the association between GMV and dissociative experience, a significant group by dissociation interaction was observed in the left superior parietal lobule/angular gyrus (SPL/AG) was observed ( $p=0.024$ , whole-brain cluster corrected), where negative correlations was observed in HV ( $r=-0.62$ ,  $p=0.001$ ) but positive correlations were observed in SCZ group ( $r=0.67$ ,  $p=0.001$ ). In SCZ group, both traumatic experience and the left SPL/AG GMV significantly predicted the dissociative experience ( $p=0.001$  and  $p=0.011$ , respectively;  $R^2$