not significant (F=30.193, p=0.11). The visual inspection of funnel plots did not reveal a clear suggestion for publication bias and the Egger's test was non-significant (p=0.10).

**Discussion:** Our systematic review and meta-analysis suggest that it is crucial to investigate physical health outcomes such as tobacco use as part of clinical practice in CHR services. Unfortunately, current CHR assessment tools are entirely based on the measurement of psychopathological features and do not include an assessment of these parameters on a regular basis.

**S155. DIETARY PATTERNS AND OBESITY IN INDIVIDUALS WITH SCHIZOPHRENIA**

Nur Amirah Abdul Rashid*, Jimmy Lee

1Research Division, Institute of Mental Health, Singapore

**Background:** It is well established that individuals with schizophrenia, compared to the general population, have reduced lifespan of up to 20–25 years. High mortality rates in schizophrenia is mainly attributed to physical illnesses which include cardiovascular diseases and diabetes. Obesity is a major risk factor for these diseases and is highly prevalent in the schizophrenia population. Although the mechanisms underlying weight gain in schizophrenia is unclear, it is generally accepted that the high obesity rate is a result of various factors which include metabolic effects of antipsychotic treatment, inadequate physical activity and unhealthy diets. This study aimed to (i) examine dietary practices of individuals with schizophrenia in comparison to the general population and (ii) to examine dietary practice correlates with Body Mass Index (BMI) classification of overweight/obese.

**Methods:** A sample of 107 community-dwelling individuals with schizophrenia were enrolled in this cross-sectional study. Height and weight were taken, and BMI was calculated. A 24-hour food recall which allows derivation of nutritional information, and the Dietary Practices Questionnaire (DPQ) which examines dietary habits, were administered based on participants’ usual diet. Dietary information was compared against the general Singapore population based on the National Nutrition Survey 2010 and the National Health Survey 2010. Logistic regression was performed to study the relationship between dietary practice and BMI status; the model was adjusted for age, gender, antipsychotic medication and energy intake.

**Results:** Nutritional information reported by participants showed that the total daily energy (1895.3 kcal ± 684), macronutrient intake (protein: 68.6 g ± 35, carbohydrate: 251.8 g ± 104.8 and total fat: 67.5 g ± 31.8) and dietary fibre intake (16.1 g ± 9.0) was lower than both the recommended Singapore guidelines and intake of the general population. In terms of dietary habits, participants were often eating out and frequented fast food places as much as the general population, and do not usually skip breakfast. The proportion of participants who do not consume sweet desserts (32.7% vs 14.9%) and deep-fried food (21.5% vs 9.6%) were higher than the general population, however the proportion of individuals reporting no intake of sweetened drinks was higher in the latter (20.6% vs 54.6%). The proportion of overweight/obese participants (Male: 70%; Female: 66%) was about twice that of the general population (Male:46.6%; Female: 33.8%). Based on the dietary habits explored, participants who did not consume deep-fried food were less likely to be overweight/obese compared to those who do (OR: 0.3, 95% CI:0.09–0.82, p=0.02).

**Discussion:** Despite potential inaccuracies due to recall or social desirability bias, the results seem to suggest that individuals with schizophrenia were below the recommended energy intake; their nutritional intake and dietary habits were either similar or lower/poorer than the recommended guidelines or the general population. Consumption of deep-fried food was the only dietary habit identified as a potential factor towards overweight/obesity. Despite this, the rate of overweight/obese individuals with schizophrenia were high. As overweight/obesity is the result of imbalance between energy intake and expenditure, future research should explore other lifestyle factors such as physical activity, in addition to dietary practices.

**S156. PUBLIC ATTENTION TO CRIME OF SCHIZOPHRENIA AND ITS CORRELATION WITH USE OF MENTAL HEALTH SERVICES IN PATIENTS WITH SCHIZOPHRENIA**

Hyunwoo Park1, Yu Sang Lee1*, Sang Yup Lee2, Seungyeoun Lee3, Kyung Sue Hong4, Shinsuke Koike5, Jun Soo Kwon6

1Yong-In Mental Hospital, Republic of Korea; 2Yonsei University, Seoul; 3Sejong University, Seoul; 4Sungkyunkwan University School of Medicine, Samsung Medical Center, Seoul, Korea; 5University of Tokyo Institute for Diversity and Adaptation of Human Mind (UTIDAHM), University of Tokyo, Japan; 6Seoul National University College of Medicine, Korea

**Background:** This study was performed to examine the effects of the public attention to ‘crime of schizophrenia’ on the use of mental health services in patients with schizophrenia using big data analysis in Korea.

**Methods:** Data on the frequency of internet searches for ‘crime of schizophrenia’ and the patterns of mental health service utilization by patients with schizophrenia spectrum disorders by month were collected from Naver big data and the Health Insurance Review and Assessment Services in Korea, respectively. Their correlations in the same and following month for lagged effect were examined.

**Results:** The number of outpatients correlated negatively with public attention to ‘crime of schizophrenia’ in the same month. The lagged relationship between public attention and the number of admissions in psychiatric wards was also found. In terms of sex differences, the use of outpatient services among female patients correlated negatively with public attention in the same month while the number of male patients’ admissions in both same and following month correlated positively with public attention.

**Discussion:** These findings suggested that public attention to ‘crime of schizophrenia’ could negatively affect illness behavior in patients with schizophrenia.

**S157. A MULTICENTER HARMONIZED DIFFUSION TENSOR IMAGING STUDY ON THE ASSOCIATION OF WHITE MATTER STRUCTURE AND CLINICAL FUNCTIONING**

Johanna Seitz1*, Suheyla Cetin Karayumak1, Joanne Wojcik2, Amanda Lyall3, James Levitt1, Ofer Pasternak1, Madhura Baxi4, Sinead Kelly5, John Sweeney6, Petra Viher7, Katharina Stegmayr2, Sebastian Walther1, Jungsun Lee4, Timothy J. Crow9, Anthony James10, Aristotle Voineskos11, Robert Buchanan12, Philip Szeszko13, Anil Malhotra14, Martha Shenton1, Yogesh Rathi1, Matcheri Keshavan15, Marek Kubicki16

1Brigham and Women’s Hospital, Harvard Medical School; 2Beth Israel Deaconess Medical Center; 3VA Boston Healthcare System/ Harvard Medical School; 4Graduate Program of Neuroscience, Boston University; 5Brigham & Women’s Hospital, Beth Israel Deaconess Medical Centre, Harvard Medical School; 6University of Texas Southwestern; 7University Hospital of Psychiatry Bern; 8Asan Medical Center, University of Ulsan College of Medicine; 9SANE POWIC, Warneford Hospital, Oxford, UK; 10University of Oxford; 11Centre for Addiction and Mental Health; 12University of Maryland School of Medicine; 13Feinberg School of Medicine At Mount Sinai; 14Zucker Hillside Hospital; 15Brigham Deaconess Med. Ctr. & Harvard Medical School
Background: The association of white matter (WM) abnormalities with clinical variables in schizophrenia (SCZ) is poorly understood. We investigated the clinical correlates of WM impairments using imaging data of 597 patients with SCZ and 490 healthy controls (HC). We focused on lifelong changes of WM (measured by Fractional Anisotropy [FA]) in SCZ and compared it to that of HC. We investigated how age, duration of illness, and medication influence WM trajectories, and examined how structural impairments are related to symptoms and cognition. Last, we tested for the role of sex in structure-function interactions.

Methods: Diffusion-weighted images and clinical measurements were collected as part of 13 independent studies, and data was harmonized across all sites. We registered images to the IIT Human Brain Atlas and averaged FA for forceps major, forceps minor, cingulum, inferior fronto-occipital fasciculus, inferior longitudinal fasciculus, superior longitudinal fasciculus (SLF) and uncinate fasciculus.

First, we modeled the FA age trajectory of each tract in HC and used it to regress out the effect of age in patients. The residuals in the FA values were utilized for further analyses. We conducted mediator regression analyses with FA as the dependent variable, sex as a covariate, and age and duration of illness as the independent variables. Next, patients were grouped based on Chlorpromazine equivalent dosage (CPZ) and CPZ group was added to the regression model. To examine the association between structure and function, a structural equation model (SEM) was used, with cognition as a mediator. Last, all analyses were repeated for males and females separately.

Results: Regression analyses revealed a significant influence of duration of illness on the forceps major (T=3.24, p<.001), forceps minor (T=3.40, p<.001), and SLF (T=3.83, p<.0001). When adding both age and duration of illness, duration of illness mediated the influence of age on FA. Adding CPZ to the model displayed a significant effect of medication on forceps major (T=3.93, p<.0001).

For SEM, FA of all tracts was used to represent structural impairment, and symptom scores were used to reflect functional impairment. All data paths were calculated with an asymptotically distribution-free model. The overall model fit was acceptable (RMSEA = .09) with a medium-strong effect of structural impairment on functional impairment (standardized estimate = .44).

When separating sexes, males showed a significant association of duration of illness and FA. Females displayed a stronger influence of structural impairment on functional impairment (standardized estimate: males = .29, females = .52), and cognition had an impact on this relationship for females only.

Discussion: The effect of duration of illness on specific WM tracts suggests a progressive, neurodegenerative pathology, which might contribute to the devastating effects of chronicity. Medication seems to have a small, localized effect on corpus callosum WM integrity. However, since our analysis used cross-sectional CPZ measures, future studies should include measurements of lifetime dosage. The observed impact of WM abnormalities on function further highlights the importance of WM for SCZ pathology.

The association of structure and function seems sex-specific. Men show a stronger effect of chronicity. For females, cognition mediates the effect of structure on function, suggesting the role of cognitive reserve.

Our approach provides the first step towards evidence-based medicine, by demonstrating the apparent relationship between structural pathology and functional outcome and suggesting possible mediators of this relationship, including duration of illness, cognition, medication, and sex.

S158. URBANICITY INDEX AND CORTICAL GYRIFICATION IN SCHIZOPHRENIA
Vittal Korann*, Umesh Thonse1, Arpitha Jacob1, Vaishnavi A Patil1, Sahana Shiri1, Priyanka Devi1, Bhargavi Nagendra1, Mudgha Kunte1, Ayushi Shukla1, Anantha Padmanabha1, Vijay Kumar K G1

S159. SUBCORTICAL GRAY MATTER VOLUME IS ASSOCIATED WITH SCHIZOPHRENIA AND WITH BOTH ITS FAMILIAL AND CLINICAL RISK
Robert Passiato1, Linda A Antonucci1, Leonardo Fazio1, Barbara Gela1, Andrea Falsetti1, Grazia Caforrio1, Teresa Popolizio1, Alessandro Bertolino1, Giuseppe Blasi1, Giulio Pergola1, Linda Antonucci1

University of Bari – Italy, 1Psychiatry Unit - Bari University Hospital – Italy, 1IRCCS Casa Sollievo Della Sofferenza – San Giovanni Rotondo, Italy, 2Lieber Institute for Brain Development - Baltimore, MD, 3University of Bari Aldo Moro

Background: Patients with schizophrenia (SCZ) show lower volumetric estimates of gray matter (GM) than healthy controls (HC). Similar results have been reported in healthy siblings of patients (SIB). However, it is unclear whether this phenotype is also present in individuals at clinical high-risk (CHR), characterized by sub-threshold symptoms and loss of...