the methodological bottlenecks that impede the clinical translation of diagnostic and prognostic tools.

**Methods:** We systematically reviewed the literature on diagnostic and prognostic models built on Cox regression and ML. Further, we conducted a meta-analysis on accuracy performances investigating effects of the following moderators: age, sex, data modality, algorithm, presence of cross-validation (CV), being a multisite study and year of publication. For prognostic studies we investigated also follow-up time and prognostic target. All analyses were conducted with R v3.6.0. and results were corrected for False Discovery Rate.

**Results:** 44 articles were included for a total of 3707 individuals for prognostic and 1052 for diagnostic studies (572 CHR and 480 healthy controls, HC). CHR could be classified against HC with 78% sensitivity (95%-CI: 63%-83%) and 77% specificity (95%-CI: 68%-84%). Across prognostic models, sensitivity reached 67% (95%-CI: 63%-70%) and specificity 78% (95%-CI: 73%-82%). Our results point to a higher sensitivity of ML models compared to Cox regression in prognostic studies (p = .009; $\chi^2(2) = 6.96$, p = 0.031). This effect was collinear with that of CV, due to the overlap of this factor with algorithm type. Notably, there was a publication bias for prognostic studies (R2 = 0.26, p < .001), yet no significant effects of data modality, CHR or CV type, prognostic target, or any other confounding variable (e.g., age distribution, sex, year of publication or follow-up interval time) on accuracy performance.

**Discussion:** Our results point to a good models' performance overall and no effects of data modality or patient population. ML outperformed Cox regression in diagnostic studies, these, however, showing a publication bias. These results may be driven by substantial clinical and methodological heterogeneity currently affecting several aspects of the CHR field. A comprehensive change within the current CHR paradigm is required to enable the clinical application of diagnostic and prognostic models for the at-risk state. First, the field requires study design harmonization, which demands, for instance, reliable methodological approaches like cross- or external validation to ensure generalizability. Second, efforts may be made in unifying the CHR definition, both theoretically and practically, and also embrace relevant non-transition outcomes to broaden the prognostic scope. Future studies are needed to investigate whether harmonising procedures within precision psychiatry will lead to more reliable and reproducible translational research in the field.

**T108. CASE REPORT OF A PATIENT WITH CATATONIA**

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**Background:** Catatonia is a condition defined by the presence of marked psychomotor features that typically include decreased motor activity, decreased engagement or excessive or peculiar motor activity. It is frequently associated with schizophrenia, but also presents in individuals with mood disorders or other neurological or medical conditions.

**Methods:** We present the case of a 40 year old single Chinese female with borderline intellectual disability who was working as a sales assistant. She presented to medical services with poor oral intake and 8kg weight loss over two months. There was transient fever over a day with a maximum of 38.1°C. No other physical symptoms were elicited. There was a significant change in behaviour, with gradual decline in oral intake and decreased speech. She became more socially withdrawn and neglected self care, as a result she was unable to continue at work two weeks prior to presentation. There was no reported decreased mood, tearfulness or suicidality. She briefly expressed on different occasions that she was ‘already dead’, ‘lost all her blood’ and thought that food was poisoned. There were no reported hallucinations.

Mental state examination revealed a thin Chinese female who was staring blankly into space. She did not establish or maintain eye contact, nor did she respond to verbal or physical stimulation. There was minimal speech. She did not appear depressed. There was no stereotypy, mannerisms, echopraxia, waxy flexibility or negativism.

**Discussion:** Catatonia can be the main presenting symptom following psychosocial stress.

**T109. TRAVERSING THE TRANSDIAGNOSTIC GAP BETWEEN DEPRESSION, MANIA AND PSYCHOSIS WITH NATURAL LANGUAGE PROCESSING**

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**Background:** The biological, clinical and social factors which underpin the aetiology of psychotic disorders are known to overlap between different ICD-10/DSM-5 diagnostic categories. A transdiagnostic approach to investigate clinical phenotype may enable a better understanding of pathophysiology at individual patient level. We applied natural language processing (NLP) tools to electronic health record (EHR) data from patients presenting with an ICD-10 diagnosis of unipolar depression to determine if symptoms at diagnosis could predict subsequent onset of a bipolar or psychotic disorder.

**Methods:** Data were obtained from 20,582 adults presenting with unipolar depression (ICD-10 F32 or F33, excluding F32.3 and F33.3) to the South London and Maudsley (SLaM) NHS Foundation Trust between April 2006 and March 2018. Natural language processing (NLP) techniques were used to extract data on 21 mood and affective symptoms from free text clinical assessments documented in the period -3/+3 months from the date of the diagnosis of unipolar depression. We obtained descriptive analyses of demographics and symptom prevalence. Symptoms were categorised into four groups: 1. Depressive (low mood, anhedonia, feelings of guilt, hopelessness, helplessness, psychomotor retardation, worthlessness, tearfulness, low energy), 2. Manic (elation, grandiosity, pressured speech, flight of ideas), 3. Biological symptoms (insomnia, disturbed sleep, low appetite, weight loss, poor concentration) and 4. Emotional/behavioural symptoms (mood instability, agitation, irritability). The symptom network structure was estimated using the Enhanced Least Absolute Shrinkage and Selection Operation procedure. We assessed network stability via a case-dropping bootstrapping procedure. We investigated associations between each of the four symptom groups and clinical outcomes using multivariable Cox regression to predict five-year risk of bipolar disorder (ICD-10 F30/F31) or a psychotic disorder (ICD-10 F2*).

**Results:** Of all patients presenting with unipolar depression, 19,569 (95.1%) had at least one documented depressive symptom, 16,199 (78.7%) had at least one biological symptom, 10,006 (48.6%) had at least one emotional/behavioural symptom, and 1,372 (6.67%) had at least one manic symptom.
Patients with at least one manic symptom were significantly more likely to be male (OR: 1.25 (95% CI 1.12 - 1.40), p < 0.001) and less likely to be of Black (OR: 0.80 (0.68 - 0.93), p = 0.004) or Other ethnicity (OR: 0.78 (0.66 - 0.91), p = 0.003). Elation was the most commonly reported manic symptom (3.17%). Network analysis revealed that the presence of manic symptoms was associated with co-occurrence of agitation, irritability and mood instability. Agitation was the most central symptom in terms of strength, betweenness and expected influence. The resulting network remained stable after dropping up to 33% of cases from the sample.

1.861 (9.04%) patients who initially presented with unipolar depression subsequently developed a mania/bipolar disorder or psychotic disorder within 5 years. The presence of at least one manic (HR: 1.71, 1.50 – 1.97), biological (HR: 1.33, 1.16 – 1.53) or emotional (HR: 1.91, 1.73 – 2.13) symptom was associated with significantly increased risk of onset of a bipolar or psychotic disorder.

Discussion: We found that patients with unipolar depression have a heterogeneous clinical phenotype with a significant proportion going on to develop a bipolar or psychotic disorder within 5 years. Symptoms extracted from the EHR using NLP were predictive of subsequent onset of a bipolar or psychotic disorder. A transdiagnostic approach to defining clinical phenotype may help to better predict subsequent clinical outcomes.

T110. CLINICAL CHARACTERISTICS OF FORMAL THOUGHT DISORDER IN SCHIZOPHRENIA

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Background: Our study aimed to present the distinctive correlates of formal thought disorder in patients with schizophrenia, using the Clinical Language Disorder Rating Scale (CLANG)

Methods: We compared the formal thought disorder and other clinical characteristics schizophrenia patients with (n = 82) and without (n = 80) formal thought disorder. Psychometric scales including the CLANG, Brief Psychiatric Rating Scale (BPRS), Young Mania Rating Scale (YMRS), Calgary Depression Scale for Schizophrenia (CDSS) and Word Fluency Test (WFT) were used.

Results: After adjusting the effects of age, sex and total scores on the BPRS, YMRS and WFT, the subjects with disorganized speech presented significantly higher score on the poverty of contents of abnormal syntax (F = 7.08, P = 0.01), lack of semantic association (F = 8.02, P = 0.01), disclosure failure (F = 60.97, P < 0.001), pragmatism disorder (F = 11.94, P = 0.01), dysarthria (F = 13.61, P < 0.001), and paraphasic error (F = 8.25, P = 0.01) items than those without formal thought disorder. With defining the mentioned item scores as covariates, binary logistic regression model predicted that disclosure failure (adjusted odds ratio [aOR] = 5.88, P < 0.001) and pragmatics disorder (aOR = 2.17, P = 0.04) were distinctive correlates of formal thought disorder in patients with schizophrenia.

Discussion: Disclosure failure and pragmatistics disorder might be used as the distinctive indexes for formal thought disorder in patients with schizophrenia.

T111. GINKGO BILOBA INDUCED MOOD DYSREGULATION: A CASE REPORT

Abstract not included.

T112. PTSD AS A MEDIATOR OF THE RELATIONSHIP BETWEEN TRAUMA AND PSYCHOTIC EXPERIENCES

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Background: Trauma exposure is linked to the development of psychotic illnesses, but little is known about potentially modifiable mechanisms underlying this relationship. Despite the high prevalence of PTSD symptoms in psychotic illnesses, only a few studies have examined the role of PTSD as a mediator, and these were all cross-sectional. This study aims to examine whether PTSD symptoms mediate the relationship between trauma and psychotic experiences (PE), using data from a large birth cohort study.

Methods: We used data from the Avon Longitudinal Study of Parents and Children (ALSPAC) to test whether: a) PTSD symptoms (at age 15) mediate the relationship between childhood trauma (age 0–14 years) and adolescent frequent or distressing psychotic experiences (age 12–18 years) (study of adolescent PE; n = 2,952), and b) PTSD symptoms (reported at age 24 for traumatic event occurring before age 19) mediate the relationship between childhood/adolescent trauma (age 0–17 years) and incident frequent or distressing psychotic experiences in early adulthood (age 19–24 years) (study of adult PE; n = 2,492).

Associations between the variables of interest were examined with logistic regression, and mediation with the parametric g-computation formula. As sensitivity analyses, we i) examined broader and narrower psychotic outcomes, ii) included a measure of psychotic-like experiences at age 14 years as an intermediate confounder in the mediation model for adolescent psychotic experiences, and iii) repeated analyses using imputed data.

Results: Exposure to trauma was associated with increased odds of psychotic experiences and PTSD symptoms both in adolescence and early adulthood (p<0.001). The association between PTSD and psychotic experiences was stronger in adolescence (p<0.001) than in adulthood (p=0.03). There was moderate evidence that PTSD symptoms mediated the relationship between childhood trauma and adolescent psychotic experiences (propotion mediated 14%), though evidence of mediation was much weaker for adult PE (proportion mediated 8%).

In sensitivity analyses we observed similar results when using imputed data, and when modelling psychotic experiences at age 14 as an intermediate confounding for the adolescent PE outcome. The proportion mediated increased when examining more narrowly defined outcomes (19% for adolescent psychotic disorder).

Discussion: These findings provide some evidence consistent with the thesis that psychotic experiences and disorder can occur consequent to PTSD symptoms after trauma exposure. Targeting PTSD symptoms might help prevent the occurrence of psychotic experiences and disorder in people with a trauma history.

T113. CATEGORICAL AND DIMENSIONAL APPROACHES EXAMINING THE JOINT EFFECT OF AUTISM AND SCHIZOTYPAL PERSONALITY DISORDER ON SUSTAINED ATTENTION

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Background: Accumulating evidence for the co-occurrence Autism spectrum disorder (ASD) and schizotypal personality disorder (SPD) at both the diagnostic and symptom/trait levels raises important questions about the nature of their association and the effect of their co-occurrence on the individual's phenotype and functional outcome. It has been recommended that informing etiological and phenotypic overlaps between ASD and schizophrenia spectrum disorders (SSD) would require the utilization of a dual-diagnosis cohort compared with two control groups, each singly diagnosed with ASD or SSD, and that the development of a multidimensional model for understanding the relationship between these two spectra would require cohorts to be described not solely by diagnosis, but also by using dimensional measures that cut across diagnostic boundaries. Research comparing adults with ASD and SPD, as