burden some throughout the individual’s lifespan (Ratnasingham et al., 2012). Consequently, new care approaches are needed.

The TELEPROM-Y project will evaluate outpatient health care delivery using InputHealth’s electronic Collaborative Health Record (CHR) at London Health Sciences Centre, St. Joseph’s Health Care London, Woodstock General Hospital, and community agencies including Youth Opportunities Unlimited, WAYS Mental Health Support, and Leads Employment Services.

**Methods:** 120 youth (ages 14–25) will be recruited from the caseloads of 46 mental healthcare providers. Participants will use a smartphone application (app) to connect to the Collaborative Health Record. Semi-structured interviews will be conducted at baseline, 6, and 12 months. This is a participatory action research project utilizing a pre-post, mixed-methods design. A standardized evaluation framework will be instituted to facilitate systematic effectiveness, economic, ethical, and policy analyses.

Some of the functions of the app, available for Apple and Android phones, include: making/changing/canceling appointments; text messaging; emailing, and filling out questionnaires/surveys. If the youth are unable to attend a scheduled appointment in person, the care-provider and youth can have a virtual visit, similar to FaceTime or Skype. Virtual visits should reduce missed appointments.

**Results:** Descriptive information thus far of 104 participants: Psychotic Disorder (e.g. schizophrenia) (13, 12.6%), Developmental handicap (e.g. Autism) (7, 6.8%), Anxiety Disorder (e.g. PTSD) (73, 70.9%), Disorder of childhood/adolescence (e.g. ADHD) (37, 35.9%), Substance-related disorder (13, 12.6%), Personality Disorder (17, 16.5%), Mood Disorder (e.g. depression, bipolar mood disorder) (70, 68.0%), Unknown (4, 3.9%), Other (19, 18.4%).

**Discussion:** We anticipate that through the usage of the TELEPROM-Y app the participant and care-provider experience will be enhanced, leading to 1) improved healthcare outcomes and patient quality of life, and 2) reduced healthcare costs by preventing hospitalization and reducing the need for face-to-face outpatient visits.

**T103. THE EFFECT OF VIRTUAL REALITY COGNITIVE BEHAVIORAL THERAPY ON PARANOIA AND MOOD STATES**

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**Background:** Recently, the efficacy of a novel virtual reality based cognitive behavior therapy (VR-CBT) for paranoia was demonstrated. Evidence is growing that the maintenance of psychosis may be influenced by affective processes. This study examined how treatment with VR-CBT influenced positive and negative affect states, and whether the interplay between mental states was affected.

**Methods:** The sample consisted of 91 patients with a psychotic disorder randomized either to 16-session individual VR-CBT or treatment as usual. The experience sampling method (ESM; a structured diary technique) was used to assess mental states at baseline, post-intervention and 6-month follow-up. Mixed model analyses were conducted to study treatment effects. Lagged associations between mental states were estimated at baseline and post-intervention, and were visualized with networks.

**Results:** VR-CBT, but not treatment as usual, resulted in reduced levels of paranoia and negative affect. At pre-intervention networks depicting the dynamic interplay between mental states over time had limited significant connections, with most stable connections being auto-relations. I.e., paranoia was best predicted by paranoia at the previous moment. The dynamic interplay between affective states did not change over time after VR-CBT.

**Discussion:** We found that VR-CBT specifically targets paranoia and there are indications that VR-CBT had an enduring effect on negative emotions. Unexpectedly, we did not find evidence that negative mental states such as feeling down or lonely triggered paranoia in the next moment even at pre-intervention, and these temporal relations between mental states did not change over time in response to treatment.

**T104. PSYCHOTIC-LIKE EXPERIENCES AND PROBLEMATIC GAMING BEHAVIOR IN ONLINE GAME FORUMS**

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**Background:** Psychotic-like experiences (PLE) are reported in the general population, characterizing a non-clinical psychosis phenotype. Although those who report PLE have a higher probability of transitioning to psychosis, PLE are usually a transitory state, and most individuals will not transition to psychosis. However, PLE samples may experience symptoms such as social withdrawal, social anxiety, or social anhedonia. These symptoms may lead individuals with PLE to choose online gaming as a preferred means of social interaction.

**Objective:** This study aims to examine the relation between PLE and problematic online gaming.

**Methods:** An online questionnaire was posted in online game forums, on online fan-pages with German-speaking domains and in social media groups. Data from adolescents and young adults (14 to 30 years old; 55.4% males) from Austria and Germany (N=280) was analyzed. Measures: PLE were assessed with the Early Recognition Inventory based on the Interview for the Retrospective Assessment of the Onset of Schizophrenia (ERIaas); problematic gaming behavior was assessed with the Compulsive Internet Use Scale (CIUS) adapted for online gaming; social anxiety was assessed with the Mini-Social Phobia Inventory (Mini-SPIN); preference for online social interactions was assessed with the Preference for Online Social Interaction scale (POSI). Analyses: Problematic gaming behavior was divided into two groups based on the suggested cut-off point of ≥18 on the CIUS (i.e., ≥18 gaming disorder vs. <18 no gaming disorder). Multivariable logistic regression analyses were performed and adjusted for sex, age, gaming hours, POSI, and social anxiety.

**Results:** A total of 63 individuals reached the cut-off for a gaming disorder, while 217 did not reach the cutoff. The majority of subjects in the gaming disorder group were males, young adults (19–24 years old, M=23.1, SD=3.7), single, or had less than high school diploma. Individuals who experienced an increased amount of PLE had a higher probability of reaching the cut-off for a gaming disorder (AOR=1.35 [95% CI 1.19–1.53]). Males were three times as likely as females to have a gaming disorder.

**Discussion:** Results implicate a close relation between the phenomena of PLE and continued problematic gaming behavior.

**T105. VERBAL MEMORY MEASUREMENT TOWARDS DIGITAL PERSPECTIVES IN FIRST-EPIPHISOD PSYCHOSIS: A SYSTEMATIC REVIEW STUDY**

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**Background:** Psychosis is a clinical syndrome which can have detrimental effects on patients in different aspects of functioning such as thought, behavior, and cognition. Even in early phases psychotic spectrum illnesses like schizophrenia, patients can experience cognitive decline prior to overt affective states. Unexpectedly, we did not find evidence that negative mental states such as feeling down or lonely triggered paranoia in the next moment even at pre-intervention, and these temporal relations between mental states did not change over time in response to treatment.
classical symptoms like delusions and hallucinations. Early detection and reducing the duration of untreated psychosis through early intervention can prevent or slow the progress of cognitive symptoms and the entire illness. Although cognition research in early psychosis has demonstrated that verbal memory is one of the first cognitive domains impacted in first-episode of psychosis and continuously declines after the first-episode, it is still not clear which tests are most widely used to measure verbal memory and which may be most amenable to being translated to a digital format. In this systematic review, we assessed which verbal memory assessments are most widely used in first-episode psychosis and may be potentially applied via digital technologies (smartphone applications, telepsychiatry, chatbots, etc.) for use in early detection in the future.

Methods: From September to November 2019, we searched studies measured verbal memory in first-episode psychosis or schizophrenia over the past 10 years on PubMed and PsyCINFO. We screened abstracts of these studies and we excluded review studies and duplicates. We downloaded full-texts of included studies to identify the verbal memory measurement tests used, follow-up frequencies, and sample sizes.

Results: We screened 233 papers and found that 121 original research studies measured verbal memory in first-episode psychosis over the past 10 years. Of these 121 studies, 32(26%) used Rey Auditory Verbal Learning Test (RAVLT), 29(24%) used California Verbal Learning Test (CVLT), 27(22%) used Weschler Memory Scale (WMS), 14(12%) used Hopkins Verbal Learning Test (HVLT), 4(3%) used both WMS and CVLT, 3(2%) used both WMS and RAVLT, and 12(10%) used other tests to measure verbal memory. Four (3%) of these studies specified that they used a computer, 23(20%) used paper-pen, 2(2%) studies used both, and 92(76%) studies did not specify their verbal measurement application tools. Thirty-six (30%) studies had follow-up measurements of verbal memory, while 85(70%) studies had only a single time point verbal memory measurement during the study period. Study sample sizes range from 6 to 498.

Discussion: We found that four main tests to measure verbal memory in first-episode psychosis are RAVLT, CVLT, WMS, and HVLT although they are not often administered via technology. Of these four verbal memory measurement tests, RAVLT is the most widely used and HVLT is easier to administer while CVLT appears to assess a broader range of verbal memory domains. There is an emerging opportunity to apply RAVLT, CVLT, WMS, and HVLT via digital technologies for expanding access to early detection of cognitive decline in clinical high risk and first-episode psychosis.

T106. CHILDHOOD TRAUMA IS ASSOCIATED WITH THEORY OF MIND IMPAIRMENT IN SCHIZOPHRENIA-SPECTRUM PSYCHOSIS

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Background: Childhood trauma (CT), a generic term encompassing experiences of severe abuse and neglect during childhood and adolescence, has been established as an important risk factor for the emergence of psychosis. Among the potential pathways involved in the CT-psychosis association, Theory of Mind (ToM) disruption holds a central position. ToM reflects the ability to attribute distinct mental states to oneself and other people, and correctly infer the beliefs, wishes, intentions and dispositions of others in order to predict their behavior and produce proper social responses. ToM is further elaborated in 1st order ToM (ToM1: the ability to understand that someone may hold a false belief about the state of the world) and 2nd order ToM (ToM2: the ability to understand that one person may hold a false belief about the belief of another person). Research shows that patients with schizophrenia-spectrum psychosis (SSP) exhibit marked deficits in ToM, CT may increase SSP risk by disrupting the emergence of normal ToM skills, thus inducing a vulnerability for cognitive errors, perceptual aberrations and impaired reality testing. Our study sought to explore the effect of CT on ToM performance in a group of SSP patients and a healthy control group (HC).

Methods: We compared 63 SSP patients to a healthy control group on measures of CT and ToM. CT (presence of parental antipathy, parental neglect, physical abuse, sexual abuse) was assessed with the Childhood Experience of Care and Abuse Questionnaire (CECA.Q). ToM1 and ToM2 performance was measured with the Perception of Social Inference Test (PESIT). Chi-squared analysis was performed to compare CT rates between SSP patients and HCs. Mann-Whitney U tests were employed to detect differences in ToM between the two groups. Within each group, the impact of CT and polytraumatization (accumulation of different CT types) on ToM performance was examined.

Results: SSP patients displayed significantly higher CT rates (q2 (1, N = 124) = 34.5, p < .001) and worse ToM performance (ToM1: U = 653.5, p < .001; ToM2: U = 435.5, p < .001) than HCs. SSP inpatients were 11.6 times more likely to have been exposed to severe CT than HCs. Within the SSP group, CT was associated with increased ToM2 deficits (U = 259, p = .020), while polytraumatization was negatively correlated to both ToM1 (rs = -.297, p = .020) and ToM2 (rs = -.341, p = .007) performance. Maternal antipathy (U = 207, p = .036) and neglect (U = 148, p = .017) were the CT subtypes associated with worse ToM2 performance. No similar effects were detected within the HC group.

Discussion: Our finding of ToM deficits in SSP patients may indicate a bi-directional association, involving on the one hand a negative effect of psychotic illness on ToM skills, and on the other hand a vulnerability towards psychosis induced by severe, early disruptions in normal ToM acquisition. Worse ToM performance in SSP patients with cumulative CT may signify an additive or synergistic effect of CT and psychosis on ToM skills. The involvement of maternal antipathy and neglect in the aforementioned association highlights the pivotal role of the mother in the development of the child's capacity to envision distinct mental states in self and others, a prerequisite for self-awareness and self-other individuation. The failure to detect similar effects in HCs may be attributed to the low frequency of CT in this group, potentially restricting the strength of this analysis. On the same matter, another explanation could be that CT by itself is not a sufficient condition for ToM impairment, and only becomes relevant when it acts in synergy with other harmful processes inherent in psychosis.

T107. INDIVIDUALIZED DIAGNOSTIC AND PROGNOSTIC MODELS FOR PATIENTS WITH PSYCHOSIS RISK SYNDROMES: A META-ANALYTIC VIEW ON THE STATE-OF-THE-ART

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Background: The Clinical High Risk (CHR) paradigm has led research into the biological and clinical underpinnings of the risk for psychosis, aiming at predicting and possibly preventing transition to the disorder. Statistical methods like machine learning (ML) and Cox proportional hazard regression have enabled the construction of diagnostic and prognostic models based on different data modalities, e.g., clinical risk factors, neurocognitive performance, or neurobiological data. However, their translation to clinical practice is still hindered by the heterogeneity both of CHR populations and methodologies. One way to tackle this issue is to use a meta-analytic approach to quantitatively investigate models' performance throughout different outcomes, algorithms and data modalities. The aim of this work was, thus, to investigate the effects of (I) data modality, (II) type of algorithm, and (III) validation paradigms on prognostic and diagnostic models' performance. We expect our results to facilitate a deeper understanding of the state-of-the-art within the CHR research field and clarify...