

O6.4. GOOGLE SEARCH ACTIVITY IN EARLY PSYCHOSIS: A QUALITATIVE ANALYSIS OF INTERNET SEARCH QUERY CONTENT IN FIRST EPISODE PSYCHOSIS

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Background: With high user adoption rates, especially among adolescents and young adults, the Internet has become a go-to source for health-related information for individuals suffering from psychiatric illness. From the perspective of researchers and clinicians looking to improve pathways to care and reduce the duration of untreated psychosis in schizophrenia, the Internet holds vast potential as a means by which clinicians can identify and engage individuals with early psychotic illness. In order to inform the development of advertisement-based interventions that optimize user engagement, a deeper understanding of what types of symptoms and experiences lead these individuals to consult the Internet is needed. Our study sought to identify common Google search themes entered by individuals with early psychosis prior to the first hospitalization in hopes of informing the development of novel online interventions.

Methods: Individuals hospitalized for psychosis between December 2016 and September 2017 provided access to their Google archive data for manual qualitative evaluation of search content. Searches conducted during the 6-month time period prior to the participant's first hospitalization for psychosis were extracted and evaluated for search activity associated with mental health-related themes.

Results: Of 20 archives reviewed, the following notable search themes were observed to repeat amongst participants. Search data is reported below by search theme. Search themes described here are followed by the number of participants who searched that theme, and subsequently, the percentage of the sample this accounted for. Delusions: 15 (75%), Illicit Drug Use: 8 (40%), Negative symptoms (e.g., social withdrawal, decline in functioning): 6 (30%), Anxiety: 4 (20%), Depression: 3 (15%), (Suicide: 2 (10%), Violence: 2 (10%), Hallucinations or related terms did not appear in our sample.

Discussion: Our findings support the notion that prior to their first clinical contact with psychiatric practitioners, individuals with early schizophrenia spectrum disorders are using the Internet for the purpose of obtaining information related to their symptoms and experiences. While our sample size was relatively small, the participants in our study sought information related to anxiety, mood, decline in function, and social withdrawal, rather than information related to hallucinatory or delusional themes. It is of note that while delusions did appear in 75% of our sample's search archives, they were highly nuanced and did not related to help or information seeking themes. Exploring what experiences motivate this population to seek information via the internet is a key first step in developing targeted online interventions that seek to engage prospective patients with offers for evaluation and treatment. If automated algorithms can be developed to help screen for psychotic illness via digital footprints, the challenge of engaging the target population with your advertisement remains. Our work implies that user engagement is likely to be optimized by offering treatment for the distressing experiences that lead these individuals to engage in online information seeking behaviors namely; anxiety, mood, decline in function, and social withdrawal. Our work has additional implications related to clinical collateral, risk assessment and privacy concerns, as searches related to suicide, illicit substance use, procuring firearms, and violence were identified in our sample. Our work highlights the need for stakeholders in this space to engage in discussions about how to integrate Internet data into research and clinical care in a thoughtful and productive manner.

O6.5. INVESTIGATING VARIABLES FROM THE NAPLS RISK CALCULATOR FOR PSYCHOSIS IN THE EU-GEI HIGH RISK STUDY

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Background: Individuals at clinical high risk (CHR) for psychosis have approximately a 25% chance of transitioning to psychosis in the first 2 years after first presentation to clinical services. A key aim in this field is to determine the risk of conversion for an individual meeting the criteria for CHR based on clinical, demographic and neuropsychological measures. An individualized risk calculator incorporating 8 risk factors based on these measures has recently been developed by the researchers from the North American Prodrome Longitudinal Study (NAPLS-2) and tested in their dataset of CHR participants.

Methods: We examined the risk factors from the NAPLS risk calculator in the EU-GEI (EU funded gene environment interaction) high risk study. The EU-GEI high risk study is a longitudinal multi-centre study including 9 sites in Europe, 1 site in Australia and 1 site in Brazil. At baseline, the study included 345 CHR individuals of which 65 later developed psychosis. The NAPLS risk calculator includes 8 risk factors and for each risk factor we attempted to harmonise the EU-GEI measures to the corresponding NAPLS measure. We used multivariate cox regression to determine the standardised hazard ratio for transition to psychosis for the 8 risk factors. To compare each of the NAPLS and EU-GEI hazard ratios we used a meta-analytical framework to calculate a combined hazard ratio and to examine heterogeneity between the effect sizes.

Results: In terms of the 8 risk factors, only the CAARMS unusual thought + non-bizarre ideas (corresponding to NAPLS SIPS P1+P2) was significantly associated with transition to psychosis, standardised hazard ratio = 1.51 (95%CI 1.01–2.23), p=0.046. Hazard ratios for the remaining risk factors varied from 0.73 to 1.41. The meta-analysis combining EU-GEI and NAPLS data did not indicate heterogeneity for any of the 8 measures, suggesting no systematic differences in the risk factors between the two studies.

Discussion: The test of the NAPLS risk factors in the independent EU-GEI high risk sample showed support for unusual thought content and non-bizarre ideas being predictive of later transition to psychosis. We were not able to replicate decline in functioning and lower scores in verbal learning memory as predictive of transition to psychosis as seen in the NAPLS study. However, our meta-analytical comparison showed no systematic differences in the hazard ratios for all 8 risk factors between both studies suggesting broad comparability between the samples.