

Using Lexical Analysis in Schizophrenia: Can the Words Patients Use Inform Our Understanding of their Internal Experiences?

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The words that people choose convey important information about their internal states, feelings, and views of the world around them. Lexical analysis is a fast, reliable method of assessing word usage that can be implemented to scan long narratives following speech transcription. It has been used to link speech content with psychopathological symptoms. However, few studies have applied lexical analysis to examine speech content in individuals with schizophrenia. In this exploratory study, we investigated whether positive affect words, negative affect words, and/or social words were related to psychotic symptoms or self-stigma in a schizophrenia cohort ($n = 46$). Individuals with schizophrenia were recruited from local community mental health and Veterans Affairs clinics. Speech was recorded during a psychiatric interview designed to elicit open-ended responses. Following transcription, lexical analysis was performed using a validated measure that derives percentage scores for positive affect, negative affect, and social word usage. Trained clinicians rated psychotic symptoms using overall and factor (positive, negative, thought disorder, hostility, emotional discomfort) scores. Finally, a self-report scale was utilized to assess self-stigma. We observed that positive affect word usage was associated with hostility and thought disorder symptoms. Negative affect words were significantly associated with overall psychotic symptoms, as well as hostility and emotional discomfort symptoms. Social words were inversely associated with negative symptoms. Surprisingly, word usage in affective or social categories was not related to positive symptoms or self-stigma. This is one of the first studies to elucidate how word usage is linked to internal states in schizophrenia. Future studies should be conducted to confirm these findings. Researchers should also examine whether affective or social word usage in this population predicts which individuals will exhibit the greatest reductions in psychotic symptoms and self-stigma following evidence-based treatment.

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