Perbedaan Analisis Sintaksis dan Semantik Berbasis Algoritme Machine Learning pada Remaja dengan Prodromal Psikosis dan Normal = Differences in Syntactic and Semantic Analysis Based on Machine Learning Algorithms in Prodromal Psychosis and Normal Adolescents

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Deskripsi Lengkap: https://lib.ui.ac.id/detail?id=20521059&lokasi=lokal

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Abstrak

Skizofrenia memiliki gejala utama psikosis yang ditandai inkoherensi pembicaraan akibat kekacauan proses pikir. Sebelum berkembang menjadi skizofrenia, terdapat fase prodromal psikosis di masa remaja. Pengenalan dini fase ini penting untuk mencegah perkembangan gejala menjadi gangguan jiwa berat. Penggunaan teknologi machine learning dapat digunakan untuk memprediksi kekacauan proses pikir melalui analisis sintaksis dan semantik pembicaraan. Penelitian ini bertujuan untuk mengetahui gambaran sintaksis dan semantik remaja prodromal psikosis dan normal serta membandingkan analisisnya pada kedua kelompok tersebut. Subjek penelitian terdiri dari 70 remaja usia 14-19 tahun yang terbagi menjadi 2 kelompok. Subjek mengisi instrumen PQ-B dan direkam suaranya melalui wawancara. Analisis sintaksis dan semantik dilakukan pada seluruh data yang berjumlah 1017 segmen frasa dan diklasifikasikan dengan <em>machine learning. Hasil penelitian terdapat perbedaan analisis sintaksis dan semantik yang signifikan antara kelompok remaja prodromal psikosis dan normal pada nilai minimum koherensi dan frekuensi penggunaan kata nomina, pronomina persona, konjungtor subordinat, adjektiva, preposisi, dan proper noun

......Schizophrenia has the main symptom of psychosis which is characterized by speech incoherence due to thought process distubance. Before schizophrenia, there is a prodromal phase of psychosis in adolescence. Early recognition of this phase is important to prevent the development of symptoms into a severe mental disorder. Machine learning technology can be used to predict thought process disturbance through syntactic and semantic analysis of speech. This study aims to determine the syntactic and semantic descriptions of prodromal psychosis and normal adolescents and to compare the analysis in the two groups. The research subjects consisted of 70 adolescents aged 14-19 years which were divided into 2 groups. Subjects filled out the PQ-B instrument and recorded their voices through interviews. Syntactic and semantic analysis was carried out on all data which amounted to 1017 phrase segments and classified by machine learning. The results showed that there were significant differences in syntactic and semantic analysis between groups of prodromal psychosis and normal adolescents at the minimum value of coherence and frequency of use of nouns, personal pronouns, subordinate conjunctions, adjectives, prepositions, and proper nouns.