

A Clustering Method to Identify Mental Health Patient Groups with Similar Treatment Outcomes

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Abstract

A person's complete emotional, psychological, and social well-being is referred to as their mental health. It has an impact on how people feel, think, and act, as well as how they act and react to obstacles in life. Maintaining positive relationships, accomplishing goals, and living a satisfying life depend on having good mental health. No matter what one's age, gender, race, or financial situation may be, mental health concerns can present themselves in a variety of ways and can affect everyone. Anxiety disorders, sadness, bipolar disorder, and schizophrenia are typical mental health issues. An individual's capacity to work, study, and sustain relationships can all be significantly impacted by mental health issues. Thankfully, there are a variety of treatments available, including counselling, medications, and dietary adjustments. Prioritizing mental health and getting treatment when needed are crucial. In the present study the treatments such as home treatments, early intervention and assertive outreach which were done focusing patients of United Kingdom (UK) are analysed. For this purpose, K-means clustering technique was used to cluster the patients with similar disorders to categorize for their treatments. The findings underscore a significant prevalence of mental health concerns among a substantial segment of the general population within UK, emphasizing the escalating significance of addressing mental health matters. Consequently, this study holds substantial potential in enabling timely interventions and the reduction of mental health disorders.

Keywords: *Mental health treatment, K-means clustering*