

ABSTRACT

Halal tourism has experienced significant growth in line with the increasing awareness among Muslim communities of services based on Sharia principles, including disability-friendly facilities. However, its implementation is often administrative in nature, without fully considering the actual needs of users. This study aims to analyze the positive emotional responses of halal tourism managers toward the design of disability facilities using electroencephalography (EEG) signals. The specific objectives include analyzing brain activity patterns through the energy of alpha, beta, and theta waves; identifying brain areas involved in processing positive emotions; and evaluating the relationship between brain activity and perceptions of proposed facilities. Respondents were shown a stimulus in the form of a visualized video, while EEG data was recorded to capture their neurological responses. The results showed significant activation in the frontal and temporal brain regions, with dominant beta and gamma waves in respondents who felt comfortable and satisfied, and dominant theta and alpha waves in those with neutral perceptions. These findings highlight the potential of EEG as an objective basis for understanding emotional perceptions of public facilities, supporting the development of more inclusive and sustainable halal tourism.

Keywords: Positive Emotion, Halal Tourism, EEG Signals, EEG Data Processing.