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The Effect of Meditation on Brain Relaxation Incorporating Different Physiological Activities

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Anxiety and depression have become such a widespread illness. It has been affecting people's health which can lead to suicidal tendencies. Studies related to depression and stress with the nervous system had been conducted and showed that slow music could be one of the methods to reduce stress. Electroencephalogram (EEG) signal is found to have potentials to detect brainwave signal as in real time data as well as history data through Bluetooth wireless communication. All the signals utilized in this paper are obtained from few experiments done, which contains of various physiological activities done by the volunteers. The features of EEG signal then will be extracted using EEG recorder. Based on the experimentation result, it can be observed that different physiological activities will result in different dominant brainwave signal. For sitting at rest, shows alpha wave dominant compared to others. For the second physiological activity which is listening and reciting the zikr, shows delta wave is the most dominant compared to alpha, beta, theta, and gamma and for walking in the park showed presiding in beta wave. As for the benchmarking, all the three physiological activities were compared to know which brainwave is the most ascendant. In addition, this study is a better alternative to the current approaches since it proves that zikr will change a person state of brain to be more relax and calming. Thus, the research will propose a study of the effect of brainwave on brain relaxation in corporation with different physiological activities to help anxiety and stress patient to relax and stay calm. © Published under licence by IOP Publishing Ltd.

[Author keywords](#)

Alpha wave; Brain Relaxation ; Brainwave; Delta wave; Electroencephalogram (EEG); Physiological Activities

**Engineering controlled terms**

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Electroencephalography

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Alpha waves; Bluetooth wireless communication; Delta waves; EEG recorders; Electroencephalogram signals; History data; Physiological activity; Real-time data

### Engineering main heading

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Emotion Recognition; Electroencephalography; Brain Computer Interface

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