

عنوان مقاله:

Suggesting a new alternative method of measuring mental disorders without the use of Paper-Pencil tests based on EEG

محل انتشار:

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خلاصه مقاله:

Background and aims: Paper-pencil tests have always its own problems in the mental disorders evaluation, including learning questions, bad or good blazon are the problems with this methodology. This study aimed to propose a new alternative method of measuring mental disorders without paper-pencil test using EEG. Methods: The research society involved depressed patients referred the psychiatrist clinics in Tabriz. 107 patients were selected as samples using a convenient sampling method. The Beck test was conducted. The EEG was recorded from the F4 point concurrent with displaying the film of 5 animated emotional images from Normed Images database (IAPS). The specialized screen of this recording was designed by the author in the Biograph Infinity software of device. Other software was written by the author in order to separate the α peak frequency average associated with any image of the recorded EEG. Then the research variables α_1 peak, α_2 peak, α_3 peak, α_4 peak, α_5 peak of each patient were analyzed with SPSS. After all, another 26 patients were selected to measure the Golden Standard, sensitivity, Positive predictability, Negative predictability and ROC. Results: The results of the multiple regression analysis showed that α_1 peak associated with α peak frequency of image 1 had more explanatory power with a beta value of 0.289 compared with other variables. Then α_3 peak had a high explanatory power. The regression equation for the predicting the score based on his/her EEG was found in terms of α peak frequency. Discussion: This research showed that Beck's depression score was predictable without using any questionnaire but according to EEG with a high sensitivity (100%), specificity (30.8%), (PPV (59.1%), NPPV (100%), and ROC (57.4%).

کلمات کلیدی:

Paper-pencil tests, Depression, Multiple regression, Roc

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