

Mahmoud Rashidi
Dr. sc. hum.

Perception of Facial Expressions of Emotion in Individuals with Migraine

Promotionsfach: Psychiatrie
Doktorvater: Prof. Dr. med. Matthias Weisbrod

It has been recently speculated that the perception of emotional facial expressions may be altered in individuals with migraine. However, the results are scarce and inconsistent. Here, the perception of facial expressions of emotion in migraine was behaviorally and electrophysiologically investigated. Twenty-eight female undergraduate students with migraine and 22 healthy controls were recruited. Participants looked at a neutral face on a computer screen which was gradually morphing to a face with either happy, fearful, or angry expression. Participants were instructed to press a corresponding button as quickly and accurately as possible when the expression was detected. No significant interaction was found between group and emotion in the early P1, N170, early posterior negativity, or late positive potential, indicating that the migraine group, compared to the control group, did not show a preferential cognitive bias toward a certain expression. Behavioral results were consistent with electrophysiological findings. Migraine individuals, compared to healthy controls, were not biased in recognition of expressions toward positive or negative expression. In addition, the mean reaction time for recognizing an expression did not differ between groups and it was not at a cost of more incorrect responses. Interestingly, the amplitude of the early posterior negativity had a negative correlation with the time interval since the last attack. It is concluded that young female individuals with migraine, compared to healthy controls, do not show any cognitive processing bias toward negative or positive facial expressions.