

# Could emotion be measured by computer? The use of emwave biofeedback tool to investigate the effect of visual *tafakur* towards stress

Nur Yani Che Husssin<sup>1</sup>, Muhammad Nubli Abdul Wahab<sup>2</sup> and Syakira Mohamad Alba<sup>3</sup>

<sup>1</sup>Dakwah Department, Sultan Ahmad Shah Pahang Islamic University College, Malaysia.

<sup>2</sup>Centre For Modern Languages & Human Sciences, Universiti Malaysia Pahang, Malaysia.

<sup>3</sup>International Islamic University Malaysia.

**Abstract.** The objective of this study is to investigate the effect of visual *tafakur* towards stress using EmWave Biofeedback tool. Previous studies reported the effect on human emotion but there are limited study investigating the visual *tafakur* effect on stress. Visual activities such as seeing, watching and looking using sight sense that incorporate with remembering Allah can affect stress. Such activities were measured using EmWave Biofeedback tool which measures heart rate variability of subjects. 30 study subjects involved were divided into treated group and controlled group. The result shows that visual *tafakur* could help in reducing stress thus improving mental health.

## 1. Introduction

Biofeedback practice technique began in the 1960s and 1970s as one of the technique to treat mental health and improve quality of life. It was first accepted in the mainstream when scientific studies reported that the human mind and body are inter-related. Human is capable of controlling body physiology activities and able to improve health. Biofeedback practice has since been accepted in society. Its benefits and advantages have been utilized in various fields (AAPB, 2011). Body physiological activities are interrelated with thought, emotion and behaviour (Martin, Fallmeier, & Schmidt, 2018). Certain changes in physiological activities would cause changes in the way of thinking, emotion and behaviour, and vice versa (Peláez-Hernández et al., 2016). Biofeedback practice would help individuals to learn how the physiological system can be controlled and optimised (Lehrer, 2018). It would be helpful to calm people down to treat headache, chronic disease, high blood pressure and substance disorders (Eddie, Vaschillo, Vaschillo, & Lehrer, 2015). Recently, biofeedback is not only practiced in clinical setting but also in sports field and workplace to improve performance (Lehrer & Gevirtz, 2014).

In Islam, *tafakur* is a spiritual cognitive activity using conscious mind, involving emotional elements merged spiritually (Badri, 2000). The concept of *tafakur* is broader and deeper as compared to meditation. It does not only involve control of conscious mind, but it also covers emotional control aiming to close oneself to Allah s.w.t. According to Hamzah Ya'kub (1992), *tafakur* concept also can

(2015). A case series study of the neurophysiological effects of altered states of mind during intense Islamic prayer. *Journal of Physiology Paris*, 109(4–6), 214–220.  
<https://doi.org/10.1016/j.jphysparis.2015.08.001>

- [13] Peláez-Hernández, V., Pablo-Santiago, R., Orea-Tejeda, A., Pérez-Cabañas, E., Pineda-Juárez, J., Santellano-Suárez, B., ... Contreras-Ramírez, E. W. (2016). PT117 Non-Pharmacological Self-Modulation of Heart Rate Variability to Psychological Stress in Heart Failure Patients. *Global Heart*, 11(2), e145. <https://doi.org/10.1016/j.gheart.2016.03.507>