

The Study on the Effect of Zikir Protocols Training towards Performance of Heart Rate Variability (HRV) and Academic Achievement among Secondary Schools Students

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ABSTRACT

Zikir has been known to have a direct impact on the individual. Zikir is able to help individuals make behavioural changes. Zikir is known to have an impact on the mind, emotions and behaviour. An investigation was conducted to identify the extent implemented zikir able to help individuals make changes themselves. Clinical studies carried out by taking 219 respondents among secondary school students who were involved in the disciplinary problems. Zikir intervention enables us to make changes ourselves using the technique of "Heart Rate Variability" (HRV). Students were given technical chanting slowly, loudly, and several techniques of zikir such as tahlil, istighfar and salawat. Conversion emWave@tm had recorded using a look at how the students were able to make changes themselves. The study found that students who successfully completed the zikir training able to make changes themselves and result in academic performance improvement. Students had successfully made a change to the change score "HRV Coherence" of the VLF spectrum of LF and HF spectrum conditions. This technique can be used in schools to improve the effectiveness of prevention of disciplinary problems therefore enabling education programs to be implemented.

Keywords

Zikir, Heart Rate Variability, HRV, biofeedback, students, academic, discipline

1. INTRODUCTION

Emotions have a very close relationship with behavior. Individuals who are able to control emotions will be able to better control the activity. Calm the mind, emotions under control will lead to more organized activities and controlled behavior. [1] A study conducted shows that people who are able to control emotions have better athletic performance [2]. The same holds if associated with students. Individuals who are able to control emotions will be able to control their behavior better and on beneficial ways. On the other hand, individuals who are unable to control emotions will be difficult to perform activities well. They are easily worried, restless and angry while doing activities. This provokes them to create disciplinary problems at school. Generally experimental work on psychophysiology stimulus variation and emotional, cognitive or behavioral response changes depending on the use of biofeedback approach [3], [4].

Heart rate Variability (HRV) is termed as a joint time/frequency study of the beat-to-beat responses in the heart rate [1]. HRV biofeedback aims to control the oscillation variability in heart rate [5]. states that there are three related

types of spectrum: the VLF (very low frequency) frequency less than 0.03 Hz, LF (low frequency), with a frequency range of 0.03 and 0.15 Hz, and HF (high frequency) between 0.18 and frequency range 0.4 Hz [6]. HRV Biofeedback show potential in increasing performance and he also states many employees perform their cognitive function below the level of the actual cognitive ability caused by fatigue, work stress and boredom[7]. Studies have revealed that higher HRV associated with creativity, psychological flexibility and capacity to adapt faster response in cognitive, affective and physiological emphasis [8] whereas low HRV is associated with anxiety, depression and different cardiovascular. Health factors can also cause an increase in certain heart rhythms, including emotional, anxious thinking, breathing, pressure in the arteries and other behavioral and physiological changes [8].

Zikir in etymology is derived from the Arabic word 'dzakara' which means remembering, in terminology means a practice speech through recitations and remembrance of Allah. Zikir is the physical and mental activities that form acceleration from reflection, attitude, and behavior until the process of life that reminds us of God [9]. Zikir is able to calm the mind and plays a role in determining a person's character. Zikir is the best traditions of worship and most pleasing to Allah, the lightest and most easily done by not having certain conditions and rules. It can be done at any time, any place and at any state [10]. Zikir has psychological and spiritual benefits. Psychologically, it gives a sense of spiritual comfort and it gives a sense of being closer to God [11]. When a person is more likely to do good deeds such as reciting zikir and remembering Allah, Allah will spare him from committing sins therefore helps forming a good personality within that individual.

Recent researches [12] have publicized the consequence of HRV biofeedback to the development of some cognitive functions in both simulated and real industrial operators. Patients with coronary heart disease (CHD) have psychological stress exhibit decreased vagal control of heart rate (HR), as measured by spectral analysis of HR variability (HRV) [13]. Student shows the better performance which increase academic achievement after doing zikir intervention. [14]

1.1 Biofeedback Protocol

In making students' disciplinary behavior change, students are taught on methods to control emotions and strengthen it. Methods or protocols focus on breathing that uniform, focusing on mind and physical control. Through this protocol, students were asked to control on focusing their mind, heart