

**EFFECT OF MOTION TECHNOLOGY ON BETA AND ALPHA
BRAINWAVE PATTERNS**



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ABSTRACT

PATTERNS OF HUMAN BETA AND ALPHA BRAINWAVES CORRESPONDING TO MOTION TECHNOLOGY (BOSS™)

This study aimed to examine the patterns of human beta and alpha brainwaves produced after having Brain Optimization and Synchronization System (BOSS™) Motion treatment. The data samples were obtained from ten participants. Each participant underwent four times treatment sessions. Each treatment session was 30 minutes. Beta and alpha brainwaves emitted by left and right brain hemispheres before and after each treatment were determined using electroencephalogram device MindPeak EEG and WaveWare windows software in Biomedical Research Laboratory for Human Potential Research in the Faculty of Electrical Engineering, Universiti Teknologi MARA Shah Alam. The study result showed that beta and alpha brainwaves patterns emitted by both hemispheres increased in the amount especially the right brain hemisphere. The beta and alpha brainwaves increased after treatments for almost all sessions. Alpha waves emitted were more frequently increased compared to the increasing of beta wave emitted. However, the increments of beta and alpha brainwaves did not contributed to the balancing of the left and right brain hemispheres. In conclusion, motion technology treatment increased beta and alpha brainwaves particularly for the right hemisphere of the brain.

CHAPTER 1

INTRODUCTION

1.1 Background of study

This research studied about the effect of motion technology on beta and alpha brainwaves patterns emitted by both human brain hemispheres before and after being exposed to the motion treatment. The motion technology applied to the samples known as BOSS™ motion technology. BOSS™ motion technology is the brain optimization and synchronization system that stimulates, optimizes and enhances the performance of the human brain. The system leads the brain to use left and right brain sides equally. For this research, the changes or the differences of the brainwave patterns were measured by electroencephalogram (EEG). Electroencephalogram (EEG) is the measurement of electrical activity produced by the brain as recorded from sensors or electrodes placed on the scalp. Two types of data were analyzed; the data before motion treatment and the data after the motion treatment. These two types of data were compared to identify whether beta or alpha brainwave emitted by the left and right hemispheres were synchronized.