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JOHOR

FINAL REPORT:

STRESS INDICATOR KIT

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ABSTRACT

Nowadays, stress has significant impact on human health. Stress is body's reaction to a change that requires physical, mental or emotional adjustment or response. Stress becomes a health concern when the amount of physiological changes or mental pressure experienced by an individual is much higher than required by the event that caused it.

This project describes a health monitoring system that is called in Stress Indicator Kit which can receive bio-signals from human beings and us the data to assess whether the person is under stress or not. In this thesis, Arduino Uno board is used to transmit and receive the data from the galvanic skin resistance which are connected directly with human body. The device gives many advantages to the user since they can monitor their stress level anytime and anywhere.

Otherwise, burden cost can be minimized by the user and the problem regarding time consuming can be settled down by using stress detector. The system is a real time application as it can detect and measure stress levels depending on the human bio-signals itself. In conclusion, the stress detector system has been created and implemented that allows a better health monitoring technique for the user.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

People constantly have to adapt and adjust to changes in their environment. The event which requires a person to be represented or to adjust the way the physical, mental or emotional causes physiological reactions in the body known as pressure. The changes of an event that cause this reaction are known as stressors. Stress can cause certain negative emotions such as frustration, anger, fear and anxiety.

In this era of fast-paced, the amount of information and knowledge available is increasing rapidly. People need to learn how to constantly changing and updating the technology, learn and know more in order to remain ahead. This fast-paced lifestyle is taking its toll in the form of high stress levels that cause a variety of health problems. Health professionals have identified stress as the cause of 46% of all medical problems faced by workers in government or the private sector.

There are three types of stress: acute stress, episodic acute stress and chronic stress. Each of these types has its own characteristic, symptoms, duration and treatment approaches. Normal level of stress or acute stress is a small dose of stress in human body such as running fast on a challenging ski slope while episodic acute stress occurs is when someone who suffers from acute stresses regularly such as waiting too long in the traffic jam every day. As for chronic stress, it is a very dangerous level of stress and should be prevented.