**PROPOSAL ON DEVELOPMENT OF SLEEP INDUCER DEVICE WITH ELECTROMAGNETIC FIELD FOR THERAPY**

***THERESA KACHA ANAK TEMPLER****,*

*Politeknik Sultan Salahuddin Abdul Aziz Shah, Malaysia*

[*tessatempler@gmail.com*](mailto:tessatempler@gmail.com)

***DR.HJH WAN ROSEMEHAH BINTI WAN OMAR***

*Politeknik Sultan Salahuddin Abdul Aziz Shah, Malaysia*

[*rosemehah@psa.edu.my*](mailto:rosemehah@psa.edu.my)

**ABSTRACT**

A quality night sleep is essential for both mental and physical wellness. However, pressures from a hectic lifestyle, job, and occasionally physiological issues have hampered adequate and healthy sleep patterns, leading to a variety of sleep disorders such as insomnia, sleep apnea, and restless leg syndrome. Sleep deprivation has a detrimental influence on such people's quality of life since it reduces productivity at work and leads to poor mental and physical health. The drugs that are now available to treat this disorder are addictive and have significant adverse effects, and the intervention devices that are available are prohibitively expensive. This project will be focused on a person who has difficulty falling asleep on a consistent basis. As a consequence, a radiator coil will be used to produce an electromagnetic field, which will result in an atmosphere that is suitable to sleeping. The objectives of the project are to design a frequency circuit that produce electromagnetic fields as a sleep relaxer, a (clock) circuit timer emitting frequencies at specifies period and create a brain pattern based on sleeping wave. This natural electromagnetic will generate the same wave pattern that human brain produces when person’s sleep. This substance may thus be beneficial in the battle against sleep deprivation. Product components include sensors such as the IC 4060 and IC 4093, a radiator coil, an SPST slider switch, a PNP transistor, and software programming that allows for data recording and remote testing using Proteus Professional 8.12 software. The goal is to perceive them, so that user brain is surrounded by an optimal environment for peaceful sleep.

**Keywords:** Sleep, Electromagnetic, Brain Wave