ABSTRACT

Prolonged lying down can cause pressure ulcers, especially in bedridden patients with limited mobility. Pressure ulcers are triggered by continuous pressure on specific points of the body, with key factors including temperature and pressure while lying down. This capstone design aims to develop a monitoring system for temperature and pressure to prevent pressure ulcers in bedridden patients. Testing results indicate that the FSR402 pressure sensor has accuracy issues due to its small surface area, requiring recalibration or replacement. Meanwhile, temperature measurements show that the patient's body temperature remains within the normal range (36–37.6°C) but tends to increase with prolonged lying down. Therefore, it is recommended that patients be repositioned every two hours to prevent excessive temperature rise and further complications.

Keywords: Bed Rest, Patients, Mobility, Temperature, Pressure.