

ABSTRACT

Pain is a very diverse and subjective feeling. Pain can occur in any part of the body that has pressure ulcers. Pressure ulcers that occur in the elderly are caused by immobility which causes the elderly to lie down in one place for a long time due to decreased physical abilities, sitting for long periods of time, and lack of adequate supply of nutrients.

Therefore, a system is needed to quickly monitor the condition of a person's pain level. In this study, a system will be designed to monitor the condition of pain levels in the elderly using an Electrodermal Activity (EDA) sensor. EDA is known to be associated with sweat gland activity which can respond when pain occurs in the body. Classification of pain levels is based on the average value of skin conductivity which will be classified with mild, moderate, and severe pain.

In this study, a comparison of the measurement results between ordinary wounds and pressure ulcers was carried out due to inadequate data for the elderly with pressure ulcers, and from the comparison of the results of the measurement of pain intensity it was found that the highest pain intensity was found in the elderly with pressure ulcers with an average value of skin conductivity. which is 720.46 μS and the category of severe pain in the elderly reaches 10. And also the results of the average value of skin conductivity are very low in the elderly with pressure ulcers with grade 4, namely 0.3 μS due to damage to some sensory nerves involved This results in impaired sensory perception and causes the pain to no longer be felt.

Keywords: Pain, pressure ulcers, electrodermal activity, skin conductivity.