Sistem Pendukung Keputusan Kejang Demam Pada Balita Berdasarkan Suhu Tubuh dan Detak Jantung Berbasis Internet of Things Menggunakan Metode Fuzzy Mamdani (*Decision Support System for Febrile Seizures in Toddlers Based on Body Temperature and Heart Rate Based on the Internet of Things Using Mamdani Fuzzy Method*).

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ABSTRACT

Febrile seizures are a neurological disorder that often occurs in children. This is because children who are under the age of 5 years are very susceptible to various diseases due to the fact that the immune system has not been fully developed. A common complication of febrile seizures is that a child with a febrile seizure will feel great shaking all over the body and lose consciousness. Effects of febrile convulsions Prolonged seizures which are often accompanied by respiratory arrest (apnea) which can result in a decrease in oxygen levels in the tissues (hypoxia) thereby increasing capillary permeability and causing brain edema resulting in damage to brain neuron cells. The incidence of febrile seizures in Indonesia in 2016 reached 2-5%. In 2017, 17.4% of children had febrile seizures and experienced an increase in 2018 with a seizure incidence of 22.2%. Normal heart rate for children aged 1-2 years is 80-130 beats per minute, normal heart rate for children aged 3-4 years is 80-120 beats per minute and normal body temperature is around 36.5-37.5° Celsius. Meanwhile, if the heart rate is 150 times per minute and the temperature is 38° Celsius, then the child is having a febrile seizure. A decision support system for early detection of febrile seizures in toddlers can detect and monitor them directly, through a website so that the child's body temperature and heart rate data can be monitored at any time by doctors and families. The system will monitor the data and will process it so that it is able to provide decision information on febrile seizures.

Keywords: *decision support system, febrile convulsion, fuzzy mamdani*