

ABSTRACT

Midwives play an essential role in ensuring the health of pregnant women and their fetuses through various routine examinations. These examinations involve the use of essential medical devices, including height measurement tools, weight measurement tools, blood pressure monitors, and fetal dopplers. Height and weight measurement tools are used to monitor the growth and development of pregnant women. Blood pressure monitors serve to detect hypertension or low blood pressure, which can affect the health of the mother and the fetus. The fetal doppler, a tool used to listen to the fetal heartbeat, enables midwives to ensure the health and well-being of the fetus. The regular use of these devices by midwives is crucial for early detection of health problems and appropriate intervention to ensure a healthy pregnancy and safe delivery. With the advancement of technology, the maternal and child health (KIA) book used by pregnant women has evolved into an Internet of Things (IoT)-based application for health education. This application allows midwives to provide information and counseling more efficiently and timely, as well as facilitate more accurate and real-time monitoring of the health conditions of pregnant women and their fetuses. Through this application, early detection of health issues can be performed more quickly, and appropriate interventions can be promptly implemented to ensure a healthy pregnancy and safe delivery. The test results indicate that the developed device has an average error of 13.74% for systolic measurements, 19.31% for diastolic measurements, and 0.24% for height and weight measurements. With this system, it is expected that the examination process can be carried out more quickly and accurately, as well as facilitate digital data recording through the IoT application.

Keywords: *Measurement tools, weight, height, blood pressure, fetal doppler, Internet of Things.*