

ABSTRACT

Posyandu is a form of Community Resourced Health Efforts which is managed with local people. The growth and development of the child's body is very important because it is the starting point for the child's growth carried out at the posyandu. Posyandu activities to support public health by including maternal and child health, the services provided in these activities are weight weighing, but in measuring height and weight are still less effective and conventional. Because in measurements some posyandu still use dacin scales or analog scales to measure weight and measuring bars to measure height, so in measurements require more time and energy.

To overcome the problems that occur due to the suboptimal measurements, a Digital Weight and Height Measuring Device for Babies is designed which is integrated by the mPosyandu application. Height measurements are performed by ultrasonic sensor HC-SR04 and weight measurements are used loadcell sensors connected to the Arduino Nano microcontroller. The tool will display the measurement results on the LCD and sent to the Mposyandu application on the smarthphone that has been connected via Bluetooth automatically.

The test results from the measurement of the baby's weight and height showed that the tool designed has an accuracy of 99.70% in measuring height and 98.01% in measuring weight. With the percentage of accuracy obtained, it can be said that the measurement tool is functioning properly and can function properly as evidenced by the percentage level of error and the level of accuracy obtained.

Keywords: mPosyandu, Ultrasonic, Loadcell, Bluetooth