

MONITORING APPLICATION FOR TODDLER NUTRITIONAL STATUS USING THE MOBILE-BASED Z SCORE METHOD

IRKHAMUL GUSTIA HUDA

*Program Studi Informatika, Fakultas Sains & Teknologi
Universitas Teknologi Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail : irkhamul02@gmail.com*

ABSTRACT

Indonesia continues to face significant challenges in meeting the nutritional needs of toddlers, as evidenced by the 2024 National Nutrition Survey (SSGI), which reported a stunting prevalence of 19.8% and malnutrition at 16.8%. Limited monitoring frequency in health services often results in delayed detection of these issues. This study aims to develop a mobile application, "Gizi Pantau," for self-administered nutrition recording using Z-scores. Utilizing the SDLC Waterfall methodology, the application was developed using the Flutter and Firebase frameworks and incorporates the 2006 WHO anthropometric standards (weight-for-age, height-for-age, weight-for-height). Black box testing demonstrated that all key features functioned at 100% capacity. Algorithm accuracy validation across 30 test cases yielded 98.3% accuracy, with an average difference of ± 0.03 SD, well within acceptable tolerance limits. Acceptability testing by parents and health workers yielded an average score of 4.5 out of 5 (Excellent). This application has proven effective in reducing technical barriers to growth monitoring and is recommended as a valuable tool for family nutrition education.

Keywords: Toddler Nutrition, Z-Score, Mobile Application, Flutter, Stunting, Nutrition Monitoring