

ABSTRACT

Indonesia continues to face a high maternal mortality rate (MMR), particularly in rural regions where access to quality maternal health services remains limited. Contributing factors such as low digital literacy, geographic isolation, and inadequate healthcare infrastructure have hindered the effective delivery of care. Mobile health (mHealth) technologies offer a promising solution to bridge this gap; however, their adoption among pregnant women in rural Indonesia remains relatively low due to various technical, social, and behavioral barriers.

This study aims to analyze the behavioral factors that influence the adoption of maternal health applications using the Technology Acceptance Model (TAM). Key constructs examined include Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Attitude Toward Behavior (ATT), Behavioral Intention (BI), and actual usage behavior (B). The research also investigates the moderating role of age in these relationships. Data were collected through structured questionnaires distributed to pregnant women in rural areas and analyzed using SmartPLS to evaluate measurement validity and structural relationships among variables.

The results confirm that all direct hypotheses (H1–H6) are statistically significant, indicating strong behavioral pathways from perceived ease and usefulness to actual usage behavior. However, Multi-Group Analysis (MGA) reveals that age does not significantly moderate any of the TAM relationships. These findings suggest that adoption patterns are relatively consistent across age groups. Based on the results, the study recommends enhancing application usability, promoting digital literacy, and ensuring inclusive design as strategies to increase adoption rates. This research offers practical insights for developers, healthcare providers, and policymakers in designing more effective, user-centered maternal health applications tailored to the needs of rural populations.

Keywords: *Maternal Mortality Rate, Mobile Health Technology, TAM, Behavioral Intention, Rural Indonesia*