

ABSTRACT

The development of digital technology has brought innovations in the health sector, one of which is health applications for pregnant women. However, the process of implementing this technology still faces several challenges that hinder the spread of its benefits to the community, especially pregnant women. Indonesia is ranked third in the country with the highest MMR in Southeast Asia, reaching 173 deaths per 100,000 live births. This condition further emphasizes the tough challenges in providing health services to meet the needs of pregnant women in Indonesia. This study aims to analyze the sentiment of pregnant women in Indonesia towards the use of health applications during pregnancy and identify factors that influence the acceptance of these applications. The main focus of this study is on technical and individual factors that influence the adoption of health applications. This study took user review data from 7 e-Health in Indonesia on the Google Play Store from 2020 to early 2025. This study uses a new approach that combines three methods: Latent dirichlet allocation for topic modeling in text, IndoBERT for sentiment labeling, and random forest for sentiment classification. Overall, the model produces an accuracy of 90.41%, indicating that the model can be relied on to perform sentiment classification. Almost all aspects have greater positive sentiment and the most influential aspects in the adoption of e-health by the community are Performance Expectancy and Attitude. These findings indicate that user satisfaction with the application is quite high, but there are several aspects that still need to be improved. This study is expected to provide valuable recommendations for health application developers and the government to develop better solutions to meet the health needs of pregnant women in Indonesia through existing e-health.

Keywords: Latent Dirichlet Allocation, Random Forest, Technical Factors, Individual Factors, e-Health, Sentiment Analysis