

ABSTRACT

Access to maternal healthcare in Indonesia faces challenges due to the country's vast and varied geography. Given these challenges, telemedicine offers a promising solution, particularly for underserved regions. While these digital platforms can bridge the critical gaps, its implementation may lead to technostress in users struggling to adapt. Technostress, in this context, refers to the strain experienced by users due to inability to adapt to digital healthcare platforms. This is the first PyABSA study on maternity health applications in Indonesia, applying Aspect-Based Sentiment Analysis to analyze over 60,000 user reviews of Indonesian maternity telemedicine applications. The goal is to extract insights from user feedback and identify specific pain points for future development utilizing Natural Language Processing (NLP). The research combines preprocessing techniques tailored for the Indonesian language, benchmarks PyABSA models that utilize the FAST_LFC_BERT with DeBERTaV3 embeddings, and applies topic modeling to aspects with high share of negative reviews. The proposed model achieved a F1-score of 87.21% for Aspect Term Extraction (ATE), and a text accuracy of 94.29% and an F1-Score of 80.39% for Aspect Polarity Classification (APC). The findings reveal a critical need for enhancement in the aspects of "Features", "Reliability & Trust", "Financial", "Doctors & Health". This study contributes to the growing research on the user-centered evaluation of telehealth services, particularly in local-language and domain-specific contexts, providing data-driven recommendations to improve digital healthcare access and user satisfaction in Indonesia.

Keywords: aspect-based sentiment analysis (ABSA), maternity application, natural language processing (NLP), PyABSA, technostress