

Revolutionizing Adolescent HIV Prevention with a Digital-Based Self-Screening and Education Model



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Adolescent access to HIV testing in Indonesia remains limited, with stigma, misinformation, and lack of youth-friendly services as persistent barriers. We developed EKSTRIM (Edukasi dan Skrining HIV Mandiri Remaja), a co-designed digital intervention integrating HIV education, self-screening, peer support, and referral pathways. We implemented the model in a 12-month study involving 400 high school students using a three-phase design: needs assessment, platform development, and a cluster randomized trial. Our analysis showed that EKSTRIM significantly influenced key behavioral and cognitive outcomes. The model had a large effect on understanding ($d = 1.23$, $p < 0.001$), risk response ($d = 1.08$, $p < 0.001$), digital media acceptance ($d = 0.93$, $p < 0.001$), peer educator support ($d = 0.87$, $p < 0.001$), stigma reduction ($d = 0.84$, $p < 0.001$), and self-awareness ($d = 0.81$, $p < 0.001$). Moderate effects were observed for knowledge ($d = 0.73$, $p < 0.001$), risk perception ($d = 0.68$, $p < 0.001$), social norms ($d = 0.63$, $p < 0.001$), self-efficacy ($d = 0.62$, $p < 0.001$), and digital media consistency ($d = 0.44$, $p < 0.001$). Initial HIV testing uptake among at-risk adolescents was 9.7%. After intensive peer-led counseling and family engagement, testing coverage reached 100%. These findings demonstrate that EKSTRIM not only increases knowledge but also enhances motivation, confidence, and peer trust—key drivers for behavior change. The model offers a scalable, theory-informed, and culturally sensitive approach to HIV prevention, supporting Indonesia's efforts to achieve the UNAIDS first "95" target.

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Her expertise spans women's health, maternal and child health, HIV/AIDS prevention, sexual and reproductive health, and complementary and alternative midwifery. She is an active member of the International AIDS Society (IAS), an Emerging Voices for Global Health Fellow (2022) and an International Health Policies Correspondent (2024).

Dr Setyani has led and contributed to numerous national and international projects, particularly in digital health innovations, youth empowerment and community-based interventions. She has published extensively in peer-reviewed journals, authored textbooks and presented her work at leading global health forums.

In recognition of her contributions, she was named one of Indonesia's 95 Inspirational Women (2023) by the Ministry of Women's Empowerment and Child Protection. Her current work focuses on advancing digital strategies for HIV prevention and strengthening primary health care, underpinned by a strong commitment to equity, community empowerment and global health advocacy.

