THE 2ND BANTEN INTERNATIONAL CONFERENCE ON HEALTH ADVANCEMENT & RESEARCH

Kemenkes Poltekkes Palembang

DEVELOPMENT OF ACARE (ADOLESCENCE CARE): AN ANDROID-BASED REPRODUCTIVE HEALTH EDUCATION APPLICATION FOR ADOLESCENT GIRLS AGED 12–15 YEARS IN INDONESIA

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85.3% / 83.08%
Very feasible — media & content experts

87.65–88.32%
Very good student acceptability

3-in-1
Gamified content + private consult + anonymous Q&A

ADDIE
5-stage iterative R&D model

BACKGROUND

- Reproductive health literacy among Indonesian adolescent girls remains low, worsened by social stigma, limited parent-adolescent communication, and uncurated information access (WHO, 2017; Sewak et al., 2023).
- Age/sex-verified registration, a 3 in 1 integrated feature set, and a multi-layer validation framework (Huang et al., 2022) not found together in existing apps
- Ages 12-15 mark menarche and self-concept formation, the most strategic window for preventive digital intervention (Kusmiran, 2011).

OBJECTIVES

1. Develop **ACare**, an Android reproductive health education app for girls aged 12-15.
2. Test its **feasibility** through media- and content-expert validation.
3. Measure its **acceptability** among adolescent girls and teachers.

ACARE APP INTERFACE



METHODS

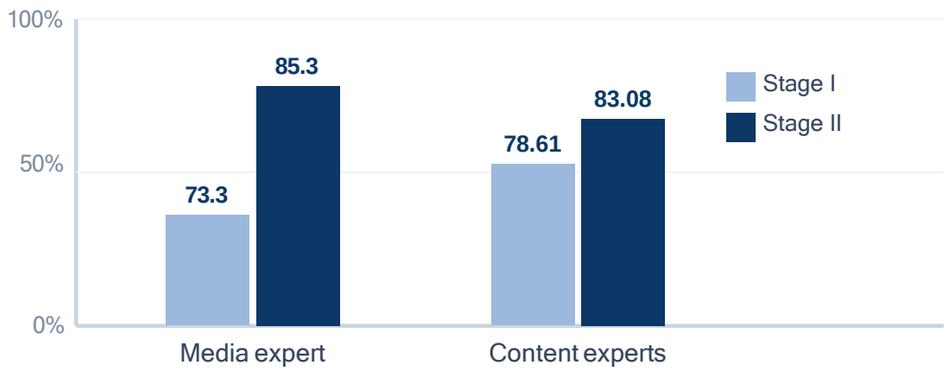
A (Analysis) → D (Design) → D (Develop) → I (Implement) → E (Evaluate)

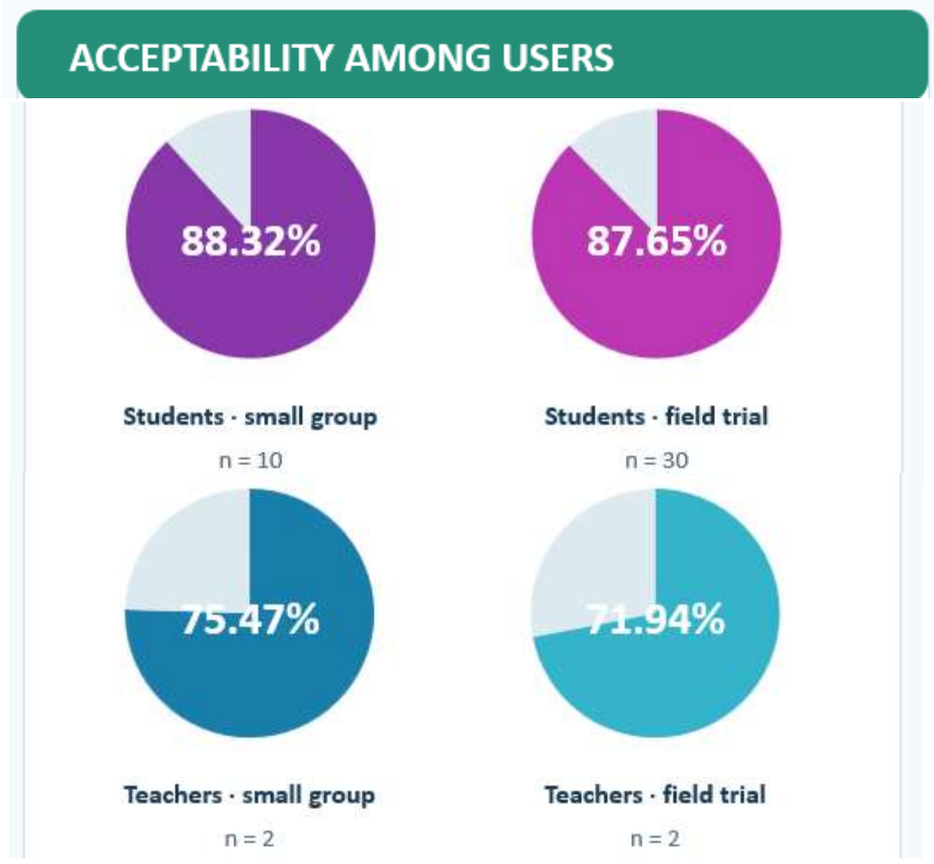
- **Setting:** SMP Negeri 1 Palembang, Indonesia (Jul-Nov 2022).
- **Validators:** 1 media + 2 content experts; 2 validation stages, 1 revision cycle.
- **Users:** small-group (n=10) & field trial (n=30), girls aged 12-15; 2 teachers as field practitioners.
- **Instruments:** five-point Likert scales (Akbar, 2013; Tessmer, 1993); analyzed descriptively by percentage.
- **Ethics:** Poltekkes Kemenkes Palembang Health Research Ethics Committee (No. 777/KEPK/Adm2/XI/2022).

RESULT

73.3% → 85.3%
Media expert score (Stage I → Stage II)
Very feasible

78.61% → 83.08%
Content expert score (Stage I → Stage II)
Very feasible





ACARE APP INTERFACE



Main menu *Garden menu & interactive quiz*

DISCUSSION

- Two-cycle revision effectively raised feasibility, confirming the value of formative feedback (Tessmer, 1993) within ADDIE's iterative structure (Branch, 2009).
- A consistent student–teacher perception gap (very good vs. good) suggests teachers need training and mentoring, not just app distribution.
- Private consultation & anonymous archive address stigma and confidentiality concerns reported in mHealth literature (Feroz et al., 2021; Situmorang, 2011).
- Feasibility (83-85%) compares favorably with related Indonesian apps such as Lawan Roma and Immunecare (79.6%).

CONCLUSION

ACare was successfully developed via the ADDIE model with three key features: **gamified content, private consultation, and an anonymous Q&A archive.**

Judged **very feasible** by media (85.3%) and content experts (83.08%).

Very good acceptability among students (87.65-88.32%); **good** acceptability among teachers (71.94-75.47%).

Effectiveness on knowledge and behavior change requires further experimental research with a comparison group.

PRACTICAL IMPLICATIONS

- A complementary, private, self-access education channel for health workers and schools.
- Field practitioners should be engaged from the **design** stage, not only at evaluation.

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