DIGITAL TRANSFORMATION IN SOCIAL PROTECTION

# AI for Youth Mental Health in Korea

## Challenges & Implications for Developing Countries

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KAIST GCODEs

ADB–NHIS Training on Technology Solutions to NCDs and Mental Health · Seoul / Wonju · July 2026

# The question is no longer whether AI can counsel

**The useful question is where AI belongs in the pathway of care.**

THE OLD QUESTION

*“Can AI counsel?”*

THE QUESTION THAT MATTERS

## Where should AI sit in the pathway of care?

Throughout, Korea's experience is read as a policy experiment: what it takes to place AI safely inside a public service system, and what breaks when the rest of the system is not ready.

01

THE DEMAND IS ALREADY HERE

# Mental-health support is moving outside the clinic

**People don't wait for the system; they already bring mental-health questions to general-purpose AI.**

**~13%**

of US youth (12–21) use AI chatbots for mental-health advice

**37%**

of UK adults have used AI for emotional or mental-health support

**65%**

of UK 25–34-year-olds, the peak age group

For many young people an AI chatbot is now the first place a worry is raised, often before any clinician is involved.

→ *The relevant choice is no longer whether people use AI.*

‘I feel it’s a friend’: quarter of teenagers turn to AI chatbots for mental health support

Experts warn of dangers as England and Wales study shows 13- to 17-year-olds consulting AI amid long waiting lists for services

*Sources: US survey of adolescents & young adults (2025); UK survey (2025).*

01

THE DEMAND IS ALREADY HERE

# Where counselors are scarce, this shift matters more

**Shortage, cost, distance, and stigma push people toward informal AI use.**

| Shortage | Cost | Distance | Stigma |
| --- | --- | --- | --- |
| Too few trained practitioners for demand | Private counseling is out of reach | Services concentrated in cities | Fear of being seen seeking help |

Long waiting lists and few practitioners make AI the de facto first contact, likely stronger in many ADB member countries than in Korea.

The same pressures that limit formal services tend to be strongest exactly where a low-cost digital tool is easiest to scale.

→ *Informal use may already be the default, before any policy is written.*

01 · THE DEMAND IS ALREADY HERE

# The policy choice has already changed

Not ***whether*** people will use AI,

but **whether they use it within a safe support system.**

→ *Our job is to make the surrounding system safe.*

A DIFFERENT KIND OF HELP

# These tools show promise, but also limits

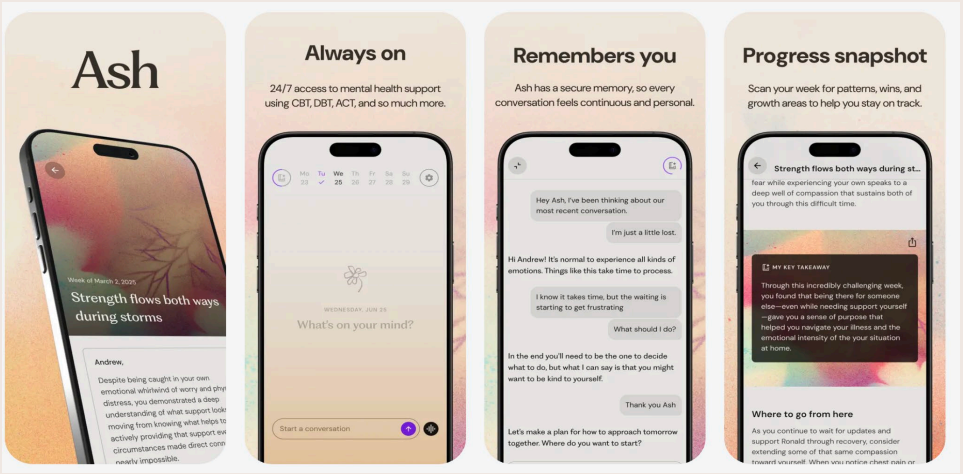
**Dedicated mental-health chatbots have real evidence behind them, and real boundaries.**

## Woebot

CBT-based self-help. Ended in 2025.

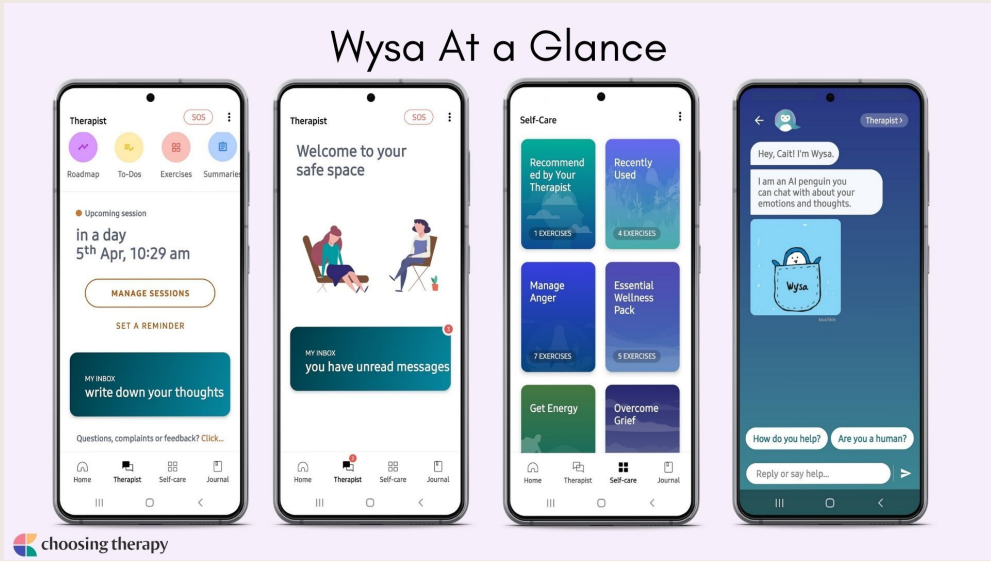
## Ash

An AI designed for **emotional coaching.**




## Wysa

India-born; partners with Singapore's Ministry of Health.




**Most of these tools are framed as support or coaching, not clinical treatment, and several have since narrowed or closed.**

→ *Promising enough to take seriously; limited enough that scope must be defined, not deployed as a therapist.*

A DIFFERENT KIND OF HELP

# A first clinical trial found meaningful improvement

**Therabot was the first randomized controlled trial of a generative-AI chatbot for clinical-level mental health.**

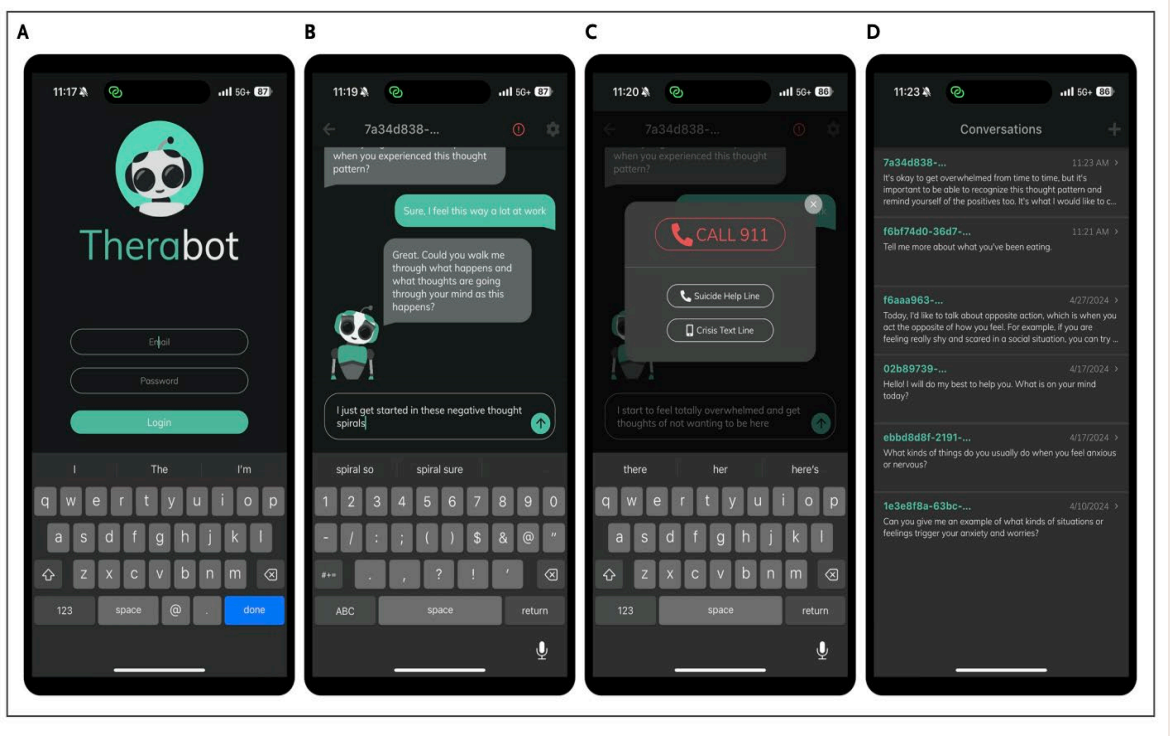
**6.18 hrs**
average use over 4 weeks

**260**
messages, on average

**24 days**
used, of up to 60

Meaningful improvement in depression (MDD), anxiety (GAD), and high-risk eating disorders (CHR-FED).

**Low-intensity, high-frequency: short 10 to 20 minute sessions, on demand; some users sent over 100 messages.**




→ *The way people receive emotional support may itself be changing.*

02

A DIFFERENT KIND OF HELP

# Generative AI is outperforming older chatbots

**Across studies, AI counseling helps with mood, anxiety, and coping, though depth is still in question.**

| | |
|---|---|
| **Generative beats rule-based** | Generative-AI chatbots tend to reduce depressive symptoms more than older rule-based bots. (Zhang et al., 2025, meta-analysis) |
| **Hard to tell apart, at first** | Students could barely distinguish AI from human counseling in early stages; sustained depth and meaning still differ. |
| **Korea: promising, age-dependent** | Promise for career guidance, ADHD, and stress, with effect sizes varying by age. (Kang, 2025) |
| **More support when isolated** | For socially isolated people, more time with AI was linked to greater perceived support. (Park et al., 2025) |

→ *The early stages look strong; sustained depth is where evidence is thinnest.*

02

A DIFFERENT KIND OF HELP

# General-purpose AI counsels well, until it doesn't

**Recent research prompts general LLMs to act like counselors, rather than building dedicated ones.**

| LARGELY REPRODUCIBLE | STRUCTURAL LIMITS |
| --- | --- |
| Question generation | **Context maintenance** |
| Cognitive reframing | **Crisis response** |
| Reflective techniques | **Over-generalization** |

- It reads logic well but not emotional context (Travota et al., 2024).
- It has no state tracking, relational memory, or risk-accountability by design, and was never trained to a counselor's ethics.

→ *Counseling-like behavior is easy to mimic; the safeguards underneath are not.*

02

A DIFFERENT KIND OF HELP

# A chatbot that mirrors you keeps you engaged

**Newer work treats AI counseling as a new form of support, and asks what keeps people using it.**

## Self-clone design

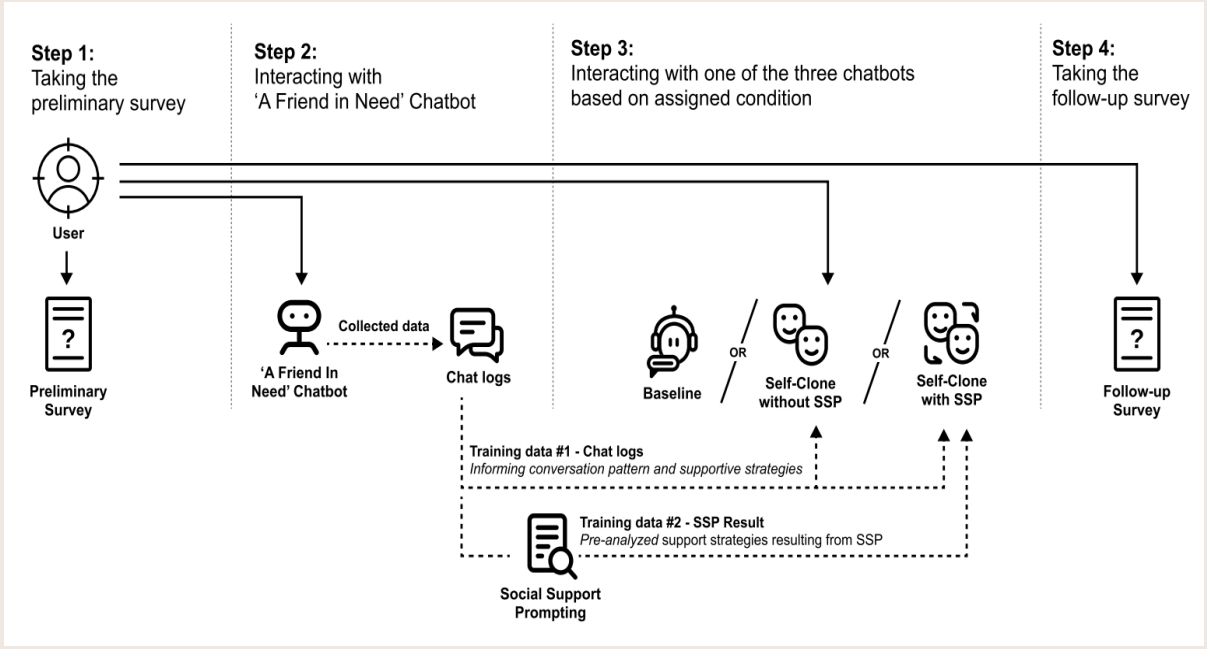
Chatbots mirror a user's own speech and patterns. (Shirvani et al., 2026)

## Deeper engagement

They raised emotional and cognitive engagement.

## The like-me effect

The more users felt the AI resembled them, the more they engaged.




Source: Shirvani et al., 2026

> **But higher engagement does not mean therapeutic effect or clinical safety.**

→ *Design that deepens use must be matched by design that keeps it safe.*

02

A DIFFERENT KIND OF HELP

# AI mental-health support is already scaling in lower-resource settings

**India-born**

Founded in India, 2016

**~65 countries**

Used internationally at scale

**Singapore MOH**

Powers the public mindline.sg service

**CBT-based · 24/7**

Structured, always-available support

Because these tools were built for settings with few clinicians and tight budgets, their design choices, not only their results, are worth studying for ADB member countries.

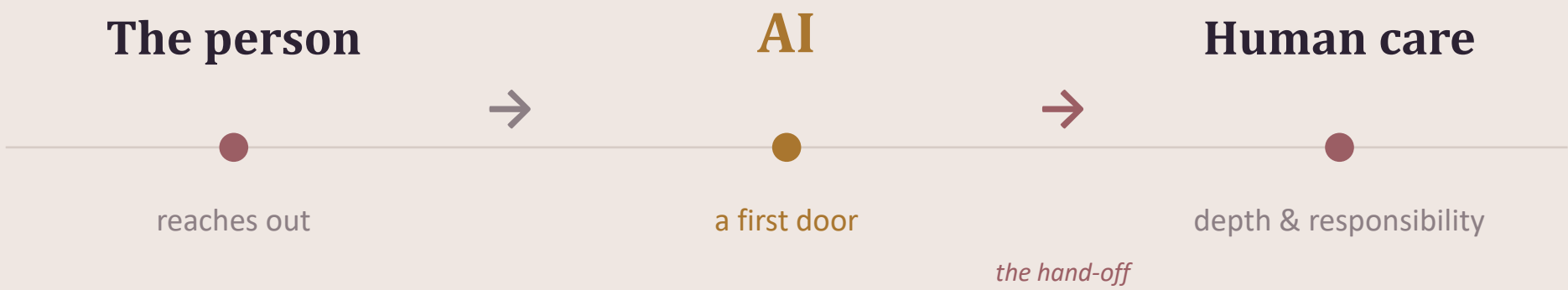
→ *Models adapted to constrained systems already exist, ready to learn from and scrutinize.*

02

A DIFFERENT KIND OF HELP

# AI is not replacing counseling; it is changing the entry point

**The question isn't human vs. AI, but how two different functions connect.**




AI widens the entry to support; the person decides whether to step further toward a human. That hand-off is where the experience is won or lost, and where most systems are thinnest.

→ *Design the connection between AI and people, rather than choosing a winner.*

02

A DIFFERENT KIND OF HELP

# Two different kinds of help

**Each does what the other cannot (at this point)**

### HUMAN COUNSELING PROVIDES

Expertise and accountability

Deep contextual understanding

Relational empathy

Clinical responsibility

### AI MAY PROVIDE

Immediate access

Repeated, low-intensity contact

Less fear of judgment

Availability at any time

The aim is not to rank them but to route between them: let AI carry low-intensity, repeated contact, and pass a person to human care when depth or responsibility is needed.

→ *Neither is the whole answer; the connection between them is the design problem.*

# 03

## Korea's case: AI opened the door, but the bridge is still weak

03

KOREA'S CASE

# Korea put AI counseling where young people already are

## A public demonstration of first-contact support

| | |
|---|---|
| BACKGROUND | Seoul Business Agency (SBA) 2024 R&D; selected for the “Testbed Seoul” project; a generative-AI, multi-persona youth mental-health counselor. |
| PURPOSE | Prevention and early intervention; an AI-based, non-face-to-face first-contact model. |
| PERIOD | December 2024 to December 2025 (and continued) |

Framed from the start as prevention and early intervention, not as a substitute for clinical care.

→ *Positioned as a first door: a primer, not treatment.*


SMART 서초유스센터 서초 SEOCHO

Nexv

weromy

KOREA'S CASE

# Seven kiosks, six sites, fixed and mobile

## The service meets young people in everyday settings, not a clinic.


**AI mental-health kiosks (WEROMI)**

fixed + mobile · worry counseling, dialogue, self-diagnosis

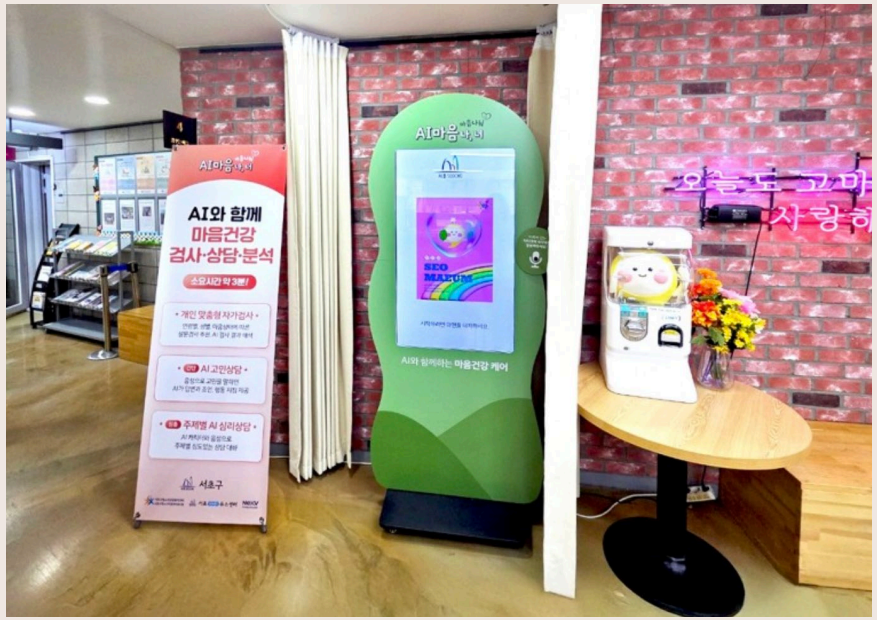
→ *Placement in ordinary spaces is part of why the door opens.*

### SIX OPERATING SITES & SEVEN KIOSKS & 4,500 USERS

Seocho Smart Youth Center  Bangbae Art Youth Center  Seocho Youth Center

Seocho Single-Household Support Center  Seocho-gu Youth Counseling & Welfare Center

Seoi Elementary School (mobile, from Dec)




**AI mental-health kiosks Placement**

03

KOREA'S CASE

# The young people are co-evaluators, not just users

**Students help test and judge the service.**

**11**

peer-counseling (“Solian”) students · 3F / 8M

**4**

structured sessions, Jul–Nov 2025

**5**

smart mental-health devices, measured pre / post

Sessions: Jul 8 · Sep 9 · Nov 4 · Nov 18, 2025

Their feedback feeds back into how the service is built, which is exactly why defining their role, beyond test users, matters.

→ *Their role still needs definition: participants in the design, not subjects of it.*

KOREA'S CASE

# Acceptance rose across four sessions

## The more they used it, the more they trusted it?

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| **Novelty + distance** | **Trust forms** | **Human-likeness** | **Practical acceptance** |
| *"Comfortable, but lacks empathy"* | *"It's confidential; I felt comforted"* | *"It feels like a person"* | *"Helpful, concrete solutions"* |

Early doubts about empathy gave way to trust and practical use. The shift came from repetition and a sense of confidentiality, not from any single feature.

→ *Repeated, low-intensity contact built trust that early human counseling rarely gets.*

03

KOREA'S CASE

# Why they opened up, in their words

**Anonymity lowered the barrier to a first disclosure.**

> *“No chance of being exposed, so I can speak with my mind at ease.”*

> *“It felt less burdensome and more secure than talking to a person.”*

> *“It helps friends who have no one around to share their worries with.”*

Students, Seocho Middle School

→ *The door opened for exactly the young people who avoid face-to-face help.*

03

KOREA'S CASE

# But empathy had a ceiling, in their words

**The same students named what was missing.**

> *“On the empathy side, the AI's answers felt mechanical.”*

> *“When I wanted emotional empathy, a lot of the time it wasn't met.”*

A STUDENT'S DEFINITION OF EMPATHY

> ***“saying ‘I've been through that too,’ then offering a solution.”***

→ *Access is not the same as feeling understood.*

03

KOREA'S CASE

# Korea now regulates high-impact AI

AI BASIC ACT

## In force Jan 22, 2026

with a one-year grace period.

"HIGH-IMPACT AI" (고영향 AI)

Systems affecting life, safety, or fundamental rights (e.g. healthcare) must carry a risk assessment and human oversight.

A counseling AI for minors sits close to both health and fundamental rights, so the safe reading is to treat it as high-impact and design oversight in from the start, not to wait for a ruling.

→ *Youth mental-health AI plausibly qualifies; cautious design and human oversight are expectations, not options.*

AI Basic Act (Framework Act on the Development of Artificial Intelligence and the Creation of a Foundation for Trust)

03

KOREA'S CASE

# The main risk is not only wrong answers, but weak connection to care

**The dangerous failure isn't a bad reply; it's a person who reaches out and reaches nothing.**

| | |
|---|---|
| **The abrupt stop** | On crisis (suicide risk, need for psychiatric care) the dialogue halts and refers, but cuts off with no warm hand-off. |
| **The unfollowed follow-up** | Students left a phone number for follow-up; when called, several had changed their mind, saying “I'm okay now.” |
| **Anonymity's cost** | The source of the strength also blocks follow-up and measurement. |

→ *Build the hand-off, and the human on the other end, before scaling the door.*

# AI opened the door.

# The question is what was behind it.

*Opening the door is the easy half. Ask what is behind it before you open it.*

# 04

## Do not procure the chatbot before designing the service pathway

IMPLICATIONS FOR DEVELOPING COUNTRIES

# Developing countries are not one category

**Match the model to what your service system can safely support.**

| SYSTEM READINESS | APPROPRIATE STARTING MODEL |
|---|---|
| **Limited counseling capacity** | Psychoeducation, self-management tools, verified crisis information. Limit scope so AI does not act as a therapist. |
| **Emerging community services** | AI-based first contact / screening, then connect to local counselors, schools, community health workers. |
| **Established referral network** | Integrated: stepped care, case management, professional-service booking, linked with risk management. |

→ *Do not copy the most advanced technology; choose what your system can safely hold.*

IMPLICATIONS FOR DEVELOPING COUNTRIES

# ASEAN is already on this path

## Countries are experiencing AI mediated counseling at very different stages.

**Singapore** has run the government platform mindline.sg since 2020, pairing an anonymous self-assessment with the **Wysa CBT chatbot** as a 24/7 first door that escalates users to human care.

*MOHT, mindline.sg (since 2020); Frontiers in Digital Health (2024)*

**The Philippines** has seen youth turn to general chatbots as informal counselors, prompting an October 2025 health-ministry warning.

*Philippine News Agency (2025); UP Population Institute, YAFS5 (2021)*

**Thailand** has scaled AI-supported chat tools that screen for stress and anxiety and route users onward, with local trials among students and older adults reporting measurable improvements.

*ADB & UNFPA (2026); Imkome et al. (2025); Mahmud & Porntrakoon (2023)*

**Indonesia** is widening access to mobile mental-health apps across urban and peri-urban areas, with chatbots for early symptom detection an active focus of local research.

*ADB & UNFPA (2026); Khairan & Habib, Jurnal EMPATI (2025)*

→ *ADB and UNFPA frame chatbot triage as a useful first contact where staff are scarce, but as a supplement, not a replacement (ADB & UNFPA, 2026).*

04

IMPLICATIONS FOR DEVELOPING COUNTRIES

# ASEAN is already regulating AI, and fast

**Governance is moving from voluntary regional guidance to binding national law.**

### REGIONAL · VOLUNTARY

- ASEAN Guide on AI Governance & Ethics (2024): 7 principles, all 10 members.
- Expanded for Generative AI (2025): anthropomorphism, bias, privacy.
- Responsible AI Roadmap, 2025 to 2030.

### NATIONAL · BINDING

- Vietnam's AI Law in force (March 2026): risk-based; health and education get a longer runway.
- Malaysia, Indonesia, Thailand, and Singapore, each on their own track.

> **Health and education draw the highest scrutiny, so a youth mental-health chatbot sits in the regulated zone.**

IMPLICATIONS FOR DEVELOPING COUNTRIES

# AI counseling raises five kinds of challenge

## User perception

*How do users perceived and engage with AI?*

- Mistaken for a therapist, not a tool
- Over-trust, emotional dependence
- Authority and blame put on AI

## Design & tuning

*How far to make it counsel-like?*

- Context and ethics lost in technique
- Tacit skill flattened into rules
- Lock-in to one therapeutic frame

## Data & learning

*What does it know, and not?*

- Little real counseling data
- Cultural, language, group bias
- Unvalidated data mixed in

## Stability & crisis

*How far to intervene, when to stop?*

- Crisis detection is hard to keep consistent
- Rare failures, but a very high cost
- Needs escalation to people and services

## Governance & accountability

*Who controls and bears responsibility for it?*

- Blurred medical / wellness / consumer lines
- Regulatory gaps, unclear ethical owner
- Unclear legal and operational liability

IMPLICATIONS FOR DEVELOPING COUNTRIES

# Five questions to answer before adoption

**These are not five equal items; they fall into two layers.**

**DESIGN** *what the service is*

| | | |
|---|---|---|
| 1 | **Purpose** | Psychoeducation, first contact, screening, or counseling support? |
| 2 | **Population** | All youth, or only high-risk groups? |
| 3 | **Localization** | How are empathy, stigma, family, religion, and crisis expressed locally? |

**SYSTEM** *how it runs safely*

| | | |
|---|---|---|
| 4 | **Next step** | When AI detects risk, who responds, and how fast? |
| 5 | **Data** | Minor consent, storage, access rights, and deletion? |

→ *The hard layer is SYSTEM: who responds next, and how to connect the flow. Answer that first.*

IMPLICATIONS FOR DEVELOPING COUNTRIES

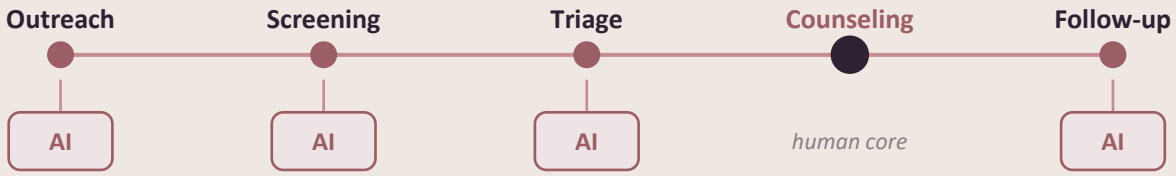
# Localization is design, not translation

## Localization means two designs at once, not just language.

**DESIGN LAYER** *how care sounds*

| | | | |
|---|---|---|---|
| Communication style | Cultural norms & stigma | Youth's common conditions | The worries they voice first |

**SYSTEM LAYER** *care is a pathway with many entry points*




*AI acts as an on-ramp at several stages, nudging people into care, not the treatment itself; map which local actors (schools, NGOs, clinics, government) own each stage.*

**CULTURAL**

Idioms of distress, norms around shame and help-seeking, the conditions youth face, and the worries they raise first.

**SYSTEMIC**

Care is a **multi-stage pathway**: outreach, screening, counseling, follow-up. AI can enter at several stages as a first nudge, not just one handoff.

→ *Budget for cultural redesign and for wiring the local pathway; this is where adoption quietly fails.*

**The real question is whether the system is ready to respond after it opens the door.**

# Thank you

Questions & discussion

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