When Asking Is Hard

A Community-Informed LLM Companion for Sexual and Mental Wellness in Rural India

14

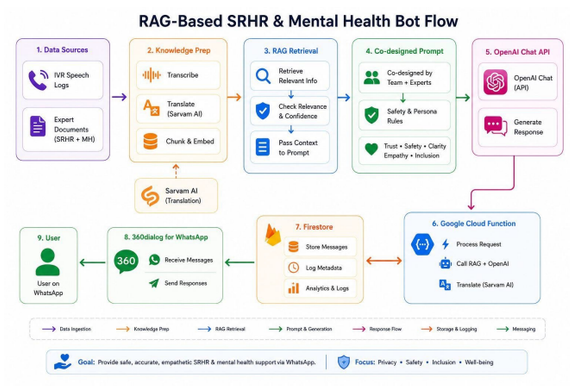
Summary

In rural India, stigma, shared phones, and limited access to professionals make sexual and mental health questions hard to ask. We built a Hindi LLM chatbot on WhatsApp, grounded in questions rural women had already asked an anonymous voice line, and shaped by community focus groups, expert review, and moderator audits.

"A man waited at a health centre from 7am to 2pm, could not ask what he came to ask, and left in tears."

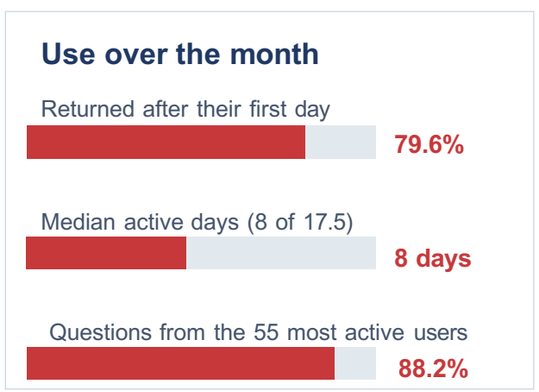
Community focus group, Bihar

Problem: no private place to ask



Architecture: how a question becomes an answer

Solution: the chatbot on WhatsApp



Use over the month: most users returned

What we did

- **Phase 1 · Community focus groups.** Five groups with 23 rural women and men set the conditions for asking: anonymity, no registration, and answers that inform rather than lecture.
- **Phase 2 · Expert and team interviews.** Doctors, moderators and the project team turned those conditions into a retrieval corpus, a persona, and a confidence gate.
- **Phase 3 · Deployment and user interviews.** A one-month pilot with 108 enrolled users, then 22 user interviews and a 100-response expert audit.

What we found

- **102 of 108 users sent 13,984 substantive questions** in one month; 88% were free text, not menu taps, and 79.6% returned after the first day.
- **Mental health was the largest theme:** 3,236 questions — 23% of all.
- **Sexual and reproductive health, largest themes:** sexual health 366, reproductive health 257, contraception 252.

What we learned

- **Writing made asking possible.** Users raised in text what focus-group participants had called impossible to say aloud, and most came back next day.
- **Grounding in community questions worked.** Moderators rated contextual relevance 97.8%, and expert-audited accuracy rose from 36% to 78% across iterations.
- **But privacy must be legible, not merely kept.** One participant withheld her most sensitive question because she could not tell what privacy she had.

Extending this to Germany

- **Anonymous questions as a novel data source.** These questions record what people will not say aloud, which surveys cannot reach. **In Germany:** an anonymous bot could gather what users in Saarland ask about mental health, before any clinic sees them.
- **Asking is hard here too. In Germany:** therapy waiting lists, a new city, and for international students a second language. E.g. a mental health support for refugees
- **The LLM architecture transfers:** retrieval over a vetted corpus, a confidence gate that declines rather than guesses, and delivery in a familiar messaging app. **In Germany:** swap the Hindi corpus for German counselling and university health guidance — the pipeline is unchanged.

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Research Interests: : HCI4D; conversational AI for health and education; human-centred evaluation of LLMs; and AI for social good in low-resource settings.

References

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Mishra, R., et al. (2023). Hindi Chatbot for Supporting Maternal and Child Health Related Queries in Rural India. 5th Clinical NLP Workshop. doi:10.18653/v1/2023.clinicalnlp-1.9

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