JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

MED-HI

Where Care Meets Comfort

Atishvi Gupta[1]; Aryaman Bhardwaj[2]

[1,2]Scholar

[1,2]Department of Computer Science Engineering

[1,2]Maharaja Agrasen Institute of Technology, PSP Area, Rohini, Delhi

Corresponding Author Email: iatishvi@gmail.com

Abstract

In a country as vast and diverse as India, access to quality healthcare and emotional support remains uneven, often hindered by deep-rooted social stigma, especially around mental health, neurological conditions and sexual health concerns, as well as the persistent fear of judgement and exclusion. This research introduces an innovative digital healthcare platform that empowers users to seek anonymous medical consultations with certified clinicians, ensuring both comfort and confidentiality in the earliest and most critical stages of medical concern. The platform will uniquely integrate real-time clinical escalation, allowing doctors to recommend in-person appointments, prescription-based medicine delivery or lab test bookings at home, thus creating a seamless care continuum. What truly distinguishes this platform is its integrated focus on emotional and psychological support. Through community-driven peer support spaces, users can share personal experiences, seek advice and find solidarity in a safe and moderated environment. This dual pronged model merging professional medical advice with empathetic community engagement creates a truly holistic approach to well-being.

The paper explores the platform's conceptual framework, its alignment with national healthcare needs, and its potential to transform patient behaviour by lowering the barriers to care-seeking. Special emphasis is given to quality assurance, data privacy and the ethical frameworks that support anonymous care delivery. Comparative analysis with existing platforms reveals substantial innovation in scope, design and inclusivity. This research asserts that such a platform will not just be a technological advancement but a paradigm shifts in healthcare delivery, upholding the values of accessibility, dignity and excellence for every individual, regardless of background or condition.

***IndexTerms*- Healthcare, social stigma, anonymous medical consultation, peer groups, continuum**

Introduction

The Healthcare Void: Delayed Diagnosis Through Cultural Filters

In a society still bound by traditional beliefs and cultural taboos, mental, sexual, and neurological health are among the most neglected yet critically important domains of healthcare [1,2]. The intersection of mental, sexual and neurological health with social stigma and cultural taboos creates a landscape where silence often replaces care and shame replaces support. This deep-rooted stigma leads to either no treatment or severely delayed intervention, pushing individuals into a cycle of suffering, isolation and even death [3].

Untreated and Unacknowledged: India's Mental Health Reality

Despite growing awareness, mental health in India remains steeped in stigma and misunderstanding. Disorders such as depression, anxiety and schizophrenia are commonly misinterpreted as signs of personal weakness or spiritual affliction, rather than legitimate medical concerns. Cultural beliefs frequently brand those affected as "mad," "possessed" or "cursed," prompting families to conceal the condition and seek religious or traditional remedies instead of professional help [4,5]. In rural communities, the situation is even more dire, mental illness is barely acknowledged and suicide rates are alarmingly high, reinforcing a cycle of silence and suffering.

As per the National Mental Health Survey (2015-16), over 10 crore (100 million) Indians suffer from mental disorders [6,7]. More than 90% of these individuals have never sought clinical treatment. According to the World Health Organization, India is among the most depressed countries in the world [8]. India alone loses over 150,000 lives to suicide annually (NCRB), with youth and women being the most affected groups [9]. Tragically, most of these deaths could have been prevented with timely psychological intervention. Despite these staggering figures, people continue to suffer in silence.

Neurological Health: Misunderstood and Marginalized

Neurological conditions such as Epilepsy, Delirium, Tourette's syndrome and autism spectrum disorders are equally prone to stigma [10]. In traditional mindsets, such disorders are often mistaken for possession by evil spirits.

People with epilepsy, for instance, are often barred from marriage or employment. Children with autism or ADHD may be labelled as "spoiled" or "stubborn" instead of being supported with therapies [11,12]. Families frequently hide these conditions rather than seek diagnosis, in fear of losing social standing or marriage prospects.

Sexual Health: A Victim of Shame and Conservatism

Topics like sexual dysfunction, infertility, sexually transmitted infections (STIs) and HIV/AIDS, are considered social taboos in many communities [13]. Talking about these issues is viewed as indecent or immoral. As a result, patients often suffer in silence for years, rely on unverified remedies or quack doctors or avoid testing or treatment altogether.

As per UNAIDS, 2.4 million people are living with HIV in India, and a large portion of them face social exclusion, which hampers their access to treatment [14].
A report by the Indian Society of Assisted Reproduction (ISAR) estimates that 10–15% of married couples in India face infertility issues yet most do not seek medical intervention due to social and family pressure [15,16]. The result is a spiral of untreated suffering, relationship breakdowns and mental health decline.

Discrimination in Healthcare: The Invisible Struggles of India's LGBTQ+ Community

In India, the LGBTQ+ community continues to face significant barriers to timely and equitable medical care [17,18]. Deep-rooted societal prejudice, combined with a lack of sensitization among healthcare professionals, often results in discrimination, misdiagnosis or outright denial of treatment. Many queer individuals report being shamed, harassed, or subjected to unethical practices like conversion therapy when seeking medical help [19,20]. Indian medical textbooks still use outdated and offensive terminology, reinforcing harmful stereotypes. During the COVID-19 pandemic, members of the LGBTQ+ community were even denied vaccines and basic healthcare services [21]. These systemic failures not only violate constitutional rights to equality and health but also exacerbate mental health issues and push individuals further into the margins of society.

Med-Hi: A Revolutionary Convergence of Voice, Dignity and Healing

Med-Hi will be a digital healthcare application designed to provide users with anonymous consultations from expert doctors across various medical fields. The platform will aim to create a safe and judgement-free environment where individuals can express their health concerns freely, without fear of social stigma or hesitation.

Users will be able to choose their preferred mode of communication i.e. text chat, audio call or video consultation based on their comfort level and the doctor's requirements for diagnosis or treatment. Every user will create their own unique username and password while signing in. This username will be used by users to log in to their accounts and by doctors to keep the records of the patients (Refer to Fig.1).

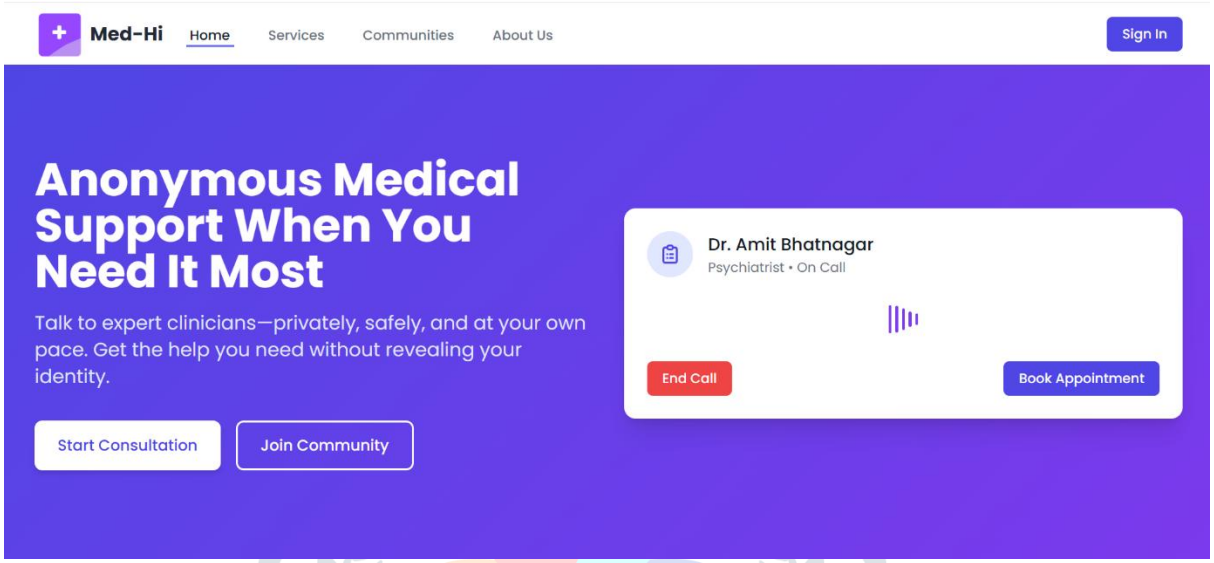


Fig.1 Home page

To initiate a consultation, the patient will send a message to the selected doctor. The doctor will then respond with available time slots according to their schedule. Once the appointment is confirmed, the session will take place at the scheduled time (Refer to Figure 2).

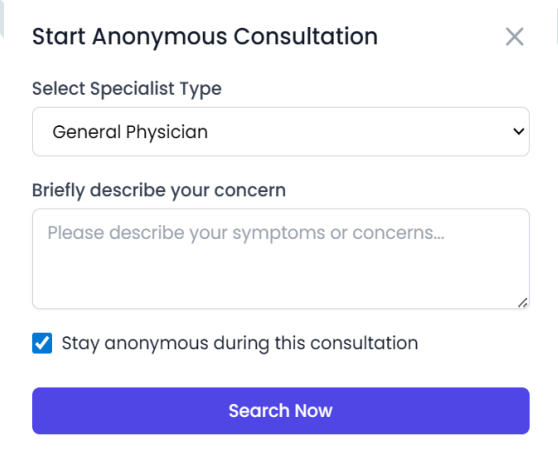


Fig.2 Appointment Booking

Patients will be required to pay the consultation fee prior to the start of the session. It will be the responsibility of the doctor to ensure that the patient feels safe, secure and comfortable throughout the consultation process, always maintaining a supportive and empathetic approach.

Additional Services Offered by Med-Hi

In addition to providing anonymous online consultations, Med-Hi will offer a comprehensive suite of healthcare services that create a seamless, end-to-end medical support ecosystem. The goal is to ensure that from the first query to the final stage of treatment, users experience comfort, privacy and accessibility at every step (Refer to Fig. 3).

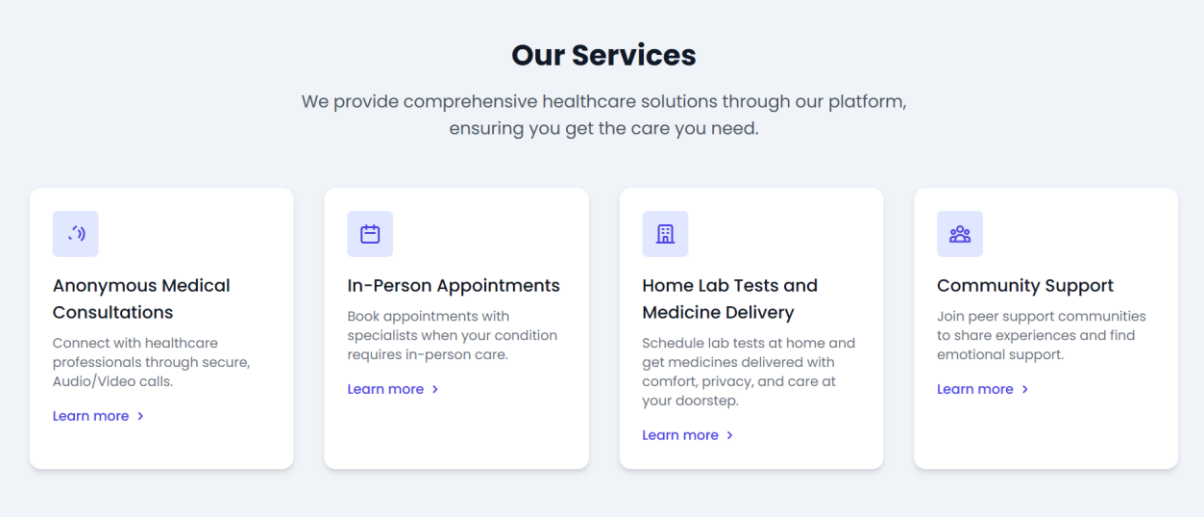


Fig.3 Services offered by Med-Hi

1. **In-Person Appointment Booking**
   In cases where the patient's condition requires physical examination or in-person treatment as advised by the consulting doctor. Med-Hi will allow users to book in-person appointments directly through the app. This will eliminate the need for third-party platforms or manual scheduling, thereby streamlining the process and reducing patient anxiety.

2. **E-Prescription and Medicine Delivery**
   If the doctor prescribes medication after the consultation, they will generate a digital prescription (E-prescription) for the patient. Users will then have the option to order the prescribed medicines directly through the app, ensuring timely access to treatment without having to visit a pharmacy. This not only enhances convenience but also protects patient privacy.

3. **At-Home Diagnostic Testing**
   For cases where diagnostic tests are required before a doctor can proceed with treatment (as is common in medical scenarios), Med-Hi will offer lab test booking services within the app. Once booked, a certified phlebotomist will visit the patient's home to collect the required samples. The tests will then be processed and results will be shared directly with both the patient and the consulting doctor through the app's secure platform.

Creating a Complete Continuum of Care

Together, these services form a complete healthcare continuum from anonymous consultation to prescription, testing, and in-person care ensuring that patients receive holistic medical support without leaving the comfort of their homes. Med-Hi will be committed to delivering ease, empathy and security throughout the entire healthcare journey.

Beyond Anonymity: Building Community to Fight Stigma

While anonymity helps patients open up about sensitive health concerns, it is not enough to fully eliminate the deep-rooted social stigma and hesitation that many individuals face specially in matters related to sexuality, gender identity or emotional wellbeing.

To address this, Med-Hi will offer a dedicated section for peer-to-peer community support.

Peer-to-Peer Support Groups

Users will be able to join safe, moderated community groups tailored to their needs and identities such as (Refer to Fig.4):

- LGBTQ+ support groups
- Male or female sexual health support forums
- Chronic illness and rare disease communities
- Mental and emotional health discussion circles

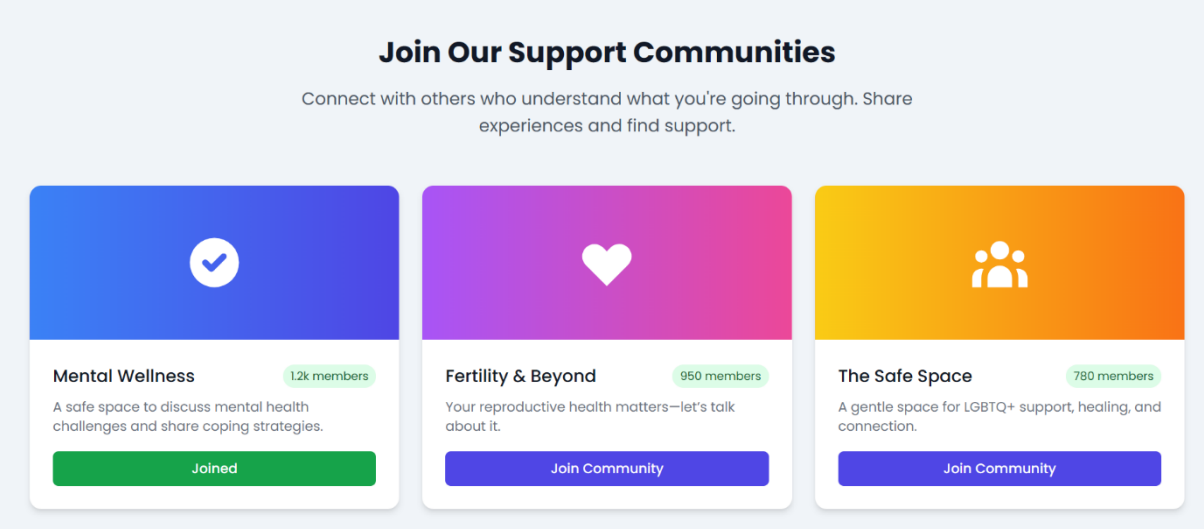


Fig. 4 Community groups on Med-Hi

These groups will serve as platforms where users can:

- Share personal experiences
- Ask questions without judgement
- Offer and receive support from peers
- Learn from others who have walked similar paths

This unique community-driven approach will not only reduce isolation but empower users with a sense of belonging and solidarity, encouraging open dialogue around taboo health topics.

While many healthcare platforms offer teleconsultation or pharmacy delivery, Med-Hi's integrated ecosystem and emphasis on peer support will set it apart. By addressing both the clinical and emotional needs of patients, Med-Hi will redefine healthcare as not just a service but a safe space for healing, connection and empowerment.

Methodology

The development of Med-Hi will follow a user-centric, modular and scalable approach aimed at ensuring accessibility, data privacy and emotional comfort for patients. The methodology is divided into six key stages:

1. Requirement Analysis and Problem Scoping

The initial phase will involve a comprehensive analysis of:

a. Existing healthcare platforms and their limitations in addressing stigma-bound concerns.
b. Target user groups, including individuals hesitant to seek traditional care due to social stigma, gender identity, sexual health or psychological concerns.
c. Feedback from healthcare professionals to understand clinical workflow needs in anonymous and remote consultation contexts.

This phase will also involve designing user personas, use-case scenarios, and a compliance checklist for data privacy laws (e.g., HIPAA, GDPR and India's Digital Personal Data Protection Act).

2. Platform Architecture and Technology Stack Selection

The technical design of the app will follow a microservices-based architecture to ensure scalability and reliability. The key components include:

a. Frontend Development: Using React Native for cross-platform deployment (Android & iOS), ensuring responsiveness and smooth UI/UX.

b. Backend Development: Using Node.js with Express.js, integrating with MongoDB for secure, encrypted data storage.
c. Real-Time Communication: WebSocket and Twilio API or Agora SDK for secure text, audio and video consultations.
d. Authentication & Security: Multi-layer encryption, token-based authentication (JWT) and optional OTP login.
e. Payment Integration: Razorpay or Stripe for secure, prepaid session booking and transaction processing.
f. Cloud Hosting: Deployment on AWS/GCP with scalability enabled via containers (Docker) and Kubernetes.

3. Core Feature Development

The application will be built in feature-based sprints using Agile methodology. The core modules include:

a. Anonymous Consultation Interface
- Registration with optional anonymity toggle
- Mode selection: Text, audio or video
- Doctor scheduling and session management
- Encrypted chat logs with automatic session termination

b. In-Person Appointment Booking
- Geo-tagged doctor directory
- In-app appointment scheduling
- Calendar integration for reminder

c. E-Prescription and Medicine Ordering
- Doctor-generated digital prescriptions
- API integration with partnered pharmacies
- Order tracking and delivery confirmation

d. At-Home Lab Testing
- Diagnostic test booking interface
- Phlebotomist allocation system
- Test tracking and digital report upload

e. Peer-to-Peer Community Groups
- Encrypted forums and interest-based communities
- Moderation protocols to maintain safety
- User tagging and support threads

4. Data Privacy, Anonymity and Ethical Safeguards

Given the sensitive nature of health data, data security and anonymity are foundational to the app's methodology. The following measures will be implemented:
- End-to-end encryption for all sessions and communication
- No compulsory disclosure of identity or demographic data
- Use of pseudonyms and avatars in community spaces
- Regular third-party security audits and penetration testing

Additionally, doctors will be trained and bound by digital confidentiality agreements and user access to the platform will be governed by a strong code of conduct and reporting mechanism.

5. UI/UX Testing and Feedback Integration

Prototypes will undergo rigorous testing with a diverse sample of target users:
- Usability Testing: To ensure comfort in navigating sensitive modules
- A/B Testing: For evaluating onboarding flows and consultation booking screens
- Doctor-side Testing: To align with clinical efficiency and ease of communication. Feedback will be continuously integrated into iterative development cycles using Agile sprints.

6. Pilot Launch and Scalability Planning

Post development, a limited-access pilot version will be launched with:

- Select user groups (urban youth, LGBTQ+ communities, mental health advocates)
- Pre-verified doctors from major cities

The performance, bug reports, user satisfaction and engagement metrics will inform the final deployment roadmap. Plans for state-wide or nationwide rollout will include:

- Partnering with government health missions and NGOs
- Introducing multilingual support
- Scaling with AI-driven symptom checkers and smart appointment bots

The proposed methodology ensures that Med-Hi is developed not just as an application, but as a trustworthy healthcare ecosystem. By integrating cutting-edge technology with deep empathy and community-driven support, Med-Hi will redefine how modern healthcare platforms address the silent suffering caused by social stigma and inaccessible care.

Challenges and Proposed Solutions

Despite its innovative approach and social impact potential, the development and implementation of Med-Hi will inevitably face a variety of challenges. These range from technical barriers and legal compliances to social resistance and user trust. Below is a detailed overview of the key anticipated challenges and strategies to resolve them:

1. Building Trust in an Anonymous Platform

Issue:

Many users may be sceptical of consulting anonymously, doubting whether their concerns will be taken seriously or whether they are communicating with qualified professionals.

Solution:

a. Med-Hi will onboard only verified, certified and experienced doctors after a strict KYC and credential verification process.
b. Each doctor's profile will include ratings, specialization, consultation style and reviews to help build user trust.
c. Transparent privacy policies and end-to-end encryption notices will be clearly displayed at every stage of the consultation process.

2. Ensuring Data Privacy and Security

Issue:

Handling highly sensitive medical data requires the highest standards of security. Any breach could destroy the platform's credibility.

Solution:

a. Med-Hi will implement bank-level encryption (AES-256) for all user data, session logs and prescription history.
b. It will use token-based login systems and zero-knowledge architecture wherever possible.
c. Regular third-party security audits and bug bounty programs will be run to test vulnerabilities.
d. Full compliance with HIPAA, GDPR and India's Digital Personal Data Protection Act will be ensured.

3. Challenge: Handling Emergency Cases

Issue:

Since Med-Hi is primarily for anonymous, non-emergency consultation, users in a medical emergency might use the app instead of seeking immediate care.

Solution:

a. Med-Hi will display clear disclaimers at login and before every session, stating that the app is not for emergency use.
b. It will include a "Quick Connect to Emergency Services" feature that redirects users to the nearest

emergency helplines or hospitals based on geolocation.

c. Doctors will be trained to immediately escalate any suspected emergency to local authorities, with user consent where appropriate.

4. Resistance Due to Cultural Taboos and Social Norms

Issue:

In conservative regions, people may still avoid talking about sexual health, mental health or gender identity, even with an anonymous app.

Solution:

a. Med-Hi will run awareness campaigns through social media, NGOs and educational institutions, showcasing real stories and testimonials.

b. It will offer first consultation free promotions to encourage trial without financial hesitation.

5. Doctor Availability and Scheduling Conflicts

Issue:

Ensuring real-time availability of doctors, especially in high-demand fields like gynaecology, mental health or dermatology, may be challenging.

Solution:

a. An AI-driven scheduling assistant will be used to optimize doctor availability based on peak hours and past usage trends.

b. A network of standby doctors will be maintained for immediate sessions during peak hours.

c. Multi-slot booking and waitlisting features will be used to give patients more flexibility.

6. Ensuring Quality in Peer-to-Peer Community Groups

Issue:

Community forums can become breeding grounds for misinformation or harmful content if not properly moderated.

Solution:

a. A combination of AI moderation tools (flagging abusive or misleading content) and human moderators trained in empathy and privacy will be employed.

b. Strict community guidelines, real-time reporting features and three-strike penalties for violations will be implemented.

c. Peer ambassadors (trained volunteers or certified health educators) to encourage responsible engagement will be invited.

7. Technical Glitches and Downtime

Issue:

Like any tech platform, Med-Hi may face glitches in video calling, server downtime or payment failures especially during scale-up.

Solution:

a. The application will be hosted on robust cloud infrastructure (e.g., AWS or GCP) with failover mechanisms and load balancers.

b. A real-time issue tracker and 24x7 customer support system (initially chatbot-assisted, then human escalation) will be built.

c. Extensive beta testing and stress simulations will be conducted prior to each major rollout.

8. Legal and Regulatory Compliance Across Jurisdictions

Issue:

Different regions and countries have varying laws for telemedicine, data storage and e-prescription.

Solution:

a. Collaboration with healthcare legal consultants will be undertaken to stay updated with regional regulations.
b. Region-specific data storage and restrict services (e.g., e-prescriptions) will be maintained in non-compliant regions through geofencing.
c. Terms & Conditions will be updated dynamically based on the user's location.

While these challenges are significant, they are not insurmountable. A proactive, ethically conscious and technology-driven approach will ensure that Med-Hi not only meets but sets new benchmarks in socially inclusive digital healthcare. By anticipating obstacles and building flexible, transparent systems, the platform can deliver transformative healthcare access with dignity, security and compassion.

Comparative Analysis

Prospects of Med-Hi

As Med-Hi evolves beyond its core functionality of providing anonymous consultations and community-based healthcare, it holds immense potential to expand into a comprehensive, technologically advanced and socially inclusive health-tech ecosystem. The following prospects outline the strategic directions in which Med-Hi can grow:

1. **AI-Powered Health Assistant**

In future updates, Med-Hi can integrate an AI-driven symptoms checker to assist users in identifying potential health conditions and recommending appropriate consultation modes. This smart triage system may reduce unnecessary consultations and improve patient-doctor matching.

2. **Corporate and Institutional Partnerships**

The platform can be extended to corporate environments and academic institutions. Med-Hi may partner with companies to offer anonymous health support to employees, and collaborate with universities to address the mental, sexual and emotional health needs of students in a stigma-free space.

3. **Government and NGO Collaborations**

Feature	Med-Hi	Tata 1mg	Practo	PharmEasy	Apollo 24/7	Netmeds
Anonymous Medical Consultations	Yes (core feature)	Not available	Not available	Not available	Not available	Not available
Peer Support Communities	Yes (mental, sexual, LGBTQ+)	Not available	Not available	Not available	Not available	Not available
Text/Audio/Video Consultations	All modes (user preference)	Text/Video	All modes	Limited (partnered clinics)	All modes	Text/Video
In-Person Appointment Booking	Doctor-recommended & auto-enabled	Yes	Yes	Mostly digital	Yes	No
E-Prescriptions & Medicine Orders	Seamless in-chat + delivery	Advanced pharmacy	Yes (via upload)	Pharmacy-led	Yes	Yes
Lab Tests with Auto-Scheduling	At-home testing + phlebotomist visit	Extensive	Available	Available	Available	Available

Med-Hi holds strong potential for collaboration with government health missions and NGOs, especially under initiatives like the National Mental Health Programme (NMHP) or Digital India Health Mission. It can be deployed in rural areas through teleconsultation booths, language-localized apps and mobile health units.

4. **Multilingual and Regional Expansion**
To broaden accessibility, Med-Hi can introduce multilingual support (Hindi, Bengali, Tamil, Marathi, etc.) and culturally relevant content. This will allow the platform to reach users in Tier 2 and Tier 3 cities, ensuring inclusivity and regional relevance.

5. **Anonymous Peer Therapy Groups**
Beyond community discussion forums, Med-Hi may host anonymous group therapy sessions through audio or avatar-based video chatrooms. These moderated peer circles can focus on specific issues such as anxiety, depression, gender identity, trauma and chronic illness support.

6. **Blockchain-Based Health Record System**
To enhance data security and give users full control over their health records, Med-Hi can adopt blockchain technology for encrypted, decentralized storage. Patients may then choose to share anonymized or partial health histories with healthcare providers as needed.

7. **Insurance and Fintech Integration**
Future versions of Med-Hi may include micro-insurance plans, EMI-based teletherapy subscriptions or partnerships with insurance providers to offer cashless mental and sexual health services. This can reduce financial barriers and make ongoing care more accessible.

8. **Public Health Research and Insights**
By collecting anonymized, ethically approved data, Med-Hi can contribute valuable insights to public health research in areas like mental wellness, LGBTQ+ health and rural care gaps. Partnerships with research institutions and universities can strengthen this direction.

Conclusion

In a country as complex and culturally layered as India, the intersection of healthcare and stigma creates invisible barriers that silence millions. Med-Hi emerges as a timely and transformative solution, addressing not only the clinical gap but also the emotional and social void experienced by those struggling with mental, neurological and sexual health concerns. By leveraging the power of anonymous, voice-based consultations and community-driven peer support, the platform restores dignity, agency and accessibility to those who have long remained unheard.

This paper demonstrates how technology, when built with empathy and cultural sensitivity, can do more than deliver services. It can redefine narratives, dismantle taboos and catalyse healing. Med-Hi is not just an innovation in telehealth; it is a movement toward inclusive care, where being seen is optional, but being heard is guaranteed.

As India continues its digital health transformation, platforms like Med-Hi point to a future where every whisper of pain can be met with a voice of understanding and no one must suffer in silence.

REFERENCES

1. Agarwal, V., & Mahapatra, S. (2012). Cultural misconceptions and traditional healing practices for sexual problems: A mental health perspective. *International Journal of Culture and Mental Health.*

2. Srinivasan, S., & Thara, R. (2023). *Mental health–related stigma, service provision and utilization in Northern India: Situational analysis*. International Journal of Mental Health Systems, 17 (Suppl 1), S174–S178. https://doi.org/10.4103/ipj.ipj_237_23

3. Mehta, N., Clement, S., Marcus, E., Stona, A.-C., Bezborodovs, N., Evans-Lacko, S., ... & Rose, D. (2015). *Evidence for effective interventions to reduce mental health-related stigma and discrimination in the medium and long term: Systematic review*. The British Journal of Psychiatry, 207(5), 377–384. https://doi.org/10.1192/bjp.bp.114.151944

4. Subramanian, S. U., & others (2023). **Mental health-related stigma, service provision and utilization in Northern India: situational analysis.** *International Journal of Mental Health Systems, 17*, Article 23.

5. Kar, N. (2008). Mental illness and health-seeking behavior: A systematic review of traditional healing practices in India. *Mental Health, Religion & Culture*, 11(3), 221–236.

6. Gururaj, G., Varghese, M., Benegal, V., Rao, G. N., Pathak, K., Singh, L. K., ... & NMHS Collaborators. (2016). The National Mental Health Survey of India, 2015–16: Prevalence, patterns and outcomes. *Indian Journal of Psychiatry*, 58(Suppl 1), 7–100.

7. Manjunatha, N., Dinakaran, D., Sarkhel, S., & Naveen Kumar, C. (2023). The National Mental Health (Psychiatric) Survey (2015–2016): A superb acceleration in public mental health scenario of India. *Indian Journal of Psychiatry*, 65(12), 1205–1207.

8. WHO India – Depression Overview World Health Organization. (n.d.). *Depression in India*. WHO India. https://www.who.int/india/health-topics/depression

9. National Crime Records Bureau. (2022). *Accidental deaths & suicides in India – 2021 (Chapter 2: Suicides)*. Ministry of Home Affairs, Government of India. https://www.ncrb.gov.in/sites/default/files/ADSI-2021/adsi2021_Chapter-2-Suicides.pdf

10. Gosain, K., & Samanta, T. (2022) *Understanding the Role of Stigma and Misconceptions in the Experience of Epilepsy in India: Findings From a Mixed-Methods Study. Frontiers in Sociology, 7.*

11. Tripathi, M., & Gupta, P. (2012). Epilepsy and stigma: A study from India. *Annals of Indian Academy of Neurology*, *15*(3), 153–158. https://doi.org/10.4103/0972-2327.99703

12. Daley, T. C. (2004). From symptom recognition to diagnosis: Children with autism in urban India. *Social Science & Medicine, 58*(7), 1323–1335. https://doi.org/10.1016/S0277-9536(03)00271-5

13. Martín-Sánchez, M., Pöge, K., Hahne, A., Hamm, J., Bremer, V., Koppe, U., & TASG-study group. (2024). Discrimination based on gender identity and decision-making regarding HIV/STI-protected sex among trans and non-binary people in Germany. *BMC Public Health, 24*, Article 3013. https://doi.org/10.1186/s12889-024-20464-2

14. UNAIDS. (2015). *Social protection: Advancing the response to HIV*. Joint United Nations Programme on HIV/AIDS.

15. Sheoran, P., & Sarin, J. (2017). *Infertility in India: Social, religion and cultural influence*. International Journal of Reproduction, Contraception, Obstetrics and Gynecology, 4(6), 1783–1788. https://doi.org/10.18203/2320-1770.ijrcog20150947

16. Indian Society of Assisted Reproduction (ISAR). (2025). *Of over 27 million Indians facing infertility challenges, 40–50% are men, say experts*. The New Indian Express.

17. Chakrapani, V., Newman, P. A., Shunmugam, M., Rawat, S., Mohan, B. R., Baruah, D., & Tepjan, S. (2023). A scoping review of lesbian, gay, bisexual, transgender, queer, and intersex (LGBTQI+) people's health in India. *PLOS Global Public Health, 3*(4), e0001362. https://doi.org/10.1371/journal.pgph.0001362

18. Shaikh, A. A. (2025). LGBTQ+ rights and health care in understanding India: A review. *Indian Journal of Forensic and Community Medicine, 12*(1), 4–8. https://doi.org/10.18231/j.ijfcm.2025.002

19. Mhatre, P., Morrison, B., Vashishtha, S., & Singh, B. (2023). *A Critical Medico-Socio-Legal Analysis of Conversion Therapy in the Indian Subcontinent*. Sexuality & Culture, 28, 883–917.

20. Nair, A., Awasthy, D., & Bishnoi, A. (2024). LGBTQIA+ rights: Progress and challenges in India. *IOSR Journal of Humanities and Social Science*, *29*(11), 35–40.

21. Garg, I., Hanif, H., Javed, N., Abbas, R., Mirza, S., Javaid, M. A., Pal, S., & Sheikh, A. B. (2021). *COVID-19 Vaccine Hesitancy in the LGBTQ+ Population: A Systematic Review*. Infectious Disease Reports, 13(4), 872–887