

In-person Mental Health Training and Tele Mentoring for Community Health Officers and Mid-level Health Providers in India: A Report from Telangana and Tripura, the Two Diverse States of India

Nishchala Pearala¹, Sahana Nujella¹, Prakyath R. Hegde¹, Channaveerachari Naveen Kumar¹, Narayana Manjunatha², Suresh Bada Math² and Rahul Patley¹

ABSTRACT

Background: Mental health integration into primary healthcare is pivotal in addressing mental, neurological, and substance use disorders in India. Community Health Officers (CHOs) and Mid-Level Health Providers (MLHPs) play a critical role in providing mental health services at the grassroots levels. Despite existing training modules, gaps persist in implementing sustained, practical training programs. This study evaluated the effectiveness of in-person mental health training combined with tele-mentoring for CHOs and MLHPs in Telangana and Tripura.

Methods: A mixed-method cross-sectional approach was employed. In-person training was delivered to 66 participants in Telangana and 396 in Tripura, covering theoretical modules, interactive sessions, and role plays. Pre- and post-assessments

evaluated Knowledge (K), Attitude (A), and Practices (P). Instant Collaborative Video Consultations (CVCs) supported participants for three months post-training. Quantitative data were analyzed using paired t-tests, while thematic analysis was applied to qualitative data from focus group discussions and feedback.

Results: Statistically significant improvements in KAP scores were observed in both states ($p < .01$). The CVC model facilitated real-time support, with 91.84% of patients being first-time mental health service users. Substance use disorders (31.25%) and common mental disorders (27%) were the most identified conditions. Participants appreciated the interactive training design and recommended ongoing support.

Conclusions: The integration of in-person training with tele-mentoring effectively

enhanced CHOs' and MLHPs' capacity to deliver mental health services. Scaling this model nationally, supported by continuous mentoring, could significantly improve community mental health outcomes.

Keywords: Community Health Officers (CHOs), Mid-Level Health Providers (MLHPs), mental health training, Collaborative Video Consultation (CVC)

Key Messages

- In-person training combined with tele-mentoring improves CHOs' and MLHPs' skills in delivering mental health services.
- Instant, live, Collaborative Video Consultations (CVCs) provide ongoing support for mental health service users.
- Scaling this integrated model nationwide can strengthen mental health care in primary health settings.

¹NIMHANS Digital Academy, Dept. of Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, Karnataka, India. ²Tele Medicine Centre, NIMHANS Digital Academy, Dept. of Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, Karnataka, India.

HOW TO CITE THIS ARTICLE: Pearala N, Nujella S, Hegde PR, Kumar CN, Manjunatha N, Math SB and Patley R. In-person Mental Health Training and Tele Mentoring for Community Health Officers and Mid-level Health Providers in India: A Report from Telangana and Tripura, the Two Diverse States of India. *Indian J Psychol Med.* 2025;XX:1–10.

Address for correspondence: Rahul Patley, NIMHANS Digital Academy, Dept. of Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, Karnataka 560029, India.
E-mail: rahulpatley@gmail.com

Submitted: 07 Mar. 2025
Accepted: 18 Aug. 2025
Published Online: xxxx



Copyright © The Author(s) 2025

Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution- NonCommercial 4.0 License (<http://www.creativecommons.org/licenses/by-nc/4.0/>) which permits non-Commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the Sage and Open Access pages (<https://us.sagepub.com/en-us/nam/open-access-at-sage>).

ACCESS THIS ARTICLE ONLINE
Website: journals.sagepub.com/home/szj
DOI: 10.1177/02537176251374824

India faces significant mental health challenges with limited services available. Strengthening primary health care (PHC) with better screening and professional training is essential to address these needs. The National Health Policy 2017, along with the Ayushman Bharat Program (ABP) launched in 2018, emphasized the importance of Ayushman Arogya Mandhir (AAM), previously known as Health and Wellness Centers (HWCs), in delivering comprehensive primary healthcare (cPHC) services. One enhanced service package under HWCs includes screening and basic management of Mental, Neurological, and substance use disorders, highlighting the government's commitment to holistic PHC strengthening.¹

Community Health Officers (CHO) and Mid-Level Health Providers (MLHP) in AAMs play a crucial role in this framework by shifting service delivery from a doctor-centric model to a team-based approach.² The institutionalization of the CHO and MLHP roles, with legal recognition and defined prescription rights under the National Medical Commission Act of 2019, marks a significant step in enhancing mental health services at the grassroots level.¹ The integration of mental health services into the PHC setup offers multiple advantages, such as reducing stigma, improving access to care, and facilitating better identification of psychiatric disorders among patients with other physical illnesses.³ This integration can reduce dependency on tertiary care and improve follow-up for mental health patients.⁴

Several mental health training programs have been implemented for primary care doctors and other healthcare providers, employing various modes such as onsite, online, and hybrid methods. For instance, the Chhattisgarh Community Mental Healthcare Tele-Mentoring Program (CHaMP) uses a combination of onsite training, eLearning, and Collaborative Video Consultation (CVC) to train Primary Care Doctors (PCDs) and Rural Medical Assistants (RMAs).⁵ Similarly, the "Diploma in Primary Care Psychiatry" (DPCP) and other task-shifting initiatives have demonstrated the efficacy of digitally driven training programs in improving mental healthcare delivery at the primary

level.⁶⁻⁸ Concerning CHO, although the MNS (Mental, Neurological, and Substance Use) module exists, they have not been fully translated into an implementable training program. Another noteworthy initiative is the TORENT (Tele-mentoring for Rural Health Organizers of Chhattisgarh) program, which aims to train Regional Health Officers (RHOs) digitally, and the training sessions cover both basic and advanced mental health concepts over 12 sessions each.⁹

These training programs have shown promise in enhancing the mental health literacy of healthcare workers, improving their ability to identify, manage, and refer patients with mental health disorders. Moreover, specialized training initiatives, such as utilizing digital technology for ongoing engagement, highlight the potential of innovative approaches in mental health care.¹⁰ However, most often they lack continuous support and follow-up, which are critical for sustaining the skills and knowledge acquired.¹¹ Despite the promising potential of CHOs and MLHPs to improve the recognition and management of mental disorders, comprehensive training is absent, and sustained handholding compromises the long-term effectiveness of such initiatives.¹²

This study will contribute to the growing body of evidence on the importance of continuous professional development for CHOs and MLHPs in the context of mental healthcare, particularly in the resource-constrained and culturally diverse states of Telangana and Tripura. To address the unique challenges posed by these settings, including stigma, a pressing need exists for in-person mental health training programs and continuous tele-mentoring through CVC to equip CHOs and MLHPs with the necessary skills and knowledge to provide effective services. In this context, this study aims to explore the impact of hybrid training (in-person mental health training combined with handholding through CVC) for CHOs and MLHPs in India.

The primary objective is to evaluate the changes in Knowledge (K), Attitude (A), and Practices (P) of CHOs and MLHPs, as well as the overall impact on community mental health outcomes. Secondary objectives included the effectiveness of this CVC-integrated in-person training

model in improving mental health service delivery at AAMs (HWCs).

Methods

Ethical Considerations

The study was approved by the Institutional Ethics Committee (IEC) (Approval No. NIMHANS/43rd IEC (BEH.SC.DIV) 2023, dated December 8, 2023) and registered with the Clinical Trial Registry of India (Registration No. CTRI/2024/02/062906). Verbal informed consent was sought from all participants, including the CHOs, MLHPs, and patients. This study employed a mixed-methods cross-sectional design to evaluate the impact of in-person mental health training combined with CVC on CHOs and MLHPs in India, specifically in the states of Telangana and Tripura. We used the STROBE cross-sectional checklist when writing our report, and it is uploaded as "STROBE Complete Checklist."¹³

Setting

The in-person training sessions were held in Hyderabad for Telangana and Agartala for Tripura, as requested by the respective states. CVCs were taken on a virtual video conferencing platform. In the CVC module, video consultations were conducted by a Mental Health Professional (MHP), such as a Psychiatrist, Clinical Psychologist, Psychiatric Social Worker, or Nursing Officer. The MHP was available during working hours and for emergencies to provide advice and support. CHOs discussed selected patients after using the Mental Health Screening and Counseling Tool [MERIT] to determine treatment plans, referrals, or resolve screening issues. After each CVC, the MHP recorded clinical data in a proforma, including the key learning points.

Participants

The In-person training in Telangana for CHOs and MLHPs took place in two batches, spanning over two days with 15 hours of training per batch in January and March 2024. The training was carried out for 66 trainees from the State of Telangana, representing all the districts nominated by the state. The In-person training in Tripura for

CHOs and MLHPs took place in two batches, spanning over two days with 15 hours of training per batch in July and August 2024. The training was carried out for 396 trainees from Tripura in 2 batches, representing all the districts nominated by the state. Participants included all CHOs and MLHPs nominated by state health authorities. Those who missed training sessions were excluded (Figure 1).

Training Curriculum

The training module included a comprehensive curriculum, including both theoretical and practical modes. The theoretical training mode included didactic lectures, case-based group discussions, and interactive question-and-answer sessions. Practical mode of training included hands-on learning experience through role-plays and case scenarios.

Training Modules for CHOs and MLHPs

In line with the MNS Training Module.

1. Orientation to various signs and symptoms of mental illness and application of the MERIT Screening Tool.¹⁴
2. Common mental disorders (CMDs): Depression and suicidal risk assessment and management
3. CMDs: Generalized anxiety disorder, panic disorder, and somatization disorder
4. Severe mental disorders (SMDs)
5. Substance use disorders (SUDs): Alcohol and tobacco addiction
6. Pandemic, disaster preparedness, Tele-MANAS, and Collaborative Care-District Mental Health Program (DMHP)

Data Collection

Quantitative Data

Pre-assessments and post-assessments were completed by the trainees before and after the in-person training sessions, respectively, which assessed the Knowledge (K), Attitude (A), and Practices (P) related to training content. Pre and post (KAP) questionnaires were shared through WhatsApp before and

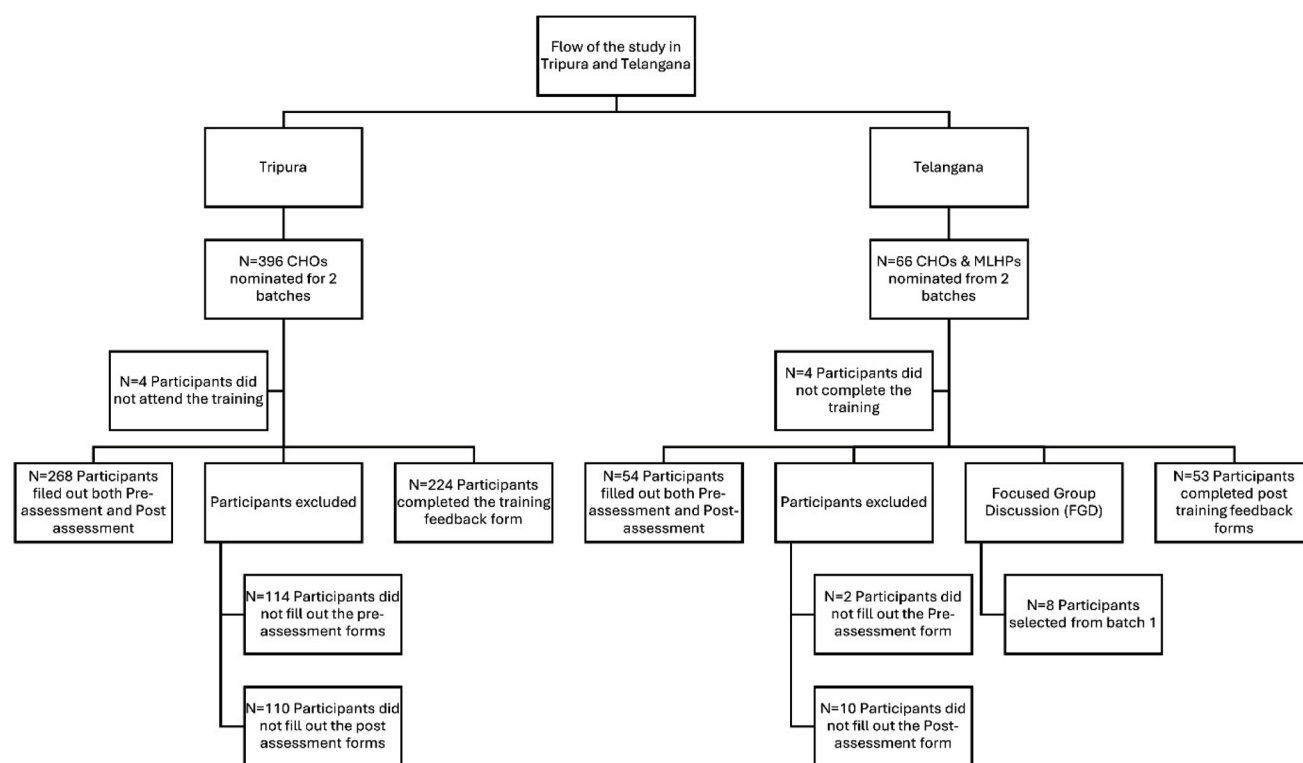
after training, after obtaining informed consent. A structured assessment tool was developed based on established mental health guidelines and literature. It was validated by two senior psychiatrists in the team. The tools comprised multiple-choice questions and case-based scenarios to evaluate CHOs' baseline understanding of CMDs, SMDs and SUDs. Continuous supportive handholding was done with the help of instant Collaborative video/audio consultations extending up to 3 months post-training. Eligible participants who have attended 2 days of the training sessions, who have filled out both pre- and post-assessments, and who have done at least one Collaborative video/audio consultation were awarded certification of completion of the training program. A feedback form was sent to the participants who completed the training.

Qualitative Data

For the batch 1 participants from the state of Telangana, an Online Focused

FIGURE 1.

Flow of the Study in Tripura and Telangana.



CHOs: Community health officers, MLHPs: Mid-level health providers.

Socio-demographic details of the participants who did not attend/complete the training are not available (Telangana N = 5, Tripura N = 4).

Group Discussion (FGD) was carried out post-training to obtain feedback from the participants. The FGD included an interview guide including questions and probes about the structure, methods of training, and other challenges faced. Participants were selected through a purposive sampling method to represent a sample of CHOs and MLHPs who attended the in-person mental health training. The faculty in charge had vetted these discussion points, and further training sessions were initiated accordingly for batch 2. The FGD was audio- and video-recorded and transcribed verbatim. Anecdotes from feedback forms were collected about the program's training.

Data Analysis

Quantitative Data

Participant demographics across the states are analyzed through descriptive statistics. Paired *t*-tests were used to compare pre- and post-training KAP scores for both states. Descriptive Statistics were employed to analyze CVC data and participant feedback forms (Figure 2). The SPSS licensed version 29 was used to analyze the quantitative data. This included performing descriptive statistics and inferential statistics (*t*-test).¹⁵ Participants with missing data were excluded from paired analyses.

Qualitative Analysis

Thematic analysis was conducted on the FGD transcripts and feedback forms. Audio recordings of the FGD were transcribed using Turboscribe software. Data were manually coded, sub-themes and themes were identified, and the findings were interpreted as per the Braun and Clarke Inductive Thematic analysis.¹⁶

Results

The study involved CHOs nominated by Telangana (66 participants) and Tripura (396 participants). A total of 54 participants from Telangana and 268 participants from Tripura completed both pre- and post-training assessments and were included in the paired KAP analysis. These numbers reflect participants who filled out both the pre- and post-assessment forms. In contrast, 2 participants in Telangana and 114 in Tripura did not complete the pre-assessment, while 10 in Telangana and 110 in Tripura did not fill out the post-assessment forms. These participants were excluded from the paired analysis. The mean age of CHOs was 30.4 years in Telangana and 31.2 years in Tripura. Gender distribution in Telangana showed 35 males (57.3%) and 26 females (42.6%). In Tripura, there were 144 males (36.7%), 247 females (63%), and one participant (0.2%) who preferred not to specify their gender.

The pre- and post-KAP score improvements were observed in both Telangana and Tripura. The mean KAP score difference was statistically significant in both states ($p < .01$) (Table 1).

The majority of the patients were first-time visitors (91.84%), and the patient demographic showed a predominance of adults aged over 18 years (97.9%), with a slight male population (62.5%) (Table 2).

In terms of diagnostic categories, most patients screened positive for substance use disorders (SUDs), specifically alcohol dependence (31.25%), followed by CMDs, including depression and anxiety (27%) (Table 3).

The treatment advice and referral data indicated that most patients (89.58%) were referred to a Medical Officer/Psychiatrist, while psychoeducation and counseling were provided to 60.41% of patients. The follow-up rate for CVCs was 6.25%, indicating that only 3 of the 48 patients returned for a subsequent consultation (Table 4).

FIGURE 2.

Participants' Feedback Frequencies Regarding the Training.

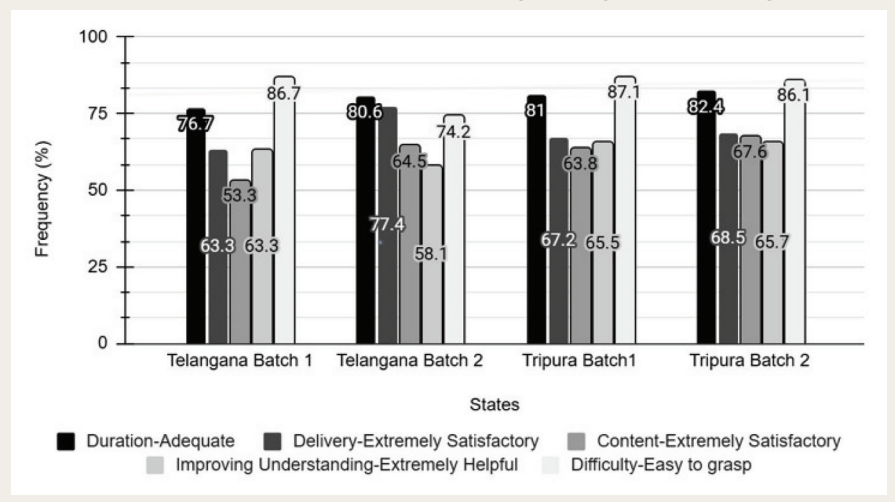


TABLE 1.

Pre KAP and Post KAP Scores of CHOs and MLHPs from Telangana and Tripura.

State	KAP	N	Mean	SD	Mean Difference	95% Confidence Interval		t	p (2-tailed)
						Lower	Upper		
Telangana	Pre	54	20.00	3.36	2.07	-2.72	-0.90	-3.69	p < .01
	Post	54	22.07	3.81					
Tripura	Pre	268	18.25	4.55	3.98	-4.49	-3.47	-15.39	p < .01
	Post	268	22.23	3.47					

KAP: Knowledge, attitude, and practices, CHOs: Community health officers, MLHPs: Mid-level health providers.

TABLE 2.

Socio-demographic Characteristics of the Patients Taken Through CVC for Both Telangana and Tripura.

Socio-demographics			Percentage
		N (N = 48)	
Patient visit	1st	45	91.84
	Follow up	3	6.12
Age	<18	1	2.08
	>18	47	97.9
Gender	Male	30	62.5
	Female	18	37.5
Marital status	Single	11	22.92
	Married	36	75
	Divorced	1	2.08
Occupation	Unemployed	20	41.66
	Employed	28	58.33

CVC: Collaborative video consultation.

TABLE 3.

Clinical Impression Made by MHPs on CVC with CHOs and MLHPs.

Diagnostic Categories	Diagnostic Categories	N (N = 48)	Percentage
CMD	Depression	5	10.41
	Anxiety	4	8.33
	Somatization	4	8.33
	Total CMD	13	27
SMD	Schizophrenia	2	4.16
	Total SMD	2	4.16
SUD	Alcohol use disorders	15	31.25
	Tobacco use disorders	3	6.25
	Both	4	8.33
	Total SUD	22	45.83
Other	Intellectual disability disorder	4	8.33
	Seizure disorder	1	2.08
	Obsessive-compulsive disorder	1	2.08
	NYD	2	4.16
	Total other	8	16.6
Multiple categories	Alcohol dependence & postpartum psychosis	1	2.08
	Depression & alcohol withdrawal	1	2.08
	Seizure disorder & anxiety	1	2.08

MHPs: Mental health professionals, CHOs: Community health officers, MLHPs: Mid-level health providers, CMD: Common mental disorders; SMD: Severe mental disorders; SUD: Substance use disorders; NYD: Not yet diagnosed.

FGD Findings from Telangana CHOs—Major Themes and Sub-themes**Mental Health Awareness and Perception Among CHOs**

CHOs' understanding of mental health within their communities plays a critical role in creating awareness; hence, their perception and attitudes toward mental health are worth considering.

Public Awareness and Education

CHOs highlighted the lack of mental health awareness within the community, stressing the need for public education to demystify mental illness. CHOs also requested additional informational resources, especially in local languages, to foster broader community understanding.

In the present-day scenario, many people have mental illness. Each person should know what mental health illness is and how to deal with it.

It will be good if there are 30-50-second videos in Telugu... If it reaches all of us, it will automatically reach the public as well.

Stigma and Societal Perceptions

Stigma surrounding mental health was identified as a significant barrier in rural communities, where cultural beliefs often lead families to dismiss mental health conditions. CHOs noted that counseling is critical for helping patients and their families overcome this reluctance.

In villages, they will be branded as some sort of psychiatric disorder, so they are not willing.

Difficulty in convincing patients of the severity of their condition due to cultural norms and initial presentation with non-psychiatric symptoms.

TABLE 4.

Treatment Advice and Referral Provided by the CHOs and MLHPs of CVC Patients.

Treatment Advice and Referral	N (N = 48)	Percentage
Referral to a medical officer/psychiatrist	43	89.58
Referral to psychologist/Tele MANAS	14	29.16
Psychoeducation and counseling	29	60.41
Follow up	3	6.25

CHOs: Community health officers, MLHPs: Mid-level health providers, CVC: Collaborative video consultation, Tele MANAS: Tele mental health assistance and networking across states.

Distinction Between Mental and Physical Health

The training helped CHOs improve their ability to differentiate between physical and mental health issues, leading to better treatment decisions.

We should know the distinction between a physical disease and a mental disease. Otherwise, treating the patient unnecessarily with other drugs adds to other causes. For a case of psychosomatic disease, if we do not identify the underlying condition, the patient will move from one doctor to another without addressing the mental illness. Correct diagnosis and treatment are critical in mental health cases to avoid unnecessary medication and to offer proper counseling.

Healthcare Workforce at AAM and Training

It is essential to explore the role and challenges of CHOs as frontline mental health providers in rural areas and focus on the impact of mental health training on their professional development.

Role and Challenges Perceived by CHOs

The CHOs acknowledged their role as being important to screen patients for mental illness, but discussed the heavy workload they face, which extends to ASHAs and ANMs (Auxiliary Nurse Midwives). This workload often leads to stress, burnout, and frustration among health workers, highlighting the need for improved workload management strategies.

Because we are the people who are on the front line to treat the public. So, first of all, we should identify a mental disease.

ASHAs and ANMs, even their work pressures are high. So, they are quite overworked and overburdened with a lot of health issues, both physical and mental health. Streamlining their work can help with targeted questions. Even MLHP is getting overburdened. Everyone is getting anxious and frustrated during meetings. Overburdened colleagues are getting anxious and frustrated.

Training and Professional Development

Training has significantly improved CHOs' awareness and ability to manage psychiatric cases. Participants benefited from interactive, practical training methods, such as role plays and CVCs, which have enhanced their confidence and skill in diagnosis and referrals. However,

participants highlighted the need for continued professional development.

Actually, before this training session, we used to see patients. Nevertheless, not from a psychiatric point of view, we know that something is wrong with them. So, after this training session, we are not letting them go.

We need more training sessions on how to handle the cases when we approach, and also in terms of the medication.

Service Provision and Resources

CHOs addressed the structural and resource-related challenges that they face in providing mental health care. Infrastructure limitations, lack of resources, and accessibility barriers were recurrent points of discussion, with the following key areas:

Resource Limitations and Accessibility

CHOs reported that the current infrastructure at PHCs is inadequate to address the rising demand for mental healthcare. Limited access to psychiatric resources, a lack of sufficient medical professionals, and an overall scarcity of facilities make it challenging to provide consistent and reliable mental health care.

We need better infrastructure at the PHC levels for effective mental health treatment. The lack of availability of specialists at the PHC level is a major limitation.

Diagnostic and Screening Tools

The MERIT tool has empowered CHOs to more accurately identify mental health conditions, increasing their confidence in diagnoses. They have also shared this tool with ASHAs, enabling them to identify cases at the community level effectively.

The MERIT screening tool is highly useful in identifying mental health issues and substance abuse. ASHAs are now trained on the MERIT screening tool, and they use it in their local language to communicate effectively with patients.

No difficulty in using the tool; it has made it easier to distinguish between mild, moderate, and severe cases.

Substance Abuse Management

Substance abuse, particularly tobacco, was identified as a common issue in the region. CHOs stressed the need for additional support and security measures when managing these cases, as they often disrupt PHC environments.

Substance abuse is common here, especially with tobacco ... it causes disturbances at PHCs. Handling substance abuse cases at PHCs requires better security and support.

Patient Care and Treatment Approaches

This theme delves into the approaches CHOs use to provide patient care, emphasizing the training's impact on their diagnostic, counseling, and referral practices. It also discusses the importance of non-pharmacological and rehabilitative interventions, which are essential in mental health care.

Diagnosis and Treatment Pathways

CHOs reported that the training enhanced their ability to identify and manage mental health cases. They discussed using counseling as a first-line intervention and referring severe cases to specialized centers, where families are willing to accept treatment.

We emphasize counseling and rehabilitation over medication wherever possible.

Referrals are reserved for severe cases and those willing to quit substance abuse.

It is challenging to manage cases where family members are reluctant; they often resist referrals.

Non-pharmacological Interventions and Integrative Medicine

CHOs have implemented lifestyle interventions like yoga and pranayama as part of their mental health support strategies. These practices, coupled with basic counseling skills, have proven effective in managing mild cases.

Lifestyle modifications, yoga, and pranayama can be included in counseling to support mental health.

The need for rehabilitation centers was emphasized as critical for comprehensive care, with suggestions for integrating Ayurvedic treatments into patient care. CHOs see these centers as essential to address both physical and mental health holistically.

Ayurvedic treatments like Panchakarma and Shirodhara can support patients in managing depression and stress. NGOs have agreed to establish Panchakarma centers in the community, which could benefit mental health care.

Handling Stigma and Patient Care

CHOs discussed the complexities of managing mild cases, particularly in situations where families resist acknowledging mental illness due to cultural beliefs. They suggested that specialized mental health units at PHCs could create a more welcoming environment for patients, enabling better management of severe cases. Empathy was highlighted as a critical skill in their training, reinforcing the importance of a compassionate approach in mental health care.

Family reluctance makes it difficult to manage mild cases.

Empathy is the first thing we should have towards a patient with any illness, but it is even more critical in mental health care.

Patients often hesitate to travel to district hospitals due to distance; if mental health care were integrated at the PHC level, they would feel more comfortable seeking treatment.

Collaboration and Integration in Mental Health Care

Effective collaboration and integration are essential for strengthening mental health care delivery at the grassroots level. There has been a strong emphasis on cohesive partnerships across government agencies, NGOs, and community leaders to address existing gaps in mental health services and education.

Collaboration with NGOs

CHOs advocated for integrating specialized mental health units, such as utilizing NGO spaces for community and health official sessions, which were discussed as viable solutions for expanding mental health outreach.

NGOs can provide space for public sessions and health official engagement, offering an opportunity to enhance mental health outreach.

Medical colleges are starting de-addiction centers, but currently, there is no provision to contact local NGOs for collaboration.

Community Outreach and Education

CHOs have been proactive in community outreach, engaging local leaders, and conducting sessions to increase awareness. They focused on areas like

exam-related stress, particularly among students, to educate young people on managing mental health and stress.

We organized camps for students to address mental stress related to exams, helping them understand mental health issues. Working with village leaders has helped us motivate community members to seek mental health support.

Ongoing Efforts and Future Directions

Participants noted that current efforts in Telangana, such as awareness programs targeting substance abuse, have been impactful but require sustained support and scaling to reach broader populations.

There are programs currently focusing on awareness for substance abuse in Telangana. Additionally, we have a suggestion to provide contact numbers for substance abuse rehabilitation centers in sub-centers.

Request for more emphasis on treatment aspects in future sessions and detailed discussion on treatment methods.

Feedback Analysis of the Training Program—Major Themes

Positive Impact of Training Content

Participants appreciated the training content for its relevance and quality, noting that it strengthened their understanding of mental health disorders and equipped them for community work.

Training sessions were beneficial in my understanding of the common and severe mental disorders.

Extremely informative and enhanced my knowledge on mental disorders.

Engagement and Teaching Style

The interactive and creative teaching methods, including role plays and activities, were highly praised for making complex topics accessible and memorable.

Easy to understand, role plays were the best.

Fun activities were excellent; please increase one more activity.

Appreciation for Trainers' Expertise

Many participants expressed gratitude for the trainers' expertise and professionalism. They appreciated the trainers' ability to explain complex topics with patience and clarity.

All are very well experienced in teaching others... thank you, team.

The instructors explained everything very well; thank you for such satisfactory training.

Suggestions for Content Expansion

Many participants suggested adding topics like screen time addiction, stress management for frontline workers, and childhood mental disorders, as well as practical examples and videos.

Can add regarding current problems like screen time and mobile addiction.

Please include content on childhood mental disorders.

Requests for Ongoing Training

Participants expressed interest in future sessions, requesting courses to continue enhancing their skills.

Request for this type of training at least once a year.

I want this type of refresher training in the future.

Learning Tools and Format Improvements

Suggestions included adding more video materials, organizing lectures sequentially, and providing digital access to presentations.

Organize lectures in the order of the MERIT.

Request for more videos to be used for educational purposes.

Discussion

This study evaluated the effectiveness of an In-person mental training program and Tele-mentoring for CHOs and MLHPs from the states of Telangana and Tripura. The significant increase in pre- and post-Knowledge, Attitudes, and Practices (KAP) observed in both States ($p < .01$) demonstrates the program's success in enhancing mental health literacy and care strategies among CHOs. These findings corroborate previous research by Garg et al., which reported similar improvements in diagnostic skills among primary care doctors following blended psychiatric training programs. Such programs combine didactics, case discussions, and outpatient-based learning to develop practical competencies.¹⁷

These results highlight the necessity of tailored training programs to address the mental health needs of underserved populations, positioning CHOs as key intermediaries in expanding access to mental health care. The training program was particularly effective in equipping CHOs with the skills to identify signs and symptoms of a mental illness and apply MERIT. Participants valued the program's interactive learning methods, which included case vignettes and role-play videos, reinforcing their understanding of mental health disorders and referral practices. These findings align with Nirisha et al., who emphasized the effectiveness of similar interactive methods in training Accredited Social Health Activists (ASHAs).¹⁰ Furthermore, the program's design resonates with the "See-it-yourself, Try-it-yourself, Do-it-yourself" (STD) Acharya teaching model used in tele-OCT training, which has been shown to enhance skill application through sequential and hands-on methodologies.^{18,19} The integration of practical tools and experiential learning ensured that CHOs could effectively incorporate mental health care tasks into their broader responsibilities.

Additionally, the CVC model provided a novel approach to extending mental health care to underserved areas. This study demonstrated that 91.84% of the patients accessing the CVC model were first-time users of mental health services, with a majority being adults (97.9%). These findings indicate the substantial unmet need for mental health care in rural populations. Moreover, the high frequency of psychiatric conditions treated through CVCs, such as SUDs (31.25%, primarily alcohol dependence) and CMDs (27%, including depression and anxiety), underscores the relevance of integrating mental health services into primary care settings. These results are consistent with previous reports on the burden of psychiatric conditions in primary care.²⁰

The positive outcomes observed in the CVC model can be attributed to periodic collaborative engagements, including video and audio consultations, which facilitated real-time diagnostic and treatment support for CHOs. These findings align with research by Manjunatha et al., who highlighted the value of telepsychiatry in identifying and managing

CMDs and substance use problems.²¹ However, the low follow-up rate (6.25%) observed in this study suggests the need for improved mechanisms to ensure continuity of care. Addressing both the demand-side (patient engagement) and supply-side (resource allocation) challenges will be crucial for sustaining these benefits.

While the training program effectively enhanced CHOs' skills, systemic barriers such as high workloads, resource limitations, and stigma in rural communities persisted. These challenges highlight the importance of developing multi-pronged strategies, including stigma-reduction campaigns and the expansion of infrastructure to support mental health services. The findings are aligned with the broader objectives of the DMHP, which emphasizes outreach, psycho-social interventions, and continued care for mental disorders at the community and district levels.²²

As part of training skills translating to practice, CHOs' preferred counseling and lifestyle interventions, such as yoga and Ayurveda, align with the NIMHANS model of integrative healthcare. This model advocates for the inclusion of yoga and other traditional practices as formalized clinical disciplines.²³ Incorporating culturally relevant practices can reduce stigma and improve treatment acceptability among rural populations. Additionally, Ayurvedic practitioners who serve as CHOs bring valuable expertise in holistic care, which can further enhance the integration of traditional treatments.

Given treatment provision on a larger scale at the sub-center level, the CHOs emphasized the importance of partnerships with NGOs and government programs to address resource gaps. Programs like "Maanasadhaara," which provide rehabilitation services for chronically mentally ill patients, demonstrate how collaborative efforts can augment public health initiatives.²⁴ CHOs' active involvement in community outreach underscores their role in linking underserved populations with essential mental health services.

The study findings also align with the idea of collaboration and integration of mental health services into primary care through the DMHP. By empowering CHOs

as intermediaries between patients and specialists, the training program addressed a critical gap in mental health service delivery. The results underscore the need for continuous training, mentorship, and resource allocation to sustain these gains.

Future Directions and Implications

The current training program for CHOs and MLHPs can be scaled and integrated into the DMHP to strengthen mental health care delivery at the grassroots level. By replicating the training curriculum, emphasizing hands-on learning through CVC, and leveraging existing frameworks like MNS modules, this model can enhance care at sub-primary levels, including AAMs.

To implement this model, DMHP must focus on building capacity through recruitment and training, supported by partnerships with NGOs, medical institutions, and telemedicine platforms. Regular monitoring and evaluation of outcomes, such as patient follow-up rates and practitioner competency, will ensure the program's impact and sustainability. This approach aligns with national mental health policies and positions CHOs and MLHPs as pivotal in integrating mental health into primary care, addressing stigma, and improving access for underserved populations.

Strengths

The research article effectively addresses a critical gap in India's healthcare landscape by integrating mental health services into primary care through innovative in-person training and tele-mentoring for CHOs and MLHPs. The study is highly relevant, targeting resource-constrained and culturally diverse regions such as Telangana and Tripura. The methodological rigor of the mixed-methods approach combines quantitative and qualitative data, offering comprehensive insights into the program's impact. The use of tele-mentoring introduces a novel, scalable method to extend mental health care to underserved areas. The study also demonstrates strong feedback mechanisms, collecting actionable insights from participants to improve future training sessions.

Limitations

The extensive resource requirements for in-person training can be a hindrance to replicating this model, but leveraging existing resources, such as DMHP and a hybrid mode of training, can mitigate this challenge, making it more scalable for a larger population. The study also suffers from high attrition rates in pre- and post-assessments, which reduces the reliability of the KAP score comparisons. The reliance on self-reported data for these assessments of Attitudes and Practices introduces the risk of bias, particularly social desirability bias. Due to the training-based setting, complete anonymization of assessments was not feasible.

Conclusions

This study highlights that in-person mental health training programs and tele-mentoring can provide sustained support and be scalable, equipping CHOs and MLHPs with the skills needed to address the mental health needs of underserved populations at the community level.

Acknowledgements

The training program was supported by Corporate Social Responsibility (CSR) Grants of a multinational company under the digitally driven primary mental health care capacity building initiative. We are thankful to Dr. Naveen Bhat, IAS (Mission Director, National Health Mission, Department of Health and Family Welfare, Govt. of Karnataka), Dr. Swapnil Lale (Director of Health Services, Maharashtra State), Director General, Dept. of Medical Health and Family Welfare, Govt. of Uttarakhand, Sri Sanjay Kumar Singh, IAS (Secretary cum Food Safety Commissioner, Govt. of Bihar), Shri Kiran Gitte, IAS (Secretary, Health and Family Welfare, Govt. of Tripura), Sri Rajib Datta (Mission Director, National Health Mission, Govt. of Tripura) and Sri R.V. Karnan (Commissioner, Health and Family Welfare, Mission Director, NHM, Govt. of Telangana) for extending their support and providing administrative approvals for carrying out this initiative in the respective states.

We extend our thanks to Dr. Rajani Parthasarathy (Deputy Director, Mental Health, Dept. of Health and Family Welfare, Govt. of Karnataka), Dr. Katke Kranti (Health Program Manager, NRHM, Maharashtra), Dr. Nasima Khedkar (State Nodal Officer, Comprehensive Primary Health Care, Maharashtra), Dr. Anusha (State Program Co-ordinator, NCD, Govt. of Telangana), Dr. A.K. Shahi (ex- State Program Officer, State Health Society, Bihar), Dr. B.K. Mishra (State Program Officer-TB, State Health Society, Bihar), Dr. Udayan Majumder (State Nodal Officer, NMHP, Govt. of Tripura), Dr. Mayank Badola, Dr. Mohanrao Dessai (Chief Medical Officer, Non-Communicable Disease Cell, Directorate of Health Services, Goa) for providing administrative support for conducting the capacity building initiative and outcome evaluation.

We are thankful to Sri Bibaswan Basu (Chief Operating Officer, JSV Innovations Private Limited), Dr. Faris Kolakkadan (National Head - Health Interventions in Streets, Daya Rehabilitation Trust (Thanal)), Arindam Saha (State Program Manager, Health and Wellness Centres, Jhpiego, Tripura), and Dr. Pallavi Sinha (State Team Leader, Jhpeigo, Bihar) for their support.

We thank the Office of the Directorate of Electronic Delivery of Citizen Services, Govt. of Karnataka, for approving the use of healthcare data to evaluate program outcomes.

We thank all the District Health Officers, District Leprosy Officers, District Surveillance Officers, District Mental Health Program Teams, Officers in charge for Primary Health Centres, Aayushman Aarogya Mandirs, Officers in charge for Medical Officers, Community Health Officers (CHOs) and Accredited Social Health Activists (ASHA) in the states of Karnataka, Maharashtra, Telangana, Uttarakhand, Bihar, Tripura, Goa, West Bengal and Kerala. We are thankful to the Medical Officers, Community Health Officers, ASHAs, and Mid-Level Health Providers (MLHP).

The content of this manuscript is solely the responsibility of the authors and does not represent the official views of the respective state governments/state health departments/implementation partner organizations or the funding agency who had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision for submission and publication of the manuscripts.

Data Sharing Statements

Data will be made available upon request.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Declaration Regarding the Use of Generative AI

The authors used the Truboscribe AI Transcription Tool to translate and transcribe video and audio data of the focus group discussions and Chat GPT to paraphrase and formalize the text. After using this tool, the authors reviewed the translated and transcribed content, edited it as needed, and took full responsibility for the content of the publication.

Ethics Committee Details

The study was approved by the Institutional Ethics Committee (IEC) (Approval No. NIMHANS/ 43rd IEC (BEH.SC.DIV) 2023, dated 8th December 2023).

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Corporate Social Responsibility Grants of a multinational company.

Patient Consent

The patient and participant consent statement is already included in the Methods section of the manuscript and has been highlighted for clarity.

Guidelines

Registered with the Clinical Trial Registry of India (Registration No. CTRI/2024/02/062906).

Prior Presentations

None.

Simultaneous Submission to Another Journal or Resource

None.


Supplemental Material


Supplemental material for this article available online.

ORCID iDs

Nishchala Pearala  <https://orcid.org/0009-0002-3621-5321>

Prakyath R. Hegde  <https://orcid.org/0000-0001-6019-6824>

Channaveerachari Naveen Kumar  <https://orcid.org/0000-0002-4568-0420>

Narayana Manjunatha  <https://orcid.org/0000-0003-2718-7904>

Suresh Bada Math  <https://orcid.org/0000-0001-8190-0382>

Rahul Patley  <https://orcid.org/0000-0003-2700-7854>

References

- Lahariya C. Health and wellness centers to strengthen primary health care in India: Concept, progress and ways forward. *Indian J Pediatr* 2020; 87(11): 916–929. DOI: 10.1007/s12098-020-03359-z.
- Desai S, Bishnoi RK and Punjot P. Community health officer: The concept of mid-level health care providers. *Int J Community Med Public Health* 2020; 7(4): 1610. DOI: 10.18203/2394-6040.ijcmph20201483.
- Manjunatha N, Nirisha L, Malathesh B, et al. Analyzing psychiatric disorders from rural primary health centers: A clinical epidemiological study from a District of South India. *J Psychiatry Spectr* 2023; 2(1): 35. DOI: 10.4103/jopsys.jopsys_37_22.
- Kishanrao S. Empowering Nurse-CHOs to be an effective mid-level health provider. *Int J Nurs Care* 2023; 1(3): 1–8. DOI: 10.31579/2835-8147/038.
- Ibrahim FA, Malathesh BC, Gajera G, et al. Chhattisgarh community mental healthcare tele-mentoring program (CHaMP): Digitally driven initiative to reach the unreached. *Int J Soc Psychiatry* 2021; 68(5): 954–957. DOI: 10.1177/00207640211011191.
- Jayasankar P, Nirisha PL, Manjunatha N, et al. Are the collaborative video

- consultations module in Diploma in primary care psychiatry helpful. *Indian J Psychiatry* 2022; 64(Suppl 3): S516–520. DOI: 10.4103/0019-5545.341490.
7. Malathesh BC, Bairy BK, Kumar CN, et al. Impact evaluation of technology driven mental health capacity building in Bihar, India. *Psychiatr Q* 2021; 92: 1855–1866. DOI: 10.1007/s11126-021-09945-4.
 8. Sukumar G, Yalgudri B, Narayana M, et al. Mental health services provided by medical officers in primary health centres in Kolar district in Karnataka, India: A situational assessment. *J Fam Med Prim Care* 2020; 9(1): 173. DOI: 10.4103/jfmpc.jfmpc_906_19.
 9. National Institute of Mental Health & Neurosciences [Internet]. TORENT – tele-mentoring for rural health organisers of Chhattisgarh – National Institute of Mental Health & Neurosciences; [cited 18 December 2024]. Available from: <https://nimhans.co.in/torent-tele-mentoring-for-rural-health-organisers-of-chhattisgarh/>.
 10. Nirisha PL, Malathesh BC, Kulal N, et al. Impact of technology-driven mental health task-shifting for accredited social health activists (ASHAs): Results from a randomised controlled trial of two methods of training. *Community Ment Health J* 2023; 59: 175–184. DOI: 10.1007/s10597-022-00996-w.
 11. Hofmann-Broussard C, Armstrong G, Boschen MJ, et al. A mental health training program for community health workers in India: impact on recognition of mental disorders, stigmatizing attitudes, and confidence. *Int J Cult Ment Health* 2016; 10(1): 62–74. DOI: 10.1080/17542863.2016.1259340.
 12. Siddaiah A, Srinivasan K, Satyanarayana V, et al. Feasibility and preliminary efficacy of training health workers in detecting priority mental health conditions among adolescents in rural South India. *Pilot Feasibility Stud* 2022; 8: 267. DOI: 10.1186/s40814-022-01215-9.
 13. Elm EV, Altman DG, Egger M, et al. Strengthening the reporting of observational studies in epidemiology (STROBE) statement: Guidelines for reporting observational studies. *BMJ* 2007; 335(7624): 806–808. DOI: 10.1136/bmj.39335.541782.ad.
 14. Suhas S, Nirisha PL, Malathesh BC, et al. Prof K C Dube poster award. *Indian J Psychiatry* 2022; 64(9): 533. DOI: 10.4103/0019-5545.341526.
 15. IBM Corp. *IBM SPSS Statistics for Windows, version 29.0.2.0*. Armonk, NY: IBM Corp, 2023.
 16. Braun V and Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006; 3(2): 77–101. DOI: 10.1191/1478088706qp0630a.
 17. Garg K, Manjunatha N, Kumar CN, et al. Case vignette-based evaluation of psychiatric blended training program of primary care doctors. *Indian J Psychiatry* 2019; 61(2): 204–207. DOI: 10.4103/psychiatry.IndianJPsychiatry_250_18.
 18. Dinakaran D, Manjunatha N, Kumar CN, et al. The rationale and guiding principles to design a psychiatry curriculum for primary care doctors of India. *Natl Med J India* 2022; 35: 32–37. DOI: 10.25259/nmj_289_20.
 19. Manjunatha N, Shadakshari D, Singhal P, et al. Designing and implementing the psychiatrist-led personalized mentorship programs: The role and impact of live consultation-driven training methods. *Indian J Psychol Med* 2024; DOI: 10.1177/02537176241286033.
 20. Patley R, David AKD, Chandna AS, et al. (eds). *Primary Care Psychiatry: A Clinician's Companion*. Bengaluru: NIMHANS, 2024, p.257.
 21. Manjunatha N, Pahuja E, Kumar T, et al. An impact of a digitally driven primary care psychiatry program on the integration of psychiatric care in the general practice of primary care doctors. *Indian J Psychiatry* 2020; 62(6): 690. DOI: 10.4103/psychiatry.indianjpsychiatry_324_20.
 22. Ministry of Health and Family Welfare [Internet]. Guidelines for implementing district-level activities under the national mental health programme (NMHP) during the 12th plan period; 24 June 2015 [cited 18 December 2024]. Available from: https://mohfw.gov.in/sites/default/files/56464578341436263710_o_o.pdf.
 23. Varambally S, Bhargav H, Holla B, et al. Yoga and integrative healthcare: Lessons from the National Institute of Mental Health and Neurosciences (NIMHANS) in India. *Int J Yoga* 2022; 15(2): 150. DOI: 10.4103/ijoy.ijoy_56_22.
 24. National Institute of Mental Health and Neuro Sciences (NIMHANS) [Internet]. District Mental Health Program; 2021 [cited 18 December 2024]. Available from: <https://nimhans.ac.in/wp-content/uploads/2021/03/District-Mental-Health-Program.pdf>.