

Home-based telemental health services for Indian patients during the COVID-19 pandemic: A comparison with the pre-COVID phase

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ABSTRACT

Background: Many developed countries have switched from conventional outpatient psychiatric services to tele mental health-based alternatives because of the COVID-19 pandemic. However, similar transitions might be difficult for countries like India because of a shortage of necessary resources. Therefore, the feasibility and acceptability of converting to a home-based tele mental health (HB-TMH) service during the pandemic were examined in an Indian hospital. **Materials and Methods:** A new and expanded version of an HB-TMH service was operated for all outpatients following the onset of the pandemic. Feasibility outcomes included operational viability, service utilization, service engagement, the need for additional in-person services, and the frequency of adverse events. Patients' and clinicians' satisfaction with different aspects of the service were evaluated using Likert-style questionnaires to ascertain acceptability. The outcomes during the prepandemic and pandemic phases were also compared. **Results:** The switch to HB-TMH services took 6 weeks during the pandemic. Patient numbers increased greatly following this transition. Attendance improved, the requirement for in-person services was low, and no serious adverse events were reported. However, patients' satisfaction levels were relatively low during the pandemic. Clinicians were more satisfied than the patients with HB-TMH treatment during the pandemic. Differences between them were less marked but still present before the pandemic. Pre- and postpandemic comparisons revealed that both patients and clinicians were more satisfied with all aspects of HB-TMH care before the pandemic than during it. **Conclusions:** Though conversion to HB-TMH services was feasible during the pandemic, such services need to be improved to enhance patient acceptability.

Keywords: Acceptability, COVID-19, feasibility, home-based, tele mental health

Introduction

During the COVID-19 pandemic, many countries across the world have switched to tele mental health (TMH) systems to deliver safe and effective psychiatric care while maintaining the capacity and continuity of mental health services.^[1-3] A recent review of eight studies, almost all from developed countries, concluded that switching from in-person to TMH treatment during the pandemic is feasible and acceptable.^[4] However, transitioning

from conventional outpatient to TMH-based services may be difficult for many low- and middle-income (LAMI) countries because they lack the necessary resources for this transition.^[5-7] The implementation of TMH services in low and middle-income countries (LAMI) countries like India has been hindered by the lack of adequate infrastructure, funding, and human resources. Consequently, the use of TMH-based care before the onset of the pandemic was limited to a few programs.^[8] Research regarding the implementation and effectiveness of these programs was scarce. Telemedicine and TMH services lacked established guidelines and regulatory frameworks and were not integrated with the national health care system.^[8,9] Though the availability of TMH services has increased since the onset of the pandemic and efforts have

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been made to develop minimum standards of care, the evidence supporting the usefulness of such services is still insufficient.^[10-12] A major part of this initiative to enhance TMH-based services in India has been to train primary-care physicians in the use of these services to improve access to mental health care in primary care settings.^[10]

Therefore, the current study examined the feasibility and acceptability of implementing a home-based TMH (HB-TMH) service during the pandemic in the psychiatric unit of a hospital in India. Additionally, the feasibility and acceptability of the service were compared between those who had used the service before and after the onset of the pandemic.

Material and Methods

The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines for reporting observational studies were followed.

The study took place in the general hospital psychiatric unit of a multi-specialty hospital in north India with a large catchment area. The adult psychiatry outpatient clinic has an annual turnover of about 15,000 new patients and 75,000 follow-up visits. The outpatient team has about 50 staff members including consultant and trainee psychiatrists, psychologists, social workers, nurses, and health assistants. The study protocol was approved by the institute ethics committee. Verbal informed consent was obtained from patients and recorded before inclusion.

The unit had been running an HB-TMH service on a smaller scale since September 2018. Following the shutdown of outpatient clinics in March 2020, a trial HB-TMH service was run for outpatients for the next 6 weeks. During this period, all aspects of the new HB-TMH service were put in place, and the entire outpatient staff was trained in its use. From May 2020, all outpatient services were switched to HB-TMH care. An expanded and hybrid version of the HB-TMH service was used during the pandemic. Differences between the HB-TMH services during the pandemic and before it are shown in [Table 1].

Feasibility outcomes included operational viability, service utilization, service engagement, the need for additional in-person services, and the frequency of adverse events. Patients' and clinicians' acceptability and satisfaction with different aspects of the HB-TMH service were evaluated using Likert-style questionnaires administered over the phone. Areas included aspects of video conferencing-based care such as audiovisual quality, ease of participation, acceptability, overall satisfaction, prescriptions through text messages, follow-up consultations, and the preference for future use of HB-TMH services.

The data were analyzed using the Statistical Package for the Social Sciences, version 25. Chi-square or the Students' t-tests were used for comparisons. Association of patients' demographic and

clinical variables with their experience of the HB-TMH service was assessed by estimating Pearson's correlation coefficients.

Results

Operational viability and service utilization

Before the pandemic, 166 patients had used the older version of the HB-TMH service over 17 months. During the 6-week trial period after the onset of the pandemic, a team of two consultants and three trainee psychiatrists provided consultations to 234 patients (90 videoconferencing and 144 phone consultations). Once the operational viability of the expanded HB-TMH service was established, the entire outpatient staff was involved in providing care. In the first 6 weeks of exclusive HB-TMH care, the patient numbers went up to 1729 (517 videoconferencing and 1212 phone consultations).

Patient profiles

Table 2 shows that patients seen during the pandemic were significantly more likely to be older, married, better educated, and from higher-income families located near the hospital. Psychotic disorders were significantly more common during the pandemic, whereas obsessive-compulsive spectrum (OCS) disorders and developmental disorders were more common before it.

Satisfaction with the HB-TMH services

Satisfaction was evaluated in patients and their clinicians who had attended at least one VC session and had completed the assessments. This included 79 of the 166 patient-clinician pairs from the pre-COVID phase and a consecutive sample of the first 157 such pairs from the 517 patients who had videoconferencing consultations during the COVID period. Ninety of these patients were new to the service, and 67 had been attending earlier.

Table 3 shows that almost all the patients (99%) and clinicians (100%) were satisfied with the different aspects of the videoconferencing-based treatment during the COVID and pre-COVID phases. However, only about 53% of the patients and 66% of the clinicians rated their overall satisfaction with videoconferencing consultations as good/very good or excellent. Similarly, good/very good or excellent acceptability of the consultations was noted in about 56% of the patients and 67% of the clinicians. The audiovisual quality of videoconferencing sessions was rated as good/very good or excellent by about 57% of the patients and 92% of the clinicians. Though about 59% of the patients rated their ease of participation in the videoconferencing sessions as easy or very easy, many reported difficulties in procuring medicines through text messages (average 54%) and with video conferencing-based follow-up (average 76%). In contrast, about 80% of the clinicians found it easy or very easy to participate in the videoconferencing sessions. Finally, about 55% of the patients and 59% of the clinicians stated that they might prefer videoconferencing-based care in the future.

Differences between the patients and clinicians: During the pandemic, satisfaction ratings were significantly higher among

Table 1: Components of the home-based telemental health services

	Pre-covid phase	Covid phase
Access	Patients from the ward or the outpatient clinic contacted personally by the telepsychiatry team	Through dedicated phones (landline or smartphones) of the department or the institute, WhatsApp text messages, or e-mail
Informed consent	Written informed consent after detailed explanation	Verbal informed consent during the phone call or VC after brief explanation
Site of consultation	Home; patient accompanied by family members	Home; patient accompanied by family members
Mode of consultation	Through VC using the Zoom platform	Through VC using the Zoom platform, WhatsApp video calls and messaging, phone calls (landline or smartphones), e-mail
Services offered	Only psychiatric	Psychiatric, psychological, social work
Nature of psychiatric consultations	Follow-up sessions for patients who had received in-person treatment earlier	Follow-up sessions for patients who had received in-person treatment. Assessment, treatment and follow-up sessions for new patients without previous in-person contact.
Nature of treatment [#]	Medication-management sessions, in-person and VC-based psychosocial treatment	Medication management sessions, and only VC- based psychosocial treatment
Treatment team	A smaller group of consultant psychiatrists, post-MD senior residents, trainee psychiatrists, and technicians	All personnel of the department including consultant psychiatrists, post-MD senior residents, trainee psychiatrists, clinical psychologists, social workers, and technicians
Training of patients and family members	Done individually much before the live sessions. Practice sessions held prior to live sessions.	Done individually a day before the live sessions. No practice sessions.
Training and support for staff	Supervision by consultants familiar with the technology and help from technicians	Written instructions for staff were circulated. Group education and supervisions sessions on the Zoom. Individual supervision by consultants and technicians familiar with the technology.
Technical support	Available from the institute computer section	Available from the institute computer section
Security & confidentiality	All VC sessions were recorded unless consent not given. All recordings stored securely and confidentiality maintained.	Most VC sessions were recorded unless consent refused. Some WhatsApp video calls and messages also recorded. All recordings were stored securely and confidentially.
Prescribing medicines	In-person at the outpatient clinic or through text messages (e-prescription)	Through text messages (e-prescription)
Safety	Patients were always accompanied by family members when seen at home. For any safety concerns during sessions, patients and family members were asked to attend the outpatient clinic or emergency services. Treating team was alerted.	Patients were required to be accompanied by family members during sessions. Closer monitoring was instituted for high-risk situations. Family members were educated and helped to manage such situations. For persisting safety concerns, patients and family members were helped to attend the emergency services.

VC - videoconferencing. [#]Medication-management included discussions about medications, side effects, adherence. Psychosocial treatments included psychoeducation, behavior therapy (e.g. exposure & response prevention), and supportive sessions

the clinicians on all aspects of video conferencing-based treatment including audiovisual quality of the sessions, ease of participation, acceptability, and overall satisfaction. However, there were no significant differences between patients and clinicians in their preference for future videoconferencing-based care. Differences between the two groups were less marked during the pre-COVID phase. There were no significant differences between them on the audiovisual quality and ease of participation in the videoconferencing sessions. The overall satisfaction levels were also not significantly different between the groups although clinicians were more likely to rate the consultations as excellent ($\chi^2 = 10.91$; $P < 0.01$). Significant differences were noted for the acceptability of videoconferencing consultations, but only because a higher number of clinicians rated the videoconferencing consultations as having excellent acceptability ($\chi^2 = 8.38$; $P < 0.01$). Lastly, clinicians were highly likely than patients to prefer future videoconferencing-based care ($\chi^2 = 9.48$; $P < 0.01$).

Differences between the pre-COVID versus COVID phases: [Table 4] shows that patients were more likely to be satisfied with all aspects of videoconferencing-based care before the pandemic than during it. Audiovisual quality, ease of participation,

acceptability, overall satisfaction, receiving prescriptions through text messages, and follow-up through video conferencing were all rated to be significantly better during the pre-COVID phase. The patients were also more likely to prefer future videoconferencing-based treatment before the pandemic than during it. Ratings of audiovisual quality among clinicians were not significantly different between the pre-COVID and the COVID phases. However, like patients, clinicians rated the ease of participation, acceptability, and overall satisfaction with video conferencing-based treatment to be significantly better before the pandemic than during it. Lastly, even clinicians were likely or highly likely to prefer future videoconferencing-based treatment during the pre-COVID compared to the COVID phase.

Service engagement, the need for additional in-person services, and adverse events

Dropout rates were low both during the pandemic (14%) and the pre-pandemic periods (11%). Only eight patients required additional in-person or emergency services during the pandemic. None of them required emergency treatment during the pre-COVID phase. No serious adverse events were reported in either phase.

Table 2: Demographic and clinical profile of the patients

	COVID (n=157)	PRE-COVID (n=79)	t-tests
Age in years			
Mean (SD) [Range]	37.72 (16.07) [5-80]	29.53 (18.16) [3-71]	$t=3.54, P<0.001$
Gender			
Men	99 (63%)	47 (59%)	NS
Women	58	32	
Marital status			
Currently married	92 (59%)	34	$\chi^2=5.11, P<0.05$
Currently single	65	45 (57%)	
Years of schooling			
Mean (SD) [Range]	12.82 (3.48) [0-20]	9.37 (4.85) [0-17]	$t=6.27, P<0.0001$
Occupation			
Employed	64	19	NS
Housewives, students, retired, unemployed	93 (59%)	60 (76%)	
Family income (rupees/month)	65000 (83953)	40962 (20865)	$t=2.50, P<0.05$
Mean (SD) [Range]	[6000-500000]	[5000-120000]	
Residence			
Urban	95 (60%)	43 (54%)	NS
Rural	62	36	
Location			
Local	20	1	$\chi^2=7.12, P<0.05$
Distant areas	137 (87%)	78 (99%)	
ICD-10 diagnosis			
Depressive disorders	38 (24%)	13 (16%)	NS
Psychotic disorders	33 (21%)	7 (9%)	
Bipolar disorder	28 (18%)	9 (11%)	NS
Other neurotic and personality disorders	26 (17%)	6 (8%)	
Obsessive compulsive spectrum disorders	10 (6%)	22 (28%)	$\chi^2=20.69, P<0.0001$
Dementia	7 (4%)	6 (8%)	
Developmental disorders [#]	6 (4%)	12 (15%)	$\chi^2=9.64, P<0.01$
Substance use disorders	5 (3%)	1 (1%)	
Attention deficit hyperactivity disorder	4 (3%)	6 (8%)	NS

NS - not significant. [#]Developmental disorders included intellectual disabilities, specific learning disabilities and autism spectrum disorders

Demographic and clinical correlates of patients' satisfaction

Men reported significantly greater levels of overall satisfaction ($r = 0.21$; $P < 0.05$), urban-based patients had less difficulty in following up through videoconferencing ($r = 0.27$; $P < 0.001$), and new patients without in-person contact were more likely to future prefer videoconferencing-based treatment ($r = 0.18$; $P < 0.05$). There were no significant associations with diagnostic groups, apart from patients with OCS disorders reporting greater ease of participation ($r = 0.21$; $P < 0.05$).

Discussion

Comparisons with other studies of TMH care during the pandemic

This study had a lot in common with the other reports of TMH-based care during the pandemic. The HB-TMH service used in the study met the current standards for TMH care.^[7,13,14] This included the use of Zoom for videoconferencing consultations supplemented by phone consultations for conducting clinical assessments, medication-management sessions, and psychosocial treatment.^[15-17] Procedures employed for access, informed

consent, privacy, patient education, training and support for staff, security, confidentiality, and for ensuring safety were also similar.^[15,17-20] Moreover, the components of the service were in keeping with the recent Indian guidelines and recommendations about telepsychiatry.^[10-12]

The feasibility outcomes included the 6-week preparatory phase before the switch,^[15,17] the increase in patient numbers following it,^[4] improved patient engagement, low rates of in-person service utilization, and low frequency of adverse events have also been reported earlier.^[20-22] The HB-TMH service used during the pandemic was based on a hybrid model of care, which employs multiple digital modes of patient-clinician communication to augment in-person care.^[1,23] As proposed, the increased versatility of hybrid models noted in the present study may contribute to enhanced TMH care.^[19,23] Like other reports of transition to TMH care, the use of phones including smartphones was preferred over traditional videoconferences in the current study.^[15,18-20] Smartphone ownership is growing in many LAMI countries including India, where access to mental health care is difficult, and communication networks are often inadequate.^[24] Smartphones may be more suited to such settings because of their mobility, low costs, options for closer monitoring, and facility for improved patient engagement.^[24] However, despite their widespread use, the

Table 3: Perceptions of the patients versus the clinicians

	COVID			PRE-COVID		
	Patients (n=157)	Clinicians (n=157)	t-tests	Patients (n=79)	Clinicians (n=79)	Chi-square tests
Audiovisual quality of the VC sessions						
Satisfactory	100 (64%)	8 (5%)	$\chi^2=134.72$ # $P<0.00001$	16 (20%)	9 (11%)	$\chi^2=2.76$ # NS
Good	51 (32%)	90 (57%)		27 (34%)	34 (43%)	
Very good/Excellent	5 (3%) [Very good-4 Excellent -1]	59 (38%) [Very good -45 Excellent -14]		36 (46%) [Very good-32 Excellent - 4]	36 (46%) [Very good-35 Excellent - 1]	
Ease of participation in the VC sessions						
A little difficult (satisfactory)	102 (65%)	45 (29%)	$\chi^2=46.56$ # $P<0.00001$	13 (16%)	9 (11%)	$\chi^2=6.83$ # NS
Easy (good)	52 (33%)	100 (64%)		34 (43%)	22 (28%)	
Very easy (very good)	1 (1%)	12 (8%)		27 (34%)	38 (48%)	
Not difficult at all (excellent)	0	0		5 (6%)	10 (13%)	
Acceptability of the VC consultations						
Just acceptable (satisfactory acceptability)	100 (64%)	81 (52%)	$\chi^2=9.982$ # $P<0.0068$	18 (23%)	12 (15%)	$\chi^2=11.44$ # $P<0.05$
Quite acceptable (good acceptability)	54 (34%)	64 (41%)		32 (40%)	25 (32%)	
Highly acceptable (very good acceptability)	2 (1%)	12 (8%)		28 (35%)	30 (38%)	
Excellent acceptability	0	0		1 (1%)	12 (15%)	
Overall satisfaction with the VC consultations						
Satisfactory	99 (63%)	76 (48%)	$\chi^2=6.88$ # $P=0.00870$	23 (29%)	14 (18%)	$\chi^2=2.86$ # NS
Good/Very good/Excellent	57 (36%) [Good-57 Very good- 0 Excellent-0]	80 (51%) [Good-67 Very good-13 Excellent-0]		56 (71%) [Good-30 Very good-26 Excellent-0]	65 (82%) [Good-25 Very good- 28 Excellent- 12]	
Preference for VC consultations in the future						
Less likely to prefer	90 (57%)	97 (62%)	$\chi^2=2.0614$ # $P=0.35675$ NS	24 (30%)	15 (19%)	$\chi^2=12.47$ # $P<0.01$
May prefer	57 (36%)	53 (34%)		31 (39%)	30 (38%)	
Likely to prefer	10 (6%)	5 (3%)		23 (29%)	21 (27%)	
Highly likely to prefer	0	0		1 (1%)	13 (16%)	

VC - videoconferencing; NS - non-significant. #As shown above, certain categories were clubbed together while comparing the groups. The text includes comparisons of individual categories

evidence for the effectiveness of smartphone-based interventions is limited, and there are concerns about the safety and security of such interventions.^[25,26]

Unlike other studies, a simpler model of direct TMH care was used in this study because resources for consultative or collaborative care were not available. Nevertheless, the evidence suggests that such direct-care models are effective and particularly suitable for countries where the TMH services are not properly integrated within the national health care system.^[6,13] Moreover, in the absence of clinic-based alternatives, home-based TMH care was the only option for treatment. HB-TMH services have been in existence for a long time but despite their proven efficacy for several psychiatric disorders, the wider implementation of HB-TMH services has not been possible to date.^[27,28] Nevertheless, there has been a resurgence of interest in HB-TMH care during the pandemic,^[1,3] and there are a few reports of HB-TMH services in this period.^[17,20] The feasibility and acceptability outcomes of this study were similar to these reports. Before the pandemic, TMH interventions used in LAMI countries had been predominantly clinic-based,^[25,26] with only occasional reports of home-based services.^[29] In contrast, the expanded HB-TMH service used during the pandemic in this study was wider in its scope. It catered to a large and varied

group of patients, including those with serious mental illnesses and dementia who are considered to be poor candidates for HB-TMH care.^[2] Similarly, the range of clinicians involved and the types of patient-care services provided were more diverse than the previous reports.^[17-20] Patient safety has been a major concern of HB-TMH care, but it has been suggested that much of the risk can be mitigated by increased awareness, screening for potential risks, and enhanced monitoring of patients.^[30] These safety measures were incorporated in the HB-TMH service of this study, and the absence of any serious adverse events suggests that they were reasonably adequate.

Perceptions of the patients and their clinicians

The satisfaction and acceptability levels among patients of this study, particularly during the pandemic, were somewhat lower than the other satisfaction surveys carried out just before the pandemic in India^[31] and the US^[32] and during the pandemic in the US and Europe.^[20,21,33] The acceptability levels among clinicians were within the range reported by other studies conducted during the pandemic but were on the lower side of this range.^[20,21,34,35] A similar trend was observed for other aspects of videoconferencing treatment including satisfaction with audiovisual quality, ease of participation, e-prescriptions, and videoconferencing-based follow-up.^[20,32,35] The preference

Table 4: Comparisons between the COVID and pre-COVID periods

	Patients			Clinicians		
	COVID (n=157)	PRE-COVID (n=79)	t-tests	COVID (n=157)	PRE-COVID (n=79)	Chi-square tests
Audiovisual quality of the VC sessions						
Satisfactory	100 (64%)	16 (20%)	$\chi^2=74.41^{\#}$ $P<0.00001$	8 (5%)	9 (11%)	$\chi^2=5.77^{\#}$ NS
Good	51 (32%)	27 (34%)		90 (57%)	34 (43%)	
Very good/Excellent	5 (3%)	36 (46%)		59 (38%)	36 (46%)	
	[Very good-4 Excellent -1]	[Very good-32 Excellent -4]		[Very good-45 Excellent - 14]	[Very good-35 Excellent - 1]	
Ease of participation in the VC sessions						
A little difficult (satisfactory)	102 (65%)	13 (16%)	$\chi^2=86.17^{\#}$ $P<0.00001$	45 (29%)	9 (11%)	$\chi^2=78.23^{\#}$ $P<0.00001$
Easy (good)	52 (33%)	34 (43%)		100 (64%)	22 (28%)	
Very easy (very good)/Not difficult at all (excellent)	1 (1%)	32 (40%)		12 (8%)	48 (61%)	
	[Very good-1 Excellent -0]	[Very good-27 Excellent -5]		[Very good-12 Excellent -0]	[Very good-38 Excellent -10]	
Acceptability of the VC consultations						
Just acceptable (satisfactory acceptability)	100 (64%)	18 (23%)	$\chi^2=68.22^{\#}$ $P<0.00001$	81 (52%)	12 (15%)	$\chi^2=66.43^{\#}$ $P<0.00001$
Quite acceptable (good acceptability)	54 (34%)	32 (40%)		64 (41%)	25 (32%)	
Highly acceptable (very good acceptability/ excellent acceptability)	2 (1%)	29 (37%)		12 (8%)	42 (53%)	
	[Very good-2 Excellent -0]	[Very good-28 Excellent -1]		[Very good-12 Excellent -0]	[Very good-30 Excellent -12]	
Overall satisfaction with the VC consultations						
Satisfactory	99 (63%)	23 (29%)	$\chi^2=24.78^{\#}$ $P<0.0001$	76 (48%)	14 (18%)	$\chi^2=21.32^{\#}$ $P<0.0001$
Good/Very good/Excellent	57 (36%)	56 (71%)		80 (51%)	65 (82%)	
	[Good-57 Very good- 0 Excellent-0]	[Good-30 Very good- 26 Excellent-0]		[Good-67 Very good- 13 Excellent-0]	[Good-25 Very good-28 Excellent-12]	
Preference for VC consultations in the future						
Less likely to prefer	90 (57%)	24 (30%)	$\chi^2=29.05^{\#}$ $P<0.00001$	97 (62%)	15 (19%)	$\chi^2=71.91^{\#}$ $P<0.00001$
Will not prefer/Less likely to prefer	90 (57%)	24 (30%)		99 (63%)	15 (19%)	
May prefer	57 (36%)	31 (39%)		53 (34%)	30 (38%)	
Likely/Highly likely to prefer	10 (6%)	24 (30%)		5 (3%)	34 (43%)	
	[Likely-10 Highly likely-0]	[Likely-23 Highly likely-1]		[Likely-5 Highly likely-0]	[Likely-21 Highly likely-13]	
Prescriptions and aftercare for patients						
Procuring medicines by text messages (e- prescriptions)	COVID (n=157)	PRE-COVID (n=79)	t-tests	Level of difficulty during VC follow-ups	COVID (n=157)	PRE-COVID (n=79)
Quite difficult	3 (2%)	0	$\chi^2=15.69^{\#}$, $P<0.0001$	33 (21%)	7 (9%)	$\chi^2=9.34^{\#}$ $P<0.05$
Somewhat difficult	104 (67%)	32 (40%)		98 (62%)	48 (61%)	
Easy/Very easy	50 (33%)	47 (59%)		26 (17%)	24 (30%)	
	[Easy-49 Very easy-1]	[Easy-30 Very easy-17]		[Easy-25 Very easy-1]	[Easy-17 Very easy-7]	

VC - videoconferencing; NS - non-significant. [#] As shown above, certain categories were clubbed together while comparing the groups

for future use of HB-TMH care among patients in the COVID phase was lower than other studies during the pandemic.^[36] Though the preference rates among clinicians were similar to some of the pandemic era studies,^[35-37] they were substantially lower than other such studies.^[20,34,38] Although the majority of studies from the pre-COVID era have found that patients and clinicians seldom prefer future videoconferencing-based care,^[39-43] preference for future use of HB-TMH treatment was greater among participants of this study from the pre-COVID phase. The discrepant results of the current study concerning lower rates of satisfaction and acceptability could be due to imperfections in the HB-TMH system during its initial phase, external factors such

as poor network connectivity, or methodological variables such as differences in TMH services, the number and type of patients and professionals included, and the method of conducting the satisfaction surveys.

One of the novel findings of the current study was that clinicians were significantly more satisfied than the patients during the pandemic. Differences were less marked during the pre-COVID period, but even during this phase acceptability and preference for future videoconferencing-based treatment were higher among clinicians. These results were contrary to what has been reported earlier. Prepandemic studies have usually found that satisfaction

with TMH care is greater among patients than clinicians,^[39-41] but this is not a consistent finding.^[42,43] In contrast, studies of TMH treatment during the pandemic have found equivalent rates of satisfaction among patients and clinicians.^[15,20,21] The comparisons between the pre-COVID and the COVID phases in this study indicated that lower patient acceptability during the pandemic could explain the clinician-patient discrepancy in perceptions. Dissimilarities between the demographic and clinical profiles of patients from the pre-pandemic and the pandemic phases could not fully account for the differences in acceptability between the two phases, because like other studies, these factors had a minimal influence on the satisfaction ratings.^[33,36] However, the pre-COVID group had fewer patients who had used the service for a longer period and had received greater individual attention from their treating clinicians. Thus, the lack of previous experience with TMH treatment, unfamiliarity with the technology, and less effective clinician-patient alliances could have contributed to the lower patient satisfaction during the pandemic.^[28,39-41] On the other hand, clinicians were more used to the technology and felt less burdened by the additional TMH consultations because their usual workload of in-person treatment had been greatly curtailed. Moreover, clinicians mostly carried out assessment and medication-management sessions, which are more likely to be associated with favorable perceptions of TMH treatment.^[41]

Methodological limitations

Although the use of Likert scales for assessing satisfaction in this study was similar to other surveys, validated scales and qualitative assessments are usually required for more in-depth investigations of patients' and clinicians' satisfaction.^[39,40] In the absence of a control group of patients who had used in-person services, it was difficult to determine whether satisfaction rates would still be the same if the patients from the COVID phase had access to conventional outpatient services.^[40] However, the relatively large number of patients from the pandemic phase and the presence of a control group from the pre-pandemic period could mitigate the lack of an in-person control group.^[44] Finally, though patient and clinician acceptability is often used to evaluate health care services, such acceptability is not a measure of their effectiveness.^[28,42]

Conclusions

Despite these limitations, the current study offered preliminary evidence for the feasibility and acceptance of an HB-TMH service provided by a broad group of clinicians for patients with a wide range of psychiatric disorders. It suggests that HB-TMH services based on direct-care and hybrid models may be viable options for care even in the resource-constrained settings of countries like India. However, the relatively low satisfaction rates among the patients are of some concern. Undoubtedly, much more needs to be done to improve these services to enhance this low patient acceptability. Moreover, the effectiveness of HB-TMH services will need to be established before they can be fully integrated within the wider system of mental health

care in India. Nevertheless, it is hoped that the insights about the feasibility and acceptance of HB-TMH services by patients as well as clinicians will encourage further use of such services for providing mental health care. This is particularly relevant for primary-care physicians who provide the bulk of mental health care in rural and remote settings.^[10]

Key messages

Home-based tele mental health services are viable options for care even in resource-constrained Indian settings but have to be improved to enhance patient acceptability.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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