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REVIEW ARTICLE

Telehealth in primary mental health care in rural and remote areas: A systematic review

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Abstract
Mental health problems are becoming more prevalent globally. Therefore, innovative patient care delivery approaches are considered due to the rising need for primary mental health care services and an increase in the usage of digital communication tools online. For this reason, this systematic review was conducted to analyze relevant articles about telehealth in primary mental health care services in rural and remote areas. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) checklist was provided as guidance. The Joanna Briggs Institute (JBI) list was also used to evaluate the quality assessment. The databases are Scopus, Web of Sciences, and PubMed databases. Most telehealth in primary mental health care used in rural and remote areas is videoconferencing and application. Telehealth in primary mental health care services delivered to difficult-to-reach populations, like those in rural and remote areas, has significantly improved community mental health services in terms of results and satisfaction. Tele-mental health can be considered a safe and long-term solution but has several challenges that must be addressed.

Keywords: Mental health; primary health care; rural area; remote Area; telehealth

Introduction

Globally, there is an increase in mental health issues (Ahmed et al., 2019). In the past ten years, there has been a 13% increase in mental health illnesses, primarily due to demographic shifts. Currently, 1 in 5 people lives with a disability due to mental health issues. All aspects of life, including school or work performance, relationships with family and friends, and participation in society, can be significantly impacted by mental health issues. The world economy suffers from the two most prevalent mental health problems, anxiety, and depression (World Health Organization, 2022). As evidenced by the inclusion of mental health in the Sustainable Development Goals, there has been growing recognition of mental health's crucial role in achieving global development goals in recent years (United Nations General Assembly, 2020). Budget issues, and limited and expensive land and sea transportation, which make it challenging to provide medications and therapy that are occasionally not provided, are constraints on mental health programs administered in primary services in distant locations. As a result, primary mental health care in isolated places is not at its best (Tasijawa et al., 2022). Primary service providers, the backbone of the community's services, have been unable to reach isolated regions, borders, and islands. The population is small and dispersed into small groups spread out over a large working area for primary services, some of which are geographically challenging to reach. There aren't many affordable transportation options, whether by land, sea, or air (Cosgrave et al., 2015).

Health professionals may have trouble getting to resources in outlying areas. Telehealth is the application of telecommunication techniques to provide telemedicine, medical education, and health education across a distance, according to the International Organization for Standardization (Calleja et al., 2022). Telehealth behavioral treatments are essential in overcoming the barriers to care in underserved and rural locations. There is mounting evidence for various presenting problems and treatment modalities that such therapies are just as successful as in-person evaluation and treatment (Pradhan et al., 2019). Telehealth can expand provider networks during public health catastrophes, such as pandemics, infectious disease epidemics, wildfires, flooding, tornadoes, and hurricanes (e.g., tapping into out-of-state providers to increase capacity). When in-person, face-to-face interactions are not possible

because of geographic restrictions or a dearth of clinicians or therapies in a particular location, they can also increase the capacity to provide direct client care. Telehealth can be included in an organization's routine procedures, offering low-barrier connections for patients and healthcare professionals to connect, assess their requirements for maintenance, develop treatment plans, start treatments, and provide long-term continuity of care (SAMHSA, 2021).

Implementation and maintenance expenses, reimbursement issues, the need for organizational structure and workflow integration, labor scarcity, particularly for behavioral health professionals, and the requirement for education and training are all barriers to implementing tele mental health. This demonstrates how crucial it is to implement telemental health interventions in a planned manner (Alghamdi et al., 2022). The required infrastructure must be created and supported, sufficient staff resources and training must be made available through initiatives to improve staff comprehension of Telehealth laws, rules, and best practices, and patient resources must be created and widely disseminated to guarantee that this happens (Schaffer et al., 2020). Telehealth refers to technology-enabled contact between the patient (caregiver) and provider that enables people to work as if they were physically together. Employing telehealth for mental health treatment, symptom assessment, and intervention is possible. Several primary care clinics described the change from in-person to virtual service. The number of visits increased or remained the same when telehealth was implemented. The most frequent presenting complaints were mental health issues, and it was determined that integrating behavioral health care through telehealth was practical. Also successfully implemented were some mental health services, such as programs for overcoming addiction and eating disorders (Cunningham et al., 2021). The use of digital communication tools online is growing. New patient care delivery methods are being considered due to the growing demand for primary mental care services (Donaghy et al., 2019).

Today, telehealth has established itself as a workable addition to an already overburdened healthcare system, where both patients and healthcare professionals are looking for rapid, efficient, and reliable tools for early identification, primary care, and long-term evaluation (Lee et al., 2020). Promising outcomes for self-care, promoting adherence, improving compliance, and reducing healthcare visits have been seen with telehealth in mental health care. Empirically and from the perspectives of the patients, telehealth's efficacy has been proven. However, virtual features are limited by socioeconomic considerations, such as internet access and data usage, much like with other forms of telemental health (Schaffer et al., 2020). There has never been a comprehensive study on telehealth, especially in the context of primary mental health care. Therefore, this systematic review aims to analyze the use of telehealth in direct mental health care services in rural and remote areas.

Method

A systematic review was conducted to analyze relevant studies about telehealth in primary mental health care services in rural and remote areas. The checklist from the PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analysis) was utilized as a guide. The quality assessment used the Joanna Briggs Institute (JBI) checklist. A systematic review was conducted in July-August 2022 using Scopus, Web of Sciences, and PubMed. Mesh terms like ((technology) OR (telehealth)) AND (primarily mental health services) AND ((rural area) OR (remote location)) were being used as keywords. The articles were written in English and released within the previous five years (2018-2022). The inclusion criteria used Population, Intervention, Comparison, Outcome, and Study Design (PICOS) framework **(Table 1)**.

We established standard exclusion criteria during the article screening process, including the irrelevant intervention and result of telehealth in primary mental health care services. Two researchers reviewed all the titles/abstracts and prospective eligible full texts (MNB and YY). A decision was reached regarding inclusion after all researchers discussed all potential issues. Two researchers (AY and RFPK) verified quality assessment and data analysis. The remaining 12 articles will be used once the 25 papers found through the article search are adjusted for eligibility and inclusion criteria **(Figure 1)**. For each piece gathered for this study, the Joanna Briggs Institute (JBI) Critical Appraisal Checklist was utilized to assess the danger of bias and prevent it. The study will be included if met the inclusion criteria. The information of the citations, including author and publication year, country, research design, sample characteristics, and interventions, are collected with the data extraction in a form. A summary table was created using the data we extracted. From the search approach and study selection, we filter out the articles. Any argument is handled through dialogue. This systematic review used a descriptive method with a narrative approach as its analytical approach.

Table 1. PICOS criteria

PICOS framework	Inclusion Criteria	Exclusion Criteria
Population	Population related to mental health in a rural and remote area	Not associated with mental health in a rural and remote area
Intervention	Consisted of telehealth	Not consist of telehealth
Comparison	No comparison	
Outcome	Showing telehealth in primary mental health care services	Not offering telehealth in primary mental health care services
Study design	Original research articles	Review articles

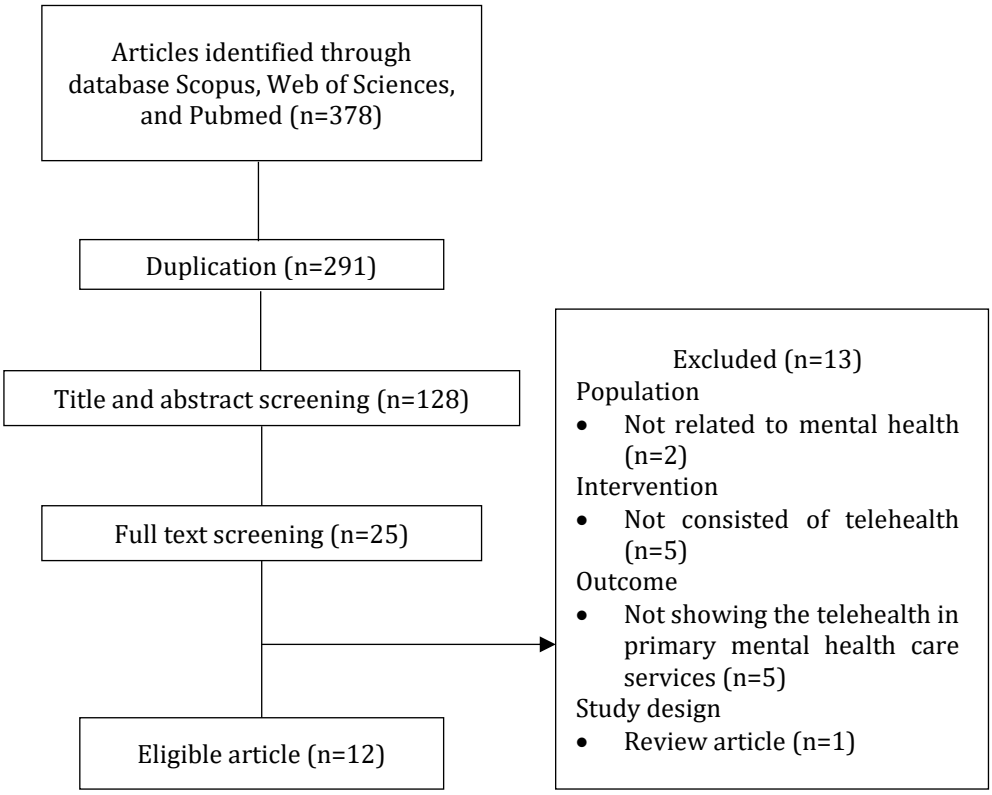

Figure 1. Article selection process

Results

The results found 12 articles meeting the critical appraisal criteria. Primary mental health care telehealth in rural and remote areas is applied in the United States, Germany, Australia, Hong Kong, India, Chile, and Zambia. The majority of telehealth takes the form of videoconferencing **(Table 2)**.

Discussion

Our finding documented that clinical video telehealth is used to give primary care to patients who lack on-site mental health care workers or don't have the resources to address the clinical demand. For patients assigned to the care management condition compared to those receiving usual care, video telehealth care management led to significant improvements in medication adherence, treatment response, and remission of depression. The telehealth video will be implemented six months apart in three waves or phases. Each stage will consist of 6 months of implementation planning, six months of active implementation, and then stepped-down facilitation of the performance (Owen et al., 2019). Over time, telepsychiatry consultation improved the competence of many clinical team members, including those not directly involved. The talks increased their ability to recognize and handle psychological illnesses (Al Achkar

et al., 2020). In rural and remote areas, primary health centers offer telepsychiatry services using video conferencing equipment connected to the video conferencing equipment through a secure broadband network at a speed of 768 kbps. It is part of a mental health program that includes mental health nurses and psychiatrists in the subspecialty of geriatric psychiatry.

Table 2. Study findings

No	Author, Year, Country	Study design	Sample	Type of telehealth	Findings
1	Owen et al., 2019; United States	Randomized controlled trial	Clinicians	Tele-PCMHI program	Tele-PCMHI is effective for telehealth
2	Al Achkar et al., 2020; United States	Qualitative	Clinical support and administrative staff	Telepsychiatry	Telepsychiatry improved the competence
3	Howland et al., 2021; United States	Qualitative	Psychiatrists and psychologists	Video conferencing	Improve patients' satisfaction
4	Hall et al., 2022; United States	Randomized controlled trial	Patients and clinicians	Telepsychiatry (SPIRIT)	Telepsychiatry increases the quality of care
5	Figge et al., 2022; Zambia	Randomized controlled trial	Cadres, adolescents	T-CETA via telephone call	T-CETA is an effective method for telehealth
6	Dham et al., 2018; Australia	Retrospective study	Clinicians and patients	Telepsychiatry	Telepsychiatry is a helpful strategy for improving the quality of care
7	Cheng et al., 2018; Hong Kong	Case study	Patients	Teleconsultation	Teleconsultation is reliable
8	Haun et al., 2021; Germany	Randomized controlled trial	Patients	Video-based consultation	Video-based consultation reduces barriers to care
9	Bleyel et al., 2020; Germany	Qualitative	Patients	Video consultation	Video consultations are a well-received method
10	Mundt et al., 2021; Chile	Mixed method	Patients	Video consultations	Video consultation is effective in consultations
11	Muke et al., 2020; India	Randomized controlled trial	Non-specialist health workers	Smartphone applications	The smartphone enables improved quality.
12	Hoffmann et al., 2020; Germany	Qualitative	Mental health specialist	Video consultations	Video consultations improve mental health care

A combination of community visits by psychiatrists every four to six weeks and telepsychiatry is used to give psychiatrist support for assessment and treatment. The evaluation aimed to outline the telepsychiatry program's usage trends over two years (Dham et al., 2018). Through videoconferencing, the telepsychiatrist evaluated the patient in person for an initial session that included a diagnostic evaluation. Patients could have direct appointments with telepsychiatrists for follow-up consultations about confirming the diagnosis or therapy every two weeks. The telepsychiatrist schedules and reminds the patient to attend visits, monitors treatment response, provide psychoeducation, promotes treatment adherence, and delivers evidence-based behavioral interventions through teleconference meetings (Howland et al., 2021).

This telehealth program included an optional referral for psychotherapy based on patient interest, readiness, and need for initial diagnosis and treatment plan through interactive video and medication maintenance televideo

sessions as needed. Before each interactive video session, the telepsychiatrist treated patients directly and kept track of their symptoms (Hall et al., 2022). This telehealth program combines components of the collaborative care and consultation models to provide targeted primary care-based mental health services. The elements include specialized diagnostics and a predetermined dose of five 50-minute video consultations for each patient spread out over eight weeks, primarily focusing on affect expression and regulation (Haun et al., 2021). Primary mental health care clinicians conducted videoconferencing mental health consultation sessions utilizing a secure web-based treatment platform, which included a closed network, customized access passwords, and a disabled recording capability. Over the course of six months, two videoconferencing mental health consultation sessions were arranged per month, with 90 minutes reserved for each session (Mundt et al., 2021).

The staff brought two portable video conferencing systems on the consultation day. To schedule a follow-up face-to-face appointment within seven days of the consultation, a maximum of four consecutive telepsychiatry consultations was set (Cheng et al., 2018). The Common Elements Treatment Approach for Telehealth (T-CETA) comprises ten days of trainers-in-training, expert T-CETA trainers live-modeling training components through video chat and observing live and pre-recorded video observations of role-plays (Figge et al., 2022). Telehealth is restricted to five consultations and includes clinical diagnostics, care planning, crisis management, or brief psychotherapy. Patients with depression and anxiety will specifically receive video consultations from mental health professionals (Bleyel et al., 2020; Hoffmann et al., 2020).

The readiness of the family support is the primary consideration for receiving dialysis (Muscat et al., 2018). The family's enthusiasm to help the patient is also one of the primary considerations for receiving dialysis (Tone Andersen-Hollekim et al., 2020; Balogun et al., 2019; Pancras et al., 2018). Cases of patients whose family members have abandoned and even their partners have been explored. It could be due to family problems or financial difficulties (Pancras et al., 2018). Travel and medical expenses for hemodialysis and other supportive care are described as challenging (Tadesse et al., 2021) because not all patients can get subsidies from medical social welfare or seek reimbursement from the Social Security Organization (SOCSO) (Sharma et al., 2019). The psychological trauma of being diagnosed with life-threatening ESRD is exacerbated by thinking about how to raise money to pay for treatment (Boateng et al., 2018). The lack of respect and empathy shown by some dialysis staff has offended some patients (Hughes et al., 2019). The lack of time given beyond substantial clinical issues creates a strong feeling. If staff members are well-trained in providing dialysis care and responding to medical problems, they are usually less able to cope with the emotional side of the patients experiencing ESRD (Sein et al., 2020). They may be relatively lacking in recognizing signs of suffering in their patients, especially when patients try to normalize their feelings or try hard to 'retain the burden of suffering'(Damery et al., 2019).

The Healthy Activity Program (HAP), a smartphone application for treating depression, is a component of digital training. The 16 modules that comprised the training program's content included PowerPoint presentations, reading materials, interactive quizzes built into the modules, and assessment questions at the end of each. Role-play videos depicting clinical scenarios were also included. The digital training material was roughly 48 hours, with the time needed to see the content, read the supporting materials, and finish the interactive quizzes and assessment tasks. Patients received a smartphone with which to access the training program, and they were required to attend a brief orientation to learn how to use the smartphone app (Muke et al., 2020). Rural mental health specialists frequently perform the challenging task alone in their community with little access to other professionals (Hoeft et al., 2018). Finding specialty mental health providers in rural and remote, community-based settings has generally been difficult. Then, the way things are set up now, mental health care for people living in rural areas is sometimes inferior to that offered in larger health center clinics (Dham et al., 2018; Edelman et al., 2020). By using telehealth technologies to deliver these services, barriers usually faced by providers are reduced (Dham et al., 2018). Through either direct communication from a mental health professional with the patient and their care team or via consultation with these providers, telehealth can benefit non-mental health physicians in primary care (Hoeft et al., 2018).

The usage pattern demonstrates that a community-based telepsychiatry program applies to a broad spectrum of psychiatric diseases in rural places where psychiatry services may not be readily available. The recommendations for psychosocial therapies show that telepsychiatry can effectively provide a coordinated management plan with the psychiatrist's assistance. However, it also permitted review of patients admitted to general community hospitals and critically sick patients in the community who need immediate intervention, such as specialist inpatient transfer or additional medical evaluation, as was clear from the recommendations provided (Dham et al., 2018; Maulik et al., 2020). Telehealth video would enable the implementation of integrated mental health services in places where it is neither practical nor cost-effective to staff co-located experts, such as additional primary care clinics serving rural patients (Owen et al., 2019). For most smaller, solo, rural, or remote primary care in many

nations worldwide, models with on-site mental health specialists are impractical (Swar et al., 2019). The availability of specialized mental health care for the growing number of multimorbid patients may be improved by incorporating videoconferencing in primary care mental health practices. Compared to standard therapy, this videoconferencing is a clinically effective and affordable method of lowering the intensity of depression and anxiety symptoms (Haun et al., 2021; Swar et al., 2019). Health care could help rural populations have prompt remote access to high-quality care, addressing the scarcity of mental health care. Technology-based solutions improve access to care, are accepted by individuals with various cultural backgrounds, and produce mental health results that are on par with in-person treatment (Mundt et al., 2021).

In difficult-to-reach populations, telemental health delivery approaches eliminate common hurdles to treatment access and adherence, such as time, financial, and transportation demands, particularly during public health emergencies (Zhao et al., 2021). Tele mental health delivery has emerged as a realistic option due to the recent rapid expansion in access to mobile technologies (Appleton et al., 2021; Figge et al., 2022; Garvin et al., 2021). Tele videoconferencing can help primary care providers deliver collaborative care for depression. In addition to offering regular specialist-led videoconference consults among rural primary care providers for various conditions, including mental health and substance abuse consultation, telehealth may also support providers through televideo or telephone consult lines. These services also provide a community of practice among providers to improve learning and decrease feelings of isolation (Hoeft et al., 2018). Most mental health specialists deemed the latter inadequate due to long wait periods and a lack of therapy resources, particularly in rural areas. Fast access to mental health care, especially for patients with impaired mobility, should not be a barrier but should be primarily advantageous for most patients to provide more immediate access to mental health care (McNaughton et al., 2020). Video consultations as a potential mode to deliver mental health care, as a stable therapeutic alliance can be established, particularly suited for an initial consultation and diagnosis rather than a genuine alternative to face-to-face psychotherapy (Hoffmann et al., 2020). This telepsychiatry model should be viewed as a promising strategy for quickly expanding the capacity of current primary care in rural mental health and establishing a chronic illness to improve care outcomes (Muke et al., 2020).

Patients were satisfied with the intervention's rural primary care settings and motivated to increase mental health care access. In particular, physicians were pleasantly surprised by the positive connection with patients over telehealth for trauma-related care. Particularly tele psychologists discovered that patient exchanges in psychotherapy were rewarding for both parties (Howland et al., 2021; Zemlak et al., 2021). Teleconsultations were on par with in-person consultations in terms of quality. The telepsychiatry consultation service was extremely well-received by the patients (Cheng et al., 2018). Training care managers and consultant psychiatrists could minimize variation in integrated behavioral health and increase the likelihood of achieving the objective of providing high-quality treatment to all rural patients (Al Achkar et al., 2020). The various study designs cause limitations in this systematic review, meaning that the results may not entirely focus on the intervention and its findings. It is possible that we missed essential articles in this study. The papers also focus on rural and remote areas; therefore, they cannot be generalized.

Conclusion

In conclusion, the telemental health in primary care services delivered to difficult-to-reach populations, like those in a rural and remote areas, has significantly improved community mental health services in terms of result and satisfaction. Tele-mental health can be considered a safe and long-term solution but has several challenges. In the future, addressing the challenges and strengthening the strategy to improve the quality of primary mental health care services will be essential.

Author's declaration

The authors made substantial contributions to the conception and design of the study and took responsibility for data analysis, interpretation, and discussion of results. For manuscript preparation, all the authors read and approved the final version of the paper.

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Availability of data and materials

All data are available from the authors.

Competing interests
The authors have declared that no conflict of interest exists.

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References
Ahmed, E., Merga, H., & Alemseged, F. (2019). Knowledge, attitude, and practice towards mental illness service provision and associated factors among health extension professionals in Addis Ababa, Ethiopia. International Journal of Mental Health Systems, 13(1), 1–9. https://doi.org/10.1186/s13033-019-0261-3

Al Achkar, M., Bennett, I. M., Chwastiak, L., Hoeft, T., Normoyle, T., Vredevoogd, M., & Patterson, D. G. (2020). Telepsychiatric consultation as a training and workforce development strategy for rural primary care. Annals of Family Medicine, 18(5), 438–445. https://doi.org/10.1370/afm.2561

Alghamdi, S. M., Aldhahir, A. M., Alqahtani, J. S., Siraj, R. A., Alsulayyim, A. S., Almojaibel, A. A., Alhotye, M., Alanazi, A. M., & Alqarni, A. A. (2022). Healthcare providers' perception and barriers concerning the use of telehealth applications in Saudi Arabia: A cross-sectional study. Healthcare (Switzerland), 10(8). https://doi.org/10.3390/healthcare10081527

Appleton, R., Williams, J., Juan, N. V. S., Needle, J. J., Schlief, M., Jordan, H., Rains, L. S., Goulding, L., Badhan, M., Roxburgh, E., Barnett, P., Spyridonidis, S., Tomaskova, M., Mo, J. P., Harju-Seppänen, J., Haime, Z., Casetta, C., Papamichail, A., Lloyd-Evans, B., … Johnson, S. (2021). Implementation, adoption, and perceptions of telemental health during the COVID-19 pandemic: Systematic review. Journal of Medical Internet Research, 23(12). https://doi.org/10.2196/31746

Bleyel, C., Hoffmann, M., Wensing, M., Hartmann, M., Friederich, H.-C. C., & Haun, M. W. (2020). Patients' perspective on mental health specialist video consultations in primary care: Qualitative preimplementation study of anticipated benefits and barriers. Journal of Medical Internet Research, 22(4). https://doi.org/10.2196/17330

Calleja, P., Wilkes, S., Spencer, M., & Woodbridge, S. (2022). Telehealth use in rural and remote health practitioner education: An integrative review. Rural and Remote Health, 22(1). https://doi.org/10.22605/RRH6467

Cheng, K. M., Siu, B. W., Au Yeung, C. C., Chiang, T. P., So, M. H., & Yeung, M. C. (2018). Telepsychiatry for stable Chinese psychiatric out-patients in custody in Hong Kong: A case-control pilot study. Hong Kong Medical Journal = Xianggang Yi Xue Za Zhi, 24(4), 378–383. https://doi.org/10.12809/hkmj187217

Cosgrave, C., Hussain, R., & Maple, M. (2015). Retention challenge facing Australia's rural community mental health services: Service managers' perspectives. Australian Journal of Rural Health, 23(5), 272–276. https://doi.org/10.1111/ajr.12205

Cunningham, N. R., Ely, S. L., Garcia, B. N. B., & Bowden, J. (2021). Addressing pediatric mental health using telehealth during Coronavirus Disease-2019 and beyond: A narrative review. Academic Pediatrics, 21(7), 1108–1117. https://doi.org/10.1016/j.acap.2021.06.002

Dham, P., Gupta, N., Alexander, J., Black, W., Rajji, T., & Skinner, E. (2018). Community based telepsychiatry service for older adults residing in a rural and remote region-utilization pattern and satisfaction among stakeholders. BMC Psychiatry, 18(1). https://doi.org/10.1186/s12888-018-1896-3

Donaghy, E., Atherton, H., Hammersley, V., McNeilly, H., Bikker, A., Robbins, L., Campbell, J., & McKinstry, B. (2019). Acceptability, benefits, and challenges of video consulting: A qualitative study in primary care. The British Journal of General Practice: The Journal of the Royal College of General Practitioners, 69(686), e586–e594. https://doi.org/10.3399/bjgp19X704141

Edelman, A., Grundy, J., Larkins, S., Topp, S. M., Atkinson, D., Patel, B., Strivens, E., Moodley, N., & Whittaker, M. (2020). Health service delivery In Norther Australia: A scoping review. Rural and Remote Health, 20(4). https://doi.org/10.22605/RRH6168

Figge, C. J., Kane, J. C., Skavenski, S., Haroz, E., Mwenge, M., Mulemba, S., Aldridge, L. R., Vinikoor, M. J., Sharma, A., Inoue, S., Paul, R., Simenda, F., Metz, K., Bolton, C., Kemp, C., Bosomprah, S., Sikazwe, I., & Murray, L. K. (2022). Comparative effectiveness of in-person vs. remote delivery of the common elements treatment approach for addressing mental and behavioral health problems among adolescents and young adults in Zambia: Protocol of a three-arm randomized controlled trial. Trials, 23(1), 417. https://doi.org/10.1186/s13063-022-06319-4

Frando Armando Tasijawa, Rosali Arsyad Kurniawan, Indah Mentari Artani Siagian, Supiatun, N. A. (2022). Recovery Skizofrenia (Cetakan ke). PT Nasya Expanding Management.

Garvin, L. A., Hu, J., Slightam, C., McInnes, D. K., Zulman, D. M., Hall, J. D., Danna, M. N., Hoeft, T. J., Solberg, L. I., Takamine, L. H., Fortney, J. C., Nolan, J. P., Cohen, D. J., McDowell, A., Huskamp, H. A., Busch, A. B., Mehrotra, A., Rose, S., Appleton, R., … Johnson, S. (2021). Implementation, adoption, and perceptions of telemental health during the COVID-19 Pandemic: Systematic Review. Journal of Medical Internet Research, 35(3), 287–297. https://doi.org/10.2196/31746

Hall, J. D., Danna, M. N., Hoeft, T. J., Solberg, L. I., Takamine, L. H., Fortney, J. C., Nolan, J. P., & Cohen, D. J. (2022). Patient and clinician perspectives on two telemedicine approaches for treating patients with mental health disorders in underserved areas. Journal of the American Board of Family Medicine: JABFM, 35(3), 465–474. https://doi.org/10.3122/jabfm.2022.03.210377

Haun, M. W., Tönnies, J., Krisam, R., Kronsteiner, D., Wensing, M., Szecsenyi, J., Vomhof, M., Icks, A., Wild, B., Hartmann, M., Friederich, H.-C. C., Toennies, J., Krisam, R., Kronsteiner, D., Wensing, M., Szecsenyi, J., Vomhof, M., Icks, A., Wild, B., … Friederich, H.-C. C. (2021). Mental health specialist video consultations versus treatment as usual in patients with depression or anxiety disorders in primary care: Study protocol for an individually randomized superiority trial (the PROVIDE-C trial). Trials, 22(1), 327. https://doi.org/10.1186/s13063-021-05289-3

Hoeft, T. J., Fortney, J. C., Patel, V., Unützer, J., Unutzer, J., Unützer, J., & Unutzer, J. (2018). Task-sharing approaches to improve mental health care in rural and other low-resource settings: A systematic review. Journal of Rural Health, 34(1), 48–62. https://doi.org/10.1111/jrh.12229

Hoffmann, M., Wensing, M., Peters-Klimm, F., Szecsenyi, J., Hartmann, M., Friederich, H.-C. C., & Haun, M. W. (2020). Perspectives of psychotherapists and psychiatrists on mental health care integration within primary care via video consultations: Qualitative preimplementation study. Journal of Medical Internet Research, 22(6). https://doi.org/10.2196/17569

Howland, M., Tennant, M., Bowen, D. J., Bauer, A. M., Fortney, J. C., Pyne, J. M., Shore, J., & Cerimele, J. M. (2021). Psychiatrist and psychologist experiences with telehealth and remote collaborative care in primary care: A qualitative study. The Journal of Rural Health, 37(4), 780–787. https://doi.org/10.1111/jrh.12523

Lee, N. T., Karsten, J., & Roberts, J. (2020). Removing regulatory barriers to telehealth before and after COVID-19. Brookings Institute, May, 1–24. https://www.brookings.edu/wp-content/uploads/2020/05/Removing-barriers-to-telehealth-before-and-after-COVID-19_PDF.pdf

Maulik, P. K., Devarapalli, S., Kallakuri, S., Bhattacharya, A., Peiris, D., & Patel, A. (2020). The systematic medical appraisal referral and treatment mental health project: Quasi-experimental study to evaluate a technology-enabled mental health services delivery model implemented in Rural India. Journal of Medical Internet Research, 22(2), e15553. https://doi.org/10.2196/15553

McNaughton, C. D., Bonnet, K., Schlundt, D., Mohr, N. M., Chung, S., Kaboli, P. J., & Ward, M. J. (2020). Rural interfacility emergency department transfers: Framework and qualitative analysis. The Western Journal of Emergency Medicine, 21(4), 858–865. https://doi.org/10.5811/westjem.2020.3.46059

Muke, S. S., Tugnawat, D., Joshi, U., Anand, A., Khan, A., Shrivastava, R., Singh, A., Restivo, J. L., Bhan, A., Patel, V., & Naslund, J. A. (2020). Digital training for non-specialist health workers to deliver a brief psychological treatment for depression in primary care in India: Findings from a randomized pilot study. International Journal of Environmental Research and Public Health, 17(17). https://doi.org/10.3390/ijerph17176368

Mundt, A. P., Irarrázaval, M., Martínez, P., Fernández, O., Martínez, V., & Rojas, G. (2021). Telepsychiatry consultation for primary care treatment of children and adolescents receiving child protective services in chile: Mixed methods feasibility study. JMIR Public Health and Surveillance, 7(7), e25836. https://doi.org/10.2196/25836

Owen, R. R., Woodward, E. N., Drummond, K. L., Deen, T. L., Oliver, K. A., Petersen, N. J., Meit, S. S., Fortney, J. C., & Kirchner, J. E. (2019). Using implementation facilitation to implement primary care mental health integration via clinical video telehealth in rural clinics: Protocol for a hybrid type 2 cluster randomized stepped-wedge design. Implementation Science: IS, 14(1), 33. https://doi.org/10.1186/s13012-019-0875-5

Pradhan, T., Ashley Six-Workman, E., & Law, K.-B. (2019). An innovative approach to care: Integrating mental health services through telemedicine in rural school-based health centers. Psychiatric Services, 70(3), 239–242. https://doi.org/10.1176/appi.ps.201800252

SAMHSA. (2021). Telehealth for the treatment of serious mental illness and substance use disorders. Evidence-Based Resource Guide Series, 776. https://store.samhsa.gov/sites/default/files/SAMHSA_Digital_Download/PEP21-06-02-001.pdf

Schaffer, C. T., Nakrani, P., & Pirraglia, P. A. (2020). Telemental health care: A review of efficacy and interventions. Telehealth and Medicine Today, 1–13. https://doi.org/10.30953/tmt.v5.218

Swar, S., Rimal, P., Gauchan, B., Maru, D., Yang, Y., & Acharya, B. (2019). Delivering collaborative care in rural settings: Integrating remote teleconsultation and local supervision in rural Nepal. Psychiatric Services (Washington, D.C.), 70(1), 78–81. https://doi.org/10.1176/appi.ps.201800273

United Nations General Assembly. (2020). Global indicator framework for the sustainable development goals and targets of the 2030 agenda for sustainable development. Work of the statistical commission pertaining to the 2030 agenda for sustainable development, 1–21. https://unstats.un.org/sdgs/indicators/Global Indicator Framework_A.RES.71.313 Annex.pdf

World Health Organization. (2022). Mental health. In World Health Organization. https://doi.org/10.1176/appi.ajp.160.8.1373

Zemlak, J. L., Wilson, P., VanGraafeiland, B., & Rodney, T. (2021). Telehealth and the psychiatric mental health nurse practitioner: Beyond the COVID-19 pandemic. Journal of the American Psychiatric Nurses Association. https://doi.org/10.1177/10783903211045119

Zhao, X. H., Innes, K. E., Bhattacharjee, S., Dwibedi, N., LeMasters, T. M., & Sambamoorthi, U. (2021). Facility and state-level factors associated with telemental health (TMH) adoption among mental health facilities in the United States. Journal of Telemedicine and Telecare, 27(4), 244–257. https://doi.org/10.1177/1357633X19868902