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Enhancing Psychiatric Care Delivery: Assessing Telehealth Patient Experience in Psychiatric Intensive and Outpatient Programs in the Context of the COVID-19 Pandemic

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Abstract
The advent of the COVID-19 pandemic necessitated the broad expansion of telehealth services to meet the needs of psychiatric care patients. Using a novel measure of telehealth patient experience in acute psychiatric care, the study examined the convenience and quality of care associated with telehealth, patients' preferred treatment delivery modality, and ancillary benefits of telehealth services. Participants were recruited via ambulatory programs from four hospitals within a primary health system to complete the Telehealth Patient Experience Survey, a 15-item measure with closed- and open-ended questions. Using a mixed methods approach, results indicated that most patients described telehealth as a convenient treatment approach and perceived that they received the same quality of care with telehealth as they did with in-person treatment. Patients also preferred future telehealth appointments followed by a hybrid approach. Most patients also reported feeling comfortable using their selected device, which significantly predicted patients' preference for future telehealth appointments. Qualitative data explored the benefits of telehealth services (e.g., ease of access, cost and time saving, perceived comfort and safety, etc.) and inconveniences (e.g., technical difficulties, physical/mental discomfort, and inadequate privacy). Implications of this and similar other studies should inform current policies to promote the use of telehealth in acute psychiatric care post-COVID-19 pandemic.

Keywords Quality improvement · Mental health · Quantitative · Qualitative

Introduction

Telehealth, defined as "the use of telecommunication technologies, such as telephone, videoconferencing, and the Internet to provide health services" (Nicholas et al., 2021), has gained significant popularity as a viable mental health treatment delivery approach in the USA since the early 2000s. The COVID-19 pandemic further accelerated the expansion of telehealth worldwide to meet the needs of patients receiving psychiatric care. Approximately 80% of mental health providers used some form of telehealth delivery by late March 2020 (Mishkind et al., 2021; Nicholas et al., 2021; Whaibeh et al., 2020), and extant research has shown that telehealth is a generally effective strategy for remotely delivering mental health care services (Jnr, 2020; Whaibeh et al., 2020). Although many studies have examined the utility of telehealth in behavioral healthcare settings (Bilimoria et al., 2021; Hays & Skootsky, 2022; Pogorzelska & Chlabicz, 2022), a gap in the literature exists regarding its ongoing use to improve access and quality of care in acute psychiatric populations (i.e., significant mental health challenges requiring structured, intensive treatment and require a higher level of care than traditional outpatient treatment but do not meet criteria for inpatient hospitalization; Zimmerman et al., 2021).

Policies to promote access to telehealth services were initiated at the national and state levels in response to the COVID-19 pandemic (e.g., legislation that removed geographic requirements for Medicare-insured patients, expansion of qualified, eligible providers who could offer telehealth services, and state-level guidance to improve access

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to telehealth services for Medicaid-insured patients; cf. Augenstein et al., 2022). Regulations and reimbursement policies and waiving restrictions to facilitate transitions to telehealth models of care (Reilly et al., 2020; Whaibeh et al., 2020) also played a significant role in rapidly expanding telehealth services. Nonetheless, despite efforts in recent years to establish telehealth as a standard of care (cf. Lau et al., 2021), some large-scale policy and system-level changes were not retained post-pandemic (Lipschitz et al., 2022; Zhu et al., 2024) along with inconsistent information about policy updates, leading to a decline in telehealth utilization (cf. Shilane & Lu, 2023).

Telehealth has several advantages for behavioral healthcare, including increased access to services, convenience, and cost savings (Madigan et al., 2021; SAMSA, 2021; Orsolini, 2021). Improved access to care is among the most prominent benefits, particularly for underserved populations, including those who reside in rural areas (Appleton et al., 2021) or those with physical disability or chronic illnesses (Whaibeh et al., 2020). Telehealth is also a convenient form of treatment delivery because it allows patients to access necessary care without significantly disrupting home and work responsibilities (Polinski et al., 2016). Extant research highlights the role of telehealth in saving patients' time and resources, including travel or commuting, reducing expenses, and enhancing interactions between providers and patients (Donelan et al., 2019; Luxton et al., 2014). Providers and patients have acknowledged that the quality of care received via telehealth is comparable to in-person services, which could enhance equitable access to care (Polinski et al., 2016; Zhu et al., 2024). However, despite its inherent strengths, telehealth may have disadvantages, including platform-specific restrictions and lack of uniformity, limited individual user experience with technology, disparities in equity of access, and concerns about threats to privacy and confidentiality (e.g., local environment and information technology security; c.f. Haimi, 2023; Houser et al., 2023).

Understanding the impact of telehealth on care quality requires considering both providers' and patients' perceptions. Extant literature highlights a range of viewpoints among providers, who generally find telehealth feasible to establish therapeutic rapport and assess risk levels (Nicholas et al., 2021; Sugarman et al., 2021). Providers also have reported enhanced therapeutic processes and patients' openness to disclose sensitive information (Lipschitz et al., 2022). However, providers' concerns persist about the use of telehealth, particularly among patients with (or high-risk concerns and relationship-building in group therapy (Sugarman et al., 2021)). Specifically, many patients have expressed high satisfaction and have reported a seamless transition to remote care, while others have cited challenges such as fatigue from video interactions, privacy concerns, and technological limitations (Barnett et al., 2021; Mishkind et al., 2021). Individuals, especially those with acute psychiatric concerns, such as self-regulation challenges or attentional deficits, may experience difficulty with active engagement in telehealth services (Appleton et al., 2021; Lau et al., 2021; Madigan et al., 2021; Orsolini et al., 2021; Siegel et al., 2021). Additionally, concerns about a lack of interpersonal connection with providers or peers and cybersecurity fears could mitigate patient acceptance of telehealth (Costa et al., 2021; Casares et al., 2020). Nevertheless, the value of telehealth is notable, both in terms of its capability to deliver optimal care and its continued integration with in-person services for patients presenting with acute psychiatric symptoms (Bulkes et al., 2022; Casares et al., 2020; Lipschitz et al., 2022; Zimmerman et al., 2021).

The effectiveness of telehealth is most evident when it is integrated within well-defined assessment and care plans that align with evidence-based delivery models (Costa et al., 2021). Research has demonstrated that telehealth has either equivalent (Bulkes et al., 2022; Lipschitz et al., 2022; Mazziotti & Rutigliano, 2021) or superior (cf. Hubley et al., 2016) clinical outcomes in behavioral health compared to traditional in-person services. Specifically, patients who have participated in telehealth have reported improved overall mental health status, reduced depression severity, fewer relapses, and improved medication adherence (Hungerbuehler et al., 2016). However, while these outcomes are promising, further examination into the differences among various telehealth modalities will be necessary, particularly among specific populations, including those patients who have acute psychiatric needs.

While existing research on telehealth has predominantly focused on non-acute psychiatric populations (Costa et al., 2021; Hungerbuehler et al., 2016; Mazziotti & Rutigliano, 2021; Skime et al., 2022), limited data exists on its use in acute care settings. The relatively limited studies conducted in intensive or partial hospital outpatient settings have shown promise (Bulkes et al., 2022; Zimmerman et al., 2021). Notably, high patient satisfaction with group-based telehealth care (Skime et al., 2022), increased attendance rates (Childs et al., 2021), and reduced psychiatric symptoms (Gannon et al., 2022) among acute and non-acute psychiatric patients indicates promising degrees of success. The suitability for expanding access to care for acute psychiatric populations via telehealth is apparent; however, its sustained success likely necessitates broader research (Appleton et al., 2021). Although research has examined providers' perspectives and the barriers they encounter

Table 1 Demographics

	Total sample ($n=578$)	Early pandemic ($n=351$)	Late pandemic ($n=227$)
Adult			
Outpatient	271 (46.9%)	193 (55%)	78 (34.4%)
Intensive outpatient	245 (42.4%)	126 (36%)	119 (52.5%)
Adolescent			
Outpatient	5 (0.9%)	5 (1.4%)	-
Intensive outpatient	57 (9.9%)	27 (7.7%)	30 (13.2%)

Table 2 Survey data overall patient experience

Survey questions	Total sample ($N=578$)		Early pandemic ($N=351$)		Late pandemic ($N=227$)	
	SA or A	SD or D	SA or A	SD or D	SA or A	SD or D
Telehealth appointments were convenient for me	519 (89.8%)	23 (4%)	312 (88.9%)	19 (5.4%)	207 (91.2%)	4 (1.7%)
I received the same quality of care during my telehealth appointments as I would during in-person office appointments	425 (73.5%)	84 (14.5%)	249 (70.9%)	58 (16.5%)	176 (77.5%)	26 (11.5%)
I felt a personal connection with the provider during my telehealth appointment	464 (80.3%)	66 (11.4%)	276 (78.6%)	49 (14%)	188 (82.8%)	17 (7.5%)
I am interested in using telehealth services for future appointments	457 (79.1%)	65 (11.2%)	275 (78.4%)	44 (12.5%)	182 (80.2%)	21 (9.2%)

SA or *A* strongly agree or agree, *SD* or *D* strongly disagree or disagree

(Lipschitz et al., 2022; Sugarman et al., 2021; Zhu et al., 2024), there is a notable gap in understanding patients' perceptions of care quality.

This study aims to address a gap in the literature by examining patients' experience of telehealth services among adult and youth populations within an acute psychiatric setting to understand the applicability of telehealth for higher-risk populations. Specifically, the research explored patients' perceptions of the quality of care provided via telehealth during the COVID-19 pandemic. It was hypothesized that patients' positive attitudes toward telehealth established during the initial stages of the pandemic would persist over time. Additionally, logistical (i.e., telehealth modality, frequency of technological difficulties, and device type/comfort with device) and experiential (i.e., the same quality of care as in person, personal connection with the provider, and effective communication) predictors for future interest in telehealth appointments were examined. It was expected that the frequency of technological difficulties and patients' perception of connectedness with providers would be the most significant logistical and clinical predictors, respectively, for future interest in telehealth appointments. Finally, patients' narratives were analyzed to understand their experiences with telehealth services. Based on anecdotal reports, it was hypothesized that most comments would transmit a positive sentiment regarding telehealth behavioral health appointments.

Methods

Participants

A diverse set of participants were recruited as part of their regularly scheduled ambulatory services (i.e., adult and adolescent outpatient and intensive outpatient) appointments from four urban hospitals within a primary health system in the northeastern United States. Participants ranged in age from 13 to 80 (89.3% were 18 and over; see Table 1), with approximately 63% identifying as female. The sample comprised approximately 70% White participants, 16.5% Black or African American, 4% Asian, and 9.5% other races. Eligibility criteria included enrollment in an outpatient or intensive outpatient program (IOP) and English-speaking. Patients who completed the survey were enrolled in multiple individual- and group-based program tracks (e.g., cognitive behavioral therapy, dialectical behavioral therapy, transitional-aged youth track, and medication management). Hence, patients' participation represented a full range of services in an acute care setting Table 2.

Procedures

The project was initially developed as a quality improvement project to better understand patient experience with

telehealth services in response to the COVID-19 pandemic. Survey responses were collected via Qualtrics from an ambulatory psychiatric setting at four time points over two years (July 2020–June 2022). An Institutional Review Board approved all procedures. Responses were collected from individual patients, and the survey took approximately 10 min for participants to complete. Due to the nature of the quality improvement project, no demographic information was collected. Responses to survey items were analyzed with SPSS, version 25.0, and open-ended questions were extracted from Qualtrics and downloaded into a Microsoft Excel spreadsheet.

Materials

A multidisciplinary group (e.g., psychology, psychiatry, social work, and nursing) of clinical researchers created the *Telehealth Patient Experience Survey* in the context of a quality improvement initiative for system-wide outpatient telehealth transformation mandates. The novel survey aimed to ascertain patient experience related to telehealth services in response to the COVID-19 pandemic (as most surveys in the extant literature *at the time* focused on patient satisfaction; Ackerman et al., 2021; Drerup et al., 2021; Mazziotti & Rutigliano, 2021). The creation of the survey was guided by a review of the literature, the use of focus groups with clinical staff, expert feedback via a content validity index study, and psychometric experts. Notably, the survey was created due to the need to rapidly transform clinical services from an in-person model to telehealth.

The measure entailed three areas of focus, including (1) telehealth platforms used (i.e., telephone and video conferencing only), (2) technological and logistical aspects of engaging in telehealth care, and (3) experiential components of telehealth services (e.g., perception about the quality of care, effective communication with providers, personal connection with providers, and interest in using telehealth services in the future). This survey defined providers as psychiatrists, advanced practice providers, psychologists, and social workers. The survey consisted of 15 items about telehealth services with six multiple choice questions, seven 5-point Likert scale questions, and two open-ended questions (i.e., "What do you like most about using telehealth?" and "What do you like least about using telehealth?").

Data Analytic Plan

Quantitative Analyses

Descriptive statistics were conducted to analyze patients' overall experience with telehealth services. A comparison between patients' experience during the early pandemic (July 2020–February 2021) and late pandemic (October 2021–June 2022) stages was also examined. Early and late pandemic stages were determined by CDC guidelines for the first series of vaccinations (Dooling et al., 2021). Given the robust sample size and greater statistical power, independent samples *t*-tests were conducted instead of a non-parametric test to explore patients' perception of quality of care over time (le Cessie et al., 2020). Finally, a multinomial logistic regression model was conducted to analyze the predictors of patients' future preference for telehealth, in-person, or hybrid care delivery.

Qualitative Analyses

Qualitative data were synthesized using deductive thematic analysis (Braun & Clarke, 2006) from patients' comments to the Telehealth Patient Experience survey's open-ended questions. Braun and Clarke's six-step analytic approach entailed familiarizing with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report in organizing the data according to the research questions. The research team developed a coding scheme after reaching a consensus on salient themes and subthemes. Codes and operational definitions emerged from patients' narrative comments regarding their telehealth experience.

Results

Sample Characteristics

In total, 578 patients completed the online survey. Telehealth services (i.e., telephone and video conferencing) included medication management, individual outpatient therapy, and intensive outpatient group therapy. Participants reported using a tablet, laptop, or desktop computer (55.7%), smartphone (33.7%), or landline/cell phone (10.6%) to connect to telehealth services, and a majority of participants (91.2%) reported comfort using their preferred device. Participants reported rarely or never (67.5%) experiencing technical difficulties, some difficulties (25.6%), or frequent difficulties (6.95%). Among the sample, 435 patients (75.3%) completed the open-ended question related to the least liked aspects of telehealth, and 404 patients (70%) completed the open-ended question related to the most liked aspects of telehealth.

Analyses

Patient Perception of Quality of Care Over Time

An independent samples *t*-test was conducted to examine whether there were differences between patients' perception of quality of care in the early stages of the COVID-19

pandemic vs. the late stages of the COVID-19 pandemic. Patients' mean perception scores significantly differed over time. Patients ($n = 307$) who completed the survey in the early stages of the COVID-19 pandemic ($M = 1.19$, $SD = 0.39$) compared to those patients ($n = 202$) who completed the survey in the late stages of the COVID-19 pandemic ($M = 1.13$, $SD = 0.34$) showed significantly greater scores, $t\ (473) = 1.85$, $p < 0.001$. These results suggest that patients who completed the survey in the early stages of the COVID-19 pandemic perceived that telehealth-based treatment provides the same quality of care as in-person treatment to a greater extent than those who filled out the survey in the late stages of the COVID-19 pandemic.

Treatment Delivery Approach Preference

Among the total sample, participants preferred a hybrid treatment approach (33.9%) compared to telehealth only (31.7%) and in-person only (27.2%) services. When examining overall preference by pandemic stage, those sampled in the early pandemic also preferred a hybrid treatment approach (35.6%); however, there was a slighter preference for in-person only (32.2%) compared to telehealth only (25.4%). For those sampled in the later stage of the pandemic, a greater preference was reported for telehealth only (41.4%) followed by hybrid (31.3%) and then in-person only (19.4%) services.

Multinomial logistic regression models were conducted to understand which factors predicted and how they predicted patients' overall preference of treatment delivery approach for future appointments. The examined predictors were (1) experiential factors (i.e., same quality of care, personal connection with provider, and effective communication with provider), (2) logistical factors (i.e., device used, comfort using device, and technical difficulties), and (3) telehealth platforms (i.e., telephone and video conferencing).

First, the sample was analyzed for experiential predictors. The same quality of care as in-person appointments ($\chi^2\ (2) = 25.22$, $p < 0.001$) and being able to establish a personal connection with providers ($\chi^2\ (2) = 6.81$, $p = 0.03$) were significant experiential predictors for the overall model. The specific ways in which predictors impacted the model were also examined. Specifically, patients who either strongly agreed or agreed that they had received the same quality of care via telehealth as in-person appointments, as well as those who experienced a personal connection with their providers, were more likely to report a greater preference for telehealth as opposed to in-person treatment for future appointments, (βs = 1.14 to 1.99, SEs = 0.45 to 0.50, ps < 0.001–0.02). Similarly, patients who either strongly agreed or agreed that they had received the same quality of care via telehealth as in-person appointments, as well as those who experienced a personal connection with their providers, were more likely to report a greater preference for a hybrid treatment delivery approach as opposed to in-person treatment for future appointments, (βs = 0.78 to 0.88, SEs = 0.32 to 0.40, ps = 0.01–0.05).

Furthermore, the sample was analyzed for logistical predictors. Patients' comfort using their preferred device ($\chi^2\ (2) = 13.34$, $p < 0.001$) was the only significant logistical predictor for the overall model. Here again, the specific ways in which logistical predictors impacted the model were examined, explicitly showing that patients who either strongly agreed or agreed that they felt comfortable using their preferred device in telehealth appointments were more likely to report greater preference for telehealth treatment delivery approach as opposed to in-person treatment for future appointments, ($\beta = 1.95$, $SE = 0.79$, $p = 0.01$). Similarly, patients who either strongly agreed or agreed that they felt comfortable using their preferred device in telehealth appointments were more likely to report greater preference for a hybrid treatment delivery approach as opposed to in-person treatment for future appointments, ($\beta = 2.07$, $SE = 0.78$, $p = 0.01$). Conversely, patients who accessed telehealth via landline/cell phones (no video) were more likely to report greater preference for an in-person treatment delivery approach as opposed to telehealth for future appointments, ($\beta = -0.82$, $SE = 0.38$, $p = 0.03$). Overall, technical difficulties did not predict patients' treatment approach preference across any conditions, (βs = −0.06 to 0.55, SEs = 0.43 to 0.51, ps = 0.25–0.99).

Finally, telehealth platform type was analyzed as a predictor for the overall model ($\chi^2\ (4) = 2.67$, $p = 0.62$) and across individual preference levels, (βs = −0.53 to 0.07, SEs = 0.23 to 0.37, ps = 0.15–0.77). Participating in telehealth via telephone, video, or mixed telehealth services did not predict patients' treatment delivery approach preference for future appointments.

Least and Most Liked Aspects of Telehealth

Among the participants, 75% ($N = 435$) responded to the question, "What did you like least about Telehealth services?" Thematic analysis revealed two themes and four sub-themes. For specificity, themes were extrapolated into sub-themes. Themes included (a) virtual format, with subthemes of 1) technological difficulties, 2) physical/mental discomfort, 3) inadequate privacy, and 4) lack of connectedness and (b) nothing, see Table 3.

Among the participants, 70% ($N = 404$) responded to the question, "What did you like most about telehealth services?" Thematic analysis revealed four themes and four sub-themes. For specificity, themes were extrapolated into sub-themes. The primary themes that emerged included (a) access, with subthemes of 1) convenience, 2) savings, 3) comfort, and 4) safety; (b) positive experience, (c) interpersonal, and (d) quality, see Table 3.

Table 3 Thematic analysis themes, definitions, and examples

Overarching theme: most liked about the use of telehealth			
Themes	Subthemes	Definition	Selected examples
Access	-	Ability to connect with a mental health provider via telehealth	● I can be anywhere and have the service available. There's flexibility in where I can do it ● I can do it even if my symptoms are severe ● Just being able to have an appointment and not missing it completely because of COVID limitations
	Convenience	Ability to participate with appropriate effort in a flexible manner (e.g., work, school, and family)	● Busy schedule gives flexibility. It provides significantly more options for time when it comes to scheduling ● As a disabled chronically ill individual it is much more convenient for me to utilize telehealth for therapy ● Because I have young kids so being able to attend from my home makes it easier, than having to get childcare, etc
	Savings	Reduction of spending time, travel, and financial resources	● No need to take off time from work ● Telehealth saves a tremendous amount of time traveling ● I use public transportation, so I don't spend time going around
	Comfort	Feeling of contentment and security in a comfortable setting	● The comfort of my own home/environment ● It's comfortable, which lends to opening up and being more revealing in the therapy ● The ease of attending even when feeling really bad. In-person appointments I can imagine missing, but telehealth was hard to miss
	Safety	Feeling of being protected, both physically and emotionally	● I was able to access important care safely during the COVID-19 pandemic ● I like the option of not having to go into an office since anxiety is a big thing for me
Positive experience	-	Expression of satisfaction with the virtual experience	● Time to reflect on what we think is important in the way we interact and treat each other, given our history of interacting with one another in a thoughtless and careless way ● Everything was a positive experience
Interpersonal	-	Ability to relate or communicate among providers and other patients while using telehealth	● It was easy to connect to others. It's often easier to be vulnerable over telehealth ● Verbal communication is hard for me, but I can use the chat and still offer feedback and encouragement ● Providers try their absolute best to try and get you to where you want or need to be with a short amount of time. They always take your own feelings into consideration and give great advice ● More intimate than in-person meetings where we have to wear masks
Quality	-	Quality and equivalence of care	● I got the same care as if I was at an in person appointment ● The schedule was organized and appointments were on time

Table 3 (continued)

Overarching theme: least liked about the use of telehealth			
Themes	Subthemes	Definition	Selected examples
Virtual format	*Virtual format*	Use of technology to facilitate remote treatment	● Typing in answers to questionnaires versus just giving answers in group, which is quicker ● Not having access to art supplies ● Lack of preparedness from providers lets telehealth fall short (e.g., handouts that would be given out in a group therapy are only briefly shown on screen instead of being sent out to patients ● Sometimes clinician seems distracted multitasking
	Technological difficulties	Malfunctioning technology	● Connection sometimes is interrupted ● Technological learning curve ● Often, there are glitches with whichever is the current telehealth platform, such as freezing, poor audio quality, etc
	Physical/mental discomfort	Feeling anxious, uneasy, or fatigued during telehealth appointment	● I sometimes had trouble staying focused ● Difficult to be engaged ● Too much time on the telehealth
	Inadequate privacy	Intrusion from others or discomfort in sharing confidential details	● Telling safety questions after check-in out loud ● I often had to find privacy to engage in telehealth services, which was not always easy
	Lack of connectedness	Difficulty interacting with other patients and providers	● Don't feel the same connection with the other group members or the therapists ● I am really missing the in-person it's more of a personal connection I think it hold you more accountable being together ● Opportunity for informal interaction in between groups, the opportunity to see complete body language which helps with connection and also practice my own
Nothing	-	General expressions of approval about telehealth	● I can't think of anything I dislike ● My experience with telehealth has been solely positive. Truly it has been a godsend! ● Nothing. I feel able to connect with my doctor which was my only initial concern since we didn't have established relationship prior

Discussion

Patients' Experience with Telehealth Services

The current study examined patient experiences with telehealth in an acute psychiatric population, focusing on convenience, quality of care, and patient preferences. Additionally, it sought to better understand the sustainability of a telehealth treatment delivery model for patients facing acute psychiatric symptoms. Results indicated that most patients described telehealth as a convenient treatment approach and that they perceived the same quality of care as in-person treatment. However, perceptions of quality of care were significantly higher in the early stages of the pandemic compared to later stages. Comfort with a preferred device predicted patients' preference for future telehealth appointments whereas technical difficulties did not significantly impact treatment modality preference. Qualitative findings further highlighted the benefits of telehealth, such as improved access, cost, and time savings, and a sense of comfort and safety, along with challenges, related to technology, privacy, and engagement.

Consistent with prior research, the results indicated that telehealth was viewed as convenient due to its greater flexibility in scheduling appointments, improved management of personal resources (e.g., time and money), and the ease and comfort of receiving care without leaving home (Al-Mahrouqi et al., 2022; Butzner & Cuffee, 2021). Results also align with past research demonstrating that telehealth offered equivalent or enhanced quality of care compared to

in-person treatment (Gajarawala & Pelkowski, 2021; Hubley et al., 2016). Although not previously evaluated, we hypothesized that changes in patients' perception of the quality of care over time might be attributed to their initial surprise by the benefits of telehealth and their view of it as a practical alternative to accessing vital care. Nonetheless, as the pandemic progressed, patients may have become more accustomed to telehealth services and developed a greater awareness of its strengths and weaknesses. Additional changes in patients' circumstances, such as their mental health status, various life stressors, or changes in support systems, may have impacted their evolving perceptions. Patients may have adapted to telehealth out of necessity earlier in the pandemic, but technological challenges and fatigue with telehealth may have lessened their satisfaction. Lastly, in the earlier stages of the pandemic, providers' attitudes and behaviors (i.e., highly responsive and readily available) may have contributed to the initial perception of higher quality of care; however, as the pandemic persisted and with healthcare systems facing increased strain, patients may have perceived a decline in the quality of care.

Preference for future telehealth appointments aligns with prior research that identifies comfort with technology and devices and perceived quality of care as key determinants of telehealth interest and use (Lipschitz et al., 2022; Olszewski et al., 2022; Zhu et al., 2024). Using large-screen devices (e.g., laptops and tablets) predicted telehealth preference, whereas the platform type (e.g., telephone versus video conferencing) was not a significant predictor. These findings suggest that behavioral health facilities will ideally need to ensure that patients have a satisfactory experience by facilitating the ease of technology use, fostering strong provider and patient connections, and seamlessly integrating telehealth into hybrid models of care. Additionally, technological difficulties did not emerge as a significant predictor of preference for appointment type (telehealth versus in-person), regardless of the pandemic stage. However, qualitative findings revealed concerns about technological difficulties, physical and mental discomfort, and privacy-related barriers, particularly the lack of a quiet space for meaningful participation in telehealth appointments. These concerns align with past literature on distractions at home and proximity to family members (Al-Mahrouqi et al., 2022; Gatdula et al., 2022).

Interestingly, findings related to physical and mental discomfort may be linked to patients' varied perceptions of quality of care throughout the COVID-19 stages. Many patients either attended school or worked from home remotely, especially at the beginning of the pandemic (Becker et al., 2020). As time progressed, fatigue with remote interactions likely led to discomfort. Fatigue was likely attributable to the accumulated number of hours individuals spent using screens broadly. However, there was likely less fatigue from remote interactions following the resumption of in-person activities (e.g., school and hybrid/in-person work modalities). Thus, a reduced burden of remote services is expected in current models of telehealth implementation.

Regarding most liked aspects of telehealth treatment, patients consistently identified benefits to telehealth, including enhanced access to care, convenience, cost and time savings, comfort, and physical and emotional safety. Qualitative analyses regarding the quality of care and interpersonal connectedness validated quantitative findings. The same quality of care as in-person treatment predicted patients' interest in future telehealth appointments. Further, the interpersonal theme that emerged from the qualitative analysis paralleled patients' ability to develop a "personal connection with providers," which also was a significant experiential factor that predicted their interest in future telehealth appointments.

In summary, results from this study corroborate that telehealth is a promising modality across various levels of care for youth and adults. While prior research on telehealth as an emerging standard of care (Appleton et al., 2021; Polinski et al., 2016; Zhu et al., 2024) has focused mainly on traditional outpatient settings, this study expands on that foundation by examining its use among high risk, acute psychiatric population using a mixed methods approach. The positive sentiment toward telehealth as an alternative to in-person care (Gatdula et al., 2022; Olszewski et al., 2022) supports its continued use and integration into local and national policies. These findings provide practical insights for improving and optimizing care delivery in acute settings by analyzing both logistical and experiential factors that influence patient satisfaction and preferences.

Although this study was conducted during the pandemic, its findings align with recent telehealth research beyond COVID-19, highlighting convenience, accessibility, and time savings as key drivers of telehealth preference (Moulaei et al., 2023; Wu & Brannon, 2024). These findings underscore a broader shift in behavioral health care delivery, where telehealth has transformed from a temporary response to an integral component of treatment. The consistent quality reported in telehealth services and the growing preference for hybrid models of care suggest that telehealth is a viable, long-term solution that should be further integrated into routine clinical practice. However, for telehealth to be fully realized, long-term policies should focus on standardizing telehealth implementation and integrating telehealth-specific training for providers. Guidelines must also support flexible care models that allow for provider licensure portability and patients to seamlessly transition between in-person and virtual care, particularly for high-risk psychiatric populations (Chaudhry, 2022; Rossi, 2024). Additionally, expanding reimbursement structures will be important for ensuring uniformity between models of care (Molfenter et al., 2021). These improvements may help to address provider shortages and improve equitable access to psychiatric care.

Long-term adoption of telehealth offers clear benefits, including expanded access, greater flexibility, and enhanced patient satisfaction (Wu & Brannon, 2024). However, privacy-related challenges, technological difficulties, and physical discomfort implicate a need for critical enhancements, such as an augmented infrastructure and standardized training initiatives for both providers and patients. Tailored approaches, particularly for acute psychiatric populations, should ideally entail telehealth-centric monitoring tools, hybrid treatment offerings, and privacy-enhancing measures, which may improve clinical engagement and patient reported outcomes. Research suggests that patients who experience continuity of care are more inclined to use telehealth services in the future (Zhu et al., 2024). Additionally, strengthening communication strategies, investing in high-quality secure video platforms, and establishing uniform telehealth access guidelines will be crucial factors for maximizing adoption (by patients and organizations) and improving the overall patient experience (Wu & Brannon, 2024).

Limitations

A primary limitation of this study was the use of a non-validated survey. However, the novel survey was developed as part of a quality improvement initiative to better inform clinical services during the pandemic as an ideal way to assess the viability of telehealth among an acute patient population. Another limitation was the lack of comprehensive demographic data collected. This was a deliberate decision due to a need to balance rigor and feasibility in the quality improvement initiative (c.f., Needham et al., 2009), which constrained the extent to which the data could be analyzed to further inform implementation efforts. Additionally, self-selection bias may have also impacted the generalizability of the results. The strength of this limitation, however, is that responses were not directly linked to patients to mitigate social desirability bias. The study's cross-sectional design precluded the ability to establish causal relationships. Future research should examine the effects of telehealth longitudinally to understand its impact over time. Finally, to strengthen the generalizability of our findings, future studies should aim to replicate this work outside of pandemic conditions and include suitable comparison groups (e.g., non-acute patients or in-person groups) to further elucidate any notable differences across patient populations and care modalities.

Conclusions and Future Directions

The future of behavioral health services will likely entail telehealth as a standard model of care, and it will be necessary for policies to be codified into existing laws rather than biannual extensions from the initial waivers. Future research should ideally explore the effectiveness of telehealth in the aftermath of the pandemic, including among patients from diverse cultural backgrounds and various sociodemographic characteristics. This will enhance our understanding of telehealth's role from a culturally competent perspective and ensure equitable access to care (c.f., Nadkarni, et al., 2020) in acute psychiatric populations. Telehealth use in behavioral health has been consistently higher compared with other medical fields (Ferguson, 2024; Mulvaney-Day et al., 2022; Shaver, 2022). Nonetheless, additional research is warranted, as studies have shown mixed findings suggesting that attitudes about telehealth use may have changed over time (Huang, 2022), with use rates declining post-pandemic (Shilane & Lu, 2023). Thus, further research and advocacy are warranted to educate stakeholders about the benefits of telehealth for acute psychiatric patient populations.

Integrating various forms of technology, such as digital mental health resources, smartphone tracking applications, augmented or virtual reality, and the use of artificial intelligence, may enhance care quality and outcomes. Indeed, further research is needed to enhance telehealth initiatives, including streamlining virtual platforms that integrate multiple features (e.g., secure messaging, videoconferencing, and medical health records), creating (rather than adapting) curriculums specifically for telehealth, and assessing the feasibility of hybrid-based approaches with respect to clinical outcomes. Further, improving telehealth infrastructure toward developing effective telehealth delivery methods will be essential, especially for patients with acute psychiatric conditions. Telehealth should ideally prioritize and embrace a patient-centered care approach by involving patient advocacy groups in shared decision-making, addressing patient preferences and needs, and ensuring that telehealth is tailored to behavioral health patients' unique circumstances and preferences. To broadly enhance the adoption of telehealth, healthcare systems may benefit from investing in telehealth-specific training for mental health providers, ensuring that clinicians can adequately develop therapeutic rapport, assess risk, and effectively intervene with crises. Additionally, organizations should evaluate their digital infrastructure needs, such as user-friendly telehealth platforms and measures to optimize patient experience and safety.

Author Contribution All authors contributed to the study's conception and design. All authors performed material preparation, data collection, and analysis collaboratively. The first author wrote the initial draft of the manuscript, and all authors commented on earlier versions of the manuscript. All authors read and approved the final manuscript.

Data Availability The data supporting this study are available upon reasonable request from the corresponding author, as access is subject to privacy considerations.

Declarations

Conflict of Interest The authors declares no competing interests.

Ethics Approval This study was performed in line with the principles of the Declaration of Helsinki. The Human Subjects Committee of Yale University approved it in October 2022.

Consent to Participate Informed consent was obtained from all individual participants included in the study.

References

Ackerman, M., Greenwald, E., Noulas, P., & Ahn, C. (2021). Patient satisfaction with and use of telemental health services in the perinatal period: A survey study. *Psychiatric Quarterly, 92*(3), 925–933.

Ahmedani, B. K., Yeh, H. H., Penfold, R. B., Simon, G. E., Miller-Matero, L. R., Akinyemi, E., ... & Rossom, R. C. (2024). Psychotherapy disruption before and after the transition to virtual mental health care induced by the COVID-19 pandemic. Psychiatric Services, 75(2), 108–114.

Aijaz, M., Lewis, V. A., & Murray, G. F. (2024). Advancing equity in challenging times: A qualitative study of telehealth expansion and changing patient-provider relationships in primary care settings during the COVID-19 pandemic. *Digital Health, 10*, 20552076241233148. https://doi.org/10.1177/20552076241233148

Al-Mahrouqi, T., Al-Alawi, K., Al-Alawi, M., Al Balushi, N., Al Ghailani, A., Al Sabti, H., & Al Sinawi, H. (2022). A promising future for tele-mental health in Oman: A qualitative exploration of clients and therapists' experiences. *SAGE Open Medicine, 10*, 1–13. https://doi.org/10.1177/20503121221086372

Augenstein, J., Marks, J. D., & Andrade, M. (2022, July 29). *Executive summary: Tracking telehealth changes state-by-state in response to COVID-19*. Manatt Health. Retrieved August 11, 2022, from https://www.manatt.com/insights/newsletters/covid-19-update/executive-summary-tracking-telehealth-changes-stat

Appleton, R., Williams, J., San Juan, N. V., Needle, J. J., Schlief, M., Jordan, H., ... & Johnson, S. (2021). Implementation, adoption, and perceptions of telemental health during the COVID-19 pandemic: Systematic review. *Journal of Medical Internet Research, 23*(12), e31746. https://doi.org/10.2196/31746

Barnett, P., Goulding, L., Casetta, C., Jordan, H., Sheridan-Rains, L., Steare, T., ... & Johnson, S. (2021). Implementation of telemental health services before COVID-19: Rapid umbrella review of systematic reviews. *Journal of Medical Internet Research, 23*(7), e26492. https://doi.org/10.2196/26492

Becker, S. P., Breaux, R., Cusick, C. N., Dvorsky, M. R., Marsh, N. P., Sciberras, E., & Langberg, J. M. (2020). Remote learning during COVID-19: Examining school practices, service continuation, and difficulties for adolescents with and without attention-deficit/hyperactivity disorder. *Journal of Adolescent Health, 67*(6), 769–777. https://doi.org/10.1016/j.jadohealth.2020.09.002

Bilimoria, K. Y., Zhan, T., Durst, D. A., Merkow, R. P., Sama, P. R., Bahaveolos, S. A., & Chrisman, H. B. (2021). Comparison of patient experience with telehealth vs. in-person visits before and during the COVID-19 pandemic. Joint Commission Journal on Quality and Patient Safety, 47(8), 533.

Butzner, M., & Cuffee, Y. (2021). Telehealth interventions and outcomes across rural communities in the United States: Narrative review. *Journal of Medical Internet Research, 23*(8), e29575. https://doi.org/10.2196/29575

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Bulkes, N. Z., Davis, K., Kay, B., & Riemann, B. C. (2022). Comparing efficacy of telehealth to in-person mental health care in intensive-treatment-seeking adults. *Journal of Psychiatric Research, 145*, 347–352. https://doi.org/10.1016/j.jpsychires.2021.11.003

Casares, M., Wombles, C., Skinner, H. J., Westerveld, M., & Gireesh, E. D. (2020). Telehealth perceptions in patients with epilepsy and providers during the COVID-19 pandemic. *Epilepsy & Behavior, 112*, 107394. https://doi.org/10.1016/j.yebeh.2020.107394

Chaudhry, H. J. (2022). Expanding licensure portability and access to care: Lessons learned during COVID-19: Perspective examines the relaxation of regulations during COVID-19 which allowed physicians and other health professionals to practice across state lines. *Health Affairs, 41*(8), 1136–1138.

Childs, A. W., Bacon, S. M., Klingensmith, K., Li, L., Unger, A., Wing, A. M., & Fortunati, F. (2021). Showing up is half the battle: The impact of telehealth on psychiatric appointment attendance for hospital-based intensive outpatient services during COVID-19. *Telemedicine and e-Health, 27*(8), 835–842.

Costa, M., Reis, G., Pavlo, A., Bellamy, C., Ponte, K., & Davidson, L. (2021). Tele-mental health utilization among people with mental illness to access care during the COVID-19 pandemic. *Community Mental Health Journal*, *57*(4), 720–726. https://doi.org/10.1007/s10597-021-00789-7

Drerup, B., Espenschied, J., Wiedemer, J., & Hamilton, L. (2021). Reduced no-show rates and sustained patient satisfaction of telehealth during the COVID-19 pandemic. *Telemedicine and e-Health, 27*(12), 1409–1415.

Dooling, K., Marin, M., Wallace, M., McClung, N., Chamberland, M., Lee, G. M., ... & Oliver, S. E. (2021). The Advisory Committee on Immunization Practices' updated interim recommendation for allocation of COVID-19 vaccine—United States, December 2020. *Morbidity and Mortality Weekly Report, 69*(51–52), 1657. https://doi.org/10.15585/2Fmmwr.mm695152e2

Donelan, K., Barreto, E. A., Sossong, S., Michael, C., Estrada, J. J., Cohen, A. B., ... & Schwamm, L. H. (2019). Patient and clinician experiences with telehealth for patient follow-up care. *The American Journal of Managed Care, 25*(1), 40–44.

Dueweke, A. R., Wallace, M. M., Nicasio, A. V., Villalobos, B. T., Hernandez Rodriguez, J., & Stewart, R. W. (2020). Resources and recommendations for engaging children and adolescents in telemental health interventions during COVID-19 and beyond. *The Behavior Therapist, 43*(5), 171–176.

Ferguson, J. M., Wray, C. M., Van Campen, J., & Zulman, D. M. (2024). A new equilibrium for telemedicine: Prevalence of in-person, video-based, and telephone-based care in the veterans health administration, 2019–2023. *Annals of Internal Medicine, 177*(2), 262–264.

Gannon, J. M., Brar, J. S., Zawacki, S., Painter, T., O'Toole, K., & Chengappa, K. R. (2022). From office-based treatment to telehealth: Comparing clinical outcomes and patient participation in a psychiatric intensive outpatient program with a large transdiagnostic sample. *Telemedicine and e-Health, 28*(8), 1126–1133.

Gatdula, N., Costa, C. B., Rascón, M. S., Deckers, C. M., & Bird, M. (2022). College students' perceptions of telemental health to address their mental health needs. *Journal of American College Health*, 1–7. https://doi.org/10.1080/07448481.2022.2047697

Gajarawala, S. N., & Pelkowski, J. N. (2021). Telehealth benefits and barriers. *The Journal for Nurse Practitioners, 17*(2), 218–221. https://doi.org/10.1016/j.nurpra.2020.09.013

Haimi, M. (2023). The tragic paradoxical effect of telemedicine on healthcare disparities- A time for redemption: A narrative review. *BMC Medical Informatics and Decision Making, 23*(1), 95. https://doi.org/10.1186/s12911-023-02194-4

Hays, R. D., & Skootsky, S. A. (2022). Patient experience with in-person and telehealth visits before and during the COVID-19 pandemic at a large integrated health system in the United States. *Journal of General Internal Medicine, 37*(4), 847–852.

Houser, S. H., Flite, C. A., & Foster, S. L. (2023). Privacy and security risk factors related to telehealth services - A systematic review. *Perspectives in Health Information Management, 20*(1), 1f.

Huang, J., Yeung, A. M., Eiland, L. A., Huang, E. S., Raymond, J. K., & Klonoff, D. C. (2024). Telehealth fatigue: Is it real? What should be done? *Journal of Diabetes Science and Technology, 18*(1), 196–200. https://doi.org/10.1177/19322968221127253

Hubley, S., Lynch, S. B., Schneck, C., Thomas, M., & Shore, J. (2016). Review of key telepsychiatry outcomes. *World Journal of Psychiatry, 6*(2), 269. https://doi.org/10.5498/wjp.v6.i2.269

Hungerbuehler, I., Valiengo, L., Loch, A. A., Rössler, W., & Gattaz, W. F. (2016). Home-based psychiatric outpatient care through videoconferencing for depression: A randomized controlled follow-up trial. *JMIR Mental Health, 3*(3), e5675. https://doi.org/10.2196/mental.5675

Jnr, B. A. (2020). Use of telemedicine and virtual care for remote treatment in response to COVID-19 pandemic. *Journal of Medical Systems, 44*(7), 1–9. https://doi.org/10.1007/s10916-020-01596-5

Lau, N., Colt, S. F., Waldbaum, S., O'Daffer, A., Fladeboe, K., Joyce, P., ... & Rosenberg, A. R. (2021). Telemental health for youth with chronic illnesses: Systematic review. *JMIR Mental Health*, *8*(8), e30098. https://doi.org/10.2196/30098

le Cessie, S., Goeman, J. J., & Dekkers, O. M. (2020). Who is afraid of non-normal data? Choosing between parametric and non-parametric tests. *European Journal of Endocrinology, 182*(2), E1–E3. https://doi.org/10.1530/EJE-19-0922

Lipschitz, J. M., Connolly, S. L., Van Boxtel, R., Potter, J. R., Nixon, N., & Bidargaddi, N. (2022). Provider perspectives on telemental health implementation: Lessons learned during the COVID-19 pandemic and paths forward. *Psychological Services*. https://doi.org/10.1037/ser0000625

Luxton, D. D., Pruitt, L. D., & Osenbach, J. E. (2014). Best practices for remote psychological assessment via telehealth technologies. *Professional Psychology: Research and Practice, 45*(1), 27–35. https://doi.org/10.1037/a0034547

Madigan, S., Racine, N., Cooke, J. E., & Korczak, D. J. (2021). COVID-19 and telemental health: Benefits, challenges, and future directions. *Canadian Psychology/Psychologie canadienne, 62*(1), 5–11. https://psycnet.apa.org/doi/https://doi.org/10.1037/cap0000259

Mazziotti, R., & Rutigliano, G. (2021). Tele–mental health for reaching out to patients in a time of pandemic: Provider survey and meta-analysis of patient satisfaction. *JMIR Mental Health, 8*(7), e26187. https://doi.org/10.2196/26187

Mishkind, M. C., Shore, J. H., Bishop, K., D'Amato, K., Brame, A., Thomas, M., & Schneck, C. D. (2021). Rapid conversion to telemental health services in response to COVID-19: Experiences of two outpatient mental health clinics. *Telemedicine and e-Health, 27*(7), 778–784. https://doi.org/10.1089/tmj.2020.0304

Molfenter, T., Heitkamp, T., Murphy, A. A., Tapscott, S., Behlman, S., & Cody, O. J. (2021). Use of telehealth in mental health (MH) services during and after COVID-19. *Community Mental Health Journal, 57*(7), 1244–1251. https://doi.org/10.1007/s10597-021-00861-2

Moulaei, K., Sheikhtaheri, A., Fatehi, F., Shanbehzadeh, M., & Bahaadinbeigy, K. (2023). Patients' perspectives and preferences toward telemedicine versus in-person visits: A mixed-methods study on 1226 patients. *BMC Medical Informatics and Decision Making, 23*(1), 261. https://doi.org/10.1186/s12911-023-02348-4

Mulvaney-Day, N., Dean, D., Jr., Miller, K., & Camacho-Cook, J. (2022). Trends in use of telehealth for behavioral health care during the COVID-19 pandemic: Considerations for payers and employers. *American Journal of Health Promotion: AJHP, 36*(7), 1237–1241. https://doi.org/10.1177/08901171221112488e

Nadkarni, A., Hasler, V., AhnAllen, C. G., Amonoo, H. L., Green, D. W., Levy-Carrick, N. C., & Mittal, L. (2020). Telehealth during COVID-19—Does everyone have equal access? *American Journal of Psychiatry, 177*(11), 1093–1094.

Needham, D. M., Sinopoli, D. J., Dinglas, V. D., Berenholtz, S. M., Korupolu, R., Watson, S. R., Lubomski, L., Goeschel, C., & Pronovost, P. J. (2009). Improving data quality control in quality improvement projects. *International Journal for Quality in Health Care: Journal of the International Society for Quality in Health Care, 21*(2), 145–150. https://doi.org/10.1093/intqhc/mzp005

Nicholas, J., Bell, I. H., Thompson, A., Valentine, L., Simsir, P., Sheppard, H., & Adams, S. (2021). Implementation lessons from the transition to telehealth during COVID-19: A survey of clinicians and young people from youth mental health services. *Psychiatry Research, 299*, 113848. https://doi.org/10.1016/j.psychres.2021.113848

Olszewski, C., Thomson, S., Pring, K., Cox, S., Merrill, R., Fishman, E., ... & Strowd, R. E. (2022). A comparison of telemedicine and in-person neurology visits: What are the factors that patients consider when selecting future visit type? *Journal of Neurology*, 1–16. https://doi.org/10.1007/s00415-022-11149-0

Orsolini, L., Pompili, S., Salvi, V., & Volpe, U. (2021). A systematic review on TeleMental health in youth mental health: Focus on anxiety, depression and obsessive-compulsive disorder. *Medicina, 57*(8), 793. https://doi.org/10.3390/medicina57080793

Pogorzelska, K., & Chlabicz, S. (2022). Patient satisfaction with telemedicine during the COVID-19 pandemic—A systematic review. *International Journal of Environmental Research and Public Health, 19*(10), 6113.

Polinski, J. M., Barker, T., Gagliano, N., Sussman, A., Brennan, T. A., & Shrank, W. H. (2016). Patients' satisfaction with and preference for telehealth visits. *Journal of General Internal Medicine, 31*(3), 269–275. https://doi.org/10.1007/s11606-015-3489-x

Reilly, S. E., Zane, K. L., McCuddy, W. T., Soulliard, Z. A., Scarisbrick, D. M., Miller, L. E., & Mahoney Iii, J. J. (2020). Mental health practitioners' immediate practical response during the COVID-19 pandemic: Observational questionnaire study. *JMIR Mental Health, 7*(10), e21237. https://doi.org/10.2196/21237

Rossi, M. (2024). Breaking barriers: Cross-state licensing reform for licensed professional counselors. *Minnesota Journal of Law, Science & Technology, 25*(2), 195.

Sharma, A., Sasser, T., Schoenfelder Gonzalez, E., Vander Stoep, A., & Myers, K. (2020). Implementation of home-based telemental health in a large child psychiatry department during the COVID-19 crisis. *Journal of Child and Adolescent Psychopharmacology, 30*(7), 404–413. https://doi.org/10.1089/cap.2020.0062

Shaver, J. (2022). The state of telehealth before and after the COVID-19 pandemic. *Primary Care: Clinics in Office Practice, 49*(4), 517–530.

Shilane, D., & Lu, T. H. (2023). Declining trends in telehealth utilization in the ongoing COVID-19 pandemic. Journal of telemedicine and telecare, 1357633X231202284. Advance online publication. https://doi.org/10.1177/1357633X231202284

Siegel, A., Zuo, Y., Moghaddamcharkari, N., McIntyre, R. S., & Rosenblat, J. D. (2021). Barriers, benefits and interventions for improving the delivery of telemental health services during the coronavirus disease 2019 pandemic: A systematic review. *Current Opinion in Psychiatry, 34*(4), 434–443. https://doi.org/10.1097/YCO.0000000000000714

Skime, M. K., Puspitasari, A. J., Gentry, M. T., Heredia Jr, D., Sawchuk, C. N., Moore, W. R., ... & Schak, K. M. (2022). Patient satisfaction and recommendations for delivering a group-based intensive outpatient program via telemental health during the COVID-19 pandemic: Cross-sectional cohort study. *JMIR Mental Health, 9*(1), e30204. https://doi.org/10.2196/30204.

Substance Abuse and Mental Health Services Administration (SAMHSA). Telehealth for the treatment of serious mental illness and substance use disorders. SAMHSA Publication No. PEP21–06–02–001 Rockville, MD: National Mental Health and Substance Use Policy Laboratory. Substance Abuse and Mental Health Services Administration, 2021.

Sugarman, D. E., Horvitz, L. E., Greenfield, S. F., & Busch, A. B. (2021). Clinicians' perceptions of rapid scale-up of telehealth services in outpatient mental health treatment. *Telemedicine and e-Health, 27*(12), 1399–1408. https://doi.org/10.1089/tmj.2020.0481

Thomson, M. D., Mariani, A. C., Williams, A. R., Sutton, A. L., & Sheppard, V. B. (2021). Factors associated with the use of and satisfaction with telehealth by adults in rural Virginia during the COVID-19 pandemic. *JAMA Network Open, 4*(8), e2119530–e2119530. https://doi.org/10.1001/jamanetworkopen.2021.19530

Whaibeh, E., Mahmoud, H., & Naal, H. (2020). Telemental health in the context of a pandemic: The COVID-19 experience. *Current Treatment Options in Psychiatry, 7*(2), 198–202. https://doi.org/10.1007/s40501-020-00210-2

Wu, Q. L., & Brannon, G. E. (2024). What's after COVID-19?: Communication pathways influencing future use of telehealth. *Patient Education and Counseling, 118*, 108025.

Zhu, D., Paige, S. R., Slone, H., Gutierrez, A., Lutzky, C., Hedriana, H., ... & Bunnell, B. E. (2024). Exploring telemental health practice before, during, and after the COVID-19 pandemic. *Journal of Telemedicine and Telecare*. https://doi.org/10.1177/1357633X211025943

Zimmerman, M., Terrill, D., D'Avanzato, C., & Tirpak, J. W. (2021). Telehealth treatment of patients in an intensive acute care psychiatric setting during the COVID-19 pandemic: Comparative safety and effectiveness to in-person treatment. *The Journal of Clinical Psychiatry, 82*(2), 28542. https://doi.org/10.4088/JCP.20m13815

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