# The State and Sustainability of Telepsychiatry Programs

**Carolyn Lauckner, PhD**
**Pamela Whitten, PhD**

## Abstract

*Telepsychiatry, or the provision of psychiatric care across a distance using communication technologies, has become widespread and has been used successfully for treating a variety of mental illnesses. Little is known, however, about the sustainability of telepsychiatry programs and their long-term success. The goal of this study was to determine current trends in telepsychiatry by completing an extensive literature review and to follow-up with the authors of telepsychiatry research to examine the current status of their programs and success factors or barriers associated with their experiences. Results indicated that modern telepsychiatry programs often target veteran/ military or child populations and that many rely on either federal or internal funding. Interestingly, several researchers indicated that they wished to improve current funding mechanisms, while others wished for improvements in the technology used. Implications of these findings for behavioral health researchers are discussed, along with suggestions for improving future telepsychiatry programs.*

## Introduction

The lack of access to psychiatry for many individuals within the USA and across the world is a well-documented problem. Two thirds of primary care physicians in the USA have reported that they could not access outpatient mental health services for their patients,[1] and close to 50% of rural hospitals report a shortage of qualified mental health professionals.[2] One potential tool for addressing this limited access to mental health care is telepsychiatry, which concerns the provision of psychiatric care through electronic communication between psychiatrists and patients. Telepsychiatry, a subfield of telemedicine, most often uses Internet broadband connections and videoconferencing tools.[3] It is commonly used for situations in which a primary care or emergency physician wants to refer a patient for mental health care, but there are no psychiatrists locally available. In this telepsychiatry setup, rural patients go to a local clinic or hospital, where they are directed to a private room to begin a videoconferencing session. The psychiatrist is typically

Address correspondence to Carolyn Lauckner, PhD, University of Georgia, Athens, GA 30602, USA. Email: clauck@uga.edu.

Pamela Whitten, PhD, University of Georgia, Athens, GA, USA.

located in an urban area and connects to the patient over a wired, high-speed, and secure Internet connection.

Previous research has found that telepsychiatry not only provides access to psychiatric care for patients who could not access it otherwise but also leads to positive clinical outcomes. It has been effective for treating many mental health conditions, including panic disorders,[4] depression,[5] and post-traumatic stress disorder.[6] Patients who have used telepsychiatry have shown satisfaction with the technology, feeling as though they can communicate the same information over video as they would communicate in person.[7] A study with mental health providers in rural areas found that telepsychiatry increased their knowledge, enhanced their confidence in assisting their patients, and reduced their sense of isolation.[8] Use of this care delivery model has also been associated with cost savings, as it often leads to reduced travel for both patients and mental health professionals.[9] In fact, many patients have reported that they prefer to use telepsychiatry over traveling to see a psychiatrist in person.[10] Hence, the benefits of this technology, especially for those in rural areas, is clear. This discussion of the benefits of telepsychiatry is not meant to suggest, however, that use of the technology is infallible—many researchers have identified barriers that inhibit the success or sustainability of telepsychiatry and telemedicine programs.

For example, a great deal of research has uncovered provider- or system-based barriers to telemedicine and telepsychiatry. As the "gatekeepers" of telemedicine, these sources have a great deal of control over if and how telemedicine systems get implemented, and their participation is essential for success. A case study by Whitten and Adams[11] examining a rural telemedicine project found that a lack of support staffing, a lack of communication between medical employees, and a lack of qualified health professionals were the primary contributors to the study's failure. They also found that issues of reimbursement had a strong negative impact on sustainability, as a fixed process for reimbursing for telemedicine services was not properly established. For many years, telemedicine and telepsychiatry were not billable services but were instead covered by grants or paid out-of-pocket. Health policymakers have recently addressed this issue, as 46 states now have some type of Medicare or Medicaid reimbursement for mental health care provided via videoconferencing. This has improved the accessibility of telepsychiatry, but many restrictions on its use still exist.

Research has also explored the impact of the size or degree of implementation of a telepsychiatry project on its cost/benefit ratio. Hyler and Gangure[12] suggest that telepsychiatry is less costly and can save money at higher volumes (i.e., numbers of consultations), but such large-scale programs require considerable funding and manpower. Considering that the majority of telepsychiatry programs are grant-funded and rely on continual applications and support for sustainability, widespread implementations can be difficult.[12] For these reasons, small-scale programs may be ideal from a logistical standpoint. However, one study found that patients and mental health providers expressed frustration with the limited resources available in their telepsychiatry program and believed that the services available were not enough to address the needs of the community.[8] Thus, there are challenges associated with both small and large telepsychiatry implementations, and more research is needed to determine the contextual factors that impact their success.

The aim of this study is to examine sustainability of existing telepsychiatry programs through a multi-method approach. First, through a systematic literature review, the characteristics of telepsychiatry programs will be examined based on the following research questions:

RQ1: What is the origin of patients enrolled in telepsychiatry programs?
RQ2: What method is used to enroll patients in telepsychiatry?
RQ3: What types of patients participate in telepsychiatry?
RQ4: How are telepsychiatry programs funded?

Next, to determine the sustainability of the reviewed programs and reported barriers to success, a follow-up survey with the studies' authors will explore the following research questions:

RQ5: Are telepsychiatry programs or projects described in published research still in operation?
RQ6: What are the reasons for continued success or discontinuation of services in telepsychiatry?
RQ7: What do health professionals or researchers desire to change about the practice of telepsychiatry?

Thus, overall, this study provides insight as to the current practice of telepsychiatry as reflected in research and the contributors or barriers to its continued use. The specific methods used to study these issues are described in the following section.
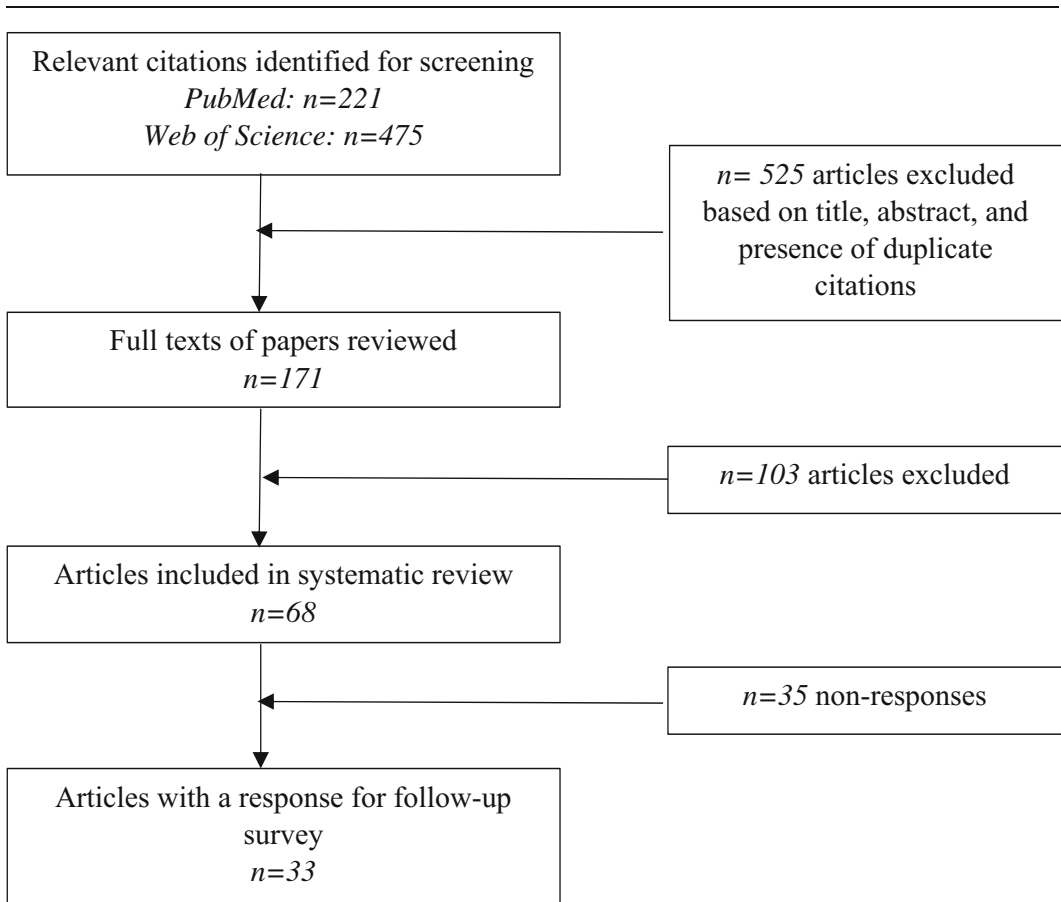
## Methods

### Literature review

The first part of this study consisted of a systematic literature review with the goal of examining videoconferencing-based telepsychiatry programs or projects described in published literature in recent years (see Figure 1 for literature review process).

The keywords "telepsychiatry" and "telemental health" were used to search PubMed/MEDLINE and Web of Science databases, with the search restricted to articles published from 2008 to 2014. Articles were excluded if they did not report on a specific telepsychiatry project (as opposed to

## Figure 1
Systematic review and survey flow chart



Relevant citations identified for screening
*PubMed: n=221*
*Web of Science: n=475*

*n= 525 articles excluded based on title, abstract, and presence of duplicate citations*

Full texts of papers reviewed
*n=171*

*n=103 articles excluded*

Articles included in systematic review
*n=68*

*n=35 non-responses*

Articles with a response for follow-up survey
*n=33*

discussing telepsychiatry in general) or described any of the following: case studies with a single patient, study protocols or plans with no data collected, surveys regarding telepsychiatry without reference to a particular project or program, or one-time usability or reliability studies. Additionally, any telepsychiatry projects that did not use videoconferencing as a primary modality or did not work directly with patients were also excluded. The goal of these exclusion criteria was to narrow the focus of the review to capture the activities of synchronous, telepsychiatry interventions, or programs with a goal of providing psychiatric care to patients at a distance. After initial screening of citations for duplicates and discordance with specified exclusion criteria, 171 full-text articles were examined. Following further filtering based on exclusion criteria, the final sample consisted of 68 articles,[6,13–79] which were then categorized according to the study characteristics described in Table 1. The categories were developed iteratively through an examination of the articles and agreed upon between the authors.

## Table 1
Characteristics of studies examined and associated frequencies

| Study characteristic | Sub-category | Percentage/frequency |
| --- | --- | --- |
| Patient context | VA/military | 25.0% ($n$=17) |
| | Mental health facility | 23.5% ($n$=16) |
| | Community health center | 14.7% ($n$=10) |
| | Primary care | 10.3% ($n$=7) |
| | ER/hospital | 9.0% ($n$=6) |
| | Specialized medical center | 5.9% ($n$=4) |
| | (e.g., oncology center and addiction center) | |
| | School/university | 5.9% ($n$=4) |
| | Correctional facility | 4.4%($n$=3) |
| Patients | Students/children | 29.4% ($n$=20) |
| | General population | 27.9% ($n$=19) |
| | Veterans/soldiers | 25.0% ($n$=17) |
| | Patients w/a specific mental health condition | 11.8% ($n$=8) |
| | Seniors | 4.4% ($n$=3) |
| | Prisoners | 4.4% ($n$=3) |
| | Patients w/a specific physical health condition | 2.9% ($n$=2) |
| Enrollment method | Referral | 45.6% ($n$=31) |
| | Facility protocol | 22.1% ($n$=15) |
| | Recruitment | 19.1% ($n$=13) |
| | Patient request/walk-in | 7.4% ($n$=5) |
| Funding source | Internal funding | 33.8% ($n$=23) |
| | Federal funding | 32.4% ($n$=22) |
| | Private grant | 23.5% ($n$=16) |
| | State/local funding | 10.3% ($n$=7) |
| | Medicare/Medicaid | 2.9% ($n$=2) |

**Follow-up survey**

As part of the literature search, the names and e-mail addresses of corresponding authors for each of the 68 articles were collected. Following human subjects' approval, these authors were e-mailed and asked to take part in a short 3-question e-mail survey, which asked the following questions: "Is your telepsychiatry program still providing services? If yes, what do you think has been the primary reason for your continued success? If no, what was the primary reason for discontinuing the service?" and "If you could change one aspect of your telepsychiatry program that you think would make/have made it more successful, what would it be?" Respondents were asked to simply reply to the e-mail with their responses. In some cases, different authors from the publication were contacted if the e-mail address was invalid or the researcher was referred to someone else. Authors from 49% of the surveyed publications responded to the survey ($n$=33), with some authors representing multiple publications. Although the small sample size did not permit advanced analysis comparing study characteristics of those who responded and those who did not respond, some patterns did emerge. Among those who did not respond to the survey, studies in correctional facility or VA/military settings were more common, as were studies that worked with veteran or soldier populations. Additionally, non-responders more often relied on internal funding and recruiting (vs. referrals) for enrollment. Those who responded to the survey were more often affiliated with primary care facilities, utilized referral systems, had federal or private funding, and worked with children or infants. Together, these comparisons suggest that VA/military studies and studies relying on recruitment are potentially under-represented in the survey results.

**Analysis**

Due to the qualitative nature of this research, simple frequencies were calculated for the categories associated with study characteristics. Following the collation of open-ended survey results and a review of their content, common themes among participant responses were identified following a discussion among co-authors. This method was chosen due to the small survey sample and the relative brevity of responses, which did not require more in-depth analysis. These responses describe reasons for success and discontinuation of telepsychiatry, as well as desired changes in telepsychiatry programs. Representative quotations were pulled to provide examples of themes.

# Results

**Characteristics of telepsychiatry programs**

This study categorized the collected articles according to the context from which patients were recruited, the source of funding for the telepsychiatry project or program, the method by which patients were enrolled in the service, and the type of patients who participated in telepsychiatry. As noted in Table 1, the most common context from which patients were recruited in the published studies was military or Veteran's Affairs (VA) settings (25.0%, $n$=17). Mental health facilities (23.5%, $n$=16) and community health centers (14.7%, $n$=10) were also common sources of telepsychiatry patients. Traditional ambulatory settings, including primary care, emergency rooms, and hospitals, were described several times in the literature, but were less common. A small number of studies were for patients in specialized medical centers, schools, and correctional facilities.

Interestingly, students or children were the most common category of patients (29.4%, $n$=20), though individuals recruited from the general population (i.e., non-targeted interventions) were also common (27.9%, $n$=19). In line with the findings regarding enrollment context, soldiers and

veterans were the target population for about a quarter of the articles. Telepsychiatry programs targeted toward individuals with a specific mental illness accounted for about 12% (*n*=8) of the surveyed literature, whereas senior citizens and prisoners were the target population for around 4% (*n*=3) of the articles. The most common enrollment method was through referrals (45.6%, *n*=31), though some programs (22%, *n*=15) had telepsychiatry enrollment built into their intake protocol, which was often the case for emergency department-based work. About 19% (*n*=13) relied on recruiting individuals to participate and 7% (*n*=5) enrolled individuals based on patient request.

Regarding funding sources, about one third of studies relied on internal funding (*n*=23), as was the case for most VA-sponsored projects, whereas another third (*n*=22) relied on federal funding to support their projects. Close to one quarter of studies relied on private grants from foundations or endowments (*n*=16), and about 10% used state or local funding (*n*=7). Medicare or Medicaid billing was listed as a funding source in only two of the studies.

## Survey responses

As mentioned, authors associated with 33 of the reviewed articles responded to a survey about their ongoing work in telepsychiatry. Table 2 contains frequencies of themes associated with their open-ended responses. Because some individuals did not answer specific questions, and other responses fit into more than one category, the percentages provided do not add up to 100%.

Of these 33 surveyed projects, 27 were still engaging in some form of telepsychiatry work, whereas six were no longer continuing telepsychiatry. An examination of the study characteristics associated with those who reported continued telepsychiatry work and those who had discontinued their work yielded some interesting patterns. Those who were still continuing their telepsychiatry work were much more likely than those who had discontinued telepsychiatry to work in mental health facilities (*n*=7 vs. *n*=0), VA/military settings (*n*=8 vs. *n*=0), and community health centers

**Table 2**
Frequencies of open-ended response themes (*N*=33)

| Survey question | Category | Percentage/ frequency |
|---|---|---|
| Why they are no longer providing telepsychiatry services | Not originally intended to be a long-term project | 9.0% (*n*=3) |
| | Ran out of funding | 6.0% (*n*=2) |
| | On-site needs changed | 6.0% (*n*=2) |
| Reasons for their continued success | High demand and patient enrollment | 39.4% (*n*=13) |
| | Good relationship between providers, administrators, and rural health workers | 18.2% (*n*=6) |
| | Strong community integration and promotion | 15.2% (*n*=5) |
| Aspects of telepsychiatry they would change | More funding | 21.2% (*n*=7) |
| | Expand offerings | 21.2% (*n*=7) |
| | Hire and/or train more staff | 15.2% (*n*=5) |
| | Improve and/or extend technology | 15.2% (*n*=5) |

(*n*=5 vs. *n*=1). Additionally, compared to those who had discontinued telepsychiatry, those who were still providing telepsychiatry were more likely to use referrals for enrollment (*n*=14 vs. *n*=4) or facility protocol (*n*=8 vs. *n*=0) and also more commonly had federal funding (*n*=13 vs. *n*=1) or internal funding (*n*=8 vs. *n*=1). Finally, continued telepsychiatry use was more common among those who served the general population (*n*=10 vs. *n*=0), children/infants (*n*=10 vs. *n*=2), and individuals with a specific mental health problem (*n*=5 vs. *n*=0).

When asked about the reasons why they were no longer participating in telepsychiatry, the answers were split almost evenly among the following three types of responses: the project had run out of funding, the on-site needs for telepsychiatry had changed, and the original goal of their work was to do a singular research study that was not part of a long-term program. One respondent said, for example, "the project was funded by a grant…and the clinic does not have resources to continue providing services," demonstrating the challenge of finding continuing funding. Another said, "This was a research study and was not part of standard treatment in the clinic," showing an interest in testing telepsychiatry but not in integrating it into routine care. Finally, as an example of on-site needs changing, one participant reported that a psychiatrist for the remote area was hired, which eliminated the need for a distant psychiatrist to provide care.

Among the participants who reported that they were still participating in telepsychiatry, many said that the reason for their continued success was due to a high demand for the service and high enrollment in the programs. One participant described an interesting situation in which there was not only a high need for telepsychiatry but also a need to train new psychiatrists, which is why telepsychiatry had been so successful. This participant said:

> I serve a largely indigent and rural population who otherwise would have no services at all and I do so with doctoral students in training (so clients benefit by virtue of no resources and other options and students benefit by virtue of access to this population – and crisis center staff/advocates have someone to refer such clients to). It's symbiosis for 3 groups of stakeholders who would otherwise be out of luck.

Individuals who worked with children especially reported a high demand for their services, presumably because working with such a population requires specialized training and resources.

Another reported contributor to success was the presence of a good relationship with health professionals and distant sites and a strong sense of collaboration among those involved in the project. One individual reported that there was "Good collaboration between our program and the psychiatrists who provide the service," while another said that "the strong support of leadership" was key to their continued success. Other responses of this type highlighted the critical role of maintaining a good relationship between project administrators and the community sites from which patients are recruited.

Similarly, several respondents reported that integration into the patient community and promotion of the project were necessary for success. One participant reported on the importance of these factors, as well as the previously discussed value of collaboration, in the following response listing their reasons for success: "Perseverance, relationships, advocacy, championing, being opportunistic, not taking 'no' for an answer, active dissemination/ promotion of program, active ongoing research component, ensuring we are integrated into community services/trainee curriculum, developing a business model of service offerings." Another respondent stated that their telepsychiatry program was situated within a well-respected community health organization, which created positive associations for individuals who may choose to participate.

The final survey question asked individuals what they could change, if anything, to increase the success of their telepsychiatry work. The most common response was related to funding, with many individuals reporting that a continued source of funding or a mechanism for reimbursement would be helpful. One individual said that "securing annualized funding" would be ideal, with another stated that simply "a greater range of services reimbursed by insurance" and "better

financing by Medicaid" would help to increase sustainability. Others reported that they wished to expand their telepsychiatry work, offering more services in general or reaching wider populations. Multiple respondents stated that they would like to offer home-based telepsychiatry, which would help to better address issues of distance for those in rural communities, while others said that they simply "always want to expand."

Several respondents reported that they would like to improve and/or extend the technology used in telepsychiatry. One respondent reported on several technological issues that impeded success, saying:

> I would try to make the equipment easier for ALL of my staff to understand and use, particularly when technological challenges are encountered. We have unreliable power… so services frequently drop (particularly during inclement weather). Even with training and simplified step-by-step instructions in the room, some of my staff have difficulty turning the equipment on and trouble-shooting basic challenges (like zooming in for the telepsychiatrist to better see a problem like tremors or a rash).

Another participant echoed this sentiment, wishing for simpler log-in procedures and easier-to-understand technology. Others, though, said that they wished for access to more technology, such as the use of texting to stay in contact with patients. Regardless of the sentiment, however, many individuals stated that improving the technology would help to increase the success of their telepsychiatry work.

A final issue that respondents wished they could address was a lack of necessary staff. Many stated that they wished to have designated individuals who could help to run the telepsychiatry program, such as the participant who said they would like "to hire more telehealth support staff to manage the satellite sites (e.g., technical problems, getting patients to machines, scheduling appointments)." Another said that they would like to "increase the administrative support at both local and remote sites," which they thought would help things to run more smoothly. Several respondents also stated that they needed more clinicians and psychiatrists to run the program, while another stated that they would like to have psychiatrists trained to use telemedicine technology early on in their careers, in an effort to increase comfort and acceptability.

Altogether, the results of the survey point to the importance of funding for supporting telepsychiatry, as well as having necessary staff support and collaboration with all members of the telepsychiatry team. The following sections will discuss these results in more detail and, based on this study's findings, provide suggestions for improving the sustainability of telepsychiatry.

## Discussion

The systematic review of telepsychiatry research demonstrated that the VA and the military are leading the way in terms of telepsychiatry usage. A quarter of all the studies involved veteran or soldier populations, which were located in regions across the USA. The continued and expansive use of telepsychiatry among these settings is unsurprising, considering the high demand for and success of these services. A recent study reported that, among over 98,000 VA patients enrolled in telemental health programs within a 4-year period, the rates of hospitalization and psychiatric admission decreased significantly, representing clinical success and widespread use of their services.[30] Telepsychiatry has also been used to ease the transition period for those returning from active duty through a partnership between the VA and the military. In this program, soldiers treated by telepsychiatry experienced a positive increase in their overall functioning and also had less of a delay before receiving psychiatric care compared to those who did not use telepsychiatry.[26] Clearly, the VA and other military sources are leaders in the field of telepsychiatry and provide ideal model programs for individuals wishing to begin work in telepsychiatry. It is important to note, though, that programs run through the VA typically benefit from having internal funding. This is likely a major contributor to success, as such projects are unencumbered by having to continually seek

funding to sustain their work, which—as this study has shown—can be a problem for telepsychiatry work.

Telepsychiatry was also used often for children, adolescents, or students—close to 30% of the reviewed articles targeted telepsychiatry toward such populations. Considering the shortage of child psychiatrists and the fact that the amount of child psychiatrists in training has not increased significantly since 1995, there is a clear need for telepsychiatry in this context.[80] Additionally, a recent study with teachers found that the majority reported a lack of experience and training for meeting the mental health needs of students,[81] again demonstrating an area ripe for telepsychiatry intervention. Research has found child telepsychiatry to be a feasible and acceptable method of service delivery,[56] so it is likely that usage in this context will continue to increase in an effort to meet the unique challenges associated with working with this population.

In addition to examining areas in which telepsychiatry is common, it is also useful to examine areas where there is a paucity of work being done. With continued funding or reimbursement reported often as an area where researchers would like to see change, it is not surprising that less than 3% of the articles reported using Medicare or Medicaid billing to cover expenses. Reimbursement has been a long-standing issue in the telemedicine field, as written by Bashshur et al., "Limited or lack of reimbursement has been identified as telemedicine's 'Gordian knot' and one of the major reasons for the slow diffusion of telemedicine" (p. 341).[82] As previously mentioned, recent strides have been made to allow for direct billing of telemedicine services, but coverage for a variety of telemedicine services and across the entire country is still limited. Hence, programs that have managed to bill for Medicaid or Medicare would aid the research community by sharing their methods for doing so, as the heavy reliance on federal funding outside of the VA is concerning. Considering the competitive nature of receiving federal grants and the fluctuations in the federal research budget, a reliance on federal funding is likely not sustainable for most telepsychiatry programs.

While work with children and adolescents is increasingly common, there is a lack of research with older adults or aging populations. Studies have demonstrated a high prevalence of mental health problems among older adults, including depression and hallucinations.[83] Among older adults who have experienced psychological distress, less than 40% have reported seeking mental health help.[84] Hence, this population has both a need for and a lack of access to psychiatric services, making it a valuable area to implement telepsychiatry interventions. Research that has used telepsychiatry for older populations has found it to be viewed positively by clinicians, nursing home staff, families, and patients and to lead to improvements in mental health status.[23,78] Concern about the acceptability of technology among older adults may deter individuals from pursuing videoconferencing-based programs, but research has found that older adults often find the technology to be satisfactory, with almost two thirds reporting no preference between face-to-face and video-based interactions.[85] Thus, the use of telepsychiatry in elderly populations would be a valuable area for future research.

## Limitations

Because this study was small in scope, there are some limitations to its generalizability. First, the keywords used may not have been inclusive enough to capture the full range of telepsychiatry uses. However, because close to 700 citations were collected, it is likely that the majority of related articles were screened. It is also important to note that this study was of telepsychiatry programs that have published articles describing their experiences. This means the findings do not address those programs that have used telepsychiatry without reporting on their outcomes, which limits the generalizability of the conclusions drawn. Future reviews may want to examine the experiences of in-progress or more small-scale telepsychiatry projects that may not have the resources or time to publish.

# Implications for Behavioral Health

Based on the results of the survey, it is easy to conclude that telepsychiatry is sustainable for many programs, considering that over 80% of published projects were still providing services. However, it is important to interpret this result with caution, as it was likely that there was a sampling bias among individuals who responded to the survey. As mentioned, about 50% of the publications' authors responded, and it is likely that individuals who are continuing work in telepsychiatry were more willing or able to offer their insight than individuals who are no longer pursuing work in the area. Regardless of this caveat, however, this research still provides some lessons about the qualities of sustainable and successful telepsychiatry programs.

Perhaps, the most obvious conclusion regarding sustainable telepsychiatry programs is the fact that investing in a high-need area is important for success. Many of the respondents indicated that this was the reason why they were able to continue their work and shows the importance of conducting formative needs assessments with target populations. Before a telepsychiatry program even begins, researchers should make sure that there is interest and a need for the services; otherwise, activity and enrollment will remain low, which can jeopardize the involvement of project team members and the potential for future funding. Research has identified that an unmet need for mental health treatment is greatest among the elderly, racial-ethnic minorities, low-income populations, uninsured individuals, and those living in rural areas[86], suggesting that these are ideal populations to target as part of telepsychiatry programs.

In terms of improving sustainability, many participants suggested that having more staff would help to increase long-term success and the scope of implementation. One potential solution for a lack of qualified clinicians is to use doctoral students or residents in psychiatry. As previously mentioned, one respondent indicated that this was key to their success, as it allowed students to gain experience while also meeting the needs of patients. Such students would be less expensive to retain than traditional psychiatrists and would be valuable for increasing telemedicine acceptance among the next generation of health-care providers—an important issue if telepsychiatry usage is going to become a standard of care in underserved areas. Hence, those seeking to develop telepsychiatry may consider partnering with universities or training programs in order to draw upon the resources there.

Regarding improving technology, most respondents who commented on the issue expressed a desire for simpler, easy-to-use technology, while another individual hoped to integrate texting and mobile phones into their practice. These suggestions point to the potential of using mobile solutions in telepsychiatry, which, despite being a new area of study, have been shown to be effective for treating depression, stress, and substance abuse.[87] Mobile- and tablet-based platforms are user-friendly, increasingly secure and HIPAA-compliant, and are inexpensive compared to traditional desktop videoconferencing technology. Switching to these technologies would not only help to address the ease-of-use barriers, but would also help programs to transition to home-based telepsychiatry—an area in which several respondents expressed interest. There are valid concerns regarding the security and safety of using mobile technologies for telepsychiatry, but application developers are increasingly using the advanced encryption required to keep patient data secure. As the telepsychiatry field moves forward, it is likely that mobile technologies will play a major role in its development.

Looking ahead, the findings of this research point to a need for more long-term studies of telepsychiatry, especially considering the changes occurring among the USA health-care landscape. Although the detail provided in the reviewed articles and the scope of this research did not permit an examination of the impact of capitated systems of care, the increased use of capitated payments in managed care plans (which now provide care to more than 50% of Medicaid beneficiaries) underscores the importance of examining the success of telepsychiatry amidst a changing health-care context. Because managed care organizations and accountable care organizations typically

have incentives to reduce costs, demonstrating cost-effectiveness of telepsychiatry is important for ensuring consistent reimbursement in these capitated systems. If telepsychiatry can become the norm in managed and accountable care organizations, this would reduce reliance on grants and could lead to more widespread implementation. Thus, research and efforts that seek to demonstrate sustainability and use innovative methods of reducing costs will be critical for the continued use of telepsychiatry in the changing health-care system.

Altogether, this study has important implications for the practice of behavioral health. Telepsychiatry has been shown to be effective for treating many mental illnesses and for improving access to care and is being used across a variety of contexts. The applications of telepsychiatry are diverse enough that individuals seeking to begin their own programs can find guidance and examples in the literature for almost any population and context, showing that the usage of the technology is growing. This study also suggests that, in addition to becoming widespread, telepsychiatry programs are also sustainable, given the right environment and funding mechanisms. Programs that engage in collaborative communication, operate in high-demand areas, and interact with the surrounding community have especially experienced success, even in light of desires for better funding mechanisms and easier technology. It is clear that telepsychiatry is here to stay and will likely only improve as the health-care landscape becomes more open to the use of telemedicine.

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