


User experience reevaluation and diffusion of technology in the context of compulsory usage illustrated by the example of telepsychotherapy—a literature review

Digital Health
Volume 8: 1–18
© The Author(s) 2022
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/20552076221134448
journals.sagepub.com/home/dhj


Benjamin Butz , Leonie Kloep  and Bernd Kriegesmann

Abstract

Objective: Models explaining technology acceptance fail to recognize the influence temporary, compulsory usage, meaning forced usage due to external factors, may have on user evaluation and continued diffusion. However, in context of the Covid-19 pandemic, a highly infectious respiratory disease, the significance of this factor is evident. Triggered by legal contact restrictions and extended reimbursement capacities, usage of telepsychotherapy increased drastically, thereby influencing therapists' attitude and increasing the technology's maturity. In this comprehensive literature review, we aim to outline the current state of research toward telepsychotherapy adoption and identify potential influences of the compulsory usage on the reevaluation of technology as well as barriers inhibiting and factors promoting future use.

Methods: The review was conducted on the five databases ScienceDirect, Web of Science, PubMed, PubPsych, and IEEE up to April 2022.

Results: Out of 685 identified references, a final selection was made of 22 papers, discussing experiences with telepsychotherapy in the context of the Covid-19 pandemic. Satisfaction and intention to use are universally high, further increasing with time and use experience, while perceived challenges decrease. Barriers include mostly contextual factors, such as technical issues, reimbursement issues, strict regulations, insufficient infrastructure, and lack of organizational support, but also concerns regarding efficacy. Promoting factors are training, guidelines, and organizational support.

Conclusions: Telepsychotherapy has become an integral part of psychotherapeutic care. A hybrid system in close coordination between provider and patient may prevail, addressing individual needs of both parties to achieve optimal care and provider well-being. This requires transparent regulations, guidelines, and standards.

Keywords

Telepsychotherapy, telehealth, user evaluation, reevaluation, reassessment, compulsory usage, crisis, technology acceptance, diffusion

Submission date: 5 June 2022; Acceptance date: 4 October 2022

Introduction

General models explaining the acceptance of technologies are manifold with the most commonly used in the medical sector being the Technology Acceptance Model and the United Theory of Acceptance and Use of Technology, as Harst et al.¹ show in a systematic literature review. Moreover, these explain the highest degree of variance in the behavior of actors, especially in versions adapted to the individual case. However, the models do not take into account the influence that sudden, temporary

Institute for Innovation Research and Management, Westphalian University of Applied Sciences, Bochum, Germany

Corresponding author:

Benjamin Butz, Institute for Innovation Research and Management, Westphalian University of Applied Sciences, 44801 Bochum, Germany.
Email: benjamin.butz@w-hs.de



crisis situations or *compulsory usage*, meaning forced usage of a technology due to external factors, can have on the reevaluation and thus on the continued diffusion after this situation. A crisis here is defined as a temporary, sudden event of a great impact that requires an acute adjustment of the behavior of actors due to changes in the circumstances. The significance of this factor is evident in the dramatically increased usage of telepsychotherapy related to the Covid-19 pandemic, a highly infectious respiratory disease. Telepsychotherapy describes the provision of psychotherapy sessions by means of telematic transmission, especially through video calls and telephone. It belongs to the area of telehealth, defined as the provision of healthcare at a distance.² For numerous medical conditions and in a variety of contexts, not only the fundamental suitability but also clear advantages of digital methods and hybrid approaches compared to pure face-to-face psychotherapy have been demonstrated.³⁻⁵ Nevertheless, the technology saw hardly any clinical use prior to the Covid-19 pandemic. Triggered by the legal contact restrictions in the context of pandemic control, as well as the extended billing capacities for video consultations, the proportion of psychotherapists using them rose dramatically within a few weeks.⁶ Reevaluation here describes the renewed assessment of a technology, for example, on the basis of new information or changed circumstances. It is conceivable that this compulsory diffusion of telepsychotherapy may alter users' perception and evaluation of the technology, causing it to persist long beyond the continuation of the crisis. Therefore, we conduct a literature review in the form of an exploratory scoping review to outline the current state of research as well as to identify possible influencing factors that could explain a reevaluation of technology in the context of crisis situations. While a lot of research addresses these changes, few papers deal with the underlying implications and potential long-term effects on therapists and patients alike.

Thus, this article aims at summarizing and comparing the experiences made with telepsychotherapy in the context of the Covid-19 pandemic in order to provide information about the potential influence crisis-induced compulsory usage of a technology may have on user reevaluation. For this purpose, the following research questions are raised:

- How satisfied are providers with telepsychotherapy during the period of compulsory usage and do they intend to use it in the future?
- What barriers impede the acceptance and diffusion of telepsychotherapy?
- What conditions promote the acceptance and diffusion of telepsychotherapy?
- What concerns existed leading up to the introduction of telepsychotherapy?

- What qualitative experiences have been made with the technology and what influence does it have on the everyday life and work of both the therapist and the patient?

By answering these questions this review aims to

- Enable policymakers to further foster the long-term implementation of telepsychotherapy and other telehealth-related technologies.
- Provide researchers with an overview of the current state of research and outline research opportunities.
- Aid practitioners in implementing teletherapy solutions in their respective offices.

Methods

In order to gain a thorough understanding of the potential influences the crisis-induced compulsory usage of telepsychotherapy may have on the acceptance and evaluation of such technology by both patients and therapists, we consider the topic from different perspectives. Therefore we retrieved relevant literature from diverse databases, mostly containing medical and psychological but also technology-focused literature.

For our chosen research questions, we decided to perform the literature review in the form of a scoping review. Unlike systematic reviews, scoping reviews aim to address broader topics and sources employing different methods and study designs, while focusing less on narrow questions or the assessment of quality. They are most useful for providing an overview of the extent, range, and nature of currently evolving areas of research, summarizing research findings or identifying research gaps.^{7,8} In our review, we aim to thoroughly explore these aspects within the ever-changing conditions of the ongoing global Covid-19 pandemic. Therefore we consider a scoping review to be the appropriate method for the purpose of answering our research questions.

The analysis process was initialized with a pre-screening focusing on the abstract of each paper, followed by a full-text assessment for a relevant subset. The resulting set of references was then qualitatively analyzed regarding each of the research questions. For each paper, the selection process was carried out separately by two researchers. Discrepancies were resolved in a later discussion. A detailed description of the eligibility criteria and study selection process is explained below.

Eligibility criteria

Only papers discussing the usage of or experiences with telepsychotherapy of therapists or patients in the context of the

Covid-19 pandemic are considered. For the present study, we define telepsychotherapy as the direct and synchronous interaction of therapist and patient through telephones or video. For the present analysis, asynchronous communication options for therapy such as mail traffic, apps, and self-help services as well as communication through chat messages were not included. Further, only the use of the technology with adult patients is considered, as interviews conducted with psychotherapists prior to this review suggest great differences in the pediatric field. Additionally, only papers providing empirical data are considered. The focus of this review lies on the following items as motivated in the introduction:

- The concerns of therapists regarding telepsychotherapy prior to the actual use of the technology as well as during the introduction phase. Most of these concerns will presumably only be available retrospectively, however, they may still offer an insightful starting point to compare later experiences and changes in attitude.
- Experiences made with telepsychotherapy by both therapists and patients after the initial introduction phase. As mentioned above we aim to detect and explain changes in attitude as a result of the compulsory usage of the technology. We especially aim to qualitatively address the influence this new technology has on the work and life of therapists and how this further affects them.
- Insights regarding barriers inhibiting the acceptance of telepsychotherapy, as well as conditions fostering it. This aspect plays into the first two items as we may find reasons as to which factors influenced attitudes and experiences during these stages. This may help in shaping innovation-friendly structures and in the active promotion of future adoption of digital technology.

Literature sources and search strategies

For the review, five databases were utilized. Most importantly, PubMed and PubPsych focus on medical and psychological topics. This includes the adoption of technologies in medical and therapeutic fields, as well as experiences, influencing factors, and perceived barriers from the perspective of patients and healthcare providers. ScienceDirect and Web of Science extends the scope by offering a broad, multidisciplinary overview of the scientific spectrum. Lastly, IEEE Xplore was consulted. This database lists research on engineering and information technology, including diffusion of and experiences with new technologies.

Search terms native to the fields of telehealth, technology acceptance, and diffusion were employed and expanded based on the keywords of relevant references

found. In order to be shortlisted in the final database search, three requirements have to be met concurrently.

- Firstly, the paper must deal with the usage of telehealth applications in the context of psychotherapy. Based on early research in the area we found that there does not yet seem to be a clear consensus on the appropriate term to describe this field. In order to avoid an excessive amount of niche search terms, we therefore decided to include the established overarching keywords “Telehealth,” “Tele-Health,” and “Telemedicine” in addition to selected telepsychology-specific terms. Consequently the use of one of the following terms in the title, keywords, or abstract of a paper qualifies it for further screening:
Telehealth, Tele-Health, Telemedicine, Telepsychology, Online Therapy, mHealth, Digital Health, Digital Therapy.
- Further, the paper must address acceptance, experiences, or diffusion of the technology. Therefore, at least one of the following search terms must be included in the title, keywords, or abstract:
Technology Diffusion, Technology Acceptance, Technology Adoption, User Acceptance, User Experience.
- Additionally, the research must take place in the context of the Covid-19 pandemic. Hence, at least one of the following two search terms must be found in the title, keywords or abstract:
Crisis, Pandemic.

We included articles, reviews, and conference papers in the search. Due to the daily increase in research on the Covid-19 pandemic, literature in an early-access stage was also included. As only usage within the context of the Covid-19 pandemic is considered, papers published prior to 2020 are excluded. No distinction was made according to location, nationality, specialties within the psychological fields, or the examined population of patients with exception of children, who were excluded from the review. Due to the terms chosen, the focus of the search was on English publications but encountered references in other languages were translated and considered as well. The last search took place on 22 April 2022.

Study selection

In total, 685 references were found in the database searches. The selection process is depicted in Figure 1 and further summarized below.

First, 172 duplicates were removed. The abstracts of the remaining 378 papers were each screened independently by two different researchers. Discrepancies were resolved by later discussion. In this screening process, we excluded another 439 references in accordance with the eligibility criteria due to the reasons stated below:

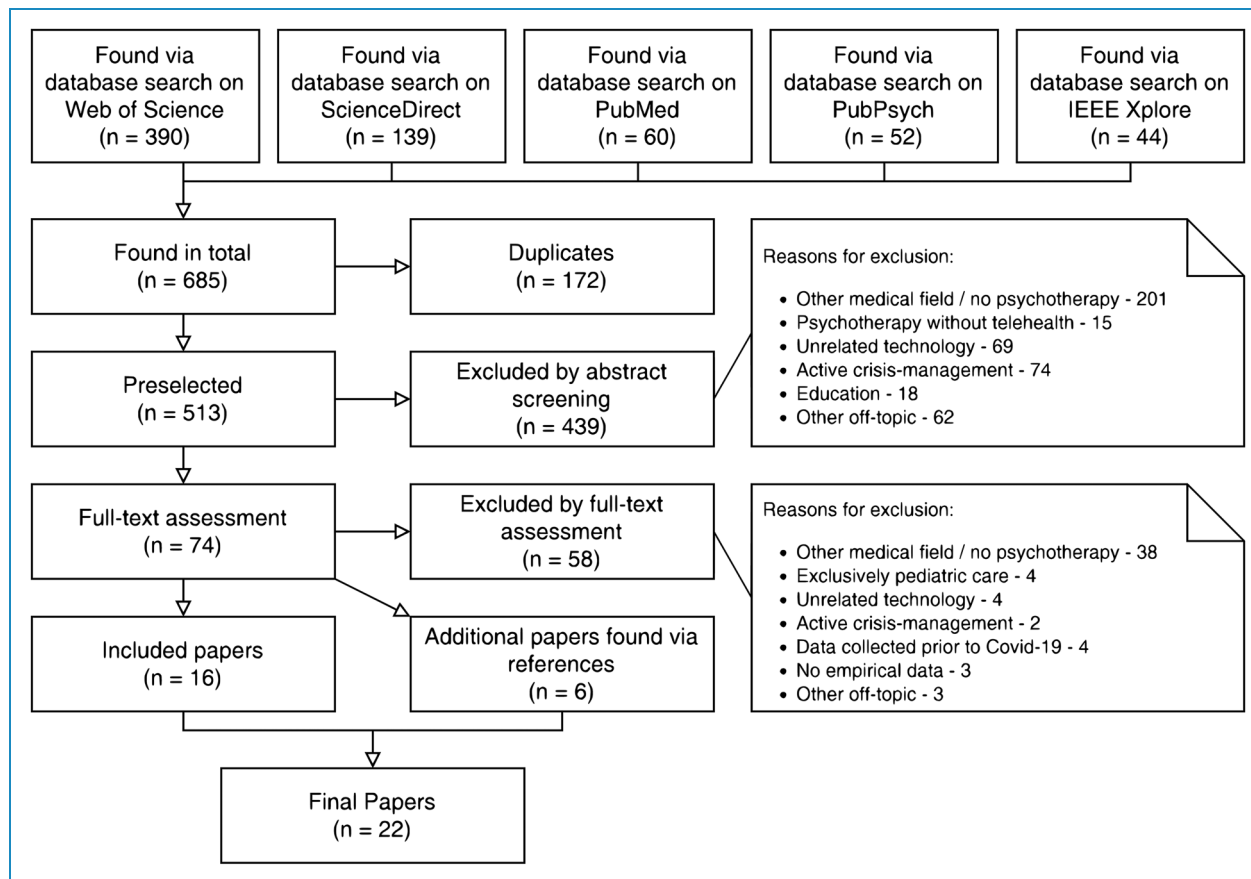


Figure 1. PRISMA flowchart of the study selection process.

- The reference addresses another medical field unrelated to psychotherapy (201).
- The reference addresses psychotherapy, but not telehealth (15).
- The reference considers unrelated technologies, for example, the use of virtual reality (69).
- The reference deals with active crisis management in the context of the Covid-19 pandemic, such as the use of technology to trace infections or to treat patients suffering from Covid-19 (74).
- The reference addresses the education of psychology students without considering experiences made employing telepsychotherapy with real patients (18).
- The reference is off-topic in other ways, for example, focusing on economics, artificial intelligence, and social media, or due to using data collected prior to the Covid-19 pandemic (62).

Several abstracts mentioned telehealth, but did not specify the medical field. These cases were not excluded but considered for further assessment. Thereby, the abstract screening resulted in 74 references which we assessed in more

detail via a full-text analysis. We excluded another 58 references for the following reasons:

- The reference addresses another medical field unrelated to psychotherapy (38).
- The reference focuses exclusively on pediatric care (4).
- The reference considers unrelated technologies (4).
- The reference deals with active crisis management in the context of the Covid-19 pandemic (2).
- The reference is based on data collected prior to the Covid-19 pandemic (4).
- The reference does not provide empirical data (3).
- The reference is off-topic in other ways (3).

This assessment left a set of 16 papers to be included in our review. In addition to the database search, we screened the references cited by the set of 74 in-depth assessed papers and identified six further references which we included as well. This led to a final set of 22 references which were examined thoroughly in the following.

Results

Descriptive statistics

We identified 22 references dealing with the usage of or experiences with telepsychotherapy of therapists or patients in the context of the Covid-19 pandemic. Out of these, 18 used quantitative methods, three qualitative methods, and one employed a mixed-methods approach. Covid-19 was officially recognized by the World Health Organization as a global pandemic on 11 March 2020. The majority of studies collected their data during the first few months of the pandemic. Out of the 16 quantitative papers, six gained their empirical data within the first three months of the global Covid-19 pandemic, between March and May 2020. Two of these, however, the surveys of Pierce et al.⁹ and McKee et al.¹⁰ are based on the same data set. Five studies finished data collected within half a year of the WHO declaration and another three surveys took place after that. Two papers did not disclose when the data was collected. Out of the three qualitative studies, one each took place within these three periods. The study by Simon et al.¹¹ conveniently started two months prior to the pandemic situation but continued until June 2020. Two of the mixed-methods approaches finished data collection by May 2020 and one by July 2020. The interest peaked within the first few months of the pandemic with an apparent lack of studies collecting data after 2020. Considering the distribution of these studies by publication year, it is however likely that a number of studies, especially longitudinal ones, are yet to be released.

The included references are summarized in Tables 1 to 3, including the scope and location as well as population type and size if appropriate. For population size, only the amount of mental healthcare providers or patients is displayed. The two studies by Barkai et al.¹² and Krahe et al.¹³ evaluate the differences between medical professions including psychotherapy or psychiatry.

The vast majority of references take the perspective of healthcare providers instead of patients. Fourteen out of 18 quantitative studies (77.8%) do so exclusively. Two studies consider both provider and patient views and only two more studies focus exclusively on patients. All of the qualitative and mixed-methods references take the perspective of providers exclusively.

There is a heavy preponderance of research conducted in the United States of America. Nine out of 22 references (40.9%) take place there exclusively. Another three studies focus mostly on North America, and within that predominately the US, resulting in 54.5% of research. The three aforementioned studies secondarily consider Europe as a whole, as did Witte et al.,¹⁸ who surveyed providers in 17 European nations and Lebanon. Two studies took place in the UK, one in Germany, one in North Macedonia, and one in the Netherlands. This results in

40.9% of research relating to Europe. Two studies (9.1%) took place in Australia and New Zealand and one (4.5%) in Israel. One study by Messina & Loffler-Stastka²³ did not disclose where the survey took place. There is great demand for research from Africa, Asia, and Latin America.

There seems to be no consensus on the appropriate terms to use in order to refer to telepsychotherapy. Analysis of the keywords and titles of the references show that the most commonly used terms are the general words “telehealth” and “telemedicine” with eight (31.8%) and five (22.7%) mentions. Psychology-specific terms used are “telepsychiatry” (5, 22.7%), “online therapy” (4, 18.2%), “online psychotherapy,” “telepsychology,” and “telepsychotherapy” (each 2, 9.1%). A number of terms are used only once (4.5%), including “teletherapy,” “telemental health,” “e-mental health,” “internet-based psychological therapies,” and “online psychological treatment.” Six of the references (27.2%) did not use any psychology-specific terms, but occasionally described the context by mentioning either “mental health” or “psychotherapy,” “psychotherapists” or “psychology.”

Future intention to use

All papers unanimously demonstrate a drastically increased level of utilization of telepsychotherapy due to the necessities dictated by the ongoing pandemic. Ten of the studies also discuss providers’ future intention of use, five of which provide percentage values, and further two of them compare these intentions to the level of usage before the pandemic. The results of these studies are, however, not perfectly comparable, as the questions asked were quite different. In the case of the lowest score found by Guinert et al.²¹ of 64.0%, the respondents were asked if they would provide more than 25% of their caseload remotely and McBeath et al.³⁰ inquired about the likelihood of telepsychology becoming core client work, which 65.0% of providers found quite likely or very likely. They quote one therapist specifically, who after the initial trial period now intends to mostly provide care via telepsychotherapy:

After 8 years of seeing clients predominantly face to face, I’m now considering changing my marketing to do 90% online and just 10% face-to-face from my home office. It’s the push I’ve been looking for.³⁰

The remaining surveys only inquired if providers intended to use any amount of telepsychotherapy in the future. Regardless, the overall intention to continue using the technology is very high. The overview can be found in Table 4.

An in-depth comparison of future intention versus pre-pandemic usage is provided by Pierce et al.⁹ Not only do they inquire how many providers used any telepsychotherapy in the past and present, but also to what extent,

Table 1. Quantitative studies considered in the review.

| Author | Year | Scope | Data collection | Population | Location |
|---|------|---|------------------------------------|------------------------------|--|
| Barkai et al. ¹² | 2021 | Satisfaction, ease of use, experiences, willingness to recommend and use in the future in different medical fields. | April to May 2020 | 28 providers 109 patients | Israel |
| Beck-Hiestermann et al. ¹⁴ | 2021 | Current use, satisfaction, technology acceptance and experience. | December 2020 | 174 providers | Germany |
| Bekes & van Doorn ¹⁵ | 2020 | Influence of characteristics and professional experience on attitude and acceptance towards the technology. | March 2020 | 145 providers | Europe (35) North America (105) |
| Bekes et al. ¹⁶ | 2021 | Longitudinal comparison of attitude, acceptance and the challenges emotional connection, distractions, patient privacy, and therapist boundaries. | March to April & June to July 2020 | 1257 providers | Europe (159), North America (1029), other (14) |
| Bekes et al. ¹⁷ | 2021 | Acceptance, therapeutic relationship, vicarious trauma, and professional self-doubt. | March to June 2020 | 795 providers | Mostly Europe and North America |
| Witte et al. ¹⁸ | 2021 | Motivation, perceived barriers and acceptance. | March to May 2020 | 2082 providers | Europe (2009), Lebanon (73) |
| Farrer et al. ¹⁹ | 2022 | Frequency usage, reasons for non-use, telehealth modalities, prior use, attitudes, future intention to use and training, information or resource needs. | May to July 2020 | 528 providers | Australia and New Zealand |
| Guinart et al. ²⁰ | 2020 | Experiences, advantages, challenges and attitudes towards the technology. | April to June 2020 | 3052 patients | USA |
| Guinart et al. ²¹ | 2021 | Experiences, advantages, challenges and attitudes towards the technology. | April to May 2020 | 819 providers | USA |
| Haxhihamza et al. ²² | 2021 | Satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with doctor, accessibility, and convenience. | – | 28 patients | North Macedonia |
| Krahe et al. ¹³ | 2021 | Satisfaction and experiences in different medical fields. | June to July 2020 | 37 providers 19 patients | Australia |
| McKee et al. ^{10*} | 2021 | Influencing factors on attitudes and acceptance of the technology. | May 2020 | 2619 providers | USA |
| Messina & Loffler-Stastka ²³ | 2021 | Perceived clinical skills, challenges, in-sessions feelings of flow, boredom, and anxiety. | – | 29 providers | - |
| Mishkin et al. ²⁴ | 2021 | Experiences, success of implementation, types of practice settings, patient and provider groups. | September 2020 to March 2021 | 333 providers | USA |
| Molfenter et al. ²⁵ | 2021 | Current use, experiences, technology acceptance, and future intention to use. | May to Aug 2020 | 327 providers | USA |

(continued)

Table 1. Continued.

| Author | Year | Scope | Data collection | Population | Location |
|------------------------------|------|---|-------------------|----------------|----------|
| Pierce et al. ^{9*} | 2021 | Comparison of technology use before, during, and expected after the pandemic, as well as influences of demographics, training, policies, and clinical practice. | May 2020 | 2619 providers | USA |
| Sammons et al. ²⁶ | 2021 | Changes in needs and opinions over 15 months of technology use. | June 2021 | 2807 providers | USA |
| Wright et al. ²⁷ | 2020 | Quality of care, technology performance, user experience, satisfaction, and technology acceptance. | April to May 2020 | 170 providers | USA |

*Identical data set.

Table 2. Qualitative studies considered in the review.

| Author | Year | Scope | Data collection | Population | Location |
|--------------------------------|------|---|----------------------|------------------------------------|-------------|
| Feijt et al. ²⁸ | 2020 | Issues and difficulties, advantages and needs. | April to May 2020 | 51 providers | Netherlands |
| Lipschitz et al. ²⁹ | 2022 | Attitudes, advantages, disadvantages, and needs for future usage. | Oct 2020 to Jan 2021 | 29 providers | USA |
| Simon et al. ¹¹ | 2021 | Attitude, barriers and requirements for implementation. | Jan to June 2020 | 10 providers, 4 after the pandemic | UK |

Table 3. Mixed-methods studies considered in the review.

| Author | Year | Scope | Data collection | Population | Location |
|------------------------------|------|---|-------------------|---------------|----------|
| McBeath et al. ³⁰ | 2020 | Client types, challenges, advantages, perceived effectiveness, patient satisfaction, need for formal training, and future intention to use. | March to May 2020 | 335 providers | UK |

calculating the overall percentage of cases being processed using the technology. They find that although 54.3% of providers claim to have some prior experience using telepsychotherapy, only 15.0% used it for more than a tenth of their caseload. This correlates with an earlier study by the same author, which found that only 21% of providers actively use it in their practice. Combining the numbers, they find that in total only 7.1% of therapy sessions were held remotely. For use during the pandemic in May 2020, this number skyrockets to 85.5%, with 77.6% of therapists processing more than 90% of their caseload remotely. Further, they extend this segmentation onto future intention to use telepsychotherapy and find that 89.2% of respondents intend to use any amount of telepsychotherapy in the future, although less actively, resulting in an estimated 35.0% of sessions to be held remotely in the post-pandemic scenario,

representing five times the prior amount.⁹ Farrer et al.¹⁹ find a similar trend. Although 57.7% of respondents state to have some level of experience using telepsychotherapy, only 10.3% used it with more than 20% of their clients. In total, 65.7% state that they will either probably or definitely use it in the future, however, do not enclose to which extent.¹⁹

Some other studies used different scales and questions to inquire about future intentions to use. Bekes et al.¹⁷ find providers to be undecided about the future of telepsychotherapy with a mean score of 3.17 (SD = 1.18) on a 1 to 5 Likert scale between March and June of 2020. Molfenter et al.²⁵ find much greater intention a few months later, differentiating between the use of phone calls and video conferencing. They use a 4-category ordinal scale to inquire whether providers intend to use

telepsychotherapy with the following scores: 1—less than before COVID-19, 2—about the same, 3—a little more than before, 4—much more than before. The majority of providers intend to use the technologies more in the future, with phone calls showing a mean score of 2.75 and video reaching 3.07.²⁵ Beck-Hiestermann et al.¹⁴ use yet another scale of 0 to 12 in their survey. They find generally positive intention, but a rather large divide with a mean score of 7.57 (SD = 3.26). Although not significant, they find differences in intention between the methods used by providers. Methods based on psychoanalysis show lower intention such as analytical psychology ($M = 6.46$, $SD = 3.18$) and depth psychology ($M = 6.93$, $SD = 3.19$) compared to behavioral therapy ($M = 8.04$, $SD = 3.20$) and systemic therapy ($M = 9.20$, $SD = 3.12$).¹⁴

All of the aforementioned studies took place during the early onset of the pandemic between March and August 2020, with the exception of the survey by Beck-Hiestermann et al.,¹⁴ which was conducted in December 2020, granting us a little indication whether these intentions resulted in actual continued use or if intentions changed over time. However, a study by Sammons et al.²⁶ examines the usage of telepsychology in June 2021 and compares it to older surveys. They find that a hybrid model became the most common policy. In total, 94% of providers still saw at least a percentage of their patients remotely, with 54% of them processing over 90% of their caseload using telepsychotherapy.²⁶ Similarly, Lipschitz et al.²⁹ find in a series of semistructured interviews conducted between October 2020 and January 2021 that the majority of providers would prefer such a hybrid model moving on.²⁹

Only one study by Guinart et al.²⁰ surveys patient's intention to continue using telepsychotherapy in the future, conducted between April and June 2020. In total, 64.2% of respondents state that they would like to continue

using telepsychotherapy at least occasionally even after a return to face-to-face therapy is possible.²⁰

Satisfaction

Eight studies surveyed provider satisfaction with the technology, as well as six do patient satisfaction. The results of six comparable provider studies are listed in Table 5. Overall satisfaction is rather high. Additionally, a clear trend toward higher satisfaction of providers can be seen in later studies, with the lowest scores shown by McBeath et al.³⁰ (58.0%) and Barkai et al.¹² (61.5%) who survey therapists right after the initial introduction of lockdowns and the compulsory use of telepsychotherapy between March and May 2020. The highest score of 85.9% is recorded by Mishkin et al.²⁴ between September 2020 and March 2021. This effect is highlighted by Farrer et al.,¹⁹ who in addition to surveying the current level of satisfaction, also retrospectively ask about the positive feelings regarding the technology at the beginning of social distancing requirements. They find an increase from 50.0% to 74.3% within three months.¹⁹ This may imply an increase in satisfaction based on the amount of experience or exposure to the technology after initial default aversion. It is, however, also possible, that at a later time, better solutions were available to the providers, perhaps related to technological advances accelerated due to the high demand. Regardless of the underlying reason, the result indicates that a reevaluation of the technology by the users took place.

These results are supported by the findings of qualitative studies. Several providers report initial concerns, difficulties, and aversion. One recalls an earlier attempt to introduce telepsychotherapy at her facility, which failed due to such concerns.¹¹

The staff didn't want it to succeed and it didn't succeed. Now, we're talking about you know, telephone assessments

Table 4. Prior use and future intention to use telepsychotherapy by providers, distinguished by “any” and “substantial” amounts.

| Reference | Any prior use | Sub. prior use | Any intention | Sub. intention |
|------------------------------|---------------|----------------|---------------|----------------|
| Pierce et al. ⁹ | 54.3% | 15.0% | 89.2% | – |
| Barkai et al. ¹² | – | – | 81.8% | – |
| Farrer et al. ¹⁹ | 57.7% | 10.3% | 65.7% | – |
| McBeath et al. ³⁰ | – | – | – | 65.0% |
| Guinert et al. ²¹ | – | – | – | 64.0% |

Table 5. High levels of user satisfaction with telepsychotherapy by providers.

| Reference | Satisfaction | Timeframe |
|------------------------------|--------------|--------------------------|
| Mishkin et al. ²⁴ | 85.9% | September 20 to March 21 |
| Krahe et al. ¹³ | 81.0% | June to July 2020 |
| Farrer et al. ¹⁹ | 74.3% | May to July 2020 |
| Guinert et al. ²¹ | 69.0% | April to May 2020 |
| Barkai et al. ¹² | 61.5% | April to May 2020 |
| McBeath et al. ³⁰ | 58.0% | March to May 2020 |

are fantastic, we've been able to keep the service going, we must do more of these.

However, after a trial period, many find themselves more satisfied and positively surprised by the effectiveness of the technology.

I actually feel that [the quality of care has] improved overall which is also something I really wasn't expecting.²⁹

I have found that although working online using Zoom was initially difficult, like most things, it has become more manageable over the six weeks of doing it, and I have worked out what is useful/not useful, how to manage my self-care.³⁰

Another two studies explored provider satisfaction without displaying the number of satisfied therapists, but rather the average level on different point scales. Both find high levels of satisfaction within their populations. Wright et al.²⁷ show an average satisfaction of $M = 4.86$ on a 7-point Likert scale while Beck-Hiestermann et al.¹⁴ find a mean score of 17.82 with an SD of 3.04 on a scale of 6 to 24.

Overall patient satisfaction is very high, between 62.8%¹⁵ and 89.5%.¹³ However, the two lowest rated of these studies by Bekes et al.¹⁵ (62.8%) and Farrer et al.¹⁹ (66.9%) did not survey patients directly, but asked providers about their impression of patient satisfaction. The effect of increased levels of satisfaction over time is much less clear for patients, mostly due to the lack of later studies. The studies and their results can be found in Table 6.

Barkai et al.¹² compare both patient and provider satisfaction of different medical professions toward the beginning of the pandemic, including oncology, pediatric care, internal medicine, and psychiatry. On average, the level of patient satisfaction was very high at 89.8%. Psychiatry

scored lowest among the professions, yet still very high with 85.3%. This is in stark contrast to the experience of medical providers, who only rated their level of satisfaction as high 37.7% of the time, with psychiatrists showing by far the greatest satisfaction with high scores in 61.5% of cases.¹² Similar results for provider satisfaction were found by Krahe et al.,¹³ who surveyed and compared psychologists, physiotherapists, exercise physiologists, and speech pathologists several months later. In total, 81.0% of psychologists were satisfied with telehealth services compared to only 63.3% of other professions. Overall patient satisfaction was 92.8% even higher than in the study by Barkai et al., but psychology again scored slightly below average with still impressively high 89.5%.¹³

Barriers and promotion of telepsychotherapy

Considering the feasibility proven in several studies, the high levels of satisfaction, and the intention to use the technology, the question remains as to what hindered the diffusion of telepsychotherapy in the past and what barriers may still obstruct its implementation in the everyday practice of providers. In total, 18 studies explore this aspect.

The most often named barrier with 12 mentions are technical issues, such as frozen screens, delays, and insufficient video or audio quality. In the context of psychotherapy, these issues may arguably influence the quality and success of the session, cause providers to miss important nonverbal cues, and may result in frustration on both sides.³⁰ Eight studies find that reimbursement issues are a threat to telepsychotherapy implementation. One provider phrases their concerns as follows:

There can't be a difference in reimbursement [...] [P]eople will usually go the way toward where the money is - and organizations do. So that's my fear, is that they will tip the scale toward in-person, and we will lose the people that would've benefited from this. But it should be a clinical decision, just like a medication.

Another seven studies are concerned with strict regulations. Often bureaucratic hurdles hinder the implementation of new methods and technologies.

We have been a bit slow on the uptake, it, it's really about the way I think the NHS bureaucracy works, a lot of the time, it doesn't allow itself to have the agility to implement....¹¹

In many countries, reimbursement hurdles, and overall regulations were temporarily relaxed to combat the Covid-19 pandemic. For example, the US allowed therapists to practice across state borders using telepsychotherapy and lifted the restrictions on the number of remote sessions that could be reimbursed.³¹

Table 6. High levels of user satisfaction with telepsychotherapy by patients.

| Reference | Satisfaction | Timeframe |
|-----------------------------------|--------------|--------------------|
| Krahe et al. ¹³ | 89.5% | June to July 2020 |
| Barkai et al. ¹² | 85.3% | April to May 2020 |
| Guinert et al. ²⁰ | 81.7% | April to June 2020 |
| Haxihizamza et al. ²² | 80.2% | - |
| Farrer et al. ¹⁹ | 66.9%* | May to July 2020 |
| Bekes and van Doorn ¹⁵ | 62.8%* | March 2020 |

*Provider perspective.

The other challenge is that folks were practicing across state lines—their patients would be in other states and that was allowed for a while. And then, they rescinded all the emergency licenses.²⁹

Another often-mentioned barrier is insufficient infrastructure or a lack of technological availability. Especially the elderly, the poor and other vulnerable populations often do not have sufficient internet connection or the equipment required to participate in telepsychotherapy. The full list of stated barriers can be found in Table 7.

The overwhelming majority of barriers are contextual factors such as technical difficulties, reimbursement concerns, policies and legal aspects, infrastructure, and the lack of organizational support. This implies a great deal of external influence potential by policymakers to breach these barriers and help implement telepsychotherapy long term. Only one study by De Witte et al.¹⁸ identify the lack of need to be a barrier. However, in their study, they focus specifically on barriers, exploring all of the issues listed in Table 7, but find the lack of need to be the single most often named barrier by their respondents. In total, 421 of the 1287 providers (32.7%) who did not use telepsychotherapy prior to the Covid-19 pandemic identify it as a reason.¹⁸

Besides appealing to policymakers, organizations, and providers, demanding that the barriers mentioned above will be overcome, most studies also contribute positive recommendations to further promote the implementation of telepsychotherapy beyond the necessity of the pandemic situation, which can be found in Table 8.

The by far most commonly named demand is the need for proper, formal training to deal with clinical, legal, and technical issues, including training on practical concerns such as using the software, troubleshooting connection

issues, and properly documenting sessions.^{10,29} McBeath et al.³⁰ find that 88% of surveyed providers consider it important or very important to teach specific remote working skills. Many providers also indicate the need for official guidelines to help with issues and concerns related to telepsychotherapy such as guidelines regulating patient safety. Some go as far as to suggest specialized licensing to perform therapy sessions remotely.^{27,30}

It's hard to anticipate what the problems are going to be until you're in it and we know a lot more now. So for training purposes we probably could prepare people.

A refresher would be nice as far as the confidentiality and those rules with liability. [...] it would be nice to know I think more of the legal stuff as a clinician.²⁹

In addition, 57.1% of studies find that organizational support can be an important tool in actively promoting a new technology. This is somewhat surprising as only 22.2% considered a lack of it to be a barrier. Selected items named regarding this aspect are supervision,^{11,15} available contact persons,²⁵ assistance with administrative processes,¹² supportive policies,⁹ and a general culture promoting digital health.¹¹ Four studies found a demand for stronger evidence of the efficacy of telepsychotherapy. Despite the large body of studies demonstrating the feasibility and effectiveness of remote sessions in different cases, some concerns remain, especially regarding patients suffering from suicidal thoughts or serious mental health disorders.¹¹ Lastly, three studies point out that a coordinated, multilateral approach on a national level, involving all relevant stakeholders from the beginning, could be a facilitator when implementing telepsychotherapy.^{11,21,22}

User experiences

Despite overall high levels of satisfaction, individual experiences with telepsychotherapy have for the most part been mixed. When compared to standard face-to-face therapy, providers have issues adapting to the new technology and face

Table 7. Barriers to telepsychotherapy adoption.

| Barrier | # | % | Category |
|--------------------------------|----|------|------------|
| Technical issues | 12 | 66.7 | Contextual |
| Reimbursement issues | 8 | 44.4 | Contextual |
| Strict regulations | 7 | 38.9 | Contextual |
| Infrastructure | 7 | 38.9 | Contextual |
| Efficacy concerns | 6 | 33.3 | Efficacy |
| Lack of organizational support | 4 | 22.2 | Contextual |
| Low self-efficacy/confidence | 3 | 16.7 | Internal |
| Lack of need | 1 | 5.6 | Internal |

Table 8. Recommendations to promote telepsychotherapy adoption.

| Aspect | # | % |
|-----------------------------|----|------|
| Training and guidelines | 15 | 71.4 |
| Organizational support | 12 | 57.1 |
| Strong evidence of efficacy | 4 | 19.0 |
| Coordinated approach | 3 | 14.3 |
| Licensing | 2 | 9.5 |

challenges, but also see advantages and opportunities, at least for certain cases and situations. In this section, we discuss qualitative findings and the experiences of providers. For that purpose, we chose categories loosely based on those proposed by Lipschitz et al.²⁹: *Technology and Utilization*, *Therapeutic Process* and *Provider Well-being*.

Technology and utilization. The qualitative experiences with technology very much mirror those found through quantitative surveys. Issues related to inconsistent connection are being reported frequently.²⁸ This causes delays, disconnections, and distortions during the session, leading to misunderstandings, interruptions, and frustration on both sides. It especially becomes troublesome during highly emotional moments. Some providers would rather not meet at all than to be forced to work with an inconsistent connection, risking a negative impact on the therapeutic relationship and the progress of the session.

Having a bad connection ...is probably worse than us not meeting because we're just like freezing, and we can't get anything done.²⁹

Some other times, when the client's emotional state has been very strong, the Skype session has disconnected. When I see 'poor connection' coming up, I have learnt to tread carefully and possibly suggest we talk about something different. This has helped.³⁰

Additionally, many providers are concerned about the lack of infrastructure, appropriate devices, and sufficient abilities in the handling of these by older or financially disadvantaged patients in particular.^{11,28} One provider comments that the lack of technical infrastructure among patients limits opportunities for collaboration. For example, patients often print and fill out worksheets sent by email, but then have no way to scan and return the completed paperwork.²⁹ It is evident that robust online tools may ease such issues. Interestingly, therapists rate the importance of this issue vastly differently among the studies. While Lipschitz et al.²⁹ frequently report this issue when surveying providers in Massachusetts, USA, McBeath et al.³⁰ show that only one out of 51 interviewees in the UK actually found this issue. However, both these studies employed a convenience sample, so many factors may cause this imbalance.

What I also find challenging is like a lot of our patients don't have stable internet access ...since a lot of our patients are a little bit lower socioeconomic status, they have issues like, they're either like in car next to the library trying to get internet or people are like on their cell-phone and because they don't have a computer.²⁹

The issues regarding inconsistent connection and available infrastructure cause some providers to prefer

telepsychotherapy delivered via telephone instead of video at least in certain cases.^{29,30} Quantitative surveys by Guinart et al. however shows that both patients²⁰ and providers²¹ have much more positive experiences with therapy delivered via video calls compared to telephone, suggesting a preference for this technology. The study by Wright et al.²⁷ supports this finding, showing higher values for video calls across all attributes, including quality of care, user experience, and satisfaction. Only the ability to understand the patient was rated higher for telephone.²⁷

The experiences regarding factors surrounding the therapy process are in contrast mostly positive. Providers praise the increased accessibility of telepsychotherapy. Especially due to the lack of commute and ease of scheduling appointments, particularly for formerly underserved populations, like those of lower socioeconomic status and elderly patients, who may live in rural areas and find it difficult to travel, or those who lack the flexibility due to work or childcare.²⁸ Further, some therapists are thrilled about the lack of geographic barriers, allowing them to continue care with patients that moved away or vice-versa.

Advantages are that—you know—care is more accessible to certain people who have a hard time with busy schedules, with transportation, with certain types of anxiety. And I've seen actually a couple of patients do really well with engaging with weekly therapy these are people who have been recommended to do CBT by many doctors in the past for years and never engaged because—you know—going to therapy weekly is a lot. And so, they were able to do that [with telehealth].²⁹

I moved from London to the countryside recently and had to stop working with most of my established clients since they wanted to work face-to-face. Most of them have got in contact again now face-to-face isn't an option, and I'm finding we are able to reconnect without much difficulty.³⁰

Similarly, telepsychotherapy lowers the activation energy required to start or reengage in therapy, as the initial hurdle to overcome is much lower.³⁰

If something heavy is going on, to go to an office and kind of face that, you know, "I have to go in and talk about this thing" or trauma ...I think it's less of that if it's over Zoom.²⁹

Another advantage found is increased attendance to the scheduled appointments. While patients may be forced to cancel sessions due to an increased workload at the job or at home, competing priorities, or unfortunate circumstances such as closed train lines, car damage, or physical injuries. As telepsychotherapy requires much less time and effort to attend, there is simply less reason to ever cancel. The amount of unannounced no-shows has also decreased.

Now, even if a patient forgets his appointment, the provider can call him. Therapists describe that this is usually sufficient to still hold at least a slightly shorter session.²⁹ Guinert et al.²¹ show in their quantitative survey that 52% of providers experience an increase in attendance related to the technology, and 69% report that appointments start on time more often, mostly due to the lack of commute or intake delays. In total, 77% indicate that the ease of scheduling and rescheduling is a great advantage.²¹

The biggest one is that the no-show rates have plummeted because if I have a patient who forgets their appointment, I call them. And most of the time they're at home and they can just log on to Zoom and we start a little late as opposed to they miss the whole appointment. [...]²⁹

Therapeutic process. Delivering psychotherapy remotely has a great impact on the therapeutic process. One issue closely related to the aforementioned technical constraints lies in the limited visual cues and restricted non-verbal communication. In a video call, only a part of the patient's body, mostly the head, is visual. Additionally, delays and distortions in the video transmission further diminish any non-verbal cue. This makes it difficult to take into consideration posture, gestures, demeanor, and smell,²⁸ as well as subtle hints regarding self-harm or eating disorders.²⁹ It also restricts the provider in his ability to use important non-verbal communication like eye contact or offering a tissue to a crying patient, causing many therapists to feel less connected to their patients. Evidently, this problem is amplified if the therapy is delivered via telephone.²⁸ Quantitative studies find that many therapists were concerned about the impact on the therapeutic relationship due to these factors prior to the introduction of the technology.^{18,19} However findings by Bekes et al.¹⁷ show similar levels of working alliance and even higher levels of the real relationship of telepsychotherapy compared to face-to-face therapy.

Part of the non-verbal communication gets lost, and with that also some of the connection with your client.²⁸

I feel like the communication bandwidth is more restricted. You can – I feel like I can – get more emotional information from somebody's posture or body language when I can see more of them.²⁹

On the screen you work with two dimensional disembodied clients who are harder to relate to.³⁰

In exchange, telepsychotherapy provides therapists with an entirely new type of clinical insight. Through the camera, they catch a glimpse into the home environment of their patients, meet family, pets, and roommates, and learn about their surroundings, interests, and way of living. This allows providers to better understand their patients as well as family and home dynamics.^{28,29}

I think actually seeing people in their own environments, sometimes there's additional information that comes from that ...I've seen how nice some people's homes are. I've seen what they enjoy, like gardening, they've e showed me things that they are proud of. I think that's a part of someone's life that we don't get in an office so that's actually been really nice too and it's a part of treatment and it helps me understand what drives this person in a way I couldn't have understood before.²⁹

Additionally, many patients find it easier to disclose information about themselves as they feel more relaxed and safe in their own home.^{28,30} Lipschitz et al.²⁹ find that people do not feel the need to present themselves positively or as socially acceptable as much in video calls, and even less so in phone calls. However, for other patients the opposite is true. Many find it difficult to find confidential space at home and have to sit in a room with other people, in public, or in a car during the sessions. This makes them fearful of getting heard by others, causing them to be less open.^{11,29,30} This is especially an issue if family is a topic to be discussed in the session, such as in cases of trauma or domestic abuse.^{30,11}

I feel that clients often open up more quickly working this way as they're in the safety of their own home and feel less awkward about sharing details that may have taken a few sessions to elicit in a face to face clinic setting.³⁰

It was easier to access the really challenging things because [the patient was] alone and so during those times you see them look away from the computer ...it was almost like they would be able to fully allow that emotional experience to happen and process it. Where in person, I found people to feel the need to posture or maybe try to be socially appropriate.²⁹

So one of the things we've learnt with, with this ...pandemic is there's a challenge around people doing therapy in their own home you know ...particularly in trauma when you may have you know, perpetrator or something like that in the next room ...about safety and boundaries.¹¹

Some clients have no confidential space to talk in or indeed are living with the person who is the main problem or seems to be in their life and they find it difficult to talk knowing that person is nearby.³⁰

Another issue with the patient being at home may be the lack of seriousness caused by the overly casual feeling of being at home, surrounded by countless distractions. Lipschitz et al.²⁹ mention patients doing chores or cooking during the session. In a longitudinal study, Bekes et al.¹⁶ compare the perceived challenges of providers at the beginning of the Covid-19 pandemic and three months later. They show that while distractions were initially considered a challenge by 53.4% of therapists, this number rose to 69.7%, implying a significant negative

influence of this factor on the perceived quality of therapy.¹⁶ McBeath et al.³⁰ report the provider's ethical concerns about making accessing therapy too casual and not challenging enough, as it encourages avoiding real meetings.

I think often clients may ask for remote work as they feel less challenged by it [...]³⁰

Lipschitz et al.²⁹ find similar concerns about patients running from confrontation during a session by pointing the camera to the ceiling or turning it off—further distorting any visual cues.

In our past visits, they've said that they're fine, and I can't get a sense of how they appear because they turn the camera off or point it up to the ceiling ...If that person were in my office, I would be able to tell. It wouldn't be as easy to hide how badly they were feeling, or how severe their symptoms were.²⁹

Telepsychotherapy allows for entirely new ways of providing care. Due to the ease of scheduling and lack of commute, it is possible to tailor treatment plans specific to the patient's needs and at their preferred pace.^{29,11} This allows for check-ups in between sessions or multiple short appointments over the week, which may be especially important with patients at risk or experiencing severe anxiety.^{22,28} Simon et al.¹¹ find it especially helpful to provide patients with online material to access in between sessions and even after treatment ended. Further, telepsychotherapy allows for personalized exercises right in the comfort of one's home, for example, to perform tasks or exposure work:

I think in some ways, you could use the platform in a creative way. Like if patients are avoiding tasks, having them work through them in-session—in real time—in a way that wouldn't be possible coming into the office. Or if there's some type of in-home exposure work, that might be part of the therapy.... so I think that's also an advantage that it allows for more of an in vivo environment for an intervention that you can't really ...I mean, you could emulate in the office, but not really have in the same way as being in someone's house.²⁹

Despite the wide base of evidence supporting the effectiveness of telepsychotherapy, several concerns existed regarding the quality of care when using telepsychotherapy prior to its introduction. Many are surprised by how well they were able to perform therapy, and some even consider it superior to face-to-face therapy in certain cases. Some providers reminisce about the formerly negative attitude and the resistance to change in light of the recent experiences with the technology.

[T]he staff didn't want it to succeed and it didn't succeed. Now, we're talking about you know, telephone assessments are fantastic, we've been able to keep the service going, we must do more of these.¹¹

I think, going into it, I had the thought that it would be a lot different or awkward or ...it just wouldn't work as well as meeting in person ...that pretty quickly faded away, and it sort of feels like very similar work or richer work in some ways. So, I think, if anything, I became much more favorably disposed to virtual care ...there are a lot of advantages to it that were unknown to me prior to like diving into it head-first.²⁹

Overall, providers praise the quality of care when using telepsychotherapy.

I think that for the reasons that we kind of discussed—which is like the greater flexibility, more continuity of care, having more ease with which to share materials—I actually feel that [the quality of care has] improved overall which is also something I really wasn't expecting.

I don't think it is ideal as I would say face-to-face is the gold standard, but I have been surprised at how effective it has been—with both individuals and couples.³⁰

However, many providers state that they find the technology to be less suited for certain populations and conditions, such as attention deficit disorder (ADD)/attention-deficit/hyperactivity disorder (ADHD), trauma, psychosis or severe anxiety.^{28,29} The greatest concerns exist toward patients at risk, as the provider cannot ensure the safety of his patient and cannot intervene in case of emergency:

I have one patient who is probably my most severe who I worry a little bit about suicidal ideation and it is a little strange that there's this person I'm responsible for that I've never met and I've only seen on a screen ...If something goes wrong, it's a really big deal and that just feels different than someone I've sat with in my office ...I think it's just easier, it's, um, the person just feels more real.²⁹

Sammons et al.²⁶ show that only 24.4% of therapists feel comfortable providing telepsychotherapy to patients at a higher risk of suicidal behavior. In contrast, Simon et al.¹¹ find that some providers consider telepsychotherapy perfectly suitable not only for mild and moderate severity conditions in general, but also as a first-stage intervention for more complex issues, as to evaluate the need for further treatment.

I think we have to have a digital, a digital first mentality ... the least intensive intervention first, see how somebody responds to that ...if somebody does need a kind of one to one situation, that's gonna cost a lot of money, that we

haven't got a lot of people delivering, at least it's reserved for the people who really, really need it ...

Provider well-being. The establishment of telepsychotherapy and working from home has had both positive and negative impacts on the well-being of providers. Despite the overall great satisfaction with the technology, most providers report higher levels of fatigue and stress related to telepsychotherapy. Many therapists find it to be more demanding, especially due to the above-mentioned common technical issues and the higher level of required attention to focus on the patient despite the limited visual cues.²⁸⁻³⁰ This is especially an issue during the abrupt switch from face-to-face therapy caused by the pandemic that often forced providers to work with unfinished prototypes or make-shift solutions.¹² Quantitative research supports these findings. Farrer et al.¹⁹ show that 74.3% of providers are satisfied with the technology, yet 79.5% feel more exhausted using it, and Bekes et al.¹⁵ find that many feel more tired, less confident, and less competent using telepsychotherapy. Messina and Loffler-Stastka²³ show that providers feel more boredom and anxiety, but less flow. Some therapists cope by spreading out their workload:

I have had to spread my clients out over another day—working online is very intense.³⁰

In contrast, Lipschitz et al.²⁹ find that therapists often enjoy better workplaces at home, listing more light, better air quality, and improved access to materials during sessions as advantages. Many providers are constantly working to improve their office at home to counter the aforementioned limitations and strains, for example, by remodeling it in a way to allow for sessions to be held standing or while moving around, or by applying cinematographic theory:

I am constantly updating how I work remotely—trying different platforms [...] Updating technology [...] Changing my room around for comfortable seating & standing sometimes...³⁰

The more I learn about elements of theatre or film (set design/location, lighting, camera angle, sound), the more creatively I can configure the situation to support dynamic contact with my clients.³⁰

Many find it difficult to separate work and downtime, for example, to switch between their family mode and therapist mode without the temporal and spatial divide and others miss the time to decompress in the car after a day's work:

I have really noticed how hard it is to move from therapist mode to parent-mode by merely walking through a door (as opposed to having a journey home in a car or public transport)!³⁰

I work and then I move a few feet and then that's my down time so hearing about trauma for 8 hr a day in my typically safe space, that was a really hard adjustment to make.... I always found the separation, like the psychological weight easier.²⁹

Another matter increasing stress and fatigue is the lack of a social life during the workday, where often in practice therapists would connect and unwind in between sessions. However, some found this to be an advantage as well, claiming it would decrease interruptions.²⁹

I really missed my coworkers, because back when I was at the clinic 'our desks were together' and we'd always kind of debrief with each other after sessions. But now, it can be hard because I'll just go from Zoom meeting to Zoom meeting and just really kind of, by myself, sit with whatever I just processed with the patient.²⁹

Working from home, I don't get as interrupted as much, you know, 'cause at work, people are ' you know ' they'll come by, ' oh, can I talk to you for a minute?' Or I'm running to and from meetings, and then you run into people [...]²⁹

While therapists find it to be helpful to catch a glimpse into the homes and lives of their patients, many feel like the reverse is invasive to their privacy.

When I'm in my own house and I'm Zooming with a person...I almost felt that I was being intruded upon. Like you're Zooming into the emergency department, and somebody's staring at you that's really angry, that doesn't want to be evaluated, and I'm in my bedroom.²⁹

Providers are often happy about the lack of commute, saving valuable time during the day and a stressful drive to the office during rush hour.^{28,29} Feijt et al.²⁸ further show that providers consider telepsychotherapy to be a more convenient alternative to face-to-face therapy and state that it allows for a better family life as well as to care for children or the elderly. Lipschitz et al.²⁹ agree and add that working from home as well as the increased flexibility allows for breaks to perform exercises or do chores during the day. McBeath et al.,³⁰ however, find that such breaks are not an advantage but a requirement to cope with the increased level of stress and fatigue.

I also find that I myself like that I don't have to 'you know' get dressed up every day and fight traffic to get into the office to go see patients. I think it puts me in a more relaxed state in the morning.²⁹

Working online is very intense, or at least it has seemed to me. Exercise has been very important in order to discharge some of the anxiety - both my own and that of my clients.³⁰

I very seldom write poetry and have not done so for over a decade, but this last week wrote a reasonably good one about a patient. I suspect it has to do with my way of coping with stress arising from remote work.³⁰

It can be seen that the assessment of the effects of telepsychotherapy on provider well-being is mixed and requires a personal evaluation in each individual case. In the long term, the technology has the potential to be a positive impact on the work–life balance and satisfaction of therapists if it is portioned purposefully, for example, on certain days of the week or according to personal circumstances. Providers themselves can contribute a lot to their well-being when using remote therapy by adapting their home office to the unique requirements of the technology and, in particular, by establishing fixed rituals and routines, scheduling breaks, and structuring the workday.

Discussion

Research opportunities

- The clear majority of the references examine telepsychotherapy from the provider's point of view. Nevertheless, in cases where, for example, therapists are asked about the satisfaction of their patients, there is a clear discrepancy with those papers in which the patients were asked directly. More research is therefore needed regarding patient's point of view, especially qualitative interviews.
- Almost all studies are momentary snapshots. However, since diffusion is an ongoing process, longitudinal research is needed to evaluate the course of (1) actual use over time, (2) satisfaction with the technology, (3) changes in attitudes over a prolonged time, and (4) future intention to use.
- Positive attitude regarding telepsychotherapy could be influenced by the ubiquitous advantage of active pandemic control. Therefore, it is important to examine how attitude will develop if this factor continues to decline in significance.
- There is a clear focus of the research on data from the US and Western Europe, which is not necessarily applicable to the needs and experiences of providers from other regions. Therefore, input from other areas of the world is urgently needed.

Limitations and strengths

This literature review holds some limitations and potential weaknesses that could be addressed in future research.

- In this scoping literature review, information was gathered from different studies and sources without assessing

or weighing the quality, accuracy, and validity of the papers. Instead, the focus was on collecting evidence to provide an overview of the research topic and assist researchers. Therefore, no assertions or suggestions can be made about the representative distribution or importance of identified barriers, promotion factors, and experiences, nor is possible to derive a fair general comparison between them.

- Furthermore, the evaluation of qualitative papers within the scope of the review was carried out by employing an open-coding process based on the categories provided by the references. Therefore, the discussed categories could be considered arbitrary.
- As previously mentioned, much of the research focuses on the US and European regions, while other parts of the world are hardly covered. It is therefore doubtful whether the results can be considered universally valid.
- Lastly, the selection of search keywords is, as with every literature review, a topic for debate. As shown above, there seems to be no consensus on the appropriate terminology. Therefore, we deliberately did not impose a pre-defined set of keywords on the search process, but rather applied an iterative process, adding relevant keywords along the way until we reached the set displayed in this article, of which sufficiency we are confident.

In contrast to the aforementioned limitations, our approach offers several strengths listed below.

- Firstly, we address the specific topic of user experiences and evaluation of telepsychotherapy in the context of the Covid-19 pandemic from many different angles, considering both quantitative and qualitative research. We are therefore able to provide a comprehensive overview of this rapidly evolving issue, profiting from both statistical results and individual experiences, to summarize current research findings.
- Through this approach, the article also aims to identify trends, needs, and research gaps to aid in future research.
- The qualitative experiences and findings of various providers are compared and contrasted in order to achieve a better understanding of the different opinions, approaches, and strategies in the realm of telepsychotherapy. The qualitative comparisons are underpinned with illustrative quotes and enriched with quantitative insights to contextualize the findings.
- In addition, the article provides information on valuable starting points for promoting telepsychotherapy and potentially other new technologies in the psychotherapeutic and medical fields. This may support both policy-makers and providers.

Conclusions

Satisfaction with telepsychotherapy is generally high among patients and providers alike. Moreover, it is shown to increase both over time since the initial onset of the Covid-19 pandemic and over the longer duration of provider use. This can be seen in the example of Farrer et al.,¹⁹ who show that satisfaction with the technology of the surveyed providers increased from 50.0% to 74.3% within three months. After initial concerns, several therapists are pleasantly surprised by the effectiveness and advantages of telepsychotherapy and perceived fewer challenges.

The intention to use among providers is also high, however, mostly supports a hybrid system of face-to-face and remote therapy, to take advantage of the benefits of both approaches and better address the personal needs of individual patients. Pierce et al.⁹ show for example an increase in the workload carried out by telepsychotherapy from 7.1% to 85.5% during the Covid-19 pandemic in May 2020, with a self-reported expected usage of 35.0% in the future. 89.2%.

Yet, barriers inhibiting the diffusion of the technology still exist. These include mostly contextual factors, such as *technical issues*, *reimbursement issues*, *strict regulations*, *insufficient infrastructure*, and a *lack of organizational support*. Concerns regarding the *efficacy* of telepsychotherapy still play a role, especially regarding vulnerable populations and certain medical conditions.

The most important factors promoting the acceptance of the technology are sufficient *training* and available *guidelines*, as well as *organizational support*.

Implications for policymakers can be derived. The most important factors to foster the implementation of new technologies that should be provided to them are transparent, easy-to-understand regulations and convenient reimbursement for providers. In addition, training should be provided and official guidelines for best practices should be made available. Licensing for the use of telepsychotherapy, for example, would be useful. The increased satisfaction correlating to exposure duration indicates a need to create easy and accessible opportunities to test new technologies. Lastly, it is the responsibility of public authorities to ensure that underserved populations, in particular, have the necessary equipment and connections to receive the healthcare they need.

The use of telepsychotherapy has a noticeable impact on the *therapeutic process*, the evaluation of which is considered mixed by providers. Some challenges emerge, such as distractions, reduced visual cues, and providing confidential space for patients. On the other hand, there are also benefits, such as the provision of additional information through insight into the patient's life circumstances, personally tailored forms of therapy, or collaborative exercises in a private space. Some patients feel more comfortable and

open in their own home, while others feel more comfortable in the neutral space of the therapist's office. In general, therapists indicate that telepsychotherapy is well suited for many populations, but not for particularly severe cases, such as trauma, psychosis, or patients at risk. Most providers experience a very positive influence of telepsychotherapy on processes surrounding the therapy, namely accessibility, attendance, and activation energy.

The effects on *provider well-being* are also considered in a differentiated manner. Several providers experience telepsychotherapy as more demanding and report increased levels of fatigue. Some are bothered by the lack of separation between their workplace and safe space, and some miss the time to decompress on their commute after work. To combat these challenges, providers should find suitable coping mechanisms, establish structured downtimes and rituals at home, as well as tailor their workspace to the specific needs of the technology. Positive effects include time savings, flexibility, and an improved work-life balance that makes family life easier, especially when children or parents are being cared for.

In conclusion, it can be said that telepsychotherapy has become an integral part of psychotherapeutic care in the long term due to the extraordinary circumstances of the Covid-19 pandemic. However, it will not replace traditional face-to-face therapy. Instead, it is becoming apparent that a hybrid system in close coordination between provider and patient will prevail, which addresses the individual needs of both parties in order to achieve optimal care and provider well-being at the same time. Several reports indicate that the compulsory usage of the technology caused a positive reevaluation by the users. To ensure sustainable diffusion, transparent regulations, guidelines, and standards are required.

Acknowledgements: Not applicable, as all contributors to this paper are listed as authors. The funders had no role in the design of the study, in the collection, analyses, or interpretation of data, in the writing of the manuscript, or in the decision to publish the results.

Contributorship: BB contributed to conceptualization, methodology, validation, formal analysis, investigation, data curation, writing and original draft preparation, visualization, editing, project administration, and funding acquisition. LK contributed to formal analysis and investigation. BK contributed to supervision, review, and editing.


Declaration of conflicting interests: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical approval: Not applicable, as this article does not contain any studies with human or animal subjects.

Funding: The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the Open Access Publication Fund of the Westfälische Hochschule, University of Applied Science.

Guarantor: BB

ORCID iDs: Benjamin Butz  <https://orcid.org/0000-0002-8706-2356>

Leonie Kloep  <https://orcid.org/0000-0002-1492-2685>

References

- Harst L, Lantzsch H and Scheibe M. Theories predicting end-user acceptance of telemedicine use: systematic review. *J Med Internet Res* 2019; 21: e13117.
- Klamroth-Marganska V, Gemperle M, Ballmer T et al. Does therapy always need touch? a cross-sectional study among Switzerland-based occupational therapists and midwives regarding their experience with health care at a distance during the COVID-19 pandemic in spring 2020. *BMC Health Serv Res* 2021; 21: 578.
- Drissi N, Ouhbi S, Idrissi MAJ et al. Connected mental health: systematic mapping study. *J Med Internet Res* 2020; 22: e19950.
- Frank F, Ower N, Zech J et al. Videokonferenzbasierte psychotherapeutische anschlussbehandlung: qualitative fallstudie mit einem cbasp-ansatz. *Psychotherapeut* 2017; 62: 355–360.
- Wilhelmsen M, Høifødt RS, Kolstrup N et al. Norwegian general practitioners' perspectives on implementation of a guided web-based cognitive behavioral therapy for depression: a qualitative study. *J Med Internet Res* 2014; 16: e208.
- Obermann K, Brendt I, Müller P et al. Ärztliche Arbeit und Nutzung von Videosprechstunden während der Covid-19-Pandemie — eine gemeinsame repräsentative deutschlandweite Befragung ambulant tätiger Ärztinnen und Ärzte durch die Stiftung Gesundheit in Zusammenarbeit mit dem health innovation hub, 2020. URL https://www.stiftung-gesundheit.de/pdf/studien/aerzte-im-zukunftsmarkt-gesundheit_2020_1.pdf.
- von Elm E, Schreiber G and Haupt CC. Methodische anleitung für scoping reviews (jbi-methodologie)(figure presented.). *Z Evid Fortbild Qual Gesundheitswes* 2019; 143: 1–7.
- Arksey H and O'Malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Methodol: Theory Pract* 2005; 8: 19–32.
- Pierce BS, Perrin PB, Tyler CM et al. The covid-19 telepsychology revolution: a national study of pandemic-based changes in U.S. mental health care delivery. *Am Psychol* 2021; 76: 14–25.
- McKee GB, Pierce BS, Donovan EK et al. Examining models of psychologists' telepsychology use during the COVID-19 pandemic: a national cross-sectional study. *J Clin Psychol* 2021; 77: 2405–2423.
- Simon N, Ploszajski M, Lewis C et al. Internet-based psychological therapies: a qualitative study of national health service commissioners and managers views. *Psychol Psychother: Theory Res Pract* 2021; 94: 994–1014.
- Barkai G, Gadot M, Amir H et al. Patient and clinician experience with a rapidly implemented large-scale video consultation program during COVID-19. *Int J Qual Health Care* 2021; 33: mzaa165.
- Krahe MA, Conway M, Howells S et al. Rapid transition of an allied health clinic to telehealth during the COVID-19 pandemic: satisfaction and experience of health professionals, student practitioners, and patients. the internet journal of allied health sciences and practice. *Int J All Health Sci Internet J All Health Sci Pract* 2021; 19: Article 9.
- Beck-Hiestermann FML, Kästner D and Gumz A. Onlinepsychotherapy in times of coronavirus disease 2019: Cross-sectional survey of german psychotherapists. *Psychotherapeut* 2021; 66: 372–381.
- Bekes V and van Doorn KA. Psychotherapists' attitudes toward online therapy during the COVID-19 pandemic. *J Psychother Integr* 2020; 30: 238–247.
- Bekes V, van Doorn KA, Luo X et al. Psychotherapists' challenges with online therapy during COVID-19: concerns about connectedness predict therapists' negative view of online therapy and its perceived efficacy over time. *Front Psychol* 2021a; 12: 705699.
- Bekes V, van Doorn KA, Zilcha-Mano S et al. Psychotherapists' acceptance of telepsychotherapy during the COVID-19 pandemic: a machine learning approach. *Clin Psychol Psychother* 2021b; 28: 1403–1415.
- Witte NAD, Carlbring P, Etzelmueller A et al. Online consultations in mental healthcare during the COVID-19 outbreak: an international survey study on professionals' motivations and perceived barriers. *Internet Interv* 2021; 25: 100405.
- Farrer LM, Clough B, Bekker MJ et al. Telehealth use by mental health professionals during COVID-19. *Aust NZ J Psych* 2022. DOI: 10.1177/00048674221089229.
- Guinart D, Marcy P, Hauser M et al. Patient attitudes toward telepsychiatry during the COVID-19 pandemic: a nationwide, multisite survey. *JMIR Ment Health* 2020; 7: e24761.
- Guinart D, Marcy P, Hauser M et al. Mental health care providers' attitudes toward telepsychiatry: a systemwide, multisite survey during the COVID-19 pandemic. *Psychiatr Serv* 2021; 72: 704–707.
- Haxhihamza K, Arsova S, Bajraktarov S et al. Patient satisfaction with use of telemedicine in university clinic of psychiatry: Skopje, north Macedonia during COVID-19 pandemic. *Telemed e-Health* 2021; 27: 464–467.
- Messina I and Loffler-Stastka H. Psychotherapists' perception of their clinical skills and in-session feelings in live therapy versus online therapy during the COVID-19 pandemic: a pilot study. *Res Psychoth: Psychopathol Process Outcome* 2021; 24: 53–59.
- Mishkin AD, Cheung S, Capote J et al. Survey of clinician experiences of telepsychiatry and tele-consultation-liaison psychiatry. *J Acad Consult Liaison Psychiatry* 2021; 63: 334–344.
- Molfenter T, Heitkamp T, Murphy AA et al. Use of telehealth in mental health (MH) services during and after COVID-19. *Community Ment Health J* 2021; 57: 1244–1251.
- Sammons MT, Elchert DM and Martin JN. Mental health service provision during COVID-19: results of the third survey of licensed psychologists. *J Health Ser Psychol* 2021; 47: 119–127.

27. Wright J, Dewan S, Hilty D et al. Health care providers' perceptions of quality, acceptance, and satisfaction with telebehavioral health services during the COVID-19 pandemic: survey-based study. *JMIR Ment Health* 2020; 7: e23245.
 28. Feijt M, Kort YD, Bongers I et al. Mental health care goes online: practitioners' experiences of providing mental health care during the COVID-19 pandemic. *Cyberpsychol, Behav, Soc Network* 2020; 23: 860–864.
 29. Lipschitz JM, Connolly SL, Boxtel RV et al. Provider perspectives on telemental health implementation: Lessons learned during the COVID-19 pandemic and paths forward. *Psychol Serv* 2022. DOI: 10.1037/ser0000625.
 30. McBeath AG, du Plock S and Bager-Charleson S. The challenges and experiences of psychotherapists working remotely during the coronavirus* pandemic. *Couns Psychother Res* 2020; 20: 394–405.
 31. Volk J, Palanker D, O'Brien M et al. States' actions to expand telemedicine access during COVID-19 and future policy considerations. Commonwealth Fund, June 2021; DOI:10.26099/r95z-bs17.
-