Drivers and Barriers Affecting the Acceptance and Adoption of EMH by Mental Health Professionals during and after COVID-19: a Scoping Review

Constance Wullink

Master's Thesis

Faculty of Behavioural, Management and Social Science, University of Twente

Positive Clinical Psychology and Technology

13 March 2025

First supervisor: Dr. M. Nieuwenhuis

Second supervisor: Prof. Dr. M. Noordzij

Abstract

Background The acceptance and adoption of e-mental health (EMH) by mental health professionals is increasing due to awareness of its benefits and accessibility to mental health care. During the COVID-19 pandemic, face-to-face care was not possible due to the restrictions, which also increased the use of EMH tools. **Objective** We aim to conduct a scoping review to identify the research gap regarding the drivers and barriers to the acceptance and adoption of EMH among mental health professionals, focusing on literature from 2020-2024, to also examine the requirements of change to improve the adoption of EMH. **Methods** Three databases were searched between 2020-2024 for research articles meeting the predefined inclusion criteria containing drivers and barriers of acceptance and adoption of e-mental health interventions among mental health professionals. **Results** The findings suggested that the most common drivers experienced by mental health professionals were flexibility, general work experience, EMH experience by psychologists, and self-help enhancement. The most common barriers found in the studies were technical challenges, fatigue because of using online tools, and professional challenges. The results also found the need for better training, tools, and implementation guidelines to support the adoption of EMH. **Conclusion** Current drivers and barriers affecting mental health professionals' acceptance and adoption of EMH have been identified, such as the relatively new barrier fatigue that was brought to light after COVID-19. The findings imply that while the COVID-19 pandemic may have temporarily increased the necessity for EMH use, it did not lead to a fundamental shift in psychologists' perspectives or intrinsic motivations for using EMH. Research on the long-term effects of fatigue due to EMH, personal traits affecting EMH acceptance, and strategies to bridge the gap in experience with using EMH can help with being able to utilize EMH more effectively and more frequently by mental health professionals.

Drivers and Barriers Affecting the Acceptance and Adoption of EMH by Mental Health Professionals during and after COVID-19: a Scoping Review

E-mental health (EMH) is defined as the use of digital tools to prevent and treat mental health disorders. Examples include mobile applications, wearable devices such as smartwatches, digital games, forums, and virtual reality (Schueller, 2018). EMH interventions are used to effectively treat depression (Karyotaki et al., 2021), anxiety, and mood disorders (Orman et al., 2014). Furthermore, a prior systematic review and meta-analysis has demonstrated that internet-based treatment is equally effective as face-to-face treatment for many disorders, including social anxiety, panic disorder, and spider phobia (Andersson et al., 2014). Thus, EMH can complement or replace traditional therapy for some clients.

There are more benefits of using EMH, besides its effectiveness. Reported benefits of using EMH by psychologists include increased client satisfaction, new treatment possibilities, and an improved therapeutic relationship (Feijt et al., 2018). EMH also expands access to care, especially in remote areas (Chester & Glass, 2006). Furthermore, personal support of therapists during computerized cognitive behaviour therapy (cCBT) interventions, increased the compliance of clients to complete the module and reduced attrition (Musiat & Tarrier, 2014). Using EMH is cost-effective and therefore appealing to increase its use (Andrews et al., 2010; Musiat & Tarrier, 2014). In conclusion, the diverse benefits of EMH could transform how psychologists treat their patients.

Despite its benefits, EMH remains underused by professionals and organisations (Feijt et al., 2018). Current studies focus on the drivers and barriers of EMH by clients, psychologists, online counsellors, and healthcare workers (Feijt et al., 2018; González-Robles et al., 2024; Reynolds et al., 2015). Understanding the drivers and barriers of psychologists and psychotherapists in their perspective on EMH is crucial to be able to effectively adopt and implement EMH interventions in practice. By identifying the current drivers and barriers

faced by these professionals, strategies can be developed to support and enhance their acceptance and adoption of EMH, ultimately also benefiting clients.

The onset of the COVID-19 pandemic led to the enhancement of the potential benefits of e-mental health programs by the need to adapt mental health services to social distancing and stay-at-home measures (Ellis et al., 2021). Due to the COVID-19 pandemic, many psychologists and clients experienced their first time using e-mental health or relied on telepsychotherapy (Van Daele et al., 2020). Therefore, examining the changes in the acceptance and adoption of EMH interventions since COVID-19 can provide valuable insights into how psychologists' perspectives have shifted due to the pandemic. Additionally, it can help identify any significant changes in the drivers and barriers influencing their use of EMH. Even though individual studies have previously investigated the drivers and barriers of EMH acceptance and adoption of specific tools, to the best of our knowledge, no broader review has synthesized this evidence. Current literature studies focus mostly on EMH interventions for a specific disorder (e.g. mood disorder by Vis et al., 2018), blended therapy (e.g. for depression by Titzler et al., 2018) or on the experiences of patients (Wilson et al., 2021), rather than providing a comprehensive overview of how EMH tools are used more broadly. The added value of this scoping review would be that the information of the individual studies about specific tools will be synthesized into a general overview of the current drivers and barriers in acceptance and adoption of EMH and therefore looking at the difference from before and after the COVID-19 pandemic.

Drivers and barriers of acceptance and adoption of EMH

Understanding the factors influencing the acceptance and adoption of EMH, seen as drivers and barriers, is crucial for the successful adoption and implementation of EMH. Acceptance and adoption represent different stages of use and integration of EMH interventions. Acceptance refers to the attitudes, perceptions, and willingness of psychologists

and psychotherapists to use EMH tools (Venkatesh and Davis, 2003). Adoption of EMH interventions happen when professionals make an active decision to use them (Feijt et al., 2018). The Unified Theory of Acceptance and Use of Technology (UTAUT) model is often used when analysing the acceptance of a new technology (Venkatesh and Davis, 2003). The objective of UTAUT is to evaluate the potential success of new technologies and to identify the factors of their acceptance (Ammenwerth, 2019). According to Staeck et al. (2022), which uses the UTAUT model, psychotherapists-in-training showed moderate acceptance of e-mental health interventions. The study showed two significant constructs from the UTAUT model that were predictive of EMH acceptance. The constructs were performance expectancy and social influence. Moreover, the concern about the therapeutic alliance was seen as a barrier. Other studies have found additional factors influencing technology acceptance. A study by Conti et al. (2016) found that professionals were more likely to accept and intend to use a robotic platform for educating and caring for children with developmental disabilities if they perceived it as enhancing and facilitating the therapeutic process. Furthermore, in a study by Van Assche et al. (2022), they tried to implement an EMH application called Moodbuster to bridge the gap between inpatient and outpatient care. Even though, the hospital leaders were excited about the application, the implementation of the application did not go as expected because the team did not use a structured implementation protocol. These findings note the importance of understanding the factors influencing the acceptance and adoption of EMH and highlight the need for tailored implementation strategies that address both drivers and barriers.

An interview study by Feijt et al. (2018) found several drivers that influence clinical psychologists to use and adopt EMH. These include their view of improved accessibility in care, belief in the possible benefits of EMH, increasing experience with EMH, and satisfaction of clients' needs and efficiency in delivering mental health services. Furthermore,

drivers such as the ability of EMH to complement traditional therapeutic approaches and the potential for these technologies to enhance outcomes were mentioned. The Levels of Adoption of eMental Health Model (LAMH) outlines EMH adoption, identifying key drivers, barriers, and necessary changes. The requirements for change mentioned are the ease of use of a technology, guiding principles and contact with other professionals who feel motivated to use EMH. The LAMH model identifies specific drivers beyond those captured by UTAUT, such as professional motivation and structural requirements for adoption.

A model such as UTAUT emphasizes perceived usefulness and ease of use as core determinants of acceptance, but these factors can also reveal barriers, such as the lack of ease of use and insufficient organizational support (Feijt et al., 2018; Nwaogu et al., 2021; Oudshoorn et al., 2024). Furthermore, other barriers that are mentioned by psychologists are about the quality of the therapeutic relationship in an online setting, a lack of evidence supporting the effectiveness of EMH interventions, and insufficient training or technical knowledge among professionals (Feijt et al., 2018).

Impact of the COVID-19 pandemic on the acceptance and adoption of EMH

Due to the enforced lockdowns because of the COVID-19 pandemic, in-person therapy was often not possible. As a result, studies show increased use of EMH due to the corona pandemic (Abraham et al., 2021; Feijt et al., 2020; Staeck et al., 2022). Staeck et al., 2022 found that the acceptance of EMH was significantly lower before the COVID-19 pandemic by psychotherapists-in-training. An explanation for this could be that psychotherapists-in-training had the possibility to develop experience and engage with EMH. This could help them expand their knowledge of EMH tools (Staek et al. 2022). Another study by Feijt et al. (2023) found that a large increase of the use of EMH was found in a period over and during the COVID-19 pandemic. However, this increase was mainly for relatively basic EMH tools such as videoconferencing. The pandemic caused for an

uncommon context in which professionals started using EMH out of necessity rather than choice. Professionals may experience new drivers and barriers because of this change. Therefore, examining studies from the time of the start of the COVID-19 pandemic can lead to new insights in the drivers and barriers that professionals experience in their use and adoption of EMH.

Current study

This scoping review aims to identify the research gap regarding the drivers and barriers to adopting EMH among mental health professionals focusing on literature from the past four years, since 2020, and to also examine the impact of COVID-19 and the requirements for acceptance and adoption of EMH. Therefore, the following research questions were formulated:

1) What are different types of EMH technologies that psychologists and psychotherapists use?

2) Which drivers and barriers to the acceptance and adoption of EMH experienced by psychologists and psychotherapists were explored, and what were their effects?

3) To what extent did the COVID-19 pandemic require psychologists and psychotherapists to change?

4) Were there other requirements for acceptance and adoption of EMH mentioned?

Method

A scoping review has been defined as a "preliminary assessment of potential size and scope of available research literature and it aims to identify the nature and extent of research evidence" (Grand & Booth, 2009, p. 101). Scoping reviews are a good tool to give a clear overview of the volume of literature and the available studies on the subject (Munn et al., 2018). This review aims to provide an overview of the available literature and identify knowledge gaps. The current scoping review followed the five-step methodological guide described by Arksey & O'Malley (2005): 1. Identifying the research question, 2. Identifying

relevant studies, 3. Study selection, 4. Charting the data, and 5. Collating, summarizing and reporting the results. Additionally, the PRISMA-ScR guideline for reporting results was adhered to (Tricco et al., 2018).

Search strategy

The search was conducted on the 25th of September. The electronic databases Scopus, PsycINFO, and Web of Science were used to find relevant studies across a wide variety of disciplines, including the social sciences, technology, medicine, and psychology. The search strategy was designed to include four relevant constructs about the research questions, namely "E-mental health", "Drivers and barriers", "Acceptance and adoption" and "Mental health professionals" (referring to psychologists and psychotherapists). The search term "implementation" was included to ensure a broad reach of articles covering the acceptance and adoption processes of EMH interventions. Articles from 2020 until 2024 were included. The complete search strategy can be found in Table 1. The same search strategy was entered in each database. The search terms could appear in the article's title, abstract, or keywords.

Table 1

Search strategy

Construct	Search terms
E-mental health	"e-mental health" OR "tele-mental health" OR "digital mental health" OR "internet-based mental health" OR "e-therapy" OR "online therapy" OR "e-counseling" OR "digital therapy"
Drivers and barriers	drivers OR barriers OR facilitators OR obstacles OR opportunities OR challenges
Acceptance and adoption	adoption OR acceptance OR implementation OR use OR usage OR "intent to use" OR willingness OR readiness
Mental health professionals	Psycholog* OR psychotherap*

Inclusion and exclusion criteria

All articles identified through the databases were imported into the review management system Covidence. Duplicate articles were removed automatically. Studies were screened for eligibility following the inclusion and exclusion criteria, which can be found in

Table 2. The screening process consisted of two steps, looking at the title and abstract, then looking at the full text.

Table 2

Inclusion and exclusion criteria

	Inclusion	Exclusion
Topic	Focusses on drivers and barriers of acceptance and adoption of e-mental health among psychologists and psychotherapists during and after the COVID-19 pandemic	
Type of literature	Peer-reviewed articles English language Articles that are published in 2020 or later	Grey literature Reviews Other languages then English
Population	Professionals in the field of mental health called psychologists or therapists	Experiences of clients Professionals with occupations other than psychologist or therapist
Type of EMH	Interventions or tools based on e-mental health (e.g. internet-based cognitive behavioural therapy, digital mental health coaching, virtual reality therapy, online support groups, teletherapy such as video conferencing)	Non-EMH related interventions, medical e-health interventions
Drivers and barriers	Individual factors such as qualities, opinions, experiences of the psychologists or psychotherapists	Institutional factors and organizational factors

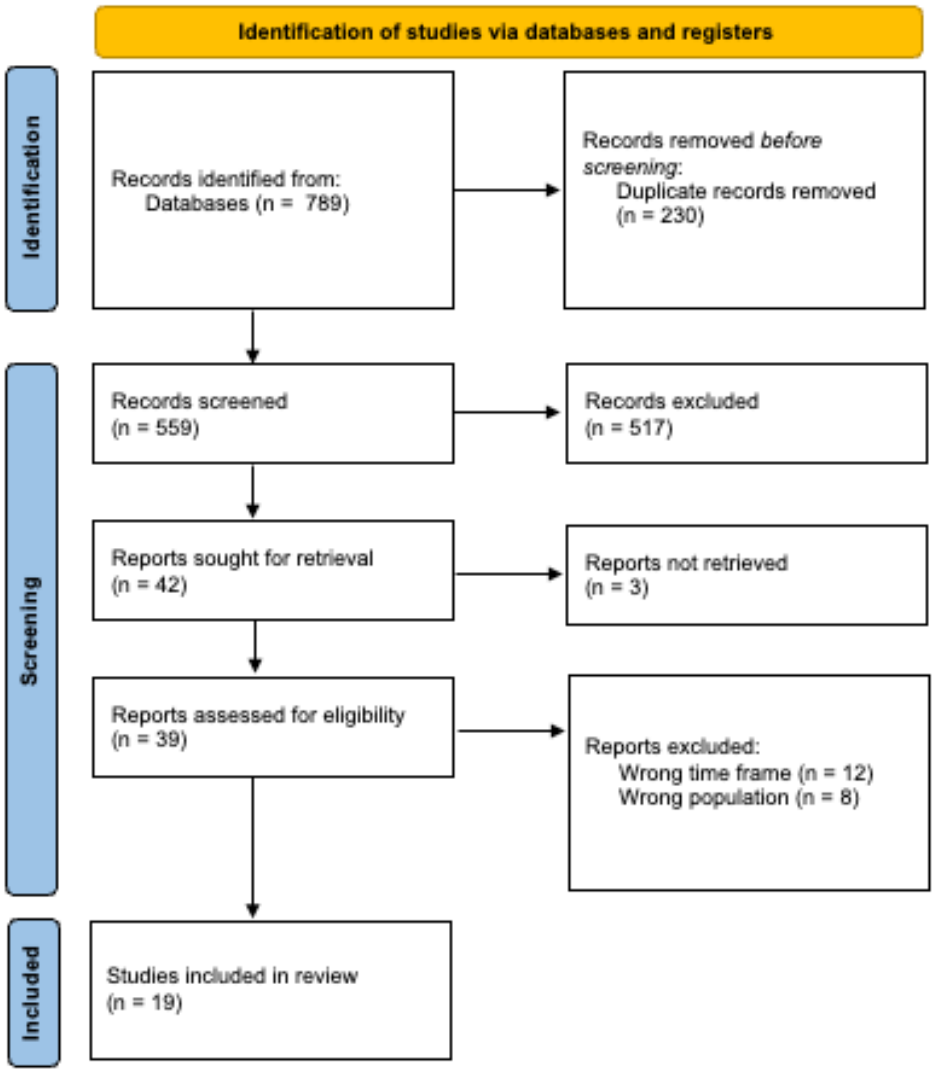
Study selection

The search within databases resulted in a set of 789 documents. Duplicated studies were removed by Covidence, 559 studies remained. First, all the articles were screened and reviewed, looking at the title and abstract. Studies were divided into three options: yes, no, and maybe. Articles selected in the maybe option, were articles where the eligibility of the article based on the inclusion and exclusion criteria was not clear enough while only reading

through the title and abstract. The articles selected in the option “maybe” were reviewed again while screening the full text. After this step, there remained 42 articles that were searched and downloaded using the Covidence linking system and assessed for eligibility based on inclusion and exclusion criteria by reading the full-text articles. Three articles were not accessible and therefore not included in the scoping review. Using a spreadsheet to organize the information and compare whether the articles meet the inclusion and exclusion criteria, 19 articles remained eligible for this scoping review. Therefore, the final set of studies for this scoping review consists of 19 research articles (see Figure 1).

Figure 1

PRISMA flow chart



Data extraction

The following data were extracted from the articles and organized in a table for further analysis: study characteristics (author(s), research design, and time frame of research), population (psychologists, psychotherapists, and therapists), sample size, age (mean or range), gender and the type of EMH (i.e. videoconferencing or internet-based cognitive therapy (iCBT)). Additionally, relevant drivers, barriers, and requirements for acceptance and adoption of EMH were extracted from the text. To synthesize the extracted data, themes were identified across the three sections (drivers, barriers, and requirements for acceptance and adoption), and patterns within the selected information were analysed.

Results

Study and sample characteristics

After the data extraction, 19 studies have been included in this scoping review. Table 3 shows the selected information of the included studies. Most research was conducted during the early periods of the COVID-19 pandemic lockdowns, around March 2020 until the end of 2020 (Békés et al., 2023; Cioffi et al., 2020; Doorn et al., 2020; Scott et al., 2022). Furthermore, studies were conducted from 2020 until 2022 (Aldaweesh et al., 2024; Andrews et al., 2023; Nogueira-Leite et al., 2023). Out of the 19 included studies, 13 were focussed on videoconferencing and the experience of psychologists using this. The other studies were focussed on the use of digital application and tools by psychologists, such as mental health apps and telehealth platforms (Aldaweesh et al., 2024; Santos et al., 2023; Nogueira-Leite et al., 2023; Scott et al., 2022; Weitzel et al., 2023). One other study focussed specifically on Guided iCBT (Bortveit et al., 2023). A variety of study designs were used. Four studies used mixed methods design, and seven studies used qualitative methods. Another eight studies used a quantitative design. Four of these studies are cross-sectional studies. Out of all the

studies eleven used surveys for the data collection process and eight studies used semi-structured interviews.

The reviewed studies included sample sizes ranging from 5 to 1257 participants. Various professional roles were included in this study, such as family and systemic therapists, psychotherapists, and psychoanalysts (Beet & Ademosu., 2023; Croxford et al., 2023; Stadler et al., 2023). In some studies, there is a distinction made between licensed therapists and trainees (Croxford et al., 2023; Stadler et al., 2023). Other studies included other healthcare providers such as social workers, psychiatrists, and general practitioners (Bortveit et al., 2023; Machluf et al., 2021). Most participants in the included studies were female, ranging from 65% to over 90%. The ages of the participants varied widely, ranging from early twenties until their eighties. Their professional experience spanned from less than a year to over 40 years of experience. Santos et al. (2023) focused mostly on early-career therapists with 0-5 years of experience. Békés et al. (2022) had a majority of more experienced professionals with more than 17 years of experience. The population of the included studies shows mainly psychotherapists and clinicians from different countries such as the United States, Canada, the United Kingdom, and other countries in Europe.

Drivers of psychologists to use EMH

The included studies identified various drivers of psychologists to make use of EMH interventions. The drivers that are mentioned more than once are listed in the text; the rest of the drivers are listed in Table 3.

Flexibility

The driver flexibility was mentioned in 6 out of the 19 studies, meaning that psychologists and psychotherapists feel that that there a more possibilities in the way they can schedule their sessions (Andrews et al., 2023; Blocksidge et al., 2022; Bortveit et al., 2023; Buckman et al., 2021; Croxford et al., 2023; Stadler et al., 2023). Stadler et al. (2023) found

that therapists experienced flexibility for themselves and their clients by being able to offer appointments on short notice and having no travel time. The study results of Blocksidge et al. (2022) showed that therapists experienced flexibility by being able to combine face-to-face sessions and video sessions based on the client's needs. Furthermore, the attendance rate was higher because of flexibility for therapists and clients (Buckman et al. 2021). The attendance was higher because there were more opportunities to make appointments. In addition, accessibility was also a recurring driver because EMH was enabling individuals for therapy in remote or rural areas or clients with psychical disabilities (Buckman et al., 2021; Nogueira-Leite et al., 2023; Scott et al., 2022). This driver can be seen as a motivator for psychologists to provide mental health care to a broader population in need.

Positive attitudes of clients

As a driver for psychologists and therapists, clients reported to their psychologists or therapists' positive experiences in using EMH. They mentioned appreciating its convenience and comfort of being able to stay at home at times (Békés & Doorn, 2020; Buckman et al., 2021; Weitzel et al., 2023). EMH is more likely to be used by psychologists and therapists if clients feel confident in its effectiveness.

Prior experience of therapists

Three studies found that having had previous experience in using EMH helps being more motivated to keep using EMH (Cioffi et al., 2020; Santos et al., 2023; Machluf et al., 2021). For example, in couple's therapy it was mentioned that having experience in using EMH helps feel more confidence in their abilities, creates more comfort and perceived success (Machluf et al., 2021). Another driver was the experience in providing therapy. A study by Cioffi et al. (2020) stated that psychotherapists older in age (45-65) showed greater satisfaction with the use of Virtual Care Psychotherapy (VCP) and that prior experience in using VCP was also linked to higher satisfaction. Additionally, Doorn et al. (2020) stated that

therapists with more clinical experience show a stronger alliance and less professional self-doubt in using EMH. It appears that prior experience providing therapy, combined with experience using EMH, results in better utilization of EMH.

Therapeutic relationship

Three studies also highlighted that EMH can create opportunities for the therapeutic relationship (Beet & Ademosu, 2023; Békés et al., 2023; Stadler et al., 2023). According to Beet and Ademosu (2023), in family therapy, having online therapy in a family's home environment strengthened their therapeutic relationship because clients could become more organised around therapy sessions.

Allows for empowerment

Four studies also show that EMH tools empower clients by providing additional resources for self-help and promoting independence (Bortveit et al., 2023; Nogueira-Leite et al., 2023; Scott et al., 2022; Weitzel et al., 2023). Which is seen as a driver for psychologists because for them it is beneficial that clients are more self-sufficient. Structured modules in approaches like guided iCBT enabled patients to become their own therapists (Bortveit et al., 2023). Furthermore, apps and digital tools supplemented face-to-face therapy and allowed patients to manage aspects of their mental health outside of sessions (Nogueira-Leite et al., 2023; Scott et al., 2022).

Barriers of psychologists to use EMH

The reviewed studies show several common barriers to the adoption of EMH by psychologists and therapists. The barriers that are mentioned more than once are listed in the text; the rest of the barriers are listed in Table 3.

Technical challenges & lack of skills

Eleven out of the 19 studies mention the barrier were technical difficulties and issues such as poor internet connection, clients who lack skills in the use of EMH, or platform-

related challenges. The use of EMH also caused more distracted clients because of being in their home environment and being distracted by looking at themselves (Doorn et al., 2020; Stadler et al., 2023). Furthermore, the use of EMH also asks for dedication and commitment of the therapist's time and technical skills while also having to navigate the poor usability of some platforms (Bortveit et al., 2023). Besides the practical challenges of using technology, there are also concerns for privacy and impersonality (Weitzel et al., 2023).

Fatigue

Another barrier mentioned by psychologists and therapists was the fatigue they experienced. By fatigue psychologists and psychotherapists mean that they felt more tired when using EMH because it requires more effort to provide online therapy to clients at the same level as face-to-face therapy. In seven studies, it was mentioned that because of the screen time and the higher attention demand during video therapy, led to stress and fatigue (Cioffi et al., 2020; Santos et al., 2023; Stadler et al., 2023). Moreover, Stadler et al. (2023) found that being at home caused more distractions for the patient but also for the professionals, which in turn increased fatigue. Clinicians found working with EMH to be more intense, stating they had to work harder to continue to apply their professional abilities in conversation with clients (Croxford et al., 2023).

Worries about the therapeutic relationship and feeling disconnected

Ten out of the 19 studies mention concerns about the therapeutic relationship and feeling disconnected from their patients during EMH. There are concerns about the impersonal or automated processes reducing therapeutic relationships and feeling less closeness because it can feel impersonal (Scott et al., 2022; Stadler et al., 2023). In family therapy, therapist worry about establishing a strong therapeutic bond to both partners (Machluf et al., 2021). Therapists had trouble emotionally connecting with their patients due to a lack of verbal cues and reduced emotional engagement (Békés et al., 2023). For some

therapists it feels more like a social chat then actual therapy which makes it difficult to set appropriate therapeutic boundaries (Blocksidge et al., 2022). Doorn et al. (2020) found that therapists found it harder to communicate empathy and therefore struggled to emotionally connect with their patients.

Professional challenges

Multiple professional challenges were experienced by professionals. Three studies mention that a professional challenge was that professionals feel restricted in applying certain techniques during treatment, such as EMDR or techniques in systemic therapy (Beet & Ademosu, 2023; Buckman et al., 2021; Cioffi et al., 2020). In addition, professionals encounter challenges when managing patient risks, such as those associated with self-harm or of people in an unsafe home environment (Andrews et al., 2023; Beet & Ademosu, 2023; Machluf et al., 2021). Another professional challenge was the lack of non-verbal cues experienced by professionals (Beet & Ademosu, 2023; Békés et al., 2023; Gullo et al., 2022; Stadler et al., 2023). Causing therapists to have difficulty remaining emotionally and cognitively present during treatments (Gullo et al., 2022). And therefore, also the feeling of the lack of human connection (Beet & Ademosu, 2023; Békés et al., 2021; Békés et al., 2023; Doorn et al., 2020; Scott et al., 2022).

Finally, having no experience in the use of EMH presented a professional challenge. Three studies suggest that the adoption process is slowed by having less experience with EMH (Beet & Ademosu, 2023; Bortveit et al., 2023; Santos et al., 2023). Furthermore, therapists reported higher levels of self-doubt by feeling less confident and competent (Doorn et al., 2020). Anxiety and self-doubt were more common among younger, less experienced therapists and those without prior video therapy experience. Croxford et al. (2023) stated that therapists felt unprepared and had concerns about adjusting to online therapy.

Impact of the COVID-19 pandemic

Eight studies found that therapists and psychologists transitioned to EMH out of necessity because of the COVID-19 restrictions. The other studies made no mention of the impact of the pandemic on their use of EMH. The COVID-19 pandemic accelerated the awareness of EMH and the use of the digital interventions (Scott et al., 2022; Weitzel et al., 2023). The rapid transition to EMH resulted in problems and challenges in usability of the technology and raised awareness of the lack of training therapists had received (Bortveit et al., 2023; Santos et al., 2023). Additionally, Stadler et al. (2023) mentioned that being there for one another with the help of EMH during the COVID-19 pandemic strengthened their therapeutic relationship.

Requirements for acceptance and adoption

The studies included in this review highlighted several requirements for change in the adoption process of EMH. A recurring theme in the studies is the lack of training and how this can influence the adoption progress. Therapists with experience in EMH are more likely to overcome challenges and continue to use EMH in times when it is not out of necessity (Santos et al., 2023). Ten studies found that there is a need for training, guidance, or additional tools to support psychologists and therapists in using EMH tools and technologies.

Training in using tools

Three studies found that psychologists and therapists mention that they need more training to feel confident in using EMH in their treatment and have a better adoption process (Blocksidge et al., 2022; Buckman et al., 2021; Stadler et al., 2023). The studies suggested guidance documents and video tutorials. There was also a need for training specifically focused on the use of certain platforms and EMH tools (Blocksidge et al., 2022; Gullo et al., 2022).

Implementation guidelines

Three studies found that implementation guidelines are of importance when supporting professionals in using EMH. Nogueira-Leite et al. (2023) emphasized the need for clearly defined processes for prescribing DMH tools for patients. Other suggestions to help the adoption process of EMH include webinars, guidelines, technical support, and reflective spaces (Croxford et al., 2023; Doorn et al., 2020). Blocksidge et al. (2022) also highlighted the importance of developing tools to assess clients' suitability for online therapy. It has also been reported that after overcoming initial challenges, therapists have reported improved confidence, positive changes in attitudes, and a willingness to continue using EMH as they move forward in their careers (Békés et al., 2021; Machluf et al., 2021). Some therapists maintained their traditional processes with minimal adaptation, while others emphasized hybrid models and new assessment tools to enhance their therapeutic outcomes (Békés et al., 2023; Blocksidge et al., 2022).

Table 3

Study and sample characteristics and outcomes regarding drivers, barriers of EMH experienced by psychologists, the impact of the COVID-19 pandemic, and requirements of change

Study	Study design	Type of EMH	Sample	Time frame and impact of COVID-19 pandemic	Drivers	Barriers	Requirements for adoption
Stadler et al., 2023	Quantitative study using a cross-sectional survey	Remote psychotherapy via digital media (video, telephone)	*N* = 217 Austrian psychotherapists 77% female, 23% male 91.2% certified psychotherapists 8.8% worked under supervision Professional experience *M* = 10.6 years (*SD* = 9.5) *M* = 50.7 years old (*SD* = 9.7)	June 26–September 3, 2020	- Flexibility for their patients and themselves - Feeling more comfortable - Strengthened therapeutic relationship - Relaxed atmosphere - Emotions can be expressed more openly	- Technical issues - Fatigue - Distractions - Difficulty distancing work and private live - Difficulties in therapeutic setting. - Therapeutic limitations - Lack of non-verbal cues - Emotional challenges - Impersonal	Need to expand the training and continuing education opportunities provided to therapists on the use of remote psychotherapy accordingly.
Békés & Doorn, 2020	Quantitative study using a cross-sectional survey	Online psychotherapy via videoconferencing	*N* = 145 psychotherapists across the U.S., Canada, and Europe 75.2% female, 24.8% male *M* = 46.5 years (*SD* = 14.8, range 23–79)	March 25–March 30, 2020	- Patients had positive experiences with online psychotherapy	- Fatigue - Difficulty connecting with patient. - Technical issues - Communication challenges.	Preparation with practical help and guidance.
Beet & Ademosu, 2023	Qualitative study using semi-structured	Psychotherapy through	*N* = 8 family and systemic	During COVID-19 pandemic	- Including other family members of clients	- Fatigue -Overscheduling client sessions	Needing training and guidance in working online.

	interviews and thematic analysis framework	videoconferencing	psychotherapists trained (UK) 63% female, 38% male 50% 1-5 years' experience 13% 5-10 years' experience 38% 10+ years' experience	Therapists transitioned to online therapy out of necessity because of the restrictions during the COVID-19 pandemic.	- Strengthened therapeutic relationship - More need of collaboration of client - Experience with EMH	- Difficulties managing risks - Difficulties in managing conflicts - Worse work-life balance - Difficulties in protecting confidentiality - Lack of non-verbal cues - Emotional challenges - Therapeutic limitations - Difficulties in connecting with client - Technology issues	
Scott et al., 2022	Qualitative study using semi-structured interview and thematic analysis	Internet-based and/or digital technologies	*N* = 10 Australian psychologists 90% female, 10% male *M* = 37.4 years age (*SD* = 6.8 years, range 28-60) Professional experience *M* = 9.4 years	Second half of 2020 Expedited awareness and experience with digital interventions because of the restrictions during the COVID-19 pandemic.	- Increased access - Range of tools available - Positive for self-help and continuity - Adaptability - Positive Perceptions	- Technological limitations - Lack of human connection - Limited awareness and training about available resources. - Issues with safety, confidentiality, and appropriateness of standalone programs - Issues with implementation models	-
Blocksidge et al., 2022	Qualitative study using Interpretative Phenomenologic	Video conferencing	*N* = 5 psychologists 100% female	April to May 2021 Therapists felt forced to use video therapy	- Useful tool - Flexibility	- Technology difficulties - Difficulties setting therapeutic boundaries	Need for training to be able to use online platforms accordingly and

	al Analysis (IPA) with semi-structured interviews.		Age range between 32-53 (*M* = 43.2 years, *SD* = 9.6 years)	because of the restrictions during the COVID-19 pandemic.		- Confidentiality - Assessing and managing risks through online therapy - Not suitable - Limited tools - Lack of non-verbal cues - Lack of confidence - Limited impact	feel confident in using them. Need for an assessment tool to access a client suitability for following online therapy. Guidelines for time management and the use of hybrid model.
Gullo et al., 2022	Quantitative study using survey data	Video conferencing	*N* = 307 therapists practicing online group therapy 52.5% female, 24.1% male and 23.4% other Age: *M* = 53.2 years (*SD* = 14.4 years) Professional experience *M* = 20.3 years (*SD* = 13.9)	September 2020 to December 2020 -	-	- Limited non-verbal cues - Lack of training - High patient dropout rate	Need for training in the use of EMH.
Buckman et al., 2021	Mixed methods study using descriptive statistics and a survey with thematic analysis	Video therapy, telephone therapy, and face-to-face therapy	*N* = 157 clinicians 110 High-Intensity (HI) therapists (e.g., Clinical Psychologists) 47 Low-Intensity (LI) psychologists	From July 2020- August 2020 Acute increase in video and telephone therapy, increase in high intensity video therapy and decrease in high intensity telephone therapy during the COVID-19 pandemic.	- Accessible - Flexibility - Improvement work-life balance - Effective - Enhanced guidance	- Technological issues - Fatigue - Stress - Variable efficacy - Resistance	Need for training to create better adoption of EMH (use of guidance documents, video tutorials, technical support and practice with colleagues).
Cioffi et al., 2020	Qualitative and quantitative	Videoconferencing psychotherapy	*N* = 507 Italian psychotherapists	Period of lockdown -	- Flexibility - Experienced psychologists	- Fatigue - Therapeutic limitations	-

	study using a survey	and other online interventions	83% female, 17% male Age groups are 24.5 % <35 years, 34.7% 36-45 years, 34.7% 46-60 years and 6.1% >60 years		- Prior experience	- No access - No prior experience	
Santos et al., 2023	Quantitative study using a cross-sectional survey	Online platforms and tools (telehealth)	*N* = 385 Brazilian psychologists 67% female, 33% male *M* = 35.4 years in age (*SD* = 10.4, range 22-68 years) Professional experience 44.2% 0-5 years, 25.9 5-10 years and 29.9% >10 years	May to November 2020 Remote care was essential during lockdowns, leading to rapid adoption despite varying levels of preparation.	- Prior experience	- Fatigue - Guideline uncertainty - Reduced effectiveness - Not feeling qualified	-
Bortveit et al., 2023	Qualitative study using semi-structured interviews and reflexive thematic analysis	Guided internet-delivered Cognitive Behavioural Therapy (iCBT)	*N* = 12 therapists 9 psychologists, 1 social worker, 1 occupational therapist and 1 nurse	December 2020 to March 2022 Increased interest and necessity for remote treatment options and forced faster adoption	- Flexibility - Useful treatment - Independence-building - Therapeutic reflection - More openness - Variation	- Suitability - High patient responsibility - Limited flexibility - Procrastination - Difficulty concentrating - High demands - Poor usability - Lack of patient-tailored	Addressing usability barriers and clarify digital platforms.
Békés et al., 2023	Qualitative study using semi-structured interviews	Teletherapy	*N* = 31 therapists *M* = 57 years of age (range 24-84 years) 83.9% female, 16% male Professional experience	July and August 2020 Use of EMH out of necessity because of the restriction during the COVID-19 pandemic.	- Improved therapeutic relationship - Responsibility	- Feeling disconnected - Technical difficulties - Lack of non-verbal cues - Self-disclosure of therapists	-

			N = 5 <5 years' experience *N* = 19 >17 years' experience Psychologists (*N* = 17), Counsellors *N* = 6), Medical doctors (*N* = 5)				
Nogueira-Leite et al., 2023	Mixed methods study using Cross-sectional web-based survey	Digital Mental Health Apps (DMHAs)	*N* = 160 Mental health professionals *N* = 127 psychologists *N* = 25 psychiatrists *N* = 8 other 83.8% female, 16.2% male 36.9% 36-45 years, 35% 26-35 years	September – November 2022 -	- Informed choices, - Proper disease management - Improved treatment adherence - Improved access to health care - Increased health literacy - Better time management - Having additional treatment options - Improved access - Proximity to the user - Prior experience	- Technical issues - Lack of information about digital apps - More effort - Lack of knowledge - Absence of training programs on DMHA - Design issues health system	Needing more information about DMHAs (scientific evidence about their validity, recommendations by professional and scientific societies). Need for a defined prescription process and sharing of positive peer experiences.
Doorn et al., 2020	Quantitative study using a cross-sectional survey	Video conferencing	*N* = 141 therapists 74.5% female, 25.5% male *M* = 46 years age (*SD* = 14.8, age range 23-79) 69.1% U.S.A, 6.5% Canada and 24.5% Europe 64.5% clinical psychologists, 9.9%	March 2020 Tried to prepare their clients for the rapid transition to EMH. Therapists spoke to colleagues, read governmental guidelines and one-third of the therapists attended webinars on how to conduct video therapy.		- Technical difficulties - Difficulties communicating - Experiencing difficulties - Self-doubt	-

			counsellors and 10.6% clinical trainees 66.6% >9 years' experience				
Andrews et al., 2023	Qualitative study with semi-structured interviews and additional interviews using thematic analysis	Video chat therapy (dMH intervention)	*N* = 20 therapists 80% female, 20% male Mean age = 27,5 years (*SD* = 5.4) Professional experience *M* = 1.5 years (*SD* = 1.5)	November 2020 – March 2022	- Increased self-awareness - Prior experience	- Technology Challenges - Concern about risk management - Worries about lack of experience	Need for formal training and supervision when delivering dMH interventions (training in therapeutic communication).
Machluf et al., 2021	Quantitative study using a survey and additional questionnaire	Video therapy (online therapy)	*N* = 166 therapists *M* = 50.5 years old (*SD* = 9.5, range 27-74) Professional experience *M* = 12.9 years (*SD* = 8.9, range 0.5-40 years) 49% social workers, 28% psychologists, 5% educational counsellors, 4% art therapists, 1% psychiatrists, and 13% "other"	April 2020 (first survey), Follow-up (May 2020) Most therapists do not plan to keep using online therapy after the COVID-19 pandemic is over.	- Prior experience	- Worries about establishing therapeutic relationship - Worries managing escalating conflicts - Higher potential of dropouts	-
Aldaweesh et al., 2024	Mixed methods approach of semi-structured interview and systematic review of EMH apps	Mobile health (mHealth) apps	*N* = 12 clinicians Psychologists *N* = 7 Psychiatrists *N* = 5 Professional experience 1-5 years *N* = 3 6-10 years *N* = 7	January - February 2022 Obligated to adopt EMH tools during the COVID-19 pandemic.	- Tools can be personalized - Variety of options	- Client's barriers of EMH - Client's shopping - More pressure - Not familiar with the available apps	-

			11-15 years *N* = 2			- No experience - Lack of Arabic-language apps.	
Weitzel et al., 2023	Quantitative study using a cross-sectional survey	Digital applications, video consultations, mobile-based interventions, self-help apps, and "app on prescription" for mental health	*N* = 425 Health care providers 65.6% female, 34.4% male *M* = 47.7 age (*SD* = 11.0) Professional experience *M* = 20.0 years (*SD* =11.1) Clinicians *N* = 102 Psychotherapists *N* = 102 Special doctors *N* = 114 GPs *N* =107	March - September 2021 The COVID-19 pandemic fostered integration, but more so under psychotherapist than other health care providers.	- Supporting self-help	- Insufficient knowledge about the program - Lack of informational materials - Privacy concerns	There is a need for more information about EMH.
Békés et al., 2021	Quantitative study using an international longitudinal survey	Online therapy via videoconferencing	*N* = 1,257 therapists 77% female, 23% male Mean age = 50.5 (*SD* = 16.4) 86.1% licensed therapists 23.9% trainees Professional experience 0-4 years 12.7% 5-16 years 36.9% >17 years 50.4% 82% North America 12.7% Europe	March-April 2020 (baseline), June-July 2020 (3-month follow-up) Therapists experienced fewer challenges after use during the COVID-19 pandemic. Positive change in attitude towards online therapy and their views on the efficacy of online therapy.	- Experience	- Difficulties connecting emotionally - Distractions - Worries about private space and confidentiality - Issues with boundaries	-

Croxford et al., 2023	Qualitative study using semi-structured interviews and thematic analysis.	*Experiences of working remotely*	*N* = 14 clinicians Psychoanalysts, *N* = 4 Psychoanalytical, *N* = 9 psychotherapy trainees, *N* = 1 Clinical psychology trainee	June to July 2020 Clinicians needed to quickly adapt to online therapy during the COVID-19 pandemic.	- Feeling safer - More relaxed - More reflective - Increased flexibility	- Concerns about therapeutic equivalence - Fatigue - More intense - Worries about dropouts - Worries about not emotionally connecting - Technological challenges - Feeling unprepared - Difficulties work-life balance	Need for emotional support and reflective spaces.

Discussion

This scoping review aimed to identify the drivers and barriers of acceptance and adoption of EMH among psychologists and psychotherapists focusing on literature from the past four years, during and after the COVID-19 pandemic, while also looking at the requirements for acceptance and adoption of EMH. Out of the 789 articles identified by databases, 19 fit the inclusion criteria.

Regarding EMH tools, we found that most of the research had been done on videoconferencing (13 out of 19 studies, while an increasing number of EMH technologies have been developed. This can be explained by the restrictions that were experienced during the COVID-19 pandemic, when videoconferencing was first used to continue therapy. This is in line with previous findings in a study by Feijt et al. (2023) who showed significant rise in the use of EMH following the beginning of the pandemic, but primarily for basic tools such as videoconferencing, with only three studies researching advanced technologies, there is a noticeable lack of studies exploring the use of more advanced technologies such as iCBT, Virtual Reality or biofeedback.

This review identified multiple drivers and barriers that are important to psychologists and psychotherapists in the use and adoption of EMH. The drivers found in the included studies were flexibility, positive client experiences, general work experience of therapists, experience with EMH, and empowerment of clients. Technical challenges, fatigue, worries about the therapeutic relationship, professional challenges such as feeling restricted in applying certain therapeutic techniques and having no experience in using EMH were found to be the most relevant barriers in the studies. Fatigue is a relatively newly identified barrier that is experienced by psychologists and psychotherapists since the COVID-19 pandemic. Psychologists and psychotherapists report increased fatigue due to heightened distractions in home environments, the necessity to pay closer attention to nonverbal cues during video calls,

and the additional effort required to apply professional techniques. Similar results were found in a scoping review by Ferracioli et al. (2023) on the potentialities and barriers of online psychotherapy experienced by Brazilian psychologists. The study reported that a common by-product of online sessions was recurrent complaints of fatigue because of greater demands on attention during online sessions and screen time. These findings suggest that while EMH offers flexibility, it also increases professional stress and fatigue, which could impact long-term adoption of EMH. This has not yet been sufficiently researched to develop effective interventions for this newfound barrier.

Besides fatigue, we expected more additional drivers and barriers would have been encountered since the pandemic, but this was not the case. These found drivers and barriers are in agreement with those obtained by Feijt et al. (2018). The drivers and barriers found in this study do not address the personal traits of psychologists and psychotherapists, such as their motivation for adopting EMH. Delgadillo et al. (2020) found that personality attributes affect the course of treatment and its results. It was found that personality traits were related to their choice of therapeutic interventions and personal skills. However, this study was not specifically focused on EMH. A study by Koch et al. (2024) found that besides common factors such as ease of use and convenience, the personal trait optimism was also identified as a driver. Which suggests that personal traits of psychologists and psychotherapists influence their engagement with technologies and tools of EMH, while also influencing the acceptance and adoption of EMH. Personality traits, as described by McCrae and John (1992), openness, conscientiousness, extraversion, agreeableness, and neuroticism could have an impact on how professionals view EMH and this could have an influence on their acceptance and adoption of EMH interventions. However, it appears that in the selected studies for this scoping review the personality traits of the psychologists and psychotherapists have not been considered or researched.

Another important finding was that the lack of experience with EMH slowed the adoption process for psychologists and psychotherapists. It was found that professionals with less work experience and less experience in using EMH felt more insecure and therefore had concerns about adjusting to EMH. Though, as an important driver, it was found that having experience in EMH helped professionals feel more confidence in their abilities, and it helped stay motivated in using EMH. Given the importance of experience with EMH, research should explore ways to bridge this gap.

The impact of the COVID-19 pandemic was that psychologists and therapists experienced that they used EMH out of necessity due to the COVID-19 pandemic restrictions rather than due to personal motivation or interest. This was confirmed in the included studies by not seeing a sustained increase in the use and adoption of EMH by mental health professionals after the COVID-19 pandemic. The findings imply that while the COVID-19 pandemic may have temporarily increased the necessity for EMH use, it did not lead to a fundamental shift in psychologists' perspectives or intrinsic motivations for using EMH. The barriers experienced by mental health professionals do not seem to outweigh the experienced drivers. It appears that sufficient tools or interventions have yet to be developed to overcome or reduce the impact of the barriers faced by mental health professionals. This also means that the LAMH model by Feijt et al. (2018) can still be applied in the process of improving the adoption of EMH.

Other requirements that facilitated acceptance and adoption of EMH were the need for better training, tools, and implementation guidelines to support the adoption of EMH. By utilizing these methods and strategies, barriers such as uncertainty about how to use certain techniques and when EMH would be appropriate for a client can be overcome. This was also found by Titzler et al. (2018). These results are also in agreement with those obtained by Feijt et al. (2018) as the LAMH model suggests the same changes in the adoption process of EMH.

Adding to the outcomes of this study, Feijt et al. (2018) suggest strategies for each stage of adoption that professionals experience, including building awareness, providing technical skills, and teaching the appropriate use of EMH to overcome the barriers they face.

There may be some possible limitations in this study. This study shows there are many different terms for EMH which makes it difficult to encompass all the literature available on EMH. Attempts were made to address this limitation by considering a variety of words that could be used to describe EMH in the inclusion and exclusion criteria. Another potential limitation is that one may question whether the acceptance and adoption of EMH of before, during and after the COVID-19 pandemic can be compared. Other external influences from technology advances and policies changes of organisations could have also impacted the acceptance and adoption of EMH. Additionally, scoping reviews often do not perform a quality appraisal of the included studies which could risk of including studies with lower research quality and therefore carry the same weight as studies with a higher research quality. This limitation was attempted to be contained by collecting the data in reliable databases such as Scopus, PsychInfo, and Web of science. While studies of lower quality may have been included in this study, it can still provide insight into the research gaps in the current literature.

This study has identified four research gaps that should be the focus of future research. Firstly, more research is needed to understand drivers and barriers experienced by psychologists and psychotherapists when using and adopting advanced EMH tools as iCBT, biofeedback or Virtual Reality. Second, future studies should research the long-term effect of screen use on psychologists and psychotherapists using videoconferencing as an EMH tool because of the fatigue-related barriers they experienced. In doing so, we should also explore what interventions can be used to help them feel less fatigued from the adaptation of therapy in an online setting. Third, research is needed to explore how personal traits influence the

ability, intrinsic and external motivation of psychologists and psychotherapists to accept and adopt EMH tools. Fourth, research should focus on developing and evaluating comprehensive training programs, practical tools, and stage-based implementation strategies (e.g., as suggested by Feijt et al., 2018). Early interventions can help overcome initial barriers, improving EMH adoption and its effectiveness.

Conclusion

In conclusion, this review reveals multiple drivers and barriers experienced by psychologists and psychotherapists in their acceptance and adoption process of EMH. The acceptance and adoption of EMH tools and interventions by mental health professionals did not lead to a sustained increase after the COVID-19 pandemic. Possibly due to perceived barriers by mental health professionals having too much impact on EMH acceptance and adoption. The relatively new barrier found was fatigue due to screen time and because a different effort is required by mental health professionals in using EMH. Several research gaps were found and by addressing these research gaps future research can help the acceptance and adoption of EMH for mental health professionals and its effectiveness in clinical practice. While the findings highlight that fatigue has emerged as a relatively new barrier for psychologists and psychotherapists since the COVID-19 pandemic, there is limited research exploring the long-term impact of fatigue on the adoption of EMH. For future mental health professionals, research on personal traits that influence the acceptance and adoption of EMH will be beneficial. Additionally, exploring ways to help them bridge the gap in the acceptance and adoption of EMH caused by a lack of experience with EMH could support a permanent increase in its use.

Reference list

Abraham, A., Jithesh, A., Doraiswamy, S., Al-Khawaga, N., Mamtani, R., & Cheema, S. (2021). Telemental health use in the COVID-19 Pandemic: A scoping review and evidence Gap Mapping. *Frontiers in Psychiatry*, *12*. https://doi.org/10.3389/fpsyt.2021.748069

Aldaweesh, S., Alateeq, D., Van Kleek, M., & Shadbolt, N. (2024). "If Someone Walks In On Us Talking, Pretend to be My Friend, Not My Therapist": Challenges and Opportunities for Digital Mental Health Support in Saudi Arabia. *In Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems*, 1–19. https://doi.org/10.1145/3613904.3642642

Ammenwerth, E. (2019). Technology Acceptance Models in Health Informatics: TAM and UTAUT. *PubMed*, *263*, 64–71. https://doi.org/10.3233/shti190111

Andersson, G., Cuijpers, P., Carlbring, P., Riper, H., & Hedman, E. (2014). Guided Internet-based vs. face-to-face cognitive behavior therapy for psychiatric and somatic disorders: a systematic review and meta-analysis. *World Psychiatry*, *13*(3), 288–295. https://doi.org/10.1002/wps.20151

Andrews, B., Klein, B., Corboy, D., McLaren, S., & Watson, S. (2023). Therapist training in video chat technology for use in an adaptive digital mental health intervention: Challenges, facilitators and implications for training models. *Counselling and Psychotherapy Research*, *23*(3), 818–829. https://doi.org/10.1002/capr.12667

Andrews, G., Cuijpers, P., Craske, M. G., McEvoy, P., & Titov, N. (2010). Computer therapy for the anxiety and depressive disorders is effective, acceptable and practical Health care: A Meta-Analysis. *PloS One*, *5*(10), e13196. https://doi.org/10.1371/journal.pone.0013196

Arksey, H., & O'Malley, L. (2005). Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology*, *8*(1), 19–32. https://doi.org/10.1080/1364557032000119616

Beet, N., & Ademosu, T. (2022). Keeping connected: Family therapists' experiences of working online during the COVID-19 pandemic. *Journal of Family Therapy*, *45*(2), 223–241. https://doi.org/10.1111/1467-6427.12421

Békés, V., & Doorn, K. A. (2020). Psychotherapists' attitudes toward online therapy during the COVID-19 pandemic. *Journal of Psychotherapy Integration*, *30*(2), 238–247. https://doi.org/10.1037/int0000214

Békés, V., Doorn, K. A., Luo, X., Prout, T. A., & Hoffman, L. (2021). Psychotherapists' challenges with online therapy during COVID-19: Concerns about connectedness predict therapists' negative view of online therapy and its perceived efficacy over time. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.705699

Békés, V., Doorn, K. A., Roberts, K. E., Stukenberg, K., Prout, T., & Hoffman, L. (2023). Adjusting to a new reality: Consensual qualitative research on therapists' experiences with teletherapy. *Journal of Clinical Psychology*, *79*(5), 1293–1313. https://doi.org/10.1002/jclp.23477

Bernard, R. M., Toppo, C., Raggi, A., De Mul, M., De Miquel, C., Pugliese, M. T., Van Der Feltz-Cornelis, C. M., Ortiz-Tallo, A., Salvador-Carulla, L., Lukersmith, S., Roijen, L. H., Merecz-Kot, D., Staszewska, K., & Sabariego, C. (2022). Strategies for Implementing Occupational eMental Health Interventions: Scoping Review. *JMIR. Journal of Medical Internet Research/Journal of Medical Internet Research*, *24*(6), e34479. https://doi.org/10.2196/34479

Blocksidge, H., Willis, L., & Codd, J. (2022). Conducting video therapy with adults with an intellectual disability: A qualitative study of qualified and trainee psychologists' experiences. *British Journal of Learning Disabilities*, *51*(3), 389–399. https://doi.org/10.1111/bld.12496

Børtveit, L., Nordgreen, T., & Nordahl-Hansen, A. (2023). Therapists' experiences with providing guided internet-delivered cognitive behavioral therapy for patients with mild and moderate depression: a thematic analysis. *Frontiers in Psychology*, *14*. https://doi.org/10.3389/fpsyg.2023.1236895

Buckman, J. E. J., Saunders, R., Leibowitz, J., & Minton, R. (2021). The barriers, benefits and training needs of clinicians delivering psychological therapy via video. *Behavioural and Cognitive Psychotherapy*, *49*(6), 696–720. https://doi.org/10.1017/s1352465821000187

Chester, A., & Glass, C. A. (2006). Online counselling: a descriptive analysis of therapy services on the Internet. *British Journal of Guidance & Counselling*, *34*(2), 145–160. https://doi.org/10.1080/03069880600583170

Cioffi, V., Cantone, D., Guerriera, C., Architravo, M., Mosca, L. L., Sperandeo, R., Moretto, E., Longobardi, T., Alfano, Y. M., Continisio, G. I., Muzii, B., & Maldonato, N. M. (2020). Satisfaction degree in the using of VideoConferencing Psychotherapy in a sample of Italian psychotherapists during Covid-19 emergency. *IEEE*, 000125–000132. https://doi.org/10.1109/coginfocom50765.2020.9237823

Conti, D., Di Nuovo, S., Buono, S., & Di Nuovo, A. (2016). Robots in Education and Care of Children with Developmental Disabilities: A Study on Acceptance by Experienced and Future Professionals. *International Journal of Social Robotics*, *9*(1), 51–62. https://doi.org/10.1007/s12369-016-0359-6

Croxford, A., Baban, A., Kreel, S., & Stern, J. (2023). Clinician experiences of remotely delivering psychodynamic and intensive psychoanalytic psychotherapy within an NHS institution during the COVID-19 pandemic, and possible implications for future clinical practice. *Psychoanalytic Psychotherapy*, *38*(1), 20–37. https://doi.org/10.1080/02668734.2023.2263509

Delgadillo, J., Branson, A., Kellett, S., Myles-Hooton, P., Hardy, G. E., & Shafran, R. (2020). Therapist personality traits as predictors of psychological treatment outcomes. *Psychotherapy Research*, *30*(7), 857–870. https://doi.org/10.1080/10503307.2020.1731927

Doorn, K. A., Békés, V., & Prout, T. A. (2020). Grappling with our therapeutic relationship and professional self-doubt during COVID-19: will we use video therapy again? *Counselling Psychology Quarterly*, *34*(3–4), 473–484. https://doi.org/10.1080/09515070.2020.1773404

Ellis, L. A., Meulenbroeks, I., Churruca, K., Pomare, C., Hatem, S., Harrison, R., Zurynski, Y., & Braithwaite, J. (2021). The Application of e-Mental Health in response to COVID-19: Scoping review and bibliometric analysis. *JMIR Mental Health*, *8*(12), e32948. https://doi.org/10.2196/32948

Feijt, M. A., De Kort, Y. A., Bongers, I. M., & IJsselsteijn, W. A. (2018). Perceived Drivers and Barriers to the adoption of eMental Health by Psychologists: The construction of the levels of adoption of eMental Health Model. *JMIR. Journal of Medical Internet Research/Journal of Medical Internet Research*, *20*(4), e153. https://doi.org/10.2196/jmir.9485

Feijt, M., De Kort, Y., Bongers, I., Bierbooms, J., Westerink, J., & IJsselsteijn, W. (2020). Mental health care goes Online: Practitioners' experiences of providing mental health care during the COVID-19 pandemic. *Cyberpsychology Behavior and Social Networking*, *23*(12), 860–864. https://doi.org/10.1089/cyber.2020.0370

Feijt, M., De Kort, Y., Westerink, J., Bierbooms, J., Bongers, I., & IJsselsteijn, W. (2023). Integrating technology in mental healthcare practice: A repeated cross-sectional survey study on professionals' adoption of Digital Mental Health before and during COVID-19. *Frontiers in Psychiatry*, *13*. https://doi.org/10.3389/fpsyt.2022.1040023

Ferracioli, N. G. M., De Oliveira-Cardoso, É. A., De Oliveira, W. A., & Santos, M. a. D. (2023). Potentialities and Barriers of Online Psychotherapy During the COVID-19 Pandemic: Scoping review. *Psicologia Teoria E Pesquisa*, *39*. https://doi.org/10.1590/0102.3772e39410.en

Ganapathy, A., Clough, B. A., & Casey, L. M. (2021). Organizational and policy barriers to the use of digital mental health by mental health professionals. *Telemedicine and E-health*, *27*(12), 1332–1343. https://doi.org/10.1089/tmj.2020.0455

González-Robles, A., Miguel, C., Richards, D., Duffy, D., & Enrique, Á. (2024). A scoping review of therapist behaviors in guided digital mental health interventions. *Internet Interventions*, *37*, 100751. https://doi.org/10.1016/j.invent.2024.100751

Grant, M. J., & Booth, A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, *26*(2), 91–108. https://doi.org/10.1111/j.1471-1842.2009.00848.x

Gullo, S., Lo Coco, G., Leszcz, M., Marmarosh, C. L., Miles, J. R., Shechtman, Z., Weber, R., & Tasca, G. A. (2022). Therapists' perceptions of online group therapeutic relationships during the COVID-19 pandemic: A survey-based study. *Group Dynamics Theory Research and Practice*, *26*(2), 103–118. https://doi.org/10.1037/gdn0000189

Karyotaki, E., Efthimiou, O., Miguel, C., Bermpohl, F. M. G., Furukawa, T. A., Cuijpers, P., Riper, H., Patel, V., Mira, A., Gemmil, A. W., Yeung, A. S., Lange, A., Williams, A. D., Mackinnon, A., Geraedts, A., Van Straten, A., Meyer, B., Björkelund, C., Knaevelsrud, C., . . . Forsell, Y. (2021). Internet-Based Cognitive Behavioral Therapy for Depression. *JAMA Psychiatry*, *78*(4), 361. https://doi.org/10.1001/jamapsychiatry.2020.4364

Koch, A., Graczykowska, A., Szumiał, S., Rudnicka, P., & Marszał-Wiśniewska, M. (2024). The factors of the psychotherapists' attitude towards technology: combining attitudes towards technology and technology readiness models. *Clinical Psychology & Psychotherapy*, *31*(5). https://doi.org/10.1002/cpp.3055

Machluf, R., Daleski, M. A., Shahar, B., Kula, O., & Bar-Kalifa, E. (2021). Couples therapists' attitudes toward online therapy during the COVID-19 crisis. *Family Process*, *61*(1), 146–154. https://doi.org/10.1111/famp.12647

McCrae, R. R., & John, O. P. (1992). An introduction to the Five-Factor model and its applications. *Journal of Personality*, *60*(2), 175–215. https://doi.org/10.1111/j.1467-6494.1992.tb00970.x

Munn, Z., Peters, M. D. J., Stern, C., Tufanaru, C., McArthur, A., & Aromataris, E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology*, *18*(1). https://doi.org/10.1186/s12874-018-0611-x

Musiat, P., & Tarrier, N. (2014). Collateral outcomes in e-mental health: a systematic review of the evidence for added benefits of computerized cognitive behavior therapy interventions for mental health. *Psychological Medicine*, *44*(15), 3137–3150. https://doi.org/10.1017/s0033291714000245

Nogueira-Leite, D., Diniz, J. M., & Cruz-Correia, R. (2023). Mental health professionals' attitudes toward digital mental health apps and implications for adoption in Portugal: Mixed Methods study. *JMIR Human Factors*, *10*, e45949. https://doi.org/10.2196/45949

Nwaogu, J. M., Chan, A. P. C., Naslund, J. A., Hon, C. K. H., Belonwu, C., & Yang, J. (2021). Exploring the barriers to and motivators for using digital mental health interventions among construction personnel in Nigeria: Qualitative study. *JMIR Formative Research*, *5*(11), e18969. https://doi.org/10.2196/18969

Orman, J., O'Dea, B., Shand, F., Berk, M., Proudfoot, J., & Christensen, H. (2014). e-Mental health for mood and anxiety disorders in general practice. *PubMed*, *43*(12), 832–837. https://pubmed.ncbi.nlm.nih.gov/25705730

Oudshoorn, C., Frielink, N., Riper, H., & Embregts, P. (2024). Acceptance and Use of eHealth in support and psychological therapy for people with Intellectual Disabilities: Two Cross-Sectional Studies of Health Care professionals. *JMIR Formative Research*, *8*, e52788. https://doi.org/10.2196/52788

Reynolds, J., Griffiths, K. M., Cunningham, J. A., Bennett, K., & Bennett, A. (2015). Clinical Practice Models for the use of E-Mental health resources in primary health care by health professionals and peer workers: A Conceptual framework. *JMIR Mental Health*, *2*(1), e6. https://doi.org/10.2196/mental.4200

Santos, J. H. C. D., Sola, P. P. B., Santos, M. a. D., & De Oliveira-Cardoso, É. A. (2023). Changing face-to-face psychological care to remote mode: facilitators and obstacles in the COVID-19 pandemic. *Revista Latino-Americana De Enfermagem*, *31*. https://doi.org/10.1590/1518-8345.6468.3900

Schueller, S. M. (2018). Mental health and eHealth technology. In *Routledge eBooks* (pp. 91–110). https://doi.org/10.4324/9781315385907-5

Scott, S., Knott, V., Finlay-Jones, A. L., & Mancini, V. O. (2022). Australian Psychologists Experiences with Digital Mental Health: a Qualitative Investigation. *Journal of Technology in Behavioral Science*, *8*(4), 341–351. https://doi.org/10.1007/s41347-022-00271-5

Stadler, M., Jesser, A., Humer, E., Haid, B., Stippl, P., Schimböck, W., Maaß, E., Schwanzar, H., Leithner, D., Pieh, C., & Probst, T. (2023). Remote Psychotherapy during the COVID-19 Pandemic: A Mixed-Methods Study on the Changes Experienced by Austrian Psychotherapists. *Life*, *13*(2), 360. https://doi.org/10.3390/life13020360

Staeck, R., Drüge, M., Albisser, S., & Watzke, B. (2022). Acceptance of E-mental health interventions and its determinants among psychotherapists-in-training during the first phase of COVID-19. *Internet Interventions*, *29*, 100555. https://doi.org/10.1016/j.invent.2022.100555

Titzler, I., Saruhanjan, K., Berking, M., Riper, H., & Ebert, D. D. (2018). Barriers and facilitators for the implementation of blended psychotherapy for depression: A qualitative pilot study of therapists' perspective. *Internet Interventions*, *12*, 150–164. https://doi.org/10.1016/j.invent.2018.01.002

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., . . . Straus, S. E. (2018). PRISMA Extension for Scoping Reviews (PRISMA-SCR): Checklist and explanation. *Annals of Internal Medicine*, *169*(7), 467–473. https://doi.org/10.7326/m18-0850

Van Assche, E., Bonroy, B., Mertens, M., Van Den Broeck, L., Desie, K., Bolinski, F., Amarti, K., Kleiboer, A., Riper, H., & Van Daele, T. (2022). E-mental health implementation in inpatient care: Exploring its potential and future challenges. *Frontiers in Digital Health*, *4*. https://doi.org/10.3389/fdgth.2022.1027864

Van Daele, T., Karekla, M., Kassianos, A. P., Compare, A., Haddouk, L., Salgado, J., Ebert, D. D., Trebbi, G., Bernaerts, S., Van Assche, E., & De Witte, N. a. J. (2020). Recommendations for policy and practice of telepsychotherapy and e-mental health in

Europe and beyond. *Journal of Psychotherapy Integration*, *30*(2), 160–173. https://doi.org/10.1037/int0000218

Venkatesh, N., Morris, N., Davis, N., & Davis, N. (2003). User acceptance of information Technology: toward a unified view. *Management Information Systems Quarterly*, *27*(3), 425. https://doi.org/10.2307/30036540

Vis, C., Mol, M., Kleiboer, A., Bührmann, L., Finch, T., Smit, J., & Riper, H. (2018). Improving implementation of eMental Health for mood disorders in routine practice: systematic review of barriers and facilitating factors. *JMIR Mental Health*, *5*(1), e20. https://doi.org/10.2196/mental.9769

Watson, J. D., Pierce, B. S., Tyler, C. M., Donovan, E. K., Merced, K., Mallon, M., Autler, A., & Perrin, P. B. (2023). Barriers and Facilitators to Psychologists' Telepsychology Uptake during the Beginning of the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health/International Journal of Environmental Research and Public Health*, *20*(8), 5467. https://doi.org/10.3390/ijerph20085467

Weitzel, E. C., Schwenke, M., Schomerus, G., Schönknecht, P., Bleckwenn, M., Mehnert-Theuerkauf, A., Riedel-Heller, S. G., & Löbner, M. (2023). E-mental health in Germany — what is the current use and what are experiences of different types of health care providers for patients with mental illnesses? *Archives of Public Health*, *81*(1). https://doi.org/10.1186/s13690-023-01150-y

Wilson, J., Heinsch, M., Betts, D., Booth, D., & Kay-Lambkin, F. (2021). Barriers and facilitators to the use of e-health by older adults: a scoping review. *BMC Public Health*, *21*(1). https://doi.org/10.1186/s12889-021-11623-w