



# Competencies Needed for Behavioral Health Professionals to Integrate Digital Health Technologies into Clinical Care: a Rapid Review

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## Abstract

This rapid review examines literature on training and competencies for behavioral health professionals to integrate digital health technologies into clinical practice. While the evidence for digital health is growing, research evidence supports its use in behavioral healthcare. Despite this, behavioral health professionals have been slow to integrate technologies into care for various reasons. The aim of this review is to inform behavioral health professionals on competencies needed to support the adoption of digital health technologies. PubMed and Google Scholar were searched for articles from 2010 through 2020. Search terms associated with digital health technologies, behavioral health professionals, and competencies, skills, training, and best practices yielded 1972 articles. Twenty-three articles met inclusion criteria indicating foundational core competencies and data was extracted and organized based on profession and technology platform in order to detect similarities and differences. The findings were used to generate an interdisciplinary approach for the clinical integration of digital health. Recommendations are presented for foundational digital health competencies applicable across behavioral health disciplines, rather than technology- or discipline-specific training. The universal digital health inter-professional competencies identified include: (a) privacy, security, and patient safety; (b) digital health technical skills; (c) ethical and legal considerations; (d) clinical skills; (e) art of therapy and digital health; and (f) administrative tasks. Research is needed to understand if the development of professional digital health competencies helps to improve patients' behavioral health.

**Keywords** Digital health · Telehealth · mHealth · Behavioral health competencies · Technology training

The rapid integration of technology is occurring in all healthcare settings, including behavioral healthcare. Behavioral health professionals (BHP) who provide direct care for patients are beginning to utilize digital health technologies (DHT) to support or deliver treatments (Aitken et al., 2017). Understanding how BHP are developing competencies to utilize DHT is unclear. The aim of this rapid review is to inform BHP on competencies needed as they increasingly adopt and utilize DHT.

The World Health Organization (2016) defines digital health as: “The use of digital, mobile and wireless technologies to support the achievement of health objectives.” DHT encompasses an array of technologies to be

leveraged, including telehealth, electronic health (eHealth), and mobile health technologies (mHealth). BHP may use DHT to help reduce barriers to treatment, such as BHP shortages, stigma, and lack of transportation (Aitken et al., 2017; Brown et al., 2015). See Table 1 for a list of relevant terms and definitions. Telehealth allows BHP to use video conferencing to offer therapeutic services to underserved locations (Brown et al., 2015), eHealth can deliver anonymous internet-based care to avoid stigma (Wu et al., 2017), and mHealth apps can be used by a patient to practice a new coping skill when a trigger is presented in their life (Gould et al., 2019). Additionally, there is support for the use of DHT for a variety of behavioral health conditions, including insomnia, posttraumatic stress disorder (PTSD), depression, and anxiety (Aitken et al., 2017). Despite these points, the integration of DHT into behavioral healthcare has been slow; with studies identifying an average of 15 years for new DHT to be implemented (Wind et al., 2020). This slow integration is influenced by numerous factors. Data from a Department of Defense (DoD) mHealth training program

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**Table 1** Definitions of terms

Term	Definition
Digital Health	<p>“The use of digital, mobile and wireless technologies to support the achievement of health objectives. Digital health describes the general use of information and communication technologies for health and is inclusive of both mHealth and eHealth” (WHO, 2016).</p> <p>Includes: eHealth, mHealth, telehealth</p>
Electronic Health (eHealth)	<p>“eHealth is an emerging field in the intersection of medical informatics, public health and business, referring to health services and information delivered or enhanced through the Internet and related technologies” (Eysenbach, 2001).</p> <p>Includes: internet-based treatments, social media, email</p>
Mobile Health (mHealth)	<p>“Medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants and other wireless devices. mHealth involves the use and capitalization on a mobile phone’s core utility of voice and short messaging service as well as more complex functionalities and applications including general packet radio service, third and fourth generation mobile telecommunications (3G and 4G systems), global positioning system, and Bluetooth technology” (WHO, 2011).</p> <p>Includes: mobile apps, text messaging</p>
Telehealth	<p>“Telehealth is defined as the use of electronic information and telecommunication technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health and health administration. Technologies include video conferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications” (Health Resources &amp; Services Administration, 2021).</p> <p>Includes: video conferencing, remote health monitoring</p>
Behavioral Health Professionals	Behavioral health professionals include psychiatrists, psychiatric nurse practitioners, psychologists, clinical social workers, marriage and family therapists, professional counselors, and drug and alcohol abuse counselors (National Alliance on Mental Illness, 2020).
Digital Professionalism	<p>Professional behaviors of healthcare professionals and students related to their use of digital health technologies.</p> <p>“Digital professionalism is based on principles of proficiency, reputation, and responsibility. ...professionals are deliberate, ethical, and accountable in their use of digital media” (Ellaway et al., 2015).</p>

identified the following clinical integration barriers: (a) uncertainty on how to integrate technology into care; (b) lack of or unclear policies around mHealth use; (c) concerns regarding privacy and security; (d) lack of employer support; (e) employer restrictions about technology use; and (f) concerns regarding the effectiveness of mHealth (Armstrong et al., 2018). These challenges highlight the need for education, training, and policy for DHT use.

In an effort to provide guidance on the use of DHT, many professional organizations have disseminated recommendations and policies. Some integrate competent use of DHT into their ethical code (e.g., American Association of Marriage and Family Therapists [AAMFT]; Blumer et al., 2015). Others have developed guidelines for a specific platform (e.g., American Telehealth Association [ATA] Guidelines for Videoconferencing and Internet-Based Care for Adults) or for specific disciplines (e.g., National Association of Social Workers [NASW] Standards for Technology and Social Work Practice; Hilty et al., 2017). There is little evidence that these efforts translate into increased integration of training programs for digital health (Blumer et al., 2015). More research may help to understand if demand for DHT has created an increase in training programs and if training programs ultimately improve behavioral healthcare.

Although the COVID-19 pandemic is not a central aspect of this rapid review, it is important to note the impact it has had on the use of DHT. In 2020, COVID-19 and restrictions aimed at reducing the spread of the virus (i.e., social and physical distancing) accelerated rates of implementation of digital health across all healthcare settings (Wind et al., 2020). While there may be some reductions in use when restrictions are lifted, the use of DHT is not expected to return to pre-pandemic rates (Wind et al., 2020). Shortly after COVID-19 restrictions accelerated the adoption of digital health, Békés and Aafjes-van Doorn (2020) surveyed BHP about their experiences using telehealth. Overall, they found BHP-endorsed positive attitudes toward telehealth use, with those who had previous experience with telehealth reporting more positive attitudes. BHP reported concerns about: (a) patients’ physical surroundings; (b) technical issues; (c) lack of competence utilizing telehealth and DHT in clinical care; and (d) feeling less connected to patients (Békés & Aafjes-van Doorn, 2020).

The reported lack of competence with DHT is a concern for the behavioral health field, considering risks to patient safety, as well as legal and ethical violations (Johnson, 2014). In an attempt to increase DHT competence, some states (e.g., Massachusetts and Washington) have passed

bills requiring all healthcare providers, including BHP, complete training (Commonwealth of Massachusetts, 2019; SB 6061, 2020). These efforts help to ensure a basic level of training and understanding for using digital health tools. This type of training requirement is a foundational initiative to make sure BHP have a basic understanding of digital health as the demand for treatment and use of technologies increase (Commonwealth of Massachusetts, 2019; Washington State Department of Health, 2020).

Depression, anxiety, substance use, and PTSD are anticipated to increase due to factors related to the pandemic. Additionally, essential workers, healthcare workers, educators, law enforcement, as well as vulnerable groups may experience higher rates of behavioral health symptoms related to the COVID-19 pandemic compared to the general population (Washington State Department of Health, 2020). These at-risk groups may face barriers to behavioral health treatment due to atypical work schedules, stigma associated with behavioral health conditions or seeking treatment, socioeconomic factors, cultural norms, distrust in the medical system, and racism (Cook et al., 2017). Digital health could help overcome of these barriers: it is anonymous, flexible (location and time), cheaper, and less biased than in-person treatment (Gould et al., 2019; Karyotaki et al., 2017; Sijbrandij et al., 2016).

This rapid review aims to provide an overview of the literature about digital health training, competencies, and ethics for BHP. We aim to synthesize the descriptive results from included studies to generate foundational recommendations for DHT competencies that BHP may share across disciplines. In order to perform this synthesis and generate competencies, we examine similarities and differences found between behavioral health disciplines, as well as across digital health platforms.

## Methods

A rapid review of the literature was conducted in October 2020. PubMed and Google Scholar were searched using the keywords listed below. While many search terms were initially explored, only the listed final terms produced unique results relating to the topic. General terms that did not yield relevant results were removed from the search, such as “digital health” and “education.” Articles from 2010 to 2020, written in the English language, were initially included. Featherstone et al. (2015) point out that rapid reviews, while they do not comprehensively cover all the available literature on a topic, may be appropriate for answering questions about emerging technologies or for exploring the scope of existing literature on a topic. Our research team included a medical librarian, who searched the PubMed database with a targeted search, as well as conducted focused Google Scholar searches to target

relevant journal articles from journals that are not fully indexed in PubMed. Hand searching, snowballing from article references, and grey literature searching was not completed. Quality assessment of included articles was not conducted.

Targeted searches yielded 1972 articles identified for title and abstract screening. Inclusion criteria included research-based articles focused on some aspect of training BHP in the USA and Canada to use technology in practice with a discussion of competencies, training, or best practices, including attitudes, skills and knowledge needed. We included pre-practice or professional training recommendations and any technology platform such as: mobile apps (mHealth), telehealth, or other electronic health (eHealth) technology. After removing duplicates and non-related articles, a screening of 76 articles by three researchers led to the identification of 29 articles for further review. After full-text review, the researchers selected 23 articles for inclusion. Figure 1 shows the article selection process.

## Final Search Terms

“technology” OR “mobile applications” OR “telehealth” OR “social media” OR “gaming” OR “web-based” OR “mhealth” OR “mobile health” OR “virtual health” OR “telemedicine”

AND

(“mental health” OR “behavioral health” OR psychiatry OR psychology) AND “professionals”

AND

competencies OR skills OR training OR “best practices” OR frameworks OR ethics

## Results

The literature search resulted in 23 articles meeting the criteria for this rapid review. The results are organized with subheadings using different behavioral health disciplines: (a) behavioral health professionals (i.e., multiple behavioral health disciplines or discipline was not specified); (b) marriage and family therapists; (c) psychologists; (d) psychiatrists; and (e) social workers. Results are separated by professional group because several distinctions were identified between ethical codes, discipline specific guidelines and responsibilities. Because of variation in language used regarding each of the technologies and within each professional group, each section is focused on subsections about the specific type(s) of DHT identified in the articles. These subsections include (a) digital health (i.e., multiple technologies or technology platform was not specified); (b) telehealth (e.g., video conferencing, remote health monitoring); (c) mHealth (e.g., mobile apps, text messaging); and (d) eHealth (e.g., social media, email).

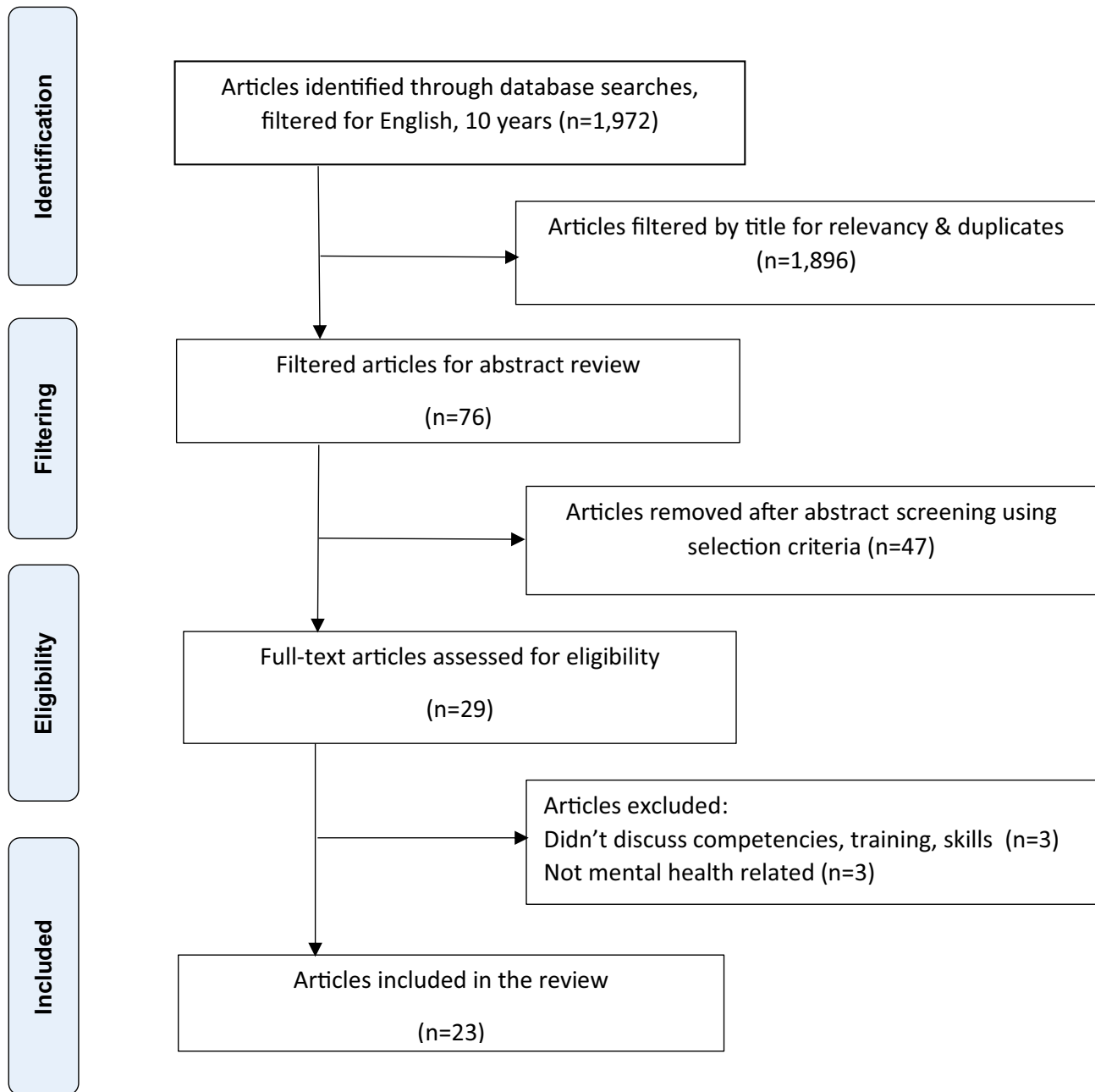


Fig. 1 Article selection flowchart

Of the 23 included articles that met the criteria for this rapid review, eight focus on the skills, knowledge, or attitudes needed for an unspecified group of BHP when using digital health. Seven articles focus specifically on skills for psychiatrists; three articles focus on psychologists, four focus on social workers, and one article is written from the perspective of marriage and family therapists.

### Behavioral Health Providers (BHP)

The first group of articles reviewed is focused on the broad category of BHP. Three articles focus on overall use of DHT, one on telehealth only, three on mHealth, and one article focused on eHealth.

## Digital Health

Three included articles recognized a multidisciplinary group of BHP and offers frameworks using multiple types of digital health within behavioral healthcare (Hilty et al., 2017; Lustgarten & Elhai, 2018; Maheu et al., 2018). These articles present competencies needed for BHP to successfully integrate DHT into treatment. Seven digital health domains were identified addressing skills needed for DHT:

1. Clinical evaluation and care
2. Virtual environment and telepresence
3. Technology (patient preference and experience with technology)
4. Legal and regulatory issues
5. Evidence-based and ethical practice
6. Mobile health technologies including apps that demonstrate alignment with therapeutic goals
7. Telehealth development

Two domains (i.e., clinical evaluation and care, and evidence-based and ethical practice) include a competency framework describing 51 behavioral objectives and 149 discrete, measurable outcomes BHP may have in clinical practice with patients (Maheu et al., 2018). The objectives and outcomes help to assure this competency framework is “more than just an outlined curriculum” for BHP to attain knowledge (Maheu et al., 2018, p. 831). The authors also suggested BHP achieve three levels of expertise within each competency beginning with the level of novice, progressing to proficient, and finally attaining a level of authority for each domain (Hilty et al., 2017; Maheu et al., 2018). For example, the BHP at the novice level would be aware of the scope of issues relevant to utilizing the technology, at the proficient level the BHP would be able to practice within the scope of the technology utilized, and the BHP at the level of authority would additionally be able to provide feedback and troubleshoot problems. These levels of expertise are highlighted as important for BHP to achieve as they develop digital health competencies and are referred to in several articles included in this review (Hilty et al., 2015, 2017, 2019a, 2020; Maheu et al., 2018). As Maheu et al. (2018) observed, the BHP who is learning how to use one or more of the available DHT should have a prior understanding and demonstrated capability with *in-person* treatment. In-person treatment skills are a fundamental requisite, as digital health competencies are *built upon* existing clinical skills. The similarities and differences between in-person care, with mobile-based applications and synchronous telehealth, should be leveraged when developing a digital health training program. The authors discuss how competencies fail due to organizational, leadership, funding challenges, and the importance of training as a “lifelong practice.”

Lustgarten and Elhai (2018) encouraged BHP to follow the ethical codes of the American Counseling Association (ACA) and the American Psychological Association (APA), emphasizing the legal and ethical risks in using digital health in clinical care. Suggesting a lack of required training in digital health use for graduate level counseling or psychology students, the authors developed competencies for digital health use. These competencies are focused on legal and ethical concerns across five domains that include: legal, welfare, privacy and confidentiality, security, and boundaries. BHP are encouraged to be thoughtful and use clinical judgment as they consider technology usage for treatment (Lustgarten & Elhai, 2018).

Hilty et al. (2017) called for an inter-professional framework for use in digital health. The authors explored three questions. First, the authors asked what evidence is applicable when developing telehealth competencies for BHP. The authors presented a table of telehealth competencies developed in 2015 that includes a recommendation for three proficiency levels: novice, proficient, and expert, described earlier. Hilty et al. (2017) asked a second question concerning which frameworks help with competency development. The answer to this second question focuses on frameworks from several associations that include the ATA, APA, ACA, NASW, the Association of Addiction Professionals, the British Psychological Society, and Australian Psychological Society. The third question asked about similarities and differences among different behavioral health professions. The answer indicated differences between disciplines may depend on state and regulatory boards. Standards and comparisons in the article are based on older documentation that was published prior to 2017. Overall, this article called for inter-professional guidelines for all mental health professionals and supports the guidelines offered and further developed in Maheu et al. (2018).

## Telehealth

One article focused on a diverse group of BHP and provided recommendations for using telehealth. Turvey et al. (2013) reported on the ATA practice guidelines for telehealth from an interdisciplinary group of authors. The proposed guidelines focus on real-time synchronous videoconferencing, provided through personal computers or mobile devices. The authors discussed the importance and value of the practice of therapy as “both a science and an art,” suggesting while guidelines are important, they do not assure the BHP ability to effectively implement care. BHP may not be required to follow these guidelines. However, standards for safe and effective care are proposed, and according to the authors, technology use is left up to clinical judgment

and deemed relevant depending on the patient's need. The guidelines offered by the ATA have been updated further and are included by other authors in this review (see Maheu et al., 2018).

### mHealth

Three behavioral health articles focused specifically on guidelines and competencies needed for mHealth utilization in clinical care. Hilty et al. (2020) closely followed previous recommendations and competencies published in 2015 and 2018 (Hilty et al., 2015, 2018), addressing specific differences in competencies needed for mHealth training. Platforms involving asynchronous communication (e.g., texting) are important to consider when using mHealth. An email, a text, or other types of digital information, necessitate data delivery via a mobile device or a wearable that results in delays in actual, co-present, synchronous forms of interaction. Asynchronous communication may engender therapeutic boundary and data management concerns (Hilty et al., 2019b, 2020). While the seasoned BHP will not be new to managing the therapeutic frame, extra attention should be given to discussing these boundary issues early in the treatment. The informed consent procedure is an opportunity to discuss these issues, including the use of social media, early in the initial psychiatric consultation (Hilty et al., 2020).

The inappropriate use of different methods can have clinical ramifications. The ability to ensure that BHP and patients have time to acquire knowledge, gain skills, and adjust attitudes is critical to successful engagement with mHealth resources. Educational considerations include using the Accreditation Council of Graduate Medical Education (ACGME) framework and facilitating skill development based on the skills used for telehealth and social media. In this framework, faculty are involved in assessment during patient care and offer seminars outside of the direct clinical setting. Learners are assessed at three levels of proficiency: novice, proficient, and authority. Clinical supervision is encouraged to help maintain clear boundaries, but since mHealth is asynchronous, on-call supervision may be necessary during training (Hilty et al., 2020).

Armstrong et al. (2018) describe the development and evaluation of a competency-based training program centered on the integration of mHealth into the military and Veterans Affairs (VA) behavioral health settings. A curriculum focused on DoD/VA developed mobile apps was created; however, the curriculum could be of use with any mHealth app. Developers based the curriculum on five core competencies: evidence base, clinical integration, security and privacy, ethical issues, and cultural considerations. The workshops solely focused on the development of mHealth skills and did not include

any training on clinical skills. The assumption was that the master's and doctoral level trainees were seasoned clinicians who had arrived at the workshop to learn how to bring apps into care. Apps were used as examples for direct hands-on practice during a seven-hour training. The findings collected from training participants indicate that knowledge about mobile health applications had improved three months after the training, with 92% of trainees using apps for patient care (Armstrong et al., 2018). However, the study did not assess the overall impact on patient outcomes, but it is suggested that apps could empower patients to be more involved in their care.

Chan et al. (2017) completed a literature review and recorded their own professional experiences to understand the overall issues experienced during integration of mobile apps into behavioral healthcare. The authors' key points about the effective use and integration of mobile apps include the need to understand the app capabilities and features, addressing workflow issues, and looking at cultural and access issues that can "make or break" an app. Several types of apps were described including apps that utilize ecological momentary assessment, which allows for real-time symptom tracking. Mobile apps can also include virtual and augmented reality elements that can be utilized with patients suffering from anxiety disorders, substance abuse disorders, and distraction technique to manage acute pain. The authors suggested that it is important to evaluate the mobile app's clinical, business, and information system by using one of several available guidelines (Chan et al., 2017).

### eHealth

One article by Hilty et al. (2018) addressed eHealth use for BHP. Previously discussed digital health competencies identified by Hilty et al. (2015) and Maheu et al. (2018) were used as a guide for teaching BHP about asynchronous social media and networking (Hilty et al., 2018). The competencies at novice and proficient levels previously described have been updated in this article to address the nuances between synchronous meetings, such as virtual meetings, and communication that is potentially sporadic or delayed. The authors also encouraged BHP to: (1) seek out help or information from organizations or others with expertise on the subject; (2) be cautious about privacy and confidentiality issues; and (3) be wary of clients using email, text messaging, or social media messaging between scheduled meetings (Hilty et al., 2018). BHP cannot ensure if email, text and social media messaging can be kept private and confidential, and need to inform clients of risk if using for communication.

## Marriage and Family Therapists (MFT)

Researchers identified only one article in this review related to MFT competencies or training for any of the DHT. This finding is surprising considering the AAMFT's Code of Ethics emphasizes the importance of competency for online therapy. In addition, the MFT board examination has numerous questions about ethical, legal, and clinical aspects of conducting online therapy and other digital health technologies (Blumer et al., 2015).

### eHealth

Blumer et al. (2015) conducted a mixed-data survey exploring MFT's observations and experiences with eHealth training, and opinions regarding competency in online therapy. The authors identified a chasm between professional expectations of eHealth competency via the code of ethics and board examination and a lack of training opportunities needed in order for MFT to become competent in using eHealth. The results of the study identified the following as recommended competencies: (a) ethical and legal issues related to eHealth; (b) confidentiality and privacy concerns; (c) information on how to utilize eHealth; (d) safety and security issues; and (e) research on the use of eHealth for therapy. The authors encouraged the integration of eHealth education and trainings into graduate school curriculum for future MFT. Additionally, continuing education on eHealth should be developed for current MFT in order to align with the ethical code (Blumer et al., 2015).

### Psychologists

Three articles addressed ethics or competencies related to psychologists' use of digital health technologies when providing behavioral healthcare. In 2013, the APA published guidelines on using telehealth for psychology but had not updated them to include eHealth or mHealth (American Psychological Association, 2013). Meanwhile, the Canadian Psychological Association (CPA) guidelines on technology have been lacking, with some individual provinces providing guidance on integrating technology into psychological care (Johnson, 2014). Two of the three articles reviewed use the APA's ethics code or guidelines from the CPA to organize their recommendations for using technology in psychological care. One article concentrated on possible APA ethical issues that may arise when using mHealth (Edwards-Stewart et al., 2019). Johnson (2014) used the CPA framework to identify digital health competencies for psychologists. The third article focused on a novel telehealth training program

integrated into a pre-doctoral internship in Texas (McChord et al., 2015).

### Digital Health

Johnson (2014) reported on the lack of standard competency guidelines for psychologists integrating digital health into behavioral healthcare in Canada. Some territories include digital health competencies in their standards of practice, whereas others do not. These inconsistencies resulted in concerns for patients due to the possibility of receiving sub-standard care from psychologists who are not competent in using DHT (Johnson, 2014). The author provided the following recommendations for competency categories: interpersonal relationships, assessment and evaluation, intervention and consultation, research, and ethics and standards with guidance on the ethical use of digital health. The interpersonal relationships category includes two competencies: telepresence and technical communication skills. Assessment and evaluation addresses the following competencies: client characteristics, and assessment and evaluation using distance technologies. The intervention and consultation category discusses the following three competencies: (a) selection of distance technologies; (b) general technical skills; and (c) tailoring interventions. Efficacy research and future research are identified as competencies within the research category. Lastly, ethics and standards contains four competencies: (a) privacy and confidentiality; (b) emergency and risk management; (c) jurisdiction of practice; and (d) competency training and standards. Even though these competencies are based on standards for psychologists from Canada, they may be applicable for psychologists in the United States (Johnson, 2014).

### Telehealth

McCord et al. (2015) described the Telehealth Counseling Clinic at Texas A & M University. The clinic provides pre-doctoral psychology interns a comprehensive training program with a focus on the use of telehealth. The goal is to increase the number of psychologists competent in telehealth, as a way to improve access to behavioral healthcare in rural areas and underserved locations. The authors provided an overview of the clinic and its programming, including the following areas of training for interns: basic counseling; community, scientist-practitioner, and telehealth (McCord et al., 2015). Within the telehealth section, the competencies are: (a) telehealth technical skills; (b) telehealth clinical skills; (c) selecting appropriate clients and interventions; and (d) initiating, maintaining, and terminating therapy (McCord et al., 2015). Despite the difference in the technology platforms and countries, the competencies identified in this program were similar to the digital health competencies recommended by Johnson (2014).

## mHealth

Edwards-Stewart et al. (2019) reviewed the APA's ethical standards and principles to identify relevant guidelines for using mHealth technologies in clinical care. Applying the APA ethical principles of beneficence and non-maleficence, as well as justice, Edwards-Stewart et al. (2019) discussed the importance of informing patients of the benefits and risks of mHealth apps, and using evidence-based mHealth apps when available. Regarding the APA ethical standards, the authors highlighted the need to focus on: (a) boundaries of competence; (b) standard of informed consent; (c) maintaining confidentiality; and (d) standards of documentation and records disposal. Throughout the article, an emphasis is placed on the following when using mHealth: (a) being proficient in apps used in clinical care, (b) being clear with patients regarding expectations, the risks and benefits, and patient-psychologist boundaries, (c) obtaining and documenting informed consent from the patient, (d) understanding and being able to describe data security to patients; and (e) ways to increase data security via passcodes and mobile device management (Edwards-Stewart et al., 2019). Throughout the review, the authors encouraged psychologists to use professional judgment when integrating mHealth apps into clinical care (Edwards-Stewart et al., 2019).

## Psychiatrists

A total of seven identified articles discussed ethics or competencies for psychiatrists integrating digital health into clinical care. The field of psychiatry has appreciated the importance of digital health since the late 1990s, when the American Psychiatric Association first provided guidance on using telehealth in psychiatric care. More recently, they provided resources for telehealth and legal issues and internet-based psychiatry (Shore et al., 2018). Two articles examined mHealth within psychiatry; one identified competencies (Hilty et al., 2019a) while the other article explored ethical issues (Torous & Roberts, 2017). The remaining two articles examined ethical issues related to using eHealth (e.g., internet, email, or social media) and ways to protect the psychiatrist and patient (DeJong et al., 2012; Sabin & Harland, 2017).

## Telehealth

Three articles were included that addressed the development of telehealth competencies for psychiatrists (Hilty et al., 2015; Saeed et al., 2017; Shore et al., 2018). Hilty et al. (2015) presented an overview of the background for conducting telehealth, competencies for psychiatrists practicing and supervising telehealth, and teaching methods to deliver training on telehealth. The competencies suggested

were presented in a previously discussed framework from the ACGME, and use proficiency levels that mimic competency-based medical education (Hilty et al., 2015). Hilty et al. (2015) provided the recommended competencies in eight themes: (a) patient care; (b) communication; (c) systems-based practice; (d) inter-professional education; (e) professionalism; (f) practice-based learning; (g) knowledge; and (h) technology. The authors also described the specific skills needed for each proficiency level within each competency (Hilty et al., 2015).

Saeed et al. (2017) provided an overview of telehealth, investigated the interest of psychiatrists in telehealth, and provided recommended competencies for graduate medical school education. Despite the lack of formal telehealth training programs, they found most residents and program directors expressed interest in using telehealth and believed a telehealth curriculum should be created. The competencies for telehealth for psychiatrists were presented within the existing ACGME framework and focused on helping psychiatrists acquire the skills needed to practice telehealth (Saeed et al., 2017). The competencies addressed being aware of a patient's location since laws and licensure regulations vary state to state, ways to protect the patients' privacy and security, and how to determine if telehealth is appropriate to a patient or situation. The authors suggested graduate medical school education should include telehealth education. Echoing recommendations from Blumer et al. (2015), the authors stated that current psychiatrists need to complete trainings in order to become competent in telehealth and identified a variety of methods to deliver training (e.g., continuing education, readings, or online programs; Saeed et al., 2017).

Shore et al. (2018) provided a guide to help psychiatrists navigate telehealth practices based on guidelines from the American Psychiatric Association and the ATA. These recommendations offer a broad array of competencies including: (a) administrative work; (b) technical skills; (c) clinical care; (d) ethical practices; (e) cultural factors, and (f) special populations and settings. An example of the special populations and settings competency would be utilizing home-based synchronous video conferencing for geriatric populations with complex health problems. Similar to Hilty et al. (2015), many of these competencies contain subtopics to provide more detail and nuance about skills needed to provide competent and ethical care using telehealth technologies.

## mHealth

Two articles addressed mHealth competencies or ethics as they relate to psychiatry. Hilty et al. (2019a) adapted their previous framework and proficiency-levels for mHealth (i.e., Hilty et al., 2015, 2017, 2020). The authors reviewed the different impacts the use of mHealth may have on



academics, clinical care, and the culture of behavioral healthcare, as well as the different cultural and societal factors that could influence the adoption of mHealth (Hilty et al., 2019a).

Torous and Roberts (2017) examined ethical issues relating to using mHealth within psychiatry by providing case vignettes and identifying steps to provide safe care while using mHealth apps. The following are ethical conflicts that may arise when using mHealth: (1) a patients identify mHealth apps to use in their own care, which may not align with their treatment, (2) concerns regarding confidentiality and data security; and (3) misleading information from companies about the benefits of their app. Torous and Roberts (2017) identified steps psychiatrists can take to ensure ethical use of mHealth apps: (a) ensuring the patient and rapport will benefit from use; (b) weighing risks of the app; (c) obtaining informed consent for using the app in treatment; (d) discussing confidentiality and privacy concerns with the patient, and (e) confirming the app will fit into the treatment plan. These items can largely be addressed by having a discussion with the patient about how mHealth could support their care.

### eHealth

Two articles examined professionalism and the ethics of eHealth for psychiatrists. DeJong et al. (2012) discussed several issues related to ethics and professionalism, including: (a) liability; (b) confidentiality and privacy; (c) psychotherapy and boundaries; (d) safety issues and mandating reporting requirements; (e) potential libel; (f) potential conflicts of interest; (g) academic issues; and (h) “netiquette.” The ethical issues identified above were explored in different vignettes. Of note, social media poses significant risks in regard to confidentiality, privacy, psychotherapy, and boundaries. First, there is the risk a patient may find a psychiatrist’s personal information through social media profiles. Second, social media creates more opportunities for inappropriate relationships or communication. Email communication was a risk related to liability and “netiquette” due to appropriate response time, miscommunications due to lack of non-verbal cues, and the risk of an unprofessional response when addressing an emotionally loaded issue. Additionally, if the psychiatrist performs a patient-targeted web search, the information uncovered could negatively impact therapeutic rapport. In order to mitigate the identified issues, psychiatrists are encouraged to: (a) limit publicly available personal details and make social media profiles private; (b) set clear boundaries with patients regarding communications via email and social media; (c) pause before responding to emails; (d) do not conduct patient-targeted internet searches without exploring personal motives and consider the impact to the therapeutic rapport; and (e) be aware of multiple roles

and endorsements made online; and (f) intentionally or unintentionally plagiarized materials (DeJong et al., 2012).

Sabin and Harland (2017) conducted a review of ethics and the use of eHealth within psychiatry. The authors identified the following as crucial topics psychiatrists should consider: (a) clinical boundaries, (b) privacy and confidentiality, (c) digital communication; and (d) digital professionalism. Exploring similar issues as DeJong et al. (2012), the authors described the possible impact of social media, Google and other search engines, as well as email communications on the patient-psychiatrist relationship. The authors provided recommendations on digital professionalism (see Table 1 for definition), recognizing there can be a challenging balance between professionalism and personal life. They discussed how digital professionalism requires self-discipline and adhering to ethical norms, even when the psychiatrist is off the clock. Medical schools are encouraged to discuss digital professionalism along with the pitfalls of the internet and social media (Sabin & Harland, 2017). These two articles place a large focus on a psychiatrist’s reputation and professional boundaries that could be breached by mistake when using eHealth.

### Social Workers

Four articles were included in the review related to ethics and competency recommendations for social workers. These articles utilized social work ethics to inform competencies and discuss how legal and ethical issues need to be considered when using DHT.

### Digital Health

Two of the three articles included in this section are by social work ethicist, Frederic Reamer, who described the use of DHT including: online chat, phone counseling, telehealth, the use of avatars instead of real-life images to provide digital therapy, asynchronous web-based interventions, social media, email, and text messaging (Reamer, 2013, 2015). In Reamer (2013) and Reamer (2015), the author reported ethical challenges attached to the use of these technologies in social work, which was first addressed in the NASW Code of Ethics in 1996. Reamer (2013) and Lopez (2014) each referred to a 2005 set of recommended standards for social workers and technology developed through a collaboration of NASW and Association of Social Work Boards (ASWB; Lopez, 2014; Reamer, 2013). Lopez (2014) provided suggestions to strengthen and update the eight recommendations published by NASW in 2005. The need to update these recommendations in less than ten years demonstrates that standards cannot always keep pace with the rate of technology development and options for treatment.

Similar to authors from other behavioral health disciplines, Reamer (2015) accentuated the need to obtain informed consent,

pay attention to privacy and confidentiality, maintain boundaries, be aware of dual relationships, and to avoid conflicts of interest with regard to the use of digital technology in their practice. Several case examples are presented, such as being asked by a patient to be a “friend” on social media, which requires attention to professional guidelines (i.e., dual relationships). Reamer (2015) took into consideration how the use of DHT might impact the therapeutic relationship, and suggested the following eight recommendations for risk management:

1. Social workers are encouraged to consult colleagues who have expertise in the use of digital technology to assist with ethical decision making.
2. It is suggested that social workers obtain supervision to increase their skills to help in case an issue of liability arises.
3. The importance of reviewing ethical standards of NASW and other professional associations involved with technology in behavioral health care is critical.
4. In order to make judgments that may put the client or the social worker at risk, it is important to be familiar with relevant regulations, laws, and policies.
5. Social workers may be expected to develop a social media policy for clients or staff.
6. Social workers should be familiar with current literature related to providing care through digital technologies.
7. For protection, social workers are encouraged to obtain legal consultation when necessary.
8. Documenting decision making steps will help to ensure that quality care is maintained.

### eHealth

Mattison (2012) called for the need to establish professional guidelines for social workers using eHealth in clinical practice. The author discusses the many benefits and challenges of using email communication for therapeutic benefit. Like other social work authors, Mattison (2012) emphasized caution before utilizing digital practices, due to ethical concerns and legal risks. The main ethical considerations include concerns about confidentiality, privacy, and maintaining clear boundaries. For example, there is always a risk of security breaches with online communication, and privacy cannot always be assured, but can be strengthened with encryption software and passwords. Recommended competency standards include the need for social workers to be technologically literate and to have a clear understanding of “core rules and practices of courteous internet communication” (Mattison, 2012, p. 254).

### Overall Similarities and Differences

This rapid review detected several themes when comparing the recommended competencies. Similar competencies

across all platforms and disciplines included: (a) clinical skills (e.g., ability to deliver behavioral health treatment); (b) technical skills (e.g., ability to use the technology and mitigate technology related risks); (c) privacy and confidentiality (e.g., ability to maintain patients’ privacy and confidentiality while using DHT); and (d) ethics (e.g., ability to use DHT in a manner congruent with professional ethical standards and codes). We will now discuss some of the similarities and differences identified across professions.

### Across Behavioral Health Professions

When examining competencies within each behavioral health discipline, additional trends were detected. For the general category of BHP, competencies largely focused on clinical skills (e.g., clinical evaluation and treatment) and ethical and legal considerations (e.g., privacy and confidentiality). Differences across DHT platforms for general BHP were related to clinical tasks, such as informed consent, or digital professionalism, such as digital boundaries and conflicts of interest. Psychiatrists mostly focused on clinical skills or ethical and legal considerations. For psychiatrists, competencies related to technical skills (e.g., DHT operational skills) and administrative tasks (e.g., billing practices) differed the most from one DHT platform to another. Technical skills and clinical skills were common competencies for psychologists. The similarities identified for social workers included clinical skills, and ethical and legal considerations. Competencies related to technical skills differed between general DHT and eHealth platforms. The MFT group only had one article about eHealth competencies, thus an examination of competencies across DHT platforms is not applicable for this group.

### Discussion

Our rapid review provides an updated overview of the competencies available for the various DHT across the behavioral health field. Additionally, we identify inter-professional competencies for BHP on the use of DHT to inform graduate education, continuing education, and other digital health training programs. Our recommended digital health inter-professional competencies across behavioral health professions include: (a) privacy, security, and patient safety; (b) digital health technical skills; (c) ethical and legal considerations; (d) clinical skills; (e) art of therapy and digital health; and (f) administrative tasks. We identified these competencies by compiling topics identified from the articles reviewed. Table 2 provides a detailed overview of the recommended competencies and related skills. A majority of the competencies are clear from their title, but the art of therapy and digital health demands more explanation. This

competency is focused on the clinical skills needed to adapt therapy and rapport to a digital format. This includes understanding the impact of technology on non-verbal communication, considering patients' characteristics, and the selection of DHT. For example, a BHP should consider what they might do if the technology fails, how their body is framed within the screen, and impact of lighting, background and sound when using telehealth.

The results of our review lead us to ask several questions about how BHP are currently accessing and learning about DHT, about related training opportunities, and if indeed these trainings are effective in their work with the people

they serve. Ensuring that BHP are competent in using therapeutic skills and clinical interventions, but also in DHT, is vital in patients' overall well-being. Developing competence with DHT requires continued education, training, and supervision, similar to how BHP develop competence working with diverse populations, clinical skills, and therapeutic interventions (Hilty et al., 2021; Maheu et al., 2018). One challenge with DHT competency is the various behavioral health disciplines may have differing requirements, guidelines, and expectations. For example, within one behavioral health clinic it is common to have psychiatrists, social workers, marriage and family therapists, and psychologists,

**Table 2** Recommended digital health competencies and related skills

Competency	Skills
Privacy, security, and patient safety	<ul style="list-style-type: none"> <li>• Maintain privacy and confidentiality while using various digital health tools</li> <li>• Understand how data transmission and security works for digital health tools and be able to communicate this clearly to patients</li> <li>• Identify ways to maintain patient safety when providing behavioral health care from a distance</li> <li>• Create an emergency plan with patient to address technical problems and risk management (e.g., suicide risk)</li> <li>• Help patient identify a support person who is located nearby that can be contacted in emergency situations and complete necessary releases of information</li> </ul>
Digital health technical skills	<ul style="list-style-type: none"> <li>• Complete training or education for relevant digital health technologies</li> <li>• Be comfortable operating and instructing patients how to use digital health tool</li> <li>• Be familiar with common problems for patient and provider and ways to troubleshoot them</li> <li>• Understand the background and evidence-based support for digital health technologies</li> <li>• Recognize when to leverage multiple digital health technologies</li> <li>• Continue to expand competencies as digital tools are adapted and developed</li> <li>• Identify opportunities for interdisciplinary education and teamwork on the topic of digital health</li> </ul>
Ethical and legal considerations	<ul style="list-style-type: none"> <li>• Understand laws relevant to behavioral health care for provider's and patient's location</li> <li>• Confirm provider meets licensure requirements for provider's and patient's location</li> <li>• Obtain patient's informed consent for therapy and use digital health technologies</li> <li>• Follow ethical codes and practice standards as dictated by professional association</li> <li>• Set clear boundaries with patient regarding online presence and social media interactions</li> <li>• Demonstrate professional behavior in person and when using digital health</li> </ul>
Clinical skills	<ul style="list-style-type: none"> <li>• Confirm patient identification and location</li> <li>• Establish provider identity and credibility</li> <li>• Conduct an intake, gathering relevant history of patient's prior experience using digital health</li> <li>• Identify appropriate assessments to administer via digital health</li> <li>• Consider patient's cultural and diversity factors, including access to technology and membership to groups that may influence receptivity to digital health</li> <li>• Discuss the integration of digital health into treatment plan with patient</li> </ul>
Art of therapy and digital health	<ul style="list-style-type: none"> <li>• Provide clear expectations for patient-provider communication, especially when communicating over digital health (e.g., email response times)</li> <li>• Identify appropriate technology for patient and adjust use of digital health as needed</li> <li>• Understand and inform patient of the risks and benefits associated with digital health</li> <li>• Adapt therapeutic presence to foster alliance with patients while using digital health</li> <li>• Monitor therapeutic alliance and identify and repair any fractures to relationship due to the use of digital health</li> <li>• Reflect on digital health skills and identify areas of growth for self</li> <li>• Seek consultation regarding patient care and digital health use with colleagues, supervisors, or experts as needed</li> </ul>
Administrative tasks	<ul style="list-style-type: none"> <li>• Include descriptions of digital health use in clinical documentation and electronic health records</li> <li>• Use billing codes to capture use of digital health technologies (e.g., telehealth) as applicable</li> <li>• Identify places to efficiently integrate digital health into clinic's workflow</li> <li>• Coordinate care between providers on patient's care team and inform them of the use of digital health technologies in care</li> <li>• Provide outreach to community to increase knowledge of digital health tools when appropriate</li> </ul>

each with their own code of ethics, legal responsibilities, and separate recommendations or requirements for digital health use. As technology development continues to accelerate, BHP may need to demonstrate that they are staying current with changes that may impact their clinical work with clients/patients. A more targeted approach to DHT training would not diminish the importance of being conversant with ethical, cultural, and security issues; rather, it would allow the BHP to target areas where skills development is most needed.

DHT competencies can be delivered in a number of ways, including graduate school education, continuing education opportunities, and various training programs (Hilty et al., 2017; Johnson, 2014). The behavioral health field would benefit from a variety of training options to allow for a more individualized training experience for BHP. The integration of training into graduate school programs would allow for education on digital health to coincide with the development of clinical therapy skills (Blumer et al., 2015; McCord et al., 2015). Continuing education and professional development programs allow practicing BHP to acquire the skills needed to become competent in using DHT (Blumer et al., 2015; Saeed et al., 2017). BHP who are new to using DHT for therapeutic purposes also need affordable, manageable, and accessible ways to learn how to use it (Saeed et al., 2017).

This rapid review has several limitations. The results did not include other behavioral health professionals such as licensed professional counselors or psychiatric nurse practitioners. It only includes articles from 2010 through October 2020 and does not include evidence about the benefits or challenges of integrating DHT in behavioral healthcare. Search terms were limited to more inclusive umbrella terms, for example, we searched for behavioral health instead of using specific terms such as social workers, and marriage and family therapists. Similarly, general technology terms such as eHealth and digital health that did not return any unique results were removed from the search strategy, although we use those more specific terms to report our results. No articles were found that met the inclusion criteria for this review offering a perspective after the changes required due to the global pandemic, and it is difficult to determine the impact of the pandemic on BHP competencies in DHT. In addition, it is not within the scope of this review to assess the wide variation of nomenclature discussing the DHT used in each of the articles. In our review, we detected that ethics and competencies were used interchangeably at times. This lack of consistency may create confusion for BHP looking for information on how to use DHT. There is a need for further research evaluating existing DHT training programs to develop professional digital health competencies and identify how they impact patient care.

This article synthesizes DHT competencies and ethics published from a range of behavioral health disciplines over the

past decade. However, competencies alone do not ensure that BHP can effectively implement DHT in their work (Maheu et al., 2018). Further research is needed to assess how and if the identified competencies effectively prepare BHP to work with DHT, including the risks and benefits of using specific technologies in behavioral healthcare. The articles included in this review tell us that ethics inform competencies, but they are not the same (Torous & Roberts, 2017). There are some blurry boundaries between what some authors call risk management, emphasizing the need to protect the BHP, and protection of patient/client data and information. At times, competencies and ethics are intertwined. This fact should be acknowledged, and BHP should be encouraged to investigate relevant laws and ethical codes for their specific profession. Additionally, clear boundaries between competencies and ethics are needed to ensure that BHP stay focused on the reasons why they are integrating technology in the first place: to improve the quality of life and overall health of the people they serve.

## Declarations

**Conflict of Interest** The authors declare no competing interests.

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