



Communicating about online health information with patients: Exploring determinants among telemental health providers

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ABSTRACT

Objective: To investigate determinants of telemental health (TMH) providers' openness to discuss and confidence to use online mental health information with patients, focusing on providers' eHealth literacy and perceived usefulness of online MH information.

Methods: TMH providers ($N = 472$) completed a web-based survey with questions about discussing and using online health information with patients, perceived usefulness of the Internet as a source of patient information, and eHealth literacy.

Results: Providers were open to discussing online health information with patients if they were not treating substance abuse disorders ($b = -0.83$), felt the Internet was a useful resource ($b = 0.18$), and felt confident in their skills to evaluate the online information ($b = 0.21$). Providers were confident using online health information if they worked in a small clinic ($b = 0.37$), felt the Internet was a useful resource ($b = 0.31$), knew where to access relevant online health information ($b = 0.13$), and had skills to help their patients find ($b = 0.17$) and evaluate ($b = 0.54$) online information.

Conclusion: TMH providers are likely to use online health information resources if they know where and how to find them and perceive the Internet as a useful resource.

Innovation: To effectively discuss online health information with patients, providers require skills to evaluate the information with patients.

1. Introduction

The Internet is an important resource for patients to learn about mental health disorders and be empowered with evidence-based self-management [1]. Unfortunately, online mental health (MH) information (e.g., websites, apps, social media) varies in content, target disorder, and quality [2]. Patients have reported challenges distinguishing the quality of online MH information [2,3], and are rarely experienced in best practices for appraising information quality (e.g., confirm its source and location, check for financial conflicts of interest) [4]. For these reasons, it is important to explore MH providers' self-reported assessment of their own openness and confidence to discuss online health information to help patients navigate MH decisions.

There are benefits to discussing online health information with patients. Linn and colleagues (2020) found that affirming and encouraging patient use of online information is one way to support patient-centered care [5].

Further, patient satisfaction and information recall improve when patients and their providers discuss online health information [6-8]. Although 60% of providers report having shared and recommended online health information with patients [9], others continue to ignore or dismiss the fact that their patients commonly use the Internet as a source of MH information [10].

MH providers select simple and useful technologies to implement into their practice [11]. The Internet, for example, is considered useful when it helps MH providers effectively carry out their professional responsibilities and supports patients to establish or achieve treatment goals [11,12]. The perceived usefulness of the Internet is strengthened when it is easy to identify, evaluate, and discuss online MH information that is high-quality and relevant to patients [11,12]. This skillset is called eHealth literacy, or the ability to seek, find, understand, and evaluate health information from the Internet to successfully inform healthcare decision-making [13]. Little research has explored the eHealth literacy of MH providers. Further,

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there is evidence that MH providers are generally unaware of the availability and quality of online information accessed by their patients [14]. Given that the Internet is used to support MH care, there is a significant need to examine MH providers' perceived usefulness of the Internet and their eHealth literacy. Such inquiry will provide a better understanding of providers' openness to discuss and their confidence to use online MH information during clinical practice.

During the COVID-19 pandemic, MH providers have shifted most of their caseload to telemental health (TMH) [15,16]. There is evidence that TMH providers integrate online MH information into patient treatment [17], but little research has examined the factors that contribute to their ability to discuss and use online information in clinical practice. Understanding TMH providers' eHealth literacy may support the need for future educational interventions to improve these interactions. The purpose of this study was therefore to investigate determinants of TMH providers' openness to discuss and confidence to use online MH information with patients, with a focus on provider eHealth literacy and perceived usefulness of online MH information.

2. Methods

2.1. Sample and procedures

The present study included a sample of 472 TMH providers who participated in a cross-sectional, web-based survey study between February and March 2021. Emails were sent to TMH providers who used Doxy.me, a telemedicine platform with over 1,000,000 registered providers, 40% of whom are mental health providers (<https://doxy.me/>). After providing electronic informed consent, providers completed a series of screening questions to assess for eligibility. English-speaking, adult (i.e., ≥ 18 years), mental and/or behavioral health providers were eligible to participate. Out of the 495 providers who agreed to participate in the study, 472 completed the study (95.4% completion rate). Participants were compensated with a free month of professional membership upgrade with Doxy.me. Study procedures were reviewed and approved as exempt by the University of South Florida Institutional Review Board (IRB#002053).

2.2. Survey and measures

The survey was developed by members of the research team to investigate aspects of providers' telemental health practices. Providers were asked about socio-demographic and professional characteristics, talking about online information with patients, eHealth literacy, and about the usefulness of the Internet to inform health decisions. The survey included items adapted from validated scales and novel questions about providers' telemental health practice since the onset of COVID-19.

2.2.1. Socio-demographic and professional characteristics

Providers completed questions about their age, gender, race, ethnicity, and geographic region (i.e., state, zip code, self-reported rural or urban influence). Professional demographics included description of practice (e.g., individual practice, small clinic), age group primarily treated (e.g., children, adolescents, adults, older adults), commonly treated disorders (e.g., anxiety, mood, trauma, substance-related), primary source of health insurance reimbursement (e.g., public, private, out-of-pocket), and percentage of caseload treated via telemedicine (e.g., <25%, 25–49%, 50–75%, >75%).

2.2.2. Talking about online MH information with patients

Providers answered two questions about how they engage patients in discussions about online health information: (1) I am open to having discussions with my patients about information they find on the Internet; and (2) I feel confident in using health information my patients find on the Internet to help them make health decisions. Items were adapted from existing validated instruments [18,19] and anchored using a 5-point Likert scale

(1 = Strongly disagree and 5 = Strongly agree). Data from the two variables were moderately correlated, $r = 0.31$ ($p < .001$).

2.2.3. eHealth literacy and the usefulness of the internet to inform health decisions

The eHealth Literacy Scale (eHEALS) was adapted to measure TMH provider knowledge about where and how to find online health information and their confidence to evaluate its quality. The original scale was designed and tested as a unidimensional model [18], but research exists to support its multidimensionality [19,20]. Items captured three dimensions: (1) Information Awareness (i.e., "I know what health resources are available on the Internet for my patients," "I know where my patients can find helpful health resources on the Internet."); (2) Information Seeking (i.e., "I know how to help my patients find helpful health resources on the Internet," "I know how to help my patients use the Internet to help them answer health questions."); and (3) Information Evaluation (i.e., "I have the skills I need to help my patients evaluate health resources they find on the Internet," "I can help my patients tell high-quality from low-quality health resources on the Internet."). Response options were on a 5-point Likert scale (1 = Strongly disagree and 5 = Strongly agree). Data from these scales demonstrated adequate internal consistency (Cronbach's $\alpha = 0.81$ – 0.84) and were highly correlated ($r = 0.57$ – 0.77 ; $p < .001$). Providers also answered the following question based on the same 5-point Likert scale: "The Internet is a useful resource to help my patients make decisions about their health." This item is recommended to be used alongside the eHEALS [18].

2.3. Data analysis

SPSS v27 was used to analyze data in this study. Frequency and descriptive statistics were conducted to summarize the personal and professional demographics of the providers. Frequency statistics also were used to describe the distribution of each eHealth literacy domain and dependent variables related to communicating about the Internet with patients (i.e., comfort discussing and comfort in using online MH information). Two hierarchical linear regression analyses were conducted to examine the predictive power of factors related to the following dependent variables: (1) I am open to having discussions with my patients about information they find on the Internet; and (2) I feel confident in using health information my patients find on the Internet to help them make health decisions. Predictors were entered into the model in a stepwise manner: socio-demographic and professional variables statistically significantly associated with at least one dependent variable (Block 1); belief that the Internet is a useful resource to help patients make health decisions (Block 2); and three dimensions of the eHealth Literacy (i.e., information awareness, information seeking, information evaluation; Block 3). Preliminary analyses indicated statistically significant associations among several socio- and professional demographic variables (i.e., race, ethnicity, type of practice) and at least one dependent variable ($p < .05$). These variables were included as covariates in main analyses.

3. Results

3.1. Characteristics of TMH providers

TMH providers who responded to this survey were 53.19 ($SD = 13.16$) years old, on average, and predominantly female (81.1%). Eighty-one percent of clinicians identified as white and 7.8% as Hispanic, Latinx, or Spanish origin. Finally, 26.2% reported living in an area with a weak urban influence or a rural, small town. Respondents were largely psychologists (30%), mental health counselors (41.3%), and social workers (13.6%) working in an individual practice (75.4%) and small clinic/network (18.4%) settings. About 68% of providers started using telemedicine in March 2020, once social distancing mandates were enacted, and 71.4% reported providing telemedicine to >75% of their caseload. Providers most often treated adults (83.9%) with anxiety disorders (42.8%), trauma- and

Table 1
eHealth literacy, perceived usefulness of the internet, and communication with patients.

Measures	M	SD
eHealth Literacy		
Online information awareness ^a	3.79	0.83
Online information seeking skills ^b	3.87	0.81
Online information evaluation skills ^c	3.94	0.89
Perceived Usefulness of the Internet		
The Internet is a useful resource to help my clients make decisions about their health.	3.75	0.97
Communicating With Clients about Online Health Information		
I am open to having discussions with my clients about information they find on the Internet.	4.53	0.71
I feel confident in using health information my clients find on the Internet to help them make health decisions.	3.54	1.04

Note. ^a $\alpha = 0.83$; ^b $\alpha = 0.81$; ^c $\alpha = 0.84$; Items/scales based on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree).

stressor-related disorders (24.6%), and mood disorders (21.8%). More detailed provider and practice characteristics are reported elsewhere [21].

3.2. eHealth literacy and the perceived usefulness of the internet to inform health decisions

Table 1 shows providers' average responses to each scale. Providers reported "somewhat-to-strongly" agreeing that they were open to having conversations with their patients about online health information ($M = 4.53$; $SD = 0.71$). They also reported feeling "neutrally-to-somewhat" confident using information their patients found on the Internet to help them make health decisions ($M = 3.54$; $SD = 1.04$), "somewhat" knowing what health resources are available on the internet and where to find them ($M = 3.79$; $SD = 0.83$). Similarly, they report "somewhat" knowing how to help patients find online health information ($M = 3.87$; $SD = 0.81$). They also reported "somewhat" having the skills they need to help their patients find and evaluate relevant, quality online health information ($M = 3.94$; $SD = 0.89$). Overall, providers "somewhat-to-strongly" agreed that the Internet was a useful resource to help their patients make health decisions ($M = 3.75$; $SD = 0.97$).

3.3. Openness to discussing online MH information with patients

Table 2 shows the results of the hierarchical linear regression analysis examining predictors that are associated with providers' openness to having discussions with their patients about information they find on the Internet. The model yielded a statistically significant *F*-change at each block: (1) socio- and professional demographics, $F(4, 433) = 3.34, p < .05$,

Table 2
Hierarchical linear regression analysis of predictors for being open to having discussions about online health information.

Predictor Variables	Step 1			Step 2			Step 3		
	<i>b</i>	<i>SE</i>	95% CI	<i>b</i>	<i>SE</i>	95% CI	<i>b</i>	<i>SE</i>	95% CI
Race ^a	0.13	0.08	(-0.05, 0.30)	0.16	0.09	(-0.01, 0.33)	0.18*	0.08	(0.02, 0.34)
Ethnicity ^b	0.11	0.13	(-0.14, 0.37)	0.08	0.13	(-0.17, 0.33)	0.02	0.12	(-0.22, 0.25)
Small clinic ^c	-0.11	0.09	(-0.28, 0.06)	-0.12	0.08	(-0.29, 0.04)	-0.23*	0.08	(-0.38, -0.07)
Treat substance abuse disorders	-0.83**	0.27	(-1.4, -0.30)	-0.63*	0.26	(-1.14, -0.11)	-0.59*	0.25	(-1.10, -0.11)
Usefulness of the Internet				0.18***	0.03	(0.11, 0.25)	0.12***	0.03	(0.06, 0.18)
Online information awareness							0.03	0.06	(-0.08, 0.14)
Online information seeking skills							0.10	0.06	(-0.02, 0.23)
Online information evaluation skills							0.21***	0.05	(0.12, 0.30)
R ²	0.03*			0.09			0.21		
ΔR^2				0.06***			0.12***		

Note. *N* = 472. CI = Confidence Interval; ^aRace (1 = White; 0 = Non-White); ^bEthnicity (1 = Hispanic; 0 = Non-Hispanic); ^cPractice Type (1 = Small clinic/network; 0 = All other settings).

* $p < .05$; ** $p < .01$; *** $p < .001$.

$R^2 = 0.03$ ($R^2_{adj} = 0.02$); (2) usefulness of the Internet, $F(5, 432) = 8.39, p < .001, R^2 = 0.09$ ($R^2_{adj} = 0.08$); (3) eHealth literacy, $F(8, 429) = 14.52, p < .001, R^2 = 0.21$ ($R^2_{adj} = 0.20$). The greatest change was at Block 3 (i.e., eHealth literacy) followed by Block 2 (i.e., perceived usefulness of the Internet).

TMH providers were more open to having conversations about online information if they reported not treating substance use disorders ($b = -0.83$; $SE = 0.27$; $p < .01$). Controlling for socio- and professional covariates, TMH providers were more open to these conversations alongside increasing perceptions about the usefulness of the Internet as a resource to help their patients make health decisions ($b = 0.18$; $SE = 0.03$; $p < .001$). Controlling for all variables, having a greater degree of confidence to evaluate the quality of online health information brought by patients to TMH sessions predicted a greater degree of openness to discuss the information ($b = 0.21$; $SE = 0.05$; $p < .001$).

3.4. Confidence in using online MH information

Table 3 shows the results of the hierarchical linear regression analysis examining predictors that are associated with TMH providers' confidence using information that patients find on the Internet to help them make health decisions. The model yielded a statistically significant *F*-change at each block: (1) socio- and professional demographics, $F(4, 433) = 3.53, p < .01, R^2 = 0.03$ ($R^2_{adj} = 0.02$); (2) usefulness of the Internet, $F(5, 432) = 11.03, p < .001, R^2 = 0.11$ ($R^2_{adj} = 0.10$); (3) eHealth literacy, $F(8, 429) = 49.93, p < .001, R^2 = 0.48$ ($R^2_{adj} = 0.47$). The greatest change in the *F*-statistic was at Block 3 (i.e., eHealth literacy) followed by Block 2 (i.e., perceived usefulness of the Internet).

Providers had greater confidence using online health information during TMH sessions if they practiced in a small clinic setting ($b = 0.37$; $SE = 0.14$; $p < .01$) and reported a more positive perception of the Internet as a useful health information resource for their patients ($b = 0.31$; $SE = 0.05$; $p < .001$). Controlling for all variables, statistically significant predictors of using online health information during TMH sessions included a greater degree of (a) knowing where to find relevant online health information ($b = 0.13$; $SE = 0.07$; $p = .05$), (b) having the skills to locate relevant online health information ($b = 0.17$; $SE = 0.08$; $p < .05$), and (c) having the skills to evaluate the quality of online health information ($b = 0.54$, $SE = 0.05$; $p < .001$).

4. Discussion and conclusion

4.1. Discussion

The purpose of this study was to investigate factors that predict TMH providers' openness to discuss and confidence to use online health information with their patients. Our findings demonstrate that TMH

Table 3
Hierarchical Linear Regression Analysis of Predictors for Confidence in Using Online Health Information.

Predictor Variables	Step 1			Step 2			Step 3		
	<i>b</i>	<i>SE</i>	95% <i>CI</i>	<i>b</i>	<i>SE</i>	95% <i>CI</i>	<i>b</i>	<i>SE</i>	95% <i>CI</i>
Race ^a	-0.15	0.13	(-0.41, 0.10)	-0.09	0.13	(-0.34, 0.16)	-0.03	0.10	(-0.22, 0.16)
Ethnicity ^b	0.32	0.19	(-0.05, 0.69)	0.26	0.18	(-0.10, 0.62)	0.11	0.14	(-0.17, 0.38)
Small clinic ^c	0.37**	0.14	(0.12, 0.62)	0.34**	0.12	(0.11, 0.58)	0.09	0.09	(0.27, 0.97)
Treat substance abuse disorders	-0.21	0.39	(-0.98, 0.56)	0.14	0.38	(-0.61, 0.89)	0.24	0.29	(-0.34, 0.82)
Usefulness of the Internet				0.31***	0.05	(0.21, 0.41)	0.16***	0.04	(0.09, 0.24)
Online information awareness							0.13 [†]	0.07	(0.00, 0.27)
Online information seeking skills							0.17*	0.08	(0.02, 0.32)
Online information evaluation skills							0.54***	0.05	(0.44, 0.65)
<i>R</i> ²	0.03**			0.11			0.48		
ΔR^2				0.08***			0.37***		

Note. *N* = 472. CI = Confidence Interval; ^aRace (1 = White; 0 = Non-White); ^bEthnicity (1 = Hispanic; 0 = Non-Hispanic); ^cPractice Type (1 = Small clinic/network; 0 = All other settings).

p* < .05; *p* < .01; ****p* < .001; [†]*p* = .05.

providers are generally open to discussing online health information with patients and using the Internet to help patients make health decisions. TMH providers somewhat-to-strongly agree that they know where to find helpful online health information and have the confidence to help patients find and evaluate high-quality, relevant online health information. Providers' perceived usefulness of the Internet and their eHealth literacy was associated with communicating about online health information with patients, with eHealth literacy having the greatest predictive power. This study provides important implications for helping TMH providers to effectively communicate with their patients about online health information.

eHealth literacy most strongly explained TMH providers' perspectives on communicating about online health information with patients, above and beyond demographic characteristics and perceptions about the usefulness of the Internet. This is consistent with McMullan (2006), who reported that providers who were open to discussions about online health information typically help patients access and appraise information from the Internet or refer them to other high-quality online information [22]. In the current study, we found that TMH providers were more likely to discuss online health information with their patients if they felt confident in their skills to evaluate it. TMH providers were also more likely to use online information to inform health decision-making if they felt confident in their skills to help patients find and evaluate it. Results of this study reinforce the value of measuring unique dimensions of eHealth literacy [23], given their unique contributions to how providers interact with their patients.

The type of clinic where TMH providers were employed was uniquely associated with how they engage their patients with health information from the Internet. For example, TMH providers across clinic settings were equally likely to discuss online health information with patients; however, providers practicing in small clinics reported greater confidence in using information from the Internet to help their patients make health decisions. Although there is evidence that time constraints of clinical consultations negatively affect healthcare communication [24], time restrictions may be less of a barrier to TMH providers who generally provide therapy in 60-min sessions. Our preliminary analyses demonstrated that openness to discuss online health information via telemedicine was not associated with provider caseload. Future research is needed to understand the organizational factors associated with communicating about health information from the Internet with TMH patients.

The type of TMH treatment also contributed to provider communication about online health information with their patients. Providers who treated patients with substance abuse disorders were less open to discussions about online health information. There are a variety of free, publicly available online programs and mobile applications to help people overcome addictions. Unfortunately, research has demonstrated their questionable quality, especially for the purposes of addiction counseling [25-27]. Not being open to discussions about online health information with this patient population

is a missed opportunity for providers who treat them. However, it should be noted that only a small number of providers reported primarily treating patients with substance use disorders (*n* = 7). Future research should be conducted to confirm and further understand this finding with a larger sample of specialty providers.

4.2. Innovation

This research contributes to existing recommendations to support patient-provider communication about online health information [28]. The first step is to explore patient experiences using the Internet to gauge their interest, comfort, and skills to navigate health-related technology. Next, providers should validate and respond empathically to empower patients in preparation for the appointment. Correcting patient misunderstanding about online health information is a final step in this process. The current study found providers are more likely to incorporate online health information into virtual patient care if the provider is skilled in identifying and evaluating its quality. This skillset explained the greatest amount of variance in providers' discussions about online health information and their confidence to use it in health decision-making with providers. Therefore, providers may struggle with or avoid conversations about online health information because these skills are not well developed for this context (i.e., helping patients find, evaluate, and use health information from the Internet). Provider-focused eHealth literacy educational programs may improve providers' abilities to counsel their patients on where to find online health information and how to evaluate its quality.

Results of this study also have implications for patients. As stated previously, patients' fear of judgment and rejection is a common barrier to initiating conversations about online health information with their providers. However, patients should not hesitate to discuss online health information with their provider, even if their provider may not believe the Internet is useful for them. Rather, patients may consider stating where they found the information and that they are interested in their provider's expertise in evaluating its usefulness. Most strategies to initiate conversations about online health information have been extracted from observations of patient-provider communication in the context of chronic diseases such as inflammatory bowel disease [10]. Future research is needed to examine how these strategies vary by disease context and provider specialty, and what strategies result in more productive conversations with clinicians.

The rapid uptake in telemedicine usage due to the COVID-19 pandemic has changed the provision of mental healthcare delivery, requiring both providers and patients to adjust to new technology. Given the widespread use of online health information, telemental health providers should consider recommending reputable information sources even before patients initiate the topic [29]. However, this pre-emptive behavior may not be appropriate for all virtual appointments, and research is needed to examine under which healthcare specialties and circumstances (e.g., diagnosis, treatment) these conversations would be most productive. The current

study introduces novel findings that contribute to our understanding of telemental health providers' openness and confidence in using online health information during virtual sessions.

4.3. Conclusion

The Internet is readily used by the public and it is important that healthcare professionals, especially TMH providers, are equipped to have discussions about online health information with their patients. This study has identified a constellation of attitudes and skills that influence patient-provider communication about using the Internet during TMH appointments. Theory-based interventions are needed to build TMH providers' skills to identify and discuss reputable online information that is relevant to their patient caseload. Such efforts may increase providers' confidence to pre-emptively introduce health information from the Internet that their patients are likely to seek on their own. Also, training providers to locate and evaluate high-quality information with patients will be important to support therapeutic alliances and patient outcomes.

Declaration of Competing Interest

Dr. Welch is a shareholder, and all other authors are employees of Doxy.me Inc., a commercial telemedicine company. The authors declare no other conflicts of interest.

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References

- [1] Mook J. Support from the internet for individuals with mental disorders: advantages and disadvantages of e-mental health service delivery. *Front Public Health*. 2014;2:65. <https://doi.org/10.3389/fpubh.2014.00065>.
- [2] Karasouli E, Adams A. Assessing the evidence for e-resources for mental health self-management: a systematic literature review. *JMIR Ment Health*. 2014;1:e3. <https://doi.org/10.2196/mental.3708>.
- [3] Pinheiro M, Serra M, Pereira-Azevedo N. Predictors of the number of installs in psychiatry smartphone apps: systematic search on app stores and content analysis. *JMIR Ment Health*. 2019;6:e15064. <https://doi.org/10.2196/15064>.
- [4] Seçkin G, Yeatts D, Hughes S, Hudson C, Bell V. Being an informed consumer of health information and assessment of electronic health literacy in a National Sample of internet users: validity and reliability of the e-HLS instrument. *J Med Internet Res*. 2016;18:e161. <https://doi.org/10.2196/jmir.5496>.
- [5] Tan SS-L, Goonawardene N. Internet health information seeking and the patient-physician relationship: a systematic review. *J Med Internet Res*. 2017;19:e9. <https://doi.org/10.2196/jmir.5729>.
- [6] Bylund CL, Gueguen JA, Sabee CM, Imes RS, Li Y, Sanford AA. Provider-patient dialogue about internet health information: an exploration of strategies to improve the provider-patient relationship. *Patient Educ Couns*. 2007;66:346–52. <https://doi.org/10.1016/j.pec.2007.01.009>.
- [7] Bylund CL, Gueguen JA, D'Agostino TA, Li Y, Sonet E. Doctor-patient communication about cancer-related internet information. *J Psychosoc Oncol*. 2010;28:127–42. <https://doi.org/10.1080/07347330903570495>.
- [8] Sanders R, Linn AJ. A mixed method study investigating the impact of talking about patients' internet use on patient-reported outcomes. *J Health Commun*. 2018;23:815–23. <https://doi.org/10.1080/10810730.2018.1514443>.
- [9] Podichetty VK, Booher J, Whitfield M, Biscup RS. Assessment of internet use and effects among healthcare professionals: a cross sectional survey. *Postgrad Med J*. 2006;82:274–9. <https://doi.org/10.1136/pgmj.2005.040675>.
- [10] Linn AJ, Schouten BC, Sanders R, van Weert JCM, Bylund CL. Talking about Dr. Google: communication strategies used by nurse practitioners and patients with inflammatory bowel disease in the Netherlands to discuss online health information. *Patient Educ Couns*. 2020;103:1216–22. <https://doi.org/10.1016/j.pec.2020.01.011>.
- [11] Harst L, Lantzsich H, Scheibe M. Theories predicting end-user acceptance of telemedicine use: systematic review. *J Med Internet Res*. 2019;21:e13117. <https://doi.org/10.2196/13117>.
- [12] Davis FD. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Q*. 1989;13:319–40. <https://doi.org/10.2307/249008>.
- [13] Norman CD, Skinner HA. eHealth literacy: essential skills for consumer health in a networked world. *J Med Internet Res*. 2006;8:e9. <https://doi.org/10.2196/jmir.8.2.e9>.
- [14] Battineni G, Baldoni S, Chintalapudi N, Sagaro GG, Pallotta G, Nittari G, et al. Factors affecting the quality and reliability of online health information. *Digit Health*. 2020;6:2055207620948996. <https://doi.org/10.1177/2055207620948996>.
- [15] Humer E, Pieh C, Kuska M, Barke A, Doering BK, Gossmann K, et al. Provision of psychotherapy during the COVID-19 pandemic among Czech, German and Slovak psychotherapists. *Int J Environ Res Public Health*. 2020;17. <https://doi.org/10.3390/ijerph17134811>.
- [16] Sammons MT, VandenBos GR, Martin JN. Psychological practice and the COVID-19 crisis: a rapid response survey. *J Health Serv Psychol*. 2020;1–7. <https://doi.org/10.1007/s42843-020-00013-2>.
- [17] Chan S, Li L, Torous J, Gratzner D, Yellowlees PM. Review of use of asynchronous technologies incorporated in mental health care. *Curr Psychiatry Rep*. 2018;20:85. <https://doi.org/10.1007/s11920-018-0954-3>.
- [18] Norman CD, Skinner HA. eHEALS: the eHealth literacy scale. *J Med Internet Res*. 2006;8:e27. <https://doi.org/10.2196/jmir.8.4.e27>.
- [19] Paige SR, Miller MD, Krieger JL, Stellefson M, Cheong J. Electronic health literacy across the lifespan: measurement invariance study. *J Med Internet Res*. 2018;20:e10434. <https://doi.org/10.2196/10434>.
- [20] Sudbury-Riley L, FitzPatrick M, Schulz PJ. Exploring the measurement properties of the eHealth literacy scale (eHEALS) among baby boomers: a multinational test of measurement invariance. *J Med Internet Res*. 2017;19:e53. <https://doi.org/10.2196/jmir.5998>.
- [21] Wilczewski H, Paige SR, Ong T, Barrera JF, Soni H, Welch BM, et al. Perceptions of Telemental health care delivery during COVID-19: a cross-sectional study with providers, February-march 2021. *Front Psych*. 2022;13. <https://doi.org/10.3389/fpsy.2022.855138>.
- [22] McMullan M. Patients using the internet to obtain health information: how this affects the patient-health professional relationship. *Patient Educ Couns*. 2006;63:24–8. <https://doi.org/10.1016/j.pec.2005.10.006>.
- [23] Paige SR, Stellefson M, Krieger JL, Miller MD, Cheong J, Anderson-Lewis C. Transactional eHealth literacy: developing and testing a multi-dimensional instrument. *J Health Commun*. 2019;24:737–48. <https://doi.org/10.1080/10810730.2019.1666940>.
- [24] Hardavella G, Aamli-Gaagnat A, Frille A, Saad N, Niculescu A, Powell P. Top tips to deal with challenging situations: doctor-patient interactions. *Breathe (Sheff)*. 2017;13:129–35. <https://doi.org/10.1183/20734735.006616>.
- [25] Paige SR, Alber JM, Stellefson ML, Krieger JL. Missing the mark for patient engagement: mHealth literacy strategies and behavior change processes in smoking cessation apps. *Patient Educ Couns*. 2018;101:951–5. <https://doi.org/10.1016/j.pec.2017.11.006>.
- [26] Penzenstadler L, Chatton A, Van Singer M, Khazaal Y. Quality of smartphone apps related to alcohol use disorder. *Eur Addict Res*. 2016;22:329–38. <https://doi.org/10.1159/000449097>.
- [27] Ferron JC, Brunette MF, Geiger P, Marsch LA, Adachi-Mejia AM, Bartels SJ. Mobile phone apps for smoking cessation: quality and usability among smokers with psychosis. *JMIR Hum Factors*. 2017;4:e7. <https://doi.org/10.2196/humanfactors.5933>.
- [28] Kissane DW, Bultz BD, Butow PN, Bylund CL, Noble S, Wilkinson S, et al. Oxford textbook of communication in oncology and palliative care. 2nd ed. London, England: Oxford University Press; 2017. <https://doi.org/10.1093/med/9780198736134.001.0001>.
- [29] Gerber BS, Eiser AR. The patient physician relationship in the internet age: future prospects and the research agenda. *J Med Internet Res*. 2001;3:E15. <https://doi.org/10.2196/jmir.3.2.e15>.