Universal Access in the Information Society (2026) 25:24
https://doi.org/10.1007/s10209-025-01297-1

LONG PAPER

More than an algorithm: mental health professionals confront the promise and ethical perils of artificial intelligence

Mehmet Demir[1] · Fuat Aydoğdu[2] · Mine Begümhan Alabay[3] · Hatice Kübra Yaşar[4] · Aras Bozkurt[5]

Received: 25 July 2025 / Accepted: 9 December 2025
© The Author(s) 2026

Abstract
This study explores the advantages and disadvantages of Artificial Intelligence (AI) in mental health, professionals' interactions with AI, and future predictions. Using a phenomenological design, 10 psychologists, psychiatrists, counselors, and psychiatric nurses in Turkey were selected through purposive sampling based on their AI knowledge and experience. Data were collected through semi-structured online interviews conducted between April and June 2024. Interviews continued until thematic saturation was reached. The semi-structured interview questions were developed based on Rogers' Diffusion of Innovations Theory (DIT) and Davis' Technology Acceptance Model (TAM). The data were analyzed using content analysis with MAXQDA 24. Findings reveal four emerging main themes: AI advantages, disadvantages, future predictions, and professionals' relationships with AI. Illustrative insights highlight participants' views of AI as a supportive supervision and consultation tool while simultaneously expressing concerns about diminished human interaction and data security. Advantages include supervision support, facilitation of mental health services, and reduced workload, while disadvantages involve diminished human interaction, risks for disadvantaged groups, and data security concerns. Accordingly, AI is seen as a tool to overcome socioeconomic barriers yet concerns about the therapeutic alliance and ethical issues persist. Participants' relationships with AI reflect mixed feelings, learning processes, and AI's role in mental health education. Despite AI's supportive role in mental health services, ethical and security concerns remain. This study highlights the need for robust regulations and standards to ensure the safe and responsible use of AI, offering a comprehensive perspective on its future role by examining the associated ethical and social implications.

Keywords Mental health · Artificial intelligence · Generative AI · Artificial intelligence in mental health · Therapy · Mental health professionals

1 Introduction

As we reach the first quarter of the new millennium, when artificial intelligence tools are extended from Freud's couch to the therapy environment [12], the field of mental health is undergoing a new phase of transformation. This transformation is driven by generative artificial intelligence (AI) [11], which encompasses technologies designed to think, learn, and act autonomously, thereby integrating the complexity of human behaviors [65]. AI shows its impact in the field

✉ Mehmet Demir
mxd6071@psu.edu

Fuat Aydoğdu
fqa5295@psu.edu

Mine Begümhan Alabay
begumhan.alabay@ufuk.edu.tr

Hatice Kübra Yaşar
haticesenel.52@gmail.com

Aras Bozkurt
arasbozkurt@gmail.com

[1] School of Behavioral Sciences and Education, Pennsylvania State University, Harrisburg, PA, USA

[2] Information Sciences and Technology, Pennsylvania State University, State College, PA, USA

[3] Psychological Counseling and Guidance, Ufuk University, Ankara, Turkey

[4] Psychological Counseling and Guidance, Hacettepe University, Ankara, Turkey

[5] Open and Distance Learning Department, Open Education Faculty, Anadolu University, Eskişehir, Turkey

Published online: 06 January 2026

of mental health as in many fields [68]. Generative AI has infiltrated almost every aspect of our daily lives through immersive technologies, which are now almost a part of the individual. In this context, it is considered proactive action against the changing paradigm for mental health professionals to adapt to this new situation, to develop themselves in line with the applications of generative artificial intelligence, to protect and update the ethical principles and values of the field.

Limited research on the current use of AI in mental health [3, 18, 36, 43] forms the basis of this study. Therefore, the aim of this study is to examine the experiences and predictions of mental health professionals regarding the use of generative artificial intelligence in mental health services. The findings of this study will contribute to assessing the potential and acceptance of AI technologies in the field of mental health.

2 Theoretical framework

The fact that artificial intelligence technologies are a relatively new field makes it natural for individuals to experience hesitation towards the adoption to these systems. The literature utilizes frameworks such as Davis' [20, 21] Technology Acceptance Model (TAM) and Rogers' [62] Diffusion of Innovations Theory (DIT) to explain the adoption of innovative technologies.

TAM explains individuals' attitudes toward accepting or rejecting a technology with the concepts of "perceived usefulness" and "perceived ease of use" [20]. Perceived usefulness refers to the belief that the technology in question can improve an individual's job performance,perceived ease of use refers to the perception that this technology can be used without mental or physical effort. These two dimensions are directly related: A technology that is simple to use is generally perceived as more useful [20, 21].

The DIT explains the diffusion process of innovations in society through the stages of information, persuasion, decision, implementation and adoption [62, 79]. First, the individual develops a positive or negative attitude by obtaining information about the innovation. Then, he/she makes a decision to adopt or reject this innovation and proceeds to the implementation process. At the point where a certain segment (e.g., 10–25%) adopts the innovation, this adoption spreads rapidly to other community members [31, 56, 62]. Thus, individuals in society can be categorized as innovators, early adopters, early majority, late majority and laggards according to the speed at which they adopt the innovation [63]. DIT also highlights five key characteristics that influence the rate of innovation adoption: relative advantage, compatibility, complexity, trialability and observability [62]. Relative advantage refers to the benefit an innovation provides compared to existing methods, compatibility reflects how well it aligns with an individual's values and work habits; complexity indicates how difficult the innovation is to learn and use; trialability refers to the possibility of testing the innovation on a small scale; and observability refers to the visibility of the innovation's outcomes. These characteristics help explain how individuals evaluate a new technology and how their adoption decisions are formed [62, 63].

Taking these two theoretical approaches together, how mental health workers perceive generative AI tools in professional and personal contexts, how they make adoption decisions, and how this diffusion process works emerges as a topic that is worth exploring.

3 Related literature

Mental health services around the world vary greatly in terms of countries' legal regulations, infrastructure and staff resources. In some countries, the lack of mental health laws restricts the integration and access of these services [81]. For example, while mental health services in many European countries are supported by comprehensive legal regulations, Türkiye, where this study was conducted, does not yet have an independent mental health law.

Around the world, various justifications and application examples for the integration of generative AI tools in mental health are presented. For instance, King et al. [43] emphasize the lack of psychiatrists in many regions in the US, the pandemic increase in disorders such as anxiety and depression, and difficulties in accessing treatment as an important starting point for the adoption of AI-based solutions. The related literature indicates that AI-supported applications are used in a wide range of areas from psychotic disorders to mood disorders, from neurodevelopmental disorders to suicide risk assessment [77]. This also demonstrates that digital therapies, including AI-assisted psychotherapy, hold considerable potential in the management of various mental health disorders [8].

These technologies play a role not only in diagnosis [22, 60] but also in therapy processes. Therapeutic chatbots, for example, provide daily support to users, monitor progress, apply therapy techniques and develop solutions for problems such as depression and anxiety [69]. It is also reported that virtual and augmented reality applications are effective in anxiety disorders, social skills development and education [13]. Artificial intelligence tools are also reported to make significant contributions in early diagnosis, prevention of behavioral risk signs, and thus the improvement of treatment outcomes [3]. Indeed, AI applications in large

hospitals are reported to improve health outcomes, reduce costs and save time [71].

The literature indicates that artificial intelligence-based interventions yield positive results, especially in the field of depression. For example, it has been shown that severe depression decreased in adolescents using the chat program called mHealth [54] and that tools such as "Aiberry" can diagnose depression consistent with client reports [80]. The fact that such applications facilitate access and provide early diagnosis accelerates the adoption process of mental health professionals within the framework of Rogers' [62] Diffusion of Innovations Theory [32].

The use of generative artificial intelligence tools in the field of mental health also encourages the acquisition and application of new skills [68]. In this process, cognitive behavioral therapy, positive psychotherapy and mindfulness-based approaches play a supportive role [30, 53]. At the same time, it is suggested that disadvantaged groups who face barriers such as fear of stigmatization, economic inadequacies or inability to access help can also receive support through these technologies [27, 46].

On the other hand, the ethical and legal dimensions of artificial intelligence applications have not yet been fully resolved. Privacy, data security, transparency of treatment intentions, and the uncertainty of responses to critical situations such as suicide risk, are of concern [43, 47, 58]. Inequalities in access to technology, low technological literacy, and whether client autonomy can be maintained are discussed [46]. At this point, it is necessary to develop software specific to the field of mental health, to make appropriate regulations and to adopt the principle of transparency [43, 55]. As a result, an interdisciplinary collaboration between scientists, clinicians, software developers and engineers is required to ensure the effective, efficient, safe and ethical use of artificial intelligence in mental health.

In this context, this research aims to evaluate the advantages and disadvantages of mental health professionals regarding the use of artificial intelligence technologies in the field of mental health, as well as to examine their interactions with artificial intelligence and their predictions about these technologies. In line with this general objective, the following research questions are expected to be answered.

1. How do mental health professionals evaluate the advantages of using AI technologies in mental health?
2. What are the disadvantages identified by mental health professionals regarding the use of artificial intelligence technologies in mental health services?
3. How do mental health workers interact with artificial intelligence?
4. What predictions do mental health professionals have about the future impact of AI technologies on mental health and the development of these technologies?

4 Materials and methods

4.1 Research design

Based on the purposes of the research questions, a qualitative phenomenology design was employed [17]. Phenomenology design is aimed to address in-depth the experiences of people who have experiences related to the phenomena that the researcher aims to examine [17]. In this context, the phenomenon addressed in this research is “generative artificial intelligence”, which is defined as technology designed to simulate humans.

4.2 Roles of the researchers

In qualitative research, the direct involvement of researchers in the data collection process makes their qualifications and roles critical for the reliability, validity and depth of the research. As emphasized by Creswell [17], a clear and detailed definition of researcher roles in qualitative research contributes to the holistic and credible interpretation of the findings.

This study was conducted by four researchers pursuing their doctoral studies in Guidance and Psychological Counseling and one researcher with expertise in the field of AI and technology integration. Each counselor had a master’s degree, was pursuing a doctorate, had received extensive training in individual counseling processes and specialized in interview techniques, thus were able to reflect their experience in the data collection and analysis stages to the whole research. By actively using artificial intelligence tools, the researchers mastered the relevant themes and had the opportunity to examine the potential of artificial intelligence technologies in mental health applications in line with the knowledge gained from the literature.

The team's areas of interest and expertise focus on understanding the role of artificial intelligence in therapeutic interventions, and this focus was supported by a comprehensive literature review to better understand the interaction between human psychology and technological tools. Accordingly, this interdisciplinary perspective is reflected in the methodological design, with researchers focusing on explaining the functionality of artificial intelligence technologies in the field of mental health and evaluating the findings obtained at both theoretical and applied levels.

To enhance reflexivity and ensure transparency throughout the research process, the positionality of the researchers

was critically considered. All members of the research team have academic and/or practical backgrounds in either mental health or technology, which shaped their perspectives during data collection and analysis. Given the focus of the study on artificial intelligence and mental health, the researchers remained aware of their own assumptions and potential biases, and regularly engaged in reflexive practices. These practices included weekly team discussions and the documentation of reflections during those meetings. Such reflexive activities enabled the researchers to critically examine how their positionalities influenced the coding and interpretation of the data. Reflexive dialogue within the research team contributed to the development of a more nuanced and trustworthy thematic structure.

4.3 Sampling & participants

The participants of the research consisted of mental health professionals (psychological counselors, psychologists, psychiatry specialists, psychiatry nurses). They were selected using the criterion sampling method, one of the purposeful sampling methods. The criteria were that "the participants use one of the artificial intelligence tools" and "can share their experiences". The snowball sampling method was used to reach the participants [57]. Because this is a qualitative study, it does not aim to make generalizations. Therefore, instead of focusing on sampling in the quantitative sense, the research group was established with attention to representational adequacy. During the interviews with this research group, it was observed that participants began to provide similar responses, which was interpreted as the onset of data saturation. In other words, interviews were concluded when no new data emerged that could contribute to the research and when thematic saturation was deemed to have been reached [42]. The decision that data saturation was reached in the study was the result of weekly research process meetings. Within the scope of the research, interviews were conducted with a total of 10 participants, 7 female participants (1 psychiatric nurse, 2 psychologists, 4 psychological counselors) and 3 male participants (1 psychiatry specialist, 2 psychological counselors). Demographic information of the participants is given in Table 1. Each participant was assigned a city name to ensure anonymity.

4.4 Data Collection Tool

In the study, a semi-structured interview form based on Rogers' [62] DIT and Davis' (1985; 1989) TAM and a personal information form were used. In the personal information form, the data about the participants' gender, age, occupation, education level, and training on the use of artificial intelligence tools was collected. The semi-structured interview form was designed to address the participants' perceptions, experiences and feelings towards artificial intelligence,how and for what purposes artificial intelligence tools are used in the field of mental health; and their future predictions and expectations regarding these tools.

In the preparation of the interview form, each researcher developed questions which were combined in a common pool. Then, the researchers held two online meetings to simplify, integrate and optimize this pool of questions for the purpose of the research. Finally, the data collection tool was finalized in line with the opinions of experienced counseling and guidance and artificial intelligence experts. In this way, the semi-structured interview form provided a reliable and valid framework suitable for the qualitative data collection process in terms of both content and application.

4.5 Data collection process

After obtaining ethics committee approval from a university associated with the researchers, interviews with volunteer

Table 1 Demographic information of the participants*

Pseudonym	Gender	Age	Profession	Education status	Practice setting	Years of professional experience
Paris	Male	34	Psychological counselor	Master's degree graduate	School	12
Tokyo	Female	26	Psychological counselor	Bachelor's	Psychological Counseling Clinic	3
Washington, D.C	Female	43	Psychiatric nurse	PhD	University	20
London	Female	30	Psychologist	Master's degree graduate	Psychological counseling Clinic	3
Rome	Male	54	Psychiatrist	PhD	University	31
Berlin	Male	38	Psychological counselor	Master's degree graduate	Psychological Counseling clinic	16
Moscow	Female	28	Psychological counselor	Master's degree graduate	Psychological counseling clinic	5
Beijing	Female	29	Psychological counselor	Master's degree graduate	University	6
Madrid	Female	29	Psychological counselor	Master's degree graduate	Psychological counseling clinic	5
Ankara	Female	54	Psychologist	PhD	University	27

Note. *The names of different countries' capitals were used as pseudonyms to anonymize the participants' names

participants were conducted online through open ended Zoom meetings to ensure data diversity. Voluntary participants who filled out the personal information form were contacted by phone or e-mail, informed about the purpose of the study and an appointment was made for the interview. After written and verbal informed consent was shared with the participants, the first, second and fourth researchers conducted interviews by adhering to the interview protocol and questions developed respectively. This protocol covers pre-, intra- and post-interview steps such as sharing informed consent in advance and sharing the questions, the order of asking the exploratory questions, and sharing the transcripts of the data with the participants for participant confirmation. This ensured the consistency of the data collection process between the researchers. One of the researchers who conducted the interviews was female and two were male, and each researcher has been working as a psychological counselor for at least ten years. The duration of the interviews varied between 20 and 40 min. Interviews were recorded with participant consent. The recordings were securely stored in a password protected online folder. Upon transcription, the recordings were deleted to ensure the confidentiality of the data. The data collection process lasted from April 30, 2024, to June 26, 2024. The researchers met weekly to exchange information and their reflections about the interview process. Since the data were collected in Türkiye, it should be noted that the country's digital mental health infrastructure is still developing. Although there is no single law titled "Digital Mental Health Law," several new regulations address the provision of mental health services in the digital era, particularly in areas such as online therapy and digital addiction. Online therapy is legally permitted when conducted by qualified mental health professionals, and broader frameworks such as the "Regulation on the Practice of Independent Professions" also influence how psychologists deliver services in digital settings. Current practices are based on various legal regulations; in addition, the professional ethical principles and general telehealth guidelines established by the Turkish Psychological Counseling and Guidance Association and the Turkish Psychological Association also serve as guiding frameworks. Although online counseling has become more common since the COVID-19 pandemic, AI-assisted interventions remain largely experimental and are not yet subject to formal regulatory oversight.

4.6 Validity and reliability

In this study, validity and reliability were addressed utilizing the methods recommended by Yıldırım and Şimşek [83] and Guba and Lincoln [35]. First of all, in-depth interviews with the participants increased the richness and versatility of the data. The interview transcripts were sent to the participants via e-mail one week later to get their feedback and confirmation. This practice is called member-checking which ensures the accuracy of the data in qualitative research and that the participant statements are accurately reflected [35]. At the same time, this step reinforces the transparency of the research and its compliance with ethical standards. In addition, participant confidentiality was ensured by de-identifying the interview recordings, limiting access to the data to researchers only. A versioned codebook was maintained throughout the analysis, providing a clear audit trail that documents coding decisions, category development, and theme identification, thereby enhancing transparency and reproducibility.

To strengthen transferability, the research design, data collection process, data analysis and interpretation stages are described in detail. This practice facilitates readers in different contexts to adapt the study to their own settings through detailed description. Purposive sampling was used in the study and direct quotations from the participants were presented, thus increasing the adaptability of the findings to similar conditions [35].

Finally, the researchers carefully evaluated the internal consistency of the data collection tools used in the research process and possible contradictions between the data by conducting a dependability review [35]. During the study, the qualitative research reporting standards specified in the American Psychological Association [1] guidelines and Consolidated Criteria for Reporting Qualitative Research (COREQ) (2007) checklist were adhered to, thus strengthening the methodological integrity and reliability of the results. This approach is a critical step aimed at increasing the academic validity and applicability of the findings.

4.7 Limitations

This study has some limitations. First, the fact that the participants were limited to psychological counselors, psychologists, psychiatrists and psychiatric nurses who use artificial intelligence tools in a professional context limits the generalizability of the findings to other professional groups. Secondly, due to the qualitative methodology, the number of participants was limited to 10; this choice is compatible with the aim of in-depth analysis, but may limit the generalization of the findings to a larger community. Third, as the findings are based on the participants' own experiences and their ability to express these experiences, the interpretation of the data remains dependent on the individual accounts of the participants.

However, the necessary ethical principles were rigorously applied to minimize the limitations of online interviews and to ensure the integrity of the data. The interviews were conducted according to an interview protocol designed

Table 2 Illustrative examples of the codebook

Code	Category	Theme
1. Prompt-based scenarios 2. Classroom demonstration 3. Inter-session support 4. Virtual supervision 5. Content screening	Artificial intelligence supported mental health education and practices	Mental health workers' relationship with artificial intelligence
1. Social media inspiration 2. Professional resources 3. Daily experimentation 4. Everyday task integration 5. First encounter & adoption	Artificial intelligence learning process	
1. Happiness & discovery 2. Excitement 3. Frustration & anger 4. Comfort & satisfaction 5. Mixed emotions	Emotions of mental health workers	
1. Affordability 2. Alternative Access 3. Therapy as accessible support 4. Overcoming language barriers 5. Accessibility & cost	Accessible artificial intelligence psychotherapist	Advantages of artificial intelligence
1. Quick access to information 2. Needs analysis support 3. Alternative suggestions 4. Feedback on techniques 5. Friend/assistant role	Supervision and consultation support of artificial intelligence	
1. Scenario generation 2. Daily experimentation 3. Task integration 4. Worksheet creation 5. Multi-input analysis	Facilitativeness	
1. Hallucinations & harm risk 2. Privacy & confidentiality risks 3. Pseudo-expertise on social media 4. Missed emergencies & nonverbal blind spots 5. Partial reliability; double-check needed	Reliability of data and risks of unethical use	Disadvantages of artificial intelligence
1. Lack of authentic interaction 2. Emotional healing limits 3. Missing nonverbal empathy 4. Generalized responses 5. Irreplaceable human contact	Artificial Intelligence-Mental health worker interaction	
1. Cultural & bias risks 2. Digital divide & gender gap 3. English-language limitations 4. Illusion of full solution 5. Cultural mismatch & preferences	Impact on disadvantaged groups	
1. VR role-play simulation 2. AI literacy training 3. Phobia exposure & safe place 4. Supportive tool, not replacement 5. Self-help applications		Future insights of artificial intelligence in mental health theme

to increase the consistency of the research and all interviewers adhered to this protocol. Thus, it was aimed that the limitations in the data collection process would affect the methodological integrity of the research as little as possible.

5 Data analysis

MAXQDA 24 software was used to analyze the research data, and content analysis was employed in accordance with Creswell [17]. The coding team consisted of four researchers who independently coded the interview transcripts. The coders had undergone prior training in qualitative data analysis as part of their doctoral coursework. Prior to coding, the researchers held meetings on the coding procedure and the use of MAXQDA. Interview transcripts were read line by line to identify repetitive points, and similar points were labeled with content-based codes. The researchers convened regularly during the coding process to maintain consistency and coordination. Any discrepancies between coders were resolved through discussion until consensus was reached. A versioned codebook was maintained throughout the process, providing an audit trail to ensure transparency and reproducibility. Subsequently, relationships among the codes were examined and various categories were developed. Based on these categories, overarching themes were identified, including mental health professionals' experiences with artificial intelligence tools, their relationship with AI, and the perceived advantages, disadvantages, and future potential of these tools. Validity was enhanced through participant confirmation, anonymization, and independent coding [83]. To strengthen representation, participants were selected from diverse disciplines and with varying years of professional experience. Examples related to the codebook are presented in Table 2.

6 Findings

Within the scope of the research, the data obtained from the participants were categorized according to their similarities and various themes were created. These themes were identified as "Mental Health Workers' Relationship with Artificial Intelligence", "Advantages of Artificial Intelligence", "Disadvantages of Artificial Intelligence" and "Predictions for the Future of Artificial Intelligence". These themes and categories are presented in Fig. 1. Explanations about the themes and categories and sample participant quotations are given below.

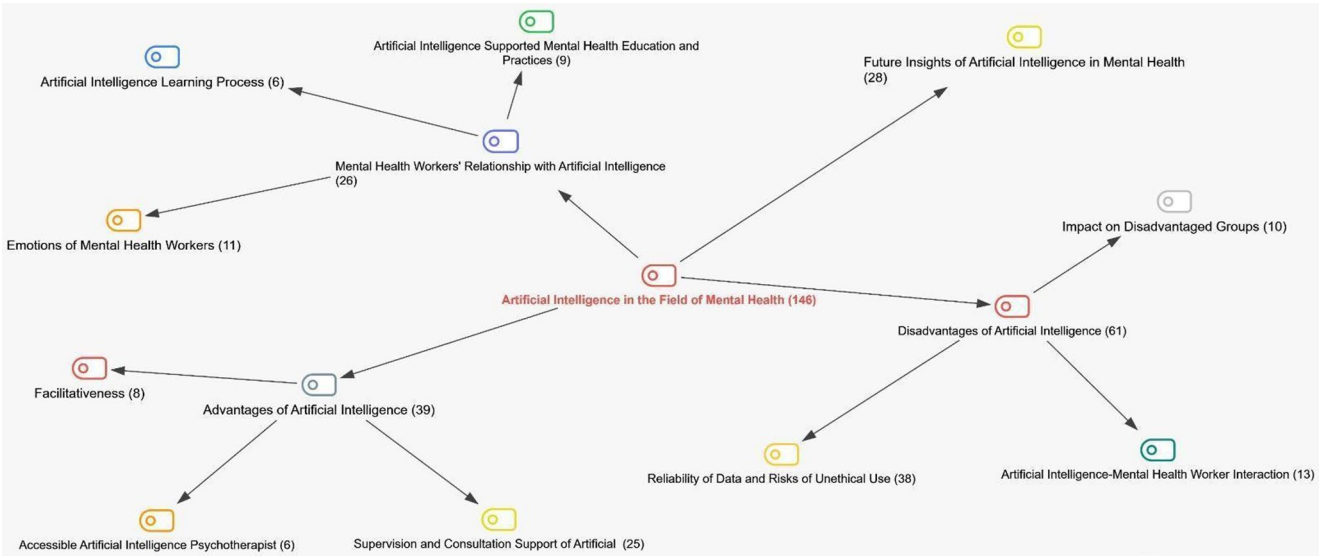


Fig. 1 Themes and categories of mental health workers' use of artificial intelligence discover mental health

6.1 Mental health workers' relationship with artificial intelligence theme

The theme of mental health workers' relationship with artificial intelligence was grouped under the categories of "Artificial Intelligence Supported Mental Health Education and Practices", "Artificial Intelligence Learning Process" and "Emotions of Mental Health Workers" and explanations regarding these categories are presented below.

Artificial intelligence supported mental health education and practices Participants stated that artificial intelligence tools provided them with significant convenience in their training and practices processes. For example, a participant (Washington, D.C.—Psychiatric Nurse) stated that he used artificial intelligence to prepare course materials with the statement "I used to write this scenario myself, now I write it by giving prompts to ChatGPT". Another participant (Moscow—Psychological Counselor) emphasized the functionality of artificial intelligence in therapeutic interventions by saying "Artificial intelligence can play a facilitating role in performing tasks such as homework in CBT (Cognitive Behavioral Therapy)." Additionally, Ankara (Psychologist) highlighted the educational value of AI, noting that "Artificial intelligence can serve as a simulation tool in training; although it cannot fully provide empathy, it is effective in monitoring technical and theoretical knowledge." Participants also stated that they received consultation support through artificial intelligence tools, accessed different perspectives, and that these technologies offered additional support when the need for supervision could not be met. However, they underlined the importance of integrating these tools in a careful and human-supervised manner.

Artificial intelligence learning process All participants stated that they are in the process of using artificial intelligence technologies and have received various trainings. One participant (Washington, D.C.—Psychiatric Nurse) pointed to the use of online resources, saying, "I watched videos on YouTube, I took a training from OpenAI, about how to give prompts," while another participant (Moscow—Psychological Counselor) stated that she attended a seminar of APA on the ethical use of artificial intelligence in psychology. Paris (Psychological Counselor) described a different learning pathway, noting that "Social media discussions prompted me to explore AI on platforms like LinkedIn and Twitter. While initially challenging to understand, using it helped me gain experience." The fact that the participants tried different platforms in addition to common AI tools such as ChatGPT, Gemini, and Grammarly shows that this process is multifaceted. The findings reveal that ChatGPT is the most frequently used artificial intelligence tool.

Emotions of mental health workers Participants reported experiencing a range of emotions when using AI tools, including happiness, excitement, anxiety, fear, anger, frustration and distrust. One participant emphasized the positive feelings she experienced during the process of using the technology by saying "I get excited. How can I put it? It excites me emotionally" (London—Psychologist). Similarly, another participant (Washington, D.C.—Psychiatric Nurse) said, "I discover something new and I share […] what I discover. It gives me a pleasure", indicating that the process of learning and sharing created a source of positive motivation for her. In contrast, Beijing (Psychological Counselor) described initial disappointment with AI capabilities: "My first experiences were disappointing. While it excelled at statistical tasks, it failed to respond empathetically when

I presented fictional personal problems, which let me down at the time." These experiences show that AI technologies create a space for an emotional interaction area that is fueled by both the excitement of novelty and the complexities of unmet expectations in the learning process.

6.2 Advantages of artificial intelligence theme

The theme of the advantages of artificial intelligence was grouped under the categories of 'Accessible Artificial Intelligence Psychotherapist', 'Supervision and Consultation Support of Artificial Intelligence' and 'Facilitativeness' the explanations related to this section are presented below.

Accessible artificial intelligence psychotherapist Participants emphasized the accessibility and economic advantages of AI-based psychotherapy services. One participant stated that 'I think it would be an advantage for people to take therapy not as a luxury, but as a support that is within everyone's reach' (Berlin—Psychological Counselor), indicating that economic barriers can be overcome and wider masses can access psychotherapy support. Similarly, another participant stated that AI-assisted therapy also offers an option for socioeconomically disadvantaged individuals with the words 'Individuals who are financially inadequate can turn to this or individuals who want to get practical, fast solutions for this' (Paris—Psychological Counselor). Washington, D.C. (Psychiatric Nurse) highlighted another dimension of accessibility challenges: "Right now, even if you can afford it, finding a truly qualified therapist is very difficult. Given how limited access is, AI may not be a perfect substitute, but it is better than having no access at all."

Supervision and consultation support of artificial intelligence Participants stated that they were able to receive supervision and counselling support in a quick and practical way thanks to artificial intelligence tools. For example, one participant stated that "Immigration policy is increasing in every country… you may not be able to help a migrant due to language barrier. But thanks to artificial intelligence, it is a great contribution to translate a document or a document quickly and simply" (Beijing—Psychological Counselor), emphasizing the ease of artificial intelligence in overcoming language barriers. The same participant also described how AI has become integrated into their daily practice: "Over time, it has come to function almost like my own assistant; keeping a ChatGPT tab open has become a routine part of my daily work." Other participants stated that they used artificial intelligence to reinforce theoretical knowledge, to investigate the suitability of psychotherapy techniques and to quickly acquire different perspectives. This situation indicates that artificial intelligence provides significant advantages not only economically but also in terms of access to information, time management and professional development. The participants explained that artificial intelligence is seen as a support mechanism complementary to traditional supervision processes with their opinions such as 'Of course, ChatGPT or another environment cannot supervise you as much as that teacher, but… I do not ask what is on my mind at that moment… in terms of time, maybe the case may even be gone from me in the supervision I receive after a month and a half' (Tokyo—Psychological Counselor).

Facilitativeness Participants also emphasized that artificial intelligence tools help therapists to be more prepared before the session and facilitate their clients' diary-keeping processes. One participant stated that the information obtained through artificial intelligence accelerates the therapy process and makes it more effective with the statement 'I am more prepared for the next session… I make my own preparation before the session and we make an evaluation together with my client' (Ankara—Psychologist). Again, a participant (Berlin—Psychological Counselor) revealed that artificial intelligence is a flexible and rich resource in developing alternative intervention strategies with the statement 'When I asked "what else can be done" about students with attention deficit…, it gave me quite a lot of options'. Another participant (Ankara—Psychologist) stated that 'It can create possible scenarios and create scenarios for every psychopathology' and that artificial intelligence provides a platform for case sampling and testing theoretical approaches. Madrid (Psychological Counselor) highlighted the efficiency gains in information processing: "It enables very fast reading, scanning, and accuracy checks, allowing me to prepare information quickly and save considerable time."

In general, participants' statements indicate that AI technologies provide multidimensional advantages in mental health services such as cost, accessibility, overcoming language and cultural barriers, quick access to supervision and consultation, pre-therapy preparation, multidimensional sampling and development of new strategies. These findings reveal that artificial intelligence significantly supports mental health practices in terms of speed, efficiency and accessibility.

6.3 Disadvantages of artificial intelligence theme

The theme of the disadvantages of artificial intelligence was grouped under the categories of 'Reliability of Data and Risks of Unethical Use', 'Artificial Intelligence-Mental Health Worker Interaction' and 'Impact on Disadvantaged Groups.' The explanations regarding this section are presented below.

Reliability of data and risks of unethical use Participants expressed concerns about privacy, data security and ethical

violations during the use of artificial intelligence tools. In particular, it was stated that chatbots may produce false or misleading information. One participant (Ankara—Psychologist) stated, “I do not find the reality value very reliable… Therefore, I feel the need to read multiple sources to be sure about a subject”, pointing out that the information provided by artificial intelligence should always be cross-checked. Similarly, another participant (Washington, D.C.—Psychiatric Nurse) highlighted the potential of artificial intelligence tools to convey outdated or unverified information by saying “It can produce hallucinatory data… Therefore, it is not possible to trust the information it provides one hundred per cent”, drawing attention to the potential of artificial intelligence tools to convey outdated or unverified information. Beijing (Psychological Counselor) raised specific privacy concerns about data permanence: "When you input client information, say to generate a transcript, that data gets stored in the AI system, and there's no way to completely remove it afterward. This same privacy issue concerns me when using AI for research purposes." These findings raise ethical and trust issues due to the lack of transparency in the data reliability of artificial intelligence tools and the opportunity for non-specialists to present themselves as mental health experts.

Artificial intelligence-mental health worker interaction Participants acknowledged that AI tools can provide information and support in some practical tasks, but they do not think that they can make an equivalent contribution to the emotion-focused and empathic therapeutic process. One participant (Berlin—Psychological Counselor) said, “Artificial intelligence cannot fully provide emotional healing. Because it is not a human being, but a technology…”, drawing attention to the difference between the value of human interaction and the inadequacy of artificial intelligence at this point. Another participant (Moscow—Psychological Counselor) emphasized that the therapeutic alliance cannot be fully established with artificial intelligence by expressing the view that “I do not think that artificial intelligence… can provide the interaction between a real therapist and a client”. Madrid (Psychological Counselor) highlighted a specific clinical limitation: "A person may smile while describing trauma, a clinically significant incongruence AI cannot detect." These findings show that artificial intelligence cannot go beyond being a complementary tool in therapeutic processes that emphasize emotional and human aspects.

Impact on disadvantaged groups Participants noted that AI tools run the risk of reflecting societal biases and thus producing discriminatory or stigmatizing responses against certain groups. For example, one participant (Washington, D.C.—Psychiatric Nurse) noted the negative impact of biased datasets on disadvantaged populations, stating that “if there is biased training in AI training… discrimination against these groups can occur”. The same participant further emphasized the scale of potential harm: "If an AI gives a stigmatizing response about a mental disorder, such as schizophrenia, it contributes to societal stigma. My classroom comments reach 200 students; a chatbot's reach millions instantly." It was also emphasized that the inability to access AI-based services in regions with limited internet access would deepen injustice. In addition, the fact that the tools are mostly English-based and cultural awareness remains limited creates disadvantages for individuals who do not speak English or have different cultural backgrounds. Participants (Berlin—Psychological Counselor, Washington, D.C.—Psychiatric Nurse) pointed out that issues such as language barriers, cultural diversity and limited access limit the inclusiveness and effectiveness of AI applications.

6.4 Future insights of artificial intelligence in mental health theme

Participants made extensive predictions about the future of AI in mental health and recognized both the limitations and potential benefits of these technologies. Although participants acknowledged that artificial intelligence can be effective in practical functions such as providing information, task management and technical skill development, they emphasized that it will be insufficient in providing emotional and empathic support and therefore cannot replace therapists. Regarding this issue, the participant (Ankara—Psychologist) said, 'I have no concerns that it will replace therapists. Because artificial intelligence cannot replace a real therapist.' supports this finding. However, Rome (Psychiatrist) offered a contrasting perspective on future possibilities: "I think that eventually, 3D human-like AI will be able to provide direct therapy for many mild cases. These programs will analyze emotions, gaze, pupillary changes, eye contact, and posture to design an appropriate therapeutic roadmap for each person."

The role of artificial intelligence in therapist training and the development of professional skills is another issue emphasized by the participants. Participants stated that artificial intelligence technologies will be effective in educational processes, especially in areas such as resource scanning, content creation and animations. In addition, the participants stated that these technologies can lighten the workload of therapists and make the methods used in vocational training more efficient. However, the participants emphasized that mental health professionals need to develop artificial intelligence literacy in order to implement these innovations effectively. This challenge is exemplified by one participant (Washington, D.C.—Psychiatric Nurse), who noted, ‘It brings a new burden; we will have to learn something we do not know.”

The contributions that artificial intelligence tools can provide in supporting individuals' self-help processes are also one of the issues expressed by the participants. Participants foresee that artificial intelligence-supported tools can be effective in teaching individualized psychotherapy techniques and accelerating diagnosis-treatment processes. This situation was considered by the participants as an important opportunity, especially for individuals who have difficulty in accessing mental health services. According to the participants, the use of artificial intelligence in personal psychotherapy processes may enable individuals to develop their existing abilities and have more control in these processes by functioning as a self-help tool. However, according to the participants, the spread of artificial intelligence technologies may require new regulations in terms of ethical and legal responsibilities. One participant (Washington, D.C.—Psychiatric Nurse) said, 'A new artificial intelligence law has emerged in the European Union. Similar regulations will be made in Türkiye', emphasizing the ethical and legal obligations that artificial intelligence technologies will bring.

The majority of the participants are of the opinion that artificial intelligence technologies will not negatively affect employment in mental health services. Participants stated that artificial intelligence tools will be used as supportive tools alongside mental health professionals rather than replacing them. According to the participants, these tools are expected to lighten the workload of therapists and provide a more efficient working order. One participant (Washington, D.C.—Psychiatric Nurse) supported this idea by saying, Artificial intelligence will be a tool to help us, but it will not replace us.'

7 Discussion

This study examined the interactions of mental health workers with artificial intelligence tools with a phenomenological approach and revealed four main themes: "Mental Health Workers' Relationship with Artificial Intelligence", "Advantages of Artificial Intelligence", "Disadvantages of Artificial Intelligence" and "Predictions for the Future of Artificial Intelligence". While the findings point to the potential of artificial intelligence to make valuable contributions in the field of mental health at different levels such as education, practice, supervision, consultation, accessibility and efficiency, they also reveal important limitations such as ethical issues, data security, the indispensability of the human element and risks for disadvantaged groups. Throughout the following section, we will discuss the study's findings in relation to Rogers' DIT and Davis' TAM, and present implications and recommendations.

7.1 Mental health workers' relationship with artificial intelligence theme

Participants explained their relationship with artificial intelligence with the themes of "Artificial Intelligence Supported Mental Health Education and Practices", "Artificial Intelligence Learning Process" and "Emotions of Mental Health Workers".

Artificial intelligence supported mental health education and practices The relationships of mental health workers with artificial intelligence were discussed under the categories of "Artificial Intelligence Supported Mental Health Education and Practices", "Learning Process of Artificial Intelligence" and "Emotions of Mental Health Workers". Participants stated that artificial intelligence can play a transformative role in education and practice processes, but emphasized the necessity of human supervision when integrating these technologies. In this context, participants' descriptions of AI as supporting efficiency and learning reflect TAM's Perceived Usefulness, while their emphasis on simple and accessible tools aligns with Perceived Ease of Use. From a DIT perspective, these perceptions correspond to Relative Advantage and Compatibility, and the use of AI in low-risk educational tasks illustrates Trialability and Observability in the adoption process.

These findings reveal that perceived usefulness and ease of use may positively affect attitudes towards artificial intelligence in line with Davis' [20, 21] TAM. At the same time, within the framework of Rogers' [62] Diffusion of Innovations Theory (DIT), it is seen that mental health workers progress towards the adoption of artificial intelligence by going through the stages of knowledge, persuasion, decision and implementation. In this case, the supportive role of artificial intelligence in education contributes to the internalization of technology in the professional context [3, 36, 55].

The functionality of artificial intelligence in therapeutic interventions is similarly emphasized in the literature. For example, it is consistent with previous studies that AI-supported CBT, virtual reality and dialog-based tools yield effective results in treatment processes [4, 24, 28]. Similarly, the need for systematic training on increasing the artificial intelligence literacy of mental health professionals and the use of these tools emerges as a necessity expressed in the literature [61, 84] and the findings of the current study.

However, our findings also reflect existing research [14, 84] indicating that practitioners' adoption of AI is often hindered by a lack of trust, ethical concerns, and insufficient knowledge, despite its perceived usefulness. This situation demonstrates that the internalization of artificial intelligence in mental health involves not only strong opportunities but also limitations that need to be carefully considered.

Artificial intelligence learning process Participants stated that they are still in the process of getting to know and learning artificial intelligence technologies, and that they benefit from various tools such as ChatGPT, Gemini, Grammarly, SiderAI, Quillbot, Colani, Bing, Canva and HappyMind. This shows that AI-supported applications are not yet widely adopted, but professional awareness and interest are increasing. These patterns suggest that many professionals remain in DIT's Knowledge and Persuasion stages, with limited literacy contributing to perceptions of Complexity. Their experimentation with multiple platforms indicates Trialability, while hesitation rooted in uncertainty reflects lower Perceived Ease of Use within TAM. The literature also points to this trend. For example, the potential of ChatGPT for use by mental health professionals is emphasized; however, it is stated that this potential has not yet been fully evaluated [2, 10, 15, 39].

Zhang et al.'s [84] research on the use of artificial intelligence technologies in the field of mental health revealed that there is an awareness of the issue among professionals, but knowledge gaps are widespread. These deficiencies are not only at the individual level, but also complex enough to require a systematic structuring. The same study shows that experts who do not have sufficient knowledge about artificial intelligence experience fear and anxiety, which slows down the adoption process. On the other hand, the meta-analysis by Rogan et al. [61] emphasizes that there are experts with different levels of literacy regarding digital tools and artificial intelligence technologies and that systematic training is needed for the effective use of these tools. When the findings of the study are considered together with those of the literature, it is seen that, for artificial intelligence to create a meaningful transformation in mental health practices, there is a need for the updating of professional training programs, the development of international standards, and the presence of policies that take ethical frameworks into account.

Emotions of mental health workers In this study, it was observed that mental health workers experienced a wide range of emotions (happiness, excitement, anxiety, fear, anger, frustration, pleasure, surprise, insecurity) while using AI tools. This diversity of emotions may be related to the new opportunities provided by artificial intelligence, current uncertainties and unpredictability regarding its future. The literature also paints a similar picture. For example, Fiske et al. [26] report that experts are concerned about ethical gaps, while Sigman et al. [70] point to concerns about the reduction of human interaction in therapy. On the other hand, Gual-Montolio et al. [34] report that when AI tools improve diagnostic accuracy and efficiency in patient care, satisfaction with these technologies increases. Darzi [19] suggests that the use of artificial intelligence can create a sense of relief.

However, the incorporation of AI technologies into practice may also leave therapists with emotionally challenging tasks [70]. Moreover, although chatbot applications increase access and engagement, ethical issues such as overtrust, undermining the human quality of care, and privacy may create new areas of tension [82]. In all, these emotional responses underscore a central tension in AI adoption: the excitement for innovation is tempered by caution regarding the technology's risks. This emotional dimension is a critical factor that must be addressed for the successful integration of AI into mental health. Furthermore, the findings show that professionals experience both excitement and hesitation simultaneously, indicating that their optimism about innovation is balanced with ethical caution in their emotional responses. These mixed emotional reactions mirror TAM's distinction between Perceived Usefulness, reflected in excitement, and concerns about Perceived Ease of Use, reflected in anxiety and insecurity. From a DIT perspective, this ambivalence reflects tensions around Compatibility and Complexity, while satisfaction emerging from observable clinical benefits demonstrates the role of Observability in strengthening adoption.

7.2 Advantages of artificial intelligence theme

Participants explained the important advantages of AI with the themes of "Accessible AI Psychotherapist" , "Supervision and Consultation Support of AI" and "Facilitativeness"

Accessible AI psychotherapist Participants pointed out that AI-based applications increase access to mental health services by providing "a support that is within everyone's reach". This confirms D'Alfonso's (2020) view that AI-based applications can reach large audiences at low cost through mobile devices. Rapid analysis of large data sources offers both economic and functional solutions by facilitating the early diagnosis and intervention process of problems such as depression and suicide risk [33, 48]. Similarly, Miner et al. [51] emphasize that these tools can be a cost-effective and supportive alternative, especially for individuals with access problems. While artificial intelligence has the potential to make mental health services more accessible, research has also highlighted possible risks that may accompany this advantage. Ethical concerns [45], the lack of empathy and emotional connection from therapists [41], and infrastructure and digital literacy challenges in delivering services digitally [16] are key barriers in this regard. Therefore, in the integration of AI into mental health services, realistic planning requires considering both the accessible aspects and the associated risks. Nevertheless, these findings demonstrate that AI technologies have the potential to provide sustainable services by alleviating clients' geographical, economic, and time-related barriers. These advantages also

correspond to DIT's constructs of Relative Advantage and Observability, as participants noted both the superior accessibility offered by AI tools and the clearly visible outcomes in reducing service barriers.

Supervision and consultation support of artificial intelligence The research findings reveal that AI tools can also provide significant support in supervision and consultation services. Some participants stated that these technologies make traditional supervision processes "more accessible, affordable, differentiated and sustainable". Maurya and DeDiego [49] state that artificial intelligence increases efficiency in tasks such as preparing first drafts of case notes, data analysis, thematic coding, thus improving the quality and speed of supervision. Lai et al. [44] also showed that the Psy-LLM tool can provide practical support to mental health professionals by offering similar functionalities. The limited number of studies on this subject suggests that artificial intelligence has unexplored opportunities in the field of supervision. Especially when evaluated within the framework of Rogers' [62] Diffusion of Innovations Theory, increasing the adoption of these technologies may bring a new dimension to professional practices by standardizing and expanding supervision processes. In addition, clinicians' initial use of AI in low-risk supervisory tasks reflects DIT's Trialability, while the structured nature of these tools appears to reduce perceived Complexity, thereby supporting wider adoption.

Facilitativeness Participants emphasized that AI speeds up everyday and professional workflow, enabling therapists to spend more time on their core task of human interaction. For example, "speeding up the processes of summarizing therapy sessions, creating transcripts and clinical documentation" [51, 66] demonstrates the practical value of these technologies. In the same vein, AI is reported to "improve treatment outcomes by increasing speed and efficiency" in patient assessment and referral processes [26, 64]. While artificial intelligence technologies have a facilitating role in the field of mental health, they also entail serious ethical concerns such as transparency, accountability, and privacy [45], as well as broad technical and security-related challenges [50, 52]. Moreover, the integration of artificial intelligence in the field of mental health entails significant challenges, as automation bias, limited generalizability, and the risk of overreliance may lead to biases and errors in decision-making processes [9]. Nevertheless, improvements made in AI tools contribute to reducing current and potential problems, thereby reinforcing the facilitating potential of artificial intelligence technologies in the field of mental health. When this situation is evaluated in the context of Davis' [20] TAM, it can be said that despite barriers and challenges, artificial intelligence tools encourage experts to adopt the technology through the dimensions of perceived usefulness and ease of use. These findings also illustrate DIT's Relative Advantage by showing that AI offers clear improvements over existing workflows, while concerns regarding transparency and automation bias point to areas where perceived Complexity may still limit diffusion.

7.3 Disadvantages of artificial intelligence theme

Despite the benefits offered by artificial intelligence tools in the field of mental health, participants drew attention to various disadvantages. These disadvantages can be examined under the headings of "Reliability of Data and Risks of Unethical Use", "Impact on Disadvantaged Groups" and "Artificial Intelligence-Mental Health Worker Interaction".

Reliability of data and risks of unethical use Participants emphasized that AI technologies create uncertainties about anonymity, privacy, data security and adherence to ethical principles. Espejo et al. [25] highlight ethical violations in AI-based applications, especially unauthorized disclosure of confidential information and its sharing by third parties. The lack of transparency about how responses are generated makes it difficult to understand decision-making processes and turns AI into a "black box" [73]. This can have dangerous consequences that can delay human intervention in critical areas such as depression and suicide risk [38]. Findings from Beg and Verma's [6] thematic analysis of interviews with users of AI-based psychotherapy applications indicate that AI presents an ethically complex landscape. They conclude that balancing user safety with empathetic engagement remains a fundamental challenge. Fiske et al. [26] pointed to the lack of ethical guidance and the risk of AI exacerbating health inequalities, while Olawade et al. [55] argue that new ethical approaches are needed to protect privacy, reduce bias, and maintain the human element in therapy. Thompson and White [72] and Luxton [45, 46] also argue that existing professional codes of ethics should be reviewed and updated. The ethical dimensions of artificial intelligence in the field of mental health are complex and require careful examination of its impacts [7, 78]. In this context, while artificial intelligence holds promising potential in the field of mental health, achieving the best outcomes requires careful consideration of the therapeutic alliance, client well-being, and ethical dimensions [8]. All these findings clearly reveal the need for a multidimensional ethical framework to guide the applications of artificial intelligence in mental health. From a DIT perspective, these ethical uncertainties increase perceived Complexity and reduce Compatibility, while within TAM they diminish Perceived Ease of Use, collectively slowing the likelihood of adoption despite the potential benefits of AI tools.

Impact on disadvantaged groups Another important point emphasized by the participants is the potential of AI tools

to produce discriminatory results against disadvantaged groups due to language, culture and technological access requirements. Timmons et al. [76] state that artificial intelligence trained with biased data sets can deepen inequalities and pave the way for exclusionary approaches. While Salcedo et al. [67] point to ethical risks related to the use of personal data, Graham et al. [33] emphasize that disadvantaged individuals may be deprived of treatment opportunities due to their inability to access AI-based services. This situation indicates that artificial intelligence tools should be addressed not only from a technological perspective but also with social justice and human rights dimensions. Applications should be organized according to inclusive norms in the data training process and linguistic-cultural diversity should be taken into consideration. In conclusion, this finding indicates that integrating the principles of justice, accessibility, and inclusivity into the design of AI-based therapeutic services can play an important role in reducing inequalities and supporting broader social benefits. These concerns directly relate to DIT's Compatibility dimension, as systems that fail to reflect linguistic and cultural diversity are perceived as misaligned with users' values, and they also reduce Observability, since positive outcomes become less visible for marginalized populations.

Artificial intelligence-mental health worker interaction Participants acknowledged that AI can play a supportive role in data analysis, information provision and task management, but they believe that it cannot replace human interaction in the therapeutic process. A bibliometric analysis by Jain et al. [40] shows that for human–machine interaction to be sustainable and efficient, not only technological innovations but also emotional and social factors should be taken into account. Hartford and Stein [37] raise concerns that AI may undermine human effort, while Zhou and Lee [85] point out that AI can support creativity in content production. However, Fiske et al. [26] argue that greater involvement of AI tools in the therapy process may increase emotional distance and increase the risk of therapist burnout. Terhürne et al. [74] state that emotion recognition tools can improve therapeutic outcomes, but the therapist will have to balance intuitive judgments and professional experience with AI inputs. This suggests that technology should be designed to complement human skills and that no technology can replace deep human contact. This dual perspective reflects a dynamic balancing process in which the advantages of artificial intelligence are continuously weighed against ethical concerns and the indispensability of human contact. Consequently, the most appropriate position of artificial intelligence in therapeutic applications should be defined not as a substitute for the human factor, but as a complementary tool that strengthens and supports it. This dual role of AI corresponds to DIT's Relative Advantage—by enhancing efficiency—while persistent concerns about losing human connection reflect perceived Complexity and compatibility challenges,in TAM terms, these tensions illustrate how high Perceived Usefulness can coexist with lower Perceived Ease of Use, shaping clinicians' cautious approach to adoption.

7.4 Future insights of artificial intelligence in mental health theme

Participants' predictions about the positive effects of AI on therapist training and development of professional skills are also supported by existing research. For example, Olawade et al. [55] emphasized that despite the rapid development of applications of artificial intelligence in mental health, privacy protection, reduction of prejudices, and preservation of the human element in therapy are essential, and that it is essential to establish regulatory frameworks in these areas. This necessity is related to the measures that need to be taken to ensure that AI-assisted applications do not lead to ethical problems, and as the participants stated, the development of legal regulations will be critical in the future. Similarly, D'Alfonso [18] stated that chatbots can play a promising role in the field of mental health, but pointed to the need for more research and application to increase the effectiveness of these tools in practice. In this context, making AI-based tools more reliable in the field of mental health through legal and ethical regulations seems to be a step towards addressing the concerns of the participants. From a DIT perspective, these expectations for clearer regulation reflect the need to reduce perceived Complexity and increase Compatibility, while in TAM terms they highlight how improving transparency and data governance can strengthen Perceived Ease of Use and facilitate future adoption. Participants' concerns that artificial intelligence may be insufficient in providing empathic support in therapeutic processes are also echoed in the literature. Prescott and Hanley's [59] study reveals the reservations of therapists towards AI and shows that it is difficult for AI to replace a human therapist, especially in functions that require deep human connection such as empathizing. This aligns with DIT's notion that technologies perceived as incompatible with core professional values face slower diffusion, and TAM likewise predicts lower adoption when Perceived Usefulness does not extend to relational or empathy-based clinical tasks. Yadav [82] also states that discomfort with the possibility of AI applications replacing human interactions raises concerns about the loss of empathy and personal connection. Therefore, the use of AI tools as a complement to face-to-face mental health services can be made more functional by reducing the risk of human substitution. Looking to the future, Doraiswamy et al.'s [23] research also supports that AI will not take over all therapeutic tasks in the mental health field, only 3.8%

of respondents stated that AI could completely replace a psychiatrist, while the vast majority (75%) thought that these tools could play an active role in more administrative tasks. This suggests that it is more realistic to position AI as a complementary tool in mental health services that center on human interaction and empathic support. Gamble [29] also states at this point that artificial intelligence cannot replace a therapist, but it can be functionalized as a supportive tool in therapeutic processes with legal regulations. On the other hand, participants and researchers agree that artificial intelligence should not only assume supportive roles, but also support individuals in self-help processes. In that context, Thakkar et al. [75] stated that artificial intelligence should be developed as a complementary technology to human abilities and emphasized the necessity of supporting the processes with ethical reviews, especially in areas that require sensitivity such as mental health. In addition, Jain et al. [40] emphasized that human–machine interaction should become sustainable in the future to include social and emotional interactions, which points to the necessity of an artificial intelligence design that does not ignore human elements. As these visions point to enhanced relational capacities in future AI systems, they also imply a potential increase in Perceived Usefulness and Compatibility, which may shift current adoption barriers identified in both TAM and DIT.

Another important point to consider under this theme is whether artificial intelligence will foster progress equally for both clients and psychotherapists in the future. For instance, the interaction between a digitally native client who is highly proficient with AI and a therapist with limited AI literacy could become a potential source of tension [26, 61, 68] The participants' expressed concern about the burden of having to learn new things already points to this emerging issue.

In conclusion, the participants' predictions about the contributions of artificial intelligence in the field of mental health are similarly supported in the literature and reveal that ethical frameworks and regulatory measures are important for the balanced use of this technology in mental health services in the future. The findings indicate that when artificial intelligence in mental health is implemented as a complement to human expertise, with careful attention to transparency, accountability, and ethical principles, it can both improve the quality of services and foster greater trust in the field [5]. Overall, the future of AI in mental health seems to rely not on uncritical optimism or outright skepticism, but rather on professionals' capacity to balance innovation with responsibility.

8 Conclusion and recommendations

This study reveals that mental health professionals view artificial intelligence as a powerful but complex tool. While AI offers significant advantages by making mental health services more accessible and affordable, reducing professional workload, and providing supervision support, it also presents serious disadvantages. Key concerns include the potential for diminished human interaction, data security risks, and the possibility of deepening inequalities for disadvantaged groups. Ultimately, the professionals surveyed do not see AI as a replacement for human therapists but as a supportive assistant. The findings emphasize a critical need for developing clear ethical guidelines and legal regulations to ensure AI is integrated into the mental health field safely and responsibly, balancing technological innovation with the indispensable value of the human therapeutic relationship**.**

In today's context, where artificial intelligence tools and deep learning algorithms are rapidly evolving, it has become increasingly important to comprehensively evaluate the potential opportunities and risks that may emerge in the coming years together with all mental health stakeholders across countries. In this regard, both mental health service providers and recipients need current and future-oriented research to ensure that their interactions with AI are maintained in a healthy, safe, and functional manner. This study offers pioneering findings that contribute to understanding this need and guiding future research in the field.

This research provides in-depth insights into the use of artificial intelligence by mental health professionals and enables the development of the following recommendations in line with the interviews with the participants and the findings obtained during the research process. In light of these findings, this study proposes the following recommendations.

Dynamics of Human-Artificial Intelligence Interaction: Further research could examine the long-term effects of human–machine interaction on psychotherapeutic processes. In particular, it would be useful to evaluate the effects of hybrid models in which therapist, client, and AI agent work together on therapeutic alliance, therapist burnout, client engagement, and therapy outcomes through experimental designs. These studies can reveal both the nature of the interaction and how artificial intelligence can be balanced with human skills.

Research on Trust and Credibility: Trust in artificial intelligence tools plays a critical role in the adoption of these technologies. In the coming period, it is important to identify the factors that shape the perceptions of trustworthiness and credibility of AI-based applications. For example, how does the accuracy and transparency of the information provided by artificial intelligence, its development within the

framework of ethical principles and its presentation under expert supervision affect users' trust? Quantitative and qualitative research on this subject can contribute to the development of trust-building strategies.

Studies Targeting Cross-Cultural and Disadvantaged Groups: The findings that artificial intelligence applications may exclude disadvantaged groups due to language, cultural and infrastructural constraints necessitate future research focusing on the specific needs of such groups. These studies will test the linguistic, cultural and socio-economic adaptability of AI tools, and provide guidance for the creation of inclusive datasets and the development of multilingual and dynamic software.

Policy Guidance for Ethical AI Integration: It is recommended that policymakers and professional associations develop practical guidelines for the ethical integration of artificial intelligence in order to ensure safe and equitable implementation in mental health services.

Author contributions First Author-M.D: Formulated the core idea of the study, made significant contributions to developing the theoretical framework and discussion section, assumed project management responsibilities, and actively conducted participant interviews. Second Author- F.A: Played a critical role in data collection, organization, and analysis; further contributed to developing the theoretical framework and preparing the discussion section; managed participant interviews, implemented the necessary software applications, and ensured the validation of the results. Third Author-M.B.A: Contributed significantly to the visualization, analysis, and presentation of the data, and participated in the review and editing process of the manuscript. Fourth Author- H.K.Y: Managed the procurement and administration of resources, oversaw general project supervision, and contributed notably to both participant interviews and data analysis. Fifth Author-A.B: Contributed to the critical review and editing of the manuscript and provided additional support in project management and oversight tasks.

Funding The authors received no financial support for the research, authorship, and/or publication of this article.

Data availability No datasets were generated or analysed during the current study.

Declarations

Conflict of interest The authors declare no competing interests.

Ethics approval The study "Mental Health Workers' Experiences Regarding the Use of Artificial Intelligence" was reviewed and approved by the Ethics Committee for Social and Human Sciences at Ufuk University (Meeting date: April 26, 2024; Decision no: 2024/03). All participants provided informed consent prior to participation.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

References

1. American Psychological Association. APA style JARS: Journal article reporting standard. https://apastyle.apa.org/jars/qual-table-1.pdf (2020)
2. Aminah, S., Hidayah, N., Ramli, M.: Considering ChatGPT to be the first aid for young adults on mental health issues. J. Public Health **45**(3), e615–e616 (2023). https://doi.org/10.1093/pubmed/fdad065
3. Anand, N., Pant, L.M., Alam, T., Pundir, S., Thomas, L., Rakshith, U.R.:. Artificial intelligence's contribution to mental health education. In: 2023 International Conference on Sustainable Computing and Data Communication Systems (ICSCDS), pp. 462–467. IEEE (2023). https://doi.org/10.1109/ICSCDS56580.2023.10104905
4. Beatty, C., Malik, T., Meheli, S., Sinha, C.: Evaluating the therapeutic alliance with a free-text CBT conversational agent (Wysa): a mixed-methods study. Front. Digit. Health **4**, 847991 (2022). https://doi.org/10.3389/fdgth.2022.847991
5. Beg, M.J.: Responsible AI integration in mental health research: issues, guidelines, and best practices. Indian J. Psychol. Med. **47**(1), 5–8 (2025). https://doi.org/10.1177/02537176241302898
6. Beg, M.J., Verma, M.K.: Artificial intelligence-based psychotherapy: a qualitative exploration of usability, personalization, and the perception of therapeutic progress. Indian J. Psychol. Med. **47**, 1–7 (2025). https://doi.org/10.1177/02537176251357477
7. Beg, M.J., Verma, M.K.: Revolutionizing Mental Healthcare Through Artificial Intelligence. In: Uludag, K., Ahmad, N. (eds.) Chatbots and Mental Healthcare in Psychology and Psychiatry, pp. 21–54. IGI Global Scientific Publishing (2025)
8. Beg, M.J., Verma, M.K.: Exploring the potential and challenges of digital and AI-driven psychotherapy for ADHD, OCD, schizophrenia, and substance use disorders: a comprehensive narrative review. Indian J. Psychol. Med. (2024). https://doi.org/10.1177/02537176241300569
9. Beg, M.J., Verma, M., Chanthar, V., Verma, M.K.: Artificial intelligence for psychotherapy: A review of the current state and future directions. Indian J. Psychol. Med. (2024). https://doi.org/10.1177/02537176241260819
10. Blease, C., Torous, J.: ChatGPT and mental healthcare: balancing benefits with risks of harms. BMJ Mental Health (2023). https://doi.org/10.1136/bmjment-2023-300884
11. Bozkurt, A.: The Three Laws of Artificial Intelligence: re-evaluating human-AI agency and interaction in a time of the generative and agentic AI ren[ai]ssance. Open Praxis **17**(3), 421–428 (2025). https://doi.org/10.55982/openpraxis.17.3.794
12. Canel, A.N.: Freud'un divanından terapi robotlarına [From Freud's couch to therapy robots]. In: Canel, A.N. (Ed.), *Terapide yeni ufuklar: Kuramdan uygulamaya* [New horizons in therapy: From theory to practice] pp. 9–25. Pinhan Yayıncılık (2021)
13. Carlson, C.G.: Virtual and augmented simulations in mental health. Curr. Psychiatry Rep. **25**(9), 365–371 (2023). https://doi.org/10.1007/s11920-023-01438-4
14. Cecil, J., Kleine, A.-K., Lermer, E., Gaube, S.: Mental health practitioners' perceptions and adoption intentions of AI-enabled technologies: an international mixed-methods study. BMC Health

Serv. Res. **25**, 556 (2025). https://doi.org/10.1186/s12913-025-12715-8
15. Cheng, S.-W., Chang, C.-W., Chang, W.-J., Wang, H.-W., Liang, C.-S., Kishimoto, T., Chang, J.P.-C., Kuo, J.S., Su, K.-P.: The now and future of ChatGPT and GPT in psychiatry. Psychiatry Clin. Neurosci. **77**(11), 592–596 (2023). https://doi.org/10.1111/pcn.13588
16. Crawford, A., Serhal, E.: Digital health equity and COVID-19: the innovation curve cannot reinforce the social gradient of health. J. Med. Internet Res. **22**(6), e19361 (2020). https://doi.org/10.2196/19361
17. Creswell, J.W.: Research design: qualitative, quantitative, and mixed methods approaches, 4th edn. Sage (2017)
18. D'Alfonso, S.: AI in mental health. Curr. Opin. Psychol. **36**, 112–117 (2020). https://doi.org/10.1016/j.copsyc.2020.04.005
19. Darzi, P.: Could artificial intelligence be a therapeutic for mental issues? Sci. Insights **43**(5), 1111–1113 (2023). https://doi.org/10.15354/si.23.co132
20. Davis, F.D.: A technology acceptance model for empirically testing new end-user information systems (Unpublished doctoral dissertation). Cambridge (1985).
21. Davis, F.D.: Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Q. **13**, 319–340 (1989). https://doi.org/10.2307/249008
22. Dhariwal, N., Sengupta, N., Madiajagan, M., Patro, K.K., Kumari, P.L., Abdel Samee, N., Tadeusiewicz, R., Pławiak, P., Prakash, A.J.: A pilot study on AI-driven approaches for classification of mental health disorders. Front. Hum. Neurosci. **18**, 1376338 (2024). https://doi.org/10.3389/fnhum.2024.1376338
23. Doraiswamy, P.M., Blease, C., Bodner, K.: Artificial intelligence and the future of psychiatry: insights from a global physician survey. Artif. Intell. Med. **102**, 101753 (2020). https://doi.org/10.1016/j.artmed.2019.101753
24. Egan, S.J., Johnson, C., Wade, T.D., Carlbring, P., Raghav, S., Shafran, R.: A pilot study of the perceptions and acceptability of guidance using artificial intelligence in internet cognitive behaviour therapy for perfectionism in young people. Internet Interv. **35**, 100711 (2024). https://doi.org/10.1016/j.invent.2024.100711
25. Espejo, G., Reiner, W., Wenzinger, M.: Exploring the role of artificial intelligence in mental healthcare: progress, pitfalls, and promises. Cureus **15**(9), e44748 (2023). https://doi.org/10.7759/cureus.44748
26. Fiske, A., Henningsen, P., Buyx, A.: Your robot therapist will see you now: ethical implications of embodied artificial intelligence in psychiatry, psychology, and psychotherapy. J. Med. Internet Res. (2019). https://doi.org/10.2196/13216
27. Fiske, A., Henningsen, P., Buyx, A.: The implications of embodied artificial intelligence in mental healthcare for digital wellbeing. In: Burr, Ch., Floridi, L. (eds.) Ethics of digital well-being, pp. 207–219. Springer International Publishing, Cham (2020)
28. Fitzpatrick, K.K., Darcy, A., Vierhile, M.: Delivering cognitive behavior therapy to young adults with symptoms of depression and anxiety using a fully automated conversational agent (Woebot): a randomized controlled trial. JMIR Ment. Health **4**(2), e19 (2017). https://doi.org/10.2196/mental.7785
29. Gamble, A.: Artificial intelligence and mobile apps for mental healthcare: a social informatics perspective. Aslib J. Inf. Manag. **72**(4), 509–523 (2020). https://doi.org/10.1108/ajim-11-2019-0316
30. Ghandeharioun, A., McDuff, D., Czerwinski, M., Rowan, K.: EMMA: an emotion-aware wellbeing chatbot. In: International Conference on Affective Computing. http://arxiv.org/pdf/1812.11423v2 (2019)
31. Gladwell, M.: The Tipping Point: How Little Things Can Make a Big Difference. Back Bay Books (2002)
32. Gotham, H.: Diffusion of mental health and substance abuse treatments: development, dissemination, and implementation. Clin. Psychol. Sci. Pract. **11**(2), 160–176 (2006). https://doi.org/10.1093/clipsy.bph067
33. Graham, S., Depp, C., Lee, E.E., Nebeker, C., Tu, X., Kim, H.-C., Jeste, D.V.: Artificial intelligence for mental health and mental illnesses: an overview. Curr. Psychiatry Rep. (2019). https://doi.org/10.1007/s11920-019-1094-0
34. Gual-Montolio, P., Jaén, I., Martínez-Borba, V., Castilla, D., Suso-Ribera, C.: Using artificial intelligence to enhance ongoing psychological interventions for emotional problems in real- or close to real-time: a systematic review. Int. J. Environ. Res. Public Health **19**(13), 7737 (2022). https://doi.org/10.3390/ijerph19137737
35. Guba, E.G., Lincoln, Y.S.: Epistemological and methodological bases of naturalistic inquiry. ECTJ **30**(4), 233–252 (1982). https://doi.org/10.1007/bf02765185
36. Gültekin, M., Şahin, M.: The use of artificial intelligence in mental health services in Turkey: What do mental health professionals think? Cyberpsychol. J. Psychosoc. Res. Cyberspace **18**(1), 6 (2024). https://doi.org/10.5817/CP2024-1-6
37. Hartford, A., Stein, D.J.: The machine speaks: conversational AI and the importance of effort to relationships of meaning. JMIR Hum. Factors **10**, e53203 (2024). https://doi.org/10.2196/53203
38. Heston, T.F.: Safety of large language models in addressing depression. Cureus **15**(12), e50729 (2023). https://doi.org/10.7759/cureus.50729
39. Islam, M.R., Urmi, T.J., Mosharrafa, R.-A., Rahman, M.S., Kadir, M.F.: Role of ChatGPT in health science and research: a correspondence addressing potential application. Health Sci. Rep. (2023). https://doi.org/10.1002/hsr2.1625
40. Jain, N., Gupta, V., Temperini, V., Meissner, D., D'Angelo, E.: Human-machine interactions: from past to future a systematic literature review. J. Manag. Hist. **30**(2), 263–302 (2024). https://doi.org/10.1108/JMH-12-2022-0085
41. Khawaja, Z., Bélisle-Pipon, J.-C.: Your robot therapist is not your therapist: understanding the role of AI-powered mental health chatbots. Front. Digit. Health **5**, 1278186 (2023). https://doi.org/10.3389/fdgth.2023.1278186
42. Kerlinger, F.N., Lee, H.B.: Foundations of Behavioral Research. Harcourt College Publishers (1999)
43. King, D.R., Nanda, G., Stoddard, J., Dempsey, A., Hergert, S., Shore, J.H., Torous, J.: An introduction to generative artificial intelligence in mental health care: considerations and guidance. Curr. Psychiatry Rep. **25**(12), 839–846 (2023). https://doi.org/10.1007/s11920-023-01477-x
44. Lai, T., Shi, Y., Du, Z., Wu, J., Fu, K., Dou, Y., Wang, Z.: Supporting the demand on mental health services with AI-based conversational large language models (LLMs). BioMedInformatics **4**(1), 8–33 (2024). https://doi.org/10.3390/biomedinformatics4010002
45. Luxton, D.D.: Recommendations for the ethical use and design of artificial intelligent care providers. Artif. Intell. Med. **62**(1), 1–10 (2014). https://doi.org/10.1016/j.artmed.2014.06.004
46. Luxton, D.D.: Ethical implications of conversational agents in global public health. Bull. World Health Organ. **98**(4), 285–287 (2020). https://doi.org/10.2471/BLT.19.237636
47. Luxton, D.D., Hudlicka, E.: Intelligent virtual agents in behavioral and mental healthcare: Ethics and application considerations. In: Jotterand, F., Ienca, M. (eds.) Artificial intelligence in brain and mental health: Philosophical, ethical & policy issues, pp. 41–56. Springer (2021)
48. Manikandan, S.: AI: a new horizon of promises & challenges: 'Exploring the impact of artificial intelligence (AI) in mental health care.' Int. J. Res. Publ. Rev. (2023). https://doi.org/10.55248/gengpi.4.823.51356

49. Maurya, R.K., DeDiego, A.C.: Artificial intelligence integration in counsellor education and supervision: a roadmap for future directions and research inquiries. Couns. Psychother. Res. (2025). https://doi.org/10.1002/capr.12727
50. Meadi, M.R., Sillekens, T., Metselaar, S., van Balkom, A., Bernstein, J., Batelaan, N.: Exploring the ethical challenges of conversational AI in mental health care: scoping review. JMIR Ment. Health **12**, e60432 (2025). https://doi.org/10.2196/60432
51. Miner, A.S., Shah, N., Bullock, K.D., Arnow, B.A., Bailenson, J., Hancock, J.T.: Key considerations for incorporating conversational AI in psychotherapy. Front. Psychiatry **10**, 746 (2019). https://doi.org/10.3389/fpsyt.2019.00746
52. Monteith, S., Glenn, T., Geddes, J., Whybrow, P.C., Achtyes, E., Bauer, M.: Expectations for artificial intelligence (AI) in psychiatry. Curr. Psychiatry Rep. **24**(11), 709–721 (2022). https://doi.org/10.1007/s11920-022-01378-5
53. Mumuksh, B., Varshney, R., Anita, R.: Emotionally intelligent chatbot for mental healthcare and suicide prevention. Int. J. Adv. Sci. Technol. **29**(6), 605–2597 (2020)
54. Nicol, G., Wang, R., Graham, S., Dodd, S., Garbutt, J.: Chatbot-delivered cognitive behavioral therapy in adolescents with depression and anxiety during the COVID-19 pandemic: feasibility and acceptability study. JMIR Form. Res. **6**(11), e40242 (2022). https://doi.org/10.2196/40242
55. Olawade, D.W., Wada, O.Z., Odetayo, A., David-Olawade, A.C., Asaolu, F., Eberhardt, J.: Enhancing mental health with artificial intelligence: current trends and future prospects. J. Med. Surg. Public Health **3**, 100099 (2024). https://doi.org/10.1016/j.glmedi.2024.100099
56. Orr, G.: Diffusion of innovations, by Everett Rogers (1995). Stanford University, Symbolic Systems 205: Learning and Change. Retrieved January 21, 2005, from http://www.stanford.edu/class/symbsys205/Diffusion%20of%20Innovations.htm. (2003)
57. Patton, M.Q.: Qualitative Research and Evaluation Methods, 3rd edn. Sage Publications (2002)
58. Plakun, E.M.: Psychotherapy and artificial intelligence. J. Psychiatr. Pract. **29**(6), 476–479 (2023). https://doi.org/10.1097/pra.0000000000000748
59. Prescott, J., Hanley, T.: Therapists' attitudes towards the use of AI in therapeutic practice: considering the therapeutic alliance. Ment. Health Soc. Inclus. **27**(2), 177–185 (2023). https://doi.org/10.1108/MHSI-02-2023-0020
60. Ramasamy, L.K., Khan, F., Joghee, S., Dempere, J., Garg, P.: Forecast of students' mental health combining an artificial intelligence technique and fuzzy inference system. In: 2024 International Conference on Automation and Computation (AUTOCOM), pp. 85–90 (2024). https://doi.org/10.1109/AUTOCOM60220.2024.10486194
61. Rogan, J., Bucci, S., Firth, J.: Health care professionals' views on the use of passive sensing, AI, and machine learning in mental health care: systematic review with meta-synthesis. JMIR Ment. Health **11**, e49577 (2024). https://doi.org/10.2196/49577
62. Rogers, E.M.: Diffusion of Innovations, 4th edn. FreePress (1995)
63. Rogers, E.M.: Diffusion of preventive innovations. Addict. Behav. **27**(6), 989–993 (2002). https://doi.org/10.1016/s0306-4603(02)00300-3
64. Rollwage, M., Juchems, K., Habicht, J., Carrington, B., Hauser, T.U., Harper, R.: Conversational AI facilitates mental health assessments and is associated with improved recovery rates. MedRxiv (2022). https://doi.org/10.1101/2022.11.03.22281887
65. Russell, S.J., Norvig, P.: Artificial Intelligence: A Modern Approach, 2nd edn. Prentice Hall (2003)
66. Sadeh-Sharvit, S., Camp, T., Horton, S.E., Hefner, J.D., Berry, J.M., Grossman, E., Hollon, S.: Effects of an artificial intelligence platform for behavioral interventions on depression and anxiety symptoms: randomized clinical trial. J. Med. Internet Res. (2023). https://doi.org/10.2196/46781
67. Salcedo, Z.B.V., Tari, I.D.A.E.P.D., Ratsameemonthon, C., Setiyani, R.Y.: Artificial intelligence and mental health issues: a narrative review. J. Public Health Sci. (2023). https://doi.org/10.56741/jphs.v2i02.282
68. Sedlakova, J., Trachsel, M.: Conversational artificial intelligence in psychotherapy: a new therapeutic tool or agent? Am. J. Bioeth. **23**(5), 4–13 (2023). https://doi.org/10.1080/15265161.2022.2048739
69. Shetty, M., Shah, P., Shah, K., Shinde, V., Nehete, S. Therapy chatbot powered by artificial intelligence: A cognitive behavioral approach. In: 2023 International Conference in Advances in Power, Signal, and Information Technology (APSIT), pp. 457–462 (2023). https://doi.org/10.1109/APSIT58554.2023.10201725
70. Sigman, M., Slezak, D., Drucaroff, L., Ribeiro, S., Carrillo, F.: Artificial and human intelligence in mental health. AI Mag. **42**, 39–46 (2021). https://doi.org/10.1002/j.2371-9621.2021.tb00009.x
71. Solaiman, B., Malik, A., Ghuloum, S.: Monitoring mental health: legal and ethical considerations of using artificial intelligence in psychiatric wards. Am. J. Law Med. **49**(2–3), 250–266 (2023). https://doi.org/10.1017/amj.2023.30
72. Thompson, R.J., White, S.: Ethical considerations in the use of AI in mental health services. J. Ethics Mental Health **12**(4), 200–215 (2020). https://doi.org/10.9876/jemh.2020.012
73. Taylor, J.E.T., Taylor, G.W.: Artificial cognition: how experimental psychology can help generate explainable artificial intelligence. Psychon. Bull. Rev. **28**(2), 454–475 (2021). https://doi.org/10.3758/s13423-020-01825-5
74. Terhürne, P., Schwartz, B., Baur, T., Schiller, D., Eberhardt, S.T., André, E., Lutz, W.: Validation and application of the non-verbal behavior analyzer: an automated tool to assess non-verbal emotional expressions in psychotherapy. Front. Psychiatry **13**, 1026015 (2022). https://doi.org/10.3389/fpsyt.2022.1026015
75. Thakkar, A., Gupta, A., Sousa, A.: Artificial intelligence in positive mental health: a narrative review. Front. DigitalHealth **6**, 1280235 (2024). https://doi.org/10.3389/fdgth.2024.1280235
76. Timmons, A.C., Duong, J.B., Fiallo, N.S., Lee, T., Vo, H.P.Q., Ahle, M.W., Comer, J.S., Brewer, L.C., Frazier, S., Chaspari, T.: A call to action on assessing and mitigating bias in artificial intelligence applications for mental health. Perspect. Psychol. Sci. (2022). https://doi.org/10.1177/17456916221134490
77. Turan, B., Gülşen, M., Yılmaz, A.E.: Artificial intelligence applications in psychiatric disorders. J. Ankara Univ. Fac. Med. **75**(1), 56–62 (2022). https://doi.org/10.4274/atfm.galenos.2022.36002
78. Verma, M., Chanthar, K.M.M.V., Beg, M.J.: Ethical considerations surrounding the use of AI-interventions in application of mental healthcare. In: Chatbots and Mental Healthcare in Psychology and Psychiatry, pp. 193–205. IGI Global (2025). https://doi.org/10.4018/979-8-3693-3112-5.ch009
79. Wani, T.A., Ali, S.W.: Innovation diffusion theory. J. Gen. Manag. Res. **3**(2), 101–118 (2015)
80. Weisenburger, R.L., Mullarkey, M.C., Labrada, J., Labrousse, D., Yang, M., MacPherson, A.H., Hsu, K.J., Ugail, H., Shumake, J., Beevers, C.G.: Conversational assessment using artificial intelligence is as clinically useful as depression scales and preferred by users. J. Affect. Disord. **351**, 489–498 (2024). https://doi.org/10.1016/j.jad.2024.01.212
81. WHO. Mental health atlas 2020. World Health Organization. https://www.who.int/publications/i/item/9789240036703 (2021)
82. Yadav, R.: Artificial intelligence for mental health: a double-edged sword. Sci. Insights (2023). https://doi.org/10.15354/si.23.co13
83. Yıldırım, A., Şimşek, H.: *Nitel araştırma yöntemleri* [Qualitative research methods]. Seçkin Yayınları (2021).

84. Zhang, M., Scandiffio, J., Younus, S., Jeyakumar, T., Karsan, I., Charow, R., Salhia, M., Wiljer, D.: The adoption of AI in mental health care–perspectives from mental health professionals: qualitative descriptive study. JMIR Form. Res. **7**, e47847 (2023). https://doi.org/10.2196/47847
85. Zhou, E., Lee, D.: Generative artificial intelligence, human creativity, and art. PNAS Nexus **3**(3), e052 (2024). https://doi.org/10.1093/pnasnexus/pgae052

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.