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ARTIFICIAL INTELLIGENCE IN PSYCHIATRY: APPLICATIONS AND CHALLENGES

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ABSTRACT

The increasing global mental illness burden is leading to inequalities in access to mental health services, particularly in low- and middle-income countries. The COVID-19 pandemic further exacerbated this situation and increased the need for digital solutions, new intervention methods. In this context, artificial intelligence offers significant transformative potential in psychiatry and psychotherapy. Artificial intelligence, through subtechnologies, is increasingly used for diagnosis, prognosis, treatment, and psychoeducation. Clinical decision support systems, natural language processing-based sentiment analysis, mobile applications, and telepsychiatry solutions offer significant opportunities for healthcare professionals to reduce workload and improve access to care. In affective disorders, electroencephalography-based deep learning models achieve high diagnostic accuracy; virtual therapy tools have also demonstrated significant effects in psychoeducation and symptom reduction. Algorithms used in schizophrenia, bipolar disorder, and autism have delivered promising results in disease progression prediction and early detection. However, data protection, ethics, and the need for clinical validation remain the main obstacles to widespread application of these technologies. Although artificial intelligence offers significant opportunities in mental health, due to ethical risks and reduced human interaction, it can only be effective if applied in a human-centered, transparent, and impartial manner. In summary, artificial intelligence's role in psychiatry is growing rapidly and is expected to contribute to the provision of more accessible, cost-effective, and personalized mental health care services in the future. In this process, it is crucial to uphold ethical principles, protect patient privacy, and adopt human-centered approaches.

Keywords: Artificial Intelligence, Learning, Mental Disorders, Ethics

PSİKİYATRİDE YAPAY ZEKÂ: UYGULAMALAR VE ZORLUKLAR

ÖZET

Ruhsal hastalıkların küresel ölçekte artan yükü, özellikle düşük ve orta gelirli ülkelerde psikiyatri hizmetlerine erişimde eşitsizlikler yaratmaktadır. COVID-19 pandemisi bu durumu daha da ağırlaştırarak, dijital çözümlere ve yeni müdahale yöntemlerine olan ihtiyacı artırmıştır. Bu bağlamda yapay zekâ, psikiyatri ve psikoterapide önemli bir dönüşüm potansiyeli sunmaktadır. Yapay zekâ; alt teknolojiler aracılığıyla tanı, prognoz, tedavi ve psiko-eğitim süreçlerinde giderek daha yaygın kullanılmaktadır. Klinik karar destek sistemleri, doğal dil işleme tabanlı duygu analizi, mobil uygulamalar ve telepsikiyatri çözümleri, sağlık profesyonellerine iş yükünü hafifletme ve hizmet erişimini artırmada güçlü imkânlar sunmaktadır. Duygudurum bozukluklarında elektroensefalografi tabanlı derin öğrenme modelleri tanıda yüksek doğruluk sağlamış; sanal terapi araçları ise psiko-eğitim ve semptom azaltmada anlamlı etkiler göstermiştir. Şizofreni, bipolar bozukluk ve otizmde kullanılan algoritmalar, hastalık seyri tahmininde ve erken tanıda umut verici sonuçlar vermektedir. Bununla birlikte, veri gizliliği, etik sorunlar ve klinik doğrulama ihtiyacı, bu teknolojilerin yaygınlaşmasının önündeki başlıca engellerdir. Yapay zekâ ruh sağlığı alanında büyük fırsatlar sunsa da etik riskler ve insan-insan etkileşiminin azalması nedeniyle ancak insan merkezli, şeffaf ve tarafsız bir şekilde uygulandığında etkili olabilir. Sonuç olarak, yapay zekânın psikiyatrideki rolü hızla genişlemekte olup, gelecekte daha erişilebilir, maliyet-etkin ve kişiselleştirilmiş ruh sağlığı hizmetleri sunulmasına katkı sağlayacağı öngörülmektedir. Bu süreçte etik ilkelerin, hasta mahremiyetinin ve insan merkezli yaklaşımların korunması kritik önemdedir.

Anahtar Kelimeler: Yapay Zekâ, Öğrenme, Ruhsal Bozukluklar, Etik

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INTRODUCTION

In recent years, the global prevalence of mental disorders has increased dramatically, making it one of the most pressing public health challenges. According to the World Health Organization (WHO), mental disorders accounted for 4.7% of lost healthy life years in 2017 – a figure that not only highlights the massive impact of these disorders on individual well-being, but also their negative impact on economic productivity and societal stability (1, 2). Mental disorders impair people's ability to work, learn, and participate socially, which in turn places significant strain on families, communities, and economies.

The situation is particularly critical in low- and middle-income countries, where inadequate health infrastructure exacerbates the problem. In India, for example, there are only 0.75 psychiatrists per 100,000 inhabitants – an alarming shortage of skilled professionals. Added to this are structural and social barriers such as geographical inaccessibility, cultural stigma surrounding mental illness, economic poverty, and underdeveloped healthcare (2). As a result, large populations remain untreated or misdiagnosed, increasing both social and economic burdens in the long term.

The outbreak of the COVID-19 pandemic added an additional burden. Studies reported rising suicide rates, increasing social isolation, higher levels of substance use, and significant increases in anxiety and depression disorders. These developments not only led to individual crises but also posed a huge challenge for healthcare systems, which were under pressure from limited resources and rising demand. Clinics and hospitals were overwhelmed, highlighting that traditional in-person treatment approaches alone were no longer sufficient. This created an urgent need for scalable, technology-enabled alternatives such as telemedicine, remote monitoring, and digital support platforms (1–4).

Against this backdrop, artificial intelligence (AI) is increasingly gaining attention as a potentially transformative tool for mental health care. A growing spectrum of innovations—including clinical decision support systems, natural language processing (NLP) for detecting emotional states, digital phenotyping, smartphone-based monitoring, and telepsychiatry services—illustrates how AI can improve both diagnostic accuracy and treatment efficiency. By automating routine tasks, rapidly evaluating clinical data, and enabling continuous patient interaction, AI can significantly reduce the workload of overworked professionals. Furthermore, it opens up access to cost-effective and readily available interventions, particularly in rural areas and fragmented healthcare systems where psychiatric care has traditionally been difficult to access (1, 3).

The aim of this paper is therefore to provide a comprehensive analysis of the role of AI in psychiatry and psychotherapy. In addition to presenting technical applications, the social, ethical, and health policy dimensions of AI integration are also addressed. This dual focus not only enables us to understand the potential of these technologies but also considers the necessary prerequisites for their responsible and sustainable implementation in psychiatric care.

Conceptual Overview of Artificial Intelligence and Its Core Domains

Artificial intelligence has been described as the design of computer systems capable of executing activities that typically rely on human cognitive abilities (5–7). This description extends beyond computational strength to include processes such as reasoning, learning, problem-solving, and decision-making. The discipline of AI is composed of several methodological branches, each of which provides a foundation for psychiatric applications.

One central pillar is machine learning (ML), which enables algorithms to enhance their performance automatically by analyzing data and learning from prior outcomes (8). In mental health research, ML techniques are frequently applied to organize and interpret large clinical and behavioral datasets, supporting diagnostic efforts in psychiatric disorders (8).

A more advanced subset, deep learning (DL), employs layered neural structures that progressively transform raw information into complex abstract features (8). Within psychiatry, DL systems have been applied successfully to uncover biomarkers from neuroimaging and to assess speech for emotional indicators.

Another dimension of AI is expert systems, computer-based programs designed to tackle intricate decision-making tasks (9). Early decision-support tools in psychiatry belong to this group, aiding clinicians in formulating diagnoses and treatment plans.

Neural networks (NNs), inspired by the functioning of biological neurons, consist of interconnected units that adjust their internal parameters through learning (10). They have become valuable in areas such as emotion recognition, speech interpretation, and classification of electroencephalography (EEG) data.

Finally, predictive analytics integrates statistical modeling with ML to estimate probabilities of future outcomes (10). Examples include forecasting treatment responses, anticipating side effects, or identifying suicide risk.

Taken together, these methodological strands illustrate the multifaceted ways in which AI can reshape psychiatric care. Each can be adapted to different forms of data—ranging from clinical records and imaging to text and social media—and to distinct clinical objectives, including screening, prognosis, and therapy planning.

Applications of Artificial Intelligence in Psychiatry: From Clinical Practice to Psychiatric Conditions

Artificial intelligence is not limited to a complementary role in mental health care; it also holds the capacity to reshape how disorders are identified and understood (11). Within clinical psychiatry, its potential uses can be seen across several dimensions. To begin with, AI-driven models can generate more refined preliminary assessments during diagnostic and screening procedures by incorporating clinical indicators and risk variables. These models can construct risk profiles that estimate the probability of developing psychiatric conditions (3, 4, 11). In this way, AI goes beyond symptom evaluation and strengthens early detection as well as preventive strategies in mental health. Another important contribution is AI's ability to manage complex and dynamic datasets, which has greatly enhanced the forecasting of symptoms and disease trajectories. Data drawn from interviews, wearable technologies, or daily self-reports can be processed to anticipate relapses, track progression, or identify resistance to treatment at earlier stages (3, 4, 12).

A further application is found in psychoeducation. Artificial intelligence-powered platforms assist patients by teaching coping mechanisms, raising awareness, and providing continuous psychosocial support (3, 4). This enables individuals to pursue learning outside of direct therapy sessions and take an active role in their recovery.

From a systems perspective, AI tools also promote efficiency by standardizing procedures, limiting unnecessary variability in care, reducing medical errors, and lowering overall treatment costs. Consequently, they play an important role in maintaining the long-term sustainability of mental health services (2). Nonetheless, while these advantages are promising, they must be balanced with ongoing concerns regarding their implications for psychiatry's future.

Artificial intelligence systems are no longer limited to supportive tasks in psychiatry; instead, they are increasingly viewed as transformative tools capable of reshaping diagnostic standards and deepening our understanding of mental disorder mechanism (11). The application spectrum spans from early detection and screening to continuous symptom monitoring, psychoeducation, and improving the efficiency of care delivery (11, 12). The following subsections present how AI technologies are being applied across various psychiatric conditions.

A growing body of research illustrates that AI can provide highly accurate and non-invasive diagnostic insights in mood-related illnesses (13). For instance, EEG-driven DL models were able to differentiate depressed individuals from healthy controls with accuracy rates surpassing 90%, while three-dimensional convolutional neural networks analyzed video sequences to detect behavioral indicators of depression (13). Beyond diagnosis, predictive modeling has been applied: ML algorithms estimated body mass index (BMI) with over 80% accuracy using variables closely associated with depression (14). In terms of interventions, digital psychotherapy tools such as Tess, Sara, Woebot, and Wysa have been adopted widely. These programs also teach emotional regulation and have shown measurable reductions in depressive symptomatology (14–18). Woebot and Tess, in particular, stand out for demonstrating clinically meaningful reductions in anxiety and depression (15, 17). Additionally, immersive methods, including avatar-based coaching and virtual reality exposure therapies, have been successfully employed in addressing phobias (19, 20). During the COVID-19 pandemic, ML frameworks were even used to anticipate psychological well-being by analyzing factors like food security and daily physical activity (19, 21).

Artificial intelligence has also gained traction in the evaluation and treatment of schizophrenia and related conditions. Speech-based analyses processed by ML algorithms have reached classification accuracies above 70% when distinguishing patients from non-clinical groups (18, 22). Automatic tools that quantify incoherence and semantic disorganization in patient speech have offered clinicians new diagnostic support (23, 24). Neuroimaging-based DL systems, trained on functional connectivity data, achieved up to 85.5% accuracy in identifying psychosis (25). Importantly, novel therapeutic strategies involving avatars and virtual reality (VR) platforms have been tested in treatment-resistant schizophrenia, showing promising results in reducing the severity of hallucinations and improving adherence to pharmacological regimens (23, 26–29).

In attention deficit hyperactivity disorder (ADHD), AI models applied to EEG signals have successfully classified patients and identified subtypes (27, 30). Within autism spectrum disorder (ASD), socially assistive robots such as KASPAR have been designed to create predictable, consistent interactions that foster social engagement skills in children (31, 32). Other approaches, such as RoboTherapy with the Nao robot, have targeted imitation, empathy, and perspective-taking, demonstrating comparable or even superior outcomes compared with human-led therapy sessions (33–35). Interestingly, studies indicate that some children respond more effectively to robotic partners than to clinicians in traditional settings (33, 35). Virtual assistants, including Siri, have also been explored as accessible and familiar platforms to provide safe practice spaces for communication (35, 36).

Artificial intelligence has proven especially useful in elderly care, where companionship and daily routine support is crucial. Companion robots such as Paro and e-Bear—designed with animal-like features—have consistently shown positive effects by reducing agitation, alleviating loneliness, and improving emotional well-being in older adults, particularly those with dementia (35, 37–39). In addition, information and support robots (ISR) have been deployed to encourage routine adherence, offering reminders for sleep, meals, and medication, thereby contributing to more stable circadian rhythm (40, 41). These tools are significant because they not only enhance independence but also reduce caregiver burden, an important factor given the aging global population.

The application of AI in addiction medicine is also noteworthy. Digital chatbots have been used to deliver psychoeducation, engage patients in treatment, and support relapse prevention, with documented reductions in substance use (42–44). At a more experimental level, drug repurposing strategies that integrate electronic health record data with computational prediction models have been employed to identify new therapeutic pathways for opioid use disorder (39, 42). Such AI-driven methods exemplify a shift toward personalized and innovative approaches in addiction treatment.

Artificial Intelligence Research Directions in Psychiatry

In recent years, studies on the use of AI in psychiatry have accelerated significantly, particularly in India, even though this field is still at a relatively early stage compared to somatic medicine (45). EEG-based approaches have played a central role in this regard. Algorithms for classifying schizophrenia have been able to reliably identify disease-specific patterns, thus enabling highly precise differentiation between patients and control groups. These studies demonstrate that capturing characteristic brainwave patterns can increase diagnostic accuracy and highlight neurophysiological biomarkers of disorders (34, 44, 45).

In the field of Alzheimer's disease, machine learning models have been used to assess cognitive and functional impairments more objectively and earlier than with traditional clinical methods (38, 45). Electroencephalography data has also enabled highly accurate differentiation between patients and healthy subjects in depression research. Beyond classification, these studies highlight the potential of quantitative neural markers to assess the severity of depressive symptoms, thus opening new avenues for personalized treatment strategies (26, 45, 46).

Similar results have been obtained in temporal lobe epilepsy, where the identification of EEG microstate abnormalities suggests that ML can simultaneously capture both epileptic and psychiatric processes (45, 47). Furthermore, retinal measurements (e.g..vascular changes) have been investigated as complementary diagnostic tools for schizophrenia and bipolar disorder, highlighting the potential for non-invasive screening methods (22, 45).

From a clinical application perspective, AI methods have now been tested in the assessment of depression severity (46, 48). Machine learning approaches are increasingly considered indispensable tools in dementia diagnostics—particularly in the context of an aging population, where early detection of cognitive decline is crucial for effective care planning (48, 49). Furthermore, AI has achieved encouraging results in distinguishing adults with ADHD from healthy controls and predicting the risk of postpartum depression. This demonstrates the versatility of AI in diverse psychiatric populations (30, 47, 48, 50).

During the COVID-19 pandemic, AI models have also been used to detect burnout among healthcare workers, thus providing an early warning function for the mental well-being of hospital staff (48, 51). These applications not only demonstrate the clinical potential of AI but also its relevance for the sustainability of the healthcare system and the resilience of care in times of crisis.

Artificial Intelligence and Psychotherapy

Limited access to psychotherapy is considered a key health problem worldwide, leading to large populations not receiving timely support. Artificial intelligence offers a range of scalable and customizable tools that could help at least partially close this gap. For example, chatbots and internet-based cognitive behavioral therapy (CBT) programs enable 24/7 access, shorten waiting lists, and create a level of anonymity that is particularly important for individuals who are reluctant to seek therapy for fear of stigma (52). Furthermore, AI systems can dynamically adapt therapeutic content by analyzing user feedback—an approach that goes beyond rigid standard programs and is more responsive to individual needs (15).

At the same time, these digital solutions raise significant ethical and practical questions. A central problem is the lack of genuine "human factors" such as empathy, authenticity, and unconditional acceptance—qualities that are at the heart of any therapeutic transformation process. Studies show that the therapeutic alliance, i.e., the bond between patient and therapist, is one of the strongest predictors of healing. It therefore remains questionable whether a relationship mediated by an algorithm can achieve the same depth of trust and emotional resonance (53).

Equally serious are issues of data security and privacy. Psychotherapeutic content is among the most sensitive personal information. Ambiguities about how this data is stored, used, or shared with third parties can significantly undermine user trust (4, 54). Added to this is the risk of algorithmic bias: When models are trained on incomplete or unbalanced datasets, cultural, gender, or socioeconomic inequalities can be reproduced, further disadvantaging particularly vulnerable groups (55).

A sustainable and responsible approach therefore consists in understanding AI not as a replacement, but as a supporting tool for human therapists. In such a hybrid model, AI takes on recurring and scalable tasks – such as symptom screening, providing psychoeducational content, training in basic coping skills, and continuous follow-up. However, humans remain indispensable for managing complex cases, crisis management, and deepening therapeutic processes supported by genuine human relationships. In this way, the ethical and interpersonal quality of treatment is maintained while simultaneously increasing the reach and accessibility of care (56). Thus, AI acts not as a competitor, but as a catalyst, enabling professionals to apply their expertise where it is most needed.

Benefits and Limitations of Artificial Intelligence in Psychiatry

Artificial intelligence applications in psychiatry are becoming increasingly apparent both in clinical practice and in the public health context (56, 57).

First, the advantage in terms of privacy and fear of judgment is significant. In traditional clinical settings, patients are often reluctant to disclose personal and sensitive issues for fear of stigma or misunderstanding. Contact with AI-based systems, on the other hand, offers an anonymous environment in which those affected can express their symptoms more openly and honestly (29, 56, 57).

Second, accessibility is paramount. According to the WHO, many developing and emerging countries lack sufficient mental health professionals. Artificial intelligence-powered platforms can be a crucial tool for providing access to mental health care for people in rural and remote areas (56, 57). In this context, telepsychiatry and mobile AI-powered applications contribute to the democratization of mental health services.

Thirdly, cost reduction is important. The use of AI within the stepped-care model makes it possible to perform routine screenings and pre-assessment using ML algorithms and to focus the limited resources of professionals on complex cases. This increases the efficiency of healthcare systems and reduces overall costs (2, 56, 58).

Fourth, the neutrality and consistency of AI play a role. Human therapists can be influenced by stress, distraction, or fatigue. Likewise, unconscious personal or cultural biases can shape the treatment process. Properly designed algorithms operate independently of such human variables and provide more standardized assessments (58).

Furthermore, AI has the potential to develop personalized treatments. Diagnostic profiles, previous therapy experiences, or individual patient preferences can be taken into account to create tailored intervention plans (58). This increases treatment effectiveness and prevents unnecessary interventions.

Last but not least, the cultural adaptation advantage should not be overlooked. Artificial intelligence -based systems can be designed to take into account the patient's cultural characteristics, socioeconomic status, or ethnic identity (58). This strengthens the therapeutic alliance and encourages active participation in the treatment process.

In summary, AI applications in psychiatry are not just a technical innovation, but represent a paradigm shift that transforms the patient experience, improves accessibility, reduces costs, and offers culturally sensitive solutions. However, to ensure these benefits remain sustainable, it is crucial to develop algorithms ethically, transparently, and in a context-sensitive manner.

Although AI in psychiatry offers numerous promising benefits, it also brings significant limitations and knowledge gaps (55, 56).

First, inappropriate use and algorithmic bias represent a significant risk factor. Algorithms only function within the limitations of the data sets they were trained with. If data is incomplete, unbalanced, or biased, results can be distorted and inaccurate (55). This problem is exacerbated when patients from diverse cultural or socioeconomic backgrounds are not adequately represented.

Second, the lack of human empathy and compassion is one of the most fundamental gaps in psychiatry. Mental health care is determined not only by diagnostic accuracy but also by "soft factors" such as therapeutic alliance, trust, and empathy (55). However, AI machines are unable to provide the necessary human warmth and understanding that are crucial for people with depression, post-traumatic stress disorder, or suicidal ideation (56).

Third, there is a risk that AI will replace existing healthcare services. Artificial intelligence's potential to reduce costs could be misunderstood by decision-makers for short-term economic reasons. This poses the risk that disadvantaged groups, in particular, will be relegated exclusively to AI-based solutions, which would further exacerbate health inequalities (55).

Fourth, there is the risk of patient dependence. Robots or chatbots developed for emotional support can reduce the need for real-life social relationships and lead people to become dependent on artificial systems (55).

Fifth, data security and privacy are becoming more important. Artificial intelligence -based applications in mental health often rely on cloud systems and online databases. This poses risks such as the misuse of sensitive patient data, cyberattacks, or unauthorized surveillance (59, 60).

Sixth, there is the problem of designer bias. A large proportion of studies on AI-based interventions are conducted by the product developers themselves. This can weaken the objectivity of the results and lead to the publication of overly optimistic findings about the technology's effectiveness (61).

Seventh, the lack of risk assessment and regulatory oversight poses a critical challenge. While conventional medical devices undergo a multi-layered review process before their clinical introduction, this process is not yet established for AI-based applications (61, 62). This can lead to erroneous diagnoses or incorrect treatment recommendations that could jeopardize patient safety.

Eighth, the limitations of human-machine interaction must be considered. Some studies show that users of AI-based devices communicate less carefully or even react rudely compared to interacting with humans (63). This risks reducing the therapeutic relationship to a mechanical level and further weakening human relationships.

Finally, legal ambiguities regarding responsibilities complicate the application of AI in psychiatry. If a bot makes an incorrect diagnosis or misinterprets a suicidal patient's cry for help, it remains unclear who is responsible: the developer, the clinician, or the healthcare facility (60). This question is one of the key challenges that must be addressed for the safe and ethical integration of AI.

Ethical and Societal Aspects

The introduction of AI into psychiatry is accompanied by a multitude of ethical and societal challenges. These not only affect the confidentiality of the doctor-patient relationship, but also have profound consequences for public health, equity in the healthcare system, and trust in mental health services.

A central issue concerns data protection and personal autonomy. Mental health data often contains a person's most intimate thoughts, feelings, and life experiences. The collection, storage, and processing of this highly sensitive information poses significant privacy risks (54). Cloud-based systems, in particular, are vulnerable to cyberattacks or unauthorized access. If such data is shared with third parties such as insurance companies or employers, there is a risk of discrimination – for example, if information about depression or suicidal thoughts is used detrimentally in application processes or in setting insurance rates (59).

Another major risk lies in algorithmic bias. Artificial intelligence models inherit the biases of their training data. If these patients predominantly come from Western, white, and socioeconomically privileged populations, there is a risk that minorities or people from different cultural backgrounds will be misdiagnosed or treated inappropriately (7, 55, 64). Language-based systems, in turn, cannot adequately capture dialects or cultural expressions, which reduces the quality of care for certain groups.

Psychotherapy is based on trust, empathy, and genuine human connection. Artificial intelligence -assisted systems carry the risk of reducing this profound interaction to mechanical processes (53). People with severe trauma or complex mental illnesses, in particular, need human warmth and authentic support – standardized responses from algorithms can be inadequate or even harmful in this case.

Responsibility in the event of harm also remains unclear. Who bears the legal and ethical liability if an AI system makes a misdiagnosis or makes a harmful recommendation – the software developer, the treating physician, or the institution? (60). Because AI models learn dynamically and often act as black boxes, it is difficult to transparently trace errors. This uncertainty creates gaps in liability and regulation.

The social consequences should not be underestimated either. When algorithms analyze mental states based on digital traces such as social media activity, this can be perceived as covert surveillance and reinforce stigmatization (65). At the same time, there is a risk of exclusion of population groups without access to modern technology – including older people, rural areas, or socially disadvantaged individuals. This widens the digital divide and exacerbates existing healthcare inequalities.

Finally, there is the question of cultural sensitivity. Since most AI systems are trained on Western-style datasets, they can misinterpret symptoms that manifest differently in other cultures. In some societies, for example, depression manifests primarily as physical complaints rather than sadness. If AI fails to recognize this, there is a risk of misdiagnosis, cultural insensitivity, and a form of technological imperialism (66).

DISCUSSION

Numerous studies demonstrate that AI offers remarkable potential in psychiatry, particularly in the areas of screening, symptom monitoring, and psychoeducation. Artificial intelligence-based systems enable rapid and systematic assessment of large populations and can also support clinicians in diagnostic and treatment processes. Nevertheless, it should not be overlooked that psychiatric applications consist not only of cognitive and behavioral outcomes, but also rely significantly on empathy, emotional understanding, and the quality of the doctor-patient relationship. In this context, despite its technical functionality, AI should not be viewed as a substitute for human interaction, but rather as a supporting tool that strengthens clinicians' decision-making processes. The data to date clearly demonstrate that the advantages of the technology—speed, consistency, and accessibility—must be integrated with the indispensable role of the empathic clinical approach. Therefore, future research should focus not only on the clinical benefits of AI but also on the development of hybrid models that preserve human interaction (63).

The integration of AI into psychotherapy is both promising and should be viewed with caution. Results show that chatbot-based interventions and online cognitive behavioral therapy programs, in particular, can be helpful in treating depression and anxiety disorders. Nevertheless, it is evident that these technologies do not fully comply with fundamental ethical principles such as empathy, privacy, and trust. Artificial intelligence can increase accessibility and support the therapeutic process, but a complete replacement for the human dimension and reciprocal interaction is hard to imagine. Therefore, it is crucial that future work focuses not only on technological advances but also on the human factor and the ethical framework (67).

Although AI has made significant progress in recent years, its functionality remains limited and it is not yet able to fully address the complex dimensions of the human psyche (67). However, with the further development of technology, more comprehensive applications can be expected in the near future. Crucially, society needs not only "intelligence" but also "wisdom." While intelligence describes the ability to solve problems and process information, wisdom encompasses prosocial values and ethical principles that directly influence the well-being, happiness, and quality of life of individuals and communities (68, 69).

In this context, the concept of "Artificial Wisdom" emerges as one of the most advanced future goals of AI. Artificial wisdom should not only enable data-based predictions but also integrate human values such as empathy, kindness, self-reflection, acceptance of different perspectives, determination, and social nurturing (68, 69). In this way, AI could not only be a tool for clinical decision support but also assume the role of an assistant with the goal of providing a better world for humanity.

In recent years, studies have shown that AI-based interventions have significant benefits in the analysis of mental disorders, their early detection, prognosis, and support of treatment processes (36, 70, 71). This highlights that the AI framework not only complements existing psychiatric therapies but also has the potential to make them more efficient, accessible, and personalized (71). The use of AI in mental health and psychiatric care opens up new possibilities in healthcare, but at the same time leads to complex discussions. Key advantages of AI include rapid data processing, screening of large populations, and strengthening clinical decision support systems. Methods such as NLP, ML, and computer-based cognitive behavioral therapy can significantly improve the accessibility and effectiveness of traditional psychotherapeutic applications. Nevertheless, these technologies should not only be understood as a technical advancement, but also as an epistemological turning point that redefines the understanding of the human psyche.

At the same time, ethical and societal dimensions are at the center of the discussion. Biases in the datasets used to train AI systems pose a risk of incorrect diagnoses and inappropriate treatment, particularly for underrepresented groups. Furthermore, violations of privacy can have serious consequences not only at the individual level but also for societal trust. The decline in human interaction, in turn, jeopardizes empathy and interpersonal connection—central elements of any psychotherapy. This highlights that AI should not be seen as a "replacement" but as a "complementary" tool in clinical practice (72).

The integration of AI into clinical applications must not be limited solely to technical accuracy. Rather, transparent and explainable systems must be developed that are consistent with ethical principles. The creation of neutral and inclusive datasets, as well as the equal representation of diverse cultural and social groups, are an indispensable component of scientific and societal responsibility. For AI to become a reliable and effective tool in psychiatry and psychotherapy, it is necessary to strengthen regulatory frameworks, conduct continuous research, and consistently integrate ethical guidelines into clinical practice.

For AI to realize this potential, however, interdisciplinary collaboration is crucial. Collective efforts between mental health professionals, ethics experts, technology developers, engineers, healthcare managers, and entrepreneurs will ensure both technological progress and ethical alignment (70). Only in this way can AI in the future be not only "intelligent" but also "wise" and support the mental health of societies (73).

DECLARATIONS

Conflict of Interest
None.

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Ethics Approval

Not required as this study is a literature review.

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