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Artificial Intelligence in Mental Health Practices: Legal Liability Analysis under Turkish, European, and Common Law Frameworks

Ruh Sağlığı Uygulamalarında Yapay Zekâ: Türk, Avrupa ve Ortak Hukuk Çerçevelerinde Hukukî Sorumluluk Analizi

Harun Mirsad Günday[1], Eda Albayrak Günday[1]

[1]Erciyes University, Kayseri

ABSTRACT

Artificial intelligence technologies are rapidly developing today and are beginning to have a significant impact in many fields. It is important to address this effect in a multidisciplinary manner. The impact of artificial intelligence is mostly addressed in terms of the contributions it will provide. Indeed, in the field of mental health, artificial intelligence is seen to bring many advantages for both doctors and patients, just as it does in other medical specialties. These advantages can cover many areas, from the diagnosis to the treatment of mental illnesses. However, the advantages of artificial intelligence and its use in diagnostic and treatment services as an expert activity do not exempt it from the application of legal rules in any way. In this case, the question arises as to whether artificial intelligence can be held legally liable in itself or how the liability will be determined due to the use of artificial intelligence technologies. There are two important points in establishing legal liability. The first of these is that artificial intelligence does not have legal liability. The second is the legal liability arising from the use of artificial intelligence and its reasons. In this study, the role of artificial intelligence technologies in mental health applications, the innovations and contributions they bring to mental health professionals, and the legal liabilities arising from artificial intelligence and its applications in the field of mental health have been examined. However, the study on criminal liability has been excluded from the scope.
Keywords: Artificial intelligence, law, legal liability, mental health, mental illness

ÖZ

Yapay zekâ teknolojileri günümüzde hızla gelişmekte ve birçok alanda önemli etkiye sahip olmaya başlamaktadır. Bu etkinin multidisipliner olarak ele alınması önemlidir. Yapay zekânın bu etkisi çoğunlukla sağlayacağı katkılar bakımından ele alınmaktadır. Ruh sağlığı alanında da yapay zekânın diğer tıp uzmanlık alanlarında olduğu gibi hem hekim hem de hasta açısından birçok avantajları beraberinde getirdiği görülmektedir. Bu avantajlar ruhsal hastalıkların teşhisinden tedavisine kadar birçok alanı da kapsayabilmektedir. Ancak, yapay zekânın sahip olduğu bu avantajlar ve uzmanlık faaliyeti olarak yürütülen teşhis ve tedavi hizmetlerinde yapay zekâya yer verilmesi hukuk kurallarının uygulanmasını hiçbir şekilde muaf kılmamaktadır. Hal böyle olunca da yapay zekânın hukukî açıdan bizzat sorumlu olup olamayacağı veyahut da yapay zekâ teknolojilerinin kullanılması sebebiyle sorumluluğun temellendirilmesinin neye göre tayin edileceği sorunu ortaya çıkmaktadır. Hukukî sorumluluğun temellendirilmesinde iki önemli nokta bulunmaktadır. Bunlardan birincisi, yapay zekânın hukuken sorumluluğunun bulunmadığıdır. İkincisini ise yapay zekânın kullanılmasından doğan hukukî sorumluluk ve sebeplerinin ne olduğudur. Bu çalışmada yapay zekâ teknolojilerinin ruh sağlığı uygulamalarındaki yeri, ruh sağlığı profesyonelleri bakımından getirdiği yenilik ile katkılar ve ruh sağlığı alanında yapay zekâ ve uygulamalarından doğan hukukî sorumluluk incelenmiştir. Bununla birlikte, cezaî sorumluluğa ilişkin çalışmanın kapsamı dışında tutulmuştur.
Anahtar sözcükler: Yapay zekâ, hukuk, hukukî sorumluluk, ruh sağlığı, ruhsal hastalık

Introduction

Artificial intelligence (AI) is defined as the theory and development of computer systems capable of performing human cognitive functions such as visual perception, speech recognition, decision-making, and language (Timmons et al. 2023). AI has been steadily making inroads into various sectors of healthcare, and the field of mental health services is no exception. Moreover, as the global mental health crisis continues to escalate, driven by the impact of the pandemic and other societal factors, the need for innovative solutions to enhance

Address for Correspondence: Harun Mirsad Günday, Erciyes University Faculty of Law Department of Civil Law, Kayseri, Türkiye **E-mail:** mirsad.gunday@gmail.com
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care delivery and improve treatment outcomes has also become increasingly pressing (Lee et al. 2021, Maraş et al. 2024, Olawade et al. 2024).

It is estimated that mental illnesses affect 10-15% of the population, that this impact is on the rise, and that they are among the leading causes of morbidity and mortality worldwide. However, the stigma associated with mental illness, low economic conditions, and the shortage of mental health professionals emerges as a significant global barrier to meeting the needs for mental health services (Doraiswamy et al. 2020). At this point, it is stated that there is a significant treatment gap in mental health services, especially in developing low- and low-middle-income countries. According to the World Health Organization (WHO), there is a treatment gap of 76%-85% for mental illnesses in developing countries (Singh 2023). As it is known, 792 million people worldwide experience mental health issues, and in developed countries, there are 9 mental health professionals per 100,000 people, while in poor countries, there are 0.1 mental health professionals per 1 million people (Allen 2020, Bickman 2020, Akkan and Ülker 2023). Especially the low number of mental health professionals and the unequal distribution of resources make this gap even more pronounced (Singh 2023).

In addition to affecting an individual's quality of life, mental illnesses also impose a significant burden on society and the economy. Indeed, it is estimated that this burden will cost the global economy approximately 2.5 trillion dollars annually by the year 2030 (Doraiswamy et al. 2020, Health 2020, Rathnayaka et al. 2022). Therefore, there is a dual problem of facing difficulties in accessing mental health services and encountering significant economic burdens even when access is achieved. At this point, AI applications can be considered a potential solution to these two problems. Since the integration of AI into mental health services offers several potential advantages. In fact, AI-powered systems can analyze vast amounts of data, identify patterns, and provide personalized treatment recommendations, potentially improving the efficiency and effectiveness of mental health interventions. Additionally, AI-based chatbots and virtual assistants can also offer around-the-clock support and guidance, addressing the issue of limited access to mental health professionals, particularly in underserved communities (Zhang and Wang 2024). Additionally, it automates routine tasks like updating electronic health records and scheduling appointments, freeing up healthcare professionals' time for patient care (The AI Effect 2019).

AI applications in the field of mental health have recently become widespread with various models such as wearable technologies, virtual reality glasses, chatbots, and smartphone mobile applications (Gültekin 2022, Soysal and Tükek 2022, Akkan and Ülker 2023). In this way, the use of various applications in mental health treatment processes for conditions such as anxiety, depression, substance use, bipolar disorder, and psychotic disorders has been facilitated (Menon et al. 2017, Fiske et al. 2019, Akkan and Ülker 2023). On the other hand, the increasing prevalence of mental illnesses worldwide and the inadequate access to services at this point have led to the widespread adoption of AI applications in the field of mental health and the belief that they will contribute to the field (Allen 2020, Bickman 2020, Akkan and Ülker 2023). In this context, the inability to diagnose mental health issues in a timely manner and the difficulties in accessing mental health services during global crises such as the pandemic have highlighted the growing importance of AI in predicting psychopathological risks, early diagnosis, and prevention efforts (Ćosić et al. 2020). On the other hand, the announcement of the COVID-19 pandemic by the BlueDot digital health surveillance platform before the World Health Organization (WHO) further increased interest in AI-based applications (McCall 2020).

AI applications and digital interfaces are being considered viable alternatives to fill the existing treatment gap in mental health services and to make psychiatric diagnosis and treatment accessible and affordable (Singh 2023). However, the integration of AI in mental health services also raises a range of challenges and concerns. (Allen 2020, Pham et al. 2022, Ediboğlu 2023, Zhang and Wang 2024). Since it is reported that a therapeutic process based on machine-computer systems and specific algorithms is far from approaches that understand and feel the human experience. In addition to that, algorithmic bias, a well-documented issue in AI systems, can lead to the perpetuation of existing disparities and inequities in healthcare access and treatment. There are also ethical considerations, such as the potential for AI to replace human psychotherapists and the need to ensure that the privacy and confidentiality of patient information are maintained. However, it is stated that at this very point, AI applications are developed for different purposes in therapy processes, and they do not disregard the therapist but rather support them (Akkan and Ülker 2023, Ediboğlu 2023).

Finally, the legal concerns arising from the use of AI in mental health applications are another important point to be addressed. Since there are currently no clear guidelines or comprehensive regulations governing the use of AI in mental health services. Hence, this study aims to address the applications of AI in the field of mental health and the types of legal issues these applications may cause within a multidisciplinary framework.

Artificial Intelligence Technologies in Mental Health Practices

In mental health applications, various AI technologies are present. The first of these is the AI-based software. AI-based software may improve diagnosis and prediction by analyzing diverse data (e.g., EHRs, social media, wearables, medical images). In addition, AI can also identify patterns and risk factors for mental illnesses, potentially enabling earlier and more accurate diagnoses (Altman 2017, Graham et al. 2019, Varnosfaderani and Forouzanfar 2024). As such, personalizing treatment plans based on individual patient characteristics and preferences to make interventions more effective, enhancing access to care, and monitoring treatment progress to be able to identify early warning signs of relapse or allowing for timely adjustments to treatment are some of the other benefits to be mentioned (Altman 2017, Graham et al. 2019, Varnosfaderani and Forouzanfar 2024).

Virtual reality headsets are another technology that offers significant advantages in mental health applications. Virtual reality technology immerses a person in a three-dimensional virtual world, providing them with a realistic environment. The technology, which became widespread due to its positive results in the treatment of post-traumatic stress disorder in war veterans, is now used in the treatment of post-traumatic stress disorder, specific phobias, panic disorder, obsessive-compulsive disorder, attention deficit and hyperactivity disorder, and autism spectrum disorders. At this point, it is stated that virtual reality headsets are a commonly preferred method, especially in disorders where avoidance responses are observed. Indeed, in experiential exposure and mental imagery practices, it is crucial for the individual to come into contact with the objects and environments they avoid. Therefore, it emerges as an important tool for the individual to contact the objects and environments they avoid in real life and to overcome the related fears (Erdem Kaya and Karakoç 2020, Akgöz et al. 2022, Singh and Sandhu 2022, Akkan and Ülker 2023). The purpose of using virtual reality concepts on patients is to alter brain function and help modify a person's behavior, mood, and perception. For example, individuals with phobias or addictions may require a virtual environment when they find themselves in an abnormal situation and their mind is not functioning properly at that moment. In such a case, it is necessary to show patients virtual videos based on their specific problems. Therefore, the use of virtual reality is recommended to analyze patients' problems and to monitor the levels of stress, anxiety, and phobias (Singh and Sandhu 2022).

AI-powered chatbots are another technology that stands out as a potential tool by providing scalable and accessible support in mental health applications. They can provide interventions like cognitive behavioral therapy, psychoeducation, and even assist with diagnosis (Singh 2019). AI-powered tools like chatbots and virtual assistants can provide readily available mental health support, particularly beneficial for individuals with limited access to traditional care. (Graham et al. 2019).

Wearable technologies, especially smartwatches and wristbands, are another type of technology that play an important role in healthcare and particularly in the field of mental health. These devices provide valuable physiological data, like pulse rate, which can be crucial for mental health professionals, especially during exposure therapies. In this way, monitoring these metrics helps therapists accurately assess a client's anxiety levels and adjust treatment accordingly (Çilingir Mermit 2019, Akgöz et al. 2022, Akkan and Ülker 2023, Robinson et al. 2023).

In mental health applications, Dreem headband technologies also hold an important place. These devices help in diagnosing sleep disorders by collecting electroencephalography (EEG) data from the brain through an integrated machine learning AI system. However, given that individuals with mental illnesses often struggle with various sleep issues, the significance of these devices becomes evident. Indeed, thanks to this technology, individuals' sleep patterns can be regulated through signals sent to the brain (Akgöz et al. 2022, Akkan and Ülker 2023, Ravindran et al. 2024).

Another technology that has potential applications in mental health practices and should be considered is AI robotics. This is because they have the potential to offer companionship and emotional support to individuals struggling with mental health issues. Eventually, it is known that AI robotics already have their place in current mental health practices, and they are, for example, used in autism therapy. Indeed, nowadays, it is observed that AI robotics are produced for completely unique purposes and can have various areas of use (Morsünbül 2018, Akgöz et al. 2022, Akkan and Ülker 2023, Alan and Zengin 2023, Pérez-Zuñiga et al. 2024).

Finally, the term metaverse is another thing to be pointed out here. Indeed, technologies such as augmented and virtual reality have the potential to significantly change the relationship between professional healthcare workers and patients. Indeed, these systems provide a safe virtual space for psychiatric treatments and offer

the opportunity to increase access to therapists. Additionally, the ability to facilitate exposure therapy for phobias, post-traumatic stress disorder, anxiety, and other mental disorders is another advantage. Lastly, it provides a controlled environment for individuals with disorders such as autism, schizophrenia, and obsessive-compulsive disorder (Sönmez and Hocaoğlu 2024). In this context, for example, the use of the metaverse and related Wii game stations in exposure therapies applied in the management of pandemics and infectious diseases, pain management, disaster management in emergencies, Parkinson's treatment, and the treatment of specific phobias seems likely to become widespread (Yılmaz et al. 2022, Akkan and Ülker 2023, Cerasa et al. 2024). The implementation of an avatar-based sexual therapy program conducted on the metaverse platform has also been shown to be more effective in treating female orgasm disorders compared to traditional sexual coaching. Similarly, a Metaverse-based social skills training program has been tested on children with autism spectrum disorder and has demonstrated a significant impact on their social interaction abilities (Cerasa et al. 2024). When all these factors are combined with the advantages of these technologies, such as cost, accessibility, compatibility, adaptation, motivation, and ease of use, it seems quite possible to say that they will have a widespread application area in healthcare services.

Use of Artificial Intelligence in Mental Health Applications

AI is bringing innovation to traditional models for the prevention and treatment of mental illnesses (Yang et al. 2020). As a result of this, it is stated that it is possible to use AI to support mental health applications (Milne-Ives et al. 2022). Research on AI, although still limited in Turkey (Ucuz et al. 2020), shows that studies related to AI in the field of mental health have begun. However, the use of AI in mental health services is addressed under different headings such as early diagnosis and detection, therapy, treatment and psychological support services, training of mental health professionals, and psychiatric drug development (Gültekin 2022).

One of the first technologies developed in the field of mental health applications of AI is the computer program ELIZA, created in the 1960s, which is one of the first software programs capable of interacting with humans. Although it is stated that ELIZA did not engage in realistic interaction with people because it merely repeated what the clients said with slight modifications, it had a significant impact during that period (Gültekin 2022, Akkan and Ülker 2023). PARRY, developed in the 1970s as a simulation of paranoid schizophrenia, also constitutes one of the pioneering works in this field (Colby 1975, Gültekin 2022, Akkan and Ülker 2023). A more advanced version of ELIZA, PARRY, was capable of generating paranoia-based belief systems and, in tests with psychiatrists, sometimes provided responses indistinguishable from those of real patients (Colby et al. 1972). As an early example in the field of natural language processing, this model has contributed to the development of modern medical AI systems.

Another area where AI is involved in mental health applications is smartphone applications like mindLAMP (Learn, Assess, Manage, Prevent) and BiAffect. MindLAMP is an application that uses smartphones and embedded sensors to understand people's experiences with mental illness, helping to predict recovery by collecting surveys, cognitive tests, GPS coordinates, and exercise information. BiAffect, on the other hand, is used to predict manic and depressive episodes in individuals with bipolar disorder (Allen 2020, Pham et al. 2022). Apart from these, it has been stated that a program developed by Walsh and colleagues (2017) can accurately detect potential suicide attempts in individuals with an accuracy rate of 80-90% (Walsh et al. 2017, Akkan and Ülker 2023). Indeed, in a study, it was concluded that an AI-based decision support system capable of effectively detecting and diagnosing mental disorders could automatically diagnose mental disorders with an accuracy level of 89% (Tutun et al. 2023). Similarly, it is said that AI plays an important role in the early prediction of individuals who may be at higher risk of developing chronic mental health disorders during the COVID-19 pandemic and in the prevention of mental health disorders (Ćosić et al. 2020, Jha et al. 2021). A recent study has also shown that AI can detect anxiety symptoms with 92% accuracy (Khan et al. 2021).

In mental health practices, AI-supported online social therapies also hold an important place. Indeed, it is often noted that such applications are beneficial in mental health services (D'alfonso et al. 2017). In this field, there are two chatbots, Woebot (Fitzpatrick et al. 2017) and Tess (Fulmer et al. 2018), that address anxiety and depressive symptoms. Woebot has learned skills such as identifying and questioning cognitive distortions. Thus, it has been effective in reducing depression by monitoring symptoms and managing anxiety and depression attacks (Fitzpatrick et al. 2017, Fiske et al. 2019). Indeed, Woebot, based on the Cognitive Behavioral Therapy Model, has been tested on students exhibiting symptoms of depression and anxiety, and a significant reduction in these symptoms has been recorded (Fitzpatrick et al. 2017).

Tess, on the other hand, is a software presented as a phone number that uses text messaging to coach individuals during times of emotional distress. This software allows the user to engage in therapeutic conversations similar to talking with a psychologist and provides the user with emotion-focused coping strategies. To examine depression and anxiety symptoms in university students, the Tess software provided a significant reduction in anxiety symptoms for the experimental group (Fulmer et al. 2018). Apart from these, it has been shown that AI-based chatbots like ChatGPT also improve the quality of life in mental health applications (Melo et al. 2024, Maurya et al. 2025). However, experts argue that the accuracy, reliability, and sources of the information provided by ChatGPT should be verified by medical professionals before being used in educational or clinical applications (Farhat 2024).

Another AI software that should be mentioned among smartphone applications is Youper. Youper is considered an accessible, low-cost, and fully self-guided option for users who cannot access mental health services. It is reported that Youper is considered a treatment option for anxiety and depression symptoms and is effective (Mehta et al. 2021). In addition, Apple's virtual assistant Siri also has the ability to interact with children on the autism spectrum disorder. Thus, it can address the issue of excessive focus on specific interests that come with autism spectrum disorder. It is stated that through such interactions provided by AI assistants like Siri, children can develop the necessary skills to socially interact with others. Because the Siri application provides a safe learning environment for the child and the necessary patience to practice these skills, it is of great help (Raccio et al. 2019, Pham et al. 2022).

With a similar approach, new forms of avatar therapy have also been developed to provide therapeutic conversations with users. In this context, another AI software called Replika allows users to talk about themselves and helps them better understand their good qualities. One of the most important features of Replika is that it allows the user to have vulnerable conversations without the fear of being judged throughout the interaction. Thus, therapeutic conversations can be conducted with the user, similar to therapy sessions with a psychiatrist or personal conversations with a trusted friend, helping the user gain insight into their own personality (Murphy and Templin 2021). Another application area encountered in this field is avatar therapies, where computer-generated facial images interact with schizophrenia patients through intelligent algorithms. In one study, patients received six ten-minute avatar therapies, during which they learned to gain control over distressing voices associated with their hallucinations. It has been determined that the amount of distress patients felt, the frequency of hearing voices, and the degree to which they felt overwhelmed by these voices decreased with the completion of the therapy (Garety et al. 2021). Another technology developed in this area, Mobilyzel, has reduced anxiety and depression symptoms in 8 adults over an 8-week period. Similarly, another program called SARA has been used in the treatment of adolescents with substance addiction and has yielded significant results (Rabbi et al. 2017, Akkan and Ülker 2023).

Clinicians and scientists have also worked with intelligent animal-like robots to improve psychiatric outcomes such as reducing stress, loneliness, and agitation, in addition to AI designed to mimic human processes. These animal-like robots interact with patients, providing them with the benefits of animal therapy. These AI-supported robots can also teach social skills to children with autism spectrum disorder through training and therapy and assist them with facial recognition and appropriate gaze responses. It is even stated that robotic interventions perform better compared to human therapists in practice (Fiske et al. 2019, Pham et al. 2022).

Finally, AI provides recommendations to healthcare professionals, aiding in clinical decision-making (Alami et al. 2020, Varnosfaderani and Forouzanfar 2024). Also, it accelerates the process of discovering and developing new drugs by analyzing vast datasets and identifying potential drug candidates (Alowais et al. 2023).

Legal Aspect of Using Artificial Intelligence in Mental Health Practices

AI applications in the field of mental health present not only innovations but also significant ethical and legal risks. Indeed, when processing patients' mental health data, AI applications raise concerns about the risk of data misuse or breaches (Voigt and Bussche 2017, Sönmez and Hocaoğlu 2024). Additionally, due to algorithmic biases, AI-based diagnostic and treatment systems may discriminate against certain demographic groups, leading to an increase in misdiagnosis rates (Obermeyer et al. 2019).

Another critical risk posed by AI applications is that autonomous decision-making processes may violate patients' rights. For instance, AI-based therapy applications could provide incorrect or inadequate psychological support, potentially harming patients' recovery processes (Fiske et al. 2019). Likewise, excessive reliance on AI may lead healthcare professionals to accept AI recommendations without questioning them,

thereby compromising clinical decision-making. This issue is considered a potential cause of medical malpractice (McDougall 2019).

Therefore, given these risks, it is crucial to develop AI applications in accordance with principles of transparency, reliability, and ethical standards. In this context, the rapid advancement and integration of AI systems into various aspects of life present novel challenges for legal systems worldwide, particularly concerning liability. Legal systems in the world are actively grappling with these challenges, seeking to establish a framework that balances innovation with accountability for harm caused by AI. At this point, it is essential to examine the evolving legal framework of AI liability in different legal systems. In this context, analyzing the existing regulations, their applicability to AI systems, the debates on granting legal personhood to AI, and the proposed solutions to address liability issues is of great importance.

In law, when the concept of responsibility is mentioned, three different types of responsibility come into play. These are legal, criminal, and administrative responsibilities. Legal liability, in a broad sense, refers to the compensation for damages arising from the breach of contractual or non-contractual obligations (Günday 2015). This study examines AI within the context of legal liability. This analysis has been conducted under two different headings. The first concerns whether AI itself can be directly held liable for the damages that have occurred in a specific case. The second addresses whether those who develop or use AI systems can be held responsible for the damages caused.

Turkish Law

In Turkish law, there are no legal regulations regarding the legal liability of AI or the legal liability arising from the use of AI. However, in addressing this issue, it appears possible to reach a conclusion by relying on general provisions related to legal personality and legal liability. The assessment of AI within the framework of personality law is of great importance in determining whether AI can be directly held liable for damages. This is because, in order to answer the question of whether AI itself bears legal liability, it must first be established whether AI qualifies as a legal person. The reason for this is that, under Turkish law, legal liability is only applicable to entities that are recognized as persons by law (Akkurt 2019). The answer to the question of who is recognized as a person by law is found in the Turkish Civil Code (TCC).

According to the TCC, when the concept of a person is mentioned, real persons and legal entities come to mind. Real persons are, according to the provision of the TCC Article 8, human beings. Because the relevant provision explicitly states, "Every person has the capacity to have rights." However, since AI is not a human, it cannot be considered a natural person under the TCC (Gülel 2023). Legal entities, on the other hand, are communities of persons and property established in accordance with the provisions of Articles 47 et seq. of the TCC. These appear to us as formations such as associations, foundations, commercial companies, and unions. Therefore, it is clear that AI cannot be considered a natural person under Turkish law. In addition, the acceptance of AI as a legal entity does not seem possible when considering the existing regulations in Turkish law. Because, by its nature, AI is neither a person nor a collection of goods. On the other hand, the principle of numerus clausus has been adopted in Turkish law regarding legal entities (Doğan 2022). For this reason, it is not possible to speak of a legal entity other than those provided for in the law. AI, on the other hand, does not fall within the scope of the limited number principle. As a result of this, Turkish legal doctrine states that AI cannot be considered a person (Akkurt 2019, Yüksekbaş 2024). Therefore, it is out of the question for AI to be directly liable for damages occurring under Turkish law. Similarly, it is also impossible to speak of AI's tort liability under Article 49 of the TCO (Turkish Code of Obligations). Because AI systems that are not recognized as legal persons cannot be parties to a contract or be held liable for breaching a contractual obligation (Doğan 2022). Similarly, it is also impossible to speak of tort liability under Article 49 of the TCO. Indeed, since AI is not recognized as a legal person, it cannot have the capacity to distinguish, and therefore, it is not possible to speak of it acting with fault.

At this point, the question may arise whether an AI software that has become autonomous and a robot supported by hardware, which does not require human intervention, can be held liable for the damages caused. Our opinion is that the answer to this question should be negative. For, eventually, AI software has emerged as a product of the human mind. Of course, it should also be noted that the concept of "product" here should not be understood as "product in the legal sense." However, whether the AI system is human-in-the-loop, human-on-the-loop, or a human-of-the-loop system with full autonomy, ultimately, there are measures that the user must legally and objectively take. Therefore, if there is damage caused by the failure to take the necessary precautions, the user of the AI systems will still be liable. As a matter of fact, in Turkish law, it has been justifiably stated that in the event of damage occurring due to the autonomous actions of AI, the liability

lies with the person on whose behalf/account the AI acted (Akkurt 2019). As a result, it is absolutely impossible to hold, for example, AI chatbots themselves liable for any harm arising from therapeutic conversations that fail to contribute to the patient's treatment process and instead lead to a deterioration in the course of the illness. Moreover, even if this question were answered affirmatively, it should not be forgotten that there is no clear answer to that question as to which assets an AI system would be liable to compensate from.

In Turkish law, another issue that needs to be addressed regarding legal liability arising from the use of AI is the cases of strict liability. The Turkish legislator has included various cases of strict liability in the provisions of Articles 66 et seq. of the TCO. At this point, the employer's liability is a type of liability that should be particularly addressed within the framework of strict liability. In Turkish law, one of the essential elements of the employer's liability is the "employment relationship. In order to speak of the employment relationship in question, it is essential that the person employed by the employer is someone who has the capacity for tortious liability (Akkurt 2019, Doğan 2022, Yüksekbaş 2024). For this reason, the business owner will not be held liable under the provisions of Articles 66 et seq. of the TCO for damages caused by the activities of an AI-based system in a business. Since AI is not considered a person, it does not present any legal difference from other machines or equipment used in the business. As a result of this, if damage has occurred due to the use of AI-based systems by a person, liability may arise under the provisions of Article 66 et seq. of the TCO depending on the specific case (Yüksekbaş 2024). However, in this case, what makes it possible to apply the provisions of TCO Article 66 et seq. is that the AI is being operated by a legal person.

In conclusion, liability under the provisions of Article 66 et seq. of the TCO may only arise if AI attains a status of personhood and legal regulations regarding the employer's liability are made to allow it to operate in the workplace. Similarly, the fact that AI is not recognized as a legal person prevents it from being considered an auxiliary person in the performance of an obligation under Article 116 of the TCO. However, if AI technology is provided by a person, the provision of Article 116 of the TCO may sometimes become applicable. For example, a psychiatrist may seek to have patient data analyzed for diagnostic purposes as part of diagnostic and treatment activities. For this purpose, a contract may have been made with a third party for the provision of AI technology services in this regard. In such a case, if the data analysis is conducted incorrectly, the applicability of Article 116 of the TCO may arise depending on the specific circumstances of the case.

Although there is no liability for AI in Turkish law, the question of how the current developments in this field affect the legal liability of mental health professionals is another issue that needs to be addressed. Indeed, one of the most important aspects of the legal liability of mental health professionals is the duty of care and attention. In other words, mental health professionals are required to demonstrate the care and diligence expected of a similar mental health professional under the same job and conditions in the specific case. Otherwise, it would be contrary to the provision of Article 506/III of the TCO. Therefore, legal liability arises for the damages caused in the specific case, provided that the other conditions are also met. At this point, the significance of AI systems in terms of the legal liability of mental health professionals becomes apparent. The question being asked here is briefly as follows: Do the opportunities provided by AI systems affect the duty of care and diligence that mental health professionals are required to demonstrate in their services? Indeed, considering the benefits that AI systems offer in healthcare services, for example, a psychiatrist might have misdiagnosed a patient's illness due to not consulting AI systems. However, if the psychiatrist had utilized an AI system while diagnosing the disease, the diagnosis might have been correct.

In Turkish law, the answer to this question has not yet been provided. In our opinion, the answer to this question is closely related to the dynamic nature of medical science. In other words, since medicine is a constantly evolving and changing field, the necessity of using AI in healthcare services must be continuously evaluated. Similarly, one of the fundamental principles in health law is that the physician must continuously improve themselves, renew their knowledge, and keep up with current information and developments (Günday 2015). These are almost an obligation for healthcare workers. At this point, AI can be a necessity for mental health professionals to continuously renew themselves. For this reason, not using AI may constitute a breach of the duty of care. However, this should not be understood as the use of AI systems completely eliminating legal liability. Ultimately, the mental health professional is also obliged to use and benefit from AI systems in accordance with the expected duty of care and attention. Otherwise, legal liability may come into play again. At this point, it does not matter whether the AI system is a fully autonomous system or not. As we stated above, the person using AI systems is ultimately responsible for monitoring and taking all necessary precautions to prevent risks and dangers arising from their use. For example, in psychiatric diagnosis, distinguishing between bipolar disorder and borderline personality disorder can sometimes be challenging. In such cases, if an AI system leans toward one diagnosis over the other, the psychiatrist must conduct a thorough

assessment, taking into account the difficulty of making an accurate diagnosis. Otherwise, relying on AI-generated outputs without a critical evaluation may, at times, result in a breach of the duty to diagnose.

The last issue that needs to be addressed under the topic of AI and legal liability in Turkish law is the matter of the producer's liability. The contentious issue regarding the producer's liability is whether AI can be considered a product. In Turkish law, the answer to the question of what should be understood by the concept of "product" is found in the Product Safety and Technical Regulations Law No. 7223. In the relevant law, Article 3/1(s), a product is defined as "any kind of substance, preparation, or item." It does not seem possible to consider AI software as "substance" or "preparation" at this point. In this case, it seems possible to apply the producer's liability only by considering AI software as a "thing." In our opinion, it seems more appropriate to make such an interpretation with the aim of protecting third parties. In Turkish legal doctrine, the approach is in this direction as well (Okur 2021, Doğan 2022, Demir 2023). Additionally, there is no hesitation regarding AI-supported robots. Because, in Turkish law, robots are considered property (Demir 2023). For this reason, it is certainly possible to apply the provisions of the manufacturer's liability in the case of AI-supported robots (Doğan 2022).

European & Common Law

In European law, unlike Turkish law, several key legal instruments and initiatives shape the current regulatory landscape for AI. These regulations could be listed as the AI Act, the Proposed AI Liability Directive, the Product Liability Directive, and the General Data Protection Regulation. Among these, the Proposed AI Liability Directive remained at the proposal stage and was withdrawn at the very beginning of 2025. However, it is still worth examining, as it can serve as a guiding reference.

The AI Act proposed regulation takes a risk-based approach to regulating AI, categorizing systems into different risk levels (unacceptable, high, limited, and minimal) and imposing corresponding obligations on providers and users (European Parliament & Council of the European Union 2024). The AI Act focuses primarily on ex-ante regulation, aiming to prevent harm before it occurs (Arcila 2024). It mandates conformity assessments, technical documentation, and post-market surveillance for high-risk AI systems. Additionally, the Proposed AI Liability Directive complements the AI Act by providing a specific legal framework for liability in cases of AI-caused harm. (Hacker 2022) It introduces a fault-based liability standard for operators of high-risk AI systems and a "presumption of causality" in certain cases, shifting the burden of proof to the defendant. This aims to address the difficulty of proving causation in complex AI systems. At this point, in common law, it is suggested that if an AI algorithm acts autonomously, it could be considered an employee, and its negligence could be attributed to the supervising radiologist or the institution under the doctrine of vicarious liability (Mezrich 2022). O'Sullivan and colleagues (2019) also suggest that current legal frameworks do not hold autonomous robots directly liable for damages they cause. Instead, liability falls on humans involved in the robot's lifecycle. Here, "lifecycle" refers to the entire period from the development of a robot to its production, use, and maintenance. Hence, the liability falls on the manufacturer if there's a manufacturing defect, the operator if they misuse the robot or make a medical error, or the maintenance personnel if the damage stems from faulty maintenance or adjustments (O'Sullivan et al. 2019).

The effects of developments in AI on the legal liability of mental health professionals in European and common law should also be handled. At this point, in French law, it is argued that the use of AI in healthcare doesn't inherently change the standard of care. However, it is argued that it introduces some difficulties in practice. Firstly, French law, like many other legal systems, mandates that physicians act with reasonable care and competence. This principle remains constant regardless of technological advancements (Geny et al. 2024). Thus, when non-autonomous AI serves as an assistive tool (like in radiology), the physician remains responsible for the final decision. Additionally, failing to use available AI tools when they would have been beneficial, or misusing them, could be considered a breach of the standard of care. In German law, it is also stated that physicians must critically assess the diagnostic and treatment recommendations provided by AI. Otherwise, liability may arise for damages resulting from the uncritical application of such recommendations (Spickhoff 2020). There is no doubt that liability will be incurred in cases where physicians fail to question AI-driven recommendations, particularly when algorithmic bias is present.

Algorithmic bias refers to the tendency of AI systems to produce non-neutral, biased decisions that disadvantage certain individuals or groups. This bias typically arises from imbalances in the training datasets, flawed modeling processes, or human-induced prejudices (Obermeyer et al. 2019). In the United States, which follows a common law system, algorithmic bias in healthcare has been identified as a serious issue. Since it can lead to misdiagnosis or disparities in access to treatment for specific ethnic, socioeconomic, or gender groups

(Buolamwini and Gebru 2018). For example, some healthcare algorithms have been found to prioritize white patients over Black patients because the underlying model was predominantly trained on healthcare records of white individuals (Obermeyer et al. 2019). To mitigate such biases, it is essential to use diversified and balanced datasets, enhance ethical oversight during model development, and ensure transparent evaluation of algorithms (Mitchell et al. 2019). Therefore, in the field of mental health, if a physician disregards the possibility of algorithmic bias and relies uncritically on AI-generated data, this could ultimately be considered a breach of their duty of care. A similar interpretation is also applicable under Turkish law. AI systems are not intended to replace physicians but rather to serve as tools that support their professional activities. Therefore, if an AI system provides an incorrect treatment recommendation for a patient from a specific ethnic group due to algorithmic bias, and the psychiatrist implements this recommendation without critically evaluating it, causing harm to the patient, legal liability may arise.

In autonomous AI systems, unlike non-autonomous systems, the boundaries of liability unfortunately become blurred. If a physician follows an AI's recommendation and a negative outcome occurs, it's unclear who bears the liability. This ambiguity could lead to situations where adhering to AI advice is perceived as meeting the standard of care, even if the outcome is unfavorable (Geny et al. 2024). On the other hand, Cestonaro and colleagues (2023) suggest that in healthcare, the use of AI diagnostic tools complicates the determination of medical malpractice. However, it should be noted that the responsibility for ensuring the patient receives the necessary healthcare services ultimately belongs to the physician. Therefore, it is essential not to place unquestioning trust in AI and to be fully aware of the limitations of AI systems. Otherwise, a breach of the duty of care may arise on the part of the physician. Conversely, failing to utilize an existing AI system that could be beneficial in the diagnosis and treatment process may likewise be considered a negligent act (Cestonaro et al. 2023).

The EU Medical Device Regulation (MDR 2017/745) classifies AI-based medical devices as high-risk products and imposes strict safety and performance requirements (European Parliament & Council of the European Union 2017). In particular, AI systems that use learning algorithms are subject to additional regulations due to their continuously evolving decision-making mechanisms, which impact product safety and predictability (European Commission 2021). Also, MDR mandates that such systems undergo clinical evaluation processes before being placed on the market and that they incorporate transparent, traceable algorithms (European Parliament & Council of the European Union 2017, Annex XIV). On the other hand, the existing Product Liability Directive may also apply to AI systems considered "products." However, its suitability for addressing AI-specific challenges and offering solutions is debated (Council of the European Communities 1985, Expert Group on Liability and New Technologies –New Technologies Formation 2019). Since defining what constitutes a "defect" in a complex, evolving AI system is problematic. Additionally, since the directive primarily focuses on manufacturers, it may not sufficiently consider or regulate the responsibilities of other involved parties, such as those who implement (deployers) or use (users) AI systems (Arcila 2024). Therefore, amendments to the Product Liability Directive are among the topics currently under discussion.

In common law, parallel with this, Mezrich (2022) highlights the difficulty of applying traditional product liability principles to AI algorithms. The primary reason for this is that an AI algorithm responsible for harm can evolve over time and reach a more advanced state than its original version. This, in turn, makes it particularly challenging to identify a specific "defect" (Mezrich 2022). On the other hand, in a traffic accident case in California, the court ruled that a coding error led to the operating system crash within the AI system, constituting a "malfunction." As a result, the court applied the strict liability principle and held the manufacturer directly liable (Geistfeld 2017). Indeed, in our opinion, this legal approach, which recognizes strict liability for damages caused by software malfunctions, is also applicable to healthcare practices (Geny et al. 2024).

In European law, it is observed that similar approaches and solutions have been adopted. As a matter of fact, the presence of AI within a device and its negative impact on the device's function due to a software error is considered within the scope of product liability under Swiss law. Because in such a case, it is considered a product within the context of Article 3 of the Product Liability Act (Produkthaftungsgesetz-PrHG) (Fellman 2021). In fact, in Swiss law, considering the risks associated with digitalization, it has been stated that the software itself should be accepted as a product under the PrHG without the necessity of being integrated into any physical object (Fellman 2021). From this perspective, it is possible to say that a similar approach has also been adopted in Turkish law. In German law, the liability of manufacturers of AI-assisted medical devices is regulated under the Product Liability Act (Produkthaftungsgesetz—ProdHaftG) based on the principle of strict liability (Gefährdungshaftung) (§ 1 ProdHaftG) (Produkthaftungsgesetz [ProdHaftG] 2023). In this context, if

an AI-based diagnostic system provides an incorrect diagnosis due to faulty software or inadequate data training, the manufacturer may be held liable for compensation (Luh 2021). Additionally, the Medical Devices Implementation Act (Medizinprodukterecht-Durchführungsgesetz—MPDG) mandates that medical devices comply with the EU Medical Device Regulation (MDR 2017/745) and meet high safety standards (European Parliament & Council of the European Union 2017).

Finally, another regulation that must be mentioned is the General Data Protection Regulation (GDPR), which imposes obligations regarding data processing and transparency. This is because the use of AI in the healthcare sector also raises significant concerns regarding data security and privacy. The reason for this is that AI systems process vast amounts of sensitive data belonging to patients. This situation, in turn, makes AI systems potential targets for cyberattacks and unauthorized data access (Voigt and Bussche 2017). At this point, the regulations set forth in the GDPR may be of particular importance concerning AI systems used in mental health applications that involve the processing of personal data. Ensuring compliance of AI systems in mental health applications with the GDPR can contribute to reducing risks and preventing harm. Therefore, it can be said that GDPR plays a significant role in assessing legal liability. However, despite the relevant regulations in this area, it is still emphasized that achieving full compliance and preventing data breaches remain significant challenges today (European Parliament & Council of the European Union 2016). Additionally, the data anonymization techniques used in AI training may not always be completely effective, and there may be a risk of identifying the actual individuals behind anonymized patient data (Shokri et al. 2017). For this reason, in AI-driven applications within the healthcare sector, implementing robust encryption methods, strict regulatory oversight, and ethical data governance frameworks is of vital importance to mitigate these risks. In other words, the solution to the issue of personal data protection extends beyond merely being a legal problem. Moreover, the establishment of the necessary technological infrastructures for these systems is also essential.

The debate on granting legal personhood to AI is still ongoing today in European and common law systems. Some views argue that granting legal personhood to AI and recognizing it as an entity that can be legally liable could put an end to discussions on liability. In contrast, opposing views claim that recognizing AI as a legal person could lead to ethical and societal concerns (Bisoyi 2022). Therefore, in European law, AI systems are not currently recognized as legal persons. As a result, they do not possess rights and obligations like natural or legal persons. Indeed, in German law, it has been stated that AI cannot be considered an independent legal person and cannot be the subject of liability (Wischmeyer and Rademacher 2020). This approach is similarly adopted in common law (O'Sullivan et al. 2019). The European Parliament has considered the concept of "electronic personhood" for robots at this point; however, it has not yet established a concrete legal framework (Olivi 2018).

In our opinion, the parliament's approach here is an effort to establish a reasonable and logical basis for the grounding of liability rather than regulating AI as a person. At this point, it should also be stated that the Parliament's approach is not binding for the United States or Asian countries (O'Sullivan et al. 2019). In addition to that, it should also be noted that since the AI does not have a personality, it cannot be personally liable within the scope of both contractual and tort liability. Indeed, for the application of traditional tort liability principles, such as negligence, the presence of certain elements is required. These are the existence of a duty of care, breach, causation, and damage. However, demonstrating causation and attributing fault can be difficult with AI systems, especially those with autonomous capabilities (Olivi 2018, Bisoyi 2022, Padovan et al. 2022). In addition to that, the opacity of some AI algorithms ("black box" problem) makes it challenging to understand how decisions are made and trace the chain of events leading to harm. Similarly, in common law, it is also argued that the novelty of AI presents challenges for existing tort law, which is not yet well-equipped to handle AI-related malpractice cases. While a breach of duty of care and deviation from the standard of care remain central to malpractice claims, in the context of AI, negligence could stem from various sources, including programming errors, inadequate supervision, physician actions, or the AI algorithm itself (Mezrich 2022). Thus, none of these arguments focus on the liability of AI itself but on users or manufacturers. As a result of this, the conclusion reached is ultimately the same. This situation is equally applicable in terms of liability arising from contracts.

However, in some exceptional cases, it is argued that legal personhood should be granted to AI algorithms. In this way, it would be possible for AI systems to be sued directly. Additionally, radical concepts such as the possibility of adapting the Vaccine Injury Compensation Program (National Vaccine Injury Compensation Program—VICP) as a model for AI-related harm are also put forward in the same manner (Mezrich 2022, Cestonaro et al. 2023). However, it must, of course, be explicitly stated that these ideas do not have a legal basis but are rather presented as approaches.

Conclusion

The influence of AI technology is significantly felt across various fields, particularly in medicine and law. Within the scope of mental health, AI has introduced substantial benefits that provide considerable convenience to practitioners. These benefits extend beyond merely assisting in the diagnosis and treatment of mental health disorders. AI also plays a crucial role in increasing accessibility to mental health services by alleviating the workload of mental health professionals, thereby allowing them to allocate more time to complex cases and personalized patient care. Furthermore, AI-driven tools, such as chatbots and virtual therapists, have expanded access to mental health support for individuals who may otherwise face barriers to traditional therapy, including geographical limitations, financial constraints, or social stigma.

The integration of AI technologies into mental health services, despite its benefits, has raised significant legal concerns. One of the primary problems lies in the absence of a comprehensive and uniform legal framework governing the liabilities associated with AI use. As a matter of fact, when examining the legal systems of Turkey, Europe, and common law jurisdictions, it becomes evident that specific regulations addressing the legal liability arising from AI-driven mental health applications have not yet been systematically established. This regulatory gap creates significant uncertainty for mental health professionals, AI developers, and patients in cases where AI-generated recommendations or decisions result in harm.

The general approach in international legal systems is that AI does not possess legal personality. Therefore, it cannot be held responsible for its so-called independent decisions or actions. At least within the current level of development of AI technologies and the existing legal regulations, this is the conclusion that can be reached for now. Consequently, AI is currently considered a tool used in various activities. Beyond this, it is not recognized as an autonomous entity with legal rights and obligations. As a result, legal liability, if any, can only be attributed to the individuals who develop, implement, and utilize AI technologies.

The compensation of damages arising from the use of AI in mental health services is an important and debated issue within the context of legal liability. When examining the existing legal regulations worldwide, it is evident that a well-established legal framework on this matter has not yet been achieved even at the level of national legal systems. Nevertheless, in European law, there are various directives addressing liability issues related to AI. For example, the European Union's AI Act classifies AI systems based on their risk levels. In this context, since mental health applications directly affect human health, they are generally considered to fall within the high-risk category. However, the issue of how liability principles will be applied in AI-supported mental health practices remains a topic of ongoing debate.

When examining common law systems, it becomes evident that similar issues regarding AI's legal liability are encountered as in European legal systems. Indeed, in these legal systems, which are largely based on case law and judicial decisions, a comprehensive body of precedents specifically addressing AI-supported mental health applications has not yet been established. A review of judicial practices also shows that courts are only beginning to address concepts such as legal liability, causation, and negligence in AI-supported medical decision-making processes. The lack of established case law in this regard creates significant uncertainty in determining liability for AI developers, healthcare institutions implementing AI, and mental health professionals using AI.

When examining Turkish law, it is observed that a parallel approach to European and common law systems has been adopted. This is because Turkish law, like these systems, has not yet introduced specific regulations addressing legal liability arising from misdiagnosis and improper treatment caused by the use of AI systems. As a result, the resolution of such issues is determined based on general principles found in contract law and tort law. However, it is clear that this solution cannot be a definitive one. The lack of algorithmic transparency in AI systems and the presence of data biases pose significant challenges in this regard. Likewise, the continuously self-improving machine learning models of AI create significant uncertainties for legislators in adequately determining the scope of legal regulations.

Given the aforementioned issues and uncertainties, it is evident that legal systems must introduce clear and comprehensive regulations governing the use of AI in mental health services. These legal frameworks should explicitly define the responsibilities of AI developers, healthcare providers, and end users. Only in this way can accountability be ensured and potential harms arising from AI usage be prevented. Furthermore, when AI systems are involved in decision-making processes, certain mandatory requirements should be established to ensure transparency. Similarly, strict testing and certification procedures should be implemented, and ethical

guidelines for the use of AI in medical applications should be enacted. By doing so, the first and essential steps will be taken to minimize the risks associated with AI systems in mental health services.

Addressing the legal gaps related to AI systems also has significant implications for mental health professionals and patients. With comprehensive legal regulations, mental health professionals will have greater opportunities to integrate AI technologies into mental health practices. Moreover, the establishment of legal standards will not only clarify the boundaries of liability for mental health professionals but also pave the way for ensuring the protection of patient rights.

In conclusion, implementing comprehensive legal regulations for AI in the field of mental health will not only enhance trust in AI-based innovations but also help balance technological advancements with ethical and legal responsibilities.

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