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Beyond Algorithmic Diagnosis: Legal Accountability and Islamic Ethical Governance of AI-Driven Mental Health Systems

Muhamad Ghofir Makturidi[1]*, Andrey V. Kotyazhov[2], Nur Hafieza Ismail[3], Ghousia Khatoon[4], Huma Khan[5]
[1]Institut Miftahul Huda Al Azhar, Banjar City, Indonesia
[2]Faculty of Law, Moscow State University of Technologies and Management, Russian Federation
[3]University Malaysia Pahang Al-Sultan Abdullah, Pekan Pahang, Malaysia
[4]Tishk International University, Erbil, Iraq
[5]Senior Research Associate, CIET, NCERT, New Delhi, India

*Corresponding Author Email: mghofirmakturidi@kampusalazhar.ac.id

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Abstract

The increasing adoption of artificial intelligence (AI) in mental healthcare has transformed the identification, monitoring, and management of psychological conditions through predictive analytics and behavioral data analysis, while simultaneously generating significant legal and ethical challenges related to accountability, privacy protection, transparency, and the legitimacy of algorithmic decision-making. This study aims to examine legal accountability mechanisms in AI-driven mental health systems and to integrate Islamic ethical principles as a complementary evaluative framework for strengthening governance. A normative legal research method is employed using statutory, conceptual, and comparative approaches, analyzing Indonesian health law, personal data protection law, and electronic information regulations, as well as international instruments such as the UNESCO, OECD, and WHO guidelines on AI governance. The findings indicate that existing legal frameworks in Indonesia remain fragmented and insufficient to comprehensively regulate algorithmic decision-making, explainability requirements, and liability allocation in AI-assisted mental healthcare. Accordingly, this study proposes an integrated governance framework that combines national legal instruments, trustworthy AI principles, and *Maqāṣid al-Sharīʿah* as normative and ethical foundations for responsible AI deployment. The novelty of this research lies in its doctrinal integration of AI legal accountability with Islamic ethical governance in the mental health context, which has been rarely addressed in previous studies. The contribution of this study is the development of a multidisciplinary governance model that strengthens legal certainty, ethical legitimacy, and patient protection in digital mental health systems. However, this study is limited by its normative doctrinal approach and the absence of empirical validation within healthcare institutions and AI implementation settings.

Keywords:
Artificial Intelligence; Legal Accountability; Data Protection; Explainable AI; *Maqāṣid al-Sharīʿah*

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1. Introduction

The integration of artificial intelligence (AI) into healthcare has transformed the methods through which medical conditions are identified, monitored, and managed. Recent advances in machine learning, deep learning, and health informatics have enabled healthcare systems to process vast amounts of digital data for predictive and diagnostic purposes (Arias et al., 2025; Chen et al., 2025). In the field of mental healthcare, AI-driven systems have demonstrated considerable potential in detecting psychological distress, depression, anxiety, and other mental disorders through behavioral and linguistic patterns extracted from digital platforms and social media interactions (Putra et al., 2026; Villarreal et al., 2026). The increasing use of digital mental health tools has further expanded opportunities for early intervention, remote healthcare delivery, and improved accessibility to mental health services, particularly among populations facing geographical, social, or economic barriers (Bridge et al., 2025). However, this technological transformation simultaneously reconfigures the legal structure of healthcare governance by introducing algorithmic decision-making into domains traditionally governed by professional medical judgment and statutory accountability frameworks.

Despite these promising developments, the growing reliance on algorithmic systems in mental healthcare raises significant legal and ethical concerns. Unlike conventional healthcare technologies, AI systems frequently operate through complex decision-making mechanisms that are difficult for users, healthcare professionals, and regulators to fully interpret (Camilleri, 2026; Islam et al., 2026). The use of predictive algorithms in mental health assessments introduces risks associated with inaccurate diagnoses, discriminatory outcomes, algorithmic bias, and uncertainty regarding liability allocation when harm occurs (Olawade et al., 2025; Mostafapour et al., 2026). Furthermore, the emergence of conversational AI and emotionally responsive systems has intensified concerns regarding human vulnerability, dependency, and the boundaries of professional medical responsibility (Rahsepar Meadi et al., 2025; Volpato et al., 2025). These developments expose a structural limitation in traditional medical malpractice doctrines, which are primarily designed to regulate human actors rather than distributed socio-technical systems involving autonomous computational agents.

The legal challenges become even more complex because AI-driven mental health systems rely heavily on the collection and processing of highly sensitive personal data. Mental health information constitutes one of the most protected categories of personal data due to its implications for dignity, autonomy, and social participation. Existing studies emphasize risks of privacy violations, unauthorized profiling, cybersecurity breaches, and secondary data use beyond original consent purposes (El-Khoury & Albarashdi, 2025; Shammar et al., 2025; Yang et al., 2026). Moreover, scholarly debates increasingly question whether traditional consent doctrines remain adequate in AI environments, where individuals often cannot meaningfully understand algorithmic inference processes (Sengupta & Mohandas, 2026; Raposo, 2026). Accordingly, the legal problem is no longer limited to data protection compliance, but extends to the question of informational self-determination in algorithmic environments and the enforceability of consent under conditions of technological opacity. These concerns have encouraged the development of international governance frameworks emphasizing transparency, explainability, accountability, and trustworthy AI (OECD, 2019; UNESCO, 2021; WHO, 2021; Guo et al., 2026; Moreno-Sánchez et al., 2026).

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The issue of governance is particularly significant in jurisdictions where statutory law interacts with religious-ethical normative systems. In Indonesia, AI deployment in healthcare must be examined within both positive law and normative ethical frameworks shaping legitimacy and public trust. Indonesia has enacted Law Number 17 of 2023 concerning Health, Law Number 27 of 2022 concerning Personal Data Protection, and Law Number 1 of 2024 concerning Electronic Information and Transactions. However, these legal instruments remain functionally fragmented because they do not explicitly regulate algorithmic accountability, automated clinical decision-making, or explainability obligations in AI-assisted healthcare systems. From an Islamic perspective, technological governance is further informed by *Maqāṣid al-Sharīʿah*, particularly the protection of life (*ḥifẓ al-nafs*), intellect (*ḥifẓ al-ʿaql*), and human dignity (Al-Shatibi, 1920; Auda, 2008; Kamali, 2008). Contemporary Islamic legal theory further emphasizes the concept of maṣlaḥah as a normative basis for ensuring that technological innovation aligns with public welfare, justice, and harm prevention (Rahman, 1987; Dusuki & Abdullah, 2007; Padela, 2013). This dual normative structure—state law and Islamic ethical jurisprudence—creates a unique governance context requiring integrative legal analysis rather than isolated doctrinal interpretation.

Although previous studies have extensively examined the technical performance of AI in mental health prediction (Putra et al., 2026; Kandeel et al., 2026), legal accountability frameworks remain underdeveloped, particularly in relation to normative integration between health law and Islamic ethical governance. Existing literature tends to analyze AI governance in segmented domains such as technical performance, ethical principles, or regulatory compliance without constructing a unified legal accountability model (Basu et al., 2026; Ibrahim et al., 2026; Krakowski, 2025). There is therefore a doctrinal gap in explaining how responsibility should be legally distributed across clinicians, healthcare institutions, software developers, and platform operators within AI-mediated mental healthcare systems. This study addresses this gap by examining three research questions: (1) How should legal accountability be structured in AI-driven mental health systems? (2) To what extent do Indonesian legal frameworks adequately regulate privacy, data protection, and patient rights in AI-based healthcare? and (3) How can *Maqāṣid al-Sharīʿah* be operationalized as a normative framework for ethical AI governance in mental healthcare? By answering these questions, this study develops an integrated socio-legal and ethical governance model that bridges statutory law, international AI governance standards, and Islamic legal theory in regulating AI-driven mental health systems.

2. Literature Review

The rapid integration of artificial intelligence (*AI*) into healthcare has generated extensive scholarly attention regarding its role in transforming diagnosis, clinical decision-making, and health service delivery. AI systems have evolved from basic computational tools into advanced machine learning infrastructures capable of predictive analytics and complex pattern recognition, significantly improving the efficiency of healthcare systems in identifying diseases and optimizing treatment pathways (Arias et al., 2025; Chen et al., 2025). In mental healthcare, AI-enabled models have shown strong potential in detecting depression, anxiety, and psychological distress through the analysis of behavioral signals, linguistic patterns, and digital footprints extracted from online platforms (Putra et al., 2026; Villarreal et al., 2026). However,

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the literature increasingly recognizes that technological advancement alone does not guarantee normative legitimacy, particularly when deployed in sensitive domains such as mental health. Digital mental health tools are therefore situated within broader debates on healthcare accessibility, prevention, and equity, especially for underserved populations (Bridge et al., 2025). Despite these developments, scholars consistently emphasize that the governance implications of AI remain underexplored compared to its technical performance (Olawade et al., 2025).

A significant body of literature addresses the challenge of legal accountability in AI-driven healthcare systems. Traditional legal frameworks assume that liability can be attributed to identifiable human actors such as physicians or healthcare institutions; however, AI systems complicate this assumption due to their probabilistic and autonomous decision-making structures. This has led to a doctrinal shift in legal scholarship from individual liability toward distributed or shared accountability models. Studies highlight difficulties in assigning responsibility when algorithmic outputs contribute to harm or misdiagnosis in clinical settings (Mostafapour et al., 2026; Cecchi et al., 2026). Basu et al. (2026) argue that effective governance requires structured accountability mechanisms capable of tracing decisions across human–machine interactions. Similarly, Ibrahim et al. (2026) emphasize the integration of legal governance with professional ethics to ensure regulatory coherence. The concept of human–AI agency further suggests that accountability should be understood as relational rather than isolated, emerging from interactions between developers, healthcare providers, and users (Krakowski, 2025). This perspective is particularly relevant for mental health applications where algorithmic outputs directly influence clinical interventions and patient welfare.

Another dominant strand of literature focuses on data protection, privacy governance, and digital rights in AI-enabled healthcare. Mental health data is classified as highly sensitive due to its potential impact on dignity, social identity, and discrimination risks. AI systems depend heavily on large-scale data collection, increasing exposure to privacy violations, unauthorized surveillance, and secondary data use (El-Khoury & Albarashdi, 2025; Yang et al., 2026). A growing consensus in the literature suggests that conventional informed consent models are insufficient in the context of machine learning-based healthcare systems. Sengupta and Mohandas (2026) argue that individuals often lack meaningful understanding of algorithmic data processing, thereby weakening the validity of consent. Raposo (2026) further highlights regulatory challenges in governing continuously learning AI systems. Consequently, governance frameworks increasingly emphasize trustworthy *AI*, focusing on transparency, fairness, explainability, and accountability (Guo et al., 2026; Moreno-Sánchez et al., 2026; Miedema et al., 2026). The *explainable artificial intelligence (XAI)* approach proposed by Islam et al. (2026) strengthens this discourse by advocating interpretability in algorithmic decision-making processes, particularly in clinical contexts where human oversight remains essential.

The ethical dimension of AI governance has also been widely discussed within international regulatory frameworks. Institutions such as the OECD, UNESCO, and the World Health Organization emphasize principles of human-centered AI, fairness, non-discrimination, and accountability in healthcare applications (OECD, 2019; UNESCO, 2021; WHO, 2021). These principles reflect a broader normative attempt to align technological innovation with

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fundamental human rights. Scholars increasingly argue that ethical governance must account for human vulnerability as a central regulatory concern, particularly in mental health contexts where emotional dependency on AI systems may arise. Rahsepar Meadi et al. (2025) identify risks of emotional manipulation and reduced professional oversight in conversational AI systems. Similarly, Teo (2025) emphasizes resilience-based governance that prioritizes psychological safety and human dignity. Studies on generative AI-based emotional support systems further highlight the tension between technological efficiency and ethical responsibility (Volpato et al., 2025). In long-term care contexts, responsible AI frameworks stress the importance of maintaining human agency while ensuring compliance with legal and ethical norms (Green et al., 2026).

Despite the growing body of literature on AI governance, limited attention has been given to integrating Islamic legal and ethical perspectives into digital mental healthcare regulation. The framework of *Maqāṣid al-Sharīʿah* provides a normative foundation grounded in the protection of religion, life, intellect, lineage, and property. Among these, the principles of *ḥifẓ al-nafs* (protection of life) and *ḥifẓ al-ʿaql* (protection of intellect) are particularly relevant for mental health governance (Al-Shatibi, 1920; Auda, 2008; Mustofa et al., 2026; Qomaro et al., 2026). Islamic legal theory emphasizes *maṣlaḥah* (public interest) and *darʾ al-mafāsid* (harm prevention) as guiding principles for evaluating technological innovation (Kamali, 2008; Rahman, 1987). Dusuki and Abdullah (2007) argue that *Maqāṣid al-Sharīʿah* functions as a dynamic and adaptive framework for addressing modern governance challenges. In bioethical discourse, Padela (2013) highlights the importance of integrating Islamic moral reasoning into contemporary healthcare systems. However, existing studies rarely operationalize Islamic ethical principles within legal accountability frameworks for AI-driven healthcare systems. This gap justifies the need for an integrated analytical model combining legal doctrine, data protection governance, and Islamic ethical theory, thereby extending the literature toward a more comprehensive socio-legal approach to AI regulation in mental healthcare.

3. Methodology

This study employs a normative legal research design to examine legal accountability and ethical governance in artificial intelligence (*AI*)-driven mental health systems. Normative legal research is appropriate because the study focuses on the interpretation and analysis of legal norms, doctrinal principles, and regulatory frameworks rather than empirical field data. Accordingly, this research is positioned within socio-legal doctrinal inquiry that prioritizes the evaluation of legal texts and governance principles governing emerging technologies. The approach is reinforced by a statute approach, conceptual approach, and comparative approach. The statute approach examines Indonesian legal instruments, including Law Number 17 of 2023 on Health, Law Number 27 of 2022 on Personal Data Protection, and Law Number 1 of 2024 on Electronic Information and Transactions. In addition, international governance frameworks such as the OECD Principles on Artificial Intelligence (2019), UNESCO Recommendation on the Ethics of Artificial Intelligence (2021), and WHO Ethics and Governance of Artificial Intelligence for Health (2021) are analyzed as normative benchmarks for AI regulation in healthcare (OECD, 2019; UNESCO, 2021; WHO, 2021).

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The conceptual approach is used to construct an integrated analytical framework combining legal accountability theory, trustworthy *AI* governance, digital rights protection, and Islamic ethical governance. This study draws on interdisciplinary literature addressing algorithmic accountability, explainable artificial intelligence (*XAI*), and healthcare data governance (Putra et al., 2026; Basu et al., 2026; Guo et al., 2026; Islam et al., 2026). The conceptual framework is further strengthened through the incorporation of *Maqāṣid al-Sharīʿah* as a normative ethical lens for evaluating AI deployment in mental healthcare. Within this framework, particular emphasis is placed on the principles of *ḥifẓ al-nafs* (protection of life) and *ḥifẓ al-ʿaql* (protection of intellect), which are directly relevant to psychological wellbeing and cognitive integrity (Al-Shatibi, 1920; Auda, 2008; Kamali, 2008). The comparative approach is applied to assess the convergence and divergence between Indonesian regulatory frameworks and international AI governance standards, particularly in relation to accountability structures, privacy safeguards, and algorithmic transparency requirements (Muhammad, Babangida, et al., 2025; Ibrahim et al., 2026; Moreno-Sánchez et al., 2026).

The legal materials used in this study consist of primary, secondary, and tertiary sources. Primary materials include national legislation, international policy instruments, and regulatory guidelines related to health law, data protection, electronic information governance, and AI ethics. Secondary materials include peer-reviewed journal articles, academic books, systematic reviews, and policy analyses addressing AI governance, mental health technologies, legal accountability, and Islamic bioethics (El-Khoury & Albarashdi, 2025; Kandeel et al., 2026; Raposo, 2026). Tertiary materials consist of legal dictionaries, encyclopedias, and reference works used to clarify doctrinal and technical legal terminology. Data collection was conducted through systematic library-based research using qualitative documentation techniques. The analytical procedure follows a descriptive-analytical and comparative-interpretive method to identify, categorize, and evaluate relevant legal norms across jurisdictions. The collected materials were then analyzed through doctrinal interpretation and normative reasoning to assess the adequacy of existing regulatory frameworks in addressing AI-related risks in mental healthcare. Through this methodological design, the study develops an integrated analytical structure that links legal accountability, trustworthy *AI* governance, and *Maqāṣid-based* ethical evaluation to support a responsible and human-centered regulatory model for AI-driven mental health systems.

4. Results and Discussion

4.1. The Emergence of AI-Driven Mental Health Systems and Their Regulatory Implications

The rapid development of artificial intelligence (AI)-driven mental health systems has fundamentally transformed contemporary healthcare by integrating machine learning, natural language processing, and predictive analytics into diagnostic and decision-support processes. Recent studies show that large-scale deep learning and healthcare analytics models are increasingly capable of detecting depression, anxiety disorders, psychological distress, and suicidal risk through behavioral patterns, linguistic indicators, and digital activity traces (Arias et al., 2025; Chen et al., 2025; Putra et al., 2026). These developments indicate a clear shift toward data-driven mental healthcare, where algorithmic systems are not only assisting clinicians but also reshaping the epistemology of psychiatric assessment through computational

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prediction and continuous monitoring. From a healthcare system perspective, AI-based mental health technologies offer significant opportunities to improve accessibility, efficiency, and early intervention in psychological services. Digital mental health platforms enable remote monitoring, real-time risk detection, and scalable psychological support, particularly in regions with limited access to psychiatrists and psychologists (Bridge et al., 2025; Villarreal et al., 2026). In addition, social media-based predictive analytics have demonstrated potential in identifying early signs of mental health deterioration before individuals seek formal clinical intervention (Galatzan et al., 2025; Tamang, 2026; Putra et al., 2026). These findings suggest that AI can contribute meaningfully to public health goals by reducing service gaps, improving response time, and enhancing preventive mental healthcare strategies.

However, the expansion of AI in mental healthcare simultaneously generates complex legal and governance challenges, particularly regarding accountability, transparency, and patient rights protection. The "black-box" nature of many AI systems limits interpretability, making it difficult for healthcare providers and regulators to verify how algorithmic decisions are produced, thereby raising concerns about liability for misdiagnosis, bias, and harmful recommendations (Camilleri, 2026; Kandeel et al., 2026). In the Indonesian legal context, regulatory frameworks such as Law Number 17 of 2023 on Health, Law Number 27 of 2022 on Personal Data Protection, and Law Number 1 of 2024 on Electronic Information and Transactions establish general obligations regarding healthcare quality, data protection, and digital system governance, but they do not explicitly regulate algorithmic decision-making or liability allocation in AI-assisted medical practice (Government of Indonesia, 2023; 2022; 2024). This indicates a normative gap between technological advancement and legal regulation in AI-driven healthcare systems.

This regulatory gap demonstrates that existing legal structures are insufficient to fully govern AI-assisted mental healthcare and to clearly define responsibility in cases of algorithmic harm**.** International normative frameworks, including the OECD Principles on AI (2019), the UNESCO Recommendation on the Ethics of AI (2021), and the WHO guidance on AI for health (2021), consistently emphasize transparency, accountability, explainability, fairness, and human oversight as core governance principles. These frameworks position AI as a supportive tool rather than an autonomous decision-maker in clinical practice. Therefore, the emergence of AI-driven mental health systems highlights the urgent need for an integrated legal governance model that ensures accountability, strengthens patient protection, and aligns technological innovation with human rights and public welfare. In this regard, the findings also imply that effective regulation must move beyond technical compliance toward a broader normative framework that can accommodate ethical responsibility and safeguard human dignity in digital mental healthcare systems.

4.2. Legal Accountability in AI-Based Mental Healthcare

One of the central legal challenges in the implementation of AI-driven mental health systems concerns the allocation of liability when algorithmic outputs lead to patient harm. In traditional healthcare governance, accountability is relatively clear because responsibility is attributed to identifiable actors such as physicians, hospitals, or health institutions under established medical negligence doctrines. However, the integration of artificial intelligence introduces a

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multilayered decision-making structure in which clinical recommendations may be generated through complex and partially autonomous computational processes. This condition complicates the identification of causality and responsibility, particularly when inaccurate predictions, biased outputs, or erroneous classifications result in adverse clinical outcomes (Li et al., 2025; Mostafapour et al., 2026; Kandeel et al., 2026). Therefore, legal accountability in AI-based mental healthcare must shift from a single-actor model to a distributed responsibility framework that reflects the socio-technical nature of algorithmic decision-making.

From the perspective of Indonesian health law, the use of AI does not eliminate the professional and institutional responsibility of healthcare providers. Law Number 17 of 2023 concerning Health emphasizes that healthcare services must uphold patient safety, professional standards, and legal accountability in all forms of medical practice (Government of Indonesia, 2023). Similarly, Law Number 27 of 2022 on Personal Data Protection imposes strict obligations regarding the processing of sensitive health data, while Law Number 1 of 2024 concerning Electronic Information and Transactions requires electronic system operators to ensure system reliability, integrity, and security (Government of Indonesia, 2022; 2024). However, these regulatory instruments do not explicitly regulate algorithmic decision-making or automated clinical reasoning, creating a normative gap in the governance of AI-assisted mental healthcare. Within this framework, AI systems cannot be recognized as independent legal subjects; instead, accountability remains attached to human actors, including clinicians, developers, and healthcare institutions.

Expanding the concept of accountability, Basu et al. (2026) argue that responsibility must be embedded throughout the entire lifecycle of AI systems, from design and data collection to deployment and monitoring. In a similar vein, Ibrahim et al. (2026) emphasize that legal governance of AI cannot be separated from ethical responsibility because algorithmic outputs directly influence human dignity and welfare. This study therefore adopts a layered accountability approach in which responsibility is distributed across multiple stakeholders based on their functional control over the AI system. The concept of *Human–AI agency* proposed by Krakowski (2025) further supports this view by framing AI not as an autonomous decision-maker but as part of an interactive decision ecosystem involving human judgment and machine output. Consequently, clinicians retain final responsibility for validating AI recommendations, while developers are accountable for system safety, transparency, and robustness, and institutions are responsible for governance and risk management structures.

Another critical dimension of legal accountability concerns data governance in mental health AI systems. Mental health information constitutes sensitive personal data requiring heightened protection under Indonesian law, particularly regarding lawful processing, consent, and confidentiality (Government of Indonesia, 2022). In addition, electronic system obligations under national law require secure data management and protection against unauthorized access or misuse (Government of Indonesia, 2024). Cecchi et al. (2026) propose that effective medico-legal accountability in AI healthcare must be grounded in four principles: *transparency*, *explainability*, *traceability*, and *human oversight*. These principles align with international frameworks such as the OECD (2019), UNESCO (2021), and WHO (2021), which collectively emphasize that AI must remain under meaningful human control. Accordingly, accountability

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in AI-driven mental healthcare should not only focus on liability after harm occurs but must also incorporate preventive governance mechanisms across the system lifecycle.

Overall, the analysis shows that Indonesia has established foundational legal instruments relevant to AI governance in healthcare; however, these instruments remain fragmented and not specifically designed for algorithmic medical decision-making. This gap creates uncertainty in liability allocation among clinicians, developers, data controllers, and healthcare institutions. Therefore, a comprehensive regulatory framework is required to integrate health law, data protection law, and AI governance principles into a unified accountability system that ensures legal certainty, ethical compliance, and patient protection in AI-driven mental healthcare.

4.3. Data Protection, Privacy, and Digital Rights

The implementation of AI-driven mental health systems fundamentally depends on the continuous collection, processing, and interpretation of large-scale personal and behavioral datasets. Unlike general health information, mental health data are particularly sensitive because they reflect deeply private dimensions of human life, including emotional states, cognitive patterns, interpersonal relationships, and behavioral vulnerabilities. This heightened sensitivity makes mental health information a critical legal category that requires strengthened protection within digital healthcare ecosystems. The increasing use of predictive analytics, including social media monitoring and linguistic analysis, further expands the scope of data extraction beyond clinical settings into everyday digital interactions, raising serious concerns regarding autonomy, informational self-determination, and lawful data use (El-Khoury & Albarashdi, 2025; Muhammad, Aliyu, et al., 2025; Putra et al., 2026). From a digital rights perspective, such developments indicate a structural shift in healthcare governance toward continuous data surveillance, where individuals may be profiled even before formal clinical engagement.

The expansion of AI-based healthcare systems has also intensified risks associated with unauthorized access, secondary data use, algorithmic profiling, and data commodification. El-Khoury and Albarashdi (2025) emphasize that healthcare AI systems often rely on complex data-sharing ecosystems that increase vulnerability to privacy breaches and uncontrolled data flows. Similarly, He and Chen (2025) argue that regulatory frameworks frequently lag behind technological innovation, creating governance gaps in data protection enforcement. Furthermore, the proliferation of open medical datasets and interoperable health infrastructures increases the risk of re-identification, even when anonymization techniques are applied (Yang et al., 2026; Mufleh et al., 2026; Emmer De Albuquerque Green et al., 2026). These conditions demonstrate that traditional confidentiality-based approaches are no longer sufficient to address the dynamic and recursive nature of AI-driven data processing. Accordingly, data protection must evolve toward risk-based and lifecycle-oriented governance capable of addressing continuous data reuse and algorithmic learning.

Within the Indonesian legal framework, personal data protection is primarily regulated under Law Number 27 of 2022 concerning Personal Data Protection, which classifies health information as *specific personal data* requiring enhanced safeguards (Government of Indonesia, 2022). This law establishes core data subject rights, including access, correction, withdrawal of

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consent, restriction of processing, and data deletion. In addition, Law Number 17 of 2023 concerning Health reinforces patient confidentiality as a fundamental principle of healthcare delivery (Government of Indonesia, 2023), while Law Number 1 of 2024 concerning Electronic Information and Transactions imposes obligations on electronic system providers to ensure system security and reliability (Government of Indonesia, 2024). However, despite this relatively comprehensive legal structure, none of these instruments explicitly regulates algorithmic profiling, automated inference, or continuous learning systems used in AI-based mental healthcare. As a result, legal protection remains focused on static data processing rather than dynamic algorithmic ecosystems. A critical unresolved issue concerns the adequacy of informed consent in AI-driven environments. Sengupta and Mohandas (2026) argue that conventional consent mechanisms are increasingly insufficient because users often cannot comprehend how machine learning models process and infer psychological conditions from their data. Raposo (2026) further highlights the regulatory difficulty of overseeing adaptive AI systems that continuously evolve after deployment, thereby challenging the stability of consent over time**.** This suggests that informed consent must be reconceptualized as an ongoing and adaptive legal process rather than a one-time procedural requirement. Additionally, algorithmic bias remains a significant concern, as biased datasets may lead to discriminatory mental health classifications and unequal access to care. Such risks are insufficiently addressed under existing Indonesian legal provisions, which do not explicitly regulate automated decision-making or algorithmic explainability in healthcare contexts.

Table 1. Major Legal Risks and Regulatory Responses in AI-Driven Mental Health Systems

Legal Risk	Potential Impact	Applicable Legal Framework
Privacy Violations	Unauthorized disclosure of mental health information	Law No. 27/2022 on Personal Data Protection
Algorithmic Bias	Discriminatory or inaccurate mental health assessments	Explainable AI standards and regulatory auditing
Lack of Transparency	Reduced accountability and inability to challenge decisions	OECD AI Principles (2019); UNESCO AI Ethics (2021)
Cybersecurity Threats	Data breaches and manipulation of health information	Law No. 1/2024 on Electronic Information and Transactions
Automated Decision Errors	Harmful healthcare recommendations affecting patient wellbeing	Human oversight and professional accountability mechanisms

Source: Author's elaboration based on OECD (2019), UNESCO (2021), WHO (2021), and Government of Indonesia (2022–2024).

Table 1 presents the major legal risks and corresponding regulatory responses in AI-driven mental health systems. The table summarizes key vulnerabilities, including privacy violations, algorithmic bias, transparency deficits, cybersecurity threats, and automated decision errors, along with relevant legal and ethical frameworks such as the PDP Law, OECD Principles (2019), UNESCO Ethics Recommendation (2021), and WHO Guidance (2021). This structured mapping highlights the multidimensional nature of AI governance, demonstrating that no single legal instrument is sufficient to regulate the complexity of AI-enabled mental healthcare systems.

Overall, the findings indicate that Indonesia has established a foundational legal framework for personal data protection, healthcare confidentiality, and electronic system governance.

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However, this framework remains fragmented and insufficiently tailored to the specific challenges posed by AI-driven mental healthcare. Therefore, future regulatory reform should adopt an integrated digital rights framework that combines data protection, algorithmic accountability, and human oversight to ensure ethical, transparent, and rights-respecting deployment of AI in mental health services.

4.4. Trustworthy AI and Explainable Governance

The increasing integration of artificial intelligence in mental healthcare has significantly transformed debates surrounding transparency, explainability, and the rule of law in digital health governance. While AI-based systems offer substantial benefits in enhancing diagnostic accuracy, early detection, and service efficiency, their legitimacy depends on whether affected individuals can understand and meaningfully contest decisions that influence their psychological assessment and treatment pathways. In legal doctrine, transparency is not merely a technical attribute but a normative requirement that safeguards procedural fairness, accountability, and patient autonomy. When algorithmic systems generate outputs related to mental health classification or risk prediction, patients must be able to access intelligible explanations regarding the basis of such decisions. Without this, the exercise of legal remedies becomes practically constrained, thereby weakening the protection of patient rights in digital healthcare environments.

One of the central challenges in AI governance is the so-called "black-box problem," where complex machine-learning models operate through multi-layered computational structures that are not easily interpretable by clinicians, regulators, or patients. Camilleri (2026) explains that Explainable Artificial Intelligence (*XAI*) offers a methodological response to this issue by enabling the translation of algorithmic outputs into interpretable representations. From a governance perspective, explainability performs a triadic legal function. First, it strengthens transparency by revealing the key variables influencing AI-generated recommendations. Second, it enables accountability by allowing judicial or regulatory review when harm occurs. Third, it reinforces procedural justice by ensuring that individuals are not subjected to opaque determinations without the possibility of contestation. Thus, explainability operates as a bridge between computational complexity and legal accountability requirements in healthcare decision-making systems.

The normative foundation of explainable governance is reinforced by international soft-law instruments. The OECD Principles on Artificial Intelligence (2019) emphasize transparency and accountability as core requirements of trustworthy AI. The UNESCO Recommendation on the Ethics of Artificial Intelligence (2021) further underscores explainability as a safeguard against discriminatory or arbitrary algorithmic outcomes. Likewise, the WHO guidance on AI governance in health systems highlights human oversight as an essential condition for ethical deployment. These frameworks collectively establish that AI systems must remain under meaningful human control and must not erode fundamental rights such as privacy, dignity, and access to justice. In this context, explainability should be interpreted not merely as a design feature but as a normative legal obligation embedded within responsible digital governance structures.

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In mental healthcare contexts, the implications of opaque algorithmic decision-making are particularly severe because AI-generated assessments may affect employment opportunities, insurance eligibility, and social stigma. Islam et al. (2026) propose a participatory governance model that integrates stakeholders—including patients, clinicians, and policymakers—into the AI design lifecycle to enhance legitimacy and accountability. Similarly, Guo et al. (2026) emphasize that trustworthy AI requires compliance with legal norms, fairness, reliability, and auditability as integrated governance dimensions. From an Indonesian legal perspective, principles of transparency and patient protection are implicitly supported by Law Number 17 of 2023 on Health, Law Number 27 of 2022 on Personal Data Protection, and Law Number 1 of 2024 on Electronic Information and Transactions (Government of Indonesia, 2023; 2022; 2024). Although these laws do not explicitly establish a *right to explanation*, their combined normative structure indicates a clear direction toward enhanced accountability in digital health services. This demonstrates a regulatory transition from conventional healthcare governance toward digitally mediated accountability regimes requiring interpretability and oversight in algorithmic decision-making.

Furthermore, trustworthy AI cannot be achieved solely through technical interpretability mechanisms. Moreno-Sánchez et al. (2026) argue that trustworthiness must be operationalized through integrated governance frameworks that combine legal, ethical, and technical safeguards across the AI lifecycle. In parallel, Miedema et al. (2026) propose a lifecycle-based governance model that embeds accountability from data collection to post-deployment monitoring, ensuring continuous oversight of algorithmic behavior. Such a governance approach aligns with the rule-of-law principle by guaranteeing that AI systems remain subject to ongoing legal scrutiny rather than one-time certification processes. In mental healthcare, where algorithmic errors may directly affect human dignity and psychological wellbeing, trustworthy AI must therefore be conceptualized as a governance objective grounded in transparency, explainability, accountability, and enforceable legal oversight rather than as a purely technological achievement.

4.5. Islamic Ethical Governance and *Maqāṣid al-Sharīʿah*

Islamic ethical governance provides a normative foundation that complements contemporary legal and technological frameworks in regulating artificial intelligence (AI) within mental healthcare systems. While modern regulatory approaches emphasize compliance, risk mitigation, and procedural accountability, they often remain insufficient in addressing deeper questions of moral legitimacy and social acceptability in Muslim-majority societies such as Indonesia. In this context, *Maqāṣid al-Sharīʿah* functions as a comprehensive ethical framework that integrates law, morality, and social welfare in evaluating AI-driven mental health technologies. Classical Islamic jurisprudence identifies the protection of religion (*ḥifẓ al-dīn*), life (*ḥifẓ al-nafs*), intellect (*ḥifẓ al-ʿaql*), lineage (*ḥifẓ al-nasl*), and property (*ḥifẓ al-māl*) as core objectives of *Shariah* (Al-Shatibi, 1920; Auda, 2008). Among these, *ḥifẓ al-nafs* and *ḥifẓ al-ʿaql* are particularly relevant to mental health governance because psychological wellbeing directly affects human dignity, rational capacity, and social functioning. AI-based mental health tools that enable early detection of psychological distress may therefore contribute positively to the realization of these objectives, as evidenced by predictive modeling in digital platforms (Putra et al., 2026).

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However, Islamic ethical evaluation requires that technological usefulness be balanced with moral constraint and harm prevention**.** According to Auda (2008), *Maqāṣid al-Sharīʿah* is a dynamic and systems-oriented framework that must respond to evolving technological realities rather than remain static. This means that AI systems cannot be justified solely on the basis of efficiency or accuracy, but must also be assessed in terms of their broader societal consequences, including privacy intrusion, discrimination risks, and erosion of human autonomy. Within Islamic legal theory, public benefit (*maṣlaḥah*) is a key consideration, yet it is always conditioned by the prevention of harm (*mafsadah*). As Rahman (1987) and Padela (2013) emphasize, Islamic bioethical reasoning places strong emphasis on human dignity and the protection of vulnerable individuals in healthcare contexts. Therefore, AI systems that generate unjust profiling, opaque decisions, or psychological harm may conflict with Shariah objectives even if they offer technical advantages.

The operationalization of Islamic ethical governance can be further strengthened through established legal maxims (*qawāʿid fiqhiyyah*) and contemporary governance principles. The principle *al-ḍarar yuzāl* (harm must be eliminated) requires that AI systems be designed to minimize risks such as algorithmic bias, misdiagnosis, and unauthorized data disclosure. Similarly, *darʾ al-mafāsid muqaddam ʿalā jalb al-maṣāliḥ* (preventing harm takes priority over achieving benefit) supports strict oversight of AI deployment in sensitive mental health contexts. These principles align with international AI governance frameworks that emphasize transparency, fairness, and accountability, including OECD (2019), UNESCO (2021), and WHO (2021) guidelines**.** Furthermore, Dusuki and Abdullah (2007) highlight that governance should prioritize *maṣlaḥah* by ensuring that public policies maximize collective welfare while minimizing social harm. In practical terms, this requires integrating human oversight, explainability mechanisms, privacy safeguards, and ethical auditing into AI mental healthcare systems.

The convergence between Islamic ethical governance and modern regulatory frameworks demonstrates their mutual compatibility in addressing AI challenges in mental healthcare. Indonesian legal instruments such as Law No. 27 of 2022 on Personal Data Protection, Law No. 17 of 2023 on Health, and Law No. 1 of 2024 on Electronic Information and Transactions already reflect principles of confidentiality, accountability, and data security (Government of Indonesia, 2022; 2023; 2024). Although these laws do not explicitly reference *Maqāṣid al-Sharīʿah*, their underlying emphasis on dignity, justice, and protection of personal data is conceptually aligned with Islamic ethical principles**.** Therefore, an integrated governance model combining national law, international AI ethics, and *Maqāṣid al-Sharīʿah* provides a comprehensive framework for ensuring that AI-driven mental health systems remain legally compliant, ethically grounded, and socially responsible.

5. Conclusion

This study directly answers the research problem by demonstrating that the rapid adoption of artificial intelligence (AI) in mental healthcare has generated complex legal, ethical, and governance challenges that cannot be adequately addressed by conventional regulatory frameworks alone. The analysis shows that responsibility in AI-driven mental health systems is no longer limited to healthcare professionals, but is distributed across a broader ecosystem

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involving healthcare institutions, technology developers, digital platform providers, and regulatory authorities. Although Indonesia has established a foundational legal structure through Law Number 17 of 2023 on Health, Law Number 27 of 2022 on Personal Data Protection, and Law Number 1 of 2024 on Electronic Information and Transactions, these instruments remain fragmented and lack specific provisions governing algorithmic decision-making, explainability, and liability allocation in AI-assisted healthcare. This regulatory fragmentation creates a significant gap in ensuring legal certainty, accountability, and effective protection for patients in digital mental health services.

The study further finds that existing Indonesian legal frameworks, while strong in safeguarding privacy, confidentiality, and data security, are still insufficient to address emerging risks associated with algorithmic bias, opaque machine-learning processes, automated profiling, and secondary data use beyond initial consent**.** In response to these challenges, this research proposes an integrated governance framework that combines health law, personal data protection law, trustworthy AI principles, and Islamic ethical-legal foundations. In this regard, *Maqāṣid al-Sharīʿah* provides a normative ethical structure grounded in the protection of life (*ḥifẓ al-nafs*), intellect (*ḥifẓ al-ʿaql*), and public welfare (*maṣlaḥah*). The novelty of this study lies in the formulation of a hybrid governance model that integrates contemporary AI accountability standards with Islamic legal objectives, offering a value-based regulatory approach to strengthen transparency, accountability, and patient protection in AI-driven mental healthcare systems. From a theoretical perspective, this study contributes to the development of an interdisciplinary framework that integrates health law, data protection law, artificial intelligence governance, and Islamic legal philosophy into a unified analytical structure. This integration demonstrates that modern regulatory theories and Islamic ethical principles are not conflicting systems but mutually reinforcing approaches to ensuring responsible technological governance. From a practical perspective, the findings provide guidance for policymakers in designing more comprehensive AI regulations for healthcare, particularly in relation to explainability requirements, human oversight mechanisms, accountability standards, and ethical auditing of algorithmic systems. These measures are essential to ensure that AI technologies operate in accordance with both legal norms and ethical expectations in society.

The study is limited by its normative doctrinal methodology and reliance on literature-based analysis without empirical validation from healthcare institutions, practitioners, or patients. Therefore, future research should adopt empirical and comparative approaches to examine how AI governance frameworks operate in practice across different healthcare settings and jurisdictions. Further studies are also needed to evaluate stakeholder perceptions, implementation challenges, and the effectiveness of integrated legal–ethical governance models in real-world AI-driven mental health services. Ultimately, ensuring trustworthy AI in healthcare requires continuous refinement of regulatory frameworks that balance technological innovation with legal certainty, ethical responsibility, and the protection of human dignity.

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https://doi.org/10.5281/zenodo.21312550

References

Al-Shatibi, I. I. M. A. I. (1920). *Al-Muwaafaqaat Fii Usuul Al-Sharii'ah*. Matba'at al-Maktabah al-Tujariyah.

Arias, M. I., Cadavid, L., & Velásquez, J. D. (2025). Advancing healthcare analytics: A thematic review of machine learning, health informatics, and real-world data applications. *Journal of Biomedical Informatics, 171*, 104934. https://doi.org/10.1016/j.jbi.2025.104934

Auda, J. (2008). *Maqasid Al-Shariah as Philosophy of Islamic Law: A Systems Approach*. International Institute of Islamic Thought (IIIT).

Basu, B. K., Sani, M. S. A., Salehin, M., Amin, M. B., Azad, M. M., Sony, M. M. A. A. M., & Bács, Z. (2026). Ethics of AI in nursing care: A doctrinal analysis of governance and societal implications in Bangladesh. *Social Sciences & Humanities Open, 13*, 103008. https://doi.org/10.1016/j.ssaho.2026.103008

Bridge, L. A., Elsey, J., Pratley, P., & Woodward, A. (2025). Digital mental health tools: A narrative review on overcoming barriers in the age of displacement and disparities. *Maturitas, 198*, 108380. https://doi.org/10.1016/j.maturitas.2025.108380

Camilleri, M. A. (2026). Opening the black box: Operational principles, tools and frameworks that advance explainable artificial intelligence (XAI) models. *Technological Forecasting and Social Change, 229*, 124710. https://doi.org/10.1016/j.techfore.2026.124710

Cecchi, R., Calabrò, F., Camatti, J., Santunione, A. L., Sperti, M., Zizzi, E. A., & Deriu, M. A. (2026). Artificial intelligence in healthcare: Proposal for a new medico-legal methodology in medical liability. *Legal Medicine, 80*, 102764. https://doi.org/10.1016/j.legalmed.2025.102764

Chen, Z., Liu, R., Huang, S., Guo, Y., & Ren, Y. (2025). A survey of large-scale deep learning models in medicine and healthcare. *CMES - Computer Modeling in Engineering and Sciences, 144*(1), 37–81. https://doi.org/10.32604/cmes.2025.067809

Chhabra, J., Pilkington, V., Benakovic, R., Wilson, M. J., La Sala, L., & Seidler, Z. (2025). Social media and youth mental health: Scoping review of platform and policy recommendations. *Journal of Medical Internet Research, 27*. https://doi.org/10.2196/72061

Dusuki, A. W., & Abdullah, N. I. (2007). Maqasid al-Shari'ah, maslahah, and corporate social responsibility. *American Journal of Islam and Society, 24*(1), 25–45. https://doi.org/10.35632/ajis.v24i1.415

El-Khoury, M., & Albarashdi, S. (2025). Navigating the privacy landscape of healthcare-driven AI in the Middle East: Case studies from Oman, Qatar, and Saudi Arabia. *Social Sciences & Humanities Open, 11*, 101492. https://doi.org/10.1016/j.ssaho.2025.101492

Emmer De Albuquerque Green, C., Reinmund, T., Hamblin, K., & Sinha, S. K. (2026). Responsible use of artificial intelligence in the provision of long-term care for older people: A care-centric approach. *The Lancet Healthy Longevity, 7*(2), 100817. https://doi.org/10.1016/j.lanhl.2026.100817

Galatzan, B. J., Johnson, E. A., Turchioe, M. R., Baker, C., & Wieben, A. (2025). Regulating at the AI frontier: The collision of policy, regulation, and nursing practice. *Technology and the Nursing Needs of Tomorrow, 16*(3), 207–215. https://doi.org/10.1016/j.jnr.2025.08.012

JUSTITIA NOVA
Indonesian Journal of Modern Law
e-ISSN: 3109-3469
Vol. 2, No. 1, June 2026
https://doi.org/10.5281/zenodo.21312550

Government of Indonesia. (2022). *Law No. 27 of 2022 on Personal Data Protection*.
Government of Indonesia. (2023). *Law No. 17 of 2023 on Health*.
Government of Indonesia. (2024). *Law No. 1 of 2024 on the Second Amendment to Law No. 11 of 2008 on Electronic Information and Transactions*.
Guo, Y., Foster, J., Buckley, A. R., & Zoukas, G. (2026). Assuring trustworthy AI: An integrative review of hierarchical and relational assurance approaches. *International Journal of Information Management Data Insights, 6*(1), 100415. https://doi.org/10.1016/j.jjimei.2026.100415
He, M., & Chen, Y. (2025). Personal data protection in China: Progress, challenges and prospects in the age of big data and AI. *Telecommunications Policy, 49*(10), 103076. https://doi.org/10.1016/j.telpol.2025.103076
Ibrahim, A., Gourari, F., & AlQodsi, E. (2026). Artificial intelligence between legal governance and professional ethics: A comparative study. *Social Sciences & Humanities Open, 13*, 102841. https://doi.org/10.1016/j.ssaho.2026.102841
Islam, F., Islam, A., Amin, M. A., & Zaber, M. (2026). A proposed participatory framework for explainable AI in mHealth: Mixed methods study integrating user and stakeholder requirements. *Journal of Medical Internet Research, 28*. https://doi.org/10.2196/87158
Kamali, M. H. (2008). *Shari'ah Law: An Introduction*. Oneworld Publications.
Kandeel, M. E., Abo Hamza, E. G., Abouahmed, A., AbdelAziz, G. M., Hashish, A., Abo El Wafa, T., Khalil, A., & Eldakak, A. (2026). AI applications integrating legal and regulatory perspectives in mental health: Systematic review. *JMIR AI, 5*. https://doi.org/10.2196/84305
Krakowski, S. (2025). Human-AI agency in the age of generative AI. *Information and Organization, 35*(1), 100560. https://doi.org/10.1016/j.infoandorg.2025.100560
Li, J., Qu, L., Cai, T., Zhao, Z., Al Hasan Haldar, N., Krishna, A., Kong, X., Romero Macau, F., Chakraborty, T., Deroy, A., Lin, B., Blackmore, K., Noman, N., Cheng, J., Cui, N., & Xu, J. (2025). AI-generated content in cross-domain applications: Research trends, challenges and propositions. *Knowledge-Based Systems, 330*, 114634. https://doi.org/10.1016/j.knosys.2025.114634
Miedema, E., Waschull, S., & Emmanouilidis, C. (2026). Towards trustworthy artificial intelligence for decision-making: A lifecycle perspective on knowledge- and data-driven artificial intelligence systems. *Computers in Industry, 174*, 104409. https://doi.org/10.1016/j.compind.2025.104409
Moreno-Sánchez, P. A., Del Ser, J., van Gils, M., & Hernesniemi, J. (2026). A design framework for operationalizing trustworthy artificial intelligence in healthcare: Requirements, tradeoffs and challenges for its clinical adoption. *Information Fusion, 127*, 103812. https://doi.org/10.1016/j.inffus.2025.103812
Mostafapour, M., Fortier, J., Pacheco, K., Murray, H., & Garber, G. (2026). Legal and ethical challenges in integrating AI into clinical practice: Qualitative study of physicians' real-world experiences. *JMIR AI, 5*. https://doi.org/10.2196/82351
Mufleh, A. S. S., Waleed, A., Altuwayjiri, S., Alajmi, L. H. R., Alsaid Hassan, M. I., & Hilal, A. M. (2026). Social aspects of artificial intelligence (AI)-driven sustainability in Saudi Arabia: A systematic review with insights on labor market transformations. *Social Sciences & Humanities Open, 13*, 102612. https://doi.org/10.1016/j.ssaho.2026.102612

JUSTITIA NOVA
Indonesian Journal of Modern Law
e-ISSN: 3109-3469
Vol. 2, No. 1, June 2026
https://doi.org/10.5281/zenodo.21312550

Muhammad, A. A., Aliyu, S. A., Ardo, A. M., Shariff, I. A., & Muhammad, Y. Z. (2025). The Role of AI in Transforming Teacher Education in Nigeria: Opportunities and Challenges. *Innovative Minds*, *1*, 1–10. https://doi.org/https://pub.darulfunun.id/index.php/imind/article/view/105

Muhammad, A. A., Babangida, B., Abubakar, M. S., Shariff, I. A., & Yukubu, Z. M. (2025). Reforming the Curriculum for Value-Based Education: A Comparative Assessment of Social Studies and Islamic Studies Integration in Nigeria. *Innovative Minds*, *1*, 27–37. https://doi.org/https://pub.darulfunun.id/index.php/imind/article/view/141

Mustofa, M., Ahyani, H., Irsyansyah, I., Ma'ruf, A. H., Buchori, M., Muadib, I., Supriadi, A., & Gumel, S. M. (2026). Strengthening Halal Tourism Governance in Pekalongan: A Maqasid-Based Collaborative Governance Framework within Siyasah Dusturiyah. *Al-Risalah: Forum Kajian Hukum Dan Sosial Kemasyarakatan*, *26*(1), 38–58. https://doi.org/10.30631/alrisalah.v26i1.2046

OECD. (2019). *OECD Principles on Artificial Intelligence*. OECD Publishing.

Olawade, D. B., Ayoola, F. I., Ebo, T. O., Asaolu, A. J., Egbon, E., & Clement David-Olawade, A. (2025). Artificial intelligence in forensic mental health: A review of applications and implications. *Journal of Forensic and Legal Medicine, 113*, 102895. https://doi.org/10.1016/j.jflm.2025.102895

Padela, A. I. (2013). Islamic bioethics: Between sacred law, lived experiences, and state authority. *Theoretical Medicine and Bioethics, 34*(2), 65–80. https://doi.org/10.1007/s11017-013-9249-1

Putra, H. S., Murti, M. A., Novianty, A., & Ismail, N. H. (2026). Early detection of mental health on social media using a hybrid Bi-LSTM–XGBoost model: A comparative study. *Scientific Reports*. https://doi.org/10.1038/s41598-026-47015-6

Qomaro, G. W., Adiyono, A., Mahaseth, H., & Arofik, S. (2026). Preventing Child Marriage through Local Regulation in Bangkalan from a Socio-Legal and Maqāṣid al-Sharīʿah Perspective. *El-Usrah: Jurnal Hukum Keluarga*, *9*(1), 106–124. https://doi.org/10.22373/ujhk.v9i1.33809

Rahman, F. (1987). *Health and Medicine in the Islamic Tradition: Change and Identity*. Crossroad.

Rahsepar Meadi, M., Sillekens, T., Metselaar, S., van Balkom, A., Bernstein, J., & Batelaan, N. (2025). Exploring the ethical challenges of conversational AI in mental health care: Scoping review. *JMIR Mental Health, 12*. https://doi.org/10.2196/60432

Raposo, V. L. (2026). The AI Gospel according to the EDPB: An overview of opinion 28/2024 on data protection aspects in AI models. *Computer Law & Security Review, 61*, 106300. https://doi.org/10.1016/j.clsr.2026.106300

Sengupta, A., & Mohandas, S. (2026). The imaginary of informed consent: Rethinking approaches to data use for AI in healthcare. *Computer Law & Security Review, 61*, 106309. https://doi.org/10.1016/j.clsr.2026.106309

Shammar, E., Cui, X., Zahary, A., Alsamhi, S. H., & Al-qaness, M. A. A. (2025). Threat to trust: A systematic review on Internet of medical things security. *Journal of Parallel and Distributed Computing, 206*, 105172. https://doi.org/10.1016/j.jpdc.2025.105172

Tamang, S. (2026). Artificial intelligence regulation in the United States: Current landscape and implications for rheumatology. *Rheumatic Disease Clinics of North America*. https://doi.org/10.1016/j.rdc.2026.03.006

JUSTITIA NOVA
Indonesian Journal of Modern Law
e-ISSN: 3109-3469
Vol. 2, No. 1, June 2026
https://doi.org/10.5281/zenodo.21312550

Teo, S. A. (2025). Artificial intelligence, human vulnerability and multi-level resilience. *Computer Law & Security Review, 57*, 106134. https://doi.org/10.1016/j.clsr.2025.106134

UNESCO. (2021). *Recommendation on the Ethics of Artificial Intelligence*. United Nations Educational, Scientific and Cultural Organization.

Villarreal, R. I., Singhal, S., Dempsey, A. G., & Shore, J. (2026). The future of digital mental health: A literature review. *Advances in Mental Health Technology, 49*(2), 377–391. https://doi.org/10.1016/j.psc.2025.08.026

Volpato, R., DeBruine, L., & Stumpf, S. (2025). Trusting emotional support from generative artificial intelligence: A conceptual review. *Computers in Human Behavior: Artificial Humans, 5*, 100195. https://doi.org/10.1016/j.chbah.2025.100195

World Health Organization. (2021). *Ethics and Governance of Artificial Intelligence for Health*. World Health Organization.

Yang, A., Pan, M.-L., Lu, H. H.-S., Lien, C.-Y., Wang, D.-W., Chen, C.-H., Tarng, D.-C., Niu, D.-M., Chiou, S.-H., Wu, C.-Y., Sun, Y.-C., Chen, S.-A., Wang, S.-J., Sheu, W. H.-H., & Lin, C.-H. (2026). Assessing the evolution and influence of medical open databases on biomedical research and health care innovation: A 25-year perspective with a focus on privacy and privacy-enhancing technologies. *Journal of Medical Internet Research, 28*. https://doi.org/10.2196/58954