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Artificial Intelligence's Ethical and Legal Issues in the Healthcare Sector

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ABSTRACT

AI technology is being rapidly adopted across all major sectors to deliver swift and high-quality services, particularly in healthcare. Despite its advantages, the integration of AI in healthcare brings forth several ethical and legal challenges. This paper addresses these issues within the context of the healthcare system. Primary data were collected using a qualitative method, specifically focus-group discussions (FGD), involving six participants. The findings indicate that the government actively integrates AI into key sectors, including healthcare, supported by specific legal measures to ensure secure and safe AI-driven services. However, there is no specific legislation regulating AI systems. It is strongly recommended that the legal framework be made more comprehensive and that ethics training be prioritized in the healthcare sector.

INTRODUCTION

Background

Artificial Intelligence (AI) has emerged as a transformative technology across various industries, including healthcare. With its capability to process vast amounts of data, analyze complex medical information, and make predictions, AI is revolutionizing patient care and the healthcare system. Beyond healthcare, AI is rapidly integrated into core industries such as manufacturing, fashion, sports, agriculture, aviation, and banking. AI has significantly enhanced service quality and improved patient experiences in the medical sector, offering a promising future. It provides new opportunities by providing valuable insights during healthcare delivery, exemplifying the powerful synergy between technology and human expertise. However, adopting AI also brings forth several ethical and legal challenges that must be addressed.

According to the International Trade Administration (2020), approximately 9 per cent of GDP is allocated to medical and healthcare services, a proportion higher than in many other countries. Karim notes that the healthcare sector is highly dynamic, and integrating AI and other emerging technologies has made it even more vibrant. However, the proper and timely addressing of the ethical and legal issues associated with AI is not just important, it is crucial to fully realizing its potential in healthcare. This is a topic of utmost significance that demands our immediate and undivided attention.

This paper aims to explore the ethical and legal concerns surrounding the use of AI in the healthcare sector. The following objectives guide the exploration of this research area, providing a clear roadmap for our journey of understanding and analysis. These objectives are not just academic exercises but crucial steps towards ensuring AI's responsible and effective use in healthcare.

Objectives

• To examine the ethical and legal aspects of healthcare

• To analyse the AI-powered legal system within the context of ethical and legal frameworks

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TECHNIQUES

For this study, a focus group discussion (FGD) was used. Several professions, such as social sciences, new product development, and market research, frequently use focus group discussions (FGD). FGD can provide a variety of viewpoints and insights from a wide range of stakeholders in the healthcare industry, including patients, medical professionals, and other pertinent parties. Six expert members have taken part in this qualitative method. Two have extensive legal experience and are well-versed in current legal framework. Three works in medicine, while one is employed by an Amman super-speciality hospital's IT department.

The discussion lasted for 30 minutes and addressed the following questions:

1. What are the challenges of integrating AI into the healthcare system?

2. What are the AI policies in the country's healthcare system?

3. Are there conflicts between ethical and legal issues?

4. What is the future of AI in the healthcare system?

TABLE I FOCUS GROUP PARTICIPANTS

Sector	**Number of Participants**
Legal experts	2
Medical practitioners	3
AI and Digital Technology Expert	1
Total	6

FINDINGS & DISCUSSION

Participants brainstormed answers to these questions in the focus group discussion (FGD). Their discussion was recorded and summarized to derive the following findings:

Challenges in Integrating AI into the Healthcare System

Participants noted that the government supports integrating AI and other emerging technologies into healthcare. Hospitals recognize the importance of AI in major healthcare activities and are agile in adopting new technologies. However, participants expressed concerns about the rapidly evolving laws and policies that need help keeping pace with AI advancements. Ethical commitment in AI integration was also a significant concern.

AI Policies in the Country's Healthcare priorities, legal and regulatory contexts, and cultural considerations influence AI policies in healthcare system and cultural considerations. These policies evolve with AI advancements and emerging ethical, legal, and societal concerns. The government has acknowledged the importance of the information technology sector, and several policies facilitate AI integration, including:

- Classification and management policy

- Open APIs policy

- Open government data policy

- Personal data protection law (pending implementation)

- Investment environment regulation law

Despite a favourable legal framework, participants emphasized the need for a robust legal and ethical framework to address cyber threats and security issues in healthcare, a sector highly vulnerable to cyber-attacks. High operating costs due to taxes and fees were also mentioned. Additionally, patient concerns about privacy and personal information disclosure pose a challenge. International collaborations and information exchange could help harmonize regulations and address common issues.

Conflict Between Ethical and Legal Issues

Ethical considerations focus on moral principles, fairness, and societal impact, while legal issues revolve around compliance with laws and regulations. Participants acknowledged that conflicts between ethics and laws are inevitable, as laws are precise and subjective. Despite AI integration in healthcare being in its infancy, participants suggested ways to strengthen AI systems, such as ensuring transparency, data security, public accountability, unbiased treatment, and patient rights within digital frameworks. Collaboration among industry, academia, policymakers, and the public is critical to balance ethical aspirations and legal compliance. A balance between innovation and legal respect is essential, and must establish strong moral standards that adhere to legal requirements.

Future of AI in the Healthcare System

The future of AI in the healthcare system holds substantial potential for transforming diagnostics, patient care, treatment outcomes, and optimizing healthcare processes. Participants were optimistic about integrating AI, citing government initiatives and public-private sector collaboration as critical strengths. Trust in digital technology systems is crucial for successful implementation. Generation Z, being tech-savvy, is likely to embrace digital technologies, and newly joined doctors support AI integration.

Participants recommended extensive educational initiatives to address ethical and legal issues related to AI-driven healthcare services. To mitigate potential risks, it is essential that all healthcare personnel understand the ethical and legal aspects of AI. AI-powered automation can streamline administrative tasks, enhance operational productivity, and improve resource allocation within the healthcare system.

CONCLUSION

In today's dynamic and turbulent market environment, organizations must be agile and prepared to face challenges, overcome threats, and seize opportunities. AI can transform healthcare by improving patient care, diagnosis, treatment, and drug discovery. By processing vast amounts of data, AI can assist healthcare professionals in making accurate diagnoses, providing personalized treatments, and improving patient outcomes.

However, several challenges and considerations must be addressed:

1. Data Privacy and Security: Ensuring data privacy and security requires robust data governance frameworks.
2. Ethical and Regulatory Frameworks: AI algorithms must adhere to ethical guidelines and regulatory frameworks to ensure transparency, fairness, and accountability.
3. Training and Education: Intensive training courses and educational programs for healthcare professionals are essential to familiarize them with AI applications and mitigate legal and ethical concerns.

AI is rapidly developing across sectors, including healthcare. Despite its potential, challenges such as data privacy, transparency, accuracy, and high taxation impede the full exploitation of AI in hospitals. Although not explicitly discussed in the FGD, conflicts between ethics and laws must be addressed through robust legal frameworks and thorough staff training in medical ethics. A solid legal and ethical foundation will facilitate AI integration and its full potential in the future.

In conclusion, AI's applications in healthcare systems promise to transform healthcare delivery and improve the patient experience. By leveraging AI technologies and fostering stakeholder collaboration, can create a more efficient, accessible, patient-centred healthcare system.

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