India's Dormant Attitude towards AI Regulations: A Developmental Approach

Sonu Choudhary
Faculty of Law, Banaras Hindu University

Christi Anna George
Faculty of Law, Banaras Hindu University

Abstract

Artificial Intelligence (AI), as the fifth generation of computing, has caught the attention of regulators worldwide, prompting the creation of new and diverse legislation to either regulate AI or adapt to this new era of machines. Recently, the European Union marked history by implementing the Artificial Intelligence Act 2024. The United States (US) also stood in line in 2025 by implementing the US Executive Order titled Removing Barriers to American Leadership in Artificial Intelligence. This insight has been recognized, as every other country at the domestic and global levels comes up with regulations for the ethical use of AI tools. However, India stunned the world by not considering regulating AI. India, being a global leader, considers AI as a "kinetic enabler" and does not want to harness its potential by hastily implementing any rules and regulations. This paper examines India's contentious position on AI, delving into the complexities and subtleties of the concept and its influences in other sectors such as healthcare, agriculture, education, and markets. This paper discusses the international perspective on regulating AI and India's stand in providing platforms for this new era of innovation without any leash while preserving human rights. The development approach of the Indian Government and its role as a member of countries involved in launching the Global Partnership on Artificial Intelligence will be critically analysed. Last but not least the paper discuss various projects implemented by the Indian Government along with the issuance of guidance and rules for maintaining the objective of "peace in development approach".

Keywords: artificial intelligence (AI); legislation; development; human rights; India; innovation; kinetic enabler.

[A] INTRODUCTION

> "Terminators into reality: rumpus around the world" (Choudhary 2024).

Technology advancement is classified into various generations. The first generation focuses on electronic tubes, the second generation is equipped with unit transistors, the third generation uses the first integrated circuit and then came the era of the fourth generation, the era which brought microprocessors, cheaper and more efficient compared to other generations. The present fifth generation of computing, considered the most advanced (Andreea 2015), is an era of artificial intelligence (AI) and has stimulated fervent interest across the globe in every domain. AI is presumed a replica of human intelligence resultant of which there is mass production of machinery-based consumer products. This is not limited to a particular industry as AI can take many forms. Therefore, there is no single exact definition or component of AI. As Tobin says: " In broad terms, it can be regarded as the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages" (Tobin 2023).

And as noted in the World Economic Forum: "People keep saying AI is coming but it is already here" (Shukla 2023). This is very much reflected in day-to-day tasks, as seen in the matter of ChatGPT (developed by OpenAI) as this application is used by billions of users for tasks like coding, grammar-checking, writing and even for palm-reading. One study noted the rapid rise in popularity of ChatGPT, which reached 100 million users in just 60 days, compared to Instagram's two years to achieve the same milestone (Ilzetzki & Jain 2023). AI-based technologies are capable of performing various tasks, including coordinating logistics, translating complex documents, retrieving information, writing business reports, providing financial services, diagnosing diseases and even preparing legal briefs (Sahbaz 2019). Moreover, the advanced features of these applications have the potential to enhance the efficiency and accuracy of tasks by leveraging machine learning, which enables them to learn, predict, and continuously improve. The results of this have been seen in a recent report from Stanford University indicating that the number of AI patents surged 30-fold between 2015 and 2021, underscoring the swift advancements in the field of AI development (Clark & Perrault 2023).

The tremendous growth of AI creates debatable issues around the globe for bringing in legislation to regulate AI. The European Union (EU) recently implemented the Artificial Intelligence Act 2024 to regularize AI-

based systems, and the United States (US) (White & Case 2015) and the UK (Brione & Gajjar 2024) are also working on legislation to deal with the tidal wave of AI applications, whereas the Indian Government is currently not contemplating any laws or regulations to manage the growth of AI in the country (Government of India 2023). This paper explores the issues relating to AI applications by examining the EU and US AI regulations and also highlights India's stance of not regulating AI, although it has enacted, or is about to enact, various legislations on a sector basis for the better growth of the country.

Definition usage of AI

The term AI was first introduced in approximately 1955. Many scholars have tried to give various explanations regarding the term. Marvin Minsky attempted to define AI as the "science of creating machines that perform tasks requiring human-like intelligence" (quoted in Bolter 1984: 1) whereas Nils J Nilsson describes it as "the endeavour of making machines intelligent whereas Intelligence is defined as the ability of an entity to function effectively and with foresight in its environment" (Nilsson 2010: 13). John McCarthy, considered the father of AI, coined the term along with his fellow researchers by observing that: "AI is characterized as the process of making a machine act in ways that would be considered intelligent if a human were performing those actions" (Cordeschi 2007: 260). However, Luciano Floridi and Josh Cowls conceptualize the term AI in its broader sense by reflecting on its characteristic features as AI can be described as a developing resource of interactive, autonomous, and often self-learning systems that handle tasks typically requiring human intelligence and intervention. In short, "AI can be seen as a reservoir of smart agency on demand" (Floridi & Cowls 2019: 4). In the 1950s the mathematician Alan Turing gave us the "Turing Test" which has become prominent in AI research. The Turing Test is a method of evaluating whether a machine can exhibit behaviour indistinguishable from a human (Uniyal 2024).

AI can excel in every field and provide huge development and growth and is not limited to a particular aspect of life. Below are some notable examples of the usage of AI in various domains.

1 AI has become the heart of enterprise growth rather than being limited to just one aspect as major private sector players such as Apple, IBM, Amazon, Google, Baidu, Facebook, and Microsoft use AI business models which indulge in non-oriental business practices, for example providing a physical store experience by installing a

"try me" feature where customers can see products on themselves through online mode, thus expanding the market by creating a whole world of digital shopping.

2 Offering AI natural language processing applications where big tech companies launch voice-responsive virtual personal assistants such as Apple's Siri, Amazon's Alexa or Microsoft's Cortana, and these have become everyday parts of people's lives for their entertainment and daily routine work reminders (Stanford University 2015: 15).

3 If looking into other innovations, AI solved the "captcha" test and acquired a 90% success rate (Metz 2013) and, even back in 2014, a chatbot named "Eugene Goostman" was developed which created confusion for the Royal Society judges as they believed it to be a 13-year-old boy (Press Association 2014).

4 AI may predict bank frauds by observing unusual card activities and large deposits in accounts which makes it easier to detect suspicious activities (Sabareesh & Ors 2024).

5 It is also observed how AI is effectively used in the healthcare sector and, as per an NHS England report, AI scrutinizes X-rays and helps radiologists assess the brain virtually without the physical presence of the patients by image analysis, detecting abnormalities and generating automatic reports. So through these technologies, patients recover at their home or in their comfort zone without being admitted to hospital (NHS England 2023).

The above examples reflect how AI has become a part of general public life in that, from digital marketing to detecting fraud and assisting doctors in examining the patient's profile, AI is everywhere.

[B] AI REGULATIONS: INTERNATIONAL INSTRUMENTS

The impact of AI is extremely large, which can create chaos as there is a high probability of biased algorithms in, for example, the healthcare sector, online advertising, and image generation which could impact the population and security of many countries. So governments around the globe are coming up with legislation to regulate AI. The objective behind regulating AI as per the government agencies is to ensure fairness under which governments will observe how AI impacts people's lives and how judiciously it operates in markets. Along with fairness, transparency is also one of the most important issues in observing how these applications come to their decisions. These issues cannot be overlooked otherwise there would be a bombardment of claims regarding discrimination and

other related liabilities noted in various government reports (Rodrigues 2020). Thus, major powers of the world are coming up with legislation to regulate AI (Candelon & Ors 2021).

The Artificial Intelligence Act: European Union

The EU Artificial Intelligence Act 2024 made history by being the first-ever regulation enacted for AI. The legislation's objective is to strengthen the rules around data quality, focus on specific utilization of AI systems and their associated or connected risks, and provide human oversight, accountability and, last but not least, transparency (World Economic Forum 2023).

Adopting a single definition of AI is not possible due to technical and scientific issues, thus the European Commission referred to the Organization for Economic Co-operation and Development (OECD) clause on AI which lays down the definition of "artificial intelligence system" under Article 3(1) as:

> software that is developed with [specific] techniques and approaches [listed in Annex 1] and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with (OECD 2019).

Annex 1, as referenced in the definition, outlines various techniques and approaches used to develop AI. The concept of an "AI system" encompasses a broad range of software-based technologies, including "logic and knowledge-based systems", "machine learning" and "statistical" methods.

The purpose of the legislation is to establish in EU law a definition of AI systems that should be technology-neutral and, thus, lay down a "risk-based approach" classification for AI systems. Under this classification, AI systems proposing "low or minimal risk" (Articles 51-56) have no such legal obligation. However, in the category of "limited risk" (Article 50) elements such as chatbots, deepfakes used to manipulate images, audio or video content are subject to light transparency obligation. If the AI system poses a "high risk" (Articles 46-49), it creates an impact on people's fundamental rights including biometric identification, law enforcement, and educational and vocational training. These high risks are divided into two categories and rules are applicable accordingly so that it would have to follow strict rules of requirements and obligation for authorized access to EU markets. The last classification categorization is "unacceptable risks" (Article 5) such as a threat to people's safety and livelihood, employing harmful manipulative practices or exploitation.

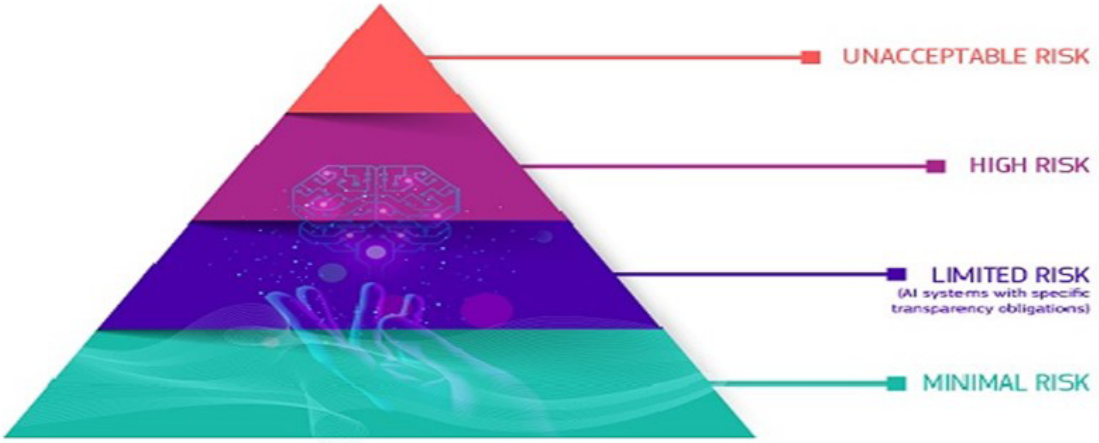

Figure 1: European Commission AI risk-based approach (European Commission 2025)

These AI systems are completely prohibited (Madiega 2024). Figure 1 represents the EU system of applicable AI categories.

To implement these rules and regulations, each member state designates one or two competent authorities that would supervise the implementation of the regulation and take corrective measures in matters of violation of AI regulations. A sufficient penalty would also be imposed in case of deviation from rules and regulations under two heads, namely matters related to Article 5 and matters other than Article 5 (Article 99).

AI legislation: the US approach

The US Government has introduced AI Bills, Acts and various guiding principles at both the state and federal levels. Under the first Trump administration, the National Artificial Intelligence Initiative Act of 2020 was introduced. It was one of the first major US Government efforts focusing on AI. However, the main objective behind this document is to foster research and development in the field concerned. The purpose of this Act is to develop trustworthy AI systems, prepare the workforce in the AI field in each sector and coordinate research and development among civilian agencies and departments (section 5101).

The US also faces challenges due to the transfer of power as, under the Biden administration, various executive orders (EOs) and the AI Bill of Rights were introduced but some were revoked once President Trump took office for the second time. However, not all orders were revoked as EO 14141 (the Biden 2025 AI Infrastructure EO) and EO 14144 (the Biden 2025 Cybersecurity EO) still exist. Under the first order, the US aimed to develop AI infrastructure for national security, without being

dependent on other countries' infrastructure, gaining advanced economic competitiveness by harnessing the benefits of AI for Americans and operating AI data centres (EO 14141). EO 14144 aims to promote security with and in AI. AI can transform cyber defence by identifying threats.

On 23 January 2025, President Trump signed a new EO (Removing Barriers to American Leadership in Artificial Intelligence). The purpose behind this order is to retain the global leadership of the US in AI and revoke all those directives aimed at restricting AI innovation. The objective is to sustain and enhance the global AI dominance of the US to promote economic efficiency, human flourishing and national security (EO 14179). This EO also instructs different agencies to set action plans for developing AI.

In addition, various states are framing legislation for AI compliance, such as the Colorado Artificial Intelligence Act 2024, the California Artificial Intelligence Transparency Act 2024 and the Utah Artificial Intelligence Policy Act 2024.

[C] INDIA'S APPROACH TO AI REGULATION

AI increasingly shapes sectors like fashion, medicine, and entertainment. Indian consumers actively engage with AI platforms from Amazon to Netflix. However, the extensive collection and storage of their data by these applications creates significant data privacy vulnerabilities. This raises critical legal concerns regarding potential breaches, cyber-attacks, unauthorized access, and data leaks, demanding careful legal and regulatory consideration to protect Indian consumer data in the evolving AI ecosystem. As per the Internet and Mobile Association of India (IAMAI) report, India's internet users' growth will surpass 900 million in 2025 (IAMAI 2025) and 67.9% internet penetration rate of the total population (Kemp 2025). Most of the credit goes to the Digital India initiative which is viewed as the modernizing triad to expand nationwide digital access. Analysing the trends and data, it is evident that AI will soon directly impact these initiatives. This makes it increasingly urgent for policymakers in India to seriously consider AI's potential (Vempati 2016). Countries around the globe are coming up with various pieces of legislation for regulating AI but, at the same time, the Indian Government has adopted a unique approach where there would be no legislation for regulating AI as the Government view is that it would restrict the development goals of AI culture in India. However, to protect the interests of the general public and to maintain law and order, the Indian Government has enacted

various specific items of legislation paving the way for the growth and development of AI in India.

1 India has enacted the Digital Personal Data Protection Act 2023 (DPDPB 2023). Under this enactment data that has been collected online, or even in offline mode which is digitized, would be protected. This Act focuses on digital personal data while following the guidelines of the case *Justice KS Puttaswamy and Another v Union of India (UOI) and Others* (2019) where the Supreme Court recognized privacy as the fundamental right under Article 21 of the Indian Constitution. This Act will apply to AI developers who facilitate AI technologies as these developers collect and store huge amounts of data to train their AI applications using algorithms to enhance the problem-solving of the applications concerned and these AI-based applications come under the category of data fiduciaries (section 2). The data fiduciary as per the Act ensures the accuracy of the data by adopting reasonable steps along with providing reasonable security safeguards to protect data which has been stored after obtaining the consent from the consumer (section 8(5)). In the event of a breach of security, it is their responsibility to inform the Data Protection Board of India and the affected persons concerned about the breach, and, once the purpose has been met, these AI applications must cease to retain personal data and therefore delete the data from the database (section 8(7)).

2 The Digital India Bill 2022 is yet to be implemented. Under this enactment, the Government aims to define and regulate high-risk AI systems. The main objective behind this Bill is to address the issues of digital India such as the open internet, online safety and trust, accountability and quality of service, adjudicatory mechanisms and new technologies. This Bill will also replace the 25-year-old Information Technology Act 2000. The most pressing issue is that this Bill will work in collaboration with other legislation and policies relating to the digital domain such as the Digital Personal Data Protection Act 2022 as discussed above, the National Data Governance Policy, various amendments for cybercrime, etc. All these laws and policies together establish a comprehensive framework governing different facets of the digital sphere under Indian jurisdiction (Anand 2023). This Bill categorizes the intermediaries into various sub-categories as per the size and risk involved, such as AI platforms, social media, fact-checking and, last but not least, e-commerce platforms. The objective behind implementing this categorization is to ensure the application of

rules and regulations as per the influence of specific intermediaries on a particular platform.

3 The Digital Competition Bill 2023 is meant to govern the digital market as the traditional market and e-commerce cannot be considered on the same footing. So how does one particular statute, namely the Indian Competition Act 2002, govern both these markets? To remove this inequality and protect the sanctity of market competition, the Government constituted the Standing Committee on Finance for the implementation of the above-mentioned Bill as it is high time to consider *ex ante* regulation rather than waiting for *ex post* law. Accordingly, the Committee recommended the following takes for the digital competition Bill. These are:

(i) Firstly, the Committee recommended initially identifying a small group of key players negatively influencing the market in this competitive digital landscape, referred to as "systemically important digital intermediaries" (Ministry of Corporate Affairs: 29).

(ii) Secondly, the Committee tagged 10 anti-competitive practices (ibid: 4). To ensure efficiency and transparency in the competitive market these practices are anti-steering provisions, platform neutrality and self-preferencing, bundling and tying, data usage, merger and acquisition, deep discounting and dynamic pricing, exclusive tie-ups and parity clauses, search and ranking preferencing, third-party applications and, last but not the least, advertising policies.

(iii) Thirdly, in introduced the establishment of digital market units within the ambit of the Competition Commission of India and proposed the Digital Competition Act to ensure fairness, transparency and equal opportunity for newcomers or start-ups in the digital market (ibid: 39).

[D] CRITICAL ANALYSIS

This fifth generation of computing, the era of AI or the era of predictive software, has caused a hue and cry around the world. Polities like the US and the EU involved in the development of AI are using different approaches. AI has created a disconcerting situation for lawmakers and governments around the need to regulate this algorithm-based technology which can mimic human intelligence. The influence or supremacy of AI is not limited to any particular area as it is impacting every field including the health sector, education sector, economic sector and so on. The regulation of AI and its related software is needed to protect the interests of people

as there have already been a tremendous number of worrying incidents including a violation of human rights in 2016 when the Microsoft Twitter chatbot handle "Tay" started showing racist content within a few hours of its launch as the main objective of this handle was to learn to engage with people through casual and playful conversation (Angulo 2018). The same is observed in another area as online giant platforms abuse their dominant position (Venkatesh & Ors 2025) as they are holding huge quantities of data, and even individual privacy was compromised after the invention of the concept of big data or machine learning. Destructive aspects of AI cannot be overlooked on the pretext of its advanced technology or generative AI. For instance, ChatGPT is making life so much easier as it is writing projects, decorating homes, doing research and even writing exams. But at what cost? These applications create biases, promote plagiarism, obstruct critical thinking, and even promote misinformation. So there is a need to protect vulnerable users; not to mislead users; to ensure users are aware of the risks; and to inform them when decisions are automated by AI. Countries around the world are coming up with legislations or policies to regulate AI, and, while Italy temporary banned ChatGPT (Pollicino & De Gregorio 2023), Germany implemented the 10th amendment to regulate the digital market, and the EU and the US have also brought in various legislations.

In this carnival of regulating AI, India took a back step by not implementing any legislation for AI, introducing Bills and regulations which are still not enforced as the Digital India Bill is still at its nascent stage, the DPDPB Act draft rules were released for public consultation on 3 January 2025 and the Digital Competition Bill is still at discussion stage. This laid-back attitude is explained by stating that the Indian Government is planning to provide space for technology to grow as it considers that this era of technology would lag behind if regulated or if the Government were to put restrictions on this flourishing technology, and the Government therefore considers it to be a kinetic enabler. This motto of the Indian Government was criticized around the world as scholars or experts viewed that:

> AI technology has enormous potential to shape India's economic and national security future; in the absence of a specific policy regime, however, India will find it difficult to realize the full power of AI while potentially falling prey to the detrimental effects of AI proliferation (Vempati 2016).

European countries criticize this approach of no regulation for AI in India and state that: "On artificial intelligence, trust is a must, not a nice to have" (Vestager 2021).

Even after the criticisms around the world, the Indian Government said no to AI legislation by reflecting the ideology that AI has so much potential to reform the various sectors. India argued that, being the hub of IT industries, the technology should be explored limitlessly and if put under restriction it would impact the growth of technology and the country negatively (Singh 2024). The Indian Government also agrees that one cannot ignore the destructive aspect of AI and, therefore, it is implementing various items of sectoral legislation to prevent harm to the general public and also maintain the sanctity of law and privacy of the individual, however, no such sectoral legislation has been passed and enforced to date.

As mentioned earlier, India can transform or modify various sectors using algorithm-based technology as the country has emerged as one of the largest markets for AI. At the same time, one cannot overlook the situation of India being a densely populated country, and it is an indispensable fact that there is a need to regulate this technology. One cannot turn a blind eye to issues of transparency or accountability while the creation or application of the same as a violation of multiple issues have been seen in the case of ChatGPT, such as misinformation, ethical concerns, safety matters and biased answers. Indeed, India needs legislation or policy for regulation and for that purpose is taking various initiatives to increase research in the area of AI. It also needs to promote rolling out guidance documents while keeping the objectives intact. The NITI Aayog, the government think-tank for public policy purposes, has released two AI strategy documents for India and these documents are "Responsible AI" and "Operationalizing Principles for Responsible AI" (NITI Aayog 2021a; 2021b). The Government has also focused on the expansion of the National Strategy for Artificial Intelligence and became the founding member of the Global Partnership on Artificial Intelligence (GPAI)[1] which, since 2024, has been chaired by India.

The Indian Government has adopted a distinctive, sector-specific tack to the governance of AI, prioritizing the avoidance of overarching regulations that could potentially stifle its nascent development. This contrasts with the legislative and executive actions undertaken in more developed jurisdictions such as the US and Europe, where dedicated legislation or EOs addressing AI regulation or research

[1] GPAI is a global, multi-stakeholder initiative designed to promote the responsible development and use of AI, with a focus on human rights, inclusion, diversity, innovation, and economic growth. It represents the first effort of its kind to enhance understanding of AI's challenges and opportunities through the experience and diversity of participating countries. To achieve this, GPAI aims to bridge the gap between theoretical knowledge and practical application by supporting advanced research and activities on AI-related priorities. See Press Release for details.

and development have been introduced. India, despite its developing nation status, is positioned as a significant destination for overseas investment. Consequently, the Government appears hesitant to impede AI's initial growth phase through broad regulatory constraints. This strategic approach aims to foster comprehensive national development by carefully calibrating technological expansion with the preservation of data protection principles, evidenced by the ongoing implementation of various sectoral legislation and pending Bills designed to achieve this delicate equilibrium.

[E] CONCLUSION AND SUGGESTIONS

To achieve the paramount benefit of this AI revolution, India adopted a "Responsible AI" policy as discussed above to attract AI adaptation, proliferation or innovation in every sector. India claims that it has adopted various policies or guidelines for this rapid AI diffusion in the market but none of the sectoral policies or Bills have yet been implemented. It creates challenges for the market to grow as AI-driven technology leads in every other field. However, the Indian Government claims that incorporating various sectoral policies or legislation emphasizes AI growth in India as well as maintaining the policy of protection of basic rights.

This approach posits that AI technology can grow to its fullest potential in the Indian market, as various other countries impose barriers, bans, or stringent regulations on the application of AI, thereby creating additional burdens for businesses seeking to invest in those jurisdictions. While India has undoubtedly been a benefactor of AI's rapid ascent, AI has yet to achieve its full potential. Therefore, the dormant attitude of India towards AI regulations is not to be considered as a developmental approach rather than a regression approach. The business community does not appreciate the EU's stringent approach towards AI as it has implemented the EU Artificial Intelligence Act 2024 and EU Digital Services Act 2022 which create a burden for them to invest in EU countries as certain restrictions are put on gatekeepers, developers and producers. As a consequence, India, being at the stage of development and one of the growing superpowers, has claimed that it cannot afford to put restrictions or hurdles in this advanced market even though basic human rights may be comprised in an unregulated state.

The Indian Government's sector-specific approach to AI governance, while potentially fostering innovation, requires urgent attention to the persistent threat of its risks. To achieve holistic growth, the authors advocate for the swift implementation of long-discussed sectoral policies

and Bills. A phased approach is recommended, involving public trials followed by formal enactment with legislative revisions, ensuring a balance between promoting AI development and establishing robust cybersecurity and data protection frameworks crucial for mitigating increasing online threats within specific sectors.

About the authors

Sonu Choudhary *is a Research Scholar at the Faculty of Law, Banaras Hindu University, in Varanasi, India. She holds Bachelor's and Master's degrees from the National Law University, Ranchi. She worked as a Fellow with "Teach for India" and her expertise lies in competition law and corporate areas. Combining her academic pursuits and experiences as a Teach for India Fellow, she is driven to contribute meaningfully to the fields of competition law and AI, constantly seeking avenues to bridge the gap between law, technology, and social impact.*

Email: sonuchoudhary@bhu.ac.in.

Christi Anna George *is a research scholar in the Faculty of Law, Banaras Hindu University, Varanasi, India. She holds a Master's degree from Aligrah Muslim University. Her expertise lies in jurisprudence and medical laws.*

Email: christigeorge@bhu.ac.in.

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