COMMENTARY

Reflections on medical ethics: A review of three Hindi online streaming series — *Human, Pill,* and *Kaala Paani*

INDRAJA SHARMA, ASHOK SEERVI

Abstract

In the governance of healthcare, medical ethics is fundamental to ensuring transparency and protecting patient rights. Medical dramas are increasingly shaping public perception of medical themes, fuelling public debate on medical ethics. In this reflective piece, we examine how three popular Hindi web series, Human (2022, Disney+Hotstar), Pill (2024, Jio Cinema), and Kaala Paani (2023, Netflix) explore critical issues, such as clinical trial ethics, medical litigation, and epidemic response management. Although these narratives raise public awareness, they often dramatise complex regulatory frameworks, which can lead to the misinterpretation of real-world medical practice. We evaluate how these portrayals align with real-world bioethics and healthcare regulations, assessing entertainment media's dual capacity to inform public understanding and potentially mislead audiences about critical ethical dilemmas in the Indian healthcare landscape.

Keywords: medical ethics, Indian healthcare, web series, clinical trials, healthcare regulations

Introduction

Indian digital entertainment platforms have explored ethical dilemmas and legal accountability in healthcare and clinical research through medical dramas and thrillers. But how accurately do these narratives reflect real-world ethical dilemmas? Online streaming series addressing medical ethics in India explore themes of corporate accountability, ethical breaches in medical research, and systemic failures in public health policy. However, given that fictionalised narratives may prioritise dramatic tension over scientific accuracy, there is room for misrepresentation of facts which could lead to distorted public perceptions of critical healthcare regulation and ethical standards.

We critically evaluate three Indian online streaming series that engage with medical ethics from distinct perspectives: clinical trial malpractices and pharmaceutical corruption (Human, 2022), medical negligence and legal redress (*Pill,* 2024), and epidemic ethics and public health governance (*Kaala Paani,* 2023). These series were selected for their thematic focus on distinct areas of medical ethics in India. Our critique draws on principles from media ethics and regulatory analysis to examine how storytelling choices shape perceptions of accountability and regulation. Each series offers a unique lens on healthcare law, regulatory failures, and ethical dilemmas, but they vary in scientific accuracy, depth of ethical discussion, legal nuance, and narrative balance.

Comparative analysis of the web series

Pharmaceutical corruption and clinical trial ethics in Human

Human portrays healthcare commercialisation, clinical trial malpractices, and pharmaceutical corruption. It shows informed-consent violations and unethical drug testing that exploit vulnerable populations. The series illustrates how pharmaceutical companies systematically undermine ethical safeguards in drug trials by manipulating drug approval processes and informed-consent protocols. Centring its narrative on the breach of ethics in individual cases, it presents compelling characters who encounter moral dilemmas, making abstract "policy failures" tangible to viewers through emotionally resonant storytelling. In one pivotal scene, a physician discovers falsified trial data, igniting an ethical crisis that anchors the series' critique of institutional corruption and regulatory shortcomings in pharmaceutical research.

The series fails to provide adequate context and neglects the safeguards provided by India's robust regulatory framework, the Drugs and Cosmetics Act, 1940 [1], the Indian Council of Medical Research Ethical Guidelines for Biomedical and Health Research Involving Human Participants [2], and Good Clinical Practice (GCP) [3], which govern clinical trials in India. This framework outlines the application process, participant safeguards, and the responsibilities of sponsors, investigators, and the Independent Ethics Committee. While it highlights the exploitation of vulnerable populations, the show fails to demonstrate how ethical violations occur within these regulatory frameworks rather than in a regulatory vacuum. This is especially notable since the Supreme Court's ruling prompted the establishment of stricter regulations under the New Drugs and Clinical Trials Rules, 2019 [4], promoting a transparent approach to clinical research and ensuring accessibility to new drugs.

Medical malpractice and legal challenges in Pill

Pill portrays a concerning view of pharmaceutical industry malpractices in drug trials and healthcare litigation. The series demonstrates how profit motives frequently override patient rights in commercial healthcare settings. It highlights barriers to legal recourse, including financial constraints, bureaucratic delays, and institutional resistance. The show's depiction of clinical trial protocols deviates significantly from established research methodologies. The dramatisation of accelerated drug approval timelines creates inconsistencies

within *Pill's* narrative framework, as the series establishes that regulatory bodies mandate rigorous multi-phase testing, yet simultaneously portrays these same protocols being bypassed without acknowledging the shift.

The series effectively captures commercial pressures in pharmaceutical research. However, it overlooks the multi-tiered regulatory oversight provided by the Central Drugs Standard Control Organisation (CDSCO), the Drug Technical Advisory Board (DTAB), and the structured pathway for medication approvals, which involves phased clinical trials, data submissions, and post-marketing surveillance. This gap is reflected in the storyline, where a new drug is rushed to market despite unaddressed trial concerns, and the whistleblower doctor's objections are sidelined rather than prompting any formal regulatory action. Pharmaceutical companies in India are held accountable through legal tools such as the Drugs and Cosmetics Act,1940, and Rules, 1945 [1] and the Consumer Protection Act, 2019, [5], which are overseen by the CDSCO and can impose financial penalties for negligence under the Bharatiya Nyaya Sanhita (BNS). While *Pill* promotes awareness of patient rights and medical accountability, it does not reflect the complex realities of medical litigation, which requires expert testimony, due process, and substantial legal compliance [6]. The narrative also oversimplifies the complex process of seeking justice.

Epidemic ethics and public health governance in Kaala Paani

Kaala Paani depicts a fictional epidemic in the Andaman and Nicobar Islands. The series portrays the authorities' ineffective response to a public health emergency, a theme reminiscent of the real-world mismanagement of the Covid-19 pandemic. It explores bioethical dilemmas, such as resource allocation during scarcity, prioritisation of treatment access, and the need to balance individual liberties with public health during a health emergency. This illustrates the tension between utilitarian (majority welfare) and rights-based (individual autonomy) approaches during health crises.

The series highlights how vulnerable communities may suffer biomedical exploitation in the absence of ethical oversight. This reflects real tensions in medical ethics in emergency situations, where individual protections may be compromised for public health needs. The series' central ethical conflict concerns the exploitation of indigenous populations for biomedical research, as scientists seek to extract an antimicrobial peptide from the cerebrospinal fluid of tribal people to develop a cure. This echoes historical cases of unethical medical research on marginalised populations, such as the Tuskegee Syphilis study in the United States [7].

Kaala Paani perpetuates scientific inaccuracies that undermine its credibility. The show incorrectly suggests that antimicrobial resistance can emerge from burial sites, whereas in reality, resistance is primarily driven by antibiotic misuse and poor regulatory oversight [8]. It also romanticises tribal peoples' genetic immunity, a problematic trope in medical anthropology. Disease in the show is mainly waterborne,

spreading through the islands' contaminated water supply. However, the containment strategies depicted involve measures to restrict the spread of airborne pathogens, like the use of air-sealed rooms, respiratory precautions, lockdowns, and mask enforcement. This flawed depiction has the potential to mislead viewers about the effectiveness of these strategies against waterborne transmission. It fails to consider real-world epidemic containment measures, such as contact tracing, risk communication, and water sanitation protocols.

The Epidemic Diseases Act,1897, [9] and the Disaster Management Act, 2005, [10] comprise India's legal framework for epidemic management. This legal framework authorises state-level interventions and establishes structured response hierarchies and resource mobilisation protocols. However, the series' inadequate exploration of enforcement reduces a complex healthcare challenge to a political failure. This misalignment reduces the series' scientific credibility and risks reinforcing public misconceptions about epidemic control. While India has a structured legal framework for epidemic response [10], its implementation during Covid-19 was contested, with ongoing debate around how population health and individual rights were balanced.

Discussion

These streaming series primarily target India's urban and semi-urban audiences with digital platform access, spanning Hindi, English, and regional language viewers across diverse socioeconomic backgrounds. This represents a significant shift from traditional broadcast medical dramas that often portray healthcare institutions favourably in their narrative. Contemporary streaming content emphasises systemic failures and ethical ambiguities, which, while potentially valuable for critical discourse, risks misleading viewers when dramatic storytelling overshadows regulatory realities.

Media narratives and their impact on public health perception

Fictional narratives shape healthcare knowledge and behaviours, as they elicit stronger emotional responses than factual communication. Research shows measurable effects: 11% negative, 32% positive, and 58% mixed outcomes on health perceptions [11]. Positive outcomes included improved health knowledge and attitudes; negative outcomes involved misinformation or unrealistic portrayals, while mixed results reflected varied effects across different viewer contexts. These narratives serve as informal health information sources, significantly shaping public understanding of healthcare systems [12]. With 547 million over-the-top (OTT) media service viewers in India [13], these narratives can have substantial impact in contexts where health literacy is asymmetrical and low. They could similarly influence the public as well as medical trainees, potentially moulding professional behaviour and ethical reasoning [14]. They explore medical professionalism and bioethics [15].

Additionally, they influence viewers' perceptions and attitudes through peer discussions in social settings, shaping how ethical issues are understood and debated [16].

Misrepresentations in these series — such as the ease with which pharmaceutical oversight is circumvented in *Human;* the unrealistic speed of drug development and approval processes in *Pill;* and the oversimplified epidemic management protocol in *Kaala Paani* — risk fostering institutional distrust and creating unrealistic expectations. This is concerning, given the evidence linking media consumption to vaccination hesitancy during Covid-19 [17]. While these shows are valuable for discussing healthcare ethics, their potential impact on health-seeking behaviours and outcomes must be carefully considered. Viewers must critically evaluate the information presented in medical dramas and consult reliable sources for factual understanding. Media literacy and public health education can support audiences in developing this critical lens.

Ethical portrayal vs dramatic license in healthcare narratives

All three series bring crucial healthcare regulatory and ethics issues to the forefront. Their legal and ethical dimensions collectively highlight the tension between medical practice, corporate interests, and the public; however, their scientific accuracy, narrative depth, and realism vary significantly. They, therefore, fail to provide a meaningful exploration of the country's robust healthcare legislation. The primary issue in Indian healthcare is the enforcement of regulatory frameworks, rather than their absence.

If works of medical fiction are to be socially meaningful, they must balance engagement with scientific accuracy and avoid over-dramatisation, that is, the tendency to prioritise sensational or emotionally charged plotlines at the expense of plausibility and regulatory realism. While big-budget, mainstream productions are primarily intended to entertain, it is not their duty to represent the contemporary regulatory framework. Yet, when creators choose medical ethics as their subject matter, they enter a space where artistic licence intersects with a social responsibility to maintain factual accuracy [18]. Despite their disclaimers, they have the potential to shape public perception on critical healthcare issues.

Thus, while maintaining narrative liberty, medical dramas would benefit from remaining grounded in plausible regulatory contexts, particularly concerning clinical research ethics, litigation, and epidemic control, as these affect public trust in healthcare systems. This approach can enhance the credibility of such a series and promote more responsible audience engagement with healthcare topics. This involves a commitment to avoiding misrepresentation or harmful misconceptions that may impact viewers' healthcare choices and policies. By referencing key legal frameworks or regulatory safeguards, even implicitly, such series can contribute more effectively to public discourse while fulfilling their purpose of entertainment and ethical storytelling.

Conclusion

Our critical examination of *Human, Pill,* and *Kaala Paani* reveals how their narratives simultaneously illuminate and distort medical ethics in the Indian healthcare system. These shows contribute to discussions on medical ethics, healthcare law, and systemic vulnerabilities by dramatising failures in the regulatory oversight of clinical trials, provision of legal remedies for patients, and governmental preparedness for public health emergencies. However, they inaccurately portray informed consent, pharmaceutical accountability, and epidemic management. In contexts where health literacy varies, viewers may see these dramatisations as informal education instead of trusting legitimate research and ethical practice. Misrepresentations can potentially mislead large audiences who view fictional portrayals as a factual representation of the healthcare sector; these portrayals suggest that ethical breaches occur in regulatory vacuums rather than as a result of implementation failures within India's comprehensive system frameworks.

The ultimate challenge is to create compelling content that accurately represents the ethical landscape of modern healthcare, balancing entertainment with scientific plausibility. Future productions would benefit from closer collaboration between creative teams and experts in clinical research, bioethics, and healthcare law — not to sanitise narratives, but to ensure that they reflect the regulatory reality and enhance public understanding. Authentic storytelling can catalyse meaningful policy discussions on healthcare governance in India by transforming digital media into effective public health communication tools.

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