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# **THE ROLE OF TECHNOLOGY IN HUMAN TRAFFICKING AND SEXUAL EXPLOITATION: A CRITICAL STUDY WITH SPECIFIC REFERENCE TO DELHI NCR**

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## **Abstract**

Among the gravest abuses of human rights, modern technology has served as a tool for trafficking in humans and sexual exploitation of vulnerable populations, but it has also the ability to aid in their abolition. With a focus on Delhi NCR, one of the most impacted areas in India, this article analyzes the function of technology in human trafficking. It delves at the ways in which social media, encrypted messaging, dark web channels, and online job ads are utilized by traffickers for various purposes, including recruitment, grooming, advertising, and logistics. Drawing upon doctrinal legal analysis, secondary data (including NCRB reports), and scholarly literature, the study highlights the inadequacies of India's current legal framework, particularly the limitations of statutes like the ITPA, IT Act, and the Bharatiya Nyaya Sanhita in addressing cyber-facilitated exploitation. The paper also underscores enforcement challenges, including the lack of specialized cybercrime capacity, evidentiary hurdles, and tensions between privacy rights and surveillance needs. At the same time, it identifies emerging technological solutions—such as NLP-based detection tools, forensic geolocation, and AI-enabled predictive policing—as promising interventions when deployed ethically and in partnership with NGOs and communities. Finally, the study proposes a multi-pronged strategy combining legislative reform, capacity-building, ethical technology deployment, and victim-centered digital support. By situating Delhi NCR as a critical case study, the paper emphasizes the urgency of bridging legal, technological, and social gaps to transform technology from a driver of exploitation into a tool of justice and empowerment.

## **1. Introduction**

### **1.1 Context and Rationale**

One of the gravest violations of human rights that occurs on a global scale is people trafficking, which primarily involves sexual exploitation. Nearly half of the estimated 600,000 to 820,000 victims of human trafficking each year are youngsters; Indians are not only exploited as sources, but many are also trafficked in the country, with an estimated 135,000 children

reaching the sex trade each year, alone in India and not including cross border trafficking.<sup>1</sup> In India, 2,250 cases of human trafficking have been registered in 2022 with more than 6,000 victims of which almost 2,900 are children, and 1,190 are girls.

Like any other major urban center that is a transit point, Delhi NCR (National Capital Region) exhibits these appalling trends. The NCRB data of Delhi between 2018 and 2022 indicate cases that vary but are still sizable: the reported human trafficking started with 98 and went down to 53 and then back up to 92 and 106 cases respectively, while the women in trafficking cases were 95 and decreased to 31 before rising to 143 and 146 cases, respectively.<sup>2</sup>

At the same time, traffickers continue to take advantage of technological platforms, which include social media, cell phone messaging, encrypted applications, and even dark-web forums, to recruit, groom, coordinate logistics, and obfuscate their activities..<sup>3</sup> However, technology can present law enforcement and civil society with powerful investigational tools, digital forensics and victim support tools as well.

It is against this background that the paper critically evaluates the dualistic role of technology in trafficking; as both facilitator and deterrence to the issue with a focus on Delhi NCR because of its legal, demographic and geographic centrality in the national dynamics of trafficking.

## 1.2. Statement of the Problem

Despite the existence of comprehensive legal frameworks such as the *Immoral Traffic (Prevention) Act, 1956*, provisions under the *Indian Penal Code* (now *Bharatiya Nyaya Sanhita, 2023*), and various human rights instruments, **human trafficking continues to thrive in Delhi NCR**, reflecting a deep gap between law and implementation. The persistence of this crime indicates not only systemic enforcement failures but also a lack of public awareness, inadequate rehabilitation mechanisms, and insufficient institutional capacity. While policies and judicial pronouncements emphasize victim protection and deterrence, the ground reality shows limited legal literacy, poor coordination among enforcement agencies, and widespread mistrust in reporting mechanisms. Thus, the difficulty is to determine how well these laws are

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<sup>1</sup> National Crime Records Bureau (“NCRB”) data (2022): ~2,250 registered human trafficking cases involving ~6,036 victims, including ~2,878 children (1,059 girls); Source: NCRB Report 2022.

<sup>2</sup> NCRB data for Delhi: Cases reported and women rescued from 2018 to 2022 as per parliamentary reply, Ministry of Women & Child Development (Rajya Sabha Unstarred Question, 07-08-2024).

<sup>3</sup> Role of technology: grooming, recruitment via social media and encrypted apps; Source: *Technology and Human Trafficking* (Urban Crime journal, 2022).

understood, put into practice, and backed by public knowledge, and how much societal and institutional obstacles prevent anti-trafficking goals from being achieved within the context of human rights.

### 1.3. Review of Literature

#### Books

1. **Jayanta Choudhury & Purbita Gupta** “Trafficking in Women and Children Tripura Perspective”<sup>4</sup> examine the various forms and geographical scope of trafficking in India, emphasizing international and national efforts by UN agencies and NGOs to combat it. Their empirical study in Tripura reveals that while prostitution is a major outcome, the purposes of trafficking vary, highlighting its multidimensional nature and the need for broader preventive strategies.
2. **P.M.Nair, IPS** “Trafficking in Women and Children in India”<sup>5</sup> presents a comprehensive NHRC-UNIFEM-supported study that includes interviews with traffickers and victims, exposing the multidimensional nature of trafficking, legal loopholes, and organized criminal involvement. The report emphasizes the close relationship between migration and trafficking, naming India as one of the countries involved at every stage (source, transit, and destination). The study stresses that effective prevention requires addressing migrant vulnerabilities and improving law enforcement sensitivity and training.
3. **S.K.Ghosh** “The World of Prostitutes”<sup>6</sup> traces prostitution from ancient civilizations to its modern forms, portraying it as a global system of exploitation and human rights violation rather than individual moral failure. The book discusses international conventions against prostitution, government policies—ban, regulation, and decriminalization—and the misuse of child adoption in trafficking. Ghosh emphasizes suppressing forced prostitution, strengthening international cooperation, and using media to raise public awareness of exploitation..
4. **K.C. Tarachand** “Devadasi Custom Rural Social Structure and Flesh Market”<sup>7</sup> The author examines the Devadasi system, exploring its origin, functioning, socio-political influences, and cultural implications. Research on commercial prostitutes in areas surrounding temples

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<sup>4</sup> P. Gupta, Trafficking in Women and Children” Tripura perspective, (Naba Chandana Prakashani; 1st ed edition (, 2012)

<sup>5</sup> **P.M.Nair, IPS** “*Trafficking in Women and Children in India*” (Orient Longman Private Limited , 2005

<sup>6</sup> **S.K.Ghosh** “*The World of Prostitutes*” (A.P.H .Publishing Corporation ,1996)

<sup>7</sup> **K.C. Tarachand** “*Devadasi Custom Rural Social Structure and Flesh Market*” (Reliance Publishing House,1992)

revealed that 35% of the participants were Devadasis. A significant number of these women had been victims of rape or abduction and had later, due to societal pressure, taken up temple service. The study reveals how ritual traditions are exploited for commercial and social gain, stressing the need for education, economic empowerment, punishment of offenders, and rehabilitation of victims to prevent the perpetuation of this exploitation..

## Articles

5. **Ibrahim Mohamed Abdelfattah Abdelaziz ‘*In Wither Childhood? Child Trafficking in India*’**<sup>8</sup> Sexual exploitation, forced labor, illicit adoption, and organ sale are some of the many forms of child trafficking that the author identifies in her examination of the scope and character of this issue in India. According to the study's assessment of current legislation and initiatives meant to safeguard children from trafficking, India does not have a thorough legislative framework to handle the issue in all its facets. The author concludes that current interventions focus excessively on sex trafficking and post-rescue rehabilitation, with insufficient emphasis on prevention and holistic child protection.
6. **P.M. Nair’s ‘*Trafficking Women and Children for Sexual Exploitation*’**<sup>9</sup> P.M. Nair’s work provides judges, prosecutors, and law enforcement with a training manual and practical guidance to combat human trafficking with instant, effective methods. It emphasizes a survivor-centric approach, advocating for systematic rescue and comprehensive rehabilitation. The book clarifies key concepts, dispels myths and sexist biases surrounding trafficking, and stresses the importance of sensitivity, legal precision, and coordinated intervention in effectively addressing and preventing trafficking crimes.
7. **Sibnath Deb in ‘*Legislation Concerning Reporting of Child Sexual Abuse and Child Trafficking in India: A Closer Look*’**<sup>10</sup> analyzes existing laws and mechanisms addressing child abuse and trafficking, emphasizing implementation challenges. Similarly, Geeta Chopra, in “*Child Trafficking: The Victimized Child*,” examines the nature, causes, and networks of child trafficking, identifying high-risk populations and hotspot regions. Both authors discuss legislative frameworks, child-tracking systems, and NGO interventions, particularly highlighting Bachpan Bachao Andolan’s role in monitoring and rescuing trafficked children across India..

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<sup>8</sup> Abdelaziz, I. M. A. (2007). *Wither Childhood? Child Trafficking in India*. In *Fifth Annual Interdisciplinary Conference on Human Trafficking 2013*.

<sup>9</sup> Nair, P. M. (2014). *Trafficking Women And Children For Sexual Exploitation* (No. id: 5923).

<sup>10</sup> Deb, S. (2015). *Legislation concerning reporting of child sexual abuse and child trafficking in India: A closer look*. In *Mandatory reporting laws and the identification of severe child abuse and neglect* (pp. 541-564). Dordrecht: Springer Netherlands.

8. Clayton A. Hartjen, S. Priyadarsini in '*Sexual and Commercial Trafficking of Children*'<sup>11</sup> examine the global dimensions of child trafficking, estimating the number of children kidnapped and sold for economic and sexual exploitation. They analyze the motives, recruitment methods, and control mechanisms used by traffickers, as well as the health risks and psychological trauma faced by victims. The authors highlight the difficulties in enforcing national and international laws and discuss ongoing global and local initiatives aimed at preventing trafficking and rehabilitating affected children..

## 1.2 Scope and Objectives

This study aims to explore the following key research questions:

1. How is technology facilitating human trafficking and sexual exploitation in Delhi NCR?
2. Which legal instruments and enforcement mechanisms currently address technology-enabled trafficking?
3. Where are the legal and practical gaps?
4. Can emerging technologies (e.g., NLP, computer vision, AI forensics) be harnessed to better detect and prevent trafficking?
5. What policy recommendations can strengthen Delhi NCR's legal and technological response framework?

## Research Question

1. How does technology facilitate human trafficking and sexual exploitation in the Delhi NCR region?
2. Are the existing legal frameworks in India adequate to address technology-enabled trafficking?
3. What challenges do law enforcement agencies face in combating cyber-facilitated human trafficking?
4. How can emerging technologies be ethically utilized to detect, prevent, and respond to trafficking more effectively?

## 1.9. Research Hypothesis

The present research examines the following hypotheses.

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<sup>11</sup> Hartjen, C. A., & Priyadarsini, S. (2011). Sexual and commercial trafficking of children. In *The Global Victimization of Children: Problems and Solutions* (pp. 137-183). Boston, MA: Springer US.

- Technology has significantly transformed the dynamics of human trafficking in Delhi NCR, serving both as a facilitator of exploitation and as a potential tool for prevention and detection.
- Existing legal frameworks, including the *Immoral Traffic (Prevention) Act, 1956*, the *Information Technology Act, 2000*, and the *Bharatiya Nyaya Sanhita, 2023*, are inadequate to effectively address the emerging forms of technology-driven trafficking.
- Strengthening cyber law enforcement capacity, integrating artificial intelligence tools, and enhancing public awareness can substantially improve the prevention, investigation, and prosecution of technology-enabled human trafficking.

### 1.3 Methodology

The study employs a **mixed-method approach**, combining doctrinal and empirical research to examine the intersection of technology and human trafficking in Delhi NCR. The **doctrinal analysis** explores legal frameworks such as the *Immoral Traffic (Prevention) Act, 1956*, *Bharatiya Nyaya Sanhita (Sections 143–146)*, *Information Technology Act, 2000*, and relevant case laws, supported by secondary data from NCRB reports, UN documents, and scholarly works. The **empirical component** involves a structured questionnaire survey conducted among respondents in Delhi NCR to assess awareness, perceptions, and challenges related to trafficking. Data were analyzed using percentages and charts, while technological tools like NLP-based systems and AI-enabled forensic methods were reviewed to evaluate their potential in combating cyber-facilitated trafficking..

## 2. Conceptual & Legal Framework

### 2.1 Defining Human Trafficking and Sexual Exploitation

Human trafficking is not merely a crime of movement but of exploitation. The **United Nations Palermo Protocol (2000)** defines trafficking in persons as:

“the recruitment, transportation, transfer, harbouring or receipt of persons, by means of threat, force, coercion, abduction, fraud, deception, abuse of power or vulnerability, or giving/receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation.”

Sexual exploitation, forced labor, servitude, slavery, and organ harvesting are all forms of exploitation that can occur here. According to this all-encompassing definition, human dignity, and not merely public order, is the primary target of trafficking crimes. According to Section 370 of the Indian Penal Code, it is considered human trafficking to entice, harbor, transfer, or

receive a person with the intention of exploiting them in any way, including prostitution, slavery, servitude, or forcible organ removal.<sup>12</sup> With some changes, these sections are repeated in the new Bharatiya Nyaya Sanhita 2023 (BNS) under Sections 143-146 which reassert the centrality of exploitation to the offence.<sup>13</sup>

Certain laws have been enacted to address sexual exploitation specifically. For example, the Immoral Traffic (Prevention) Act, 1956 (ITPA) makes it illegal to run a brothel, live off of prostitution, and engage in trafficking related to commercial sexual activity.<sup>14</sup> The **Protection of Children from Sexual Offences Act, 2012 (POCSO)** increases the severity of the punishments for the crime by making child sexual exploitation a strict liability offence.<sup>15</sup>

Thus, the conceptual framework integrates both international and Indian legislative materials to portray trafficking as a transnational organized crime and a human rights violation on a domestic level.

## 2.2 Technology in Trafficking: A Global View

All over the world, technology has found itself as a two-edged sword against trafficking. On one hand it is intensively exploited by traffickers to recruit, advertise and exploit and on the other hand it gives new means of detection and law enforcement.

- **Internet & Social Media:** The traffickers exploit Facebook, Instagram and WhatsApp as their recruitment tools, reporting the offers of the jobs or modeling contracts which do not exist in real life.
- **Mobile Applications:** The dating and messaging apps will enable traffickers to build a rapport and trust, as well as groom victims in addition to scheduling and mapping movements by concealing identity.<sup>16</sup>
- **Encryption & Anonymity:** End-to-end encrypted (Signal, Telegram) and VPNs can also be used to close any possible digital trace when communicating.<sup>17</sup>
- **Dark Web & Online Advertisements:** The dark web offers anonymity marketplaces that offer places to buy the services such as sexual exploitation. Research cases

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<sup>12</sup> Indian Penal Code, 1860, § 370.

<sup>13</sup> Bharatiya Nyaya Sanhita, 2023, §§ 143–146.

<sup>14</sup> The Immoral Traffic (Prevention) Act, 1956.

<sup>15</sup> Protection of Children from Sexual Offences Act, 2012

<sup>16</sup> ResearchGate, Kejriwal & Szekeley, Use of Technology in Human Trafficking Networks and Sexual Exploitation (2017).

<sup>17</sup> UNODC, The Role of Technology in Trafficking in Persons (2022).

demonstrate that traffickers exploit Bitcoin and other cryptocurrencies in an effort to mask money flows.

- **Global Case Studies:** According to a study commissioned by the UNODC, in 41 percent of the cases detected worldwide, technology played a role whether it was during the recruitment or exploitation process.<sup>18</sup>

Therefore, technology serves to enhance trafficking networks and thus limits costs, increasing access and guaranteeing concealment. In parallel, international NGOs and law enforcement start employing data mining, AI detection, and online observation as the counter-measures as well.

## 2.3 Legal Protections and Instruments

### (a) National Framework (India)

India has a layered governing system to treat traffic and sexual abuse:

- **IPC/Bharatiya Nyaya Sanhita:** Section 370 (IPC) / Sections 143–146 (BNS) criminalize trafficking.
- **Immoral Traffic (Prevention) Act, 1956 (ITPA):** Enactments specifically targeting sex trafficking, specifically brothels and the like, and organized prostitution.
- **Protection of Children from Sexual Offences Act, 2012 (POCSO):** Protection of children, in particular sexual exploitation through trafficking.
- **Information Technology Act, 2000 (IT Act):** Sections 66E, 67, 67A & 67B criminalize the online circulation of obscene material, child pornography, and digital exploitation.<sup>19</sup>
- **Criminal Law (Amendment) Act, 2013:** The Nirbhaya case led to stronger terms of sexual assault, and addition of terms of trafficking as well as increased punishments in the Bill as well.<sup>20</sup>

### (b) International Instruments

- **UN Palermo Protocol (2000):** This protocol has been ratified by India in 2011 so the laws regulating trafficking in the country are being adjusted to the international ones.<sup>21</sup>
- **UNODC Conventions & Programs:** Offer technical support, capacity building and cross border collaboration.<sup>22</sup>

<sup>18</sup> UNODC Global Report on Trafficking in Persons (2022).

<sup>19</sup> Information Technology Act, 2000, §§ 66E, 67, 67A, 67B.

<sup>20</sup> Criminal Law (Amendment) Act, 2013.

<sup>21</sup> United Nations Treaty Collection, Status of Palermo Protocol (India ratification 2011).

<sup>22</sup> UNODC, Comprehensive Strategy on Trafficking in Persons and Smuggling of Migrants (2021).

- **CEDAW (1979) & CRC (1989):** India has a duty to do its role in the fight against human trafficking, especially that which targets children and women.

Collectively, these systems establish a twofold compliance system--national laws ensuring proscriptions enforced locally, and the international norms informing India with regard to its international obligations.

### **3. Delhi NCR: Trafficking Landscape & Tech-enabled Dynamics**

#### **3.1 Prevalence and Patterns in Delhi**

One of the most prominent areas in India linked to human trafficking and exploitation is the National Capital Region (NCR) of Delhi. According to NCRB data, Delhi had between 53 and 106 such cases in the period between 2018 and 2022 with the highest proportion being cases involving women and then children. Trafficking is localized towards some regions especially the GB road (now officially Swami Shradhanand Marg) which is among the largest red light areas remaining in India with thousands of women who are due to the sex trade.

According to the Trafficking Institute (2023), the traffickers tend to take advantage of the position of Delhi as a destination and a transit point as in this part of India, tourists can find victims brought in both internally (e.g., West Bengal, Jharkhand, Assam) and externally (Nepal, Bangladesh). According to reports filed by the U.S. State Department, trafficking networks in Delhi operate as organised groups with a high level of demand met by low levels of enforcement within the unregulated areas.

According to research conducted by UNODC and IJNRD, traffickers are increasingly relying on digital platforms to organise recruitment, payments and observation and this makes Delhi NCR a good example of the technology driven exploitation crimes and the research also points out to the fact that trafficking including commercial sexual services, bonded labour and child exploitation is also perpetuated by domestic demand in India suggesting that it is not a one-dimensional problem but is caused by a multidimensional issue of trafficking in India.<sup>23</sup>

#### **3.2 How Technology Facilitates Recruitment and Grooming**

Technology has become a key element in recruitment particularly in the urban setting e.g. Delhi, where the level of internet penetration is high. Fake job adverts of hospitality, modeling

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<sup>23</sup> IJNRD, Role of Technology in Human Trafficking (2023); PLOS One, Human Trafficking in South Asia: Prevalence & Responses (2022).

and domestic work are frequently placed online which attracts women and children of vulnerable backgrounds.<sup>24</sup>

- **Social Media Grooming:** Traffickers rely on tools like Facebook, Instagram, and WhatsApp to start conversations with their targets and groom them into trusting their traffickers.
- **Deceptive Opportunities:** Victims are presented with well-paying jobs or marriages in Delhi where they are entangled into brothels or exploitative labour.
- **Case Documentation:** In Reports Calio Files, the internet-facilitated child trafficking is in one case in Delhi, the minors are contacted through chat rooms and social media, and then physically transported.<sup>25</sup>

Scholarly research (e.g., arXiv research) also points out how traffickers adjust to digital policing by using code words, emojis, and closed groups, which makes it difficult to identify them. Wikipedia recaps on cybersex trafficking also report how third party traffickers in major metropolitans now utilize live-stream technologies to take advantage of their victims without having to move them physically.

In such a way, recruitment and grooming in Delhi NCR mixes the usual techniques of deception with digital savvy.

### 3.3 Logistics: Transportation & Control via Technology

Technology also facilitates the logistical chain of trafficking:

- **Encrypted Messaging:** Traffickers in Delhi use encrypted applications like Telegram, Signal, and WhatsApp to organize the movement of victims from rural settings to the urban destinations.
- **GPS and Location Services:** Ride-sharing mobile applications (Ola, Uber) and location-sharing are commonly abused to locate and dominate the movement of the victim and track him/her in real-time.
- **Surveillance of Victims:** Victims are given mobile phones by traffickers as a method of communication and control, keeping them on a short leash by enslaving them with the mobile phone as a surveillance tool haunting their lives with no way to escape the slavery chain either short of desperation and suicide or running against all odds and chances in the human chain of trafficking cartels.

<sup>24</sup> arXiv, Kejriwal & Szekely, Detection of Human Trafficking Ads (2017).

<sup>25</sup> Calio Files, Internet-Facilitated Trafficking of Minors (2021).

Traffickers issue mobile phones to their victims to control movement, to communicate and to spy on one another, limiting autonomy.<sup>26</sup>

### 3.4 Digital Advertising & Dark Channels

The sex workers in Delhi have desperately displayed a massive change in their mode of advertisement of the products they offer instead of physical prostitution houses they have drifted to advertisement in classifieds, messaging apps, and dark-web marketplaces.

- **Commercial Sex Ads:** Websites and informal networks advertise “escort services” that often mask trafficking victims.
- **Digital Pornography & Exploitation:** Increasingly, directors in Delhi NCR are blackmailing victims into making pornographic material transmitted through encrypted means which is generating additional avenues to exploit them.
- **Cross-Border Links:** According to NODC, Indian traffickers liaise with the international buyers through the dark net and the incorporation of Delhi in global markets of exploitation.<sup>27</sup>

Through these, digital ecosystems have not only provided a market but also a mechanism of concealment, which conventional investigative stratagem of law enforcement has to deal with in a new context of law and order policing.

## 4. Tech-Driven Challenges to Law Enforcement and Victim Support

### 4.1 Anonymity & Encryption

Anonymity is one of the greatest threats brought by technology in the case of trafficking. Traffickers are increasingly using encrypted instant messaging applications (e.g. WhatsApp, Signal, Telegram) which mask communications against a third-party interception.<sup>28</sup> The encryption makes it so that even service providers cannot get inside, and they must have access to the device level itself in order to get the information, and thus, it is hard to imagine an instance where a law enforcement officer can intercept any communications without violating the laws protecting privacy.

The 2024 U.S. State Department Trafficking in Persons (TIP) Report lists over-usage of encryption as a two-fold veil, both shielding the traffickers against law enforcement, and at the

<sup>26</sup> UNODC, Cybercrime and Trafficking Intersection Report (2022).

<sup>27</sup> UNODC, Dark Web and Trafficking Report (2021).

<sup>28</sup> State.gov, Trafficking in Persons Report – India (2024).

same time exposing children to predation online. Moreover, the traffickers use anonymizing programs (VPN, Tor browser) to conceal their online traces and access the dark web where sexual services can be found and money is transferred in untraceable cryptocurrencies.

As noted by the iCAT Project (Interpol Child Abuse Image Database), a considerable number of exploitative files are put on cloud servers or peer-to-peer networks by traffickers. In case one of the networks is identified and shut down, the decentralized storage feature allows the resumption of operations rather swiftly.<sup>29</sup>

Therefore, the consequences are that encryption and anonymity lead to a game of cat and mouse between the authorities and traffickers whereby privacy-enabling technologies, which have desirable effects on legal freedom, are enabled to cause such forms of intolerable exploitation.

#### 4.2 Detection Difficulties

Although in some cases digital evidence is available, the process of tracking down and hence prosecuting online trafficking groups in Delhi NCR is extremely complicated. A serious issue is the inability of most local police officers to understand the technologies as well as inadequate technology-based resources to conduct sophisticated cyber-forensics.

- **Volume of Data:** Trafficking has to be found by sifting through volumes of online ads, job opportunities, and social media messages. Automated filters tend to miss the coded language or coded image traffickers use.
- **Jurisdictional Barriers:** Internet networks cross jurisdictional boundaries, state and national boundaries, so it may take time before the authorities at Delhi have to seek cooperation of various jurisdictions and even international agencies,...
- **Evidentiary Standards:** The courts require that chain-of-custody evidence of digital materials be strong. Metadata or the digital traces are altered or erased in most instances, before they could be retrieved by law enforcers.<sup>30</sup>

Even when a victim wants to testify, investigations often fail in India not because witnesses cannot be found--but because, as the Trafficking Institute explains, digital evidence trails in India are fragmented and, more often than not, they cannot be used under stringent evidentiary practices.

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<sup>29</sup> iCAT (Interpol Child Abuse Image Database), *Annual Review Report (2022)*.

<sup>30</sup> Indian Evidence Act / Bharatiya Sakshya Adhinyam, 2023, §§ 65B (admissibility of electronic records).

This results in an enforcement gap that leaves the investigators lagging behind the traffickers in terms of skills and field preparedness: traffickers are digital, but investigators are mostly analog Schluer.

### 4.3 Vulnerability of Minors & Grooming Online

Children and adolescents as well are very vulnerable to technology-enabled trafficking. Human traffickers can utilize online platforms like Facebook and messaging apps to establish rapport with children, boost their self-esteem, and eventually exploit them. This is a widely known case with social media locally perceived as infamous online grooming in NCR where internet permeation is high but parenthood control is weak or nil..

- **Social Media Grooming:** Predators often form pseudo accounts impersonating peers or recruiters in order to get children to share personal photos and meet face to face.
- **Remote Exploitation:** In some instances, individuals underage, in other words, minors, have been made to either produce self-generated sex content through intimidation or extortion and later distributed on trafficking sites.
- **Psychological Coercion:** Unlike abduction as we usually know it, grooming may involve emotional manipulation, promises of love or jobs, and cyber-bullying an underage child or teenager into entrapment.

Studies on ResearchGate illustrate that Children and adolescents are more likely to be trafficked into cybersex than adults due to cybersex abuse without the need to even move the child physically. iCAT reports also show that AI-driven grooming technologies (Chatbots and fake automated-generated profiles) are starting to appear, which further expose minors to dangers.

Mixed poverty and migration factors drive minors to the brink as being poor and in constant migration becomes a burden, whereas, unregulated social media exposure on the other hand also creates a vulnerable case among minors in Delhi NCR. Such a combination of pressure renders children especially vulnerable to technologically enabled traffickers.

## 5. Legal and Technological Gaps

### 5.1 Gaps in Law: Old Statutes vs. Modern Tech

Modern Indian legislation against human trafficking is based on statutes passed in the middle

of the twentieth century, such as the Immoral Traffic (Prevention) Act, 1956 (ITPA).<sup>31</sup> Although it has been successful at furthering the campaign against brothel-based sex trafficking, most of the transgressions that the Act does not discuss are Internet-based prostitution, sex trafficking via the Internet, online pornography, and transactions made over the Dark Web.

The Information Technology Act, 2000 again, amended in 2008, is also concerned largely with obscenity (Sections 66E, 67, 67A, 67B), and does not go so far as to address algorithmic grooming, AI-based coercion, or crypto-currency payments in connection with trafficking.<sup>32</sup> Provisions under the Bharatiya Nyaya Sanhita, 2023 (BNS ) ( SS 143-146) expand upon the existing framework of IPC Section 370, with crimes of resulting in continental trafficking with an express provision criminalising the very act of seeking money or other forms of payment or benefits through means of trafficking out of exploitation..<sup>33</sup>

The absence of explicit provisions has two consequences:

- The general provisions (conspiracy, cheating, obscenity) are the sources that prosecutors have to refer to when prosecuting digital exploitation.
- Traffickers take advantage of statutory silence and revert to the Internet where physical trafficking is less demonstrable.

In an international context, technology role is particularly addressed in the UN Palermo Protocol and Convention on Cybercrime - Budapest, of the Council of Europe which has not been fully harmonised with Indian legislation.

## 5.2 Enforcement & Capacity Constraints

Even where law exists deployment is frustrated due to weak institutional capacity. The Delhi NCR police possess different cyber cells, but these are not appropriately staffed and on most occasions overworked too.

- **Specialized Training Gaps:** Investigating officers often lack skills in **digital forensics, blockchain tracing, or dark-web surveillance.**<sup>34</sup>

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<sup>31</sup> The Immoral Traffic (Prevention) Act, 1956.

<sup>32</sup> Information Technology Act, 2000, §§ 66E, 67, 67A, 67B.

<sup>33</sup> Bharatiya Nyaya Sanhita, 2023, §§ 143–146.

<sup>34</sup> ResearchGate, Capacity Gaps in Cybercrime Policing in South Asia (2021).

- **Infrastructure Deficits:** Numerous cyber units are deprived of access to the leading software in the field of image identification, AI-based grooming detection tools, or real-time monitoring software.
- **Coordination Failures:** The jurisdictional division between the Delhi Police, NCR states (Haryana, UP) and central agencies (CBI, NIA) is the major cause of delays in investigations.
- **Low Conviction Rates:** The Trafficking Institute has shown that in India there are large numbers of trafficking rescues, but a conviction rate that barely reaches 20%. This is generally because of illicit evidence that cannot be used in court.<sup>35</sup>

Unless there is systemic training and improvement of infrastructure, enforcement will be analogue and traffickers will be digital.

### 5.3 Digital and Privacy Rights vs. Surveillance Necessities

Surveillance technologies In many cases, the use of surveillance technologies-a use frequently aided by and driven by AI, including monitoring chatrooms, bulk collection of metadata, or flagging of online advertisements-introduces critical tensions with fundamental rights.

- **Right to Privacy:** Recognized as a fundamental right under *Justice K.S. Puttaswamy v. Union of India* (2017), privacy limits indiscriminate online surveillance.<sup>36</sup>
- **Freedom of Speech:** General surveillance of the social media will impinge on the expression provisions of the Constitution under Article 19(1)(a).<sup>37</sup>
- **Due Process Concerns:** Identification of trafficking materials by use of automated programs may result in false positive errors, leading to a criminal liability of innocent users.

Meanwhile, police appeal to extend fewer protections against surveillance to track encrypted chats, trade in cryptocurrencies, darknet markets. UNODC urges authorities to find a middle ground between human rights protection and active anti-trafficking measures, such as warranted intrusive tracking and transparency.<sup>38</sup>

In this sense, Delhi NCR is a state at the crossroads of freedom and security: reinforcement of the surveillance potential is indispensable, and in the absence of capable safeguards, it is likely to discourage the element of freedom enshrined in the Constitution.

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<sup>35</sup> Trafficking Institute, India Country Profile 2023.

<sup>36</sup> (2017) 10 SCC 1.

<sup>37</sup> Constitution of India, art. 19(1)(a).

<sup>38</sup> UNODC, Human Rights and Technology in Anti-Trafficking Policy (2022).

## Case laws

**Neetu Singh & Anr. v. Telegram FZ LLC & Ors**<sup>39</sup>, Delhi High Court, decision 30 Aug 2022

This Delhi High Court judgment held Telegram responsible for facilitating unauthorized circulation of copyrighted and obscene materials through anonymous channels. The Court ordered Telegram to disclose IP addresses, device IDs, and phone numbers of channel operators, despite its servers being located abroad. The ruling demonstrated that digital platforms are not immune from Indian jurisdiction and can be compelled to assist in investigations of sexually exploitative or trafficking-related online activity—a major legal precedent for Delhi NCR’s cyber law enforcement.

**Shabana v. Govt. of NCT of Delhi (2024–25, Delhi High Court)**<sup>40</sup> Here, the petitioner sought

urgent tracing of her missing daughter suspected to be trafficked through social media contacts. The Court transferred investigation to the Anti-Human Trafficking Unit (AHTU) and instructed use of cyber-forensic tools, including IMEI and IP tracking. It reaffirmed that law enforcement agencies must adapt investigative techniques to the digital era and ensure rapid coordination between NCR’s cybercrime and trafficking divisions. This case marks a judicial endorsement of technology-led rescue operations for trafficked minors.

**Delhi High Court Order on “Massage Parlour Trafficking”**<sup>41</sup> , decided 29 Nov 2022)

In this Public Interest Litigation, the Court directed the Delhi Police and Municipal Corporation to regulate and inspect so-called “spa and wellness centres,” after finding that many were fronts for sex trafficking. The order highlighted that such establishments often advertise services on social media, online directories, and messaging apps, making them part of the digital trafficking ecosystem. The Court mandated regular monitoring of web-based advertisements, licensing transparency, and joint operations with cybercrime units—making this a critical NCR-specific precedent linking digital publicity to organized sexual exploitation.

**WhatsApp LLC v. Union of India (2021–pending, Delhi High Court)**<sup>42</sup>

The rules of the Digital Media Ethics Code and the 2021 Intermediary Guidelines are being challenged in this continuing litigation. Rule 4(2), which requires the traceability of message

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<sup>39</sup> (CS(Comm) 282/2020

<sup>40</sup> W.P.(CRL) 1599/2024

<sup>41</sup> WP(C) 6597/2022

<sup>42</sup> WP(CrL.) No.02 of 2023

originators, is in particular being challenged. The government justified it as necessary to investigate crimes such as child pornography, sex trafficking, and online exploitation, while WhatsApp contended that it compromises end-to-end encryption. Even though they haven't made a final decision just yet, the Delhi High Court has supported interim enforcement. Here we see the privacy vs. investigation conundrum at work, wherein the pursuit of those responsible for online sex trafficking networks must be balanced with the protection of individuals' right to privacy guaranteed by Article 21.

### **Vishal Jeet v. Union of India<sup>43</sup>, (Supreme Court of India)**

With this historic decision, the Supreme Court upheld the right to life with dignity (Article 21) and condemned child sexual exploitation and prostitution as serious human rights breaches. The Court has ordered the federal government and individual states to combat human trafficking from the ground up and develop plans to help rescued children and women recover from their experiences in brothels. Although predating the internet era, this case laid the constitutional foundation for interpreting technology-enabled trafficking as a modern extension of these same violations, emphasizing the State's duty to anticipate and regulate new forms of exploitation, including those online.

### **Empirical Study**

The empirical study aimed to assess public awareness, perceptions, and challenges concerning human trafficking in the Delhi NCR region. A structured questionnaire was distributed to 12 respondents, and the results reveal crucial insights into the understanding and effectiveness of anti-trafficking measures.

The findings indicate that a large majority of respondents (91.7%) had heard about human trafficking, showing a basic level of public awareness. However, only 16.7% were aware of specific laws addressing trafficking, such as the *Immoral Traffic (Prevention) Act, 1956* and relevant provisions under the *Indian Penal Code*. Most participants identified child labour (58.3%) as the most prevalent form of trafficking in Delhi NCR.

When assessing the effectiveness of legal measures, 50% of respondents felt that current laws were not effective, while 41.7% found them somewhat effective. Only 8.3% considered them

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<sup>43</sup> (1990) 3 SCC 318

very effective. Furthermore, 50% believed that law enforcement agencies were not adequately trained to handle trafficking cases.

In identifying implementation challenges, 75% cited lack of awareness among victims, followed by corruption in law enforcement (16.7%) and lack of rehabilitation facilities (8.3%). A strong consensus emerged regarding the role of education—66.7% strongly agreed that schools and colleges should conduct awareness programs.

The report highlights the disconnect between laws and their actual implementation, highlighting the importance of raising awareness, providing training, and involving communities in the fight against human trafficking.

### Awareness About Human Trafficking in Delhi NCR

Awareness About Human Trafficking in Delhi NCR

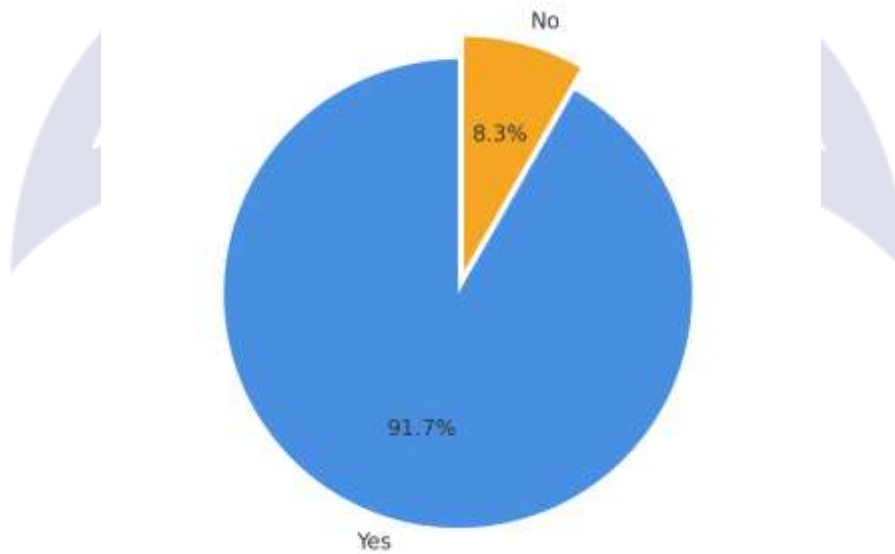


Table: Effectiveness of Legal Measures Against Human Trafficking

Response	Frequency	Percentage
Very Effective	1	8.3%
Somewhat Effective	5	41.7%
Not Effective	6	50%
Don't Know	0	0%
<b>Total</b>	<b>12</b>	<b>100%</b>

## Major Findings

1. A majority of respondents (91.7%) had heard about human trafficking in Delhi NCR, yet only 16.7% were aware of specific anti-trafficking laws such as the *Immoral Traffic (Prevention) Act, 1956* or relevant provisions under the *Bharatiya Nyaya Sanhita, 2023*.
2. There is extensive socioeconomic exploitation, since the majority of participants (58.3%) named child labor as the most common type of trafficking, followed by domestic servitude (25%).
3. Half of the people who took the survey think that the police aren't prepared to deal with human trafficking situations, which calls attention to the necessity for cybercrime training and capacity-building initiatives.
4. 50% of respondents felt that current legal measures are not effective, while 41.7% found them only somewhat effective, indicating limited public confidence in enforcement mechanisms.
5. The biggest challenge identified was lack of awareness among victims (75%), followed by corruption in law enforcement (16.7%) and lack of rehabilitation facilities (8.3%). Fear of retaliation (41.7%) and mistrust in police (33.3%) were key reasons preventing people from reporting trafficking cases.
6. All respondents agreed that schools and colleges should include awareness programs on human trafficking, emphasizing education as a critical preventive tool.
7. While technology facilitates recruitment, communication, and concealment in trafficking, it also offers powerful tools—such as AI, NLP systems, and forensic geolocation—for detection, prevention, and evidence gathering when ethically implemented.
8. Existing statutes like the *ITPA* and *IT Act* inadequately address cyber-facilitated trafficking, leaving loopholes for traffickers to exploit online anonymity, encryption, and digital payment systems.

## 6. Conclusion

Human trafficking in Delhi NCR affirms the duo nature of technology, on the one hand, it is being used by the traffickers to exploit the anonymity, encryption, and global connectivity to trap a victim and on the other hand, it can be used to detect, prosecute and prevent it.

As this paper has revealed, present Indian laws that concern cyber-facilitated trafficking- the

ITPA, the IT Act, POCSO, and the new BNS- present a partial picture but neglect the online nature of trafficking. Enforcement is being held back by lack of capacity, poor cyber-forensics and lack of inter-jurisdictional harmonisation. Victims, particularly minors, are fully susceptible to online grooming and distant abuse.

Meanwhile, new potential solutions exist: like the use of NLP to identify ads, computer-vision forensic geolocation, and AI predictive policing. Model interventions in the Delhi NCR region, such as cyber-help desks, NGO-led digital literacy classes and cross-sector preparedness, show potential models.

### Suggestions

The study therefore recommends a **multi-pronged approach**:

- Amend existing laws such as the *Immoral Traffic (Prevention) Act, 1956* and the *Information Technology Act, 2000* to explicitly address cyber-enabled trafficking, online grooming, and the use of digital currencies in exploitation.
- Establish specialized cyber-anti-trafficking units in Delhi NCR equipped with advanced digital forensics, AI tools, and trained personnel to trace online trafficking networks effectively.
- Provide continuous training for police, prosecutors, and judiciary on handling technology-driven crimes, digital evidence management, and survivor-sensitive investigation procedures.
- Get the word out in your local communities, schools, and universities about online recruitment traps, reporting systems, and ways to stay safe online.
- Strengthen rehabilitation programs by ensuring access to housing, education, mental health care, and employment, along with tech-based helplines and confidential reporting platforms for survivors

To sum up, Delhi NCR occupies a place of crisis where technology and people meet. Whether technology continues to be an instrument of exploitation or a means towards justice depends on how rapidly and in what ways India interprets its own laws, built its own institutions and how it mobilizes its own people.

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