

Role of Forensic Evidence in Criminal Justice Delivery System in India

Mrs. Shubhi Mack, Dr. Ishita Chatterjee*

Research Scholar and Associate Professor, School of Law and Justice, Adamas University, Kolkata, West Bengal.

Abstract

Forensic science includes the use of physical and natural sciences for the investigation of civil or criminal cases. It is used for multivariate purposes such as inspecting criminal crimes such as rape, murder, and drug tracking and civil cases as wilfully destructing the natural environment. It includes using modern technologies such as DNA testing fingerprint profiling, and narco test so that the facts related to crime and suspect are identified. The study identifies that as per Indian Evidence Act (IEA) 1872, evidence has been classified into different parts such as Oral Evidence, Documentary Evidence, Primary evidence, and Judicial Evidence that play a vital role in the investigation process. The study found that forensic investigations are highly helpful as it tracks the implications of the illegitimate substances and recognizes the residues by reconstructing the crime scene again. Forensic investigations also help in identifying the victim and acquiring knowledge about the reasons/ conduct of crime.

Keywords: Forensic, Science, India, Impact, Criminal, Justice

1 Introduction

Forensic science includes the use of physical and natural sciences for the investigation of civil or criminal cases. It is used for multivariate purposes such as inspecting criminal cases (rape, murder, and drug tracking) and civil cases (wilfully destructing the natural environment).

The involvement of forensic methods of investigations holds an important place in the investigation procedure and provides practical solutions to the existing criminal circumstances. While focusing on the role of forensic evidence in the criminal justice delivery system, it is used as an influential instrument to inspect crimes and suspects so that cases are resolved as per authentic evidence and no innocent is punished. The forensic investigation methods and evidence are approved by the governing bodies of different countries such as Colorado, the United States of America, Canada, and Australia. For example, the Automated Fingerprint Identification System (AFIS) is used by the Federal Bureau of Investigation (FBI), the US to investigate criminal cases by using advanced technologies. The evidence and proofs that are gathered, examined, and produced by using Forensic techniques are more readily acceptable by the Courts of Law. Forensic evidence is gained from the experts and holds more authenticity and credibility to be used as evidence in criminal cases (McEwen, 2010). While considering the role of forensic evidence in the criminal justice delivery system in India, it is governed by Indian Forensic Organization (IFO) which carries out criminal forensic investigations in the country. However, the investigations that are performed by the forensic science methods are condemned by the Supreme Court as under Articles 20(3) of the Indian Constitution. The Article ensures fundamental right against self-incrimination of the offender and the application of the forensic science investigation process offends the fundamental right of the individual (Shali, 2018). Thus, the use of

forensic investigations gets restricted in India as many complications are associated with the acceptance of forensic evidence. The current provides relevant information related to the criminal justice system and the concept of criminalistics/forensic science. The study also provides relevant information related to the role and impact of forensic evidence and legal provisions supporting the criminal investigation.

2. Literature Review

2.1 Overview of the Criminal Justice System

Shali, (2018) examined that the criminal justice system is defined as a set of processes or regulations that safeguard the interests of the social communities and individuals. It is framed by the governing body of India and authorized institutions to organize the legal structure. It helps the individuals to respond against challenging and distressing actions and behaviors appropriately. The administrative part of the criminal justice system in India is handled by the police, court, prosecution, and prisons. They form the pillars of the criminal justice system and perform different activities such as prevention, detection, trial, adjudication, and punishment of lawbreakers in society. The Courts form an integral part of the criminal justice system that decides the culpability of the offender. The process of determining the culpability of the offender is very complex and supported by evidence and proof. The police play an eminent role in investigating the crime and procuring evidence against the offender. Thus, due to the effective investigation and maintenance of law and order by the criminal justice system, there is the provision of a secure and peaceful society. Under the Indian Evidence Act (IEA) 1872, evidence has been classified into different parts such as Oral Evidence in which the oral statements of the individuals who have witnessed the crime either by seeing or hearing is accepted under Section 60 of IEA 1872. Documentary Evidence is another proof that is provided to the Court for investigation purposes under Section 3 of IEA 1872. Primary evidence is the highest graded evidence under Section 62 of IEA in which the evidence provides vital facts about the incident/event through documented proofs. Secondary Evidence is considered to be inferior evidence under Section 63 of IEA. It is produced in the Court when there is no primary evidence. Real Evidence is the physical (object or material) evidence that is produced in the Court by inspecting the physical object at the crime scene. Hearsay evidence is the weakest evidence in which the witness has not personally seen or heard the crime and came to know about it from a third party. Judicial Evidence is the evidence that is received by the Court in the form of confession made by the offender. Non Judicial Evidence is the evidence in which the confession is made by the offender outside the court in front of any person. Direct evidence is the evidence directly provided by the witness who has seen the course of crime in the form of documents or illustrations about the incident. Circumstantial Evidence or Indirect evidence provides evidence to the current case through relational facts. Thus, with the help of different evidence, the Court decides the culpability of the offender and summons punishments as per the severity of the offense.

2.2 Understanding the Concept of Criminalistics/Forensic Science

Narejo & Avais, (2012) examined that forensic science or criminalistics is the application of scientific methods in criminal laws. It includes applying knowledge and technology in legal matters. Forensic Science includes using advanced technology such as DNA profiling, computer science, and engineering for the criminal investigation process by the police. For instance, physics science is used to

identify the outline structure of the blood scatter, whereas biology science is used identity to the imprints of the suspect, and chemistry is used to recognize the chemical composition of drugs. However, the application of forensic science in a criminal investigation in the Indian criminal justice system is limited and underestimated. Forensic science was primarily used by Sir William Herschel in the form of fingerprinting to identify the suspects of the crime. The fingerprint evidence was firstly accepted by the Court of Argentina in the 1890 era and then by English Court in the year 1902. Forensic science is included in the Indian criminal justice system since ancient times for inspecting the cases and verifying the crime facts. Forensic science helps the investigators to find evidences against the culprits and strengthen the Indian Legal system by providing authentic proofs.

Menaker, Campbell & Wells, (2017) examined that the scientific and technical literature of forensic science and criminalistics focuses on the laboratory methods that are used to examine and interpret physical evidence collected from the scenes of crimes. Forensic science and criminalistics laboratories generally provide the scientific examination of physical evidence collected from scenes of crimes, victims, and suspects. **Rana, (2020)** examined that with the advancement of new technologies, the concept of forensic science is also changing. It includes modern techniques of investigations such as liquid chromatography, 3D printing, DNA evaluations, and mass spectrometry for the précised inspection of the facts from the crime spot police acquired physical evidence. There are different branches of forensic science such as Odontology, Biology, Anthropology, Toxicology, and Pathology. While focusing on Odontology, it includes using scientific methods to identify the body of the victim when it is left in an unrecognizable position. The identification of the victim is executed by examining the teeth, mouth, or body alignment. Forensic Biology includes DNA profiling in which the identification of the suspect is done through hair, blood, semen, or any other body part. Fingerprint analysis is also used to identify the suspect. Anthropology includes inspecting the cause, and time of death of the victim. It also helps in identifying victims when left in an unrecognizable position and determines the age, gender, and ancestry of the skeleton. Toxicology includes inspecting the victim and majorly used for investigating accidents, sexual violence, and poisoning cases. Pathology includes examining the body of the victim after death to know the exact reason of death. Thus, it can be said that forensic science is an extremely useful investigational disciple that helps in inspecting the cases by identifying the offenders/victims, and techniques used for doing crime.

2.3. Role and Impact of Forensic Evidence

Jyotirmoy Adhikary, (2007) examined that forensic science is one of the most essential elements of criminal justice. It includes exploring methodical and physical traces from the crime spot. It helps in identifying the crime suspect, time of the crime, and mode of the crime. It helps in investigating the different aspects of the crime and provides evidence about the victim, offender, and criminal activity. The collection of forensic evidence and the application of forensic sciences have become essential to criminal investigations and prosecutions. Forensic evidence fulfills several roles in criminal investigations such as proving a crime has been committed or establishing key elements of a crime, placing the suspect in contact with the victim or with the crime scene, establishing the identity of persons associated with a crime, exonerating the innocent, corroborate a victim's testimony, assist in establishing the facts of what occurred. **McEwen, (2010)** examined that the forensic science process is

used for criminal investigation purposes for extracting the evidence of a crime, identifying the main constituents of the crime, recognizing the suspect, confirming the testimony of the offender, and vindicating the innocent. It includes developing forensic databases so that criminal investigations are carried out expedite. Additionally, different organizations such as Automated Fingerprint Identification System (AFIS), Combined DNA Index System (CODIS), and National DNA Index System (NDIS) have been set up so that database related to offenders and forensic profiles are developed to perform forensic investigations are at international and national levels. **Pragati Ghosh, (2018)** examined that forensic science is included in the Indian Evidence Act, 1872, and regarded as expert evidence. An expert is an individual who has extensive learning about a subject and the learning can be used to give expert judgment concerning the criminal case. in the case of Pantangi Balaram Venkata Ganesh v. State of Andhra Pradesh, the deceased was fired and killed at gunshot by accused and the co-accused. The witness recognized that the accuser was wearing a pink shirt at the time of the attack and confirmed that the attacker was injured when the firing took place. Upon investigation, the police had recovered the pink shirt which was completely stained with blood patches. The police took it as a piece of evidence and sent it to the forensic lab for DNA testing to identify the culprit. The DNA test results that were acquired by the police along with the other evidence concluded the accuser to be guilty. Thus, it can be said that forensic investigations play a major role in supporting investigative activities by identifying the suspect and providing evidence for a crime.

2.4 Legal Provisions Supporting Criminal Investigation

Patel, Gautaman & Jangir, (2013) examined that the main function of forensic science is to convert uncertainty or doubt in the case into certainty and prove the innocence or guilt of the suspect. As per the survey conducted in the year 2011, the Supreme Court and High Court were recorded to resolve 47 cases based on forensic science evidence. It was also found that amongst all the cases, about 23.4% of cases related to forensic science investigations were decided by the Delhi High Court. Additionally, forensic science-based DNA analysis was used as evidence in murder cases (4.7%) and rape and murder cases (2.3%). The application of forensic science in the criminal investigation process helped in identifying the offenders and increased the resolving propensities. Thus, the use of forensic science has increased in the Indian criminal justice system as an increasing number of judges are considering them as authentic evidence. forensic evidence was accredited and accepted in the case of Ramchandra Reddy and Ors. v. The state of Maharashtra when evidence was produced in the form of Brain fingerprinting, lie detector test, and narco analysis. Concerning the case, the Court held a special hearing in which SIT was allowed to perform scientific tests upon the main accused Abdul Karim Telgi on the charges of fake stamp paper scam. However, the authenticity of the forensic evidence was questioned on account of violation of Article 20(3) of the Indian Constitution which protects the offender against forcible testimony. The judgment provided in cases such as the State of Bombay v. KathiKaluOghad & Others increased the acceptance of forensic evidence in the Indian criminal justice system. in the case of The State of Bombay v. KathiKaluOghad & Others, the forensic evidence was collected by examining the thumb impression, specimen signature, blood, hair, semen of the suspect. The suspect objected on account of violation of Article 20(3) of the Indian Constitution which protects the offender against forcible testimony. But the court provided that the suspect has no legal rights to object DNA

investigations and must cooperate with the investigative process. Thus, it can be said that forensic investigation and evidence play a major role in inspecting cases and resolving them with high accuracy. In the case of *Dinesh Dalmia v State*, the judgment provided by Madras High Court included that the forensic evidence that has been produced in the form of narco analysis could not be testified. On the other hand, in the case of *Selvi & Ors v. State of Karnataka & Anr*, the judgment provided by the Supreme Court questioned the authenticity of the scientific evidence that was used for the investigation of the case. The Supreme Court provided that the scientific evidence that is provided in the form of the P-300 test and polygraph evaluation was indecisive and unconvincing. Thus, evidence procured on these scientific investigational bases could not be included for judgment purposes. The Supreme Court also restricted the compulsory usage of the forensic science investigational techniques for criminal cases by making it an unconstitutional action.

3 Findings and Discussion

As per the above-discussed literature review facts, it can be said that forensic science is technology-based investigative methods that help in resolving critical cases logically and rationally. The different forensic investigative methods such as the narco test, P-300 test, and polygraph evaluation provide evidence for crime and suspect. The study examined that under the Indian Evidence Act (IEA) 1872, evidence has been classified into different parts such as Oral Evidence, Documentary Evidence, Primary evidence, and Judicial Evidence that play a vital role in the investigation process. It was also analyzed that the applicability of forensic science techniques of investigations and evidence of the crime has limitations in India. It is because it is restricted by the Court of Law on account of Articles 20 (3) of the Indian Constitution. The Article provided that protection to the offender against forcible testimony is unconstitutional. The study examined that forensic investigations are highly helpful as it tracks the implications of the illegitimate substances and recognizes the residues by reconstructing the crime scene again. Forensic investigations also help in identifying the victim and acquiring knowledge about the reasons/ conduct of crime. Thus, it can be said that forensic science techniques are highly essential for the investigation of criminal and civil cases and resolve them effectively (Shali, 2018).

4 Conclusion

As per the above-discussed facts, it can be concluded that forensic science is an investigational process that uses modern technologies such as DNA testing fingerprint profiling, and narco test so that the facts related to crime and suspect are identified. It was found that the different countries such as Canada, the United States, and Australia have adopted forensic science investigative technologies in the inspection of crime and find evidence against offenders in the criminal and civil cases. The governing body of different countries has also established forensic science organizations such as Automated Fingerprint Identification System (AFIS), Combined DNA Index System (CODIS), and National DNA Index System (NDIS) to create databases and criminal investigations. The study examined facts related to the role and impact of forensic evidence in the criminal system in India and found that the use of forensic investigations is limited due to the imposing of Articles 20 (3) of the Indian Constitution. It protects the offender against forcible testimony is not constitutional. It was also found that rights given by the Supreme Court of India protects the rights of the individual and pronounces him/her to be guilt-free

unless proved by the Court of Law. Criminal Law also presumes that an individual must be considered as an innocent person until the time the crime is proofed by the law. Thus, the Indian government must promote scientific knowledge, humanism, and enquire about the different spheres for the speedy resolution of cases.

References

- Jyotirmoy Adhikary, DNA Technology in Administration of Justice, (LexisNexis, Butterworths, 2007)
- McEwen, T. (2010). The role and impact of forensic evidence in the criminal justice system. *National Institute of Justice*. <https://www.ncjrs.gov/pdffiles1/nij/grants/236474.pdf>
- Menaker, T. A., Campbell, B. A., & Wells, W. (2017). The use of forensic evidence in sexual assault investigations: Perceptions of sex crime investigators. *Violence against women, 23*(4), 399-425. https://www.researchgate.net/publication/301500979_The_Use_of_Forensic_Evidence_in_Sexual_Assault_Investigations_Perceptions_of_Sex_Crimes_Investigators/link/5a7904c70f7e9b41dbd44740/download
- Narejo, N., & Avais, M. A. (2012). Examining the Role of Forensic Science for the Investigative-Solution of Crimes. *Sindh Univ. Res. Jour. (Sci. Ser.) Vol, 44*(2), 251-254.
- Patel, N., Gautaman, V. K., & Jangir, S. (2013). The role of DNA in a criminal investigation—Admissibility in Indian legal system and future perspectives. *Int J Humanit Soc Sci Invent, 2*, 15-21.
- Pragati Ghosh, Evidentiary Value of Expert Evidence under Indian Evidence Act, 1872, <http://www.shareyouressays.com/119180/evidentiary-value-of-expert-evidence-under-indianevidence-act-1872>, (accessed on 26.05.2018)
- Rana, P. (2020). Modern Techniques in Forensic Science and Their Function in Criminal Justice System: An Overview. *Studies in Indian Place Names, 40*(50), 3311-3323.
- Shali, S. K. (2018). Applicability of Forensic Science in Criminal Justice System in India With Special Emphasis on Crime Scene Investigation. *Medico-Legal Desire Media and Publications, Medico-Legal Reporter, Inaugural Issue*.
- Deepani, Vijit, and A. K. Kapoor. "Variability In Human Handwritings: An Indian Understanding." *International Journal of Humanities and Social Sciences (IJHSS) ISSN (P)* (2018).
- Bajwa, Mohammad. "Real-World DNA Applications." *International Journal of General Medicine and Pharmacy (IJGMP), ISSN (P)* (2017): 2319-3999.
- Betigeri, AMRUTA S., and M. A. N. A. S. I. Dixit. "Modification In Human Face Image For Personal Identification." *International Journal of Applied Engineering Research and Development* 4.2 (2014): 13-22.
- Saboohi, Misbah. "Fact Finding, Weight of Evidence & Reasonable Doubt in Civil & Criminal Trials." *International Journal of Political Science, Law and International Relations (IJPSLIR)* 7.1 (2017): 11-26.