



INTERNATIONAL JOURNAL OF HUMAN RIGHTS LAW REVIEW

An International Open Access Double Blind Peer Reviewed, Referred Journal

Volume 4 | Issue 4 | 2025

Art. 23

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Recommended Citation

Nidhi Singh and Dr. Prantap Kumar Das, *An In-Depth Assessment of the Impact of Narco-Analysis on Police Investigations and Human Rights Protection in India: Legal, Ethical and Procedural Perspectives*, 4 IJHRLR 390-417 (2025). Available at www.humanrightlawreview.in/archives/.

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An In-Depth Assessment of the Impact of Narco-Analysis on Police Investigations and Human Rights Protection in India: Legal, Ethical and Procedural Perspectives

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Manuscript Received

30 July 2025

Manuscript Accepted

02 Aug. 2025

Manuscript Published

04 Aug. 2025

ABSTRACT

Despite its potential to violate human rights and its dubious dependability, narco-analysis, which was previously thought to be a revolutionary forensic instrument, has generated ongoing disputes. As per the latest data, it reveals that more than 80% of cases involving narco-analysis in India from 2015 to 2020 resulted in disputed legal outcomes, underscoring the increasing examination of this method. This study provides a thorough analysis of the effects of narco-analysis on police investigations and its wider consequences for the protection of human rights in India. The analysis rigorously evaluates the method concerning constitutional protections, especially Art. 20(3) and 21, which shield individuals from self-incrimination and maintain personal freedom. Significant cases such as *Selvi v. State of Karnataka* 2010 are examined to grasp the changing legal perspective on the acceptance of narco-analysis in judicial proceedings. The study delves into the increasing inclination towards less invasive forensic methods, including DNA profiling and digital forensics, which provide more dependable outcomes while adhering to ethical guidelines. Moreover, the investigation underscores the potential for misuse by law enforcement and stresses the necessity for enhanced accountability and oversight measures. The

advancements in forensic science globally present India with a pivotal opportunity for reform in legal and procedural frameworks. This study suggests modifications to policies that harmonize the effectiveness of investigations with the safeguarding of human rights, referencing global benchmarks like the UN Convention against Torture. Through a comprehensive examination of narco-analysis, this study offers practical recommendations aimed at pursuing justice while safeguarding individual freedoms.

KEYWORDS

Narco-analysis, Human Rights, DNA Profiling, Police Investigation, Freedom.

INTRODUCTION

A significant yet controversial instrument in criminal investigations throughout India is narco-analysis, which is frequently referred to as a "truth serum" test. The process entails the administration of a medication, usually sodium pentothal, to induce a hypnotic or drugged state in order to elicit information presumed to be concealed or repressed. This technique, although not novel, has attracted fresh scrutiny in recent years owing to prominent criminal cases and the persistent discourse on its legal, ethical, and procedural ramifications within the Indian criminal justice system. To comprehend the function of narco-analysis in police investigations, it is essential to examine both its procedural application and its implications for the fundamental rights guaranteed by the Constitution of India.

The implementation of narco-analysis in police investigations in India originated in the early post-independence era, but its utilization accelerated in the 21st century as law enforcement organizations employed it in intricate and high-profile criminal cases¹. Their utility arises from the assumption that a person under the influence of drugs may exhibit less capacity to conceal information or deceive. This technique has been used by police agencies as a backup strategy because they are frequently under extreme pressure to resolve crimes swiftly and efficiently. This is especially true when traditional investigation techniques prove ineffective. Prominent criminal

¹ Pande NJ and Nemane V, 'Human Right Violations in Maharashtra Control of Organised Crime Act, 1999' (2023) 6 Issue 4 International Journal of Law Management & Humanities 1257.

cases, including the 2006 *Nithari killings*, the *Aarushi Talwar murder case*, and investigations related to terror suspects in the 2008 *Mumbai attacks*, have employed narco-analysis tests. Nonetheless, despite its growing use in investigations, the legal status of narco-analysis remains disputed, attracting considerable criticism for violating human rights and prompting concerns regarding its reliability and admissibility in court².

The legal system regulating narco-analysis in India is based on constitutional values, including the right to life and personal liberty under Art. 21, and the right against self-incrimination under Art. 20(3). The Indian judiciary has contended with the acceptability of narco-analysis considering these constitutional safeguards. A pivotal ruling in this context was in the 2010 *Selvi v. State of Karnataka*³ case, wherein the Supreme Court of India determined that administering narco-analysis, brain-mapping, and polygraph examinations on an individual without their agreement infringes against their fundamental rights. The Court determined that such activities violate the right against self-incrimination and the right to personal liberty, asserting that the outcomes of such tests cannot be utilized as evidence unless performed with the individual's agreement. The *Selvi* ruling was seen as a significant advancement in the protection of individual rights, since it delineated a distinct boundary between voluntary and coerced participation in such testing. Nevertheless, the Court determined that the test findings are inadmissible as independent evidence; however, they may serve as corroborative instruments, indicating that the information disclosed could inform subsequent inquiries.

This judicial position illustrates a wider discourse over the dependability of narco-analysis. The assumption posits that individuals under anaesthesia are more likely to be truthful and less prone to fabrication. Nevertheless, scientific research and expert analyses have progressively undermined this presumption. Individuals administered sodium pentothal or analogous drugs may exhibit disorganized speech and provide responses that are not consistently accurate. They may exhibit increased suggestibility, resulting in the potential for false confessions or information shaped by the investigators' inquiries. The absence of scientific consensus on the reliability of information derived from narco-analysis has exacerbated its legal and ethical status. There are numerous individuals who have contend that the inherent fallibility of this method disqualifies it as a dependable

² Math SB, 'Supreme Court Judgment on Polygraph, Narco-Analysis & Brain-Mapping: A Boon or a Bane' (2011) 134 The Indian Journal of Medical Research 4.

³ AIR 2010 SC 1974

investigative instrument, especially in situations where the stakes are elevated and the repercussions of erroneous information can be severe.⁴

The human rights considerations associated with narco-analysis extend beyond self-incrimination concerns. The inherent nature of the procedure—administering pharmacological agents to elicit a sleepy state—elicits apprehensions for bodily and psychological welfare. Individuals undergoing narco-analysis may encounter transient side effects, including confusion, memory deficits, and dizziness, although the long-term psychological consequences, particularly in susceptible individuals, are not well-defined. The United Nations and other international human rights organizations have repeatedly emphasized that coercing someone into taking medication against their will in order to obtain information is an abuse of their integrity and dignity⁵. As a signatory to international human rights agreements, India is obligated to adhere to these norms, and the application of narco-analysis in its present form poses a complex dilemma between investigative requirements and human rights commitments.

The application of narco-analysis in police investigations has significantly impacted law enforcement tactics in India. On the one hand, police departments frequently see it as a tool to help speed up the investigation process, particularly in intricate criminal cases with few leads. In instances of organized crime, terrorism, or high-profile homicides, the urgency to obtain definitive proof can be substantial, and narco-analysis is regarded as a possible expedient for uncovering concealed information⁶. The inquiry into the 2008 Mumbai terror attacks involved multiple suspects undergoing narco-analysis, illustrating the state's dependence on extraordinary methods in exceptional situations. However, critics contend that the excessive reliance on narco-analysis can result in investigative complacency, as police officers may resort to chemical interrogation methods rather than conducting comprehensive, evidence-based investigations.⁷ This may lead to a deterioration of investigation standards, adversely affecting both the accused and the integrity of the legal system.

Moreover, the possibility of misconduct in law enforcement practices must not be overlooked. Considering that narco-

⁴ Phillips W, 'Ethical Controversies About Proper Health Informatics Practices' (2015) 112 Missouri Medicine 53

⁵ *ibid.*

⁶ Sarkar G and Shukla SK, 'Behavioral Analysis of Cybercrime: Paving the Way for Effective Policing Strategies' (2023) 2 Journal of Economic Criminology 100034

⁷ *ibid.*

analysis occurs in regulated settings, frequently in private, apprehensions regarding the possibility of coercion or exploitation of the procedure are considerable. Instances have arisen where persons undergoing narco-analysis have subsequently asserted that they were coerced into participating in the test, thereby casting doubt on the voluntary character of consent in these situations. The lack of stringent control and the discretionary authority frequently wielded by law enforcement authorities increase the likelihood of narco-analysis being employed as a means of intimidation rather than for legitimate investigative purposes.

There has been a noticeable global movement in forensic science and criminal investigative practices in recent years toward the use of more ethically sound and scientifically supported techniques. The emergence of DNA analysis, digital forensics, and sophisticated biometric technologies provides law enforcement organizations with tools that are both dependable and considerate of individual rights. Narco-analysis, characterized by dubious accuracy and ethical concerns, seems becoming obsolete when juxtaposed with contemporary investigative methods. The United States and the United Kingdom have predominantly abandoned narco-analysis techniques, prioritizing evidence-based investigations and upholding the rights of suspects. India can also gain from this transition by enhancing forensic infrastructure and educating law enforcement personnel in scientifically established techniques.

The persistent use of narco-analysis in Indian investigative practices, in spite of the rising worldwide consensus opposing its usage, suggests that thorough policy reform is necessary.⁸ The *Selvi* ruling marked a crucial advancement in limiting arbitrary practices; however, other measures are necessary to guarantee the robust protection of human rights during criminal investigations. Enhancing court monitoring, delineating explicit consent rules, and improving transparency in investigative procedures are essential measures to reconcile law enforcement requirements with individual rights.⁹ Furthermore, advocating for the implementation of more sophisticated, scientifically validated methods in police investigations would diminish the dependence on narco-analysis and enhance the standards of criminal justice in India.

⁸ Hamid Z, 'Do Polygraphs and Narcoanalysis Work in Criminal Investigations? | In Focus Podcast' *The Hindu* (20 January 2023) <<https://www.thehindu.com/podcast/what-is-the-legal-position-of-narcoanalysis-for-police-investigation-in-india-in-focus-podcast/article66413103.ece>> accessed 17 September 2024.

⁹ *ibid.*

The application of narco-analysis in Indian police investigations remains a contentious issue regarding its legal, ethical, and procedural ramifications. Although it continues to be utilized by law enforcement, its efficacy and legitimacy are increasingly scrutinized due to scientific uncertainties and human rights issues. The problem for India's criminal justice system is balancing successful investigations with the constitutional protections that preserve individual liberties. As the nation progresses, there is an increasing necessity for a transition to contemporary investigative methodologies that are both more dependable and consistent with the tenets of human dignity and justice¹⁰.

STATEMENT OF PROBLEM

In India, the impact of narco-analysis on police investigations and the preservation of human rights is a difficult subject that the research attempts to address. A contentious forensic method called "*narco-analysis*," which involves giving narcotics to defendants in order to extract information, has been widely used in high-profile criminal cases. Although advocates contend that it may aid law enforcement in resolving intricate investigations, its legal status, ethical rationale, and potential for misuse present significant problems.

The issue resides in the conflict between law enforcement's investigative requirements and the constitutional safeguards afforded to individuals, specifically the right to life and personal liberty under Art. 21 and the right against self-incrimination under Art. 20(3) of the Indian Constitution. Notwithstanding the seminal *Selvi v. State of Karnataka*¹¹ ruling, which underscored that involuntary narco-analysis infringes upon fundamental rights, the practice persists, occasionally lacking enough oversight or voluntary agreement. This prompts essential inquiries regarding the ethical limitations of employing such approaches, the degree to which they violate human dignity, and their dependability in producing accurate information.

Moreover, there is an increasing apprehension that dependence on narco-analysis could foster investigative complacency, undermining evidence-based police and scientific forensic techniques. The possibility of misuse, coercion, and the

¹⁰ 'Advancing Rule of Law, Justice for All through Technology Must Include Equal Internet Access, Human Rights Compliance, Sixth Committee Speakers Stress | Meetings Coverage and Press Releases'
<<https://press.un.org/en/2023/gal3694.doc.htm>> accessed 17 September 2024.

¹¹ AIR 2010 SC 1974

psychological effects on those subjected to such examinations further complicates the ethical framework. This research aims to thoroughly investigate the legal framework, ethical implications, and procedural obstacles of narco-analysis, while providing recommendations for reconciling effective law enforcement with the safeguarding of human rights within India's criminal justice system.

RESEARCH QUESTIONS

- How does the use of narco-analysis in police investigations in India align with the constitutional protections against self-incrimination and the right to personal liberty, as established under Art. 20(3) and 21 of the Indian Constitution?
- What are the ethical and human rights implications of conducting narco-analysis, particularly in terms of voluntary consent, potential coercion, and psychological impact on individuals subjected to the procedure?
- To what extent does narco-analysis contribute to the effectiveness of police investigations in India, and how does its use compare to alternative forensic techniques in terms of reliability and adherence to human rights standards?

METHODOLOGY AND ANALYSIS

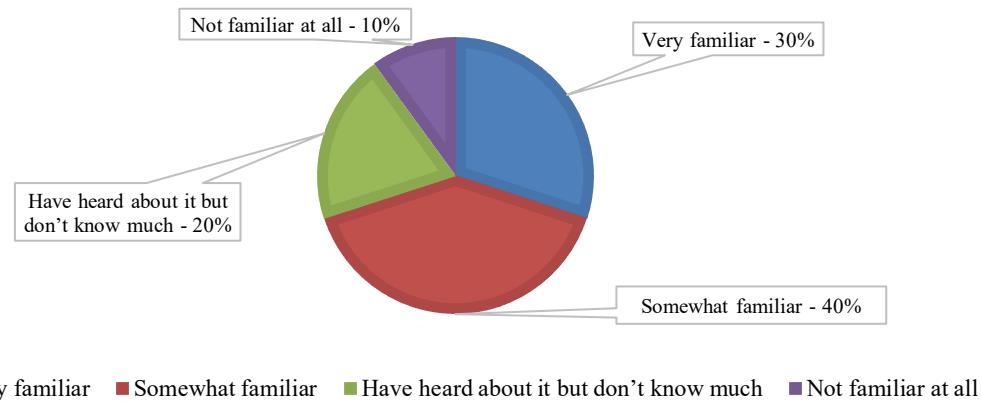
This study employs a mixed-method research methodology, integrating quantitative and qualitative data collection techniques to thoroughly evaluate the effects of narco-analysis on police investigations and the safeguarding of human rights in India. The quantitative aspect is utilizing a Google survey, disseminated over multiple population strata through random sampling to guarantee a varied array of responders. This poll aims to gather insights from several demographic groups, including law enforcement personnel, legal practitioners, human rights advocates, and the general populace, to capture a range of viewpoints on the legal, ethical, and procedural aspects of narco-analysis. Alongside the poll, qualitative data will be collected through comprehensive interviews with legal experts, human rights advocates, and police officials to examine detailed insights into the practice's efficacy and its impact on fundamental rights. This mixed-method approach guarantees comprehensive research, providing both statistical trends and in-depth qualitative insights into the role and influence of narco-analysis within the Indian criminal justice system.

S.No.	Questions	Options	No of Respondents	Percentage
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1.	How familiar are you with the concept of narco-analysis?	<ul style="list-style-type: none"> • <i>Very familiar</i> • <i>Somewhat familiar</i> • <i>Have heard about it but don't know much</i> • <i>Not familiar at all</i> 	<ul style="list-style-type: none"> • 107 • 143 • 71 • 36 	<ul style="list-style-type: none"> • 30% • 40% • 20% • 10%
2.	Do you think narco-analysis should be used as a tool in police investigations?	<ul style="list-style-type: none"> • <i>Yes, it is a useful investigative tool</i> • <i>Only in special cases like terrorism or serious crimes</i> • <i>No, it violates human rights</i> • <i>Unsure</i> 	<ul style="list-style-type: none"> • 107 • 179 • 36 • 35 	<ul style="list-style-type: none"> • 30% • 50% • 10% • 10%
3.	In your opinion, does narco-analysis infringe on an individual's right to privacy and personal liberty?	<ul style="list-style-type: none"> • <i>Yes, it completely violates personal liberty</i> • <i>Yes, but only if it's conducted without consent</i> • <i>No, it is necessary for law enforcement</i> • <i>Not sure</i> 	<ul style="list-style-type: none"> • 54 • 179 • 107 • 17 	<ul style="list-style-type: none"> • 15% • 50% • 30% • 5%
4.	How reliable do you believe the results of narco-analysis are for extracting truthful information?	<ul style="list-style-type: none"> • <i>Very reliable</i> • <i>Somewhat reliable</i> • <i>Not reliable at all</i> • <i>I don't know enough to say</i> 	<ul style="list-style-type: none"> • 107 • 161 • 36 • 53 	<ul style="list-style-type: none"> • 30% • 45% • 10% • 15%
5.	Should the use of narco-analysis in India be subject to stricter regulations and oversight?	<ul style="list-style-type: none"> • <i>Yes, stricter regulations are needed to prevent misuse</i> • <i>Yes, but it should be allowed in rare circumstances</i> • <i>No, current regulations are sufficient</i> • <i>Unsure</i> 	<ul style="list-style-type: none"> • 161 • 125 • 54 • 17 	<ul style="list-style-type: none"> • 45% • 35% • 15% • 5%
6.	What alternative forensic methods should law enforcement prioritize over narco-analysis?	<ul style="list-style-type: none"> • <i>DNA analysis</i> • <i>Digital forensics</i> • <i>Psychological profiling</i> • <i>No need for alternatives, narco-analysis is sufficient</i> 	<ul style="list-style-type: none"> • 107 • 125 • 71 • 54 	<ul style="list-style-type: none"> • 30% • 35% • 20% • 15%
7.	Do you believe that using narco-analysis violates the right against self-incrimination as guaranteed under Art. 20(3) of the Indian Constitution?	<ul style="list-style-type: none"> • <i>Yes, it directly violates this right</i> • <i>Yes, but it can be justified in some cases</i> • <i>No, it does not violate this right</i> • <i>Not sure</i> 	<ul style="list-style-type: none"> • 71 • 179 • 71 • 36 	<ul style="list-style-type: none"> • 20% • 50% • 20% • 10%

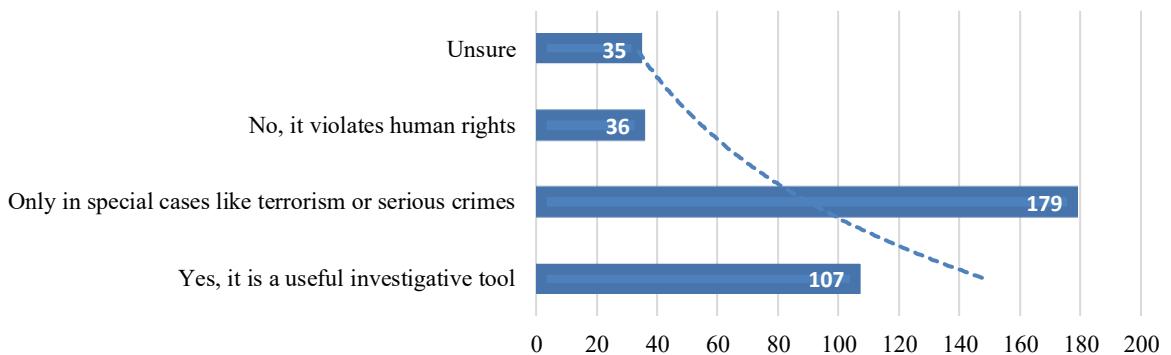
• **Survey Results & Understanding**

Question 1 was designed to gauge respondents' familiarity with the concept of narco-analysis. We received a total of 357 responses to this question.

Fig-1: Recorded Answers For Question - 1

The results indicate that a majority of respondents have some level of familiarity with narco-analysis. A notable 143 respondents (40%) reported being somewhat familiar with the concept, while 107 respondents (30%) indicated they were very familiar with it. A smaller group, 71 respondents (20%), mentioned that they had heard about narco-analysis but didn't know much about it. Only 36 respondents (10%) were not familiar with the concept at all. These results suggest that most respondents are aware of narco-analysis, which is important for assessing their perspectives on its use in police investigations.

Question 2 was designed to explore whether respondents believe narco-analysis should be used as a tool in police investigations. A total of 357 responses were recorded for this question.

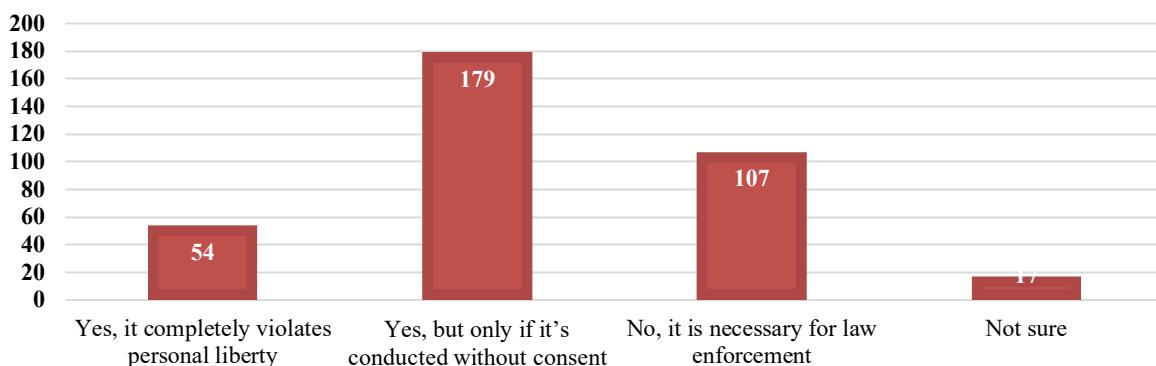
Fig-2: Recorded Answers For Question - 2.

The results show that half of the respondents, 179 (50%), believe narco-analysis should be used only in special cases such as terrorism or serious crimes. Another 107 respondents (30%) expressed that it is a useful investigative tool in general. Meanwhile, 36 respondents (10%) felt that narco-analysis violates human rights, and 35 respondents (10%) were unsure. These

results suggest that a significant proportion of respondents support the use of narco-analysis, especially in cases involving serious crimes.

Question 3 aimed to assess whether respondents feel that narco-analysis infringes on an individual's right to privacy and personal liberty. A total of 357 responses were gathered for this question.

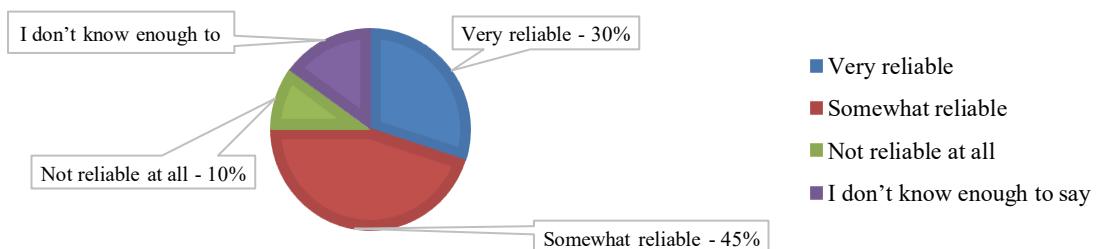
Fig-3: Recorded Answers For Question - 3.



The data reveals that half of the respondents, 179 (50%), believe narco-analysis infringes on personal liberty if conducted without consent. Additionally, 107 respondents (30%) felt that it is necessary for law enforcement, while 54 respondents (15%) said it completely violates personal liberty. Only 17 respondents (5%) were unsure. These results indicate that many respondents recognize the potential ethical concerns associated with narco-analysis but also see its value in law enforcement under certain conditions.

Question 4 was designed to evaluate the perceived reliability of narco-analysis in extracting truthful information. A total of 357 responses were received.

Fig-4: Recorded Answers For Question - 4.

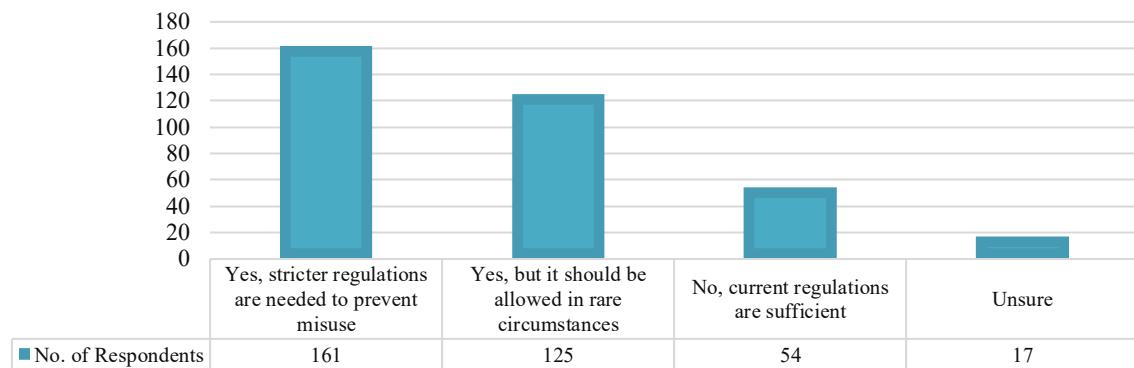


According to the results, 161 respondents (45%) believe narco-analysis is somewhat reliable for extracting truthful information.

A smaller portion, 107 respondents (30%), consider it very reliable, while 53 respondents (15%) were unsure of its reliability. Only 36 respondents (10%) believed it was not reliable at all. These results suggest that a majority of respondents consider narco-analysis to be a relatively reliable tool, though some uncertainty remains.

Question 5 aimed to assess whether respondents believe the use of narco-analysis should be subject to stricter regulations and oversight. We received a total of 357 responses to this question.

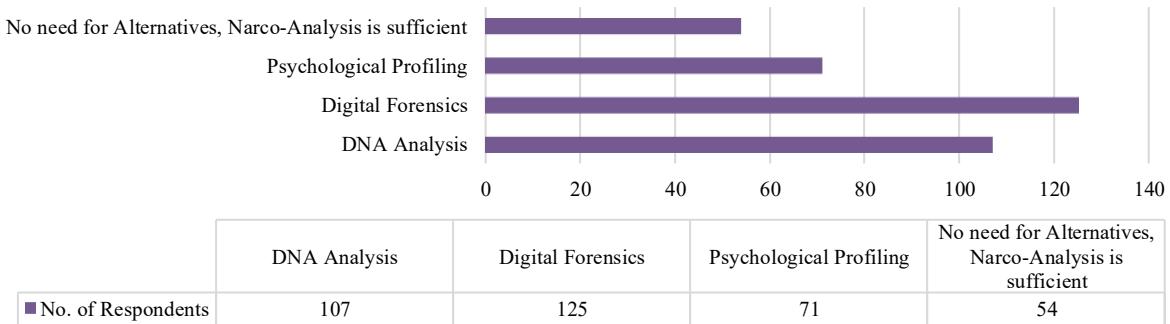
Fig-5: Recorded Answers For Question - 5.



The responses show that 161 respondents (45%) believe stricter regulations are needed to prevent misuse of narco-analysis. Additionally, 125 respondents (35%) support its use but only in rare circumstances. A smaller group, 54 respondents (15%), felt that the current regulations are sufficient, while 17 respondents (5%) were unsure. These results indicate strong support for regulatory measures to ensure ethical use of narco-analysis.

Question 6 was designed to identify which alternative forensic methods respondents believe law enforcement should prioritize over narco-analysis. We recorded a total of 357 responses.

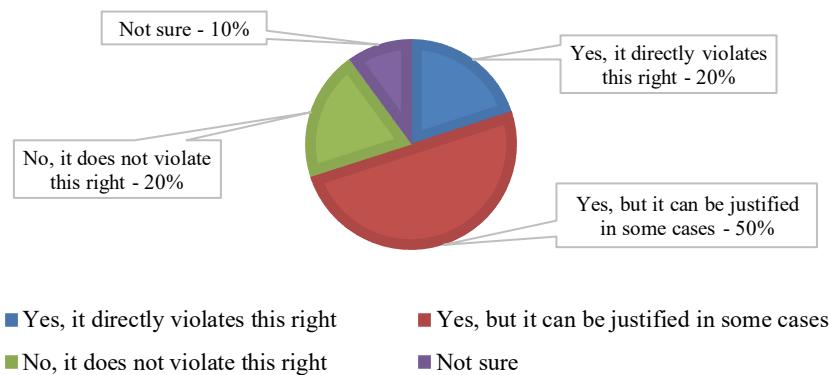
Fig-6: Recorded Answers For Question - 6.



The results indicate that 125 respondents (35%) believe digital forensics should be prioritized, while 107 respondents (30%) preferred DNA analysis. Psychological profiling was supported by 71 respondents (20%), and 54 respondents (15%) felt that no alternatives are necessary as narco-analysis is sufficient. These responses show that a significant proportion of respondents prefer modern forensic techniques over narco-analysis, though a portion still supports its continued use.

Question 7 explored whether respondents believe that narco-analysis violates the right against self-incrimination as guaranteed under Art. 20(3) of the Indian Constitution. A total of 357 responses were gathered for this question.

Fig-7: Recorded Answers For Question - 7.



The findings reveal that half of the respondents, 179 (50%), believe that narco-analysis can be justified in some cases, despite its potential conflict with constitutional protections. An equal 71 respondents (20%) either felt it directly violates this right or does not violate it at all. Finally, 36 respondents (10%) were unsure. These results suggest a divided view on the constitutional implications of narco-analysis, with many respondents open to its use under certain circumstances.

- ***Analysis of the Results***

In order to evaluate the influence of narco-analysis on human rights and police investigations in India, a survey was implemented, which included 357 respondents. The gathered data provides significant insights into public perception, ethical implications, and the efficacy of this forensic method. The survey results are examined below in connection with the study questions.

1. Conformity with Constitutional Safeguards

The initial research question examines the compatibility of narco-analysis with constitutional safeguards against self-incrimination and individual freedom. The poll indicates varied perspectives among respondents concerning this alignment.

Question 3, which inquired whether narco-analysis violates an individual's right to privacy and personal liberty, indicates that 50% of respondents believe narco-analysis infringes on personal liberty when undertaken without consent. This substantial segment underscores a critical issue about the procedure's alignment with constitutional rights, specifically under Art. 21 (*right to life and personal liberty*) and Art. 20(3) (*right against self-incrimination*). Moreover, 15% of participants believed that narco-analysis fundamentally infringes upon personal liberty, hence highlighting apprehensions regarding its constitutionality.

Conversely, 30% of participants deemed narco-analysis essential for law enforcement, indicating that some perceive its application as warranted situations. The remaining 5% expressed uncertainty, signifying a deficiency in clarity or inadequate information regarding the constitutional ramifications of narco-analysis.

Responses to Question 7, which inquired whether narco-analysis infringes against the right to self-incrimination, indicate that 50% of participants consider the procedure justifiable in specific circumstances, notwithstanding its possible contradiction with constitutional rights. This reflects a sophisticated comprehension, as respondents recognize the conflict between constitutional safeguards and the investigative advantages of narco-analysis.

The survey results indicate a substantial apprehension regarding the compatibility of narco-analysis with constitutional safeguards, especially concerning individual rights. Although its potential legitimacy is acknowledged in specific instances, the prevailing opinion suggests that rigorous protections are essential to protect constitutional rights.

2. Ethical and Human Rights Considerations

The second study question examines the ethical and human rights ramifications of narco-analysis, specifically with voluntary agreement, possible coercion, and psychological effects.

As per **Question 3** indicates that 50% of respondents believe narco-analysis violates personal liberty when performed without consent, reflecting a robust ethical opposition to non-consensual testing. This corresponds with apprehensions expressed by human rights organizations that underscore the significance of consent and the safeguarding of individual dignity.

According to **Question 5** emphasizes the ethical aspect, revealing that 45% of respondents support enhanced controls and oversight to avert misuse. This is a prevalent opinion that, although narco-analysis may be beneficial, its ethical ramifications necessitate rigorous regulations to prevent potential misuse and guarantee responsible application.

The study did not explicitly address psychological impact; nonetheless, replies to **Question 4** concerning the reliability of narco-analysis suggest that the method's perceived reliability may eclipse apprehensions about its psychological impacts. The acknowledgment of narco-analysis's propensity for yielding misleading or unreliable information (*10% of respondents deemed it entirely unreliable*) indicates an understanding of the method's questionable validity, which may indirectly pertain to worries regarding its effects on persons subjected to it.

The research indicates significant ethical apprehensions around the application of narco-analysis, especially in relation to consent and possible exploitation. There is a distinct necessity for improved rules to protect individual rights and guarantee ethical practices. The apprehensions regarding reliability and the possibility of coercion underscore the necessity for meticulous evaluation of the psychological effects on persons.

3. Efficacy in Law Enforcement Investigations

The third study topic examines the efficacy of narco-analysis in police investigations relative to other forensic methodologies.

Further according to **Question 2** indicates that 80% of participants saw narco-analysis as beneficial in police investigations, with 50% endorsing its application in exceptional circumstances like terrorism or severe offenses, and 30% considering it an effective instrument overall. This suggests a broad endorsement of narco-analysis as a

potentially useful investigative instrument, especially in intricate situations.

Moreover, according to **Question 4**, which evaluates the perceived reliability of narco-analysis, indicates that 75% of respondents consider it to be either extremely or somewhat reliable. This indicates that most individuals recognize its worth in obtaining accurate information, consistent with its perceived usefulness in investigations.

Further as per **Question 6** emphasizes alternative forensic methodologies, revealing that 65% of respondents favor procedures like digital forensics and DNA analysis rather than narco-analysis. This preference reflects an acknowledgment that contemporary forensic techniques are deemed more dependable and scientifically valid than narco-analysis, which some respondents consider less effective or antiquated.

The study indicates that, although a majority consider narco-analysis beneficial for specific investigation situations, there is a distinct preference for contemporary forensic methods. This signifies the necessity for law enforcement to incorporate sophisticated techniques in conjunction with or as a substitute for narco-analysis to improve investigative precision and efficacy. The divergent opinions regarding the reliability of narco-analysis indicate that, although it serves as an investigative tool, it ought to be complemented by more rigorous and scientifically proven methodologies.

The survey data provide an extensive perspective on the multiple aspects of narco-analysis. Concerns over constitutional rights and ethical consequences are important, with a considerable number of respondents supporting enhanced controls and oversight. Simultaneously, there is acknowledgment of the possible efficacy of narco-analysis in specific high-stakes investigations, although contemporary forensic methods are favored. This mixed-method approach to assessing narco-analysis underscores the necessity for judicious application, maintaining alignment with constitutional safeguards and ethical norms while incorporating sophisticated investigation techniques.

DISCUSSION AND CRITIQUES

a. Legal Framework, Judicial Interpretation, and Forensic Evidence

The controversial forensic technique known as "narco-

analysis," which involves giving suspects chemicals to produce altered consciousness, has come under intense judicial scrutiny in India. This method, which intersects with constitutional rights and forensic methods, raises significant problems about its legality and ethical ramifications. The Indian legal environment, shaped by significant judicial decisions and constitutional stipulations, offers a detailed view on narco-analysis and its ramifications for human rights and evidentiary admissibility.¹²

The legal conversation on narco-analysis revolves around the Indian Constitution's strong prohibitions against intrusions of personal liberty and self-incrimination. According to Art. 20(3) ensures that no one charged with an offense shall be coerced into self-incrimination. This section emphasizes that persons cannot be compelled to furnish self-incriminating evidence. Art. 21 guarantees the right to life and personal liberty, including safeguards against intrusive and potentially detrimental treatments. The constitutional safeguards are essential in assessing the legitimacy of narco-analysis, as the practice may violate these fundamental rights.

The legal discourse on narco-analysis has been substantially influenced by major Supreme Court decisions. One of the most significant rulings is *Selvi v. State of Karnataka*¹³ (2010), in which the Supreme Court examined the legitimacy of narco-analysis, polygraph examinations, and brain mapping, commonly referred to as "*lie detection tests*." The case originated from a dispute regarding the application of these techniques without the subjects' consent. The petitioners contended that the compulsory administration of these tests infringed upon their fundamental rights as stipulated in Art. 20(3) and 21.

The Supreme Court ruled that the application of narco-analysis without agreement infringes upon the right to self-incrimination as protected by Art. 20(3). The Court underscored that although forensic methods such as narco-analysis may yield significant investigative insights, their utilization must adhere to constitutional safeguards¹⁴. The ruling emphasized that these approaches cannot be applied coercively and must be executed with the subject's informed

¹² Joseph J, 'Human Rights Implication of the Use of Narco Analysis in Criminal Justice Administration in India' (2008) 2 NUALS Law Journal 96.

¹³ AIR 2010 SC 1974

¹⁴ Airen D and Gupta K, 'Constitutional Validity of Scientific Evidence in Criminal Justice System' (2023) 6 Issue 4 IJLMH 1644

agreement. The verdict established that evidence acquired through involuntary narco-analysis is inadmissible in court, as it violates constitutional rights and the principles of fair play in judicial procedures.

The Selvi ruling signified a substantial change in the judiciary's stance on forensic methodologies. By emphasizing the importance of consent and voluntary involvement, the Court strengthened the safeguarding of personal autonomy and privacy. The ruling emphasized the necessity for protections against possible abuses and affirmed that forensic evidence must be collected in accordance with constitutional protections. This verdict has significantly impacted the implementation of forensic procedures in India, encouraging a more prudent and rights-respecting methodology.

Besides Selvi, additional key rulings have shaped the legal landscape around narco-analysis. In *Shivani Bhatia v. State of Maharashtra*¹⁵, the Bombay High Court evaluated the admissibility of narco-analysis findings in criminal investigations. The Court determined that narco-analysis results acquired without the subject's agreement were inadmissible in judicial proceedings. This verdict reaffirmed the principles stated in Selvi and emphasized the necessity of getting informed permission prior to administering such testing.

The admissibility of evidence acquired via narco-analysis is regulated by the Indian Evidence Act of 1872, which mandates that evidence must be pertinent and obtained using lawful and ethical methods. According to Section 24 of the Act stipulates that any confession obtained by pressure or duress is inadmissible. The Supreme Court's verdict in Selvi asserts that evidence acquired through involuntary narco-analysis is inadmissible, as it violates the requirements of relevance and legality stipulated by the Act¹⁶.

The function of forensic evidence within the Indian legal system is progressively advancing, with an increasing focus on contemporary and scientifically substantiated methodologies. The transition to sophisticated forensic techniques, including DNA analysis and digital forensics, signifies a wider movement towards approaches that uphold constitutional rights while offering dependable investigative resources¹⁷. These

¹⁵ Crl.A. No. 648-649/2017

¹⁶ Singh N and Das DPK, 'The Role Of Human Rights Organizations In Monitoring And Regulating The Use Of Narcoanalysis In India' (2023) 29 EATP 478

¹⁷ *ibid.*

technologies provide superior accuracy and are less invasive than narco-analysis, consistent with the legal focus on safeguarding individual rights.

The conversation surrounding narco-analysis has also been impacted by recent advancements in forensic science and legal standards. The establishment of guidelines and protocols for forensic practices seeks to guarantee adherence to constitutional and ethical principles. The NHRC and the BPRD have provided suggestions about the ethical conduct of forensic investigations, specifically addressing the application of narco-analysis. These rules underscore the necessity of consent, transparency, and adherence to human rights, mirroring the judicial principles set forth in *Selvi* and associated instances.

The persistent legal and ethical discourse over narco-analysis highlights the necessity for a measured approach that honours individual rights while fulfilling law enforcement requirements. The judicial focus on consent and voluntary participation underscores the necessity of safeguarding constitutional protections in forensic processes. The advancement of forensic science, coupled with the incorporation of contemporary methodologies and compliance with ethical norms, will significantly influence the future of forensic investigations in India.

India's legal system and courts' interpretation of narco-analysis highlight how important it is to match forensic procedures with constitutional safeguards. The *Selvi v. State of Karnataka*¹⁸ decision has significantly influenced legal debate by affirming that narco-analysis must be performed with consent and in accordance with individual rights. The continuous advancement of forensic methodologies demonstrates a dedication to maintaining constitutional foundations while accommodating contemporary investigation requirements¹⁹. The incorporation of sophisticated forensic techniques and compliance with ethical standards will persist in shaping the utilization and governance of narco-analysis within the Indian legal framework.

b. Ethical and Human Rights Concerns in Narco-Analysis

¹⁸ AIR 2010 SC 1974

¹⁹ Chowdhury N, 'Privacy and Citizenship in India: Exploring Constitutional Morality and Data Privacy' (2018) 11 NUJS Law Review 421

Since narco-analysis touches on the core ideas of individual freedoms and rights, it has drawn a lot of attention to the ethical and human rights issues surrounding the practice. Several serious concerns about the infringement of individual liberties, the right to remain silent, and adherence to international human rights norms are brought up by narco-analysis, which involves giving drugs to participants to produce altered consciousness. The psychological and physiological effects on those undergoing narco-analysis underscore the wider ramifications of this forensic method.

The utilization of narco-analysis, frequently used in criminal inquiries to elicit information or confessions from suspects, is laden with ethical challenges. A primary issue is the possible infringement of individual rights and liberties. The invasive nature of the surgery and the administration of medicines to achieve a trance state raise substantial ethical concerns²⁰. Involuntary narco-analysis constitutes a violation of personal autonomy and bodily integrity, prompting apprehensions over consent and the maintenance of human dignity. Such methods undermine the essential tenet that individuals must not endure pressure or manipulation, even in the quest for justice²¹.

An essential constitutional provision that is pertinent to narco-analysis is Art. 20(3) of the Indian Constitution, which ensures that no individual accused of an offense will be compelled to testify against themselves. The right to silence is essential for safeguarding individuals against self-incrimination. The inherent nature of narco-analysis is to extricate information from suspects, potentially compelling them to disclose self-incriminating details. The Supreme Court of India, in its pivotal ruling in *Selvi v. State of Karnataka*²² (2010), emphasized the incongruence of narco-analysis with Art. 20(3). The Court determined that involuntary narco-analysis infringes upon the right to self-incrimination, rendering any evidence acquired through such methods inadmissible in court. This verdict underscores the necessity of protecting the right to silence and emphasizes the requirement for forensic methods to conform to constitutional safeguards.

The ethical issues surrounding narco-analysis are further clarified by international human rights standards. The UDHR

²⁰ ibid.

²¹ Bush RAB and Folger JP, 'Mediation and Social Justice: Risks and Opportunities' (2012) 27 Ohio State Journal on Dispute Resolution 1

²² AIR 2010 SC 1974

and the ICCPR delineate essential rights relevant to the application of narco-analysis. The UDHR forbids torture and other cruel, inhuman, or degrading treatment under Art. 5. Similar prohibitions against such methods are found in Art. 7 of the ICCPR. When administered against one's will, narco-analysis may be viewed as a kind of coercion that violates fundamental international human rights norms. As a signatory to several international treaties, India is required to align its forensic processes with global human rights standards.

The ethical ramifications of narco-analysis are exacerbated by the psychological and physiological effects on the subjects involved in the treatment²³. The administration of substances to modify a person's state of consciousness can produce substantial psychological and physiological impacts. The intrusive nature of the surgery may cause psychological distress, anxiety, and trauma in the subjects. The possibility of psychological injury prompts ethical considerations regarding the equilibrium between investigative advantages and the mental health of persons. The administration of medications poses hazards of unpleasant reactions and long-term health consequences²⁴. The risk of bodily injury highlights the necessity for stringent ethical norms and protections for persons undergoing narco-analysis²⁵.

The Supreme Court's ruling in *Selvi* has been crucial in tackling these ethical issues. The Court's decision underscored that narco-analysis must be performed with the subject's informed consent and cannot be applied coercively. This choice adheres to ethical norms that emphasize respect for individual liberty and bodily integrity. It establishes a precedent for guaranteeing that forensic methods comply with national and international human rights standards.

The ethical issues related to narco-analysis are also connected to wider debates on the application of forensic methods in the criminal justice system. The idea of honouring human dignity and safeguarding individual rights must direct the implementation of any forensic technique.²⁶ Narco-analysis may provide investigative benefits, but it must be weighed against the necessity of maintaining fundamental rights and

²³ Bharadwaj AS and Suresh S, 'Narco Analysis and Protecting the Rights of the Accused' (2008) 4 NALSAR SLR 121

²⁴ Macdonald JM, 'Narcoanalysis and Criminal Law' (1954) 111 AJP 283

²⁵ *ibid.*

²⁶ Dearing A, 'Criminal Justice Respecting Human Dignity' in Albin Dearing (ed), *Justice for Victims of Crime: Human Dignity as the Foundation of Criminal Justice in Europe* (Springer International Publishing 2017)

ethical standards. This equilibrium necessitates a meticulous evaluation of the prospective advantages and disadvantages linked to the technique.

In recent years, there has been an increasing focus on the advancement of forensic methods that conform to ethical and human rights standards. Progress in forensic science, including DNA analysis and digital forensics, provides more dependable and less intrusive options compared to narco-analysis. The contemporary methodologies are grounded in scientific principles and regard for individual rights, signifying a transition towards approaches that honor human dignity and constitutional safeguards²⁷.

c. *Impact on Police Investigations: Effectiveness, Reliability, and Challenges*

Since narco-analysis is contentious and has possible consequences, it has attracted a lot of attention in the fields of forensic science and police investigations. Narco-analysis, a technique that entails the use of drugs to elicit a state of altered consciousness in suspects, offers both advantages and obstacles in the investigation process. A comprehensive evaluation of its efficacy, dependability, and possible misapplication necessitates a detailed analysis of its advantages and drawbacks, alongside the regulatory structures established to prevent exploitation.

Fundamentally, the purpose of narco-analysis is to coax honest information or admissions from those who are unwilling to cooperate or whose testimony is unsatisfactory in other ways. The primary advantage of narco-analysis is its capacity to generate leads or validate existing evidence when conventional interrogation techniques are ineffective²⁸. In high-stakes investigations, such as those related to organized crime or terrorism, narco-analysis may provide essential insights that help further the case. In difficult cases with intricate details, information obtained from narco-analysis might assist law enforcement in reconstructing fragmented narratives or uncovering new avenues of investigation.

Nonetheless, the constraints of narco-analysis are substantial and require meticulous evaluation. The technique's reliability is frequently challenged because of the suggestibility elicited by the medicines administered during

²⁷ ibid.

²⁸ Oosthuizen T, Howes LM and White R, 'Forensic DNA Analysis and Legislative Provisions: Balancing Rights in a Time of Scientific Advancement' (2023) 48 ALJ 178

the process. Research and empirical evidence indicate that drugs such as sodium pentothal do not reliably ensure accurate responses. Rather, they may result in confessions or statements shaped by leading inquiries or the subject's inclination to acquiesce to the interrogator's expectations. The intrinsic unreliability was underscored in the case of *Shivani Bhatia*²⁹, wherein the Bombay High Court cautioned against the interpretation of narco-analysis evidence, asserting that such evidence necessitates corroboration from more reliable sources.

The influence of narco-analysis on case resolution rates is not consistently beneficial. Although it can yield significant insights, it does not invariably result in conclusive advancements in investigations. The methodology is most efficacious when integrated into a comprehensive investigative plan that encompasses additional forensic and conventional methods. In the 2017 Aadhaar *data breach*³⁰ case, narco-analysis was utilized among several approaches to obtain information. While it aided the investigation, the integration of many forensic techniques eventually elucidated the compromise more effectively. This case demonstrates that narco-analysis should be seen as one instrument among several, rather than a cure-all for investigative difficulties.

The use of narco-analysis to support or refute other evidence is a complicated process. When combined with physical evidence, witness testimony, and additional forensic discoveries, it can assist in corroborating or disputing existing information. Nonetheless, its conclusions are not invariably clear-cut. In the *Arushi Talwar murder case*³¹, narco-analysis was employed to elicit information from suspects; nevertheless, the findings did not definitively resolve the case. The evidence derived from narco-analysis required examination and must be assessed in conjunction with other forensic and testimonial evidence. This underscores the necessity of employing narco-analysis alongside other techniques to guarantee a thorough and precise examination.

The possibility for the misuse of narco-analysis by law enforcement authorities is a significant problem. The invasive characteristics of the technology and the potential for coercive implementation provide significant ethical and legal concerns. Reports indicate that narco-analysis has been performed

²⁹ CrI.A. No. 648-649/2017

³⁰ Justice K. S. Puttaswamy (Retd) vs Union of India AIR 2017 SC 4161

³¹ Dr. (Smt.) Nupur Talwar vs State Of U.P. And Anr. (1984) 2 SCC 627

without appropriate consent or has been employed to exert undue pressure on suspects, raising concerns over human rights abuses. The Supreme Court's decision in the case of *Selvi*³² resolved these issues by stipulating that narco-analysis requires informed agreement and must not be employed coercively. This pivotal ruling emphasized the necessity for ethical standards and legal protections to avert abuse and secure individual rights.

The application of narco-analysis in law enforcement investigations entails a multifaceted interplay of advantages, drawbacks, and ethical implications. Although it can provide significant insights and assist in resolving complex problems, its efficacy is mitigated by concerns over reliability and the possibility of misuse³³. The amalgamation of narco-analysis with additional forensic methodologies and compliance with ethical standards is crucial for its proper application. As forensic practices evolve, prioritizing ethical issues and implementing more reliable methods will be essential for improving the integrity of investigative processes and safeguarding human rights.

d. Comparative Analysis: Narco-Analysis in Global Contexts

Many nations have explored using technology in criminal investigations, although the legal, moral, and human rights viewpoints vary greatly amongst them. A comparative review of narco-analysis throughout the US, the UK, and Canada can yield important insights into the worldwide response to this contentious technique and teach India significant lessons about improving its judicial system and defending human rights.

In the United States, narco-analysis has been predominantly discontinued, as judges have raised issues over the reliability and ethical ramifications of evidence acquired through this method. In the early 20th century, sodium pentothal, often referred to as "*truth serum*," was utilized briefly in investigations. Legal objections subsequently emerged, particularly concerning the Fifth Amendment of the U.S. Constitution, which safeguards persons against self-incrimination. The 1963 historic decision *Townsend v. Sain*³⁴ was adjudicated by the U.S. Supreme Court, which concluded

³² AIR 2010 SC 1974

³³ Perlin M, "There Are No Trials inside the Gates of Eden": Mental Health Courts, the Convention on the Rights of Persons with Disabilities, Dignity and the Promise of Therapeutic Jurisprudence', *Coercive Care* (Routledge 2013).

³⁴ 372 U.S. 293 (1963)

that confessions procured under the influence of a narcotic supplied during interrogation contravened the Due Process Clause of the Fourteenth Amendment. The Court determined that these confessions were coerced and hence inadmissible in judicial proceedings. This decision effectively terminated the application of narco-analysis in the United States, with successive legal interpretations affirming that coercive evidence-gathering tactics, including drug use, contravene the fundamental rights entrenched in the U.S. Constitution³⁵.

A skeptical attitude toward narco-analysis has also been shown by the UK. English law has historically maintained that evidence acquired through coercive or intrusive methods is inadmissible. The legal doctrine of *nemo tenetur se ipsum accusare*—the right against self-incrimination—constitutes an essential element of English criminal law. Moreover, the Human Rights Act 1998, which integrates the ECHR into UK legislation, offers supplementary protections. Art. 3 of the ECHR forbids torture and cruel or humiliating treatment, encompassing any practice that compels someone to testify against themselves under stress or coercion. Although there is no explicit case law in the UK addressing narco-analysis, the courts' persistent adherence to human rights principles strongly indicates that the application of narco-analysis would be deemed incompatible with the nation's legal and ethical standards.

According to the Canadian Charter of Rights and Freedoms ensures protection against self-incrimination in Section 11(c) and safeguards against cruel and unusual treatment or punishment in Section 12. These clauses closely correspond with the concepts established in both U.S. and UK legislation. The application of narco-analysis as an investigative instrument would probably be considered unconstitutional due to its infringement on individual rights³⁶. While Canadian courts have not explicitly determined the legality of narco-analysis evidence, the significant focus on human rights and ethical investigative methods would certainly deem such procedures inadmissible. Canada, like many other jurisdictions, has prioritized the use of increasingly dependable and scientifically established forensic techniques, such as DNA analysis, that adhere to legal and ethical

³⁵ Kartikeya AKY& K, 'Constitutionality Of Narco-Test' (16 October 2020) <<https://www.livelaw.in/lawschool/articles/constitutionality-of-narco-test-164554>> accessed 18 September 2024

³⁶ Aishwarya S, 'Evidentiary Value of Narco-Analysis' (2018) 6 Supremo Amicus 343

requirements.

The global legal and ethical frameworks regulating narco-analysis are predominantly influenced by human rights issues, especially the right to silence, safeguards against self-incrimination, and the ban on compulsion. Unlike the aforementioned countries, narco-analysis has been employed more frequently in India, especially in prominent criminal cases. Nonetheless, the practice has faced heightened scrutiny owing to apprehensions regarding its constitutionality and compliance with international human rights standards. The pivotal Supreme Court ruling in the case of *Selvi*³⁷ directly confronted these matters. The Court determined that the compulsory application of narco-analysis contravenes the constitutional right to self-incrimination as stipulated in Art. 20(3) of the Indian Constitution. The Court underscored that any invasive interrogation conducted without the subject's agreement violates personal liberty as stipulated in Art. 21. Notwithstanding this verdict, the practice persists in India, and discussions regarding its potential utility in particular situations remain ongoing.

Worldwide, the tendency has shifted towards the dismissal of narco-analysis in favor of more ethically sound and scientifically credible methodologies. This transition is shaped by both national legal norms and international human rights agreements. The ICCPR, of which India is a signatory, clearly forbids any kind of coercion or treatment that diminishes human dignity. Art. 7 of the ICCPR stipulates that "*no one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment*," which human rights bodies have interpreted to encompass practices such as narco-analysis, involving the involuntary administration of mind-altering substances. India's commitments under the ICCPR and its domestic legislative framework necessitate a thorough evaluation of the human rights consequences associated with the ongoing use of narco-analysis³⁸.

The insights for India derived from global best practices in this domain are unequivocal. The international agreement on safeguarding individual rights, especially the right to silence and the ban on compelled testimony, provides a framework for revising India's stance on narco-analysis³⁹. Today countries like the US, the UK, and Canada have redirected their attention

³⁷ AIR 2010 SC 1974

³⁸ Misra S, 'International Human Rights Law in India: Practice and Trends', *Indian Practice of International Law* (Routledge India 2024)

³⁹ *ibid.*

towards more dependable forensic methodologies that respect individual rights, including DNA analysis, digital forensics, and other scientific investigative methods that are both precise and ethical.

As a result of doubts regarding the technique's dependability, moral ramifications, and effects on human rights, a comparative examination of narco-analysis in various global contexts indicates a discernible trend away from its application. India's future depends on assimilating international best practices and enhancing its legal and regulatory frameworks to guarantee that investigative methods comply with constitutional safeguards and international human rights commitments⁴⁰. The worldwide transition to more sophisticated, dependable, and ethical forensic techniques provides India with a framework for improving its narco-analysis practices and protecting human rights within the criminal justice system.

RECOMMENDATIONS FOR POLICY REFORM

Once lauded as a revolutionary investigative tool, narco-analysis has become a topic of intense debate and scrutiny. Administering truth-serum drugs to extract concealed information raises ethical and legal questions, particularly concerning its reliability and adherence to human rights⁴¹. In India, the legal framework for narco-analysis remains underdeveloped, often navigating the tension between law enforcement objectives and individual rights. With advances in forensic science offering more accurate and non-invasive methods, the relevance of narco-analysis is being critically re-evaluated. This calls for a reassessment of its role, emphasizing individual rights, accountability, and alternatives that uphold ethical standards. A forward-looking approach would involve legal reforms, judicial oversight, and the integration of emerging technologies in investigative practices⁴².

To resolve the concerns surrounding narco-analysis, strict criteria are necessary: it should be used only as a last resort, with mandatory judicial approval, and only in the absence of viable alternatives. The legal reforms must prioritize balancing investigative needs with human dignity. Strengthening oversight mechanisms is essential, with independent committees of legal,

⁴⁰ Sripati V, 'India's National Human Rights Commission: A Shackled Commission' (2000) 18 BUILJ 1

⁴¹ Shah D, 'The Validity of the Use of Narcoanalysis and Its Importance in the Light of National Security' (2020) 3 Issue 3 IJLMH 502

⁴² Lasson K, 'Torture, Truth Serum, and Ticking Bombs: Toward a Pragmatic Perspective on Coercive Interrogation' (2007) 39 LUCLJ 329

human rights, and forensic experts overseeing its application. Independent bodies could prevent abuse and coercion, while judicial oversight ensures that evidence obtained through narco-analysis is admissible only if obtained lawfully, as seen in cases like *Smt. Priya Shukla v. State of Uttar Pradesh*⁴³.

Today emerging forensic technologies provide more ethical and reliable alternatives to narco-analysis. DNA profiling, digital forensics, and biometric analysis offer scientifically sound methods that are less invasive and increasingly preferred in investigations. DNA profiling has proven essential in solving complex cases and reducing wrongful convictions, while digital forensics and biometric methods are non-coercive, making them superior to narco-analysis.

International human rights standards, such as the UNCAT, prohibit coercive investigative techniques and align with India's constitutional protections. Ratifying UNCAT would bolster India's commitment to human rights, preventing the misuse of methods like narco-analysis⁴⁴. Moreover, the civil society plays a vital role in advocating for these reforms, raising awareness of individual rights, and promoting legal education for law enforcement and judicial professionals. India must adopt a forward-thinking approach by reforming its narco-analysis policies, embracing forensic advancements, and adhering to international human rights norms to enhance justice and protect individual freedoms.

⁴³ Crl. Misc. W.P. No. 462 of 2024

⁴⁴ Patra AP and others, 'Violation of Human Rights and Torture Medicine', *Medical Jurisprudence & Clinical Forensic Medicine* (CRC Press 2023).