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Review Article

Forensic Justice for Sexual Assault Survivors: A Critical Analysis of Rape Kit Implementation in India

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Abstract

Introduction: Rape kits, or Sexual Assault Evidence Collection Kits (SAECKs), are critical forensic tools used in the investigation and prosecution of sexual assault. Despite their proven importance, India faces numerous implementation challenges due to infrastructure deficits, lack of training, and policy gaps. **Methods:** This study adopted a qualitative and descriptive research methodology to assess the application, availability, and effectiveness of Sexual Assault Evidence Collection Kits (SAECKs) in India. Data collection involved a review of secondary sources, including government guidelines, legal provisions, and research publications such as the Ministry of Health and Family Welfare (2014), CEHAT (2018), UNFPA, and National Crime Records Bureau (2023). **Discussion:** Findings indicate systemic barriers in infrastructure, training, and survivor-sensitive care. Comparative analysis with international standards highlights India's need for legally binding mandates on SAECK use, nationwide Sexual Assault Nurse Examiner (SANE) programs, and technological solutions for evidence tracking. **Conclusion:** Strengthening rape kit implementation through statutory backing, infrastructure expansion, and survivor-centric protocols is essential to improving conviction rates and ensuring justice for survivors of sexual violence in India.

1. Introduction

In India, rape kits, also known as Sexual Assault Evidence Collection Kits (SAECKs), are increasingly being recognized as indispensable forensic tools in the investigation and prosecution of sexual offences.

Globally, the use of rape kits has significantly improved the quality of evidence presented in courts, enhancing conviction rates and reinforcing survivors' testimonies with objective, scientific proof such as DNA, semen, saliva, blood, and skin

particles. However, in the Indian context, the implementation of rape kits remains inconsistent, underutilized, and poorly regulated.

Following the brutal 2012 Nirbhaya case, India witnessed a wave of legal reforms, including the Criminal Law (Amendment) Act, 2013, which expanded the definition of sexual offences and mandated prompt medical examination of survivors. In 2014, the Ministry of Health and Family Welfare (MoHFW) issued medico-legal

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guidelines emphasizing the use of SAECKs for comprehensive and respectful treatment of survivors. Yet, the lack of legal codification of these guidelines and limited awareness among law enforcement and healthcare personnel have hindered effective implementation.¹

Infrastructure and human resources pose additional challenges. A 2018 study by CEHAT (Centre for Enquiry into Health and Allied Themes) found that only 20% of hospitals in Maharashtra followed proper forensic protocols, and fewer than 10% had trained staff or access to rape kits. Furthermore, India's Forensic Science Laboratories (FSLs) are overburdened and lack the capacity to process samples efficiently, contributing to extensive delays and case backlogs. For instance, in Delhi alone, over 16,000 DNA cases were pending in 2021, undermining the timely delivery of justice.²

Thus, while rape kits hold the potential to transform India's response to sexual violence, their effectiveness is currently curtailed by systemic inefficiencies, training gaps, and lack of accountability mechanisms. Urgent reforms are needed to integrate SAECKs within a survivor-centric, rights-based legal and medical framework.

2. Rape Kit

A rape kit also known as a Sexual Assault Forensic Evidence (SAFE) kit, Sexual Assault Evidence Collection Kits (SAECKs) in India is a collection of items used by medical professionals to gather and preserve physical evidence following an alleged sexual assault.³

Key Components of a Rape Kit:

One of its primary components includes swabs and envelopes, which are used to collect bodily fluids such as semen, saliva, and blood from the survivor's body or clothing. These samples are vital for DNA analysis and play a crucial role in establishing physical contact or identifying the perpetrator. The kit further contains documentation forms, which allow the medical examiner to record a detailed account of the survivor's statement, obtain informed consent for the examination, and note clinical observations and injuries. In instances where drug-facilitated sexual assault is suspected, blood and urine collection kits are essential to test for intoxicating substances that may impair memory or consent. Some advanced kits may also include tools for photographic evidence, enabling the medical professional to document visible injuries, always ensuring this is done with the survivor's explicit consent to protect dignity and privacy. Lastly, chain of custody forms is a critical legal

component of the kit, as they record each person who handles the evidence, ensuring its admissibility in court by maintaining its integrity from collection to laboratory analysis.⁴

The Evidentiary Value of Rape Kits

Studies globally confirm that rape kits enhance the legal credibility of the survivor's testimony. When kits are used and analyzed, prosecution rates improve. The presence of DNA evidence often shifts a case from circumstantial to corroborated, allowing for stronger prosecutorial decisions.⁵ Absence of DNA or physical trauma should not invalidate a survivor's testimony, especially in cases where the victim delayed reporting or the assault did not involve penetrative contact.⁶

National Standards and Statutory Provisions

Free and Immediate Medical Treatment for Survivors: Section 473 of Bharatiya Nagarik Suraksha Sanhita, 2023 (BNSS) mandates that every hospital, whether public or private, shall immediately provide first-aid or medical treatment, free of cost, to victims of sexual offences and must inform the police.

Medical Examination of Rape Survivors: Section 184 of the BNSS lays down a statutory framework for conducting the medico-legal examination of a survivor in cases of rape or attempted rape. It emphasizes time-sensitive, consent-based, and scientifically valid processes, reinforcing the evidentiary foundation for prosecuting sexual offences while upholding the survivor's dignity and bodily autonomy.

Legal Accountability: Section 203 of Bharatiya Nyaya Sanhita, 2023 (BNS) prescribes punishment up to one year imprisonment and/or fine for people in charge of hospitals who contravene the provisions of section 473 BNSS.

Consent and Voluntariness: Section 35 of the Bharatiya Sakshya Adhinyam, 2023 (BSA), explicitly reinforces the need for consent and voluntariness when recording evidence, particularly in cases involving survivors of sexual violence. This section upholds that any statement, confession, or forensic evidence such as bodily samples or physical examinations must be obtained without coercion, intimidation, or inducement. The provision is crucial in cases of sexual assault where survivors are often in a vulnerable and traumatized state.

Medico-Legal Guidelines for Sexual Assault Survivors in India: In 2014, the Ministry of Health and Family Welfare (MoHFW), Government of India, released the "Guidelines and Protocols: Medico-Legal

Care for Survivors/Victims of Sexual Violence". This landmark document was developed in response to increasing concerns about the insensitive and inconsistent medico-legal practices surrounding sexual assault cases in India. It aimed to standardize the care of survivors and ensure the ethical, scientific, and legally sound collection of forensic evidence using Sexual Assault Evidence Collection Kits (SAECKs).⁷

3. Results

The analysis of secondary sources and legal documents reveals significant discrepancies between policy frameworks and ground-level implementation of Sexual Assault Evidence Collection Kits (SAECKs) in India.

Inconsistent Implementation of National Guidelines:

Despite the 2014 Ministry of Health and Family Welfare guidelines mandating the standardized use of SAECKs in all cases of sexual violence, actual implementation across states remains inconsistent. Some states, such as Maharashtra and Delhi, have adopted structured medico-legal protocols, while others continue to rely on outdated or informal practices.⁸

Shortage and Uneven Distribution of SAECKs:

Several hospitals, especially in rural or under-resourced districts, reported a lack of rape kits or received them sporadically. A 2018 CEHAT study revealed that many district hospitals in Maharashtra lacked access to functioning SAECKs, limiting proper forensic documentation.

Low Forensic Utilization Rates: Even when kits are available, forensic evidence is often underutilized. Healthcare providers frequently lack proper training to administer SAECKs in a trauma-informed manner. As a result, critical evidence is lost or improperly preserved.

Legal Accountability Measures Remain Underused:

Section 203 of the Bharatiya Nyaya Sanhita (BNS), 2023, prescribes penalties for hospital administrators who fail to comply with forensic obligations under section 473 BNSS. However, there are limited cases of enforcement, indicating a gap between legislative intent and operational practice.

Informed Consent and Survivor Rights: While section 35 of the Bharatiya Sakshya Adhinyam (BSA) underscores the importance of consent and voluntariness, many survivors report being examined without adequate explanation or choice. Documentation standards are also poorly followed,

often lacking comprehensive medical history or psychological assessment.⁹

Low Conviction Rates Correlate with Poor Evidence

Collection: According to the National Crime Records Bureau (NCRB), 31,516 rape cases were registered in India in 2022, but only 27.2% ended in conviction. Experts attribute part of this gap to deficient forensic collection and evidence handling during the early stages of investigation.

Limited Training and Awareness: There is a significant lack of regular training programs for doctors, forensic staff, and police officers involved in sexual assault investigations. The absence of trauma-informed, rights-based approaches contributes to further trauma for survivors and weakens the evidentiary chain.

4. Discussion

The present study set out to evaluate the implementation and effectiveness of SAECKs in India, examining whether forensic evidence collection in sexual assault cases is adequately standardized, survivor-centered, and legally enforced.

Uneven Implementation across States: The study confirmed that despite national guidelines introduced in 2014 by the Ministry of Health and Family Welfare emphasizing standardized medico-legal care and SAECK usage, implementation varies widely. States such as Delhi and Maharashtra have integrated these kits more systematically into healthcare protocols, while others lag behind due to administrative inefficiencies and lack of training. These findings align with prior studies (CEHAT, 2018; UNFPA, 2020), which found that regional disparities in medico-legal practices stem from inconsistent political will, funding, and infrastructure.

Forensic Practices and Low Conviction Rates: The correlation between poor forensic procedures and low conviction rates is evident in the data from the National Crime Records Bureau (2023), where only 27.2% of registered rape cases in 2022 led to convictions. Inadequate evidence handling, delays in collection, and lack of proper preservation protocols result in compromised prosecutions. This pattern is consistent with prior literature indicating that evidence collected within the first 72 hours post-assault significantly influences legal outcomes.¹⁰

Ground-Level Enforcement: The Bharatiya Nyaya Sanhita (2023), specifically sections 203 and 473, has introduced accountability mechanisms to ensure hospitals comply with forensic obligations. However, as our results show, there is little evidence of

enforcement. No significant case law or penalties have been documented against institutions that fail to use SAECKs, suggesting that the law's deterrent potential is not being realized.

Moreover, section 184 of the Bharatiya Nagarik Suraksha Sanhita (BNSS) and section 164A of the CrPC emphasize timely medical examination and consent-based procedures. Yet survivor testimonies and NGO reports continue to highlight violations, including non-consensual exams and re-traumatization. This disconnect between statutory law and practice reflects systemic deficiencies in training and accountability.

Comparison with International Standards: Compared to global practices, such as the U.S. Violence Against Women Act 1994 (VAWA), which mandates free and timely forensic exams irrespective of police reporting, India's approach appears underdeveloped in terms of both survivor rights and evidentiary rigor. The lack of a uniform national protocol backed by enforceable compliance mechanisms places Indian survivors at a disadvantage in the justice process.

Survivors' Experience and Psychosocial Gaps: The findings also reinforce that medical response to sexual violence in India is still largely procedural, with insufficient emphasis on psychosocial support, informed consent, and trauma-informed care. Prior studies¹¹ have emphasized that the lack of empathetic care not only deters survivors from reporting but also affects their willingness to undergo critical forensic procedures, leading to compromised evidence chains.

Enhancing the Quality of Response of the Health Care System to Sexual Violence (ICMR-DHR Study Report, 2022): This comprehensive study examines the preparedness of India's public healthcare system in responding to survivors of sexual violence. It evaluates infrastructure, human resources, and healthcare providers' knowledge of the Ministry of Health and Family Welfare's 2014 guidelines. The report highlights significant gaps in training, awareness, and infrastructure, emphasizing the need for standardized protocols and capacity building.¹²

Recommendations and Reforms for Effective Implementation of Rape Kits in India: For rape kits to become a robust instrument in ensuring justice for survivors of sexual assault, India must implement comprehensive reforms across legal, infrastructural, procedural, and social dimensions. These reforms must move beyond guidelines to become enforceable

mandates, supported by training, funding, and accountability mechanisms.

Legal Mandate for Rape Kit Use: The first step toward uniform and mandatory use of Sexual Assault Evidence Collection Kits (SAECKs) is to enact statutory backing. This can be achieved through an amendment to the Bharatiya Nagarik Suraksha Sanhita, 2023 (BNSS), inserting a specific provision that mandates the use of SAECKs in all registered cases of sexual assault. Such a provision should codify the existing Ministry of Health and Family Welfare (MoHFW) 2014 guidelines, making them binding on all medical institutions both public and private.

Standardized Training and Certification Programs: To ensure the sensitive and skilled use of rape kits, India must implement a national certification program for medical professionals. The introduction of Sexual Assault Nurse Examiner (SANE) training, under the regulatory oversight of the Indian Nursing Council, would professionalize the process. Certified SANEs should be made mandatory in all tertiary care hospitals and One Stop Centres (OSCs).¹³

Infrastructure and Technology Expansion: Lack of infrastructure remains a critical bottleneck in the effective use of rape kits. All state Forensic Science Laboratories (FSLs) should be equipped with dedicated DNA analysis units to reduce the current backlog of sexual assault cases. Every rape kit must be equipped with a unique barcode to ensure traceability, and a centralized digital platform.¹³ National Sexual Assault Evidence Management System (NSAEMS) should be created to log kit issuance, collection, testing status, and evidence chain of custody. This will significantly improve transparency, inter-agency coordination, and judicial efficiency.

Monitoring, Evaluation, and Accountability: Regular monitoring and public auditing are essential to measure the effectiveness of rape kit usage. The National Crime Records Bureau (NCRB), in coordination with State Forensic Boards, should be mandated to publish annual reports on rape kit usage, delays in testing, conviction outcomes, and gaps in infrastructure or training. Additionally, third-party or judicial oversight committees can be established to independently review compliance and recommend improvements. This will create a culture of accountability and promote data-driven reforms.

Survivor-Centric and Rights-Based Protocols: Survivor dignity must be at the heart of every forensic protocol. Informed consent should be obtained at

every stage examination, evidence collection, testing, and legal proceedings. Survivors must have access to female medical professionals trained in trauma-informed care, ensuring the process does not inflict further psychological harm. Post-examination support such as access to mental health professionals, shelter, legal aid, and rehabilitation must be integrated into the protocol to promote holistic recovery and empowerment.¹⁴⁻¹⁶

Financial Support and Public Awareness: The central government must significantly increase the allocation from the Nirbhaya Fund for the procurement of SAECKs, training of healthcare and law enforcement personnel, development of forensic labs, and digital infrastructure.¹⁷⁻¹⁹ Additionally, mass awareness campaigns should be launched to educate the public about the availability and importance of rape kits, debunk myths around sexual violence, and encourage reporting. These campaigns should be survivor-led, intersectional, and tailored to local languages and contexts.²⁰

5. Conclusion

The study critically examined the deployment, utility, and legal relevance of Sexual Assault Evidence Collection Kits (SAECKs) within India's criminal justice and healthcare systems. Despite policy advancements and growing recognition of the forensic and legal value of SAECKs, their implementation remains fragmented, inconsistent, and under-enforced.

The findings confirm that although guidelines issued by the Ministry of Health and Family Welfare (2014) and legal mandates such as sections 203 and 473 of the Bharatiya Nyaya Sanhita (BNS, 2023) and section 184 of the BNSS promote the timely collection and admissibility of forensic evidence, real-world application is hindered by gaps in infrastructure, training, survivor-centered care, and procedural accountability. While SAECKs have the potential to significantly improve conviction rates in sexual offence cases, as seen in global contexts, their impact in India is currently muted by systemic deficiencies.

Further, the low conviction rate of 27.2% in rape cases as reported by the National Crime Records Bureau (2023) underscores the urgent need for comprehensive reform in forensic response protocols. Survivors often face re-traumatization, lack of informed consent, and inadequate psychosocial support factors that ultimately diminish the evidentiary and therapeutic value of SAECK-based interventions.

Thus, the study concludes that SAECKs are not merely forensic tools but indicators of a system's commitment to justice, sensitivity, and scientific rigor. Their effective use depends on synchronized efforts from healthcare professionals, law enforcement agencies, forensic laboratories, legal bodies, and survivor support services.

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