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DIGITAL EVIDENCE IN PAKISTAN: LEGAL FRAMEWORK, FORENSIC CHALLENGES, AND JUDICIAL RELIABILITY

***Iftikhar Ahmed**
****Dr. Tansif Ur Rehman**
*****Syed Hyder Ali**

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***Iftikhar Ahmed**
Department of Law, Dadabhoy Institute of Higher Education, Pakistan
Email: drifiraza01@gmail.com
****Dr. Tansif Ur Rehman**
Teaching Associate, Department of Sociology, University of Karachi, Pakistan; and Visiting Faculty, Department of Law, Dadabhoy Institute of Higher Education, Pakistan
Email: tansif@live.com
ORCID: https://orcid.org/0000-0002-5454-2150
*****Syed Hyder Ali**
Department of Law, Dadabhoy Institute of Higher Education, Pakistan
Email: cyedhyderali@gmail.com

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Abstract
In Pakistan, digital technology has been widely used, and it has transformed significantly the character of evidence that is presented in the court. Mobile information and emails, as well as CCTV records and web transactions, are also digital evidence that is noteworthy in criminal and civil cases. The author of this paper has addressed the problem of gathering, storing, and accepting digital proof in the Pakistani legal framework. It puts emphasis on the applicability of the Qanun-e-Shahadat Order, 1984, which lays the foundation of the rules of evidence, and the Prevention of Electronic Crimes Act (PECA), 2016, which addresses cyber offences and sets the procedures to follow when undertaking digital investigations. The paper also gives reports about the examination and authentication of electronic records conducted by the Federal Investigation Agency (FIA) and forensic laboratories. Pakistan is said to have problems which involve a lack of technical expertise, poor infrastructure, and there is possibility of tampering with evidence, although this is legal. The role of justice and credibility in the Pakistani judicial process is to increase the digital forensics capacity and the regularity of the procedures.

Keywords: *challenges, historical context, laws, opportunities, theoretical context.*

Introduction

Technology development has had an immense impact on all spheres of contemporary life, justice administration being one of them (Rizwan & Mehdi, 2024). The growing trends of using digital devices, communicating via the internet, and financial systems via the internet have brought new aspects of evidence collection and presentation in the courtroom in Pakistan (Khan & Bhatti, 2023; Nazir et al., 2025). Electronic documentation and data, emails, social networks,

phone recordings, CCTV, and financial transactions are some of the forms of digital evidence that have become crucial in civil and criminal cases (Afzal, 2025). It has increased its functions, especially in the cases of cybercrimes, financial fraud, terrorism, and defamation (Rasool & Rasool, 2022).

The law that regulates the use of digital evidence in Pakistan is largely based on the Qanun-e-Shahadat Order 1984 (Khan et al., 2023). That sets general evidentiary provisions, and the Prevention of Electronic Crimes Act that deals specifically with the offences that are committed via electronic means (Jan, 2025). All these laws together characterized the admissibility, authenticity, and reliability of digital evidence at the same time, creating procedural protection of its gathering and testing (Hadi, 2023).

The digital evidence itself is primarily examined by special organizations like the Federal Investigation Agency (FIA) and the Punjab Forensic Science Agency (PFSA), which are capable of retrieval, examination, and validation of electronic data (Khan & Ahmed, 2025). Nevertheless, there are still some problems facing Pakistan, such as the lack of qualified forensic specialists, the insufficient technological facilities, and the inability to preserve the integrity of any digital records in the course of the investigation (Ilyas et al., 2023). With the judicial outcomes more and more influenced by digital evidence, the need to control the correct management, preservation, and authentication of digital evidence becomes a necessity (Abdullah et al., 2025). It is hence essential that the forensic capacity, legal awareness, and technological collaboration should be strengthened to maintain justice in the changing digital age in Pakistan
(Arshad et al., 2022).

Research Justification

This process has resulted in a growing reliance on digital technology in the social, economic, and legal framework of Pakistan, and consequently, digital evidence has become a vital part of contemporary judicial procedures. Nevertheless, even though this evidence is increasingly becoming important, Pakistan has several difficulties in the efficient handling, analysis, and presentation of this evidence in courts. The credibility and admissibility of digital evidence are usually weakened by the absence of standardized procedures, the dearth of forensic expertise, and inadequate infrastructure. Such deficiencies may result in the delay and possible miscarriage of the principles of fair trial.

The data presented in this research is supported by the fact that there is an urgent necessity to evaluate and reinforce the current framework of digital evidence in Pakistan. The study will examine the existing laws, including the Qanun-e-Shahadat Order (1984) and the Prevention of Electronic Crimes Act (2016), and suggest solutions to address the gap in procedures and be suggested as a reform to improve legal and technical integration. Furthermore, due to the recent increase in cybercrimes and digital fraud, the knowledge of digital evidence collection, preservation, and examination is crucial to the improvement of law enforcement and judicial effectiveness. Therefore, the study is not only valuable in enhancing the law system in Pakistan but also in ensuring that justice keeps pace with the realities of the technologically advanced society with transparency, accuracy, and accountability in the course of judicial proceedings

Research Objectives

1. To discuss the historical context of digital evidence in Pakistan.
2. To highlight the theoretical context of digital evidence in Pakistan.
3. To analyze the laws regarding digital evidence in Pakistan.
4. To identify the key challenges regarding digital evidence in Pakistan.

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5. To explore the opportunities for digital evidence in Pakistan.
6. To propose effective prevention and intervention strategies.

Research Methodology

This study employed a systematic review methodology, with research objectives established accordingly. A comprehensive literature review was conducted (Komba & Lwoga, 2020). Research findings were categorized based on their content (Hiver et al., 2021; Petticrew & Roberts, 2006), and classified information was incorporated into the study by organizing it into headings (Gan et al., 2021; Pawson et al., 2005). The evaluation of classified information and titles formed the basis of the study (Page, 2021; Rahi, 2017), ensuring the integrity of the research subject and its contents (Egger et al., 2022; Victor, 2008). The criteria for selection are listed.

1. **Relevance:** Researches that directly addressed the questions posed by this study are included.
2. **Quality:** Studies that meet a certain quality threshold (e.g., methodological rigour, bias risk) are included. Most of the research is from Scopus-indexed and Clarivate Analytics journals and reputed publishers.
3. **Recency:** Consideration of the publication date to ensure that the review reflects the most current evidence. Most of the studies are from the last three years.
4. **Language:** Only studies published in English are included.
5. **Data Completeness:** Previous studies must provide sufficient data on outcomes of interest for practical synthesis; this is also ensured in this research.

This study did not use primary data from human participants; therefore, no ethics clearance letter from the ethics committee was required.

Literature Review

Digital evidence application in courts has become an internationally acknowledged necessity in the quest to determine the truth in the digital era (Ilyas et al., 2023; Nazir et al., 2025). There is a consensus among scholars that digital evidence, including emails, computer files, CCTV footage, and mobile data, determines a verdict in either a criminal or a civil matter (Arshad et al., 2022; Rasool & Rasool, 2022). On the international scale, studies are pointing out that the validity and integrity of digital evidence are based on rigor in collection and preservation, as reported by Jan (2025) who note that standards of digital forensics and chain-of-custody mechanisms are essential to guarantee the integrity of evidence (Khan & Bhatti, 2023).

As far as Pakistan is concerned, literature represents the shifting yet poorly developed system of digital evidence (Hadi, 2023). Legal commentators observe that the Qanun-e-Shahadat Order (1984), which was originally intended to cover traditional types of evidence, has been complemented by the Prevention of Electronic Crimes Act (PECA, 2016), to take into consideration contemporary technological facts writes that PECA grants procedural transparency on the investigation and admissibility of digital evidence. It is not enforced in practice due to poor technical resources and training (Rizwan & Mehdi, 2024).

Institutions such as the Federal Investigation Agency (FIA) and the Punjab Forensic Science Agency (PFSA) have established cybercrime units but are still hampered in expert power, equipment, and inter-agency coordination (Khan & Ahmed, 2025; Saddique et al., 2024). Also, the legal community usually has no knowledge about the principles of digital forensics, which results in the lack of evidence in the courtroom (Khan et al., 2023).

In general, the literature review indicates that the legal framework of Pakistan recognizes the use of digital evidence, though its use is not supported by the lack of technology, procedures, and institutional shortcomings (Abdullah et al., 2025). The identified gap demonstrates the

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urgent necessity of a complete system of reforms in the form of capacity building, legal modernization, and the use of international forensic standards to provide credibility, authenticity, and justice in the digital evidence system in Pakistan (Afzal, 2025).

Historical Context of Digital Evidence in Pakistan

Digital evidence in Pakistan came into existence as a gradually developed concept with the rise in information technology and the growth in the use of computers and mobile communication in the early 2000s (Khan et al., 2023). Prior to this digital revolution, the evidentiary structure of the country was largely controlled by the Qanun-e-Shahadat Order, 1984, which covers the traditional types of evidence, i.e., oral testimony and hard copy (Nazir et al., 2025; Rasool & Rasool, 2022).Lack of legal recognition of electronic records presented a challenge in engaging cyber-based crimes and electronic transactions (Afzal, 2025).

Identifying these lapses, Pakistan started to reform the law system in order to keep up with the pace of technology (Saddique et al., 2024). The passing of the Electronic Transactions Ordinance, 2002, was a significant move because it introduced the legal validity of electronic documents, signatures, and contracts (Jan, 2025; Khan & Bhatti, 2023). Nonetheless, as cybercrimes and online fraud emerged, there was a necessity to have a more detailed legal and procedural framework (Khan & Ahmed, 2025).

In response to this, the Prevention of Electronic Crimes Act (PECA), 2016 came into effect, which officially provided the regulations of gathering, storing, and analyzing digital evidence (Hadi, 2023). At the same time, special departments like the National Response Centre of Cyber Crimes (NR3C) of the Federal Investigation Agency were created to examine and research computer data (Abdullah et al., 2025). Therefore, the historical development of digital evidence in Pakistan indicates a gradual change in traditional modes of furnishing evidence to technologically responsive processes of justice (Arshad et al., 2022; Rizwan & Mehdi, 2024).

Theoretical Context of Digital Evidence in Pakistan

The Pakistani theory of digital evidence can be based on the evidentiary law and cyber jurisprudence, which have co-defined the process of electronic data recognition, authentication, and assessment in court. The general theory of evidence is offered in the Qanun-e-Shahadat Order (1984), which focuses on the following principles of admissibility, authenticity, relevance, and reliability. These principles are applied to digital evidence in Article 164, which permits the admission of evidence gained with the use of modern equipment or scientific procedures by the court.

In terms of jurisprudence, digital evidence works under the theory of technological neutrality, which states that laws must be equal to both conventional and electronic evidence. Moreover, the chain of custody theory is critical in making sure that digital evidence is preserved in its original state when collected until the time it is presented before the court. Failure in any of these links may result in a lack of admissibility. The current theoretical principles are supported by the Prevention of Electronic Crimes Act (PECA), 2016, which gives procedural clarity regarding the identification, preservation, and forensic analysis of electronic data. It creates a mode of framework that integrates the theory of law with technological practice. Therefore, the theoretical approach of the digital evidence in Pakistan is an indicator of the shifting balance between the old rules of evidentiary dogma and the new realities of digital forensics in the Pakistan court

Laws Regarding Digital Evidence in Pakistan

1. Qanun-e-Shahadat Order, 1984: In Pakistan, the basis of the evidentiary law is the Qanun-e-Shahadat Order (QSO). Though it was initially founded on classical evidence, its Article 164

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allows courts to admit evidence of modern equipment or scientifically acquired evidence, and thus electronic records. Electronic evidence to be admissible should fulfill the basic criteria of authenticity, integrity, and relevancy. The QSO points out that the evidence has to be authentic, well-conserved, and authentic by use of credible sources. This legislation enables the courts to deal with the changes in technology without adversely affecting procedural fairness and transparency in the legal system.

2. Prevention of Electronic Crimes Act (PECA), 2016: Cybercrimes are regulated by the Prevention of Electronic Crimes Act (PECA) in Pakistan. It outlines crimes like unauthorized access to data, cyber stalking, and electronic fraud, and the steps that should be taken in case of investigation and forensic examination. PECA ensures that the agencies, such as the Federal Investigation Agency (FIA), can collect, store, and analyze electronic information and make sure that it can be used in court. It also requires collaboration with service providers in order to access the digital records. QSO and PECA together define the legal basis of the legal collection, analysis, and presentation of digital evidence in the Pakistani courts.

Challenges for Digital Evidence in Pakistan

1. Absence of Technical Expertise and Infrastructures: Prosecutors, judges, and investigators have little knowledge of digital forensics, which results in the mishandling and misinterpretation of important data. Moreover, the lack of contemporary lab and new software for repair, preservation, and analysis restricts the performance of the inquiries. The consequence of this technological disparity is a delay, data corruption, or even rejection of evidence in the court because of the issue of authenticity.

2. Legal, Procedural, and Institutional Barriers: Although the Qanun-e-Shahadat Order (1984) and the PECA (2016) exist, their application has several issues due to the lack of consistency. The absence of standardized practices of keeping a chain of custody makes digital evidence less credible. Also, there is ineffective coordination between agencies such as FIA, police, and forensic departments that results in procedural gaps. Data tampering, privacy intrusion, and cyber jurisdiction are other issues that make the process tougher. These are some of the problems that should be tackled by building capacity, inter-agency collaboration, and standard forensic criteria to achieve the reliability and admissibility of digital evidence within the Pakistani law.

Opportunities for Digital Evidence in Pakistan

1. Effort of Technological Progress and Criminal Justice: The rapid development of digital technology offers Pakistan the possibility to empower its forensic capacity and investigative processes. The growth of digital forensic laboratories, including the Punjab Forensic Science Agency (PFSA) and the National Response Centre of Cyber Crimes (NR3C) by FIA, has
Provided a base for the contemporary evidence analysis. The development of data recovery, the study of encryption, and artificial intelligence can significantly contribute to the precision of the investigation and its effectiveness. To eliminate the current gap in technology and enhance the credibility of the presented evidence in the court, investment in the digital infrastructure, capacity-building programs, and specialized training of investigators, prosecutors, and judges may assist in bridging the gap.

2, Institutional and Legal Reforms: The changing legal system in Pakistan presents the possibility of matching the national laws to the international standards of handling digital evidence. Through the introduction of clear procedural guidelines, the Qanun-e-Shahadat Order (1984) and PECA (2016) can be strengthened so that the evidence collection and admissibility are consistent. Knowledge sharing and transfer in technology can be achieved through the enhanced cooperation of the law enforcement agencies, judicial, and international bodies. In

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addition, transparency, accountability, and efficiency during the judicial process can be improved due to the implementation of e-justice systems and electronic recordkeeping. All these opportunities put Pakistan in a position to modernize the system of justice and use digital evidence in the quest to deliver fair and timely justice.

Discussion

The adoption of digital evidence into the system of judges in Pakistan is a highly important step toward modernization and adaptation to technologies. Although some laws, including the Qanun-e-Shahadat Order (1984) and the Prevention of Electronic Crimes Act (2016), have a legal basis to admit electronic records, their practical application is still uneven. The key problems are poor forensic facilities, technical skills, and inconsistencies in the procedures, which affect the integrity of evidence.

Nevertheless, positive changes can be observed in the Pakistani investment in the field of forensic science and in digital investigation units. The system can be more reliable and transparent in judicial proceedings with the appropriate training, coordination of the activities of different agencies, and the use of standard procedures in evidence handling. It has been discussed that digital evidence, if handled properly, can become a potent tool in the fight against cybercrime and deliver justice. As such, institutional capacity building and adoption of technological innovation are important measures to create an efficient legal system in Pakistan.

Conclusion

In Pakistan, the analysis of digital evidence is a critical move towards the digitalization of the justice system in an ever-digitalized society. Despite the presence of substantial legal groundwork due to the Qanun-e-Shahadat Order (1984) and the Prevention of Electronic Crimes Act (2016), the real-world experience of the issues imposed upon implementation, including limited expertise, poorly developed infrastructure, and inconsistency in the procedures, is an obstacle to effective implementation. However, there are many encouraging possibilities due to the continued development of forensic technology and institutional change. It is necessary to enhance digital forensics, create awareness about the law, and maintain procedural consistency to ensure the authenticity and admissibility of digital evidence, to ensure transparency, accountability, and justice in the Pakistani legal system.

Recommendations

1. Develop digital forensic laboratories in every province with state-of-the-art equipment.
2. Encourage innovation in digital forensics and technology through the formation of partnerships by the government with the private sector.
3. Enhance the procedures of chain of custody operations to ensure the integrity of evidence.
4. Give a legal test to bring the Qanun-e-Shahadat Order and PECA in line.
5. Improve the interaction between FIA, police, and forensic agencies to deal with the cases effectively.
6. Introduce severe punishments for the manipulation of evidence and data.
7. Install electronic recordkeeping in the courts to be transparent.
8. Organize periodical training sessions on digital evidence handling for the judges, lawyers, and investigators.
9. Promote international cooperation in terms of building the capacity and global adoption of forensic standards.
10. Standard operating procedures (SOPs) on the collection, preservation, and analysis of electronic data should be developed.

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Research Limitations

The study of the digital evidence of investigation in Pakistan has some limitations that need to be appreciated. To begin with, the empirical data concerning forensic procedures and case outcomes are quite scarce since the majority of the information is obtained through secondary sources, including texts of law, reports, and web resources. Secondly, the challenge of the ever-changing nature of technology is also present since new types of digital evidence and investigative tools are often introduced, and it is hard to keep the analysis up-to-date. Third, the lack of access to official records of such institutions as the FIA and forensic agencies does not help to understand the practical implementation better. Also, regional enforcement differences and intra-judicial interpretations of digital evidence decrease the overall generalizability of results. Comparative analysis with international models is also not included in the study, which would have given a wider context. Irrespective of such limitations, the study offers a background on the predicaments and possible solutions in the digital evidence system of Pakistan.

Research Implications

1. Implications Applied and Institutional: This paper illuminates the need to make the organization of Pakistan stronger in tackling digital evidence. It implies that the enforcement of laws, laboratory personnel, judicial officers, and courts will be required to go through certain training and technological updates to arrive at quality and dependable examination of evidence. Another aspect that is promoted in the paper is the development of standard procedures that will be applied in the collection, preservation, and authentication of electronic data to enhance the integrity of evidence. The efficiency and transparency of investigations and judicial procedures can be increased significantly through the improvement of inter-agency coordination and investments in new forensic equipment.

2. Policy and Academic Implications: At the policy level, the study emphasizes that there is a need to revise the existing laws, namely the Qanun-e-Shahadat Order (1984) and PECA (2016), to ensure that they comply with the global demands of digital forensics. Regarding research, it offers the opportunity to conduct further research on the comparative analysis of laws on computer evidence on a cross-jurisdictional level. All these implications ease the process of modernization of the law, accountability, and justice in the digital age of Pakistan.

Future Research Directions

1. Comparative Studies, Ethical, and Legal: More studies should be done to assess judicial interpretations and procedural loopholes in the digital evidence legislation of Pakistan. The best practices can be recognized through comparative analyses with such countries as the UK, India, and the USA in order to improve legislation and enforcement. Moreover, the investigation of the ethical and privacy issues of digital evidence gathering and surveillance will be balanced in the context of reforming the justice system in Pakistan in the future.

2. There is the technological development and the Forensic Development: The utilization of emerging technologies, artificial intelligence, blockchain, and digital encryption to enhance the authenticity and traceability of digital evidence is a trend that future studies should investigate. Research may concentrate on the creation of automated forensic instruments that will guarantee the integrity of data in the collection and analysis. In addition, studies must evaluate the effectiveness of cybersecurity in the preservation of evidence as well as the issue of sophisticated cybercrimes. Such studies will be able to assist Pakistan in modernizing its forensic procedures and bring them into sync with the global technological developments.

References

Abdullah, H. O., Maqsood, M., & Nadeem, A. (2025). Digital evidence in criminal proceedings: Legal standards, chain of custody, and evidentiary reliability in the digital era. *Research Journal for Social Affairs*, *3*(5), 795-805. https://doi.org/10.71317/RJSA.003.05.0375

Afzal, J. (2025). Comparative review on acceptance of digital evidence within the legal frameworks of Pakistan and China. *International Journal of Law and Legal Advancement*, *1*(1), 1-16. https://doi.org/10.64060/IJLLA.v1i1.1

Arshad, H., Abdullah, S., Alawida, M., Alabdulatif, A., Abiodun, O. I., & Riaz, O. (2022). A multi-layer semantic approach for digital forensics automation for online social networks. *Sensors*, *22*(3), 1-24. https://doi.org/10.3390/s22031115

Egger, M., Higgins, J. P., & Smith, G. D. (Eds.). (2022). *Systematic reviews in health research: Meta-analysis in context.* John Wiley & Sons. https://doi.org/10.1002/9781119099369

Gan, J., Xie, L., Peng, G., Xie, J., Chen, Y., & Yu, Q. (2021). Systematic review on modification methods of dietary fiber. *Food Hydrocolloids, 119*, 106872. https://doi.org/10.1016/j.foodhyd.2021.106872

Hadi, M. J. (2023). Beyond the witness stand: Exploring modern approaches to cross -examination in Pakistan. *SSRN,* 4483302. https://dx.doi.org/10.2139/ssrn.4483302

Hiver, P., Al-Hoorie, A. H., Vitta, J. P., & Wu, J. (2021). Engagement in language learning: A systematic review of 20 years of research methods and definitions. *Language Teaching Research,* 13621688211001289. https://doi.org/10.1177/13621688211001289

Ilyas, M., Din, A. U., Haleem, M., & Ahmad, I. (2023). Digital entrepreneurial acceptance: An Examination of the technology acceptance model and do-it-yourself behavior. *Journal of Innovation and Entrepreneurship*, *12*(1), 1-19. https://doi.org/10.1186/s13731-023-00268-1

Jan, A. (2025). Digital evidence in Pakistan: A doctrinal assessment of admissibility and reliability in criminal trials. *Advance Social Science Archive Journal*, *4*(2), 914-920. https://doi.org/10.5281/zenodo.17440993

Khan, A. A., Shaikh, A. A., & Laghari, A. A. (2023). IoT with multimedia investigation: A secure process of digital forensics chain-of-custody using blockchain, Hyperledger Sawtooth. *Arabian Journal for Science and Engineering*, *48*(8), 10173-10188. https://doi.org/10.1007/s13369-022-07555-1

Khan, M. N. I., & Ahmed, I. (2025). A systematic review of judicial reforms and legal access strategies in the age of cybercrime and digital evidence. *International Journal of Scientific Interdisciplinary Research*, *5*(2), 1-29. https://doi.org/10.63125/96ex9767

Khan, M. S., & Bhatti, S. H. (2023). Digital evidence and Pakistani criminal justice system: A review article. *Journal of Social Sciences Review*, *3*(1), 489-498. https://doi.org/10.54183/jssr.v3i1.198

Komba, M. M. & Lwoga, E. T. (2020). Systematic review as a research method in library and information science. In P. Ngulube (Ed.), *Handbook of Research on Connecting Research Methods for Information Science Research* (pp. 80-94). IGI Global Scientific Publishing. https://doi.org/10.4018/978-1-7998-1471-9.ch005

Nazir, S., Asif, M., & Khan, A. U. A. (2025). Digital evidence in Pakistan: A doctrinal assessment of admissibility and reliability in criminal trials. *Advance Social Science Archive Journal, 4*(1), 1941-1951. https://doi.org/10.55966/assaj.2025.4.1.0107

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., & Moher, D. (2021). Updating guidance for reporting systematic reviews: Development of the PRISMA 2020 statement. *Journal of Clinical Epidemiology, 134*, 103-112. https://doi.org/10.1016/j.jclinepi.2021.02.003

Pawson, R., Greenhalgh, T., Harvey, G., & Walshe, K. (2005). Realist review - A new method of systematic review designed for complex policy interventions. *Journal of Health Services Research & Policy, 10*(1), 21-34. https://doi.org/10.1258/1355819054308530

Petticrew, M., & Roberts, H. (2006). *Systematic reviews in the social sciences: A practical guide.* Blackwell Publishing. https://doi.org/10.1002/9780470754887

Rahi, S. (2017). Research design and methods: A systematic review of research, sampling issues, and instruments development. *International Journal of Economics Management Sciences, 6*(2), 403. https://doi.org/10.4172/2162-6359.1000403

Rasool, N., & Rasool, M. (2022). Challenges for expert evidence in the justice system of Pakistan. *Journal of Forensic Science and Medicine*, *8*(2), 62-67. https://doi.org/10.4103/jfsm.jfsm_16_21

Rizwan, S., & Mehdi, H. (2024). The role and challenges of forensic evidence in criminal investigations in Pakistan. *Dialogue Social Science Review*, *2*(5), 677-694. https://doi.org/10.5281/zenodo.14600760

Saddique, A. A., Hussain, M., Iqbal, M., & Ahmad, B. (2024). Role of forensic evidence in the criminal trials; A legal analysis in Pakistan perspective. *Research Journal of Psychology*, *2*(3), 261-278. https://doi.org/10.59075/rjs.v2i3.56

Victor, L. (2008). Systematic reviewing in the social sciences: Outcomes and explanation. *Enquire, 1*(1), 32-46. https://www.nottingham.ac.uk/sociology/documents/enquire/volume-1-issue-1-victor.pdf