

Short Review

Forensic Psychology and Criminal Profiling

**Eze SM^{1*}, Alabi KJ¹, Ibrahim SO¹, Yusuf AO², Hamzat FO¹,
A Abdulrauf¹, Atoyebi AT¹, Lawal IA¹, OA Ibrahim³,
AY Imam-Fulani¹ and Dare BJ⁴**

¹Department of Human Anatomy, Faculty of Basic Medical Sciences, College Health Sciences, Al-Hikmah University, Ilorin, Kwara State, Nigeria

²Department of Human Anatomy, Faculty of Basic Medical Sciences, Abubakar Audu University, Kogi State, Nigeria

³Faculty of Nursing Sciences, College of Health Sciences, Al-Hikmah University, Ilorin, Kwara State, Nigeria

⁴Department of Human Anatomy, Faculty of Basic Medical Sciences, College of Health Sciences, Osun State University, Osogbo, Nigeria

Abstract

Introduction: Forensic psychology plays a critical role in the criminal justice system, bridging the gap between psychology and law enforcement. One of its most significant applications is in criminal profiling, which involves the analysis of crime scene evidence, behavioral patterns, and psychological indicators to construct a profile of potential offenders. This study explores the intersection of forensic psychology and criminal profiling, focusing on how psychological principles aid in understanding and predicting criminal behavior.

Aim: The study aimed to evaluate the effectiveness and limitations of criminal profiling as a tool in criminal investigations, and to examine the methodologies that underpin profiling practices as a vital tool in the field of forensic sciences.

Methodology: Qualitative content analysis of documented criminal cases from reputable journals were reviewed for this study. Related articles were searched for from Google Scholar and Research Gate using the Keywords. A selection of high-profile cases where profiling significantly contributed to suspect identification were analyzed to assess the practical utility of psychological profiling.

Results: The results indicate that while criminal profiling is not a standalone solution, it offers valuable insights when integrated with traditional investigative techniques. Psychological constructs such as personality disorders, cognitive distortions, and behavioral consistency were found to be instrumental in building accurate profiles. However, the findings also highlight challenges including subjectivity, bias, and the risk of stereotyping, potentially compromising investigative objectivity.

Conclusion: Forensic psychology, through the application of criminal profiling, provides a powerful adjunct to investigative procedures. When used responsibly and in conjunction with empirical data and forensic evidence, profiling can enhance the efficiency and direction of criminal investigations. Continued research and standardization of profiling methodologies are essential to maximize its reliability and effectiveness in modern forensic practice. This study contributes to a deeper understanding of the practical roles and limitations of forensic psychology's role in the pursuit of justice.

Introduction

Forensic psychology is a rapidly evolving subfield of psychology that intersects with the legal and criminal justice systems [1]. It involves the application of psychological principles and methodologies to understand, evaluate, and assist in legal matters, both civil and criminal [2].

One of the most intriguing and high-profile aspects of

forensic psychology is criminal profiling aims to identify the characteristics and behavioral patterns of individuals likely to have committed certain crimes based on evidence from crime scenes and other data sources [3]. Together, forensic psychology and criminal profiling contribute to investigative processes, courtroom procedures, risk assessment, and the rehabilitation of offenders, offering a psychological lens through which to interpret criminal behavior and justice [2].

More Information

***Address for correspondence:** Eze SM, Department of Human Anatomy, Faculty of Basic Medical Sciences, College Health Sciences, Al-Hikmah University, Ilorin, Kwara State, Nigeria,
Email: ezesuleiman@alhikmah.edu.ng

 <https://orcid.org/0009-0009-1452-2882>

Submitted: May 26, 2025

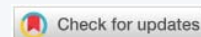
Approved: June 02, 2025

Published: June 03, 2025

How to cite this article: Eze SM, Alabi KJ, Ibrahim SO, Yusuf AO, Hamzat FO, A Abdulrauf, et al. Forensic Psychology and Criminal Profiling. J Forensic Sci Res. 2025; 9(1): 092-096. Available from: <https://dx.doi.org/10.29328/journal.jfsr.1001085>

Copyright license: © 2025 Eze SM, et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Keywords: Forensic psychology; Criminal profiling; Empirical research; Jury selection; Interdisciplinary approach



Forensic psychology encompasses a broad spectrum of activities, including competency evaluations, risk assessments, eyewitness testimony analysis, jury selection, and the treatment of offenders [4]. It provides insights into the mental states of individuals involved in the legal system, aiding in the adjudication process by clarifying complex psychological issues. The American Psychological Association (APA) formally recognized forensic psychology as a specialty in 2001, signifying its established importance in legal contexts [5]. Forensic psychologists work in various settings such as law enforcement agencies, courts, prisons, and private practices, applying their expertise to address issues ranging from insanity defenses to child custody evaluations [6].

The utility of criminal profiling in investigations is both lauded and contested. Proponents argue that profiles can narrow down suspect lists, generate investigative leads, and help anticipate an offender's next move. Notable cases such as the apprehension of the "Unabomber," Ted Kaczynski, illustrate the potential value of behavioral analysis in criminal investigations.

However, critics point to the lack of consistent scientific validation for many profiling techniques. Research has often failed to demonstrate high levels of accuracy in profiler predictions compared to laypersons or other law enforcement officials [7]. This has led some scholars to argue that profiling should be viewed as an investigative tool rather than a definitive means of identifying suspects.

Despite these challenges, forensic psychology continues to play a crucial role in the broader criminal justice system. The psychological assessment of offenders helps inform decisions about sentencing, parole, and treatment, while forensic evaluations contribute to determinations of legal insanity, competence to stand trial, and risk of recidivism [8].

Moreover, forensic psychologists are increasingly involved in areas such as police psychology, supporting the mental health and operational effectiveness of law enforcement personnel and, victimology, providing counseling and support to victims of crime. As forensic psychology evolves, so too does the integration of technological advancements into profiling and investigative practices.

Developments in artificial intelligence, data analytics, and neuropsychological assessment are poised to enhance the accuracy and utility of psychological evaluations and criminal profiling [9]. For example, machine learning algorithms can identify complex behavioral patterns across vast databases of criminal cases, potentially refining the predictive power of profiling methods [10]. Nevertheless, ethical considerations about privacy, bias, and the potential misuse of psychological information remain central to ongoing debates in the field [2].

Finally, forensic psychology and criminal profiling represent vital, though sometimes controversial, intersections

between psychology and law. While forensic psychology offers a robust scientific framework for understanding the behavior of individuals within the legal system, criminal profiling provides a specialized lens focused on behavioral prediction and offender characteristics. Together, these fields contribute not only to the resolution of criminal cases but also to a broader understanding of the psychological underpinnings of criminal behavior [5]. As research and practice continue to advance, the potential for these fields to contribute to justice, public safety, and rehabilitation remains significant—provided they are grounded in empirical evidence and ethical responsibility [5].

History of forensic psychology and criminal profiling

Criminal profiling emerged from efforts to understand the minds of serial offenders. A notable early example is Dr. Thomas Bond's profile of Jack the Ripper in the late 19th century, in which he speculated about the killer's personality and mental health based on crime scene evidence [11]. Another key development that led to the development of the modern criminal profiling techniques used today involved Key figures such as John E. Douglas and Robert Ressler, who conducted extensive interviews with serial killers and violent offenders to understand their motives and behaviors [12]. Today, forensic psychologists contribute to various legal issues, from competency evaluations to risk assessments, while criminal profilers support law enforcement in understanding and apprehending offenders by analyzing crime scenes and predicting future actions based on psychological theories.

However, the modern era of profiling began in the 1970s with the FBI's Behavioral Science Unit (BSU) [12]. The BSU pioneered the use of detailed case interviews and analyses to construct offender profiles, leading to the development of the Criminal Investigative Analysis (CIA) approach [12]. This method involves classifying offenders as organized or disorganized based on crime scene characteristics, a taxonomy that has had lasting influence despite ongoing critiques about its empirical foundation [13].

The fields of forensic psychology and criminal profiling have continued to evolve, incorporating advancements in psychological research, neuroscience, and criminal justice [12].

Types of profiling

- Contemporary profiling techniques can be broadly categorized into three approaches (deductive profiling, inductive profiling, and geographic profiling). These methods highlight the diversity of tools available to forensic psychologists and criminal profilers and underscore the importance of methodological rigor and critical thinking in their application [12].

1. Deductive profiling involves a detailed analysis of the

crime scene, physical evidence, and victimology to generate specific conclusions about the offender [14].

2. **Inductive profiling:** this is based on statistical and comparative analysis of past crimes committed by similar offenders. While inductive methods can identify general patterns, they are sometimes criticized for relying heavily on stereotypes and assumptions [9].
3. **Geographic profiling,** developed by criminologist Kim Rossmo, uses mathematical models to determine the likely residence or base of operations of serial offenders based on the locations of their crimes [15].

Psychological insights into criminal behavior

Psychological profiling, also known as offender profiling, is a method used to infer the characteristics and behavioral patterns of a criminal based on the analysis of the crime scene, victimology, and other available evidence [16]. This technique is grounded in psychological theories and research, aiming to create a comprehensive profile that can help law enforcement agencies identify, apprehend, and understand offenders [17].

Applications of forensic psychology in law enforcement

Applied forensic psychology encompasses various specialized fields, including police psychology, correctional psychology, and investigative psychology. Each of these areas applies psychology. Each applies psychological principles to specific aspects of the legal and criminal justice systems.

1. **Police psychology:** police psychology focuses on supporting law enforcement personnel through psychological services. This includes conducting pre-employment psychological evaluations to ensure that candidates are mentally fit for the demands of police work. Police psychologists also provide counseling and stress management interventions to officers, helping them cope with the high-stress nature of their job [10].
2. **Correctional psychology:** it concerns with the assessment and treatment of individuals within the correctional system. Correctional psychologists conduct psychological evaluations to determine the mental health of inmates and develop treatment plans to address issues such as substance abuse, depression, and aggression. They also design and implement rehabilitation programs aimed at reducing recidivism and promoting successful reintegration into society.
3. **Investigative psychology:** investigative psychology applies psychology principles to criminal investigations, focusing on understanding criminal behavior and aiding in the detection and apprehension of offenders. This field includes offender profiling, where psychologists analyze crime scene evidence and pattern of behavior

to develop profiles that can help narrow down suspect lists [18].

Psychopathy and personality disorders

Psychopathy and other personality disorders are critical areas of focus in forensic psychology and criminal profiling. These conditions are often associated with violent and criminal behavior, making their identification and understanding essential for profiling and intervention.

Psychopathy: Psychopathy is a personality disorder characterized by persistent antisocial behavior, impaired empathy and remorse, and bold, disinhibited, and egotistical traits [7,14]. The most widely used tool for assessing psychopathy is the Hare Psychopathy Checklist-Revised [PCL-R], which evaluates 20 characteristics divided into two factors: interpersonal/affective traits and impulsive/antisocial traits.

Key features of psychopathy

1. **Interpersonal traits:** manipulativeness, deceitfulness, and superficial charm.
2. **Affective traits:** lack of empathy, guilt, and shallow emotions.
3. **Behavioral traits:** impulsivity, irresponsibility, and criminal versatility.

Personality disorders: are frequently examined in forensic psychology and profiling. These disorders are characterized by enduring pattern of behavior, cognition, inner experience that deviate markedly from expectations of the individual's culture.

1. Antisocial Personality Disorder (ASPD).
2. Borderline Personality Disorder (BPD).
3. Narcissistic Personality Disorder (NPD).

Application in profiling

Profilers use knowledge of psychopathy and personality disorders to construct detailed offender profiles. These profiles help the law enforcement agencies understand the likely psychological makeup of a suspect, predict their future behaviors, and identify potential risk factors. For example, the presence of psychopathic traits can inform decisions about the risk of reoffending and the suitability of different correctional interventions [19].

Ethical guidance and standards

Forensic psychologists must follow the ethical guidelines established by professional organizations such as the American Psychological Association [APA]. The APA's 'Ethical principles of psychologists and code of conduct' provides a comprehensive framework emphasizing respect for

individuals' rights, dignity, integrity, and responsibility [5]. Specifically, they are required to maintain confidentiality, obtain informed consent, and ensure that their evaluations and testimonies are based on scientifically and professionally derived knowledge. These ethical standards are critical in maintaining the credibility and integrity of the forensic psychology profession.

Legal challenges

Forensic psychologists also face numerous legal challenges that can complicate their practice. One significant legal consideration is the requirement to balance the rights of the individuals they assess with the demands of the legal system. This can involve complex issues such as determining the limits of confidentiality when courts order disclosure of information. Forensic psychologists must be aware of the legal standards related to competency and insanity, as these standards can vary significantly by jurisdiction and can impact the admissibility and relevance of their testimony.

Case application

Case study: Jeffrey Dahmer

Dr. Eric Hickey, a noted criminologist, analyzed the psychological profile of Jeffrey Dahmer in his report, shedding light on the complex interlay of factors that contributed to Dahmer's criminal behavior. Hickey emphasizes that Dahmer exhibited characteristics typical of serial killers, including a history of childhood trauma and a pattern of escalating violence over time. According to Hickey, Dahmer's crimes were driven by a combination of sadistic fantasies and a profound sense of alienation, which manifested in his need to exert control over his victims, often through brutal means [20].

Dr Eric Hickey's analysis of Jeffrey Dahmer's case provide a detail understanding of the psychological and behavioral pattern that led to Dahmer's heinous crimes. Hickey identifies several key factors that contributed to Dahmer's transformation into one of the most notorious killers in history. He notes that Dahmer's early experiences, such as his dysfunctional family life and social isolation, played a significant role in shaping his deviant behavior. Furthermore, Hickey points out that Dahmer's fascination with death and compulsion to dominate his victims were central to his criminal acts [21].

Hickey also discusses how Dahmer's crimes were methodically planned, reflecting a deep-seated need for power and control. Dahmer's choice of victims, often young, vulnerable men further underscore his desire to assert dominance. According to Hickey, Dahmer's behaviors fits the profile of a 'lust murderer' a typical serial killer who derives pleasure from the process of killing, which, in Dahmer's case, was intertwined with his necrophilic tendencies. Hickey's report also highlights the importance of understanding the

psychological makeup of such individuals to better prevent and investigate similar crimes in the future [22] (Figure 1).

Case study: Andrea Yates

Andrea Yates, who drowned her five children in 2001, suffered from severe postpartum depression and psychosis. Her case highlighted the importance of understanding mental illness in legal contexts. Forensic psychologists assessed her mental state, concluding that her actions were driven by delusional beliefs, which influence the court's decision to accept her insanity defense [23] (Figure 2).

Case study: Richard Chase

Known as the 'Vampire of Sacramento,' Richard Chase exhibited signs of severe schizophrenia. He believed he needed to drink blood to prevent his heart from shrinking. Profilers and forensic psychologists recognized his psychosis, which was crucial for understanding his erratic and violent behavior and assisting in his capture [24-29] (Figure 3).



Figure 1: Jeffrey Dahmer and his victims [20].



Figure 2: Andrea Yates Not Guilty by Reason of Insanity [23].



Figure 3: Richard Chase, The Vampire of Sacramento [24].

Conclusion

Forensic psychology is integral to the criminal justice system, providing essential services such as mental health evaluations, competency assessments, and expert testimony. Forensic psychologists analyze the psychological aspect of criminal behavior, contributing to the understanding and management of offenders.

Criminal profiling, a specialized technique, involves creating profiles of offenders based on crime scene evidence and behavioral patterns, aiding law enforcement in narrowing down which provides crucial insights during investigations, helping to predict future offenses and identify potential perpetrators. The practice of forensic psychology and criminal profiling must adhere to strict ethical standards to ensure the accuracy and fairness of assessments and avoid potential biases.

References

1. Lonne B, Scott D, Higgins D, Herrenkohl TI. Re-visioning public health approaches for protecting children. In: Child maltreatment. 2019. Available from: <https://link.springer.com/book/10.1007/978-3-030-05858-6>
2. Menzie L. "ITT: Rape Analysts": Hosting negotiations of consent, kink, and violence in virtual space. 2018. Available from: <https://doi.org/10.22215/etd/2018-13198>
3. Dwivedi YK, Hughes L, Baabduallah AM, Ribeiro-Navarrete S, Giannakis M, Al-Debei MM, et al. Metaverse beyond the hype: Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *Int J Inf Manag*. 2022;66:102542. Available from: <https://www.sciencedirect.com/science/article/pii/S026840122200059X>
4. Bartol CR, Bartol AM. Introduction to forensic psychology: Research and application. 5th ed. Thousand Oaks (CA): SAGE Publications; 2018.
5. American Psychological Association. Specialty guidelines for forensic psychology. *Am Psychol*. 2013;68(1):7–19. Available from: <https://www.apa.org/practice/guidelines/forensic-psychology.pdf>
6. Tapper S. Testing the assumption of behavioral consistency in a New Zealand sample of serial rapists [master's thesis]. 2021. Available from: <https://doi.org/10.26686/wgtn.16968520.v1>
7. Snook B, Cullen RM, Bennell C, Taylor PJ, Gendreau P. The criminal profiling illusion: What's behind the smoke and mirrors? *Crim Justice Behav*. 2008;35(10):1257–1276. Available from: <http://dx.doi.org/10.1177/0093854808321528>
8. Melton GB, Pettila J, Poythress NG, Slobogin C. Psychological evaluations for the courts: A handbook for mental health professionals and lawyers. 4th ed. New York (NY): Guilford Press; 2017. Available from: <https://www.guilford.com/excerpts/melton.pdf?t=1>
9. Canter D. Mapping murder: The secrets of geographical profiling. London: Virgin Books; 2004. Available from: <https://archive.org/details/mappingmurdersec0000cant>
10. Geradts Z, Bree E, Keppens J, de Koster B. Artificial intelligence in forensic science: A review. *Forensic Sci Int Synergy*. 2019;1:54–62.
11. Keppel RD, Birnes WJ. The psychology of serial killer investigations: The grisly business unit. San Diego (CA): Academic Press; 2003. Available from: <https://www.sciencedirect.com/book/9780124042605/the-psychology-of-serial-killer-investigations>
12. Douglas JE, Olshaker M. The anatomy of motive: The FBI's legendary Mindhunter explores the key to understanding and catching violent criminals. New York (NY): Gallery Books; 2024.
13. Ressler RK, Burgess AW, Douglas JE. Sexual homicide: Patterns and motives. Lexington (MA): Lexington Books; 1988. Available from: <https://www.ojp.gov/ncjrs/virtual-library/abstracts/sexual-homicide-patterns-and-motives-0>
14. Turvey BE. Criminal profiling: An introduction to behavioral evidence analysis. 4th ed. San Diego (CA): Academic Press; 2011.
15. Rossmo DK. Geographic profiling. Boca Raton (FL): CRC Press; 2000.
16. Mutawa NA, Bryce J, Franqueira VN, Marrington A, Read JC. Behavioral Digital Forensics Model: Embedding Behavioral Evidence Analysis into the investigation of digital crimes. *Digit Investig*. 2019;28:70–82. Available from: <https://doi.org/10.1016/j.diin.2018.12.003>
17. Meyerson D, MacDermott T, Mackenzie C. Procedural justice and relational theory. In: Routledge eBooks. 2020. Available from: <https://doi.org/10.4324/9780429317248>
18. Birzer M, Roberson C. Introduction to criminal investigation. Boca Raton (FL): CRC Press; 2018. Available from: <https://doi.org/10.4324/9781439897485>
19. Herve H, Yuille JC. The psychopath: Theory, research, and practice. New York (NY): Routledge; 2017. Available from: <https://doi.org/10.4324/9781315085470>
20. Karwowski M, Kaufman JC. The creative self: Effect of beliefs, self-efficacy, mindset, and identity. San Diego (CA): Academic Press; 2017. Available from: <http://dx.doi.org/10.1016/C2015-0-07011-3>
21. Freud S. Leonardo da Vinci. London: Routledge; 2018. Available from: <https://www.routledge.com/Leonardo-da-Vinci/Freud/p/books/k/9780415253864?srsltid=AfmBOornwtsQAf4QXiBg4gevZUbl3jTcYkMG6Ph1IshGYgb8kINWCsBt>
22. Machado H, Granja R. Forensic genetics in the governance of crime. Cham: Springer Nature; 2020. Available from: <https://library.oapen.org/handle/20.500.12657/23264>
23. Resnick PJ. The Andrea Yates case: insanity on trial. *Clev St L Rev*. 2007;55:147. Available from: <https://engagedscholarship.csuohio.edu/cgi/viewcontent.cgi?article=1174&context=clevstlrev>
24. Crow CL. California Gothic: The dark side of the dream. Vol. 1. London: Anthem Press; 2024. Available from: https://books.google.co.in/books/about/California_Gothic.html?id=atGbzgEACAAJ&redir_esc=y
25. Douglas JE, Olshaker M. Mindhunter: Inside the FBI's elite serial crime unit. New York (NY): Simon and Schuster; 2017. Available from: <https://www.amazon.in/Mindhunter-Inside-Elite-Serial-Crime/dp/1501191969>
26. Meissner SN, Braithwaite J, Thorne K, Martinez A, Lycett E. Indigenous feminist evaluation methods: a case study in "My Two Aunties." *Can J Program Eval*. 2023;38(2):186–207. Available from: <https://doi.org/10.3138/cjpe-2023-0042>
27. Pritchett S, Moeller K. Can social bonds and social learning theories help explain radical violent extremism? *Nordic J Criminol*. 2022;23(1):83–101. Available from: <https://doi.org/10.1080/2578983x.2021.1889133>
28. Van Der Wolf M. Safeguarding the quality of forensic assessment in sentencing. In: Routledge eBooks. 2022. Available from: <https://doi.org/10.4324/9781351266482>
29. Warburton K, Stahl SM. Decriminalizing mental illness. Cambridge: Cambridge University Press; 2021. Available from: <https://www.amazon.com/Decriminalizing-Mental-Illness-Katherine-Warburton/dp/108826954>