

CRIMINOLOGICAL PERSPECTIVES ON PUBLIC HEALTH DETERMINANTS OF CRIME: A SCOPING REVIEW

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Abstract: Background: Crime represents a multifaceted social phenomenon that extends beyond legal violations and into the realm of public health. Research increasingly reveals how health-related factors such as mental illness, substance use, trauma, and environmental disadvantage serve as root contributors to criminal behavior. Recognizing crime as a public health issue enables a broader, more integrative approach to prevention and justice reform. Methods: This scoping review aims to map and synthesize empirical and theoretical literature exploring the intersection between criminology and public health. Specifically, it identifies public health determinants associated with criminal behavior and evaluates how criminological frameworks engage with these factors. Results: Following PRISMA-ScR guidelines, we systematically searched PubMed, Scopus, and Google Scholar for English-language articles published between 2013 and 2024. Keywords included "crime," "public health," "mental illness," "substance abuse," "violence," and "social determinants." Eligible studies were charted and synthesized thematically. Conclusion: Criminological inquiry increasingly intersects with public health. Understanding the social and health-related precursors to crime allows for more effective, equitable, and interdisciplinary interventions. Policymakers, law enforcement, and health practitioners must collaborate to address these shared determinants and reduce systemic harm

INTRODUCTION

Crime has long been a topic of concern in both criminological and public discourse, traditionally addressed within the domain of law enforcement and legal sanction. However, in recent decades, a growing body of interdisciplinary research has emphasized the role of upstream public health determinants in shaping patterns of criminal behavior (Karystianis et al., 2023). This shift acknowledges that crime is not merely the result of individual pathology or moral failure but is deeply embedded in social, economic, and health-related contexts (Webb & Kline, 2023).

Understanding crime as a manifestation of broader public health challenges allows for a more holistic approach to prevention and intervention. For example, mental health

disorders, substance use, exposure to violence during childhood, and conditions of chronic deprivation have all been linked to elevated risks of offending and victimization (DeLisi et al., 2025; Braga, 2022). These factors, typically studied within epidemiology or psychology, are increasingly recognized in criminological theory as contributing to pathways into and out of criminality.

The emergence of epidemiological criminology (EpiCrim) reflects this convergence, integrating tools and frameworks from public health to inform criminal justice practices. EpiCrim emphasizes the social determinants of criminal behavior and advocates for prevention-focused, data-driven policy approaches. It also highlights the interdependence between health systems, community well-being, and criminal justice outcomes (Oxford RE, 2024).

The relevance of this framework has become particularly apparent in the wake of several public health and social crises. The opioid epidemic, the COVID-19 pandemic, and the resurgence of social movements like Black Lives Matter have exposed the inadequacies of punitive responses to problems that are fundamentally rooted in structural inequality, health access, and social exclusion (Webb & Kline, 2023). Police violence, mass incarceration, and criminalization of mental illness and homelessness are all examples of how health and justice systems can intersect to perpetuate harm when not adequately integrated.

Despite increasing scholarly attention, the integration of public health perspectives into mainstream criminology remains limited and fragmented. Many criminological theories still treat crime in isolation from the social environments in which it emerges. Likewise, public health research often overlooks the specific legal and structural mechanisms through which health inequalities become criminalized.

This scoping review seeks to address these gaps by mapping and synthesizing existing research that examines public health determinants of crime from a criminological perspective. Specifically, it aims to identify how health-related factors are conceptualized within criminological literature, what themes dominate current research, and where opportunities exist for greater interdisciplinary collaboration.

By critically reviewing and thematically categorizing recent empirical and theoretical work, this study contributes to a more integrated understanding of crime as a public health issue. In doing so, it supports the development of evidence-based, health-oriented criminal justice reforms and policies aimed at reducing harm and promoting community well-being.

METHOD:

This scoping review was conducted according to the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews) checklist. The objective was to identify and map existing research that examines the relationship between public health determinants and criminal behavior from criminological perspectives.

1. **Study Design:** This review utilized a qualitative scoping review design, supported by thematic synthesis. The search strategy was conducted in PubMed, Scopus, and Google Scholar using the Boolean logic combination of keywords: ("crime" OR "criminal behavior" OR "violence") AND ("public health" OR "social determinants" OR "mental illness" OR "substance abuse" OR "trauma"). Articles were imported into Mendeley and screened in two phases: title/abstract and full-text review.

2. **Population and Sample:** The population of interest consisted of published peer-reviewed articles focusing on crime and its associations with public health variables, including but not limited to mental health, substance abuse, trauma, and structural disadvantage. The final sample included 13 articles that met the inclusion criteria after systematic screening.
3. **Inclusion and Exclusion Criteria:** Included studies: (1) published in English between 2013–2024, (2) full-text availability, and (3) contained empirical or theoretical content linking public health and criminal behavior. Excluded: (1) non-criminological focus, (2) lacking relevance to public health determinants, or (3) non-peer-reviewed sources such as editorials or opinion pieces.
4. **Study Variables:**
Key variables extracted from the included studies involved determinants such as:
 - Mental health disorders (e.g., psychosis, personality disorders)
 - Substance use and abuse
 - Childhood trauma and adverse experiences
 - Community and neighborhood disadvantage
 - Structural inequities (e.g., policing, incarceration, discrimination)
5. **Definition of Operational Variables:**
 - *Public health determinant:* Any social, behavioral, or structural factor affecting physical or mental health and influencing involvement in or exposure to crime
 - *Criminological perspective:* Analytical lens grounded in criminological theory (e.g., strain theory, social disorganization, green criminology)
 - *Crime:* Encompasses violent and non-violent offenses, recidivism, and other legally defined antisocial behaviors
6. **Study Instrument:** A standardized data charting form was developed in Microsoft Excel to systematically extract relevant information from each included study. The instrument captured data on authorship, publication year, study location, design, population, public health determinants assessed, type of crime or criminal behavior, criminological theory applied (if any), and main findings.
7. **Data Analysis:** Extracted data were synthesized using a thematic analysis approach. Recurring patterns and concepts were coded and grouped into five overarching thematic categories that reflect the intersection of criminological and public health determinants. This qualitative synthesis enabled identification of gaps, trends, and theoretical integration across the selected studies.

RESULTS

A total of 2,316 records were identified through database searching (PubMed = 726, Scopus = 784, Google Scholar = 806). After removing 438 duplicates, 1,878 records were screened by title and abstract. A total of 64 full-text articles were assessed for eligibility. Ultimately, 13 studies were included in this review based on the predefined inclusion and exclusion criteria.

The 13 included studies were published between 2013 and 2024, with most originating from high-income countries such as the United States, United Kingdom, and Australia. The studies varied in design, including quantitative analyses, qualitative

interviews, text mining techniques, and historical policy reviews. Most studies focused on marginalized populations, including individuals with mental illness, substance use disorders, or histories of trauma.

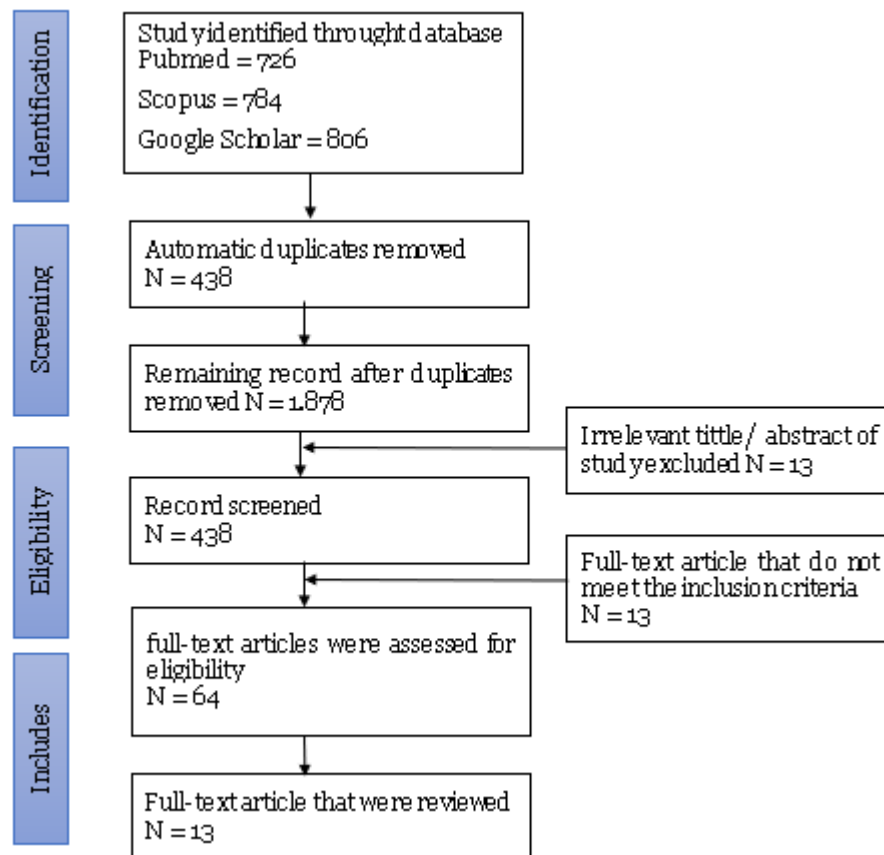


Figure 1. PRISMA Flowchartl

Mental Illness and Chronic Violence

Several studies identified a strong correlation between mental health disorders—particularly psychosis, personality disorders, and untreated psychiatric conditions—and increased risk of violent behavior and criminal justice involvement. For instance, DeLisi et al. (2025) explored the role of psychiatric comorbidity and the general psychopathology factor (p-factor) in violent offenders.

Childhood Trauma and Youth Offending

Studies emphasized the long-term criminogenic impact of early life adversity, including abuse, neglect, and exposure to violence. These experiences were linked to increased likelihood of delinquency, substance misuse, and incarceration during adolescence and adulthood.

Substance Abuse and Recidivism

Multiple articles identified substance use—especially involving alcohol, opioids, and performance-enhancing drugs—as both a driver and consequence of criminal activity. Gibbs & Piatkowski (2023) analyzed a high-profile case of steroid abuse and its intersection with

aggressive behavior and misinformation.

Neighborhood Disadvantage and Crime Rates

Environmental and social conditions such as poverty, housing instability, and lack of access to healthcare were recurrently associated with higher crime rates. These findings were often interpreted through social disorganization theory and supported by quantitative community-level data.

Health Inequity, Policing, and Structural Violence

Studies like Webb & Kline (2023) and WHO (2024) underscored the impact of racialized policing, incarceration, and criminalization of illness on community health and safety. They called for public health framing of policing and justice reform rooted in equity.

Methodological Innovations

Notably, Welsh et al. (2022) traced the historical evolution of matched-pair randomized controlled trials in criminology and medicine, highlighting their utility in place-based crime prevention research. Karystianis et al. (2023) applied automated text mining to 23,000 abstracts, identifying priority research themes such as mental illness, infectious disease, and substance use.

Table 1. Charting Table of Included Studies

No	Authors (Year)	Country	Determinants	Crime Type	Key Findings
1	DeLisi et al. (2025)	USA	Psychiatric disorders	Violent offending	p-factor linked with chronic violence
2	Karystianis et al. (2023)	Global	Mental illness, infectious disease	Mixed	Mental health, substance use were dominant themes
3	Webb & Kline (2023)	USA	Racialized policing, health equity	Police violence	Health disparities linked to policing practices
4	Gibbs & Piatkowski (2023)	USA	Steroid misuse, masculinity ideology	Aggression	Misinformation and substance use linked to violence
5	Welsh et al. (2022)	USA/UK	Methodological (matched RCTs)	All types	Advocacy for RCTs in criminological interventions
6	Mokomane & Sebudubudu (2020)	Botswana	Structural inequality, trauma	Youth crime	Social exclusion linked to youth offending

No	Authors (Year)	Country	Determinants	Crime Type	Key Findings
7	Mai-Bornu (2024)	Nigeria	Environmental injustice	Gendered harm	Ecological degradation tied to violence against women
8	Ribka et al. (2024)	Indonesia	Drug addiction	Drug-related crime	Substance use linked to recidivism
9	Bhagat (2025)	India	Illicit pharmaceuticals	Drug-related crime	Market failure in regulation as criminogenic factor
10	Jacobs et al. (2024)	USA	Homelessness	Recidivism	Unstable housing at intake predicts reoffending
11	Oxford RE (2024)	Global	Epidemiological criminology	All types	Integrative framework of public health and criminology
12	Deniz (2020)	Turkey	Personality disorders, culpability	Violent crime	Forensic view of mental illness and legal responsibility
13	Ibáñez Alonso & South (2025)	Global South	Green criminology, zoonotic risk	Environmental crime	Structural drivers of ecological violence

Discussion

The findings of this scoping review underscore the complex interplay between public health determinants and criminal behavior, revealing a robust yet fragmented body of knowledge. This synthesis reveals that mental illness, trauma, substance use, and structural disadvantage are not merely correlates of crime but active drivers embedded within broader societal inequities. The diversity of study designs—ranging from case studies to computational analyses indicates a growing interdisciplinary interest in framing crime through a public health lens.

The strong association between mental illness and violent offending found in several studies reinforces the utility of the general psychopathology (p-factor) model in criminological settings (DeLisi et al., 2025). This suggests the need for criminal justice systems to incorporate comprehensive mental health screening, diversion programs, and rehabilitative care. Similarly, childhood trauma emerged as a persistent risk factor in the pathway to delinquency, aligning with strain theory and life-course criminology frameworks. Interventions targeting early life adversity, such as trauma-informed education and

parenting programs, are therefore critical.

Substance abuse was identified both as a cause and a consequence of criminal involvement. These findings echo the self-medication hypothesis and reinforce the need for integrated substance use and behavioral health services within correctional and community settings. Moreover, environmental disadvantage including poverty, poor housing, and social disorganization was a consistent predictor of neighborhood crime rates, calling for place-based interventions that address systemic deprivation.

One of the most pressing insights comes from the literature on structural violence and policing. Studies such as Webb & Kline (2023) call for a fundamental rethinking of policing as a determinant of community health. Excessive force, racial profiling, and the criminalization of mental illness and homelessness produce harms that ripple through entire communities. The literature reviewed here supports calls for reallocation of public resources toward mental health services, housing, and violence prevention initiatives.

The review also highlighted important methodological innovations. Welsh et al. (2022) emphasize the potential of matched-pair RCTs in community crime prevention trials. Likewise, Karystianis et al. (2023) demonstrate the feasibility of large-scale, automated thematic extraction in literature analysis, pointing toward future directions in data-driven criminological synthesis.

Despite these advances, several gaps remain. First, only a minority of studies explicitly incorporated criminological theory. Second, there was a lack of geographic diversity—most studies were conducted in high-income countries, limiting generalizability to global south contexts. Third, intersectional variables such as gender, race, and sexual orientation were underreported, despite their known relevance to both health and justice outcomes.

This review underscores the urgency of embedding public health frameworks into criminological research and criminal justice policy. Cross-sector collaboration—particularly among police, social workers, healthcare providers, and community leaders—is necessary to break cycles of disadvantage and violence. Future research should adopt mixed-methods approaches, incorporate theoretical models, and address structural determinants across diverse cultural and socioeconomic settings.

CONCLUSION

This scoping review highlights the interdependence of public health and criminological domains in understanding and preventing criminal behavior. The findings reveal that mental illness, trauma, substance use, and environmental disadvantage are significant, modifiable risk factors embedded within broader structural inequities. These determinants not only shape individual trajectories into criminality but also reflect systemic failures in public health, education, housing, and justice systems.

In sum, crime is not merely a legal problem it is a manifestation of deeper health and social injustices. Addressing it effectively requires aligning criminological insights with public health understanding to promote safety, dignity, and well-being for all communities.

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