

A Review of Some Behavioral Studies of Addicted Offenders With Emphasis on Criminal Psychology and Neurology

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Introduction and Research Problem:

Drug addiction is one of the most complex individual and social challenges of the present era. It not only endangers individuals' physical and mental health but also, by inducing fundamental changes in behavioral, cognitive, and emotional systems, paves the way for the commission of various crimes. In common discourse, the slogan "an addict is not a criminal but a patient" is supported by neuroscience and psychology; however, within the criminal justice system, addicts, alongside their illness, engage in criminal behaviors rooted in functional brain disorders and environmental factors. Hence, the main issue of this article is to explain the behavioral characteristics of addicted offenders through an interdisciplinary approach, with emphasis on criminal psychology and neurology, in order to systematically analyze the link between neural changes, environmental causes, and the emergence of criminal behavior.

Research Methodology:

The present study employs a descriptive-analytical and comparative approach, using documentary and library research methods. Data and information were collected through a systematic review of reputable Persian and English sources, including scientific articles, specialized books, research reports, and empirical findings in criminology, criminal psychology, neuroscience, and behavioral science, and were analyzed using qualitative content analysis. Furthermore, to enrich the analysis, findings from several experimental and quasi-experimental studies on behavioral interventions and cognitive-behavioral therapies were also reviewed.

Theoretical and Empirical Findings:

The findings indicate that criminal behavior in addicts results from the complex interaction of three categories of factors:

- Neurobiological Factors: Addiction, as a brain disorder, induces persistent changes in the structure and function of key areas such as the prefrontal cortex (responsible for decision-making and impulse control), basal ganglia (reward and pleasure

center), and the extended amygdala (emotion regulation and stress response). This impairs the dopaminergic system and reduces dopamine receptor sensitivity. This mechanism renders the individual more dependent on substance use, weakens self-control, and distorts decision-making. Additionally, environmental cues associated with drugs, through neural conditioning, trigger intense cravings and facilitate relapse even after periods of abstinence.

- **Psychological and Personality Factors:** Addicts often suffer from comorbid disorders such as major depression, anxiety, antisocial personality disorder, and borderline personality disorder. These disorders not only complicate the treatment process but also, by reinforcing impulsive, aggressive, and delinquent behaviors, increase the likelihood of committing crimes. Moreover, many addicts use drugs as a coping mechanism to alleviate unresolved emotional pain or childhood traumas, which in turn perpetuates the vicious cycle of addiction and crime.
- **Environmental and Social Factors:** Variables such as poverty, unemployment, homelessness, social disorganization, easy access to drugs, association with criminal groups, and adverse childhood experiences (physical and sexual abuse, neglect, domestic violence) serve as exacerbating contexts and play a significant role in the formation and persistence of criminal behaviors. According to meta-analyses, the impact of environmental factors on the tendency toward addiction is nearly as significant as individual factors, highlighting the need for socio-structural interventions.

Theoretical Explanation and Link to Criminology:

From a theoretical standpoint, drawing on rational choice theory, the article demonstrates that addicts commit crimes when the perceived reward of crime (securing funds for drugs) outweighs potential costs (punishment). Likewise, based on routine activity theory, the convergence of three elements—a motivated offender (a needy addict), a suitable target (property or vulnerable individuals), and the absence of capable guardianship—facilitates the occurrence of crime. On the other hand, environmental criminology emphasizes that modifying urban spaces, reducing blind spots, and increasing social surveillance can reduce criminal opportunities. Furthermore, social disorganization theory indicates that communities characterized by poverty, family instability, and weak social cohesion experience higher rates of crime and addiction.

Findings Related to Treatment and Prevention:

A review of empirical studies indicates that cognitive-behavioral therapies and pharmacological interventions such as naltrexone are effective in reducing substance use and criminal behaviors, but they are insufficient on their own. Lasting success depends on concurrent social interventions, including employment support, family relationship rebuilding, housing provision, and community-based programs to change norms that tolerate drug use. Additionally, neurological research has shown that neurobehavioral-based therapies can help restore reward circuits and improve impulse control; however, the "brain-disease" approach faces criticisms emphasizing the heterogeneity of recovery, the role of individual agency, and the lack of specific neural markers for addiction.

Final Conclusion and Policy Implications:

The behavioral analysis of addicted offenders reveals the necessity of an integrated perspective encompassing biological, psychological, and social dimensions. Effective addiction treatment, without simultaneous attention to reducing criminogenic environmental factors and enhancing social capital, cannot prevent relapse into crime. Accordingly, the article proposes the following:

- Developing individualized and environment-oriented treatment programs based on a precise understanding of each addict's behavioral background and biological status;
- Expanding group behavioral studies to identify common and recurrent environmental indicators that contribute to crime;
- Designing environmental prevention policies, including reducing physical access to drugs, improving urban spaces, and empowering local communities;
- Reforming the criminal justice perspective toward addicts and replacing purely punitive approaches with restorative and supportive ones;
- Establishing coordination among judicial, treatment, and welfare institutions to provide comprehensive support packages for addicts undergoing treatment.

Overall, this research demonstrates that a precise understanding of the causes and factors influencing the criminal behavior of addicts is not only essential for their treatment but also provides a foundation for redesigning the criminal justice system and evidence-based social policymaking.

Keywords:

Addiction, Addicted Offender, Behavioral Studies, Criminal Psychology, Neurology, Environmental Prevention, Integrated Treatment.