Review

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Bezmialem Science

A Comprehensive Review of Addiction: Historical Development, Neurobiological Foundations, Diagnostic Criteria, and Organizations Responsible for Combating Addiction

Bağımlılığa Kapsamlı Bir Bakış: Tarihsel Gelişim, Nörobiyolojik Temeller, Tanı Kriterleri ve Bağımlılıkla Mücadeleden Sorumlu Kuruluşlar

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ABSTRACT

Addiction is a complex and multifaceted condition that significantly affects individuals' physical, psychological, and social well-being. Beyond substance dependence, addiction encompasses behavioral disorders such as gambling, excessive technology use, and compulsive shopping. Historically, substance use has been deeply embedded in societal and cultural practices, evolving from medicinal and ritualistic applications to modern regulatory frameworks. Advances in neuroscience have elucidated the pivotal role of neurotransmitters and brain structures, particularly the reward system, in the development and persistence of addiction. While chemical addictions—such as those involving alcohol, nicotine, and illicit drugs—profoundly alter physiological processes, behavioral addictions impair impulse control and reward processing, resulting in compulsive behaviors. The diagnosis of addiction adheres to standardized frameworks, including the Diagnostic and Statistical Manual of Mental Disorders, fifth edition and the International Classification of Diseases, tenth edition, which assess severity based on behavioral patterns and physiological responses. Treatment approaches encompass pharmacological interventions and psychological therapies, with an increasing emphasis on holistic and multidisciplinary strategies. National and international

ÖZ

Bağımlılık, bireylerin fiziksel, psikolojik ve sosyal iyi oluşunu önemli ölçüde etkileyen karmaşık ve çok yönlü bir durumdur. Madde bağımlılığının ötesinde, bağımlılık; kumar, aşırı teknoloji kullanımı ve kompulsif alışveriş gibi davranışsal bozuklukları da içermektedir. Tarihsel olarak madde kullanımı, toplumsal ve kültürel uygulamalara derinlemesine yerleşmiş olup, tıbbi ve ritüel amaçlardan modern düzenleyici çerçevelere doğru evrim geçirmiştir. Nörobilim alanındaki ilerlemeler, nörotransmitterlerin ve özellikle ödül sisteminin bağımlılığın gelişimi ve devamlılığındaki kritik rolünü açıklığa kavuşturmuştur. Alkol, nikotin ve yasa dışı maddeler gibi kimyasal bağımlılıklar fizyolojik süreçleri derinden değiştirirken, davranışsal bağımlılıklar dürtü kontrolünü ve ödül işleyişini bozarak kompulsif davranışlara neden olmaktadır. Bağımlılığın tanısı, Ruhsal Bozuklukların Tanısal ve İstatistiksel El Kitabı, beşinci baskı ve Uluslararası Hastalık Sınıflandırması, Onuncu baskı gibi standartlaştırılmış çerçeveler doğrultusunda belirlenmekte olup, bu değerlendirmeler davranışsal örüntüler ve fizyolojik tepkiler temelinde yapılmaktadır. Tedavi yaklaşımları, farmakolojik müdahaleler ve psikolojik terapileri içermekte olup, giderek daha fazla bütüncül ve multidisipliner stratejilere odaklanılmaktadır. Dünya Sağlık Örgütü, Birleşmiş Milletler

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ABSTRACT

organizations, such as the World Health Organization, the United Nations Office on Drugs and Crime, and *Yeşilay*, play a crucial role in addiction prevention, rehabilitation, and policy development. A comprehensive understanding of addiction necessitates an integrated approach that combines biological, psychological, and social perspectives. This review aims to provide an in-depth analysis of addiction and its implications for public health, guiding further research and policy advancements in the field. Future research should focus on innovative therapies and personalized treatment plans to enhance recovery outcomes.

Keywords: Behavioral addictions, diagnosis, neurobiology of addiction, substance-related disorders, preventive health services

ÖZ

Uyuşturucu ve Suç Ofisi ve *Yeşilay* Cemiyeti gibi ulusal ve uluslararası kuruluşlar, bağımlılığın önlenmesi, rehabilitasyonu ve politika geliştirme süreçlerinde kritik bir rol oynamaktadır. Bağımlılığın kapsamlı bir şekilde anlaşılması, biyolojik, psikolojik ve sosyal perspektiflerin birleştirilmesini gerektirmektedir. Bu derleme, bağımlılığın halk sağlığı üzerindeki etkilerini derinlemesine analiz etmeyi, alandaki araştırmaları ve politika geliştirme süreçlerini yönlendirmeyi amaçlamaktadır. Gelecekteki araştırmalar, yenilikçi terapilere ve kişiye özel tedavi planlarına odaklanarak iyileşme süreçlerini daha etkili hale getirmeye yönelmelidir.

Anahtar Kelimeler: Davranışsal bağımlılıklar, tanı, bağımlılığın nörobiyolojisi, madde ile ilişkili bozukluklar, koruyucu sağlık hizmetleri

Introduction

Addiction is a multifaceted disorder that profoundly impacts an individual's physical and psychological well-being, social interactions, and overall quality of life (1). It is defined as the compulsive engagement in substance use or behaviors despite detrimental consequences. This conceptualization underscores that addiction extends beyond substance dependence to encompass behavioral addictions, such as those related to technology, gambling, and compulsive shopping (2).

Key characteristics of addiction include the development of tolerance, withdrawal symptoms, impaired control, persistent use despite adverse effects, and altered life priorities (3). Tolerance develops when an individual requires escalating amounts of a substance or behavior to achieve the desired effect. Withdrawal symptoms, manifesting as physical and psychological distress when access to the addictive substance or behavior is restricted, contribute significantly to the perpetuation of the addiction cycle (4).

Beyond being an individual affliction, addiction represents a substantial societal concern. It disrupts family structures, undermines professional productivity, burdens healthcare systems, and imposes economic constraints. For example, substance dependence leads to escalating healthcare expenditures and diminished workforce efficiency, whereas technology addiction negatively influences interpersonal relationships and productivity levels. Moreover, addiction-related stigma presents a considerable obstacle to seeking and receiving appropriate treatment (5).

The etiology of addiction is rooted in a complex interplay of biological, psychological, and social determinants, necessitating a holistic approach to treatment (6). Biologically, genetic predisposition, dysregulated neurotransmitter activity, and neurostructural modifications contribute to addiction susceptibility. Psychologically, factors such as trauma, chronic stress, depression, and low self-esteem play a pivotal role. On a social level, inadequate familial support, social isolation, and economic hardship are significant risk factors that facilitate addiction development (7).

This review aims to provide a detailed analysis of addiction by exploring its historical evolution, different types, neurobiological underpinnings, and the criteria used for its diagnosis and evaluation. Additionally, the study examines the role of national and international organizations in monitoring and addressing addiction-related challenges. By synthesizing existing research, this review seeks to contribute to a deeper understanding of addiction as a medical, psychological, and social phenomenon, helping to inform future studies in this field.

History of Substance Use

Substance use has been a persistent aspect of human civilization, dating back to ancient times when natural substances were utilized for medicinal, ritualistic, and recreational purposes. Over the centuries, societies have developed varying perceptions and regulations regarding substance use, influenced by cultural, political, and economic factors.

Ancient and Early Uses

In antiquity, substances such as opium, cannabis, and alcoholic beverages were widely used across different civilizations for both therapeutic and religious purposes. The Sumerians, around 3000 BCE, referred to opium as the "plant of joy", employing it in religious ceremonies and medicinal practices. Similarly, alcohol was integral to social and spiritual rituals in Ancient Greece and Rome, where wine was considered sacred and widely consumed during festivals (3,8).

The Middle Ages and Substance Use

During the Middle Ages, the use of psychoactive substances remained largely medicinal and ritualistic. However, with the expansion of trade routes, opium found its way from Asia to Europe, increasing its accessibility and usage. In the Islamic world, alcohol consumption was restricted due to religious prohibitions, whereas opium continued to be used for medicinal purposes, as documented by scholars such as Avicenna (3,9).

Substance Use in the Ottoman Empire

The Ottoman Empire maintained a controlled but occasionally widespread practice of substance use. Opium cultivation and

trade were integral to the economy, with Anatolia serving as a significant producer. Tobacco was introduced to the empire in the 16th century and quickly gained popularity, despite being subject to strict prohibitions during the reign of Sultan Murad IV. Although alcohol consumption remained largely underground due to Islamic laws, it was notably prevalent among non-Muslim communities (10,11).

The Republican Era and Substance Use in Türkiye

In the 20th century, Türkiye began implementing stricter regulations regarding substance use (12). By the 1930s, Türkiye aligned with international drug control policies, instituting stringent regulations on opium production and trade. The 1970s and 1980s witnessed intensified global drug trafficking concerns, prompting the Turkish government to enhance its measures against substance abuse. In contemporary Türkiye, addiction has emerged as a pressing issue, particularly among younger demographics, necessitating the establishment of treatment and prevention programs such as Alcohol and Substance Addiction Treatment Center (AMATEM) (13).

The historical evolution of substance use reflects its deep entrenchment in socio-cultural and economic structures. Türkiye's regulatory efforts highlight the ongoing need for a comprehensive, multidisciplinary approach to combating addiction at national and global levels (12).

Types of Addiction

Addiction is broadly classified into two main categories: chemical (substance addiction) and behavioral (process) addiction. Each type presents distinct mechanisms, risk factors, and consequences, necessitating tailored intervention strategies (14).

Chemical Addictions (Substance Use Disorders)

Chemical addictions involve dependence on psychoactive substances, leading to both physiological and psychological alterations. These addictions are characterized by tolerance development, withdrawal symptoms, and compulsive substance-seeking behaviors (15).

Alcohol addiction is among the most prevalent forms of substance addiction, posing significant health risks such as liver cirrhosis, hypertension, and cognitive impairments. Additionally, it disrupts social relationships and contributes to workplace inefficiencies. Similarly, nicotine addiction, primarily through tobacco use, is associated with heightened risks of lung cancer and cardiovascular diseases, emphasizing its broader implications for public health. Illicit drug addiction, including opioids, amphetamines, and cocaine, profoundly impacts brain chemistry, reinforcing addictive behaviors and complicating treatment efforts (16).

The misuse of prescription medications, particularly opioids and benzodiazepines, constitutes a growing public health concern. These substances, while medically beneficial, pose a high risk for dependency when misused, often leading to cognitive impairments and overdose fatalities (17).

Behavioral Addictions (Process Addictions)

Behavioral addictions, also referred to as process addictions, involve compulsive engagement in non-substance-related activities, which can be equally disruptive to individuals' well-being. Technology addiction, particularly excessive internet and social media use is increasingly recognized as a significant behavioral disorder. It adversely affects academic performance, interpersonal relationships, and sleep patterns. Similarly, gaming addiction, a subset of technology addiction, is linked to reduced physical activity and mental health issues, especially among adolescents (18). Gambling addiction leads to severe financial and psychological consequences, often resulting in debt accumulation, strained relationships, and heightened stress levels. Shopping addiction exhibits similar compulsive patterns, causing financial instability and emotional distress (19). Food addiction, characterized by the excessive consumption of highly processed and calorie-dense foods, contributes to obesity, diabetes, and cardiovascular disorders. Emotional triggers such as stress and anxiety often exacerbate this form of addiction (20).

Both chemical and behavioral addictions exert profound effects on individuals and societies. Understanding the nuances of each type is essential for developing effective prevention, treatment, and rehabilitation strategies. Addressing addiction from a public health perspective underscores the necessity for comprehensive intervention models encompassing biological, psychological, and socio-environmental factors (21).

Neuroanatomy, Physiology, and Mechanisms of Addiction

Addiction not only affects an individual's behavior and quality of life but also induces significant and long-lasting changes in brain structures and physiological processes. The development and persistence of addiction are closely related to the brain's reward system, neurotransmitters, and dysfunctions in neural circuits (22). Below, the neuroanatomical and physiological foundations of addiction are examined in detail.

Neuroanatomical Structures

Addiction primarily involves the brain's reward system and its associated regions. This system regulates feelings of pleasure and motivation, forming the basis of addictive behaviors. The key neuroanatomical structures implicated in addiction are detailed in Table 1 (22).

Neurotransmitters

Neurotransmitters, particularly dopamine and serotonin, play a critical role in addiction development and maintenance. Table 2 presents the major neurotransmitters involved in addiction and their functions (23).

Physiological Processes

Addiction triggers a series of physiological changes in the brain, explaining its chronic nature and the difficulties in treatment. One of the primary physiological changes is the development of tolerance, which occurs when repeated exposure to an addictive substance or behavior causes the brain's reward system to become

Table 1. Neuroanatomical structures involved in addiction

Neuroanatomical Structure	Function in addiction
Ventral tegmental area (VTA)	• The VTA plays a central role in addiction by producing dopamine, a neurotransmitter crucial for reward processing. Substance use or addictive behaviors increase dopamine release from the VTA, reinforcing addiction
Nucleus accumbens	• The nucleus accumbens is central to the brain's reward system and responds to dopamine release, creating pleasure and reinforcing addictive behavior
Prefrontal cortex	• Responsible for decision-making, impulse control, and self-regulation. Chronic addiction impairs prefrontal cortex function, weakening an individual's ability to resist addictive urges
Amygdala and hippocampus	• The amygdala regulates emotional responses related to addiction, while the hippocampus stores addiction-related experiences in memory, increasing the likelihood of seeking addictive substances or behaviors

Table 2. Neurotransmitters involved in addiction

Neurotransmitter	Role in addiction
Dopamine	• Regulates reward and pleasure responses. Addictive substances and behaviors significantly increase dopamine levels, reinforcing addictive behaviors. Over time, the dopamine system becomes desensitized, requiring higher doses to achieve the same effect (tolerance)
Serotonin	• Involved in mood regulation, sleep, and appetite. Altered serotonin levels contribute to addiction-related behaviors, such as compulsive eating
Glutamate	• Plays a role in learning and memory, essential for reinforcing addiction-related habits
GABA	• A calming neurotransmitter, affected by substances such as alcohol and sedatives, leading to dependency

GABA: Gamma-amino butyric acid

desensitized. This results in the need for increasingly higher doses to achieve the same effect. When an individual ceases or reduces their substance use, withdrawal symptoms emerge, characterized by both physical and psychological distress. These symptoms often include anxiety, depression, sweating, tremors, and insomnia, further reinforcing the cycle of addiction. Additionally, chronic addiction leads to structural and functional changes in the brain's neural connections, a phenomenon known as neuroplasticity. These changes make addiction a deeply ingrained behavior that becomes progressively harder to overcome (22).

Mechanisms of Addiction

Addiction disrupts the balance between the brain's reward-motivation system and cognitive control processes. This process follows a cycle. The process begins with reward activation, where addictive substances or behaviors lead to excessive dopamine release, creating an intense sense of pleasure. Over time, compulsive seeking emerges as the natural reward system becomes less responsive, causing individuals to derive less satisfaction from non-addictive activities (24). As addiction, progresses, cognitive control impairment occurs due to dysfunction in the prefrontal cortex, making it increasingly difficult for individuals to resist addictive impulses. Finally, stress and relapse play a crucial role in perpetuating addiction, as heightened stress responses and elevated cortisol levels significantly increase the risk of returning to addictive behaviors. Understanding these mechanisms is crucial for developing effective treatments that target both biological and behavioral aspects of addiction (25).

Causes and Symptoms of Addiction

Addiction results from an interplay of genetic predisposition, environmental conditions, and psychological factors. The likelihood of addiction development and its progression are shaped by biological, emotional, and social influences (26,27).

Risk Factors for Addiction

The primary risk factors contributing to addiction include biological, psychological, and environmental determinants (26,27).

Genetic Factors: Studies indicate that addiction has a genetic basis, with individuals having a family history of addiction being at a higher risk. Variations in dopamine receptor genes influence reward processing, increasing susceptibility to addiction. Twin and adoption studies estimate that genetic factors contribute approximately 40-60% to addiction risk (28).

Psychological Factors**:** Psychological stressors, including trauma, depression, anxiety, and low self-esteem, significantly increase addiction risk. Addiction often serves as a maladaptive coping mechanism for regulating emotions. For example, alcohol or drugs may temporarily alleviate anxiety but ultimately lead to dependency (29).

Environmental Factors: Socioeconomic status, education level, peer influence, and early exposure to addictive substances are key environmental risk factors. Adolescence is particularly critical, as early exposure increases the likelihood of developing addiction in adulthood (28).

Symptoms of Addiction: Addiction manifests through physical, emotional, and social symptoms. The severity and progression of these symptoms vary based on the individual and type of addiction (30).

Physical Symptoms: Individuals experiencing addiction often develop tolerance, requiring higher doses of the substance to achieve the same effect. Withdrawal symptoms, which occur when the substance is discontinued, may lead to significant physical discomfort. Furthermore, addiction-related health issues, such as liver damage from alcohol, respiratory diseases from tobacco, and neurological impairments from stimulant use, can arise as the condition progresses (31).

Emotional Symptoms: Addiction is frequently accompanied by mood swings, alternating between euphoria and depressive states. Additionally, individuals may experience a loss of interest in previously enjoyable activities, as their focus becomes centered on the addictive substance or behavior (32).

Social Symptoms: Social withdrawal is common among individuals with addiction, leading to reduced engagement in relationships and social activities. The consequences of addiction often extend to the workplace or educational settings, resulting in decreased performance and, in severe cases, job loss or school dropout. Additionally, family relationships may become strained due to conflicts arising from addictive behaviors (33).

Addressing addiction requires a multifaceted approach, integrating biological, psychological, and social factors. Understanding these risk factors and symptoms is essential for prevention and treatment (34).

Diagnostic Criteria and Evaluation of Addiction

The diagnosis and evaluation of addiction involve a systematic analysis of the physical, psychological, and social symptoms associated with substance use or behavioral dependence. International classification systems, clinical assessment methods, and biological tests serve as crucial tools in this process (35).

Diagnostic Criteria for Addiction

The most widely used systems for diagnosing addiction are the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5) and the International Classification of Diseases, tenth edition (ICD-10). DSM-5 categorizes addiction under "substance use disorders", evaluating it based on 11 criteria. These criteria classify addiction as mild, moderate, or severe, depending on the number of symptoms present. DSM-5 distinguishes between "substance use disorders" and "substance-induced disorders" (36). The diagnostic criteria in DSM-5 for substance use disorders require at least two of the following symptoms within a 12-month period: impaired control over substance use, unsuccessful attempts to reduce or quit, excessive time spent obtaining or using the substance, strong cravings, failure to fulfill major obligations, continued use despite social or interpersonal problems, reduced participation in important activities, use in physically hazardous situations, persistent use despite awareness of physical or psychological harm, tolerance

Table 3. DSM-5 criteria for substance use disorders

To diagnose substance use disorder, at least two of the following 11 criteria must be met within a 12-month period*
1. Uncontrolled substance use: The substance is often used for longer periods or in larger amounts than intended
2. Unsuccessful attempts to cut down or quit: Persistent efforts to reduce or control substance use fail
3. Excessive time spent on substance-related activities: A significant amount of time is dedicated to obtaining, using, or recovering from substance effects
4. Strong cravings: A powerful urge or desire to use the substance
5. Failure to fulfill major obligations: Continued use results in the inability to meet responsibilities at work, school, or home
6. Persistent use despite social or interpersonal problems: Continued substance use despite relationship or social problems caused by its effects
7. Withdrawal from important activities: Social, occupational, or recreational activities are reduced or abandoned due to substance use
8. Use in hazardous situations: The substance is used in physically dangerous circumstances (e.g., driving under the influence)
9. Continued use despite physical or psychological harm: Continued use despite awareness of the substance causing or worsening health problems
10. Tolerance development: a. The need for increasing amounts of the substance to achieve the same effect b. Reduced effect when using the same amount
11. Withdrawal symptoms: a. The emergence of specific withdrawal symptoms when substance use is stopped b. Continued use of the substance to relieve withdrawal symptoms
*: After diagnosis, the severity of the disorder is classified as follows: • Mild: 2-3 criteria met • Moderate: 4-5 criteria met • Severe: 6 or more criteria met
DSM-5: Diagnostic and Statistical Manual of Mental Disorders, fifth edition

development, and withdrawal symptoms (35). Table 3 presents the DSM-5 criteria for substance use disorders.

The ICD-10, in contrast, defines addiction under "substance dependence syndrome" using six main criteria: a strong desire to use the substance, difficulties in controlling use, withdrawal symptoms, tolerance development, neglect of other activities due to substance use, and continued use despite harmful consequences. The focus of the ICD-10 criteria is to assess whether substance use leads to significant impairment in an individual's life functions. Diagnosing addiction accurately is critical for designing effective treatment strategies (36).

Evaluation of Addiction

The assessment of addiction relies on clinical interviews, standardized questionnaires, and biological tests. Clinical interviews are conducted in structured or semi-structured formats to identify addiction-related symptoms, substance use patterns, and motivational levels. Questionnaires and scales are employed to evaluate substance consumption, addiction severity, and behavioral consequences. Commonly used assessment tools include the addiction severity index and the Alcohol Use Disorders Identification Test (37). Self-report questionnaires also play an essential role, allowing individuals to provide insights into their substance use habits and psychological states. Biological tests offer objective methods to detect substance use and measure addiction severity. Blood tests are used to identify the presence and concentration of addictive substances, while liver enzyme tests help assess long-term alcohol use. Urine tests are widely utilized for detecting recent drug consumption due to their low cost and efficiency. Saliva tests provide short-term detection of substance use, whereas hair tests offer an extended history of substance consumption, tracing usage over several months. A comprehensive evaluation of addiction requires integrating these diagnostic criteria and assessment methods to formulate an individualized treatment plan (38).

Organizations Responsible for Combating Addiction

The fight against addiction requires collaboration between national and international institutions that focus on prevention, treatment, and rehabilitation. In Türkiye and worldwide, various governmental agencies, non-governmental organizations, and research centers play crucial roles in addressing addiction (39).

Institutions and Organizations Combating Addiction in Türkiye

Turkish Green Crescent Society (*Yeşilay*)

Founded in 1920, *Yeşilay* works to combat addictions related to alcohol, tobacco, drugs, technology, and gambling. The organization conducts public awareness campaigns, educational programs, and counseling services through the Green Crescent Counseling Centers (*Yeşilay Danışmanlık Merkezi*), which provide psychological and social support for individuals struggling with addiction. Yeşilay also implements school-based prevention programs to educate youth on addiction risk (40).

AMATEM *(Alkol ve Uyuşturucu Madde Bağımlıları Tedavi ve Araştırma Merkezi)*

AMATEM facilities, operating under the Turkish Ministry of Health, specialize in the medical treatment of substance and alcohol addiction. These centers offer detoxification, pharmacological treatment, psychotherapy, and rehabilitation services. AMATEM plays a pivotal role in addressing addiction-related health concerns and providing structured recovery programs (40).

Social Adaptation and Support Centers [*Sosyal Uyum Destek Merkezi* (SUDEM)]

Established by the İstanbul Metropolitan Municipality, SUDEM focuses on the reintegration of individuals recovering from addiction. These centers provide psychological counseling, rehabilitation programs, and social adaptation support. SUDEM professionals, including psychologists, occupational therapists, and social workers, collaborate to offer a holistic approach to addiction recovery

Turkish Monitoring Center for Drugs and Drug Addiction [*Türkiye Uyuşturucu ve Uyuşturucu Bağımlılığı İzleme Merkezi* (TUBİM)]

TUBİM, affiliated with the Turkish National Police, is responsible for monitoring drug-related activities and formulating policies for drug control. The center collects and analyzes data on drug use, trafficking, and addiction trends in Türkiye, contributing to evidence-based policy-making (41).

Universities and Research Institutions

Academic institutions conduct scientific research on addiction, contributing to the development of effective treatment and prevention strategies. Universities also provide education and training in psychology, medicine, and social work to equip professionals with the necessary skills to address addiction-related challenges (42).

International Organizations Combatting Addiction

World Health Organization (WHO)

WHO develops international policies and strategies to combat addiction, providing guidelines on prevention, treatment, and rehabilitation. It also collects and analyzes global data on substance use and addiction-related health impacts (43).

United Nations Office on Drugs and Crime (UNODC)

UNODC coordinates global efforts to prevent drug trafficking and addiction. It implements drug control policies, supports treatment programs, and collaborates with governments to combat illicit drug trade. UNODC works to reduce both the supply and demand of addictive substances (44).

European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)

EMCDDA monitors drug use and addiction trends in European countries, providing evidence-based recommendations for policy development. The organization publishes annual reports on substance use and promotes best practices in addiction prevention and treatment (45).

National Institute on Alcohol Abuse and Alcoholism (NIAAA) and National Institute on Drug Abuse (NIDA)

In the United States, NIAAA focuses on alcohol addiction research, while NIDA conducts studies on drug dependency. These institutions support the development of new treatment approaches and public health initiatives (46).

Global Cooperation and Networks

International collaboration is essential in addressing the global challenge of addiction. Organizations such as WHO, UNODC, and EMCDDA facilitate cross-border cooperation, data sharing, and policy development to mitigate the impact of addiction worldwide (47).

Türkiye and the international community recognize that addiction is not just an individual issue but also a broader public health concern. The efforts of these institutions emphasize the necessity of multidisciplinary collaboration to prevent addiction, provide effective treatment, and support long-term recovery (48).

Conclusion

Addiction is a complex issue that extends beyond individual struggles, affecting societies and public health on a global scale. Throughout history, its understanding and regulation have evolved, emphasizing the interplay of biological, psychological, and environmental factors. Today, both substance and behavioral addictions require scientifically grounded diagnosis and treatment approaches, supported by national and international institutions. Effective prevention and rehabilitation efforts depend on a holistic approach that integrates medical, psychological, and social interventions. Addressing addiction with a comprehensive perspective is essential to reducing stigma, improving recovery outcomes, and fostering long-term well-being.

Footnotes

Authorship Contributions

Concept: G.Z.Y., M.T., Design: G.Z.Y., M.T., Analysis or Interpretation: G.Z.Y., M.T., Literature Search: G.Z.Y., M.T., Writing: G.Z.Y.

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