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EDITORIAL

Behavioral addictions beyond classic addictions and their future perspectives

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1. Historical evolution of the concept of addictions

Over the past decades, the concept of addiction has undergone a profound evolution. This evolution has also been reflected in the Diagnostic and Statistical Manual of Mental Disorders (DSM), which is a widely used international diagnostic manual for mental disorders. The first edition of the DSM-I, published in 1952, considered addiction as primarily a personality issue and categorized it as sociopathic personality disturbance, which also encompassed antisocial personality disorder. Consequently, addiction was regarded as a secondary manifestation of personality disorders. In the DSM-II, published in 1968, addiction was separated from antisocial personality disorder; yet, it still remained within the realm of personality disorders.

It was not until the publication of the DSM-III in 1980 that addiction was finally recognized as a distinct category, designated as "substance use disorders (SUDs)." Furthermore, the DSM-III introduced criteria for substance abuse and substance dependence within the context of SUD. This edition placed particular emphasis on pharmacological criteria such as tolerance and withdrawal symptoms, rather than social problems related to substance use. Moreover, as pathological gambling came to be recognized as a disorder arising from impulse control issues, it was included under the category of impulse control disorders. In the revised third edition of the DSM (DSM-III-R), published in 1987, the diagnostic criteria for substance dependence underwent a significant refinement. This was evident in the shift from a focus on pharmacological criteria to a more comprehensive approach that encompassed behavioral syndromes, including impaired control, the giving up of activities, and the continued use of substances despite the presence of adverse consequences. The publication of the DSM-IV in 1994 saw the duration for substance abuse and dependence being revised from 1 month to 12 months.

The DSM-5,[1] published in 2013, presents a significant attempt in transforming the dimensional and structural aspects of addiction. First, the categories of abuse and dependence were merged into a single entity, and the criterion of "craving" was incorporated, while the item "recurrent substance-related legal problems" was eliminated. Another notable change was that DSM-5 expanded the scope of addiction to behavioral addictions. The term "pathological gambling" was replaced with "gambling disorder," and gambling disorder was reclassified from the "impulse control disorders" category to the "substance-related and addictive disorders" category. This change was based on the acknowledgment that gambling disorder shares numerous similarities with SUD in terms

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of genetic predisposition, neurobiological underpinnings, personality and psychological characteristics, clinical features, comorbidities, course, and treatment methods. Furthermore, a new condition, "Internet gaming disorder", was included in Section III (Conditions for Further Study) of the DSM-5.

2. Behavioral addictions

The term "addiction" has traditionally been used to describe a chronic and relapsing brain disease caused by the action of certain substances or drugs on the brain. This results in neuroadaptation processes that lead to tolerance and withdrawal, as well as the repeated use of substances despite the negative consequences. However, the concept of addiction has evolved to include addiction caused by behaviors. Behaviors that were once performed for the purpose of survival now utilized as instruments to fulfill personal gratification beyond mere survival. These behaviors elicit pleasure, excitement, and mood enhancement, similar to addictive substances, and serve as a means to relieve or avoid stress and negative emotions. Examples of such behaviors include food consumption, sex, spending (shopping), working, and exercise. Behavioral addictions, such as gambling disorder, share common characteristics with SUD, including loss of control, preoccupation, tolerance, withdrawal, and a pattern of persistent behavior despite negative consequences. Moreover, therapeutic approaches for behavioral addictions are quite similar to those for SUD. These include motivational enhancement therapy to enhance intrinsic motivation, cognitive-behavioral therapy to identify and modify distorted thoughts or behaviors, the acknowledgment of one's powerlessness over addiction and recovery through spiritual awakening in the 12-step program, and the use of anti-craving medications like opioid antagonists, such as naltrexone, which are also applicable in behavioral addictions.

3. Beyond substance addictions

Given the distinct characteristics of behavioral addictions compared to SUD, it is imperative to adopt a different approach to comprehend behavioral addictions. First, in behavioral addictions, there are often no physical withdrawal symptoms. For instance, alcohol enters the brain and causes addiction, which can result in physical withdrawal symptoms such as hand tremors, nausea, vomiting, sweating, and seizures, in addition to psychological withdrawal symptoms like anxiety. Nevertheless, addictive behaviors such as gambling tend to manifest primarily psychological withdrawal symptoms, such as depression and anxiety, rather than physical ones.[2] In the case of Internet gaming disorder, withdrawal symptoms are most consistently referred to as irritability and restlessness following cessation of the activity.[3] It is important to differentiate between withdrawal symptoms associated with Internet gaming disorder and negative emotions resulting from abrupt cessation of gaming. Symptoms that persist for a few hours to a few days after the cessation of play can be regarded as withdrawal symptoms.[4] Second, behavioral addictions may have different motives from those of SUD. For example, in the case of gambling disorder, the presence of a financial motive within gambling behavior, as evidenced by the diagnostic criteria for persistence in gambling with the aim to recover lost money, can be observed. With respect to gaming motivations, there may be achievement, immersion, or social components.[5] Third, behaviors regarded as types of behavioral addictions, such as sex addiction and food addiction, frequently exhibit a high degree of interconnectedness with real-life experiences. This implies that the treatment goals for these behaviors differ from those of traditional addiction treatment, which is focused on abstinence. Treatment goals for behavioral addictions may include improving self-control, discontinuing specific behaviors, or minimizing the harm caused by addictive behaviors. Furthermore, while SUD are typically regarded as a progressive disease with worsening outcomes over time, some behavioral addictions may exhibit a spontaneous remission course.[6]

4. Future perspectives

The concept of behavioral addiction is evolving gradually, partly due to changes in societal environments, including the advancement of the Internet. Consequently, novel forms of behavioral addiction, such as Internet gambling, have emerged. To obtain a more comprehensive understanding of these behavioral addictions, it is essential to conduct in-depth research that examines not only the similarities with SUD but also the distinctive characteristics, motivational factors, risk factors, and other aspects of each behavior.

Conflict of interest

The authors declare that they have no competing interests.

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