Changes of Diagnosis Criteria for Gambling-Related Disorders and Psychoactive and Behavioral Addictions

Abstract: The article presents the issue of diagnostic criteria concerning gambling-related disorders and psychoactive and behavioral addictions in the literature. It is also a brief review of next editions of international classification manuals, both DSM (Diagnostics and Statistical Manual of Mental Disorders), and also ICD (The International Statistical Classification of Diseases and Related Health Problems). The article presents a discussion of researchers about the place of gambling-related disorders in diagnostic classifications. The latest, fifth edition of DSM (DSM-V) places gambling disorders in the Substance-Related and Addictive Disorders category (DSM-V), in the subcategory Non-Substance Related Disorders (DSM-V). However, according to The International Statistical Classification of Diseases and Related Health Problems (ICD-10), gambling disorder remains in the category of impulse control disorders, under the name “pathological gambling”.

Key words: diagnostic criteria, pathological gambling, ICD, DSM.

Introduction to the discussion on the diagnosis of behavioral addictions including gambling-related disorders

Defining gambling as a disorder has for decades resulted in a discussion on the different positions among researchers of this phenomenon (Demetrovics, Griffiths 2012; Benguigui 2009; Davidson 2008; Valleur, Velea 2002; Goodman 1990;
As a result, in the current world classifications (The International Statistical Classification of Diseases and Related Health Problems – ICD, Diagnostic and Statistical Manual of Mental Disorders – DSM), further changes have been introduced to the criteria for the diagnosis of gambling-related disorders. Currently, in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V 2013), pathological gambling has been included in the area of addiction, which is a breakthrough change in the approach to its diagnosis. However, in the still valid 10th edition of the International Classification of Diseases, Injuries and Causes of Death ICD-10 (The International Statistical Classification of Diseases and Related Health Problems), pathological gambling is under impulsive control disorders (ICD-10, 1992). These differences in approach to gambling as a disorder cause that the discussion on diagnostic criteria and defining gambling is still open.

The Polish language dictionary defines the word gambling as “playing for money” or “risk”, and distinguishes between soft gambling (generally games where the stake is relatively little money and a win is mainly determined by chance) and hard gambling (usually games in which the stake is big money and a win is mainly determined by chance) (Żmigrodzki 2007). Gambling therefore describes games in which randomness determines a win, and a win can be money but also other material goods, e.g. trips, gadgets, and cars. In contrast, the law on gambling in 2009 defines gambling as a game of chance, mutual betting and slot machine games (Journal of Laws of 2009 No. 201, item 1540). One can speak about gambling in the context of where it takes place. For example, cylindrical games, card games, dice games and slot machine games take place in casinos, while bets are accepted in game rooms, in mutual betting points, sweepstakes or betting parlors (Pierszała 2010).

Since the beginning of investigations on this issue, researchers have not been in agreement as to the nature of this phenomenon. The first concepts endearing pathological gambling as a behavioral addiction have their origins in research on the use of harmful substances, mainly alcohol and opiates (Lelonek-Kuleta 2012). Some authors accepted the position that the concepts developed on the basis of psychoactive addictions may also find use in explaining other forms of problem behavior, unrelated to the intake of substances, including gambling behavior (Demetrovics, Griffiths 2012; Benguigui 2009; Davidson 2008; Valleur, Velea 2002; Goodman 1990; Peele, Brodsky 1977). In the 1970s, in connection with the reference of models of psychoactive addictions to behavioral addictions, people with gambling problems were begun to be called addicts (Woronowicz 2011; Peele, Brodsky 1977). A particular aspect, which has attracted attention – as in the case of substance abuse – was the change in behavior of a person who gambled in a problematic way. An important fact in the recognition of problem gambling, was that a person experiences a loss of control over their behavior, which becomes very important in terms of understanding, diagnosis and treatment of this type.
Attempts to determine the criteria for behavioral addiction beyond diagnostic classifications of mental disorders DSM and ICD

The concept of behavioral addiction or “toxicomania without substance” was first introduced by Otto Fenichel (1945) in the publication *The psychoanalytic theory of neurosis* - a psychoanalyst considered the forerunner in the development of the category of “impulsive control disorder” in the American classification of mental disorders DSM. The psychotherapist Stanon Peele, in 1977, showed the analogy between the mechanisms characteristic of psychoactive addiction and certain behavioral disorders, which once again gave rise to the determination of problem behaviors as addiction. He analyzed addiction in terms of instrumental conditioning, claiming that the feeling of the lack of life competences pushes to search for rapid and predictable gratification, which can be achieved through the ingestion of a particular psychoactive substance or performing a particular activity, e.g. gambling. Regular achievement of such a payment very quickly turns into addiction, further intensifying the feeling of the lack of life competences (Peele, Brodsky 1977). The mechanism of the formation of behavioral addiction presented above was not accompanied by providing clear criteria for its diagnosis, thanks to which this type of addiction could be defined.

The first criteria of behavioral addiction were presented in 1978 by Jim Orford, according to whom they are expressed in: 1) continuing the behavior despite its negative consequences, 2) obsession with its performance, 3) experiencing guilt after completing the compulsive activity, and 4) withdrawal symptoms in the case of it suddenly stopping (Orford 2001).

More precise indicators of behavioral addiction, referring to the general concept of addiction, was formulated by Aviel Goodman (1990). He developed them when trying to describe compulsive sexual behavior. The developed criteria are, however, applicable to other behavioral addictions. According to Goodman, addiction is characterized by the fact that the person undertakes behavior that brings pleasure or reduces distress (causes relief) and continues this behavior in such a way that it provokes the occurrence of certain symptoms (Goodman 1990). The following were identified as the key symptoms of behavioral addiction: the inability to rely on impulses pushing for a particular behavior, a sense of growing tension appearing just before the start of the behavior, the sensation of pleasure and/or relief during the behavior, the sense of loss of control over the activity performed. Behavioral addiction is placed between impulse, which assumes rapid pleasure, and compulsion, which aims to reduce tensions (Goodman 1990).
The time in which certain signs of behavioral addiction appear is also relevant. It is necessary to find their duration was longer than one month or repeated for a longer period of time. During this period, it is important to observe the occurrence of at least five of the following criteria (Goodman 1990):

— frequent preoccupation with a certain behavior or preparing for this activity;
— intensity and duration of episodes of behavior significantly exceeding the level originally desired;
— repeated unsuccessful attempts to limit, control or stop the behavior;
— devoting large amounts of time to preparing the behavior, undertaking it or returning to it;
— frequent neglect of occupational, school, academic, family, social duties;
— sacrificing social, occupational or recreational activity for the benefit of the compulsive behavior;
— continuing the behavior despite the awareness of experiencing or the exacerbation of persistent or recurrent social, financial, psychological, and physical problems;
— the need to increase the intensity or frequency of behavior to achieve the desired effect or reduce the severity of sensations caused by the behavior of the same intensity as before;
— anxiety or nervousness in a situation of impossibility of taking up the behavior.

To sum up the range of possible symptoms of behavioral addiction developed by Goodman, it should be emphasized that it is widely accepted by scientists and often used to describe both behavioral addictions and substance addictions (Lelonek-Kuleta 2012; Demetrovics, Griffiths 2012; Woronowicz 2011; Benguigui 2009; Davidson 2008; Valleur, Velea 2002).

In 1997, another researcher of the phenomenon, Marc Griffiths, presented six criteria defining behavioral addiction. These include (Griffiths 1997):

— the dominance of a particular behavior in a person's life – their thinking, emotions and behavior;
— change of mood in connection with taking up a specific behavior and the use of emotional coping strategies when this behavior occurs;
— increase in tolerance in connection with the occurrence of this behavior;
— withdrawal symptoms, both mental and physical, after stopping the activity;
— interpersonal and intrapsychic conflicts;
— returning to the performance of the behavior after a period of having stopped it or an attempt to control it.

In reference to the Polish researcher, Andrzej Woronowicz (2001), behavioral addiction can be considered as an incorrect way of performing a given activity, leading to the significant disturbance of mental function and behavior.

Another Polish researcher of the phenomenon, Andrzej Augustynek (2006), shows that the symptoms of behavioral addiction are generally similar to one other, and the addiction process is carried out in several phases (Augustynek 2006):
— getting to know and the rational and efficient use of activities, or interest in a particular behavior or its occurrence in everyday life;
— addiction, that is the need to consistently perform the activity, loss of other interests, depressed mood and recurring thoughts and dreams about the activity;
— destruction, that is total absorption with the given behavior, negligence in the performance of social roles, continuing the behavior despite the obvious social, physical and mental damages.

Researchers of the phenomenon also point to the similarities between behavioral and substance addictions. They note that in both types of addictions there is similar characteristic behavior, and at the biological level the same neurotransmitters are involved in the two types of disorders, therefore that both types have a similar neurobiopsychosocial basis (Davidson 2008; Valleur, Velea 2002).

Simultaneously with the ongoing discussions among scientists studying the nature of behavioral addiction, there were and still are attempts to clarify the criteria of gambling in the diagnostic classifications of mental disorders. In the diagnosis of mental disorders two basic classifications are used:
— The International Classification of Diseases, Injuries and Causes of Death (ICD), the subsequent editions of which are being developed by the World Health Organization and are valid worldwide;
— The Classification of Mental Disorders of the American Psychiatric Association (DSM), used primarily in the United States. In many countries, including Poland, the criteria of psychopathology distinguished in subsequent editions of the DSM are used, which are ancillary in relation to the information contained in the ICD.

Changes in the criteria for the diagnosis of pathological gambling and substance addictions in subsequent editions of the ICD

Despite the strong interest of clinicians in gambling, as well as numerous attempts to define it in terms of the disorder, it was not in any way included in the first manuals of the ICD. It was not until the last two decades of the twentieth century that brought about changes in this respect.

In the valid ICD-10 of 1992, gambling-related disorders were introduced to the criteria for diagnosing psychopathology. It was included in the category of “habit and drive disorders, including – pathological gambling, pathological stealing or pathological fire-setting” (ICD-10, 1992).

Pathological gambling, according to ICD-10, is defined as “a disorder involving the frequently repeated action of gambling, which prevails in a person’s life to the detriment of the values and social, occupational, material and family obligations” (ICD-10, 1992). Based on the diagnostic criteria proposed by ICD-10,
it can be assumed that pathological gambling can be identified when (ICD-10, 1992; Niewiadomska et al. 2005):
— two or more episodes of gambling were experienced over a period of at least one year;
— these episodes do not bring profit but are continued despite the perceived discomfort and disruption in daily functioning of the individual;
— the person describes an intense, difficult to control urge to gamble and displays the inability to stop gambling despite the effort of will;
— the person is absorbed in thinking and imagining about acts of gambling or the circumstances involved with it.

It should also be noted that the diagnosis of substance addiction was introduced into the ICD quite late. It was only in the eighth edition of the Manual of the International Classification of Diseases, Injuries and Causes of Death from 1967 that took into account for the first time the problems associated with psychoactive substance use (ICD-8 1967). In this edition the disorder defined as alcoholism was classified with personality disorders and neuroses. In ICD-8 alcoholism was distinguished as a separate category, which includes episodic excessive drinking, habitual excessive drinking and alcohol addiction, characterized by a compulsion to drink and withdrawal symptoms after discontinuation (Augustynek 2006, ICD-8 1967).

In the currently valid ICD-10, psychoactive substance addiction falls in the category of “mental and behavioral disorders caused by the use of psychoactive substances” (ICD-10 1992). The diagnosis of substance addiction is based on finding strong links between mental symptoms (substance hunger) with physiological symptoms (tolerance and abstinence symptoms) as well as characteristic behaviors (reaching for the substance to free oneself from withdrawal symptoms).

In ICD-10, substance addiction is defined as a set of various phenomena at the biochemical, physiological, mental (especially emotional and cognitive processes), and behavioral level (behaviors associated with psychoactive substances). The main symptom of addiction is an overwhelming desire to take a specific psychoactive substance (ICD-10 1992; Woronowicz 2011). The tenth edition of the manual also introduces the concept of “harmful use”, which recognizes health problems caused by the use of psychoactive substances.

The diagnosis of psychoactive substance addiction is made by a psychiatrist based on the criteria of ICD-10, when for a given substance 3 of 6 of the criteria listed below are fulfilled (ICD-10 1992):
— strong, intrusive need to take the substance;
— impaired ability to control substance use;
— the occurrence of withdrawal symptoms after the discontinuation of substance use or using a substances in order to avoid or mitigate the withdrawal symptoms with the subjective sense of the effectiveness of such actions; changing tolerance for the substance used;
— the occurrence of tolerance, involving the need to intake higher doses to produce the effect caused by the previously lower doses;
— progressive neglect of pleasures, behaviors, interests alternative to using; concentration of life around using or obtaining the substance and narrowing the repertoire of behavior to 1-2 patterns;
— using a substance despite knowledge about its harm to health.

The World Health Organization is planning to introduce a new edition of the classification of health disorders: ICD-11. On the basis of reports from the congress organized in 2011 by *The World Psychiatric Association* and the World Health Organization, it can be clearly stated that the criteria for gambling-related disorders will remain in the category of “habit and drive disorders, including pathological gambling, pathological stealing or pathological fire-setting”. There will also be changes in the category of “mental and behavioral problems caused by the use of psychoactive substances” (Keeley et al. 2016; Heitzman et al. 2011).

**Changes in the criteria for the diagnosis of gambling addiction as well as substance and behavioral addictions in subsequent editions of the DSM**

The first formulation of diagnostic criteria for the diagnosis of addiction in the context of DSM related to alcoholism and were included in the classifications DSM-I of 1952 and DSM-II of 1968. In both editions alcoholism was treated as a subcategory of personality disorders or neuroses. Addiction was characterized by regular (e.g. Saturday-Sunday or even daily) consumption of large quantities of alcohol. Thus, the diagnostic criteria included in DSM-I and II allowed only to conclude an addiction or lack thereof, but they did not allow to introduce any gradation in its intensity (Augustyn 2006). In 1980, DSM-III was published, in which the use of the term “alcoholism” was abandoned for the first time for two separate categories: “alcohol abuse” and “alcohol addiction”. For the first time a category of disorders was created relating to psychoactive substance use and not, as in previous editions, personality disorders (DSM-III 1980; Sanders 2010). In the third edition of the diagnostic manual DSM also introduced criteria for gambling behavior in the form of “pathological gambling” as a disease entity placed in the category of “impulse disorders”. In the fourth edition of DSM published in 1994 the criteria for the diagnosis of pathological gambling (DSM-IV 1994; Tartakovsky 2011) were not changed, while adjustments were made in respect of the diagnosis of substance addiction. Details with respect to the subtypes of addiction were applied. “Physical addiction” can be diagnosed when symptoms of the tolerance and abstinence withdrawal syndrome are present, and the “lack of physical addiction” – when the symptoms of tolerance and withdrawal syndrome do not occur. In DSM-IV there was still a distinction between abuse and
addiction. According to Babor (1995), this conceptualization makes it possible to classify the important aspects of the patient’s behavior, even though they are clearly associated with addiction. The consumption of substances was added to the criteria for diagnosing abuse, despite recurrent social and interpersonal problems or conflicts with the law. DSM-IV provides the following diagnostic criteria for abuse (DSM-IV 1994):

— not stopping to use the substance despite knowledge of the sustainable and recurring social, psychological or physical problems caused or exacerbated by substance use (e.g. daily cigarette smoking despite the well-known diagnosis of emphysema or chronic bronchitis, cocaine use despite depression caused by its use or not stopping drinking in a situation of the severity of ulcers caused by alcohol consumption);

— repeated use of the substance causing the inability to fulfill obligations related to the performance of roles at work, school, home (e.g. repeated absences from work or poor performance due to substance use, absence from school and activities due to substance use, expulsion from school, suspension of student rights, child neglect or neglect of everyday household duties);

— recurrent substance use in situations in which it is physically hazardous (e.g. driving a car or operating machinery in a state of disorder due to substance use);

— abandoning or reducing the effectiveness of performing important, essential social, occupational or recreational activities due to substance use;

— recurrent legal or interpersonal problems resulting from the consumption of substances (e.g. arrest or traffic accidents due to substance use, physical fights caused by substance use).

The DSM-IV also emphasizes that psychiatric symptoms in the form of anxiety or depression may be the result of substance use (DSM-IV 1994; Augustynek 2006).

According to DSM-IV, psychoactive substance addiction occurs when at least 3 out of 6 of the following symptoms appeared on most days for at least a month, or were observed as repeated for a long time in the past 12 months (DSM-IV 1994):

— tolerance, defined by one of the following symptoms:
  • the need to consume clearly increasing amounts of the substance to achieve intoxication or the desired effect;
  • markedly weaker “hallucinogenic effect” with continued consumption of the same amount of the substance;
  • seemingly proper functioning of the body at doses or levels of substances in the blood that would cause serious disruption in a random, other consumer;

— the occurrence of characteristic features for the withdrawal syndrome;

— frequent consumption of the same substance to relieve or eliminate withdrawal symptoms;
frequent consumption of substances in larger amounts or for longer periods than intended, planned;
— unsuccessful attempts or unsuccessful efforts to stop substance use or control its consumption;
— devoting large amounts of time on steps necessary to obtain the substance, consume the substance or fade the effects exerted by it;
— repeated use of the substance causing the inability to fulfill obligations related to the performance of roles at work, school or home;
— recurrent substance use in situations in which it is physically hazardous;
— abandoning or reducing the effectiveness of performing important, essential social, occupational or recreational activities due to substance use;
— recurrent legal or interpersonal problems resulting from the consumption of substances;
— not stopping to use the substance despite knowledge of the sustainable and recurring problems caused or exacerbated by substance use.

The DSM-IV distinguishes the following criteria of pathological gambling (DSM-IV 1994; Woronowicz 2011):
— preoccupation with gambling, such as remembering previous experiences of playing, planning the next game, thinking about how to obtain money for gambling, etc.;
— the need to raise money bets when playing, which are necessary to achieve an adequate level of satisfaction (satisfaction, desire);
— repeatedly undertaking unsuccessful efforts to reduce or stop gambling;
— nervousness or irritability when attempting to reduce or stop gambling;
— treat gambling as a way to escape problems or to improve one’s own well-being (e.g. feelings of helplessness, guilt, anxiety, depression);
— making attempts to “play back” after losing money while previously gambling;
— lying to family members, the therapist or others to conceal the true extent of their gambling;
— undertaking illegal activities, such as forgery, fraud, theft or embezzlement in order to obtain money for gambling;
— the loss or compromise of emotional relationships, educational or professional opportunities, etc. due to involvement in gambling;
— looking towards other people's financial assistance to improve a poor economic situation caused by gambling.

In 2013, the latest prevailing version of the manual DSM-V was published, in which a breakthrough was made when it comes to diagnosing pathological gambling. It is called “gambling disorder”, which was placed in a newly created category of Substance-Related and Addictive Disorders category (DSM-V), in the subcategory Non-Substance Related Disorders (DSM-V). According to DSM-V, the persistent and recurrent non-adaptive behavior related to gambling include at least four of the symptoms listed in the manual which occurred in the last
year (DSM-V 2013; Rowicka 2015). There is only one difference in terms of the diagnostic criteria of pathological gambling between the manuals DSM-V and DSM-IV. In the latest, “undertaking illegal actions, such as: forgery, fraud, theft or embezzlement in order to obtain money for gambling” was removed from the criteria of gambling disorders; the other criteria are the same (DSM-V 2013). In addition, in DSM-V, the criteria for psychoactive substance abuse were included in the criteria for substance addiction, which is an important change compared to the previous two editions of the manual (DSM-V 2013). Its introduction refers to the assumption of an etiopathological similarity of psychoactive substance abuse and addiction, as well as the recognition of them as one disorder (Samochowiec et al. 2015).

Final conclusions

**Conclusion 1.** Discussion on the location of gambling in typologies of disorders and psychopathology classifications was conducted from the beginning of investigations on gambling behavior. Some authors believe that this is a behavioral addiction and should be treated separately from psychoactive addiction, others – that there are many aspects combining these types of disorders. An element arousing controversy is, among other things, the occurrence of withdrawal symptoms and tolerance. Experts point to the fact that the main factor distinguishing behavioral addiction from substance addiction is the lack – in the strict sense – of physical symptoms of withdrawal from undesirable behavior, because there is no chemical substance here which would fall into contact with brain neurotransmitters (Denis et al. 2012; Woronowicz 2011; Shaffer et al. 2009; Petry 2006). Due to the fact that the issues concerning behavioral addiction, and among them, gambling addiction, are still areas being studied and poorly-known, one should expect that debates in this field will not stop.

**Conclusion 2.** The latest manual DSM-V published in 2013 classifies gambling-related disorders in the category of **addictive disorders** as a separate sub-category of “gambling use disorders”. In the same category of compulsive disorders there are also lists arising from the use of psychoactive substances. As justification for placing them in one category, in DSM-V, study results were indicated confirming that:

- gambling behavior activates a reward system in the brain, as it happens in the case of the use of substances;
- involvement in gambling leads to behavior similar to those encountered with psychoactive substance addiction (DSM-V 2013).

Adès and Lejoyeux point out the following symptoms between the two types of addictions: poor physical and mental health, anxiety and irritability, and the recurrent desire to re-enter the sequence of compulsive behavior in the event of
its absence (Lejoyeux et al. 1999). For both substance and behavior addictions, one can observe symptoms of increasing tolerance, exhibited by the increase in frequency or intensity of a person’s behavior in order to experience pleasure or alleviate pains to the extent to which it took place in the initial period of the compulsive behavior (Zaworska-Nikoniuk 2005).

Conclusion 3. According to information from the world literature (Keeley et al., 2016 Heitzman et al. 2011), the diagnostic criteria for pathological gambling in the eleventh edition of the Manual of the International Classification of Diseases, Injuries and Causes of Death ICD-11 will remain unchanged both in terms of their wording, and the place in the classification – as a disorder of habits and drives, including pathological gambling, pathological theft or pathological fire-setting. However, changes made to the fifth edition of the Diagnostics and Statistical Manual of Mental Disorders DSM-V rely on the integration of gambling-related disorders to the category of addictive behavior. Therefore, differences in the diagnosis of this phenomenon in the ICD and DSM require settlement and unification. Therefore, research should be undertaken into the specifics of the problems arising from gambling, in order to learn its exact conditions and mechanisms, which in turn should lead to the standardization of diagnostic criteria for gambling-related disorders.

Literature

Iwona Niewiadomska, Agnieszka Palacz-Chrisidis


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