

## Behavioral Addiction versus Substance Addiction: Correspondence of Psychiatric and Psychological Views

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### ABSTRACT

**Introduction:** Behavioral science experts believe that all entities capable of stimulating a person can be addictive; and whenever a habit changes into an obligation, it can be considered as an addiction. Researchers also believe that there are a number of similarities as well as some differences between drug addiction and behavioral addiction diagnostic symptoms. The purpose of this study is to consider different approaches in this field.

**Methods:** This is a descriptive research using content analysis method. First, differences and similarities of various perspectives on addiction and addiction behavior in different substances were obtained, thereafter, the data was coded and categorized, subjects were discussed and major issues were extracted.

**Results:** Behavioral addiction such as internet addiction is similar to drug addiction except that in the former, the individual is not addicted to a substance but the behavior or the feeling brought about by the relevant action. In addition, the physical signs of drug addiction, are absent in behavioral addiction. Others have stated that behaviorally addicted individuals have certain symptoms and will undergo the same consequences brought about by addiction to alcohol and drugs as well as other obsessive behaviors.

**Conclusion:** Similar to substance abuse prevention, programs aimed at addicted individuals and specialized training can educate adolescents about the warning signs of online addiction, in order to assist the early detection of this disorder. For prevention of behavioral addiction (such as internet addiction) authorities, cultural institutions and parents should monitor the use of internet and teach to the adolescent and children, the useful and appropriate methods of internet use.

**Keywords:** Addiction, addictive behavior, prevention

### INTRODUCTION

The concept of addiction is not easy to define and the usage of the term addiction has been considered as controversial;<sup>[2]</sup>

however, central to its definition is the dependence on a substance or activity.<sup>[1]</sup>

Until recently, “non-substance related behavioral addiction” was listed in neither of the two internationally used diagnostic manuals of mental disorders, i.e. DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders)<sup>[1]</sup> and ICD-10 (International Classification of Disease).<sup>[3]</sup> Contrary to the commonly held belief that holds addiction to be a particular kind of dependence on drugs and chemical substances such as alcohol, nicotine and heroin, behavior science experts believe that any source which is capable of stimulating an individual, could become addictive. The change of behaviors such as gambling, drug abuse, computer gaming or chatting and internet browsing from habits into obligatory behavior, can be considered as the development of addiction.<sup>[4]</sup>

The idea that true addictions can exist even in the absence of psychotropic drugs (behavioral addictions) was popularized by Peele.<sup>[4]</sup> According to Peele, addicted individuals are dependent on a particular set of experiences, of which the reactions to a specific chemical substance is only one example.

Building on Peele’s notion, some authors have developed the idea that addiction does not necessarily have to involve the abuse of a chemical intoxicant or substance.<sup>[5,6]</sup>

For example, the term “addiction” has been used to refer to a range of excessive behaviors, such as gambling,<sup>7</sup> video game playing,<sup>[8,9]</sup> eating disorders,<sup>10</sup> sports and physical exercise,<sup>[11]</sup> media use,<sup>[12,13]</sup> sex addiction, pathological working,<sup>[14]</sup> and compulsive criminal behavior. Although such behavioral addictions do not involve a chemical intoxicant or substance, a group of researchers have posed that some core indicators of behavioral addiction are similar to those of chemical or substance addiction.<sup>[15]</sup> At present, researchers emphasize that in order to make a diagnosis of behavioral addiction, functional impairments must be present at work, in social relationships, or in other social situations.<sup>[16]</sup>

A number of experts believe that behavioral addictions can be passive (e.g. television) or active (e.g. computer games), and usually contain inducing and reinforcing features which may contribute to the promotion of addictive tendencies.<sup>[16]</sup>

Considering the importance of prior literature on behavioral addiction, the primary aim of

this study was to review the major approaches expressed in this field.

## METHODS

This is a descriptive study and content analysis. First, differences and similarities of different perspectives in the field of addiction as well as behavioral symptoms of addiction to various substances was obtained from scientific literature (1990-2009). Thereafter, the obtained data was coded and categorized and subjects were discussed and major issues were extracted.

### Findings

Researchers concluded that there are similarities and differences between diagnostic symptoms of drug addiction and behavioral addiction.

Behavioral addictions such as gambling, overeating, television compulsion, and internet addiction are similar to drug addiction except that the individual is not addicted to a substance, but he/she is addicted to the behavior or the feeling experienced by acting out the behavior. Goodman’s<sup>[17]</sup> and Griffiths’<sup>[18]</sup> criteria for behavioral addictions are presented below [Tables 1 and 2).

Based on the views of Peel and Griffiths (1988) behavior addiction like drug addiction includes the following components:

However, the physical signs of drug addiction are absent in behavioral addiction.<sup>[19]</sup> One of the precursors of behavioral addiction is the presence of psychopathologies such as depression, substance dependence or withdrawal, and social anxiety as well as a lack of social support<sup>[20]</sup>

Based on Davis model, Urzack believed that people who suffer from behavioral addictions, were tired, depressed, lonely, bashful, shy, and usually have other types of addiction.<sup>[21]</sup> Young (1998) stated that individuals with behavioral addiction have certain symptoms and will undergo the same consequences as those with alcohol and drug addiction and other obsessive behaviors.<sup>[22]</sup>

From a neurobiological point of view, behavioral addictions that only indirectly affect the neurotransmitter systems of the brain, can serve as reinforcers comparable to pharmacological substances that directly affect these systems (e.g., dopaminergic system).<sup>[23,24]</sup> Indeed, recent findings support the assumption of common mechanisms

**Table 1: Diagnostic criteria for behavioral addictions**

**Goodman (1990)**

- A. Recurrent failure to resist impulses to engage in a specified behavior.
- B. Increasing sense of tension immediately prior to initiating the behavior.
- C. Pleasure or relief at the time of engaging in the behavior.
- D. A feeling of lack of control while engaging in the behavior.
- E. At least five of the following nine criteria:
  1. Frequent preoccupation with the behavior or with activity that is preparatory to the behavior.
  2. Frequent engaging in the behavior to a greater extent or over a longer period than intended.
  3. Repeated efforts to reduce, control or stop the behavior.
  4. A great deal of time spent in activities necessary for the behavior, engaging in the behavior, or recovering from its effects.
  5. Frequent engaging in the behavior when expected to fulfill occupational, academic, domestic or social obligations.
  6. Important social, occupational or recreational activities given up or reduced because of the behavior.
  7. Continuation of the behavior despite knowledge of having a persistent or recurrent social, financial, psychological or physical problem that is caused or exacerbated by the behavior.
  8. Tolerance: Need to increase the intensity or frequency of the behavior in order to achieve the desired effect or diminished effect with continued behavior of the same intensity.
  9. Restlessness or irritability if unable to engage in the behavior.
- F. Some symptoms of the disturbance have persisted for at least 1 month, or have occurred repeatedly over a longer period of time.

that underlie the development and maintenance of both behavioral and substance-related addiction.<sup>[25]</sup>

This leads to the assumption that excessively conducted behavioral addictions (e.g., excessive shopping/sport, pathological gambling/computer game-playing, internet browsing), which induce specific reward effects through biochemical processes in the body, do have an addictive potential as well. This assumption is also supported by several clinical experiences and scientific investigations. Therefore, several authors have postulated that the criteria of

**Table 2: Diagnostic criteria for behavioral addiction**

**Griffiths (1996)**

1. Saliency:
 

When the particular activity becomes the most important activity in people’s lives and dominates their thinking (preoccupations and cognitive distortions), feelings (cravings) and behavior (deterioration of socialized behavior).
2. Mood modification:
 

A consequence (such as an arousing “buzz” or “high” or a feeling of escape) of engaging in the particular activity; can be seen as a coping strategy.
3. Tolerance:
 

Increasing amounts of the particular activity are required to achieve satisfaction.
4. Withdrawal symptoms:
 

Unpleasant feeling states (such as moodiness or irritability) and/or physical effects (such as “the shakes”).
5. Conflict:
 

Interpersonal conflicts between addicts and those around them or intrapsychic conflict within the addicted individual (between the psychological need to engage in the activity and the desire not to give in to the tensions caused by addiction to the activity).
6. Relapse:
 

The tendency to revert to earlier patterns of the particular activity after a period of abstinence or control over the addictive behavior.

behavioral addiction are comparable with those of substance-related addiction.<sup>[27]</sup> Patients suffering from behavioral addiction describe addiction-specific phenomena and diagnostic criteria such as craving, excessive behavior, psychological and physical withdrawal symptoms, loss of control, development of tolerance (increased behavior range) and inducing and perceiving expected psychotropic effects (e.g., pathological gamblers use several slot machines at the same time).<sup>[26]</sup> In addition, the high comorbidity of behavioral addiction and substance-related addiction suggests comparable etiological mechanisms for their development. All in all, it seems appropriate to categorize excessively conducted behaviors which lead to suffering, as behavioral addictions.<sup>[27]</sup>

**DISCUSSION**

A number of experts such as Brown have argued that the concept of addiction is meaningful and that it should not be restricted to the ingestion

of substances.<sup>[28]</sup> the six criteria of Brown can be summarized as follows:

1. Salience: Domination of a person's life by the activity
2. Euphoria: A 'buzz' or a 'high' is derived from the activity
3. Tolerance: The activity has to be undertaken to a progressively greater extent to achieve the same 'buzz'
4. Withdrawal Symptoms: Cessation of the activity leads to the occurrence of unpleasant emotions or physical effects
5. Conflict: The activity leads to conflict with others or self-conflict
6. Relapse and Reinstatement: Resumption of the activity with the same vigor subsequent to attempts to abstain, negative life consequences, and negligence of job, educational or career opportunities.<sup>[29,30]</sup>

From the psychological and psychiatric viewpoint, behavioral addictions include a collection of disorders, such as anxiety, depression, obsessive thoughts<sup>[31]</sup>, withdrawal and isolationism, affective disorders, disturbances in social relationships, school problems such as educational failure and lack of interest in doing homework, occupational or interpersonal difficulties, isolation and negligence of friends and family or personal responsibilities, and mental or physical restlessness. In instances when the individual reduces or stops a specific behavior, excessive fatigue, lifestyle changes, significantly reduced physical activity, deprivation and changes in sleep patterns, impatience, sexual deviations, violence, eating disorder and withdrawal symptoms ensue.

Behavioral addiction risk factors have biological bases and some of them have been effectively treated by SSRIs.<sup>[31]</sup> Also, cognitive-behavioral therapy, which is the treatment of drug addiction disorders, emotional disorders and eating disorders could be useful.<sup>[32]</sup> In the treatment of behaviors such as drug addiction, four fundamental aspects should be considered: 1 – prior individual psychopathology 2 - differential reinforcement 3 – maladaptive cognitions 4 - Social support network. In this area psychiatrists and psychologists involved in the field of mental health should be aware of psychological problems caused by addictive behaviors, including symptoms such as anxiety, depression, aggression, and academic and career dissatisfaction.

## CONCLUSION

Similar to substance abuse prevention programs aimed at addicted persons, specialized training can educate adolescents about the warning signs of online addiction in order to assist early detection.

1. Parents should inform their children about the negative consequences of overuse of the Internet and its moral deviations, in order to prevent addiction.
2. Parents should monitor their children while using internet and teach them the useful and appropriate methods of internet use. This helps adolescents self-monitor their online use without abusing it.
3. Behavior science professionals might help adolescents understand the factors underlying their online habits and reintegrate former activities into their lifestyles and aid to prevent suspected cases of online abuse.
4. It is important to know that prevention programs for online abuse can reduce the occurrence of future incidents and decrease risk of internet addiction.
5. One of the important ways to prevent internet addiction, is to treat risk factors such as loneliness, stress, depression and anxiety, which may trigger the addiction to the internet and should be treated. Mental health professionals should encourage individuals who overuse the internet, to seek treatment when problems emerge, and help them identify ways they may be using the internet to escape from real life.
6. Authorities and cultural institutions have a duty of providing healthy and proper usage of the internet to individuals, especially adolescents who are most vulnerable, via mass media education and training. Therefore, the most important step in this field is education and information
7. We should realize, however, that filtering is necessary and can limit the abuse of internet (using pornographic sites, etc) but it is temporary. In the current situation, the government must invest in immunization, strengthening of religious beliefs and improving the spirit. It seems that in such ways the correct usage of the internet in the community will be naturalized.
5. Much research must be done to show that educational training programs on internet addiction have proven effective in preventing



new cases and improving the satisfaction and cohesion with internet using.

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