Continuing Education Module 20: **Brain disease**

Addiction and dependency – what we already know

Hanora Byrne discusses the diagnosis and treatment of addiction and dependency of the chemical and non-chemical kind

THE words 'addiction' and 'dependency' are often used interchangeably. There is some debate surrounding the definition of both terms, however, there are certain characteristics that are indicative of either. These include the first, and any two other points from the list below:

- A strong desire for the substance; a craving
- An increase in tolerance; an increased amount of the substance is needed to achieve the desired effect
- Loss of control – there is a problem controlling the amount and frequency of taking the substance
- Psychological or physical withdrawal symptoms – when not under the influence of the substance, the user experiences different emotions, or has pains/cramps in the body
- The person uses the substance despite physical damage – for example, liver damage or another physical condition is exacerbated by the substance, but person continues to use it despite the consequences
- Leisure time is devoted to substance use or activities leading to using, such as getting money or preparing the substance.

Definition

Addiction (or dependency) is a persistent, compulsive dependence on a behaviour or substance. It is seen as a chronic relapsing behavioural disorder with remissions and relapses, and can be both chemical and non-chemical.

The American Psychiatric Association's current Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) defines substance dependence using the following statement: "When an individual persists in use of alcohol or other drugs despite problems related to use of the substance, substance dependence may be diagnosed. Compulsive and repetitive use may result in tolerance to the effect of the drug and withdrawal symptoms when use is reduced or stopped. This, along with substance abuse are considered substance use disorders."

Addiction

When referring to addiction it is best to first ascertain whether it is a chemical addiction (ie. to stimulants such as amphetamines, cocaine, MDMA, LSD and other hallucinogens, opiates, cannabis and alcohol), or a non-chemical addiction (eg. eating, gambling, shopping, internet and exercise).

There are many common characteristics among the various addictive behaviours. For example, the individual becomes obsessed with the object, activity, or substance and will seek it out, often to the detriment of work or interpersonal relationships. The individual will compulsively engage in the activity, even if they do not want to. Upon cessation of the activity, withdrawal symptoms of irritability, craving, and restlessness will often occur.

The person does not appear to have control over when, how long, or how much they will engage in the behaviour and often deny problems resulting from the behaviour, even though others can see the negative effects.

Individuals with addictive behaviours usually have low self-esteem and feel anxious if they do not have control over their environment.

There is a lack of consensus as to the aetiology, prevention and treatment of addiction. As a result of this confusion, many people consider addictive behaviours such as gambling and alcoholism, as 'diseases'. However, others consider them to be behaviours that are learned in response to the complex interplay between heredity and environmental factors.

Some researchers argue that, unlike most common diseases such as Coeliac disease, which has a definite cause and treatment model, there is no conclusive aetiology or definite treatment method for most addictive behaviours. This causes problems with prevention and treatment approaches for the addictions.

Others debate whether total abstinence or controlled use of a substance (such as alcohol) or activity (such as gambling) is desirable, or whether or not a substitute chemical (such as methadone for heroin) or activity is a desired treatment method. Of course, total abstinence is not a viable solution for addiction to food or exercise,

In order to understand the various professionals approaches to addiction, it is best to look at the models of addiction that underpin these different treatment approaches:

The moral model

- Addiction is a set of behaviours that violate religious, moral or legal codes of conduct
- Addiction results from a freely chosen behaviour that is immoral, sinful, and at times, illegal

- Persons who misuse and abuse substances create suffering for themselves and others and lack self-discipline and self-restraint.

The biological model

- Addiction is viewed as a chronic and progressive disease that is physiologically based
- Genetic factors increase the likelihood of a person misusing psychoactive substances or losing control when using them. Neuro-chemical changes in the brain as a result of substance use induce continuing consumption, and the development of physiological dependence.

The psychological model

- Substance use is a learned behaviour; people repeat certain behaviours if they are reinforced for engaging in them
- Substance use is a result of a series of cognitive processes and beliefs about substances and their effects on the person.

The social model

- Addiction is influenced by socialisation processes and cultural factors that facilitate the development of substance misuse disorders.

Bio-psychosocial model

- Addiction is the result of many interacting influences.

Another area that is becoming more acceptable when referring to addiction is mental illness and there is anecdotal evidence to support the claim that one disorder exacerbates the other.

One of the most common features in this area is when the symptoms of a severe mental illness, such as schizophrenia, are made far worse by a person's use of illicit psychoactive substances (drugs of abuse including alcohol).

This may occur despite ongoing prescribed drug therapy, and may in some cases lead to a full-blown relapse of mental illness. A 'dual diagnosis' occurs when an individual is simultaneously diagnosed with at least one mental disorder and a separate substance use problem.

There is empirical evidence from research to support the theory that people with a mental disorder, who abuse drug or alcohol have: a higher likelihood of re-admission to hospitals; increased criminal behaviour; increased non-compliance with medication; and higher rates of homelessness and suicide.

Understanding the complex diagnostic and treatment issues posed by the co-occurrence of severe mental illness and substance use disorders has become a necessary exercise in current psychiatric practice

Assessments

Assessment, along with history-taking, is necessary to establish if an individual has a dependency. However, the reliability of the person with the addiction to accurately self-report history of past use is often unreliable and subsequently requires collaboration from a significant other.

Assessment tools, such as the Alcohol Dependency Scale (ADS) – a 25-item questionnaire that can be self-administered or conducted through interview – provides a quantitative measure of the severity of alcohol dependence consistent with the concept of the alcohol dependence syndrome.

The ADS is widely used as a research and clinical tool, and studies have found the instrument to be reliable and valid. It takes approximately 10 minutes to complete. Use of the ADS has been reported mostly for clinical adult samples, however studies have used the instrument in general population and correctional settings.

ADS scores have proven to be highly diagnostic with respect to a DSM diagnosis of alcohol dependence, and has an excellent predictive value with respect to a DSM diagnosis. The ADS yields a measure of the severity of dependence that is important for treatment planning, especially with respect to the intensity of treatment. The ADS can be used in wide variety of settings.

Assessment tools that address drug dependency include the Drug Abuse Screening Test (DAST-20). This is a 20-item instrument delivered through self-reporting or a structured interview. The assessment requires either a 'yes' or 'no' response from each of 20 questions. It is constructed similarly to the earlier Michigan Alcoholism Screening Test (MAST), and tends to parallel those of the MAST.

The purpose of the DAST is to give a brief and valid method for identifying individuals who are abusing psychoactive drugs and to yield a quantitative index score of the degree of problems related to drug use and misuse. DAST scores are highly diagnostic with respect to a DSM diagnosis of psychoactive drug dependence.

Non-chemical addiction dependency assessment tools are also available and include the Inventory of Gambling Situations (IGS). This is a 63-item questionnaire that can be administered through interview or self-reporting.

The IGS is a clinical tool that generates an individualised profile of a client's gambling behaviour by identifying situations associated with the client's gambling in the past year. It also helps therapists to develop an individualised treatment plan for people with gambling problems.

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Source material

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