

11.4 ADDICTION AND IMPULSE CONTROL DISORDERS

DEFINITIONS, TYPES AND CHARACTERISTICS

A range of addiction and impulse control disorders can be diagnosed by a psychologist.



ASK YOURSELF

What behaviours would you expect people to show if they had an impulse control disorder?

Definitions

According to Griffiths (2005), there are six components to any addiction disorder:

- ▶ Saliency – when the addiction becomes the single most important activity in the person's life. It dominates the person's behaviour, thoughts and feelings.
- ▶ Euphoria – the subjective experience that is felt while engaging in the addictive behaviour, like a "rush" or a "buzz".
- ▶ Tolerance – when the person has to do *more* of the addictive behaviour to get the same effect.
- ▶ Withdrawal – this refers to the unpleasant thoughts and physical effects felt when the person tries to stop the addictive behaviour.
- ▶ Conflict – when the person with the addiction begins to have conflicts with work colleagues, friends and family.
- ▶ Relapse – the chances of the person "going back" to the addictive behaviour are high.

Types

Alongside alcoholism (abusing the use of alcohol) there are a range of impulse control disorders. They include these disorders:

- ▶ Pyromania – when people deliberately start a fire because they are attracted to fires or seeing the fire

service in action. They may feel a sense of arousal and satisfaction once the fire has started.

- ▶ Kleptomania – when people have the urge to collect and hoard items in their homes. They may go out and steal objects even if the items have little monetary value or they could afford to buy them. The more difficult the challenge of gaining the objects, the more thrilling and addictive it becomes.
- ▶ Compulsive gambling – when people feel the need to gamble to get a sense of euphoria especially if they win. They will continue to gamble whether they win or lose.

Physical and psychological dependence

Physical dependence refers to times when the body becomes used to functioning with the drug in its system and so "requires" the drug to maintain normal functioning. Psychological dependence is when the drug or activity becomes of great importance to the person's life to maintain a "stable" mental state.

CAUSES OF ADDICTION AND IMPULSE CONTROL DISORDERS

There are several ideas about the potential causes of addiction and impulse control disorders. Some of them are covered below. Examples of these are attempting to ingest more of a drug or gamble more as the person 'feels' they 'need' to engage in the activity to function. For example, a person may go to the casino as they 'feel' being on a roulette wheel 'calms them down'.

Genetic: alcohol

Could there be a genetic link to alcoholism? Edenberg & Foroud (2006) reported on findings from the *Collaborative Study on the Genetics of Alcoholism*. Early research suggested that there are three potential candidate genes that had been found in families with multiple alcoholic members: GABRA2, CHRM2 and ADH4. A further five genes were noted that needed further investigation. Edenberg (2013) also noted evidence relating to two variants in genes that encode two enzymes involved in the

metabolism of alcohol: alcohol dehydrogenase (ADH1B) and aldehyde dehydrogenase (ALDH2). Agrawal & Bierut (2013) also noted that the same two genes (ADH1B and ALDH2) appear to play a key role in alcoholism. They added that GABRA2 could also play a role as it encodes information about receptor sites in neurons linked to alcohol-related processing. Biernacka *et al* (2013) analysed 43 single nucleotide polymorphisms in 808 alcoholics and 1 248 control participants. One in particular (rs1614972) in the ADH1C gene was found to be a key difference between the two groups. This was irrespective of the sex of the participant. Ducci & Goldman (2008) stated that more than 50 per cent of the variance for vulnerability to alcoholism could be accounted for by genetics but the exact pathways were still unknown.



Biochemical: dopamine

Dopamine has been linked to addiction and impulse control disorders as when it is released in the body it gives us the feelings of pleasure and satisfaction. Once these feelings become a desire, we then repeat behaviours that cause the release of dopamine and the cycle continues with repetitive behaviours. Voon *et al* (2010) reported that when participants were given a dopamine agonist (it activates dopamine receptors), impulsive choice increased, reaction times became faster and participants showed fewer decision conflicts compared to a control group. One drawback is that participants had Parkinson's disease so whether this can be related to people with impulse control disorder needs investigating.



Behavioural: positive reinforcement

This follows the idea of rewards. When an action is followed by a pleasurable outcome, the person is more likely to engage in that behaviour again. For example, if an addictive behaviour or impulse control behaviour

is followed by a positive outcome (e.g. feeling a sense of arousal when setting fire to a house or winning on a fruit machine), the person is likely to repeat the behaviour.



Cognitive or personality

There has been much research examining personality differences in pyromaniacs compared to controls. Gannon *et al* (2013) examined 68 pyromaniacs and 68 control participants. All were given a range of questionnaires to complete that measured a range of personality traits. The characteristics more common in the pyromaniacs were:

- ▶ higher anger-related cognitions
- ▶ interest in serious fires
- ▶ lower levels of perceived fire safety awareness
- ▶ lower general self-esteem
- ▶ external locus of control.

Therefore, there were differences in the personality and cognitive mechanisms of participants in the two groups.

Kennedy *et al* (2006) reviewed the literature (six studies) and reported the following about adolescent pyromaniacs who set fires again after being convicted (compared to those who did not go back to fire-setting). The adolescents repeating the behaviour:

- ▶ had a great interest in fire-setting and showed higher levels of covert antisocial behaviours
- ▶ were more more likely to be male and older
- ▶ had poorer social skills with a high level of family dysfunction.

Moore, Thompson-Pope & Whited (1996) examined the responses on the Minnesota Multiphasic Personality Assessment Questionnaire (MMPI) of 28 adolescent boys with a history of pyromania compared to 96 without a history. The following subscales differentiated the two groups: depression, feelings of alienation, anger, conduct problems, family problems and school problems.

Cunningham *et al* (2011) interviewed nine women who were pyromaniacs. The qualitative analysis revealed that

they had distressing experiences and lack of support pre-pyromaniac behaviour and conducted the fire-setting to influence others, gain help and feel a sense of achievement and control.

Wedekind *et al* (2013) studied the personality and attachment profiles of 59 alcoholics (43 male and 16 female). Participants completed a battery of questionnaires as well as taking part in a structured interview. Only one-third of participants were securely attached. All had high levels of trait-anxiety and showed higher levels of cognitive avoidance as well as higher scores on a number of pathological measures.



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TEST YOURSELF

Describe and evaluate one cause of addiction and impulse control disorders.

COPING WITH AND REDUCING ADDICTION AND IMPULSE CONTROL DISORDERS

Behavioural

One technique that has been used with alcoholics is token economy (see page 214 for a description of token economy). Petry *et al* (2000) researched 42 alcohol-dependent older adults in an outpatient setting. They were randomly assigned to two groups: one to receive standard treatment only; the other to receive a standard treatment plus token economy (the TE group). The latter had the chance to earn tokens that could go towards prizes for submitting negative breathalyser tests and completing set steps towards desired behaviours. The treatment lasted eight weeks. The first measure was the percentage of participants who completed the full treatment: 84 per cent in the TE group and 22 per cent receiving standard treatment only. By the end of the treatment phase, 69 per cent of the TE group were still abstinent compared to just 29 per cent in the other group. Participants in the TE group earned, on average, about \$200 worth of prizes.



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Aversion therapy.

This is a therapy based on classical conditioning. The idea is that an undesirable behaviour (e.g. when an alcoholic drinks alcohol) is paired with an aversive stimulus (something unpleasant). This decreases the frequency of the behaviour as the two elements are associated and the undesirable behaviour is no longer enjoyable. For alcoholics this could be that whenever they smell or taste alcohol they are given an emetic drug (this will make them vomit). They should begin to associate being sick with drinking alcohol and avoid drinking or drink less alcohol, so their behaviour will be changed.

Howard (2001) examined the effectiveness of aversion therapy using 82 hospitalised patients. They all went through a pharmacological aversion treatment and these were the results:

- ▶ The strength of “positive outcomes for drinking alcohol” were significantly reduced.
- ▶ The confidence that they could avoid drinking alcohol in “high-risk situations” was significantly increased.
- ▶ Those who had a greater experience of alcohol-related nausea pre-treatment or were involved in antisocial conduct showed reduced effectiveness for the treatment.

Thurber (1985) reviewed the field and reported a moderate positive effect for the use of emetics with alcoholics whereas Cannon, Baker & Wehl (1981) noted that the same effect was seen at 6-month follow-up sessions but that it had disappeared by 12 months post-treatment. Finally, Smith, Frawley & Polissar (1997) assessed the effectiveness of aversion therapy compared to counselling with alcoholics. A total of 249 patients went through the aversion therapy and were matched with participants who had the counselling. The group who received aversion therapy had significantly higher rates of alcohol abstinence at 6 and 12 months post-treatment.



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CBT for kleptomania

See page 162 for a description of how CBT works. Hodgins & Peden (2008) reviewed the current field at the time in relation to CBT usage for kleptomania. The first thing they noted was that there was little systematic research in the area. The main CBT techniques used for kleptomania tended to be as follows:

- ▶ Covert sensitisation – this is when patients have to visualise a negative (aversive) image with the kleptomania behaviours. The idea is to make them associate the two so the behaviour decreases.
- ▶ Imaginal desensitisation – this is when patients are taught relaxation techniques. They have to visualise themselves engaging in the impulsive behaviour while also engaging in relaxation. Impulsion and relaxation cannot happen at the same time and the idea is that relaxation takes over when people have the urge to involve themselves in kleptomania.

The review concluded that CBT appears to be the most effective way of controlling kleptomania.

Kohn & Antonuccio (2002) noted that CBT is very successful with kleptomaniacs especially if

kleptomania-related consequences are used (e.g. getting arrested and going to jail) instead of just general aversive imagery (e.g. nausea and vomiting). It is also effective when the kleptomaniac describes the scenarios out loud, in as much detail as possible, so that the anxiety continues to increase with the imaginings. This repeated pairing of aversive stimuli with kleptomania thoughts and ideas does decrease behaviour especially if patients are then reinforced for not engaging in kleptomania-related behaviours.

CBT has been used successfully with other impulse control disorders. As Jimenez-Murcia *et al* (2011) reported, it worked very well with male slot-machine addicts over a 16-week period and even an online CBT-based programme for alcoholics showed good levels of success (van Deursen *et al*, 2013).



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CHALLENGE YOURSELF

You have been asked by a local mental health charity to choose the most effective programme for dealing with addiction and impulse control disorder. Which therapy would you choose and how would you run the programme? Justify your choices.