Looking for reward or running away from stress and dysphoria: Different vulnerabilities and pathways to addictive behaviors

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Ethical review	Approved WMO
Status	Pending
Health condition type	Other condition
Study type	Observational invasive

Summary

ID

NL-OMON31339

Source
ToetsingOnline

Brief title
Pathways to addictive behaviors

Condition

- Other condition
- Psychiatric disorders NEC

Synonym
alcohol dependence/alcohol addiction and pathological gambling/gambling addiction

Health condition

middelenafhankelijkheid (alcohol)

Research involving
Human

Sponsors and support

Primary sponsor: Academisch Medisch Centrum
Source(s) of monetary or material Support: Veni grant (NWO-ZonMW)

Intervention

Keyword: alcohol dependence, pathological gambling, reward sensitivity, stress reactivity

Outcome measures

Primary outcome

Personality characteristics, behavioural scores, blood pressure, heart rate

variability and brain activity (measured by functional MRI) are obtained.

Genetic information will be derived by analysing blood.

Secondary outcome

not applicable.

Study description

Background summary

Addicted persons display an excessive search for immediate rewards. Whether referring to alcohol, drugs, or to behaviours like gambling, addictions evolve because of pleasurable immediate physical and/or emotional effects of substances or behaviours. Addiction theories refer to this construct as reward sensitivity. On the other hand, some people indulge in addictive behaviours to find relief for dysphoric or unpleasurable emotional states. Addiction theories refer to this as stress relief motives or punishment sensitivity. However, phenotypical indicators of reward sensitivity and punishment sensitivity/stress reactivity seem to overlap to a great extent and generally no prototypical reward or punishment sensitive alcoholics or pathological gamblers can be distinguished. Based on these findings, it has been suggested that this distinction should be made at the endophenotypical (e.g. heart rate variability, brain activity during reward or punishment) and genotypical level (e.g. dopaminergic polymorphism) in order to study the different

psychobiological pathways to addiction and tailor treatments to causality. Recent psychobiological research focused on addiction states suggest that in the course of acquiring an addiction different pathways are affected in time. The reward pathway is the first pathway in the brain that is affected in addiction. Salience attribution or attentional bias for drugs related stimuli is a second mechanism. In the last stage of addiction, rewards play a smaller part and addictive behaviours are becoming habit behaviours. Studies on addictive behaviours use clinical samples, where the course of the disorder is more chronic. Up till now, it is not clear whether clinically referred alcohol dependent/pathological gamblers differ from non-clinical referred alcohol dependent/pathological gamblers, on current etiological concepts studies in addiction.

Study objective

This research therefore encompasses the study of reward sensitivity, punishment sensitivity, stress reactivity, attentional bias and habit formation in groups of persons who are receiving treatment for their alcohol dependency or pathological gambling and in persons who are problem drinkers or problem gamblers. By focusing on problem groups as well as on clinical addicted groups, insight will be gained in which aspects are involved in different stages and levels of addictive behavior. Furthermore, we will be able to study which characteristics (e.g., reward sensitivity; stress reactivity), are predictive of relapse in addictive behavior after treatment, escalation or de-escalation of gambling or drinking in the problem gambling and problem drinking group, and which characteristics are specific for people who are suffering from an addiction and are receiving treatment for this.

Study design

Psychological questionnaires and standardised diagnostic interviews are assessed; physiological examination (e.g. blood pressure and heart rate), neurocognitive tests and functional MRI are recorded and 15ml blood is drawn to examine genetic polymorphisms.

Study burden and risks

This study requires 6 hours time from the participants. (6 hours total, of which one 4-hour visit takes place in the research facility, a pre-screening of maximum one hour, and two follow-up interviews), and besides a 15ml blood draw, is not invasive. Moreover, no adverse health consequences are known using functional MRI scans. New insights generated by this study on addictive disorders and on the course of addiction are of great interest, since this study aims to find factors which influence the course and recovery of addiction.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

Problem drinkers need to meet 1 to 3 criteria of the DSM-IV criteria for alcohol abuse or alcohol dependence (assessed by CIDI section J). Clinical alcohol depended subjects need to score more than 3 criteria of the DSM-IV criteria for alcohol dependency (assessed by CIDI section J).
Problem gamblers meet 3 from 5 DSM-IV criteria assessed by the DIS section T. Pathological gamblers meet 5 or more DSM-IV criteria assessed by the DIS section T.
The control group does not have any history or presence of addictive behaviours.

Exclusion criteria

Subjects are excluded when there is a history or presence of psychiatric disorders assessed

by CIDI or DIS diagnostic interviews, such as: bipolar disorder, psychosis/hallucinations, manic, obsessive compulsive disorder or ADHD. Or if subjects have a history or presence of; neurological disorder (CVA, loss of consciousness>30 minutes, coma), hospitalization for psychiatric disorder(s), an estimated IQ lower than 85, or if they do not speak Dutch as their primary language. Subjects from the control groups are excluded when having a history of substance use or dependence, or pathological gambling (other than nicotine smoking). Men in the normal control group are excluded when drinking 21 or more alcoholic drinks a week; women are excluded when drinking more than 15 alcoholic drinks a week.

Study design

Design

Study type:	Observational invasive
Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-09-2007
Enrollment:	160
Type:	Anticipated

Ethics review

Approved WMO

Application type:	First submission
Review commission:	METC Amsterdam UMC

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL18521.018.07