The effect of memory training on alchohol use.

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Ethische beoordeling	Positief advies
Status	Werving nog niet gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON26354

Bron
Nationaal Trial Register

Aandoening

Alcohol dependence
Alcoholafhankelijkheid

Ondersteuning

Primaire sponsor: Maastricht University
Mondriaan Zorggroep
Overige ondersteuning: Maastricht University
Mondriaan Zorggroep

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

1. Working memory performance: See interventions for the description of the tasks;
2. Automatic impulses: The Implicit Association Test (IAT) will be used as an index of

automatic impulses to drink alcohol; automatic (or implicit) preferences for alcohol will be measured (Greenwald et al. 1998; Houben & Wiers 2009). The IAT is a reaction time task that required participants to sort stimuli into two target categories, alcohol and soft drink and two attribute categories, pleasant and unpleasant. Items representing the four categories will be presented one at a time, and participants have to categorize them as quickly as possible.

Toelichting onderzoek

Achtergrond van het onderzoek

Rationale:

Alcohol abuse causes disruptions in the human cognitive domain. For instance planning, attention, inhibition of inappropriate actions and working memory are affected by long-term alcohol abuse. It has been shown that an impairment of the aforementioned executive functions may result in maladaptive behaviour. For instance, drinking behaviour can get out of control, due to the fact that automatic impulses may not be suppressed appropriately. Working memory forms/is the basis for learning, planning, organizing, staying focused, control of impulses and reasoning. For this reason, the present study will investigate whether working memory training can strengthen executive control and thereby maybe overcome the aforementioned deficits.

Objective:

The primary aim of this study is to investigate the effect of a computer-based WMT on executive functioning (and especially WM performance) in a clinical sample of alcohol dependent subjects. Secondly, we will examine if an improvement in WM is related to improved control over drinking behaviour (e.g. the amount of consumed alcohol beverages and alcohol cravings). Thirdly, we are interested whether this improvement in cognitive functioning is additional to the effect of the regular treatment, especially in the long run.

Study design:

Split-plot design (double-blind randomized trial).

Study population:

A minimal total of 125 alcohol dependent subjects.

Intervention:

The experimental group and one of the two control groups will receive working memory training for 25 consecutive days.

Main study parameters/endpoints:

The difference in working memory performance, automatic preferences for alcohol, alcohol cravings, executive functioning, relapse rate and
alcohol use between patients who will receive working memory training and patients who will not receive working memory training.
Nature and extent of the burden and risks associated with participation, benefit and
group relatedness
Working memory training is an intervention that is used to strengthen executive functions. It is found that working memory training is highly relevant for reducing
clinical symptoms and to improve working memory capacity and other cognitive abilities in a variety of clinical samples. The study holds no direct risks for the participants.

Doel van het onderzoek

The primary aim of this study is to investigate the effect of a computer-based WMT on executive functioning (and especially WM performance) in a clinical sample of alcohol dependent subjects. Secondly, we will examine if an improvement in WM is related to improved control over drinking behaviour (e.g. the amount of consumed alcohol beverages and alcohol cravings). Thirdly, we are interested whether this improvement in cognitive functioning is additional to the effect of the regular treatment, especially in the long run.

Onderzoeksopzet

Neuropsychological assessment before the start of the experiment. At pretest, posttest and follow-up, several questionnaires and tests will be administered.

Onderzoeksproduct en/of interventie

The working memory training (WMT) used in the present study is based on the exact same tasks used in the study of Houben, Wiers and Jansen (2011) and the results of this study were promising. The participants in this study showed an improvement in WM performance after WMT. Their WMT was based on the ideas, tasks and studies of Klingberg and associates (e.g. 2002). The daily exercises are designed to train both the visuo-spatial and verbal WM.

All participants (in both the training and control conditions) will be tested during the WMT on three kind of WM tests: the visuospatial WM span task, the backwards digit span task, and the letter span task (based on Klingberg et al., 2002). All three tasks consist of 30 trials.

1. Visuospatial WM task: During this task, a certain number of squares in a 4x4 grid changed in colour on the computer screen. Participants have to reproduce this sequence by clicking on the squares that have changed colour in the correct order using the computer mouse;

2. Backward digit span: During this task, a sequence of numbers will be presented on the computer screen. Participants have to reproduce this sequence in reversed order, using either the computer mouse or the number keys on the keyboard;

3. Letter span task: During this task, a sequence of letters will be presented on the computer screen in a circle. One of the positions in this circle is the be indicated and participants have to reproduce the corresponding letter using the keyboard.

In the training condition (participants in the experimental group (group 3)), the difficulty level of all three WM tasks will be automatically adjusted on a trial-by-trial basis. Initially, each task involved sequences of three items. The length of the sequences will increase and decrease according to participants' performance. When participants correctly reproduce the sequences on two consecutive trials, one item will be added to the sequence on the next trial. When participants are not able to correctly reproduce the sequences on two consecutive trials, the sequence in the next trial will contain one item fewer.

In the control condition (participants in group 2), the difficulty level of the WM tasks will not be adjusted, remaining at the initial, easy level throughout each task (i.e., three items in each sequence).

Contactpersonen

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

1. Alcohol dependence: diagnosed according to criteria DSM IV (American Psychiatric Association, 2000);

2. Participants will be screened with the Alcohol Use Disorder Identification Test (AUDIT; Saunders et al.1993), and are only allowed to participate when they score 8 or higher on the AUDIT (i.e., the cut-off score for hazardous drinking; Saunders et al. 1993);

3. Age over 18 years;

4. A minimum of 4 years of formal schooling and no history of mental retardation;

5. Native Dutch speaker;

6. Mental competency to give informed consent. Mental competency as defined by the Dutch law (WGBO: Wet of Geneeskundige Behandel Overeenkomst) is determined by the medical specialist (e.g. psychiatrist) based on the patient's health record, observations and conversation with the regular therapist. If necessary, the psychiatrist will have a short conversation with the patient. The concerning psychiatrists are: Dr. Michael Wellner, Dr. Robert Hilse, Dr. Claudia Decker and Dr. An Joos. They are all employees of Addiction Care of the Mondriaan Zorggroep;

7. Participants must have access (preferable at their own home) to a computer with an internet connection.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

1. AUDIT score lower than 8 (the cut-off score for hazardous drinking; Saunders et al. 1993);

2. History of acquired brain injury (e.g. cerebral contusion, cerebrovascular accident);

3. Participants who show signs of poor compliance (e.g. not completing a session in time and session loss) and/or poor response on the questionnaires will be excluded from the experiment by the researchers;

4. Polydrug users, people who use more than one drug, are excluded from the study.

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Parallel
Toewijzing:	Gerandomiseerd
Blindering:	Enkelblind
Controle:	Placebo

Deelname

Nederland

Status:	Werving nog niet gestart
(Verwachte) startdatum:	01-02-2012
Aantal proefpersonen:	168
Type:	Verwachte startdatum

Ethische beoordeling

Positief advies

Datum:	08-11-2011
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

ID: 35211
Bron: ToetsingOnline
Titel:

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL3004
NTR-old	NTR3152
CCMO	NL38350.068.11
ISRCTN	ISRCTN wordt niet meer aangevraagd.
OMON	NL-OMON35211

Resultaten

Samenvatting resultaten
N/A