Gegamificeerde werkgeheugentraining bij adolescenten met verslaving

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Although current treatment programs for adolescents with substance use disorders show beneficial outcomes, post-treatment relapse rates remain high and leave room for further improvement. Patients with an addiction show neurocognitive deficits and…

Ethische beoordeling	Positief advies
Status	Werving tijdelijk gestopt
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON23672

Bron
Nationaal Trial Register

Aandoening

Addiction, Substance Use Disorder (SUD), adolescents, working memory

Verslaving, Middelgebonden stoornis, Adolescenten, Werkgeheugen

Ondersteuning

Primaire sponsor: None
Overige ondersteuning: No external funding.

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Change in working memory capacity from pre-test to immediate post-test is the primary study outcome. Working memory is assessed with the Span board task (Klingberg, 2005), the scores on the Span board task form a unidimensional measure.

Toelichting onderzoek

Achtergrond van het onderzoek

Although current treatment programs for adolescents with substance use disorders show beneficial outcomes, post-treatment relapse rates remain high and leave room for further improvement. Cognitive enhancement by training patients' working memory capacity is regarded as a promising new approach that might contribute to the effectiveness of current addiction therapies. Patients with an addiction show neurocognitive deficits and low levels of impulse control which can impede their ability to remain abstinent.

Furthermore, cognitive impairments might hamper the processing of information during regular therapy sessions, which can potentially diminish the effectiveness of regular addiction treatment.

According to previous cognitive and clinical research, a working memory training can enhance working memory capacity leading to beneficial outcomes, such as improved executive functioning and reduced complaints in individuals with ADHD, depression, schizophrenia and also problem drinkers and stimulant dependent patients. An important drawback of most working memory training programs is that they involve repetitious and often tedious exercises. As addicted adolescents might be less motivated to comply with these types of interventions, we developed a working memory training in game-format. Results from a small pilot study among adolescents in an addiction care unit, showed very positive evaluations and high completion rates confirming the feasibility of providing a 'gamified' working memory training to this clinical population.

The proposed research project will examine the potential benefits of a 'gamified' working memory training for adolescents in addiction care. The primary objective is to test whether a gamified working memory training will lead to improved working memory capacity in addicted adolescents. As a secondary aim of this project we wil explore the potentially advantageous effects of the gamified working memory training on addicted adolescents' capacities on other aspects of working memory, craving, mood states, relapse rates, delay discounting, and substance use patterns. Finally, in an additional research question, we will examine whether addicted patients show less working memory capacity compared to non-addicted adolescents.

In a randomized controlled trial (RCT) with a pre-post design, 68 patients with a Substance Use Disorder (SUD) who receive inpatient treatment for their addiction will be randomly assigned to either a working memory training or a placebo-training (i.e., working memory exercises with low difficulty and not customized to participants' ability levels). In addition, 64 healthy, non-addicted peers will be recruited outside the treatment setting and will be asked to perform only the baseline assessment of the RCT. This non-addicted non-patient group will function as a reference group to examine differences in working memory capacity at baseline

between addicted adolescents and healthy controls.

Doel van het onderzoek

Although current treatment programs for adolescents with substance use disorders show beneficial outcomes, post-treatment relapse rates remain high and leave room for further improvement. Patients with an addiction show neurocognitive deficits and low levels of impulse control which can impede their ability to remain abstinent. Furthermore, cognitive impairments might hamper the processing of information during regular therapy sessions, which can potentially diminish the effectiveness of regular addiction treatment. According to previous cognitive and clinical research, a working memory training can enhance working memory capacity leading to beneficial outcomes, such as improved executive functioning and reduced complaints in individuals with ADHD, depression, schizophrenia and also problem drinkers and stimulant dependent patients. An important drawback of most working memory training programs is that they involve repetitious and often tedious exercises. As addicted adolescents might be less motivated to comply with these types of interventions, we developed a working memory training in game-format.

The primary objective of present study is to test whether a gamified working memory training will lead to improved working memory capacity in addicted adolescents. As a secondary aim we will explore the potentially advantageous effects of the gamified working memory training on addicted adolescents' craving, mood states, relapse rates and substance use patterns. Finally, we will examine whether addicted patients show less working memory capacity compared to non-addicted adolescents.

Onderzoeksopzet

Start.

Immediate post-test: after 12 weeks of training.

Post-test 2: at the end of usual clinical treatment program.

Onderzoeksproduct en/of interventie

The intervention consists of 8 working memory exercises that are integrated in a computer game. This computer game can be characterized as a role-playing game (rpg) where players can develop and upgrade their playing character during the game. The game depicts an island where players can move their avatar freely. The goal of the game is make your playing character strong enough to escape from the island. The upgrade their character, players have to battle against different enemies. The battle consist of working memory exercises. To win a battle, the playing character has to train in the training room. Here, players can choose which working memory exercise they want to practice. For participants who receive the working memory training (in contract to those who receive the placebo-training) the task will

become more difficult as soon as participants become better, to increase the training effect. The participants trains twelve sessions of 30 minutes. The training contains the following tasks: two versions of the Simon task, two versions of the Digit span, the N-back task, the Symmetry span task, the Operation span task and the Figure task.

Contactpersonen

Publiek

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

Inclusion criteria addicted patient group:

- Diagnoses of Substance Use Dirsorder (SUD) assessed by psychiatrist.

- Between 14 and 23 years of age

Inclusion criteria non-addicted non-patient reference group:

- Between 14 and 23 years of age

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

Exclusion criteria addicted patient group:

- Gambling disorder and/or compulsive gaming behavior assesses by psychiatrist

Exclusion criteria non-addicted non-patient reference group:

- Risky level of alcohol (AUDIT-score>= 8) or cannabis use (CUDIT-R-score >=8) or lifetime use of any hard drug.

Onderzoeksopzet

Opzet

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

Deelname

Nederland

Status:	Werving tijdelijk gestopt
(Verwachte) startdatum:	23-09-2013
Aantal proefpersonen:	68
Type:	Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Nee

Ethische beoordeling

Positief advies

Datum:	09-09-2014
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

ID: 38700
Bron: ToetsingOnline
Titel:

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL4669
NTR-old	NTR4822
CCMO	NL44000.078.13
OMON	NL-OMON38700

Resultaten