Increasing adolescents cognitive functioning through physical education

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Ethische beoordeling	Niet van toepassing
Status	Werving gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON23906

Bron
Nationaal Trial Register

Aandoening

cognition, mental health, academic performance, physical activity, adolescents

Ondersteuning

Primaire sponsor: University Medical Center Groningen
Overige ondersteuning: NRO

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

The primary outcome measures of the present study are: executive functioning (inhibition and working memory), mental health (depression and anxiety symptoms, ADHD-symptoms and self-concept) and academic achievement (spelling and mathematics).

Toelichting onderzoek

Achtergrond van het onderzoek

Rationale: Adolescence represents a crucial stage in the maturation of executive functioning (e.g. working memory and inhibition) and mental health (i.e. behavioural and emotional functioning, and self-concept), which both are important predictors of academic achievement. In this study we examine whether aerobic and cognitively engaging physical education (PE) lessons may improve executive functioning and mental health. We hypothesize that improved executive functioning and mental health may translate into enhanced academic achievement. The findings of this study might be relevant for policy makers and schools, because more intensive and cognitively demanding PE lessons might be more beneficial for adolescents' cognitive functioning (including executive functioning, mental health and academic achievement) than regular PE lessons.

Objective: The primary objective is to examine the causal effects of intensive and cognitively demanding PE on executive functioning, mental health and academic achievement in healthy adolescents. Secondary objectives are examining the causal effects of a physical activity intervention during PE classes on physical fitness, school absence and switching towards other school tracks of adolescents.

Study design: We will use a cluster randomized controlled trial (RCT), with a control and an experimental group.

Study population: Healthy adolescents from the Netherlands, 13-15 years old
Intervention: The control group will receive regular PE lessons and the intervention group will receive more intensive and cognitively demanding PE lessons. Both groups will receive two one-hour sessions of PE as part of their school curriculum per week, during 14 weeks.

Main study parameters/endpoints: The primary outcome measures of the present study are: executive functioning (inhibition and working memory), mental health (depression and anxiety symptoms, ADHD-symptoms and self-concept) and academic achievement (spelling and mathematics). The secondary outcome measures are implementation measures and physical fitness. Finally, school absence and switching of educational level will be measured.

Doel van het onderzoek

Adolescence represents a crucial stage in the maturation of executive functioning (e.g. working memory and inhibition) and mental health (i.e. behavioral and emotional functioning, and self-concept), which both are important predictors of academic achievement. In this study we examine whether aerobic and cognitively engaging physical education (PE) lessons may improve executive functioning and mental health. We hypothesize that improved executive functioning and mental health may translate into enhanced academic achievement.

Onderzoeksopzet

Measurements at baseline and after the intervention in both the intervention as well as the control group

Onderzoeksproduct en/of interventie

The control group will receive regular PE lessons and the intervention group will receive more intensive and cognitively demanding PE lessons. Both groups will receive two one-hour sessions of PE as part of their school curriculum per week, during 14 weeks.

Contactpersonen

Publiek

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

Adolescents following secondary education and are in grade 8 (junior secondary vocational education (‘VMBO’), senior general secondary education (‘HAVO’), and pre-university education (‘VWO)) aged between 13 and 15 years
written informed consent (both from individual as parent/caregiver)

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

Adolescent who are physical disabled and cannot participate in the intervention

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Factorieel
Toewijzing:	Gerandomiseerd
Blindering:	Open / niet geblindeerd
Controle:	Actieve controle groep

Deelname

Nederland

Status:	Werving gestart
(Verwachte) startdatum:	01-09-2018
Aantal proefpersonen:	600
Type:	Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Nog niet bepaald

Ethische beoordeling

Niet van toepassing

Soort:	Niet van toepassing

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL6903
NTR-old	NTR7098
Ander register	Medisch Ethische Toetsingscommissie UMCG : METc 2017/673

Resultaten