

Temporal dynamics of physical activity and mood in everyday life: Towards tailor-made interventions to prevent or ameliorate depressed mood

Published: 02-12-2011

Last updated: 30-04-2024

Primary Objective:1. To investigate, within individuals, the temporal dynamics of physical activity and depressed mood.Secondary Objectives: 2. To test mechanisms in and modifiers of the relationship between physical activity and depressed mood...

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Mood disorders and disturbances NEC
Study type	Observational non invasive

Summary

ID

NL-OMON37420

Source

ToetsingOnline

Brief title

MOOVD study:
Mood and Movement in Daily life

Condition

- Mood disorders and disturbances NEC

Synonym

depression, depressive illness

Research involving

Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Groningen

Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: Depression, Intraindividual variation, Physical activity, Stress

Outcome measures

Primary outcome

Mood will be measured with the Positive and Negative Affect Schedule (PANAS; Watson, Clark and Tellegen 1988), with two additional items, namely *happy* and *sad*, which has shown to be a short and valid instrument for the daily assessment of mood (Wenze et al. 2006). Physical activity levels will be tracked with an accelerometer, the ActiCal® (Respironics, Bend, OR, USA). Output of this instrument will be presented as Energy Expenditure (EE) and Metabolic Equivalent of Task (METs). Actigraphy will be complemented with a newly developed questionnaire that covers the nature and context of physical activities and motivations for being physically active.

Secondary outcome

Saliva will be sampled three times a day, by means of a synthetic swab to determine concentrations of several biochemical compounds (hormones and enzymes), including cortisol, alpha-amylase and melatonin, as indicators for HPA-axis activity, ANS-activity, and circadian phase, respectively.

Sleep quality will be measured with (part of) the Pittsburgh Sleep Diary (PghSD; Monk et al. 1994), because sleep can have significant effects on mood.

Other activities and cognitions influencing physical activity and mood, such as social interactions, important events, rumination, and self-esteem will be assessed by means of items adopted from previous experience sampling studies (De Vries 1992; Myin-Germeys et al. 2009).

At baseline, following the diagnostic interview, sleep habits will be assessed with the Munich Chronotype Questionnaire (MCTQ; Roenneberg et al. 2007), cognitive vulnerability with the Dysfunctional Attitudes Scale (DAS-A; Weissman & Beck 1978), self-esteem with the Rosenberg's Self-Esteem Scale (SES; Rosenberg 1965), mastery with the Pearlin Mastery Scale (PMS; Pearlin & Schooler 1978) and neuroticism with the Eysenck Personality Questionnaire Revisited Short Scale (EPQ-RSS; Eysenck et al. 1991). Potential confounders such as smoking, alcohol/drug consumption, body weight and menstrual cycle and phase will be registered as well.

Study description

Background summary

Depression is a common psychiatric disorder, with an often chronic or recurrent course and far-reaching consequences for individuals' quality of life and future opportunities (Meyer-Lindenberg et al. 2006). Core symptoms are depressed mood and anhedonia (i.e., loss of interests or pleasure). Physical activity is known to be related to depression in various ways. Depressed individuals tend to be less physically active, and sedentary individuals tend to be more depressed. Because of its inverse relation to depressed mood, physical inactivity may hamper remission (Farmer et al. 1988; Teychenne et al. 2008b).

Potentially, physical activity is a highly valuable depression treatment. However, effects of physical activity interventions for depression reported in

the literature are modest and inconsistent, and the operating mechanisms are not yet clear (Teychenne et al. 2008b; Ströhle 2009). This is at least in part due to limitations of the studies conducted so far; most of them have adopted cross-sectional designs, or longitudinal group designs with only a few assessment points. Such (nomothetic) designs are suitable for generalizing associations found in the sample to the population level, but do not necessarily tell us anything about association patterns within individuals (Brosse et al. 2002). We aim to improve effectiveness of physical activity-based antidepressant interventions, by investigating temporal patterns and putative causal mechanisms at the individual level, using multiple repeated assessments within individuals. Thereafter, we will aggregate the data of all individuals to find common patterns and mechanisms.

Study objective

Primary Objective:

1. To investigate, within individuals, the temporal dynamics of physical activity and depressed mood.

Secondary Objectives:

2. To test mechanisms in and modifiers of the relationship between physical activity and depressed mood within the individual, such as the social context of physical activity, functioning of the stress system, and cognitive/emotional functioning.
3. To examine to what extent these mediating and moderating factors are person-specific or generic.

Study design

The study has a replicated single-subject time-series design. 30 depressed and 30 non-depressed individuals will be studied for 30 days in their home environment, by means of actigraphy, electronic diaries and saliva sampling. Physical activity levels will be tracked with an accelerometer worn at the hip or wrist. Three times a day, subjects will fill out rating scales on thoughts, feelings and activities (e.g. mood, energy, physical activity and stressful events); and sample saliva by means of a synthetic swab.

Study burden and risks

There are no risks involved in participating in this study. The burden consists of: an inclusion interview (1 / 1.5 hr), completion of a diary at fixed times (3 x 3 minutes a day), wearing an accelerometer 24 hours a day throughout the study period, and chewing synthetic swabs thrice a day to collect saliva. Subjects are not allowed to eat or drink, except water, 30 minutes prior to saliva sampling. The study period is 30 days. Benefits may include more insight

in the temporal dynamics of physical activity and depressed mood, and person-specific factors that promote a good mood.

Contacts

Public

Universitair Medisch Centrum Groningen

Hanzeplein 1
Groningen 9713 GZ
NL

Scientific

Universitair Medisch Centrum Groningen

Hanzeplein 1
Groningen 9713 GZ
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

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

Inclusion criteria

Age between 20 and 50 years

Subjects should be capable of keeping an electronic diary three times a day, sampling saliva while filling out the electronic diary, abstaining from eating or drinking (except water) during 30 minutes before sampling, wearing an accelerometer 24 hours a day; Depressed subjects:

A diagnosis of Major Depressive Episode according to DSM-IV criteria at the moment of inclusion; Non-depressed subjects:

No diagnosis of Major Depressive Episode, Minor Depressive Episode or Dysthymic Episode according to DSM-IV criteria at the moment of inclusion

Exclusion criteria

A current diagnosis or diagnosis anywhere in the past two years of a Psychotic Disorder or Bipolar Disorder

Somatic disorders that severely affect functioning of the hypothalamic-pituitary-adrenal (HPA) axis or the autonomic nervous system (ANS)

Medication that severely affect functioning of the HPA axis or the ANS

Significant visual or hearing impairments

Pregnancy

Study design

Design

Study type: Observational non invasive

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Basic science

Recruitment

NL

Recruitment status: Recruitment stopped

Start date (anticipated): 13-03-2012

Enrollment: 60

Type: Actual

Ethics review

Approved WMO

Date: 02-12-2011

Application type: First submission

Review commission: METC Universitair Medisch Centrum Groningen (Groningen)

Approved WMO

Date: 21-03-2013

Application type: Amendment

Review commission: METC Universitair Medisch Centrum Groningen (Groningen)

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	NL38006.042.11