Is apathy associated with poor effort during neuropsychological assessment in patients with Alzheimer*s disease or Parkinson*s disease?

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The general aim of this study is to explore how a motivational deficiency (i.e. apathy) related to neurodegenerative diseases is associated with effort and how it can be distinguished from intentional underperformance. We will investigate whether…

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Movement disorders (incl parkinsonism)
Study type	Observational non invasive

Summary

ID

NL-OMON37992

Source
ToetsingOnline

Brief title
Apathy and effort during neuropsychological assessment

Condition

- Movement disorders (incl parkinsonism)
- Dementia and amnestic conditions

Synonym
Effort

Research involving
Human

Sponsors and support

Primary sponsor: Universiteit Maastricht
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: Apathy, Effort, Neuropsychological assessment, Underperformance

Outcome measures

Primary outcome

The difference in performance on the following symptom validity tests: Test of Memory Malingering (TOMM), Dot Counting Test (DCT) and Structured Inventory of Malingering Symptoms (SIMS) between patients with and without apathy.

For more detailed information on the symptom valdity tests, we refer to section 7.3 Study procedures (p.14-15) of the research protocol.

Secondary outcome

Relationship between the scores on TOMM, Dot Counting and SIMS and those on neuropsychological tests.

The difference in cognitive complaints as measured with the Cognitive Failure Questionnaire (CFQ, see section 7.3, page 16, of the research protocol for more detailed information) between patients with and without apathy.

Study description

Background summary

Psychological tests are assumed to yield objective and standardized measures of an individual*s mental ability. However, neuropsychological test performance can be influenced by other factors than cognitive ability, such as a primary

motivational deficiency as a consequence of cerebral pathology, unwillingness to undergo the assessment, and exaggeration out of a psychological need to demonstrate cognitive deficits and to adapt the sick role. All these factors may lead to insufficient effort.
Effort is defined by Bush, Ruff, Troster, Barth, Koffler, Pliskin, Reynolds and Silver (2005; p. 120) as *the individual*s investment at performing at capacity levels*. Hence, insufficient effort leads to performing below one*s capacities (e.g. underperformance) and this withholds conclusions to be drawn from the traditional cognitive tests about cognitive abilities or deficits. Therefore, it is important to control for effort when interpreting cognitive test results to avoid the risk of drawing errounous conclusions about a person's cognitive capacities and giving inappropriate advice.

Since research convincingly showed that the clinician*s view is unreliable in detecting insufficient effort (Heaton et al., 1978; Wedding and Faust, 1989), many Symptom Validity Tests (SVTs) have been developed to measure effort. An SVT appears to tap cognitive function, most often memory, when in fact it is an easy task even for patients with quite marked cognitive impairment. Effort testing has been primarily developed and examined in medico-legal and forensic settings. In such settings, external incentives may play an important role and demonstrating cognitive deficit may lead to a more favorable outcome of the legal procedure (e.g. a higher financial compensation or a diminished punishment). In this domain, underperformance is often used as a behavioral proxy of malingering. However, as mentioned above, there are several other explanations why a patient does not put sufficient effort in test. SVTs can only tap underperformance on cognitive tests. The underlying reason for poor effort must be inferred by the clinician.

To date there are no objective measures or strategies available to the clinician to interpret insufficient effort and little scientific research has been conducted into exploring the possible factors operating behind insufficient effort. One important question that remains unresolved is whether a motivational deficiency as a consequence of cerebral pathology may lead to insufficient effort on neuropsychological assessment and if so, how it can be distinguished from a lack of motivation to perform optimally based on a psychological need or secondary gains to demonstrate cognitive deficits. This question is important because not being able to perform optimally out of a motivational deficiency requires a different treatment approach than not performing optimally out of need to demonstrate cognitive deficits.

Study objective

The general aim of this study is to explore how a motivational deficiency (i.e. apathy) related to neurodegenerative diseases is associated with effort and how it can be distinguished from intentional underperformance. We will investigate whether there is a difference in performance on SVTs and cognitive tests between patients with Parkinson Disease (PD) and Alzheimer dementia with and

without apathy. If it can be shown that there is a difference in SVT performance between patients with and without apathy, then this will be a first clue that a motivational disorder can lead to underperformance on cognitive tests.

A secondary aim is to investigate whether apathy is associated with a low endorsement of complaints. We anticipate that the typical malinger pattern of underperformance on cognitive tests and overendorsement of complaints (Iverson, 2006) is not present in patients with apathy. If so, then this would provide clinicians with an important clue as to how to differentiate between intentional underperformance as seen in malingering and apathy related underperformance. However, we also anticipate that patients might as a consequence of their cognitive deficits not fully comprehend the questionnaires measuring cognitive complaints and non-credible psychological and neurological complaints, and thus undermining the reliability of these questionnaires. To overcome this we will separately analyze the results for the group AD patients, who per definition have cognitive deficits, and the group Parkinson patients, in which patients with co morbid dementia are excluded.

Hypotheses:
1. Patients with Alzheimer*s or Parkinson*s disease that suffer from apathy score lower on SVTs than those that do not suffer from apathy.
2. Apathetic patients report fewer cognitive complaints than non-apathetic patients.
3. Scores on the SVTs are related to the traditional cognitive test (e.g., IQ etc.) scores.
4. Neither apathetic nor non-apathetic patients report non-credible psychological and neurological complaints.

Study design

we will use a cross-sectional, between-subjects design. Basically, the design follows the 2 (apathetic versus non-apathetic) x 2 (PD versus early dementia patients) between-subjects Analysis of Variance (ANOVA) set-up.

Study burden and risks

The risks of participating in this study are considered minimal. The two questionnaires and two tests that are added to the regular assessment protocol are non-invasive and scarcely stressful. These instruments will be administered during the routine neuropsychological assessment, so patients are not asked to make an extra visit to the hospital. The burden in our study stems from the fact that the regular assessment is extended for approximately 40 minutes. The participants will not directly benefit from the study.

When taken into consideration that the patients have to be mental competent to give informed consent and that the risks of participating in this study are minimal, we feel that the burden of 40 minutes extra testing time is justified, in order to gain more insight into the relationship between apathy and effort during testing.

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

M. Parkinson: diagnosis according to the United Kingdom Parkinson*s Disease Society Brain Bank criteria.;Dementia: diagnosis of possible or probable Alzheimer*s disease according to NINCDS-ADRDA criteria. ;Mental competency to give informed consent. Mental competency as defined by the Dutch law (WGBO; Wet op Geneeskundige Behandel Overeenkomst) is determined by the medical specialist (psychiatrist, neurologist). ;Native Dutch speaker;A

minimum of 8 years of formal schooling and no history of mental retardation

Exclusion criteria

Mini Mental State Examination (MMSE) < 20 ;M. Parkinson: no dementia (or MMSE < 26) ;Major Depressive Disorder as defined by the Diagnostic and Statistical Manual of Mental Disorders; DSM-IV-TR (American Psychiatric Association, 2000);Other neurological diseases ;History of acquired brain injury (e.g. cerebral contusion, cerebrovasculair accident) ;External incentives (e.g. involvement in litigation)

Study design

Design

Study type: Observational non invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Diagnostic

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	18-05-2011
Enrollment:	180
Type:	Actual

Ethics review

Approved WMO Date:	29-03-2011
Application type:	First submission
Review commission:	METC academisch ziekenhuis Maastricht/Universiteit Maastricht, METC azM/UM (Maastricht)
Approved WMO Date:	20-06-2012

Application type:	Amendment
Review commission:	MEC academisch ziekenhuis Maastricht/Universiteit Maastricht, MEC azM/UM (Maastricht)

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	NL33694.068.10