Pilot study into the validity and usability of the DynMetrics gait analysis system.

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Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Central nervous system vascular disorders
Study type	Observational non invasive

Summary

ID

NL-OMON46512

Source
ToetsingOnline

Brief title
Validity and usability DynMetrics.

Condition

- Central nervous system vascular disorders

Synonym
Stroke

Research involving
Human

Sponsors and support

Primary sponsor: Revalidatiecentrum Het Roessingh
Source(s) of monetary or material Support: MIND Eurregio

Intervention

Keyword: DynMetrics, Gait analysis, Usability, Validity

Outcome measures

Primary outcome

For the validity part, the main study parameter is the intraclass correlation

coefficient of the data from the DynMetrics system and the Vicon system.

For the usability part, the main study parameter is the usability of the

DynMetrics system as quantified by the System Usability Scale.

Secondary outcome

For the validity part, see primary study parameters.

For the usability part, the main study parameter is the usability of the

DynMetrics system as quantified by a semi-structured interview.

Study description

Background summary

Monitoring the recovery of walking ability, and more specifically dynamic stability and walking speed, is important during stroke rehabilitation. The current measurement systems that are able to monitor these variables are expensive, time consuming, and difficult to use. This limits their usability for daily clinical practice. The University of Osnabrück developed a measurement system, the DynMetrics system, that can measure dynamic stability as well as walking speed in an easy and fast way. The performance of the measurement system in healthy subjects was promising. It is, however, unknown how the measurement system performs in stroke survivors. In addition, it is unknown how physiotherapists rate the usability of the measurement system and what the added value of the gathered data is for daily clinical care.

Study objective

For the reliability part, our objective to have an initial understanding of the validity of the DynMetrics measurement system when compared to the Vicon system

(gold standard). For the usability part, our objective is to quantify the usability of the DynMetrics system and the usability of the data from the viewpoint of physiotherapists.

Study design

Observational pilot study.

Study burden and risks

The burden and risk associated with participation is low, as we will be performing non-invasive measurements of walking. The distance that participants will have to walk is comparable to the distance that is normally walked during a therapy session. Participants will not benefit from participation.

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

Reliability
- Understand Dutch or English;
- Able to follow simple instructions;
- Experience mobility-related walking problems (FAC score between 3 and 5, as determined by the treating physiotherapist).;Usability
- Work as a physiotherapist at Roessingh, Center for Rehabilitation
- Treating stroke survivors, either in- or outpatient

Exclusion criteria

Validity
- Require physical support of a physiotherapist during walking (the DynMetrics system might encounter problems when two bodies are so close together that they are hard to distinguish from one another);
- Are using a stroller (this might obscure the foot positioning which would be problematic for the DynMetrics system).;Usability
No specific exclusion criteria

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):	11-06-2018
Enrollment:	15
Type:	Actual

Ethics review

Approved WMO Date:	08-06-2018
Application type:	First submission
Review commission:	METC Twente (Enschede)

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	NL65077.044.18
Other	Nog niet bekend