

An evaluation of a game for the rehabilitation of pain patients (pilot study).

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Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Observational non invasive

Summary

ID

NL-OMON36490

Source

ToetsingOnline

Brief title

Gaming and rehabilitation

Condition

- Other condition

Synonym

Chronic pain (back and neck/-shoulder pain)

Health condition

chronische pijn klachten

Research involving

Human

Sponsors and support

Primary sponsor: Revalidatiecentrum Het Roessingh

Source(s) of monetary or material Support: Europese Unie

Intervention

Keyword: chronic pain rehabilitation, clinical change, gaming, user experience

Outcome measures

Primary outcome

The primary study parameters are user experience (satisfaction, usability and emotional engagement) with the Playmancer game and the clinical changes (complaints and disability) induced by playing the Playmancer game.

Secondary outcome

not applicable

Study description

Background summary

The growing popularity of motion-based games, like Nintendo's Wii, is not limited to the youth and gamers but slightly entering the professional field of physical rehabilitation as well. Games have the potential to be an attractive alternative for therapy. The challenging game environment is considered to be motivating for patients thereby potentially increasing exercise compliance. Besides games challenge participants to play a game over and over to beat their personal high score and thereby increase their treatment intensity and performance. Motion-based games have an additional advantage in that they are controlled by the movement of a person captured by a controller (Nintendo's Wii) or by a digital camera device (Sony EyeToy) and as such have the potential to positive influence physical performance.

Although promising, practice shows there are a number of limitations when applying these existing games into professional rehabilitation settings. First, not all games can be adjusted to the level of the impaired patient and become too hard to play which often leads to frustration. It would be an advantage when a game could be adapted to the capabilities of an impaired patient. Second, the level of energy expenditures reported for the motion-based games

cannot be compared to levels of energy expenditures reached during physical therapy as only limited movements with a controller held in the patient's hand are requested from the patient for controlling the game. Desirable would be a game controlled by those motions the patient's need to train. As a consequence of these limitations games are more used as a pleasurable alternation instead of being a proper tool to use for the treatment during rehabilitation.

A game with the possibility to personalize for different patients and controlled by the relevant motions of the patient's body has been developed by different European partner's expert on the field of rehabilitation, motion capturing and game design.

Study objective

The aim of this pilot study is to investigate the user experience with this game and clinical changes induced by playing this game. As, the experience of patients and clinical changes associated with game-based pain rehabilitation in literature are scarce. Therefore, this study will have an explorative nature.

Study design

The study design of this pilot study is: a prospective cohort study.

Study burden and risks

The burden associated with participations comprises several visits (8 in total) of approximately 30-60 minutes at Roessingh Research and Development. The Playmancer game challenges participants to train daily live movements; walking, reaching overhead and turning the head. Potential risks considered to be minimized.

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

Be aged 18 years or older

Have a length between 1m50 and 1m95 (task layout requirement)

Physical capable of playing a motion-based game

Patients have back pain or pain in the neck-shoulder region without specific pathological causes for at least 12 weeks during the past.

Exclusion criteria

an insufficient understanding of the Dutch language

a visible impairment that inhibits the perception of the screen where the play is on projected.

receiving (physical) therapy for their pain complaints

Study design

Design

Study type: Observational non invasive

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Treatment

Recruitment

NL	
Recruitment status:	Recruitment stopped
Start date (anticipated):	06-01-2011
Enrollment:	15
Type:	Actual

Ethics review

Approved WMO	
Date:	23-09-2010
Application type:	First submission
Review commission:	METC Twente (Enschede)
Approved WMO	
Date:	06-09-2011
Application type:	Amendment
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	NL33217.044.10