

Wii games for physical therapy at home



HEALTHCARE

Gameplay as a core ingredient in next gen physiotherapy.

The rise of affordable off the shelf motion controlled game hardware and peripherals, and the success of motion based gameplay as a genre enables the application of games in physical therapeutic settings. Not only in hospitals and care centres, but also at home...

The goal of the Wiihabitainment pilot is to research and demonstrate the potential of the application of entertaining and affordable motion-based gameplay in rehabilitation. This is done by

“Affordable hardware opens doors for game based physical therapy”

the development and validation of a prototype for a motion-based game aimed at children that are suffering from Acquired Brain Injury (ABI). The game will address a range of physical therapeutic goals using affordable off the shelf motion controlled game hardware and peripherals. The offered gameplay will be adaptable to specific therapeutic needs and usable in both care centres and home settings. This way the patients can also play with their family and friends.

Paving the way for game assisted physical therapy at home

Since the costs of healthcare are expected to increase substantially in the next few years, the healthcare sector is looking into the possibilities of transferring parts of the care to the home setting. Game assisted physical therapy is expected to be one of the core ingredients in this transfer. Together with patients, therapists and experts our research team has identified several challenges that have to be met in order for this

transfer to become a success: the quality of the game experience should resemble that of a popular commercial motion controlled videogame and the hardware and peripherals should be affordable and easy to use. Also, the gameplay should be adaptable to a range of therapeutic goals and respect asymmetry in background, gaming literacy and physical abilities of both patients and their friends and family. The game will have to provide possibilities to monitor use and therapeutic progress. Last but not least the gameplay needs to be build upon a thorough understanding of physical movement in relation to gameplay. The final result of this Pilot will be a fully playable and validated game demo that addresses the challenges identified above and enables the dissemination of knowledge developed in regard to game assisted physical therapy at home.

Next gen physiotherapy

If we are to develop game assisted physiotherapy to the next stage, we not only need to demonstrate we can successfully design and apply gameplay in the context of home based physiotherapy, but also prove to both the market and the healthcare sector that Wiihabitainment is commercially viable. Over the next few years we will develop a fully playable demo with the help of patients, therapists and experts. We will also validate the prototypes and game in its context of use, and showcase the potential of games for next gen physiotherapy. The gained knowledge will be aggregated and disseminated to the healthcare sector and the creative industries in the form of demo's, papers, presentations, workshops and symposia. Finally, we will conduct market research and develop a business case in close contact with the sector and publishers.

Pilot:

Healthcare

Partners

Utrecht School of the Arts (HKU)
Waag Society

Budget

625.000 euro

Contact details

Jeroen van Mastrigt
HKU
jeroen.vanmastrigt@kmt.hku.nl

