

# SilverFit –Literature and Research Review

---

This document consists of two parts. The first part provides a scientific literature review of research related to the usage of the SilverFit. The second part is an overview of research in the usage of virtual therapy, mostly in geriatric care.

## Content

<b>1. SilverFit literature</b> .....	<b>2</b>
SilverFit & General Health .....	2
SilverFit & Rehabilitation .....	2
SilverFit & Stroke .....	3
SilverFit & Orthopedic Rehabilitation .....	3
SilverFit & Parkinson’s Disease .....	3
SilverFit & Oncology.....	3
SilverFit & Clinical Tests and Parameters .....	3
SilverFit & Balance .....	4
SilverFit & Motivation .....	4
SilverFit & Cognition .....	5
SilverFit & Dementia/ Alzheimers’ Disease .....	5
SilverFit & (Intellectual) Disabilities.....	6
SilverFit & Implementation.....	6
SilverFit & Rehabilitation at the Intensive Care.....	6
SilverFit & Home-Based Training .....	7
SilverFit & Respiratory Training .....	7
SilverFit & Dysphagia .....	7
<b>2. General Scientific Literature Review Virtual Therapy</b> .....	<b>8</b>
Virtual Therapy & General Health .....	8
Virtual Therapy & Rehabilitation .....	9
Virtual Therapy & Stroke General.....	9
Virtual Therapy & Stroke - Upper Extremity.....	10
Virtual Therapy & Stroke - Lower Extremity.....	11
Virtual Therapy & Orthopedic Rehabilitation.....	12
Virtual Therapy & Parkinson’s Disease .....	12
Virtual Therapy & Traumatic Brain Injury (TBI) .....	13
Virtual Therapy & Multiple Sclerosis (MS) .....	13
Virtual Therapy & Cardiac Rehabilitation .....	14
Virtual Therapy & Pain Control.....	14
Virtual Therapy & Depression.....	15
Virtual Therapy & Balance .....	15
Virtual Therapy & Adherence/ Motivation.....	17
Virtual Therapy & Cognition .....	18
Virtual Therapy & Dementia/ Alzheimer’s Disease .....	19
Virtual Therapy & (intellectual) Disabilities.....	20
Virtual Therapy & Home-Based Training .....	20
Virtual Therapy & Dysphagia .....	21
Virtual Therapy & Cyber Sickness .....	22

## 1. SilverFit Literature

### SilverFit & General health

1. Belong Macclesfield (2017). **Impact of SilverFit 3D and Mile on health parameters of care center residents** (Unpublished).

### SilverFit & Rehabilitation

1. Attema, K.J. (2018). **Design of a long-range, cost-effective serious gaming system for reliable gait measurement of the elderly to support their physical activity** (Unpublished Master's thesis). University of Twente.
2. Rademaker, A., Van der Linden, S., & Wiersinga, J. (2009). **SilverFit, a virtual rehabilitation system**. *Gerontechnology*, 8(2), 119.
3. Van der Burgt, R., & Wiersinga, J. (2009). **Moderne ouderenzorg: revalidatie met behulp van computerspellen** [Modern geriatric care: rehabilitation using computer games]. *Fysiotherapie & Ouderenzorg*, 23(3), 43-50.

### SilverFit & Stroke

1. Veringa, M. (2018). **Het effect van exergame therapie op de loopvaardigheid van chronische CVA-patiënten in vergelijking met conventionele fysiotherapie. Een literatuuronderzoek** [The effect of exergame therapy on the walking ability of chronic CVA patients compared to conventional physiotherapy. A literature study] (Unpublished Bachelor's thesis). Utrecht University of Applied Sciences.
2. Kivihalme, K. (2016). **User centered research for fine motor control rehabilitation after stroke in The Netherlands** (Unpublished Bachelor's thesis). JAMK University of Applied Sciences.
3. Le, J. (2015). **Literature review of evidence for best evidence based exercises and state of the art of virtual reality rehabilitation for the upper extremity post stroke** (Unpublished Bachelor's thesis). Fontys University of Applied Sciences.
4. Altink, T., Kloosterman, P., & Van der Knaap, S. (2015). **Balansprotocol voor CVA patiënten** (Unpublished Bachelor's thesis). Leiden University of Applied Sciences.
5. Schot, J.J., & Van der Meer, L.S. (2015). **Virtuele therapie na een CVA. Wat kan er toegevoegd worden aan de spellen van de SilverFit die SilverFit heeft ontwikkeld voor de revalidatie na een beroerte voor de arm/hand functie?** [Virtual Therapy after stroke. What can be added to the games SilverFit has developed for post-stroke rehabilitation of the arm-hand function?] (Unpublished Bachelor's thesis). Thim van der Laan University of Applied Sciences.
6. Jonker, S. (2013). **Virtual reality bij revalidatie na een beroerte** [Virtual reality used for post-stroke rehabilitation] (Unpublished Master's thesis). Avans Plus University of Applied Sciences.

### SilverFit & Orthopedic Rehabilitation

1. Kenson, W., Van Donge, G., De Kaper, A., & Blom, S. (2015). **Een protocol met gebruik van virtuele therapie bij revaliderende ouderen na een beenamputatie – triangulatie onderzoek** [A rehabilitation protocol using virtual therapy for elderly people with a leg amputation - triangulation] (Unpublished Bachelor's thesis). Leiden University of Applied Sciences.
2. Van Wijngaarden, J. (2013). **Kan therapeutisch gamen gebruikt worden als extra trainingsmoment bij de geriatrische orthopedische revalidant?** [Can therapeutic games be used to create more training moments for the geriatric orthopaedic rehabilitant?] (Unpublished Master's thesis). Avans Plus University of Applied Sciences.
3. Oude Aarninkhof, L., & Pinxteren, K. (2012). **Virtuele training voor ouderen – Handleiding heuprevalidatie SilverFit als ondersteuning voor reguliere oefentherapie** [Virtual training for elderly people – Manual Hip rehabilitation SilverFit used as part of regular therapy] (Unpublished Master's thesis). Avans Plus University of Applied Sciences.
4. Van der Linden, S. (2009). **Wat is de meerwaarde van de SilverFit en is het bruikbaar in de fysiotherapie bij mensen met een THP/TKP?** [What is the added value of the SilverFit and is it useful for physiotherapy for people with a THP/ TKP?] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.
5. Wiersum, B. (2019). **Kwaliteitsonderzoek naar orthopedisch revaliderende ouderen met behulp van de SilverFit** [Qualitative research examining elderly who undergo orthopedic rehabilitation using the SilverFit] (Unpublished Bachelor's thesis). Thim van der Laan University of Applied Sciences.
6. Van Cruchten, A. (2019). **Een kwalitatief onderzoek naar de hanteerbaarheid en de ervaringen van het SilverFit amputatieprogramma binnen de Geriatrische Revalidatiezorg** [Qualitative research examining the manageability and experiences of the SilverFit amputation program within the geriatric rehabilitation care] (Unpublished Master's thesis). Avans Plus University of Applied Sciences.

### SilverFit & Parkinson's Disease

1. Harteveld, N., Van der Ven, L., Vessies, K., & De Vries, E. (2016). **Wat zou virtuele therapie voor Parkinson patiënten kunnen betekenen?** [To what extent is virtual therapy useful for patients with Parkinson's Disease?] (Unpublished Bachelor's thesis). Leiden University of Applied Sciences.
2. Van Uden, S. (2019). **De ervaringen van parkinsonpatiënten met loopbandtraining door middel van de SilverFit Mile** [Experience of patients with Parkinson's Disease performing treadmill training using the SilverFit Mile] (Unpublished Bachelor's thesis). Avans Plus University of Applied Sciences.

### SilverFit & Oncology

1. Buningh-Quaedvlieg, F. (2018). **Het toepassen van een beweegprogramma op de SilverFit bij de geriatrische palliatieve oncologierevalidant met als doel het verbeteren van het fysiek functioneren en verminderen van de kwetsbaarheid. Een haalbaarheids-/pilotstudie** [The application of a SilverFit exercise program in the geriatric palliative oncologic rehabilitation to improve physical functioning and to reduce frailty. A feasibility/ pilot study] (Unpublished Master's thesis). Avans Plus University of Applied Sciences.

## SilverFit & Clinical Tests and Parameters

1. Griswold, D., Rockwell, K., Killa, C., Maurer, M., Landgraff, N., & Learman, K. (2014). **Establishing the reliability and concurrent validity of physical performance tests using virtual reality equipment for community dwelling healthy elders.** *Disability and Rehabilitation*, 37(12), 1097-101.
2. De Rooij, C., Sletten, A., Thuraisamy, K., & Van Veen, S. (2016). **Een mixed-method onderzoek ter ondersteuning van het fysiotherapeutisch behandelproces van kwetsbare ouderen** [A mixed-method research of physical parameters for the standing Fox-game supporting the physical therapy treatment of frail elderly] (Unpublished Bachelor's thesis). Leiden University of Applied Sciences.
3. Faatz, T., Kerstens, Y., Sipkes, N., & Van Wensveen, R. (2015). **Hoe serieus is serious gaming?** [How serious is serious gaming?] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.
4. Braam, M. (2014). **Een nieuwe output voor het mollenspel: Een onderzoek naar fysieke parameters geschikt voor het waarnemen en registreren van vooruitgang van spelers tijdens het mollenspel** [A new output for the mole game: A research to what physical parameters can monitor and register the progress of users playing the mole game] (Unpublished Bachelor's thesis). The Hague University of Applied Sciences.
5. Spoorenberg, R. (2019). **Het bepalen van functieverbetering met behulp van de SilverFit 3D. Welke uitkomstmaten zijn geschikt om functieverbetering van de bovenste extremiteit te bepalen met de SilverFit 3D?** [Determining functional improvement using the SilverFit 3D. Which outcome measures are suitable to determine functional improvement of the upper extremity using the SilverFit 3D?] (Unpublished Bachelor's thesis). De Haagse Hogeschool.
6. Bakker, M. (2019). **Why do physiotherapists not look at what they want?** (Unpublished Master's thesis). Utrecht University.

## SilverFit & Balance

1. Anders, P., Grønvik, K., Molde, I., Müller, H., Skjaeret-Maroni, N., & Vereijken, B. (2017). **Balance exergames improve movement characteristics of body weight transfer.** Poster presented at ESMAC (European Society for Movement analysis in Adults and Children) 26<sup>th</sup> Annual Meeting, Trondheim, Norway.
2. Skjaeret-Maroni, N., Vonstad, E.K., Ihlen, E.A., Tan, X.C., Helbostad, T.L., & Vereijken, B. (2016). **Exergaming in older adults: movement characteristics while playing stepping games.** *Frontiers in Psychology*, 7(964).
3. Skjaeret, N., Nawaz, A., Ystmark, K., Dahl, Y., Helbostad, J.L., Svanaes, D., & Vereijken, B. (2014). **Designing for movement quality in exergames: lessons learned from observing senior citizens playing stepping games.** *Gerontology*, 61(2), 186-194.
4. Nawaz, A., Skjaeret, N., Ystmark, K., Helbostad, J.L., Vereijken, B., & Svanaes, D. (2014). **Assessing seniors' user experience (UX) of exergames for balance training.** In *Proceedings of the 8th Nordic Conference on Human-Computer Interaction: Fun, Fast, Foundational: NordiCHI'14* (pp. 578-587). New York, USA: ACM.
5. Van Gastel, M., & Van der Burgt, R. (2012). **Verminderen van vallen met de SilverFit** [Reducing falls with the SilverFit]. *Fysiotherapie & Ouderenzorg*, 26(1), 11-17.
6. Flick, J.T., Gräper, C., De Gruyter, L.J.M., & De Snoo, E.K. (2017). **Zonder vallen en opstaan – Een veilige balanstraining door SilverFit en Balance Trainer (SFBT) bij Centraal**

**Neurologische Aandoeningen? Een explorerend onderzoek** [Without falling and standing up – A safe balance training with SilverFit and Balance Trainer (SFBT) for people with Central Neurological Disorders? An exploratory research] (Unpublished Bachelor's thesis). Leiden University of Applied Sciences.

7. Ystmark, K. (2013). **The potential of the use of step-based exergames in balance training for senior citizens** (Unpublished Master's thesis). Norwegian University of Technology and Science.
8. De Bakker, P., & Klaveren, W.J. (2010). **Effect van training met de 'SilverFit' op rompstabiliteit en coördinatie van de onderste extremiteit bij adolescenten** [Effect of training with the 'SilverFit' on core stability and coordination of the lower extremity in adolescents] (Unpublished Bachelor's thesis). Amsterdam University of Applied Sciences.
9. De Deugd, J., & Willemse, J. (2010). **SilverFit virtual reality game as an evaluation tool for hip function** (Unpublished Bachelor's thesis). Avans University of Applied Sciences.

### SilverFit & Motivation

1. Pisica Donose, G., Razzolini, O., Bardgett, M. Lim, F., & Samarcq, L. (2017). **Impact of using the SilverFit Mile videos on training time**. Presented at congres fragilité, Paris, France.
2. Van Wezel, S. (2017). **Exergame balance training and conventional balance training among healthy elderly: Effects on motivation and exercise intensity** (Unpublished Master's thesis). VU University Amsterdam.
3. Saes, M.A.P.M. (2016). **Efficient virtual rehabilitation** (Unpublished Master's thesis). VU University Amsterdam.
4. Feenstra, A. (2014). **Kan fietsen in een virtuele omgeving leiden tot een verhoogde belastbaarheid bij kwetsbare ouderen?** [Will cycling in a virtual environment lead to increased exertion in frail elderly?] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.
5. Van Oudheusden, P. (2013). **Virtual Reality in de ouderenrevalidatie** [Virtual reality in geriatric rehabilitation] (Unpublished Master's thesis). University of Applied Sciences Leiden.
6. Zegeling, A., Dekker, B., & De Wit, K. (2013). **Spelcomputers fun? Of tóch functioneel?** [Game computers fun? Or yet functional?] (Unpublished Bachelor's project). Amsterdam University of Applied Sciences.
7. Gerlofsma, N. (2018). **Technologie in de arm-/handrevalidatie bij CVA-patiënten** [Technology in rehabilitation of the arm-/hand function in stroke patients] (Unpublished Bachelor's thesis). Rotterdam University of Applied Sciences.
8. Van der Kooij, K., van Dijsseldonk, R., van Veen, M., Steenbrink, F., de Weerd, C., & Overvliet, K.E. (2019). **Gamification as a Sustainable Source of Enjoyment During Balance and Gait Exercises**. *Frontiers in Psychology*, 10(294).

### SilverFit & Cognition

1. Anders, P., Lehmann, T., Müller, H., Grønvik, K.B., Skjaeret-Maroni, N., Baumeister, J., & Vereijken, B. (2018). **Exergames inherently contain cognitive elements as indicated by cortical processing**. *Frontiers in Behavioral Neuroscience*, 12(102).
2. Anders, P., Lehmann, T., Müller, H., Molde, I., Grønvik, K., Skjaeret-Maroni, N., Vereijken, B., & Baumeister, J. (2017). **Balance exergames increase cortical activity in frontal areas of the**

**brain.** Poster presented at ESMAC (European Society for Movement analysis in Adults and Children) 26<sup>th</sup> Annual Meeting, Trondheim, Norway.

3. Sebregts, F., Van den Oudenalder, R., Konings, B., & Van Iersel, K. (2015). **Wat is het effect van 10 minuten matig intensief bewegen op de cognitie?** [What is the effect of exercise (10 minutes at a moderate intensity) on cognition?] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.

### SilverFit & Dementia / Alzheimer's Disease

1. Pisica Donose, G., Marinescu, M., Razzolini, O., Bardgett, M., & Wiersinga, J. (2018). **Benefits and stress reduction for nursing home residents living with dementia through engaging in physical activities: participation and outcomes of "SilverFit" exergames.** Poster presented at congress "Fragilité du Sujet Âgé; Le Vieillissement Santé; Prévention de la Perte d'Autonomie 2018, Paris, France.
2. Chan, M. (2017). **Muziektherapie en de SilverFit Alois. Een adviesrapport** [Music therapy and the SilverFit Alois. An advisory report] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.
3. Korian (2016). **Taking care of patients suffering from dementia and neurodegenerative diseases, TNM (non-medical techniques) project.** Presented at Silver Economy Expo, Paris, France.
4. Koning-van Zuilen, M., & Lindeboom, R. (2014). **Effecten van een beweegprogramma voor demente ouderen in het verpleeghuis op kwaliteit van leven** [The effects of an exercise programme on quality of live for people with dementia living in a care home]. *Fysiotherapie & Ouderenzorg*, 26(1), 11-17.
5. DAZ (2014). **Evaluatierapport 'Bewoners met dementie in beweging'** [Evaluation report 'Exercise for people living with dementia'] (Published online).
6. Van Gestel, L., Slot, C., Remijn, R., & Theunissen, J. (2015). **Het monitoren van beginnend dementerenden d.m.v. een spel element** [Monitoring people with dementia through the use of a game] (Unpublished Bachelor's work). Avans University of Applied Sciences.
7. De Bruin, L., Knuisting Neven, L., & Van Zanten, M. (2013). **SilverFit en mensen met dementie in beweging** [SilverFit exercises for people living with dementia] (Unpublished Bachelor's thesis). Rotterdam University of Applied Sciences.
8. Van Vliet, L. (2012). **Proposals for the SilverFit Alois, active entertainment for memory care** (Unpublished Master's thesis). University of Twente.
9. Bongaards, B., & Groen, C. (2018). **Dementie in beweging** [Dementia in motion] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.
10. Van Santen, J., Dröes, R.M., Bosmans, J.E., Blanson Henkemans, O.A., Van Bommel, S., Hakvoort, E., . . . Meiland, F (2019). **The (cost-) effectiveness of exergaming in people living with dementia and their informal caregivers: protocol for a randomized controlled trial.** *BMC Geriatrics*, 19, 1-19.
11. De Winter, A. (2019). **Improving physical activity (PA) of elderly with dementia through exergaming. Factors affecting the facilitating role of the social environment** (Unpublished Master's thesis). Wageningen University.

### SilverFit & (Intellectual) Disabilities



1. Lexis, M. (2013). **Het stimuleren van lichaamsbeweging bij cliënten met verstandelijke beperkingen door de inzet van (informatie- en communicatie) technologie: een pilotstudie** [Stimulating physical exercise with clients with intellectual disabilities through the use of (information- and communication) technology: a pilot study] (Unpublished Bachelor's thesis). Zuyd University of Applied Sciences.

### SilverFit & Implementation

1. Nap, H. H., & Diaz-Orueta, U. (2013). **Rehabilitation gaming**. In S. Arnab, I. Dunwell, & K. Debattista (Eds.), *Serious games for healthcare: applications and implications* (pp. 50-75). Hershey, PA, USA: IGI Global.
2. Westdijk, P. (2016). **Implementatie van de SilverFit Alois op de Berkenhof; wat ging goed, wat kan beter?** [Implementation of the SilverFit Alois at the Berkenhof; what went well and what improvements could be made?] (Unpublished Bachelor's thesis). Arnhem and Nijmegen University of Applied Sciences.
3. Duindam, A., & Fischer, B. (2013). **Ouderen en bewegen: wensen en innovatie** [Eldery and exercise: wishes and innovation] (Unpublished Bachelor's thesis). The Hague University of Applied Sciences.
4. Moonen, J. (2012). **De Wii niet meer op je heupen hebben; het gebruik van serious games voor de revalidatie van ouderen** [Having fun with the Wii; the use of serious games for geriatric rehabilitation] (Unpublished Master's thesis). Avans Plus University of Applied Sciences.

### SilverFit & Rehabilitation at the Intensive Care

1. Fiks, T., Ruijter, A., Te Raa, M., & Spronk, P.E. (2016). **Interactive gaming is feasible and potentially increases ICU patients' motivation to be engaged in rehabilitation programs**. Poster presented at 36<sup>th</sup> International Symposium on Intensive Care and Emergency Medicine, Brussel, Belgium.
2. Waaning, L. (2017). **Gamen op de intensive care. Het toepassen van technologie om mobilisatie op de intensive care te ondersteunen** [Gaming at the intensive care. The application of technology to support mobilization at the intensive care unit] (Unpublished Bachelor's thesis). The Hague University of Applied Sciences.
3. Van Veluwen, E. (2014). **Exergames op de Intensive-Careafdeling** [Exergames at the Intensive Care] (Unpublished Bachelor's thesis). The Hague University of Applied Sciences.

### SilverFit & Home-Based Training

1. Dobner, S., Jogl, I., Mayer, T., Kolland, F., Freitag, H., Panovsky, S., ... Baltas, D. (2018). **Entertainment and Training on a Personalized Training Platform**. Poster presented at Smarter Lives Conference 2018, Innsbruck, Austria.
2. Hoogeboom, V. (2018). **Virtuele therapie voor hartpatiënten in een thuissituatie** [Virtual Therapy for patients with heart disease living at home] (Unpublished Bachelor's thesis). Rotterdam University of Applied Sciences.

### SilverFit & Respiratory Training

1. Verburg, A. (2016). **Blow your mind. Digitale ademhalingstraining voor ouderen** [Blow your mind. Digital flow exercises for elderly people] (Unpublished Bachelor's thesis). Amsterdam University of Applied Sciences.
2. Kaelen, M. (2016). **Medische Business Case 'SilverFit Flow'** [Medical Business Case 'SilverFit Flow'] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.

### SilverFit & Dysphagia

1. Chiu, A.T.S., & Yip, C.C.K. (2018). **Effectiveness of game based biofeedback swallowing training in elderly: a quasi experimental study**. Presented at the 2018 International Occupational Therapy Conference, Kunming, Yunnan, China.
2. Lut, J., Spronk, L.E.J., Jansen, M., Hemler, R.B., Dekker-Holverda, E., Kröner, A., & Spronk, P.E. (2017). **Interactive gaming for evaluating dysphagia in ICU patients?** Abstract presented at Topics in IC Multidisciplinair Congress 2017, Lunteren, The Netherlands.
3. Van Snippenburg, W., Lut, J., Hofhuis, J.G.M., Flim, M., Hemler, R.B., Kröner, A., & Spronk, P.E. (2017). **Awareness and Management of Dysphagia in Dutch intensive care units: a nationwide survey**. Abstract presented at Topics in IC Multidisciplinair Congress 2017, Lunteren, The Netherlands.
4. Spronk, L.E.J., Lut, J., Dekker, E., Jansen, M., Van Munster, B., Lemmens, J., . . . Spronk, P.E. (2017). **Dysphagia is severely under recognized in hospitalized patients**. Abstract presented at Topics in IC Multidisciplinair Congress 2017, Lunteren, The Netherlands.
5. Te Rietstap, M. (2016). **Oral intake problems of patients suffering from dysphagia** (Unpublished Master's thesis). University of Twente.
6. Van Snippenburg, W., Kröner, A., Flim, M., Dekker, E., Hemler, R., Buise, M., & Spronk, P. **Improving swallowing function in critically ill patients using an interactive gaming rehabilitation program**. Poster.
7. Gnacke, E., & Mijnes, D. (2018). **sEMG-normaalwaarden van slikkracht en sliktiming in de ziekenhuispopulatie** [sEMG normal data for swallow force and swallow timing in the hospitalized population] (Unpublished Bachelor's thesis). Zuyd University of Applied Sciences.
8. Helmhout, S. (2018). **Fitness voor het Slikken. Logopedische behandeling van slikstoornissen bij volwassenen met een verstandelijke beperking door biofeedback: werkt het?** [Fitness for swallowing. Speech therapy treatment for swallowing disorders in elderly with intellectual disabilities through biofeedback: what works?].
9. Snoek, D. (2019). **Ervaringen van logopedisten met het gebruik van SilverFit Rephagia bij patiënten met de ziekte van Parkinson** [Experiences of speech language therapists using the SilverFit Rephagia for patiënts with Parkinson's disease] (Unpublished Bachelor's thesis). Hanzehogeschool Groningen University of Applied Sciences.
10. Kerkdijk, E., van der Laak, M., Nieuwkamp, M., Zwaagstra, Y., & van Dusseldorp, L. (2018). **H36 Applicability of and experience with SilverFit Rephagia by patients with Huntington's disease in day care**. *Journal of Neurology, Neurosurgery & Psychiatry*, 89, A79-A80.



## 2. General Scientific Literature Review Virtual Therapy

### Virtual Therapy & General Health

1. Taylor, L., Kerse, N., Klenk, J., Borotkanics, R., & Maddison, R. (2018). **Exergames to improve mobility of long-term care residents: a cluster randomized controlled trial.** *Games for Health Journal*, 7(1), 37-42.
2. Loos, E., & Zonneveld, A. (2006). **Silver gaming: Serious fun for seniors?** In *International Conference on Human Aspects of IT for the Aged Population* (pp. 330-341). Springer International Publishing.
3. DeSmet, A., Van Ryckeghem, D., Compernelle, S., Baranowski, T., Thompson, D., Crombez, G., . . . De Boerdeaudhuij, I. (2014). **A meta-analysis of serious digital games for healthy lifestyle promotion.** *Preventive Medicine*, 69, 95-107.
4. Chao, Y.Y., Scherer, Y.K., & Montgomery, C.A. (2014). **Effects of using Nintendo Wii™ exergames in older adults: a review of the literature.** *Journal of Aging and Health*, 27(3), 379-402.
5. Sween, J., Wallington, S.F., Sheppard, V., Taylor, T., Llanos, A.A., & Adams-Campbell, L.L. (2014). **The role of exergaming in improving physical activity: a review.** *Journal of Physical Activity & Health*, 11(4), 864-70.
6. Molina, K.I., Ricci, N.A., De Moraes, S.A., & Perracini, M.R. (2014). **Virtual reality using games for improving physical functioning in older adults: a systematic review.** *Journal of Neuroengineering and rehabilitation*, 11, 156.
7. Loria, K. (2014). **Game on: Physical therapists are turning to gamifications for help in treating their patients.** In *PT in Motion* (pp. 16-21).
8. Heuvelink, A., Groot, J., & Hofstede-Kleyweg, C. (2014). **Let's play: ouderen stimuleren tot bewegen met applied games** [Let's play: Stimulating elderly to exercise with applied games]. TNO.
9. Shema, S.R., Brozgol, M., Dorfman, M., Maidan, I., Sharaby-Yeshayahu, L., Malik-Kozuch, H., ... Mirelman, A. (2014). **Clinical experience using a 5-week treadmill training program with virtual reality to enhance gait in an ambulatory physical therapy service.** *Physical Therapy*, 94(9), 1319-1326.
10. Larsen, L.H., Schou, L., Lund, H.H., & Langberg, H. (2013). **The physical effect of exergames in healthy elderly - a systematic review.** *Games for Health Journal*, 2(4), 205-212.
11. Wittelsberger, R., Krug, S., Tittlbach, S., & Bös, K. (2013). **Auswirkungen von Nintendo-Wii Bowling auf Altenheimbewohner** [Impact of Nintendo-Wii Bowling on Care Home residents]. *Zeitschrift für Gerontologie und Geriatrie*, 5(46), 425-340.
12. Hall, A.K., Chavarria, E., Maneeratana, V., Chaney, B.H., & Bernhardt, J. (2012). **Health benefits of digital videogames for older adults: a systematic review of the literature.** *Games for Health Journal*, 1(6), 402-410.
13. Staiano, A., & Calvert, S. (2011). **The promise of exergames as tools to measure physical health.** *Entertainment Computing*, 2(1), 17-21.

14. Portela, F.R., Correia, R.J., Fonseca, J.A., & Andrade, J.M. **Wiithery on seniors—Effects on physical and mental domains.** In *2011 IEEE 1st International Conference on Serious Games and Applications for Health (SeGAH)* (pp. 1-5). Piscataway, New Jersey, USA: IEEE.
15. Studenski, S., Perera, S., Hile, E., Keller, V., Spadola-Bogard, J., & Garcia, J. (2010). **Interactive video dance games for healthy older adults.** *The Journal of Nutrition, Health & Aging*, *14*(10), 850-852.
16. Adamovich, S.V., Fluet, G.G., Tunik, E., & Merians, A.S. (2009). **Sensorimotor training in Virtual Reality: a review.** *Neurorehabilitation*, *25*(1), 29-44.
17. Warburton, D.E.R., Sarkany, D., Johnson, M., Rhodes, R.E., Whitford, W., Esch, B.T.A., . . . Bredin, S.S.D. (2009). **Metabolic Requirements of Interactive Video Game Cycling.** *Medicine & Science in Sports & Exercise*, *41*(4), 920-926.
18. Warburton, D.E.R., Bredin, S.S.D., Horita, L.T.L., Zbogor, D., Scott, J.M., Esch, B.T.A., & Rhodes, R.E. (2007). **The health benefits of interactive video game exercise.** *Applied Physiology Nutrition, and Metabolism*, *32*, 655-663.
19. Liao, Y.Y., Chen, I.H., & Wang, R.Y. (2019). **Effects of Kinect-based exergaming on frailty status and physical performance in prefrail and frail elderly: A randomized controlled trial.** *Scientific Reports*, *9*(9353).

### Virtual Therapy & Rehabilitation

1. Skjaeret, N., Nawaz, A., Morat, T., Schoene, D., Laegdheim Helbostad, J., & Vereijken, B. (2016). **Exercise and rehabilitation delivered through exergames in older adults: an integrative review of technologies, safety and efficacy.** *International Journal of Medical Informatics*, *85*(1), 1-16.
2. Ortiz-Catalan, M., Nijenhuis, S., Ambrosch, K., Bovend'Eerd, T., Koenig, S., & Lange, B. (2015). **Virtual Reality.** In J.L. Pons, & D. Torricelli (Eds.), *Emerging Therapies in Neurorehabilitation, Biosystems & Biorobotics* (pp. 249-265). Berlin, Germany: Springer.
3. Smith, S.T., & Schoene, D. (2012). **The use of exercise-based videogames for training and rehabilitation of physical function in older adults: current practice and guidelines for future research.** *Aging Health*, *8*(3), 2433.
4. Tanaka, K., Parker, J., Baradoy, G., Sheehan, D., Holash, J.R., & Katz, L. (2012). **A comparison of exergaming interfaces for use in rehabilitation programs and research.** *The journal of the Canadian Game Studies Association*, *6*(9), 69-81.
5. Holden, M.K. (2005). **Virtual environments for motor rehabilitation: review.** *Cyberpsychology & Behavior: The Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society*, *8*(3), 187-219.
6. De Vette, F. (2019). **Designing game-based eHealth applications. Strategies for sustainable engagement of older adults** (Doctoral dissertation). University of Twente, Enschede, Netherlands.

### Virtual Therapy & Stroke - General

1. Laver, K.E., Lange, B., George, S., Deutsch, J.E., Saposnik, G., & Crotty, M. (2017). **Virtual reality for stroke rehabilitation.** *Cochrane Database Systematic Reviews*, *11*, CD008349.

2. Givon, N., Zeilig, G., Weingarden, H., & Rand, D. (2015). **Video-games used in a group setting is feasible and effective to improve indicators of physical activity in individuals with chronic stroke: a randomized controlled trial.** *Clinical Rehabilitation*, 30(4), 383-392.
3. Russel, K. (2015, November 23). **Helping hand. Robots, video games, and a radical new approach to treating stroke patients.** Retrieved from <https://www.newyorker.com/magazine/2015/11/23/helping-hand-annals-of-medicine-karen-russell>
4. Webster, D., & Celik, O. (2014). **Systematic review of Kinect applications in elderly care and stroke rehabilitation.** *Journal of Neuroengineering and Rehabilitation*, 11, 108.
5. Celinder, D., & Peoples, H. (2012). **Stroke patients' experiences with Wii Sports (®) during inpatient rehabilitation.** *Scandinavian Journal of Occupational Therapy*, 19(5), 457-463.
6. Saposnik, G., & Levin, M. (2011). **Virtual reality in stroke rehabilitation: a meta-analysis and implications for clinicians.** *Stroke*, 42(5), 1380-1386.
7. Lange, B.S., Requejo, P., Flynn, S.M., Rizzo, A.A., Valero-Cuevas, F.J., Baker, L., & Winstein, C. (2010). **The Potential of Virtual Reality and Gaming to Assist Successful Aging with Disability.** *Physical Medicine and Rehabilitation Clinics of North America*, 21(2), 339-356.
8. Broeren, J., Claesson, L., Goude, D., Rydmark, M., & Sunnerhagen, K.S. (2008). **Virtual rehabilitation in an activity centre for community-dwelling persons with stroke. The possibilities of 3-dimensional computer games.** *Cerebrovascular Diseases*, 26(3), 289-296.
9. Broeren, J., Bjorkdahl, A., Claesson, L., Goude, D., Lundgren-Nilsson, A., Samuelsson, H., . . . Rydmark, M. (2008). **Virtual rehabilitation after stroke.** *Studies in Health Technology and Informatics*, 136, 77-82.
10. Goude, D., Björk, S., & Rydmark, M. (2007). **Game design in virtual reality systems for stroke rehabilitation.** *Studies in Health Technology and Informatics*, 125, 146-148.
11. Henderson, A., Korner-Bitensky, N., & Levin, M. (2007). **Virtual reality in stroke rehabilitation: a systematic review of its effectiveness for upper limb motor recovery.** *Top Stroke Rehabilitation*, 14(2), 52-61.
12. Merians, A.S., Poizner, H., Boian, R., Burdea, G., & Adamovich, S. (2006). **Sensorimotor training in a virtual reality environment: does it improve functional recovery poststroke?** *Neurorehabilitation and Neural Repair*, 20(2), 252-267.
13. Edmans, J.A., Gladman, J.R., Cobb, S., Sunderland, A., Pridmore, T., Hilton, D., & Walker, MF. (2006). **Validity of a virtual environment for stroke rehabilitation.** *Stroke*, 37(11), 2770-2775.
14. Johnson, M.J. (2006). **Recent trends in robot-assisted therapy environments to improve real-life functional performance after stroke.** *Journal of Neuro-engineering and Rehabilitation*, 18, 3-29.

### Virtual Therapy & Stroke - Upper Extremity

1. Levin, M.F., Weis, P.L., & Keshner, E.A. (2015). **Emergence of virtual reality as a tool for upper limb rehabilitation: incorporation of motor control and motor learning principles.** *Physical Therapy*, 95, 415-425.
2. Ballester, B.R., Nirme, J., Duarte, E., Cuxart, A., Rodriquez, S., Verschure, P., & Duff, A. (2015). **The visual amplification of goal-oriented movements counteracts acquired non-use in hemiparetic stroke patients.** *Journal of NeuroEngineering and Rehabilitation*, 12, 50.

3. Crosbie, J.H., Lennon, S., McGoldrick, M.C., McNeill, M.D., & McDonough, S.M. (2012). **Virtual reality in the rehabilitation of the arm after hemiplegic stroke: a randomized controlled pilot study.** *Clinical Rehabilitation*, 26(9), 798-806.
4. Fluet, M.C., Lamercy, O., & Gassert, R. (2011). **Upper limb assessment using a Virtual Peg Insertion Test.** In *2011 IEEE International Conference on Rehabilitation Robotics* (pp. 1-6). Piscataway, New Jersey, USA: IEEE.
5. da Silva Cameirão, M., Bermúdez, I.B.S., Duarte, E., & Verschure, P.F. (2011). **Virtual reality based rehabilitation speeds up functional recovery of the upper extremities after stroke: a randomized controlled pilot study in the acute phase of stroke using the Rehabilitation Gaming System.** *Restorative Neurology and Neuroscience*, 29(5), 287-298.
6. Deutsch, J.E., Merians, A.S., Adamovich, S., Poizner, H., & Burdea, G.C. (2004). **Development and application of virtual reality technology to improve hand use and gait of individuals post-stroke.** *Restorative Neurology and Neuroscience*, 22(3-5), 371-386.
7. Boian, R., Sharma, A., Han, C., Merians, A., Burdea, G., Adamovich, S., . . . Poizner, H. (2002). **Virtual reality-based post-stroke hand rehabilitation.** *Studies in Health Technology and Informatics*, 85, 64-70.
8. Merians, A.S., Jack, D., Boian, R., Tremaine, M., Burdea, G.C., Adamovich, S.V., . . . Poizner, H. (2002). **Virtual Reality – Augmented Rehabilitation for patients following stroke.** *Physical Therapy*, 82(9), 898-915.

#### Virtual Therapy & Stroke - Lower Extremity

1. De Rooij, I.J.M., Van de Port, I.G.L., & Meijer, J.G. (2016). **Effect of virtual reality training on balance and gait ability in patients with stroke: systematic review and meta-analysis.** *Physical Therapy*, 96(12), 1905-1918.
2. Corbetta, D., Imeri, F., & Gatti, R. (2015). **Rehabilitation that incorporates virtual reality is more effective than standard rehabilitation for improving walking speed, balance and mobility after stroke: a systematic review.** *Journal of Physiotherapy*, 61(3), 117-124.
3. Darekar, A., McFadyen, B.J., Lamonagne, A., & Fung, J. (2015). **Efficacy of virtual reality-based intervention on balance and mobility disorders post-stroke: a scoping review.** *Journal of NeuroEngineering and Rehabilitation*, 12, 46.
4. Lee I.W., Kim Y.N., & Lee D.K. (2015). **Effect of a virtual reality exercise program accompanied by cognitive tasks on the balance and gait of stroke patients.** *Journal of physical therapy science*, 27(7), 2175-2177.
5. Lloréns, R., Gil-Gómez, J.A., Alcañiz, M., Colomer, C., & Noé, E. (2015). **Improvement in balance using a virtual reality-based stepping exercise: a randomized controlled trial involving individuals with chronic stroke.** *Clinical rehabilitation*, 29(3), 261-268.
6. Hyun Geun, H., Koa, Y.J., Lee, H.J., & Lee, W.H. (2014). **Effects of 3-dimensional balance trainer in combination with a video-game system on balance and gait ability in subacute stroke patients.** *Korean Academy of Physical Therapy Rehabilitation Science*, 3(1), 7-12.
7. Cho, K.H., & Lee, W.H. (2014). **Effect of treadmill training based real-world video recording on balance and gait in chronic stroke patients: a randomized controlled trial.** *Gait & Posture*, 39(1), 523-528.
8. Barcala, L., Grecco, L.A.C., Colella, F., Lucareli, P.R.G., Salgado, A.S.I., & Oliveira, C.S. (2013). **Visual Biofeedback Balance Training Using Wii Fit after Stroke: A Randomized Controlled Trial.** *Journal of physical therapy science*, 25(8), 1027-1032.

9. Yang, S., Hwang, W.H., Tsai, Y.C., LIU, F.K., Hsieh, L.F., & Chern, J.S. (2011). **Improving balance skills in patients who had stroke through virtual reality treadmill training.** *American Journal of Physical Medicine & Rehabilitation*, 90(12), 969-78.
10. Deutsch, J.E. (2011). **Using virtual reality to improve walking post-stroke: translation to individuals with diabetes.** *Journal of Diabetes Science and Technology*, 5(2), 309-314.
11. Kim, J.H., Jang, S.H., Kim, C.S., Jung, J.H., & You, J.H. (2009). **Use of Virtual Reality to Enhance Balance and Ambulation in Chronic Stroke: A Double-Blind, Randomized Controlled Study.** *American Journal of Physical Medicine & Rehabilitation*, 88(9), 693-701.
12. Mirelman, A., Bonato, P., & Deutsch, J.E. (2009). **Effects of training with a robot-virtual reality system compared with a robot alone on the gait of individuals after stroke.** *Stroke*, 40(1), 169-174.
13. Deutsch, J.E., & Mirelman, A. (2007). **Virtual reality-based approaches to enable walking for people post stroke.** *Topics in Stroke Rehabilitation*, 14(6), 45-53.
14. Fung, J., Richards, C.L., Malouin, F., McFadyen, B.J., & Lamontagne, A. (2006). **A treadmill and motion coupled virtual reality system for gait training post-stroke.** *Cyberpsychology & Behavior: The Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society*, 9(2), 157-162.
15. Jaffe, D.L., Brown, D.A., Pierson-Carey, C.D., Buckley, E.L., & Lew, H.L. (2004). **Stepping over obstacles to improve walking in individuals with post stroke hemiplegia.** *Journal of Rehabilitation Research and Development*, 41(3A), 283-292.

#### Virtual Therapy & Orthopedic Rehabilitation

1. Chughtai, M., Kelly, J.J., Newman, J.M., Sultan, A.A., Khlopas, A., Sodhi, N., . . . Mont, M.A. (2018). **The Role of Virtual Rehabilitation in Total and Unicompartmental Knee Arthroplasty.** *The Journal of Knee Surgery*.

#### Virtual Therapy & Parkinson's Disease

1. Ferraz, D.D., Trippo, K.V., Duarte, G.P., Neto, M.G., Bernardes Santos, K.O., & Filho, J.O. (2018). **The effects of functional training, bicycle exercise and exergaming on walking capacity of elderly patients with Parkinson Disease: a pilot randomized controlled single-blinded trial.** *Archives of Physical Medicine and Rehabilitation*, 99(5), 826-833.
2. Allen, N.E., Song, J., Paul, S.S., Smith, S., O'Duffy, J., Schmidt, M., . . . Canning, C.G. (2017). **An interactive videogame for arm and hand exercise in people with Parkinson's disease: a randomized controlled trial.** *Parkinsonism & Related Disorders*, 41, 66-72.
3. Meng-Che, S., Ray-Yau, W., Shih-Jung, C., & Yea-Ru, Y. (2016). **Effects of a balance-based exergaming intervention using the Kinect sensor on posture stability in individuals with Parkinson's disease: a single-blinded randomized controlled trial.** *Journal of NeuroEngineering and Rehabilitation*, 13(1), 78.
4. Harris, D.M., Rantalainen, T., Muthalib, M., Johnson, L., & Teo, W.P. (2015). **Exergaming as a viable therapeutic tool to improve static and dynamic balance among older adults and people with idiopathic Parkinson's disease: a systematic review and meta-analysis.** *Frontiers in Aging Neuroscience*, 7, 167.
5. Yang, W.C., Wang, H.K., Wu, R.M., Lo, C.S., Lin, K.H., & Lin, K.H. (2015). **Home-based virtual reality balance training and conventional balance training in Parkinson's disease: A randomized controlled trial.** *Journal of the Formosan Medical Association*, 115(9), 734-743.



6. Vieira, G.P., De Araujo, D.F.G.H., Leite, M.A.A., Orsini, M., & Correa, C.L. (2014). **Virtual reality in physical rehabilitation of patients with Parkinson's disease.** *Journal of Human Growth and Development*, 24(1), 31–41.
7. Barry, G., Galna, B., & Rochester, L. (2014). **The role of exergaming in Parkinson's disease rehabilitation: a systematic review of the evidence.** *Journal of neuroengineering and rehabilitation*, 11(1), 33.
8. Pompeu, J.E., Mendes, F.A.D.S., Silva, K.G., Lobo, A.M., Oliveira, T.D.P., Zomignani, A.P., & Piemonte, M.E.P. (2012). **Effect of Nintendo WiiTM-based motor and cognitive training on activities of daily living in patients with Parkinson's disease: A randomised clinical trial.** *Physiotherapy*, 98(3), 196-204.
9. Mirelman, A., Maidan, I., Herman, T., Deutsch, J.E., Giladi, N., & Hausdorff, J.M. (2011). **Virtual reality for gait training: can it induce motor learning to enhance complex walking and reduce fall risk in patients with Parkinson's disease?** *Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 66(2), 234-240.
10. Wang, C.Y., Hwang, W.J., Fang, J.J., Sheu, C.F., Leong, J.F., & Ma, H.I. (2011). **Comparison of virtual reality versus physical reality on movement characteristics of persons with Parkinson's disease: effects of moving targets.** *Archives of Physical Medicine and Rehabilitation*, 92(8), 1238-45.
11. Ma, H.I., Hwang, W.J., Fang, J.J., Kuo, J.K., Wang, C.Y., Leong, I.F., & Wang, T.Y. (2011). **Effects of virtual reality training on functional reaching movements in people with Parkinson's disease: a randomized controlled pilot trial.** *Clinical Rehabilitation*, 25(10), 892-902.
12. Kaminsky, T.A., Dudgeon, B.J., Billingsley, F.F., Mitchell, P.H., & Weghorst, S.J. (2007). **Virtual cues and functional mobility of people with Parkinson's disease: A single-subject pilot study.** *Journal of Rehabilitation Research and Development*, 44(3), 437-48.
13. Van der Kolk, N.M., de Vries, N.M., Kessels, R.P.C., Joosten, H., Zwinderman, A.H., Post, B., & Bloem, B.R. (2019). **Effectiveness of home-based and remotely supervised aerobic exercise in Parkinson's disease: a double-blind, randomised controlled trial.** *The Lancet. Neurology*, 18(11), 998-1008.

### Virtual Reality & Traumatic Brain Injury (TBI)

1. Mumford, N., Duckworth, J., Thomas, P.R., Shum, D., Williams, G., & Wilson, P.H. (2012). **Upper-limb virtual rehabilitation for traumatic brain injury: a preliminary within-group evaluation of the elements system.** *Brain Injury*, 26(2), 166-176.
2. Levac, D., Miller, P., & Missiuna, C. (2012). **Usual and Virtual Reality Video Game-based Physiotherapy for Children and Youth with Acquired Brain Injuries.** *Physical & Occupational Therapy In Pediatrics*, 32(2), 180-195.
3. Larson, E.B., Ramaiya, M., Zollman, F.S., Pacini, S., Hsu, N., Patton, J.L., & Dvorkin, A.Y. (2011). **Tolerance of a virtual reality intervention for attention remediation in persons with severe TBI.** *Brain Injury*, 25(3), 274-281.
4. Mumford, N., Duckworth, J., Thomas, P.R., Shum, D., Williams, G., & Wilson, P.H. (2010). **Upper limb virtual rehabilitation for traumatic brain injury: initial evaluation of the elements system.** *Brain Injury*, 24(5), 780-791.
5. Mumford, N., & Wilson, P.H. (2009). **Virtual reality in acquired brain injury upper limb rehabilitation: evidence-based evaluation of clinical research.** *Brain Injury*, 23(3), 179-191.



6. Rose, F.D., Brooks, B.M., & Rizzo, A.A. (2005). **Virtual Reality in Brain Damage Rehabilitation: Review.** *Cyber Psychology and Behavior*, 8(3), 241-262.
7. Thornton, M., Marshall, S., McComas, J., Finestone, H., McCormick, A., & Sveistrup, H. (2005). **Benefits of activity and virtual reality based balance exercise programmes for adults with traumatic brain injury: Perceptions of participants and their caregivers.** *Brain Injury*, 19(12), 989-1000.

### Virtual Therapy & Multiple Sclerosis (MS)

1. Robinson, J., Dixon, J., Macsween, A., Van Schaik, P., & Martin, D. (2015). **The effects of exergaming on balance, gait, technology acceptance and flow experience in people with multiple sclerosis: a randomized controlled trial.** *BMC Sports Science, Medicine and Rehabilitation*, 7, 8.
2. Kramer, A., Dettmers, C., & Gruber, M. (2014). **Exergaming with additional postural demands improves balance and gait in patients with multiple sclerosis as much as conventional balance training and leads to high adherence to home-based balance training.** *Archives of physical medicine and rehabilitation*, 95(10), 1803-1809.
3. Fulk, G.D. (2005). **Locomotor training and virtual reality-based balance training for an individual with multiple sclerosis: a case report.** *Journal of Neurologic Physical Therapy*, 29(1), 34-42.
4. Casuso-Holgado, M.J., Martín-Valero, R., Carazo, A.F., Medrano-Sánchez, E.M., Cortés-Vega, M.D., & Montero-Bancalero F.J. (2018). **Effectiveness of virtual reality training for balance and gait rehabilitation in people with multiple sclerosis: a systematic review and meta-analysis.** *Clinical Rehabilitation*. Advanced online publication.

### Virtual Therapy & Cardiac Rehabilitation

1. Vieira, Á., Melo, C., Machado, J., & Gabriel, J. (2018). **Virtual reality exercise on a home-based phase III cardiac rehabilitation program, effect on executive function, quality of life and depression, anxiety and stress: a randomized controlled trial.** *Disability and Rehabilitation: Assistive Technology*, 13(2), 112-123.
2. Vieira, Á., Gabriel, J., Melo, C., & Machado, J. (2016). **Kinect system in home-based cardiovascular rehabilitation.** *Journal of Engineering in Medicine*, 231(1), 40-47.
3. Klompstra, L., Jaarsma, T., & Strömberg, A. (2014). **Exergaming to increase the exercise capacity and daily physical activity in heart failure patients: a pilot study.** *BMC Geriatrics*, 14, 119.
4. Verheijden Klompstra, L., Jaarsma, T., & Strömberg, A. (2014). **Exergaming in older adults: a scoping review and implementation potential for patients with heart failure.** *European Journal of Cardiovascular Nursing*, 13(5), 388-398.
5. Lu TH, Lin HC, Lee YH, Chen RR, Chen HL, Chang, SY, . . . Wu, T.H. (2012). **A motion-sensing enabled personalized exercise system for cardiac rehabilitation.** In *2012 IEEE 14th International Conference on e-Health Networking, Applications and Services (Healthcom)* (pp. 167-171). Piscataway, New Jersey, USA: IEEE.
6. Chuang, T.Y., Sung, W.H., Chang, H.A., & Wang, R.Y. (2006). **Effect of a virtual reality-enhanced exercise protocol after coronary artery bypass grafting.** *Physical Therapy*, 86(10), 1369-1377.

### Virtual Therapy & Pain Control

1. J-Lyn Khoo, Y. (2014). **Exergaming acceptance and experience in healthy older people and older people with musculoskeletal pain** (Unpublished PhD Thesis). Teesside University.
2. Teeley, A.M., Soltani, M., Wiechman, S.A., Jensen, M.P., Sharar, S.R., & Patterson, D.R. (2012). **Virtual reality hypnosis pain control in the treatment of multiple fractures: a case series**. *American Journal of Clinical Hypnosis*, 54(3), 184-194.
3. Kipping, B., Rodger, S., Miller, K., & Kimble, R.M. (2012). **Virtual reality for acute pain reduction in adolescents undergoing burn wound care: A prospective randomized controlled trial**. *Burns*, 38(5), 650-657.
4. Li, A., Montano, Z., Chen, V.J., & Gold, J.I. (2011). **Virtual reality and pain management: current trends and future directions**. *Pain Management*, 1(2), 147-157.
5. Gutierrez-Maldonado, J., Gutierrez-Martinez, O., & Cabas-Hoyos, K. (2011). **Interactive and passive virtual reality distraction: effects on presence and pain intensity**. *Studies in Health Technology and Informatics*, 167, 69-73.
6. Malloy, K.M., & Milling, L.S. (2010). **The effectiveness of virtual reality distraction for pain reduction: a systematic review**. *Clinical Psychology Review*, 30(8), 1011-1018
7. Morris, L.D., Louw, Q.A., & Grimmer-Somers, K. (2009). **The effectiveness of virtual reality on reducing pain and anxiety in burn injury patients: a systematic review**. *Clinical Journal of Pain*, 25(9), 815-826.
8. Hoffman, H.G., Patterson, D.R., & Carrougher, G.J.R.N. (2000). **Use of virtual reality for adjunctive treatment of adult burn pain during physical therapy: a controlled study**. *Clinical Journal of Pain*, 16(3), 244-250.

### Virtual Therapy & Depression

1. Li, J., Theng, Y.L., & Foo, S. (2016). **Effect of Exergames on Depression: A Systematic Review and Meta-Analysis**. *Cyberpsychology, Behavior, and Social Networking*, 19(1), 34-42.
2. Rosenberg, D., Depp, C.A., Vahia, I.V., Reichstadt, J., Palmer, B.W., Kerr, J., & Jeste, D.V. (2010). **Exergames for Subsyndromal Depression in Older Adults: A Pilot Study of a Novel Intervention**. *The American Journal of Geriatric Psychiatry*, 18(3), 221.

### Virtual Therapy & Balance

1. Tahmosybayat, R., Baker, K., Godfrey, A., Caplan, N., & Barry, G. (2018). **Movements of older adults during exergaming interventions that are associated with the Systems Framework for Postural Control: A systematic review**. *Maturitas*, 111, 90-99.
2. Neri, S.G., Cardoso, J.R., Cruz, L., Lima, R.M., De Oliveira, R.J., Iversen, M.D., & Carregaro, R.L. (2017). **Do virtual reality games improve mobility skills and balance measurements in community-dwelling older adults? Systematic review and meta-analysis**. *Clinical Rehabilitation*, 31(10), 1292-1304.
3. Alhasan, H., Hood, V., & Mainwaring, F. (2017). **The effect of visual biofeedback on balance in elderly population: a systematic review**. *Clinical Interventions in aging*, 12, 487-497.
4. Mirelman, A., Rochester, L., Maidan, I., Del Din, S., Alcock, L., Nieuwhof, F., . . . Hausdorff, J.M. (2016). **Addition of a non-immersive virtual reality component to treadmill training to reduce fall risk in older adults (V-TIME): a randomized controlled trial**. *Lancet*, 388(10050), 1170-1182.

5. Nawaz, A., Skjaret, N., Helbostad, J.L., Vereijken, B., Boulton, E., & Svanaes, D. (2016). **Usability and acceptability of balance exergames in older adults: A scoping review.** *Health Informatics Journal*, 22(4), 911-931.
6. Park, E.C., Kim, S.G., & Lee, C.W. (2015). **The effects of virtual reality game exercise on balance and gait of the elderly.** *Journal of Physical Therapy Science*, 27(4), 1157–1159.
7. Karahan, A.Y., Tok, F., Taskin, H., Küçüksaraç, S., Basaran, A., & Yildirim, P. (2015). **Effects of exergames on balance, functional mobility, and quality of life of geriatrics versus home exercise programme: randomized controlled study.** *Central European journal of public health*, 23, S14-S18.
8. Proffitt, R., Lange, B., Chen, C., & Winstein, C. (2015). **A comparison of older adults' subjective experiences with virtual and real environments during dynamic balance activities.** *Journal of Aging and Physical Activity*, 23(1), 24–33.
9. Whyatt, C., Merriman, N.A., Young, W.R., Newell, F.N., & Craig, C. (2015). **A Wii bit of fun: a novel platform to deliver effective balance training to older adults.** *Games for Health Journal*, 4(6), 423–433.
10. Wüest, S., Borghese, N.A., Pirovano, M., Mainetti, R., Van de Langenberg, R., & De Bruin, E.D. (2014). **Usability and effects of an exergame-based balance training program.** *Games for Health Journal*, 3(2), 106-114.
11. Duque, G., Boersma, D., Loza-Diaz, G., Hassan, S., Suarez, H., Geisinger, D., & Demontiero, O. (2013). **Effects of balance training using a virtual-reality system in older fallers.** *Clinical Interventions in Aging*, 8, 257–263.
12. Bieryla, K.A., & Dold, N.M. (2013). **Feasibility of Wii Fit training to improve clinical measures of balance in older adults.** *Clinical Interventions in Ageing*, 8, 775–781.
13. Van Diest, M., Lamoth, C.J., Stegenga, J., Verkerke, G.J., & Postema, K. (2013). **Exergaming for balance training of elderly: state of the art and future developments.** *Journal of Neuroengineering and Rehabilitation*, 10(1), 101.
14. Singh, D.K., Rajaratnam, B.S., Palaniswamy, V., Raman, V.P., Bong, P.S., & Pearson, H. (2013). **Effects of balance-focused interactive games compared to therapeutic balance classes for older women.** *Climacteric*, 16(1), 141–146.
15. Kennedy, M.W., Schmiedeler, J.P., Crowell, C.R., Villano, M., Striegel, A.D., & Kuitse, J. (2011). **Enhanced feedback in balance rehabilitation using the Nintendo Wii Balance Board.** In *2011 IEEE 13th International Conference on e-Health Networking, Applications and Services* (pp. 162-168). Piscataway, New Jersey, USA: IEEE.
16. Padala, K.P., Padala, P.R., Malloy, T.R., Geske, J.A., Dubbert, P.M., Dennis, R.A., . . . Sullivan, D.H. (2012). **Wii-Fit for Improving Gait and Balance in an Assisted Living Facility: A Pilot Study.** *Journal of Aging Research*, 597573.
17. Lamoth, C.J.C., Alingh, R., & Caljouw, S.R. (2012). **Exergaming for elderly: effects of different types of game feedback on performance of a balance task.** *Annual Review of Cybertherapy and Telemedicine*, 181, 103-107.
18. Meldrum D, Herdman S, Moloney R, Murray D, Duffy D, Malone K, . . . McConn-Walsh R. (2012). **Effectiveness of conventional versus virtual reality based vestibular rehabilitation in the treatment of dizziness, gait and balance impairment in adults with unilateral peripheral vestibular loss: a randomised controlled trial.** *BMC Ear Nose Throat Disorders*, 12, 3.
19. Jorgensen, M.G., Laessoe, U., Hendriksen, C., Nielsen, O.B.F., & Aagaard, P. (2012). **Efficacy of Nintendo Wii training on mechanical leg muscle function and postural balance in**

- community-dwelling older adults: a randomized controlled trial.** *The Journals of Gerontology. Series A, Biological Sciences and Medical Sciences*, 68(7), 845–852.
20. Singh, D.K.A., Rajaratnam, B.S., Palaniswamy, V., Pearson, H., Raman, V.P., & Bong, P.S. (2012). **Participating in a virtual reality balance exercise program can reduce risk and fear of falls.** *Maturitas*, 73(3), 239-243.
  21. Rendon, A.A., Lohman, E.B., Thorpe, D., Johnson, E.G., Medina, E., & Bradley, B. (2012). **The effect of virtual reality gaming on dynamic balance in older adults.** *Age Ageing*, 41(4), 549-552.
  22. Pluchino, A., Lee, S.Y., Asfour, S., Roos, B.A., & Signorile, J.F. (2012). **Pilot study comparing changes in postural control after training using a video game balance board program and 2 standard activity-based balance intervention programs.** *Archives of Physical Medicine and Rehabilitation*, 93(7), 1138-1146.
  23. Lamoth, C.J.C., Caljouw, S.R., & Postema, K. (2011). **Active video gaming to improve balance in elderly.** *Studies in health technology and informatics*, 167, 159-164.
  24. Kosse, N.M., Caljouw, S.R., Vuijk, P.J., & Lamoth, C.J. (2011). **Exergaming: interactive balance training in healthy community-dwelling older adults.** *Journal of Cyber Therapy and Rehabilitation*, 4(3), 399-407.
  25. Agmon, M., Perry, C.K., Phelan, E., Demiris, G., & Nguyen, H.Q. (2011). **A pilot study of Wii Fit exergames to improve balance in older adults.** *Journal of Geriatric Physical Therapy*, 34(4), 161-167.
  26. Lange, B., Chang, C.Y., Suma, E., Newman, B., Rizzo, A.S., & Bolas, M. (2011). **Development and evaluation of low cost game-based balance rehabilitation tool using the Microsoft Kinect sensor.** In *2011 Annual International Conference of the IEEE Engineering in Medicine and Biology Society* (pp. 1831–1834). Piscataway, New Jersey, USA: IEEE.
  27. Lange, B., Flynn, S., Chang, C.Y., Ahmed, A., Geng, Y., Utsav, K., . . . Rizzo, A. (2010). **Development of an interactive rehabilitation game using the Nintendo (WiiFit) balance board for people with neurological injury.** *Topics Stroke Rehabilitation*, 15(5), 345–352.
  28. Kliem, A., & Wiemeyer, A. (2010). **Comparison of a traditional and a video game-based balance training program.** *International Journal of Computer Science in Sport*, 9(2), 80-91.
  29. Nitz, J., Kuys, S., Isles, R., & Fu, S. (2010). **Is the Wii Fit™ a new-generation tool for improving balance, health and well-being? A pilot study.** *Climacteric: The Journal of the International Menopause Society*, 13(5), 487-491.
  30. Fitzgerald, D., Trakarnratanakul, N., Smyth, B., & Caulfield, B. (2010). **Effects of a wobble board-based therapeutic exergaming system for balance training on dynamic postural stability and intrinsic motivation levels.** *Journal of Orthopaedic & Sports Physical Therapy*, 40(1), 11-19.
  31. Heiden, E., & Lajoie, Y. (2010). **Games-based biofeedback training and the attentional demands of balance in older adults.** *Aging-Clinical and Experimental Research*, 22(5), 367-373.
  32. Stanmore, E.K., Mavroei, A., De Jong, L.D., Skelton, D.A., Sutton, C.J., Benedetto, V., ... Todd, C. (2019). **The effectiveness and cost-effectiveness of strength and balance Exergames to reduce falls risk for people aged 55 years and older in UK assisted living facilities: a multi-centre, cluster randomised controlled trial.** *BMC Medicine*, 17(49).

### Virtual Therapy & Adherence/Motivation

1. Oesch, P., Kool, J., Fernandez-Luque, L., Brox, E., Evertsen, G., Civit, A., . . . Bachmann, S. (2017). **Exergames versus self-regulated exercises with instruction leaflets to improve adherence during geriatric rehabilitation: a randomized controlled trial.** *BMC Geriatrics*, *17*, 77.
2. Meekes, W., & Stanmore, E.K. (2017). **Motivational determinants of exergame participation for older people in assisted living facilities: mixed-methods study.** *Journal of Medical Internet Research*, *19*(7), e238.
3. Hasselmann, V., Oesch, P., Fernandez-Luque, L., & Bachmann, S. (2015). **Are exergames promoting mobility an attractive alternative to conventional self-regulated exercises for elderly people in a rehabilitation setting? Study protocol of a randomized controlled trial.** *BMC Geriatrics*, *15*, 108.
4. Monedero, J., Lyons, E.J., & O’Gorman, D.J. (2015). **Interactive Video Game Cycling Leads to Higher Energy Expenditure and Is More Enjoyable than Conventional Exercise in Adults.** *PLoS ONE*, *10*(3), e0118470.
5. Wu, Z., Li, J., & Theng, Y.L. (2015). **Examining the influencing factors of exercise intention among older adults: A controlled study between exergame and traditional exercise.** *Cyberpsychology, Behavior, and Social Networking*, *17*(8), 519-527.
6. Lohse, K., Shirzad, N., Verster, A., Hodges, N., & Van der Loos, M. (2013). **Video games games and rehabilitation: Using design principles to enhance engagement in physical therapy.** *Journal of Neurologic Physical Therapy*, *37*, 166-175.
7. Peng, W., Lin, J.H., Pfeiffer, K.A., & Winn, B. (2012). **Need satisfaction supportive game features as motivational determinants: An experimental study of a self-determination theory guided exergame.** *Media Psychology*, *15*(2), 175-196.
8. Belchior, P., Marsiske, M., Sisco, S., Yam, A., & Mann, W. (2012). **Older adults’ engagement with a video game training program.** *Activities, Adaptation & Aging*, *36*(4), 269-279.
9. Brox, E., Luque, L.F., Evertsen, G.J., & Hernandez, J.E.G. (2011). **Exergames for elderly: Social exergames to persuade seniors to increase physical activity.** In *2011 5th International Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth) and Workshops*, (pp. 546-549). Piscataway, New Jersey, USA: IEEE.
10. Rhodes, R.E., Warburton, D.E.R., & Bredin, S.S.D. (2009). **Predicting the effect of interactive video bikes on exercise adherence: an efficacy trial.** *Psychology, Health & Medicine*, *14*(6), 631-640.
11. Valenzuela, T., Okubo, Y., Woodbury, A., Lord, S.R., & Delbaere, K. (2018). **Adherence to Technology-Based Exercise Programs in Older Adults: A Systematic Review.** *Journal of Geriatric Physical Therapy*, *41*(1), 49-61.
12. Donia, V. (2018). **The Effect of Formative Feedback on Exercise Motivation in Elderly** (Unpublished Master’s thesis). Vrije Universiteit Amsterdam.

### Virtual Reality & Cognition

1. Barcelos, N., Shah, N., Cohen, K., Hogan, M.J., Mulkerrin, E., Arciero, P.J., & Anderson-Hanley, C. (2015). **Aerobic and cognitive exercise (ACE) pilot study for older adults: executive function improves with cognitive challenge while exergaming.** *Journal of the International Neuropsychological Society*, *21*(10), 768-779.



2. Hughes, T.F., Flatt, J.D., Fu, B., Butters, M.A., Chang, C.C.H., & Ganguli, M. (2014). **Interactive video gaming compared with health education in older adults with mild cognitive impairment: A feasibility study.** *International Journal of Geriatric Psychiatry, 29*(9), 980-998.
3. Toril, P., Reales, J.M., & Ballesteros, S. (2014). **Video Game Training Enhances Cognition of Older Adults: A Meta-Analytic Study.** *Psychology and Aging, 29*(3), 706-716.
4. Lampit, A., Hallock, H., & Valenzuela, M. (2014). **Computerized cognitive training in cognitively healthy older adults: a systematic review and meta-analysis of effect modifiers.** *PLoS Medicine, 11*(11), e1001756.
5. Anderson-Hanley, C., Arciero, P.J., Barcelos, N., Nimon, J., Rocha, T., Thurin, M., & Maloney, M. (2014). **Executive function and self-regulated exergaming adherence among older adults.** *Frontiers in Human Neuroscience, 8*(989), 1-8.
6. Lewis, G.N., & Rosie, J.A. (2012). **Virtual reality games for movement rehabilitation in neurological conditions: how do we meet the needs and expectations of the users?** *Disability and Rehabilitation, 34*(22), 1880-1886.
7. Anderson-Hanley, C., Arciero, P.J., Brickman, A.M., Nimon, J.P., Okuma, N., Westen, S.C., & Zimmerman, E.A. (2012). **Exergaming and older adult cognition: A cluster randomized clinical trial.** *American Journal of Preventive Medicine, 42*(2), 109-119.
8. Anderson-Hanley, C., Arciero, P.J., Westen, S.C., Nimon, J., & Zimmerman, E. (2012). **Neuropsychological Benefits of Stationary Bike Exercise and a Cybercycle Exergame for Older Adults with Diabetes: An Exploratory Analysis.** *Journal of Diabetes Science and Technology, 6*(4), 849-857.
9. Cherniack, E.P. (2011). **Not just fun and games: applications of virtual reality in the identification and rehabilitation of cognitive disorders of the elderly.** *Disability and Rehabilitation: Assistive Technology, 6*(4), 283-289.
10. Russell, W.D., & Newton, M. (2008). **Short-Term Psychological Effects of Interactive Video Game Technology Exercise on Mood and Attention.** *Educational Technology & Society, 11*(2), 294-308.
11. Zhang, L., Abreu, B.C., Masal, B., Scheibel, R.S., Christiansen, C.H., Huddleston, N., & Ottenbacher, K.J. (2001). **Virtual reality in the assessment of selected cognitive function after brain injury.** *American Journal of Physical Medicine & Rehabilitation, 80*(8), 597-604.
12. Grealy, M.A., Johnson, D.A., & Rushton, S.K. (1999). **Improving cognitive function after brain injury: the use of exercise and virtual reality.** *Archives of Physical Medicine and Rehabilitation, 80*(6), 661-667.
13. Rizzo, A.A., Buckwalter, J.G., & Neumann, U. (1997). **Virtual reality and cognitive rehabilitation: a brief review of the future.** *The Journal of Head Trauma Rehabilitation, 12*(6), 1-15.

### Virtual Therapy & Dementia / Alzheimer's Disease

1. Shimizu, N., Umemura, T., Matsunaga, M., & Hirai, T. (2017). **Effects of movement music therapy with a percussion instrument on physical and frontal lobe function in older adults with mild cognitive impairment: a randomized controlled trial.** *Aging and Mental Health, 1*-13.
2. Van Santen, J., Dröes, R.M., Holstege, M., Blanson Henkemans, O., Van Rijn, A., De Vries, R., . . . Meiland F. (2018). **Effects of exergaming in people with dementia: results of a systematic literature review.** *Journal of Alzheimer's Disease, 63*(2), 741-760.



3. Kenigsberg, P.A., Aquino, J.P., Bérard, A., Brémond, F., Charras, K., Dening, T., . . . Manera, V. (2017). **Assistive technologies to address capabilities of people with dementia: from research to practice.** *Dementia*. Advance online publication.
4. Wiloth, S., Werner, C., Lemke, N.C., Bauer, J., & Hauer, K. (2017). **Motor-cognitive effects of a computerized game-based training method in people with dementia: a randomized controlled trial.** *Aging and Mental Health*, 22(9), 1124-1135.
5. Padala, K.P., Padala, P.R., Lensing, S.Y., Dennis, R.A., Bopp, M.M., Roberson, P.K., & Sullivan, D.H. (2017). **Home-Based Exercise Program Improves Balance and Fear of Falling in Community-Dwelling Older Adults with Mild Alzheimer's Disease: A Pilot Study.** *Journal of Alzheimer's Disease*, 59, 565-574.
6. Wiloth, S., Lemke, N., Werner, C., & Hauer, K. (2016). **Validation of a computerized, game-based assessment strategy to measure training effects on motor-cognitive functions in people with dementia.** *JMIR Serious Games*, 4(2), e12.
7. Cutler, C., Hicks, B., & Innes, A. (2016). **Does digital gaming enable healthy aging for community-dwelling people with dementia?** *Games and Culture*, 11(1-2), 104-129.
8. Ben-Sadoun, G., Sacco, G., Manera, V., Bourgeois, J., König, A., Foulon, P., . . . Robert, P. (2016). **Physical and Cognitive Stimulation Using an Exergame in Subjects with Normal Aging, Mild and Moderate Cognitive Impairment.** *Journal of Alzheimer's Disease*, 53, 1299-1314.
9. Steensma, T. (2016). **Het motiveren van mensen met dementie tot Exergaming** [Motivating people with dementia to Exergaming] (Unpublished Bachelor's thesis). VU University Medical Center.
10. Bamidis, P.D., Fissler, P., Papageorgiou, S.G., Zilidou, V., Konstantinidis, E.I., Billis, A.S., . . . Kolassa, I.T. (2015). **Gains in cognition through combined cognitive and physical training: the role of training dosage and severity of neurocognitive disorder.** *Frontiers in Aging Neuroscience*, 7(152), 1-15.
11. Robert, P.H., König, A., Amieva, H., Andrieu, S., Brémond, F., Bullock, R., & Manera, V. (2014). **Recommendations for the use of serious games in people with Alzheimer's disease, related disorders and frailty.** *Frontiers in Aging Neuroscience*, 6, 54.
12. Plancher, G., Tirard, A., Gyselinck, V., Nicolas, S., & Pionilo, P. (2012). **Using virtual reality to characterize episodic memory profiles in amnesic mild cognitive impairment and Alzheimer's disease: Influence of active and passive encoding.** *Neuropsychologia*, 50(5), 592-602.
13. Van Santen, J., Dröes, R.M., Holstege, M., Blanson Henkemans, O., Van Rijn, A., De Vriese, R., . . . Meiland, F. (2018). **Effects of Exergaming in People with Dementia: Results of a Systematic Literature Review.** *Journal of Alzheimer's Disease*, 63(2), 741-760.
14. Karssemeijer, E. (2019). **Brain in motion: combined cognitive and physical exercise training in people with dementia** (Doctoral dissertation). Radboud UMC, Nijmegen, Netherlands.

### Virtual Therapy & (Intellectual) Disabilities

1. Mitchell, L., Ziviani, J., Oftedal, S., & Boyd, R. (2012). **The effect of virtual reality interventions on physical activity in children and adolescents with early brain injuries including cerebral palsy.** *Developmental Medicine & Child Neurology*, 54(7), 667-671.

2. Green, D., & Wilson, P.H. (2012). **Use of virtual reality in rehabilitation of movement in children with hemiplegia: a multiple case study evaluation.** *Disability Rehabilitation*, 34(7), 593-604.
3. Plow, M.A., McDaniel, C., & Linder, S. (2011). **A Scoping Review of Exergaming for Adults with Systemic Disabling Conditions.** *Journal of Bioengineering and Biomedical Sciences*, S1, 002.

### Virtual Therapy & Home-Based Training

1. Vieira, Á., Melo, C., Machado, J., & Gabriel, J. (2018). **Virtual reality exercise on a home-based phase III cardiac rehabilitation program, effect on executive function, quality of life and depression, anxiety and stress: a randomized controlled trial.** *Disability and Rehabilitation: Assistive Technology*, 13(2), 112-123.
2. Padala, K.P., Padala, P.R., Lensing, S.Y., Dennis, R.A., Bopp, M.M., Roberson, P.K., & Sullivan, D.H. (2017). **Home-Based Exercise Program Improves Balance and Fear of Falling in Community-Dwelling Older Adults with Mild Alzheimer's Disease: A Pilot Study.** *Journal of Alzheimer's Disease*, 59, 565-574.
3. Vieira, Á., Gabriel, J., Melo, C., & Machado, J. (2016). **Kinect system in home-based cardiovascular rehabilitation.** *Journal of Engineering in Medicine*, 231(1), 40-47.
4. Yang, W.C., Wang, H.K., Wu, R.M., Lo, C.S., Lin, K.H., & Lin, K.H. (2015). **Home-based virtual reality balance training and conventional balance training in Parkinson's disease: A randomized controlled trial.** *Journal of the Formosan Medical Association*, 115(9), 734-743.
5. Nijenhuis, S.M., Prange, G.B., Amirabdollahian, F., Sale, P., Infarinato, F., Nasr, N., . . . Rietman, J.S. (2015). **Feasibility study into self-administered training at home using an arm and hand device with motivational gaming environment in chronic stroke.** *Journal of NeuroEngineering and Rehabilitation*, 12, 89.
6. Hall, A.K., & Marston, H.R. (2014). **Games for health in the home: gaming and older adults in the digital age of healthcare.** In J. Van Hoof, G. Demiris, & E.J.M. Wouters (Eds.) *Handbook of Smart Homes, Health Care and Well-Being* (pp. 579-588). Cham, Zwitserland: Springer.
7. Uzor, S., & Baillie, L. (2014). **Investigating the long-term use of exergames in the home with elderly fallers.** In *Proceedings of the 32Nd Annual ACM Conference on Human Factors in Computing Systems* (pp. 2813-2822). New York, USA: ACM.
8. Schoene, D., Lord, S.R., Delbaere, K., Severino, C., Davies, T.A., & Smith, S.T. (2013). **A randomized controlled pilot study of home-based step training in older people using videogame technology.** *PLoS ONE*, 8(3).
9. Yen, C.Y., Lin, K.H., Hu, M.H., Wu, R.M., Lu, T.W., & Lin, C.H. (2011). **Effects of virtual reality-augmented balance training on sensory organization and attentional demand for postural control in people with Parkinson disease: a randomized controlled trial.** *Physical Therapy*, 91(6), 862-874.

### Virtual Therapy & Dysphagia

1. McCullough, G.H. (2014). **One Step Back and Two Steps Up and Forward: The Superior Movements of Research Defining the Utility of the Mendelsohn Maneuver for Improving UES Function.** *Perspectives on swallowing and swallowing disorders (Dysphagia)*, 23(1), 5.

2. Drulia, T.C., & Ludlow, C.L. (2013). **Relative Efficacy of Swallowing Versus Non-Swallowing Tasks in Dysphagia Rehabilitation: Current Evidence and Future Directions.** *Current Physical Medicine and Rehabilitation Reports*, 1(4), 242-256.
3. McCullough, G.H., & Kim, Y. (2013). **Effects of Mendelsohn Maneuver on Extent of Hyoid Movement and UES Opening Post Stroke.** *Dysphagia*, 28(4), 511-519.
4. Stepp, C.E. (2012). **Surface Electromyography for Speech and Swallowing Systems: Measurement, Analysis, and Interpretation.** *Journal of Speech, Language, and Hearing Research*, 55(4), 1232-1246.
5. Humbert, I.A., Michou, E., MacRae, P.R., & Crujido, L. (2012). **Electrical Stimulation and Swallowing: How much do we know?** *Seminars in speech and language*, 33(3), 203-216.
6. Steele, C.M., Bennett, J.W., Chapman-Jay, S., Polacco, R.C., Molfenter, S.M., & Oshalla, M. (2012). **Electromyography as a Biofeedback Tool for Rehabilitating Swallowing Muscle Function.** In C. Steele (Eds.) *Applications of EMG in Clinical and Sports Medicine* (pp. 311-328). London, United Kingdom: IntechOpen.
7. McCullough, G.H., Kamarunas, E., Mann, G.C., Schmidley, J.W., Robbins, J.A., & Crary, M.A. (2012). **Effects of Mendelsohn Maneuver on Measures of Swallowing Duration Post Stroke.** *Topics in Stroke Rehabilitation*, 19(3), 234-243.
8. Stepp, C.E., Britton, D., Chang, C., Merati, A.L., & Matsuoka, Y. (2011). **Feasibility of game-based electromyographic biofeedback for dysphagia rehabilitation.** In *2011 5th International IEEE/EMBS Conference on Neural Engineering* (pp. 233-236). Piscataway, New Jersey, USA: IEEE.
9. Vaiman, M., & Eviatar, E. (2009). **Surface electromyography as a screening method for evaluation of dysphagia and odynophagia.** *Head & Face Medicine*, 5, 9.
10. Wheeler-Hegland, K.M., Rosenbek, J.C., & Sapienza, C.M. (2008). **Submental sEMG and Hyoid Movement During Mendelsohn Maneuver, Effortful Swallow, and Expiratory Muscle Strength Training.** *Journal of Speech, Language, and Hearing Research*, 51(5), 1072-1087.
11. Crary, M.A., Carnaby-Mann, G.D., Groher, M.E., & Helseth, E. (2004). **Benefits of Dysphagia Therapy Using Adjunctive sEMG Biofeedback.** *Dysphagia*, 19(3), 160-164.
12. Ding, R., Larson, C.R., Logemann, J.A., & Rademaker, A.W. (2002). **Surface Electromyographic and Electroglottographic Studies in Normal Subjects Under Two Swallow Conditions: Normal and During the Mendelsohn Maneuver.** *Dysphagia*, 17(1), 1-12.
13. Crary, M.A., & Groher, M.E. (2000). **Basic Concepts of Surface Electromyographic Biofeedback in the Treatment of Dysphagia: A Tutorial.** *American Journal of Speech-Language Pathology*, 9(2), 116-125.

### Virtual Therapy & Cyber Sickness

1. Bos, J.E., Ledegang, W.D., Lubeck, A.J.A., & Stins, J.F. (2013). **Cinemasickness and postural instability.** *Ergonomics*, 56, 1430-1436.
2. Nishiike, S., Okazaki, S., Watanabe, H., Akizuki, H., Imai, T., Uno, A., . . . Inohara, H. (2013). **The effect of visual-vestibulosomatosensory conflict induced by virtual reality on postural stability in humans.** *Journal of Medical Investigation*, 60(3-4), 236-239.
3. Bos, J.E. (2011). **Gaan, staan, kijken en kokken met het evenwichtsorgaan.** *Inaugural lecture*, 17 March, VU University, Amsterdam.

4. Bos, J.E. (2011). **Nuancing the relationship between motion sickness and postural stability.** *Displays*, 32(4), 189-193.
5. Bonato, F., Bubka, A., & Palmissiano, S. (2009). **Combined pitch and roll and cybersickness in a virtual environment.** *Aviation, Space and Environmental Medicine*, 80(11), 941-945.
6. Bos, J.E., Bles, W., & Groen, E.L. (2008). **A theory on visually induced motion sickness.** *Displays*, 29(2), 47-57.
7. Kassa (2011, 3 september). **De schadelijke effecten van 3D** [The side effects of watching 3D movies]. Retrieved from <http://kassa.vara.nl/nieuws/de-schadelijke-effecten-van-3d>