

1. Background

People after stroke experience difficulties with walking, leading to restrictions in participation in daily life. Virtual reality (VR) might be beneficial to improve participation after stroke. The ViRTAS study examined the effect of a treadmill-based virtual reality gait training (VRT) on participation.



2. Aims

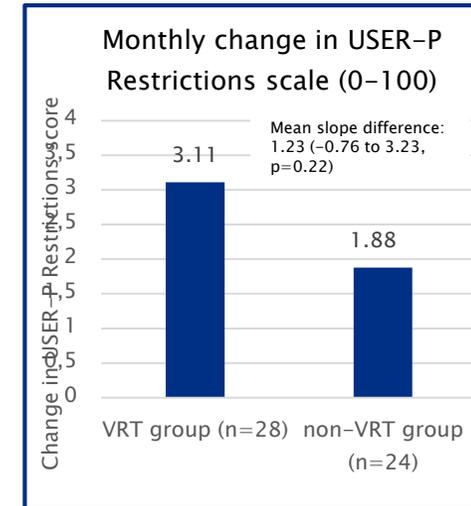
1. To examine the effect of VRT on participation in community-living people within six months after stroke.
2. To explore the experiences of people after stroke with VRT and their perception on how this training influenced their walking ability and participation.

3. Methods

- Effect of VRT compared with non-VRT (2x30 min/wk, 6 wks):
 - *VRT*: Gait Real-time Analysis Interactive Lab (GRAIL)
 - *non-VRT*: treadmill training + functional gait exercises
- Primary outcome measure: Utrecht Scale for Evaluation of Rehabilitation-Participation (USER-P): Restrictions scale.
- Between-group differences are assessed with ANCOVA linear mixed effects model.
- Semi-structured interviews are performed to explore patients' experiences with VRT.

4. Results

- The USER-P Restrictions score improved 1.23 points more per month in the VRT compared with the non-VRT group, but no statistically significant difference in USER-P Restrictions score was found between VRT and non-VRT.
- Secondary outcomes did also not show significant between-group differences.
- Patients' experiences with VRT were positive. Majority of the participants stated that VRT positively influenced their walking ability and participation. No serious adverse events were reported.



5. Conclusions

- Both interventions contribute to improvement on participation level.
- Although not statistically different, treadmill-based VRT was a safe and well-tolerated intervention that was positively rated by people after stroke.
- Virtual reality gait training can be a valuable addition to stroke rehabilitation.