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Scientific Abstract

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Post-Stroke Outpatient and Home Tele-rehabilitation With Jintronix System: A Feasibility Study.

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Objectives

Feasibility study of a stroke outpatient program comprising of clinic-based and caregiver-supervised home-based telerehabilitation training using the Jintronix system.

Method and Materials

Medically stable participants of ≥ 3 months post-stroke, require ≤ than minimal assistance were recruited. Participants and caregivers were clinic trained 9 times (3 times weekly) in Phase 1, followed by Phase 2 caregiver-supervised home-based training for 20 sessions (5 times weekly) with telemonitoring, by therapist. Outcomes measurement at T0: pre-Phase 1, T1: post-Phase 1, T2: post-Phase 2, and T3: 1 month follow-up, and included Fugl-Meyer Upper Limb Motor Assessment (FMAUL), Berg Balance Scale (BBS), 6-minute Walk Test (6minWT), 10-metre Walk Test (10mWT), pain, Stroke Self-Efficacy Questionnaire (SSEQ) and user feedback.

Results

35 participants of mean(SD) age: 55.91 years (11.36) and median(IQR) post-stroke duration of 311.00 days (633.00) were recruited, with 3 drop-outs due to non-related reasons. Mean(SD) FMAUL was T0: 36.52(16.55), T1: 38.48(16.55), T2: 39.17(16.20), T3: 40.00(16.70); mean(SD) BBS was T0: 43.34(9.99), T1: 47.17(8.64), T2: 47.59(9.53), T3: 48.59(8.97); mean(SD) 6minWT was T0:
206.23(129.38), T1: 227.67(144.46), T2: 239.83(148.56), T3: 250.78(158.95); mean(SD) 10mWT was T0: 0.70(0.42), T1: 0.70(0.49), T2: 0.72(0.53), T3: 0.73(0.54); and mean(SD) SSEQ was T0: 80.79(19.30), T2: 91.79(20.11), T3: 93.59 (20.49). Gains were all statistically significant ($p<0.05$) except 10mWT. User feedback showed >80% agreement for user-friendliness and satisfaction. Nil adverse events were reported.

Conclusion

Complementary caregiver-supervised home training with Jintronix supported by clinic-based telemonitoring was found to be feasible and effective for post-stroke users