First author,	Kind of study	Purpose	Participant	Neuropsychomotor	Virtual reality modality	Time
year				deficiencies treated		intervention
Im, 2016	Experimental	Investigate the effects of motor	15 healthy subjects (12	Chronic Stroke	system developed by	Not informed
	study	imagery in combination with of	men; mean age: 31.73		biomedical engineers	
		RV programs in stroke patients	± 6.22);			
			15 subjects bearing			
			AVE (9 men; mean			
			age: 58.87 ± 10.07);			
Kalron, 2016	Pilot Study	To examine the effect of a	30 participants (11	Multiple Sclerosis	Integrated reality	2 Sessions for
		training program in RV on the	men)		CAREN system	6 consecutive
		balance in multiple sclerosis				weeks
Dimbwadyo-	Pilot Study	Investigate effects of RV	31 patients;	Spinal cord injury	RV Torya system;	15 days for 5
Terrer, 2015		combined with conventional	Mean age: Between 24		Xsens Sensor;	weeks
		therapy on upper limb function in tetraplegia	and 62 years old			
Killane, 2015	Experimental	Examine the training effect with	20 participants	SD	Maze in RM; Integration	20 minutes per
	study	RV in cognitive-motor task on			with display screen	session; 8
		the gait performance				times for 2
						weeks
Kim, 2013	Experimental	Investigate a system of	10 patients;	Chronic Stroke	3D Magnetic Sensor	3 operations
	study	proprioceptive rehabilitation in	Mean age: $54.7 \pm 7.83$		Position; Virtual task in	before, during

Table 1. Virtual reality applications for neuromotor rehabilitation

		RV over the control of the upper			software A6	and after 1
		limb			(3dgamestudio, co.,	week of
					USA)	training
Liao, 2014	Experimental	Examine the effects of exercise	36 participants;	Idiopathic DP	Exercise based in RV	12 training
	study	based on RM on the gait			with Wii Fit Plus gaming	sessions over
		performance and balance in			system; Wii Balance	6 weeks
		DP			Board	
Luque-	Short report	Identify the effectiveness of an	2 patients (men, 58 and	Chronic Stroke;	High-resolution LCD	15 sessions for
Moreno, 2016		RV system in the kinematic	49 years)	Ischemic and	projector; System of	3 weeks
		assessment and approach to gait		Hemorrhagic type	motion tracking 3D	
		disorders in stroke			(FASTRAK system)	
					Integrated computer;	
Meldrum,	Clinical Trial	Investigate the Wii Fit Plus® in	71 participants (44	Unilateral peripheral	Frii Board integrated	6 weeks
2015		the rehabilitation of balance in	women)	vestibulopathy	with Nintendo Wii Fit	
		vestibulopathies compared to			Plus	
		conventional Exercises				
Peruzzi, 2016	Clinical Trial	To examine the effect of a	31 participants	Multiple Sclerosis	RV system with software	18 sessions;
		training program based on RV			WorldViz; Two inertial	3 times for 6
		on the gait in multiple sclerosis			sensors (MTx, Xsens,	weeks
					Netherlands)	
Brunner, 2016	Clinical Trial	Compare the intensity of an	50 participants (22	Chronic Stroke	YouGrabber system	4 to 5 training
		intervention training in RV with	women);		(YouRehab); Glove with	sessions; 4
		a conventional intervention	Mean age: 61 years		sensors	weeks

Pozeg, 2017	Experimental study	Investigate changes in body property and chronic neuropathic pain in patients with spinal cord injuries using the body own illusions in RV	20 patients with spinal cord injury (paraplegia), average age: 47.36 ± 12.0 years; 20 healthy subjects, mean age: 43.06 ± 11.8	Spinal Cord Injury	Monitor mounted on the head (Glasses) with headphones; Camera to record the movement in real time	Not informed
Robles- García, 2013	Experimental study	Understand the execution of motor patterns during the imitation of movements in an environment of RV in DP	28 participants; 9 Healthy young, 9 healthy elderly and 10 individuals with PD	Idiopathic DP	Monitor mounted on the head (glasses); Sensor for motion capture	Not informed
Saposnik, 2016	Clinical Trial	Compare the effectiveness of RV with a recreational therapy in motor recovery in stroke	14 participants; age criterion: 18 to 85 years	Acute Stroke; Ischemic type	Nintendo Wii System (VR Wii)	2 weeks
Shin, 2014	Clinical Trial	Evaluate the effectiveness of an RV system based on tasks for the rehabilitation of upper limb in stroke	22 patients	Acute, Sub-Acute and Chronic Stroke	RehabMaster virtual rehabilitation system; Monitor screen; movement sensor (Universal Serial Bus)	5 days for 2 weeks
Soares, 2017	Case study	Evaluate the use of a sensor movement, based on an RV in the for the rehabilitation of upper limb in stroke	3 patients; 3 men 60 and 48 years old; 1 woman 58 years old	Chronic Stroke	Leap Motion Sensing Controller; 3D Playground game System	3 consecutive days

Thielbar, 2014	Experimental	Investigate the impact of a	16 patients	Chronic Stroke;	Virtools Software	18 times for 6	
	study	training for finger, by means of		Ischemic and	platform; System of	weeks	
		a RV mechatronics system, on		Hemorrhagic type	virtual keyboard		
		the fine motor control in stroke			integrated with a sensing		
					sleeve (PneuGlove);		
					Display Monitor		
Villiger, 2013	Experimental	Evaluate an intensified RV	14 participants;	Incomplete Spinal	Sensors for upper limb	16 to 20	
	study	training for improvement of	Mean age: 52.7 ± 14.9	Cord Injury	(YouGrabber,	sessions for 4	
		lower limb function, and	years;		YouRehab); Software	weeks	
		neuropathic pain			mechanism of Unity 3D		
					game;		
					Display Monitor		
Cho, 2015	Clinical Trial	Investigate the effect of a VR	22 patients;	Chronic Stroke	Display Monitor;	5 sessions for	
		training with cognitive load on			RV projector; Treadmill	4 weeks	
		the gait function in stroke					
RV= Virtual Reality; CAREN= Computer Assisted Rehabilitation Environment; DP= Parkinson Disease.							