

CONTENT AND EFFECTIVENESS OF COMMUNITY BASED REHABILITATION ON QUALITY OF LIFE IN PEOPLE POST STROKE: A systematic review with meta-analysis.

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BACKGROUND

Community based rehabilitation (CBR) was basically envisaged as an affordable way of offering rehabilitation to children with disabilities in the rural areas.

After its adoption by the WHO in the year 1978, it developed into much more towards social inclusion of people with disability.

PURPOSE

To review the content and evaluate the effects of CBR on quality of life (QoL), balance, and walking capacity for people post-stroke compared to other rehabilitation protocols or no care.

Self-directed rehabilitation at home. (Fuet al, 2020) Adaptive physical activity combined with therapeutic 1) Exercise program, advice booklet and educational patient education) in community (Calugi et al, 2016) materials in community and at home. (Dimnat al. 2017) Educational and 2) Community-based exercise & education schemes at taking charge home. (Harrington et al, 2010) program 3) Educational talks, strength, balance exercise and sychosocial support in community. (Latet al. 2014) Exercise Task oriented 1) Set of physical & leisure activities in home-based carer-1) Sit to stand, grip strength, arm curl in group & in program assisted therapy(Mohd Nordin et al, 2019) 2) Adaptive physical activity in community (Stuart et al, 2009) 2) Rehabilitation training group classes in community & 3) Pedometer monitored, community-based intervention home-based training program (Dean et al, 2017) 3) Community-based rehabilitation program. (Hartman-4) Brisk walking at home or community (Gordon et al. 2013) Maeir et al. 2007 5) Tai chi in community (Taylor-Piliae et al. 2014) Exercise and project-based activities in community 4) Ti-To rehabilitation program (Malagoni et al, 2016) alone/in group (Mayo et al, 2015) 6) Community-based arts and health group (Ellis-Hill et al,

METHODS (1)

Data sources and searches

PubMed, Web of sciences, Scopus, Hinari and Pedro, earliest available date until August 2020 with an update on 15th of December 2020.

- Inclusions
- RCT, Clinical Trials, or longitudinal/cohort studies
- Adults (age ≥ 18 years) with a confirmed stroke
- CBR programs as compared with CR
- Qol, balance and walking capacity
- Exclusions

aged <18 years; other diagnosis; Not investigating QoL as outcome

RESULTS (1)

- Studies and participants characteristics
- A total of 1690 patients
- (08) RCTs; (01) CT and (05) LCs
- Mean/median ages: 60 years to 72.7 (int); 55.8 years to 73 (cont)
- Percentage males: 40% to 90%.

DISCUSSION & CONCLUSIONS

- CBR programs can benefit people post-stroke regarding quality of life, walking capacity and balance
- CBR is applied in many forms ranging from educational, task-oriented and exercise training or in combinations
- Specifically, CBR is more effective than usual care without physical training or no care

METHODS (2)

Data extraction and quality assessment: PEDro scale and NOS / Cochrane risk of bias tool

Data synthesis and analysis: SMD with 95% confidence intervals (CI)

RESULTS (2)

	Expe	erimen	tal	С	ontrol			Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean		Total			Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
1.1.1 Effectiveness of CBR on quality of life										
Stuart 2009	76.2	3.3	40	73.4	3.5	38	3.6%	0.82 [0.35, 1.28]	2009	_
Harrington 2010	26	3	97	26	2	108	4.6%	0.00 [-0.27, 0.27]		+
Gordon 2013		12.7	64		13.2	64	4.2%	0.13 [-0.22, 0.48]		-
Taylor-Piliae 2014	46	9.4	97	45.1	9.9	48	4.2%	0.09 [-0.25, 0.44]		+
Malagoni 2016	19	15	6	20	17	6	1.3%	-0.06 [-1.19, 1.07]		
Calugi 2016	39.4	9.8	126		10.5	103	4.7%	0.04 [-0.22, 0.30]		_
Dean 2018	3.4	0.7	20	3.6	0.8	20	2.8%	-0.26 [-0.88, 0.36]		
Ellis-Hill 2019	0.2	0.03	22		0.02	21	2.9%	0.00 [-0.60, 0.60]		
Nordin 2019	0.7	0.03	45	0.7	0.02	46	3.8%	0.00 [-0.41, 0.41]		
Fu 2020 - Group1	45.4	8.4	123		10.7	125	4.7%	0.21 [-0.04, 0.46]		
Fu 2020 - Group2	47.3	8.4	133		10.7	125	4.7%			
Subtotal (95% CI)	47.3	8.4	773	43.4	10.7	704	41.5%	0.41 [0.16, 0.65] 0.16 [0.02, 0.30]	2020	<u> </u>
	0.00.0	L 19 4 4		40.0				0.10 [0.02, 0.30]		Y
Heterogeneity. Tau* = 0.02; Chi* = 16.70, df = 10 (P = 0.08); I* = 40% Test for overall effect: Z = 2.18 (P = 0.03)										
l est for overall effect	Z = 2.18	3 (P = U	.03)							
1.1.2 Effectiveness	of CBR o	n walki	ina can	acity						
Stuart 2009	58.2	4.6	40	49.8	2.6	38	3.0%	2.21 [1.64, 2.78]	2009	
Harrington 2010		17.2	96		20.3	106	4.6%	-0.13 [-0.41, 0.14]		
Gordon 2013	95.8	6.5	64		10.1	64	4.2%	0.32 [-0.03, 0.66]		<u> </u>
Taylor-Piliae 2014	3.1	1.1	97	3	1.2	48	4.2%	0.09 [-0.26, 0.43]		<u> </u>
Malagoni 2016	48.7	17.4	6	50.7		6	1.3%	-0.09 [-1.22, 1.04]		
	2.1	0.9	126	1.5	0.8	103	4.6%			
Calugi 2016	12.2	3.3	21					0.70 [0.43, 0.97]		<u></u>
Dean 2018		22		12.7 58.8	1.8	20	2.8%	-0.18 [-0.80, 0.43]		<u></u>
Nordin 2019	49.6		45		27	46	3.8%	-0.37 [-0.78, 0.04]		
Fu 2020 - Group1	27.9	9	123	26	10	126	4.7%	0.20 [-0.05, 0.45]		T.
Fu 2020 - Group2	29.4	7.9	132 750	26	10	126	4.7%	0.38 [0.13, 0.62]	2020	
Subtotal (95% CI)						683	38.1%	0.31 [-0.02, 0.64]		_
Heterogeneity: Tau² = 0.23; Chi² = 76.36, df = 9 (P < 0.00001); i² = 88%										
Test for overall effect: Z = 1.87 (P = 0.06)										
1.1.3 Effectiveness	of CBR o	n balar	ice							
Stuart 2009	45	3.2	40	43.2	1.7	38	3.6%	0.69 [0.23, 1.15]	2009	
Taylor-Piliae 2014	3.3	1	97	3.3	1	48	4.2%	0.00 [-0.35, 0.35]		+
Malagoni 2016	5	2.3	6	5	1.4	6	1.3%	0.00 [-1.13, 1.13]		
Calugi 2016	44.8	9	126		11.3	103	4.6%	0.45 [0.19, 0.72]		
Dean 2018		19.3	21	15.9	12	20	2.8%	0.30 [-0.32, 0.91]		
Nordin 2019	52	3	45	53	3	46	3.8%	-0.33 [-0.74, 0.08]		<u>→</u>
Subtotal (95% CI)	32	,	335	33	,	261	20.4%	0.20 [-0.12, 0.53]	2070	•
Heterogeneity, Tau ^a = 0.10; Chi ^a = 15.60, df = 5 (P = 0.008); i ^a = 68%										
Test for overall effect Z= 1.24 (P = 0.22)										
Total (95% CI)			1858			1649	100.0%	0.22 [0.07, 0.37]		A
	0.44.0			v 00.						
Heterogeneity: Tau ²				n = 26 (ا.0 > ۲	JUUU1)	r= //%		-	-4 -2 0 2 4
Test for overall effect										Favours [experimental] Favours [control]
Test for subgroup differences: Chi² = 0.74, df = 2 (P = 0.69), i² = 0%										



