



Determining barriers and facilitators of exercise after stroke: a multi-perspective explorative study.

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Determining barriers and facilitators of exercise after stroke: a multi-perspective explorative study.

Rees R., Brick N., Kennedy N., Simms V., & Simpson E

BACKGROUND

A growing body of evidence suggests that exercise after stroke can improve cardiovascular fitness, muscle strength, mobility and quality of life (Brazzelli, Saunders, Greig, & Mead, 2011; Harris & Eng, 2010). However, despite the clear benefits of exercise post stroke, activity levels are found to be significantly lower after stroke compared to other chronic conditions (Rand, Eng, Tang, Jeng, & Hung, 2009). Encouraging exercise to improve recovery and reduce the risk of recurrent stroke is often considered within stroke rehabilitation (Feigin, Norrving & Mensah, 2017). Understanding why stroke patients do or do not participate in exercise may have significant impact on how rehabilitation programmes are designed. The findings from this study will identify patient need and make recommendations for the development of post-stroke exercise interventions and standardised care.

METHOD

Design: A qualitative exploration study of the barriers and facilitators of exercise was carried out using semi structured virtual interviews.

Participants: Three participant groups were included: Stroke survivors, Primary caregivers, Physiotherapists and Occupational Therapists

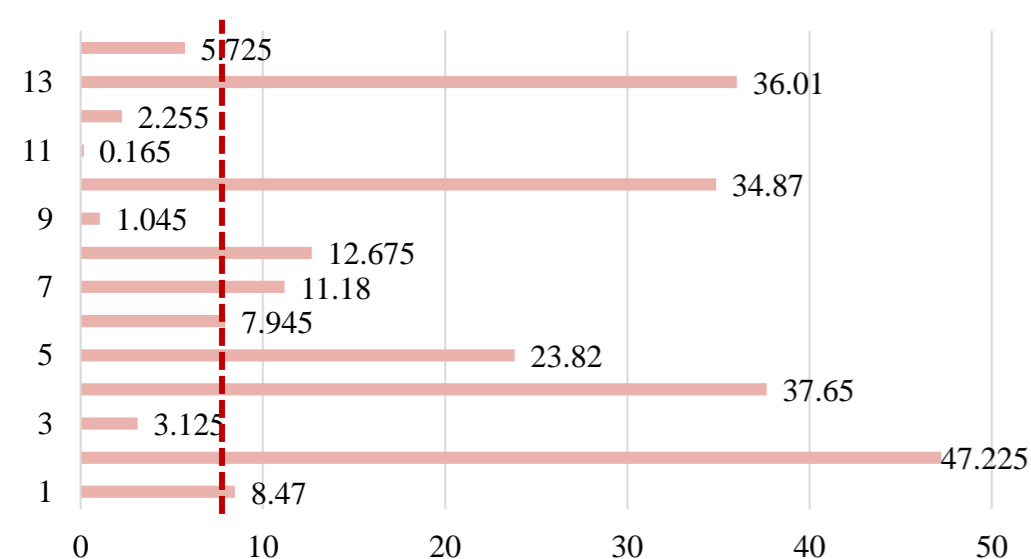
Recruitment: Participants were recruited through the NICHS, Facebook groups and stroke networks. Thirty-five individuals were interviewed: 13 stroke survivors; 8 caregivers and 13 clinicians.

Measures	
Global Physical Activity Questionnaire (GPAQ)	The Physical Activity Scale for Individuals with Physical Disabilities (PASIPD)
The Stroke Impact Scale (SIS)	Fatigue Severity Scale (FSS)

SAMPLE

Stroke survivors	
Male (8); Female (5)	Ischemic (7); Hemorrhagic (3); Unknown (4)
Age range: 41-68 years	Mean fatigue score = 4.48/7
Time since stroke: 3 mnths-25yrs	Mean HRQoL score: 56.29/100
Caregivers	
Male (1); Female (7)	Time caring: 5 mnths-11yrs
Clinicians	
Male (1); Female (12)	Physiotherapist (8); Occupational Therapist (5)

Figure 1. Stroke survivor physical activity levels MET h/d out of 199.5 as measured by PASIPD



Note: Mean MET h/d score = 7.9 as reported by Pang et al. (2019), 8/13 stroke survivors have higher physical activity levels than the average within this population.

RESULTS

Table 1 – Most common barriers and facilitators mapped onto the Theoretical Domains Framework (TDF) reported by stroke survivors, caregivers and clinicians

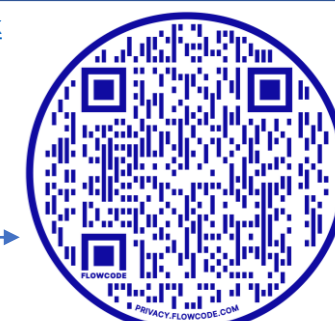
TDF Construct	Theme	Carers	Clinicians	Survivors	
Barriers					
Environmental Context and Resources	Access to facilities and services	✓	✓	✓	
	Cost and Resources		✓	✓	
	Covid restrictions	✓		✓	
	Access to information			✓	
	Lack of education	✓	✓		
	Access to transport		✓		
	No access to psychological services		✓		
	Gyms		✓	✓	
	Generic exercise programmes	✓			
	Rehabilitation aimed at older survivors	✓			
	No gender or age matched groups	✓			
	Lack of follow up assessments	✓			
	Beliefs about capabilities	Fatigue	✓	✓	✓
Confidence		✓	✓	✓	
Self-efficacy to exercise		✓			
Beliefs about consequences	Physical impairments	✓	✓	✓	
	Pain		✓		
	Cognitive impairment		✓		
Emotion	Fear	✓	✓	✓	
	Mental Health	✓	✓	✓	
	Lack of motivation		✓		
Facilitators					
Environmental Context and Resources	Access to services and facilitators		✓	✓	
	Access to transport		✓	✓	
	Cost and resources		✓	✓	
	Individualised exercise programmes		✓	✓	
	Virtual exercise programme	✓		✓	
	Covid	✓			
	Follow up care	✓			
	Gender and age matched groups	✓			
	Guidance and training on exercise	✓	✓		
	Caregiver education on exercise	✓	✓		
	Beliefs about capabilities	Build confidence		✓	
		Social Influences	Group exercise	✓	✓
	Support of others		✓	✓	
Make exercise enjoyable	✓		✓		
Good rapport with physiotherapist	✓		✓		
Goal/target setting	Goal setting		✓		
	Self-monitoring	✓	✓		

IMPLICATIONS FOR REHABILITATION

1. Rehabilitation should aim to offer individualised exercise programmes, with the opportunity for integration of higher intensity exercise for those survivors who are capable of a more advanced programme.
2. Education on safe exercise should be made available to stroke survivors and caregivers after discharge.
3. Future exercise programmes/research should focus on reducing the need for exercise equipment due to the lack of resources, and the high cost associated with exercise training equipment and personal trainer fees. Home based or virtual exercise programmes may be effective in reducing these costs and the need for additional resources and transport to and from rehabilitation programmes.
4. Rehabilitation should be individualized to the stroke survivors' interest and with a view to long term needs.

CONTACT AND REFERENCES

Davidson-r2@ulster.ac.uk
n.kennedy@ulster.ac.uk
n.brick@ulster.ac.uk



References →