

Keeping Active with Texting after Stroke (KATS): A single-arm feasibility and acceptability study of a behavioural intervention to promote community-based physical activity after stroke rehabilitation

Basic Results

Recruitment

Of 46 potential participants identified by rehabilitation physiotherapists, fifteen (ten male, five female) who were invited to take part declined, indicating a recruitment rate of 66%. Reasons for refusal were: not well enough to participate (n=8); progress on recovery from stroke was good so the intervention was not required (n=3); declined without giving a reason (n=3); and one person could not be contacted. Three participants withdrew after the first baseline assessment session due to health problems unrelated to the study. Twenty-eight participants completed study procedures.

Table 1. Baseline: Demographic Characteristics		N=31
		n (%)
Sex		
Male		18 (58)
Female		13 (42)
Living arrangements		
Lives with spouse, partner, and/or other family members		18 (58)
Lives alone		13 (42)
Age		
<60 years		6 (19)
60 – 69 years		9 (29)
70 – 79 years		13 (42)
≥80 years		3 (10)
Range 48 -64; Mean 67.6; Median 71; SD 8.1		
Scottish Index of Multiple Deprivation (SIMD) quintile		
1 – 2 (most disadvantaged)		10 (32)
3 – 4		13 (42)
5 (least disadvantaged)		8 (26)
Time from hospital discharge to recruitment		
≤ 10 weeks		10 (32)
11 – 19 weeks		11 (35)
20 – 29 weeks		5 (16)
30 – 39 weeks		2 (6)
≥ 40 weeks		3 (10)
Range 0-156; Mean 131.0; Median 106.0; SD 73.3		
Time from stroke to recruitment to the KATS study		
≤ 10 weeks		6 (19)

11 – 19 weeks	9 (29)
20 – 29 weeks	5 (16)
30 – 39 weeks	5 (16)
≥ 40 weeks	6 (19)

Range 10-622; Mean 180.9; Median 137; SD 101.4

Table 2. Baseline scores on selected outcome measures **n (%)**

Nottingham Extended Activities of Daily Living Scale (NEADL) (22 questions, scores 0 – 66, higher score indicates greater independence, scores <44 indicate needing assistance in Extended Activities of Daily Living)	N=28*
20 – 39	12 (42)
40 – 59	14 (50)
≥60	5 (18)
Score <44	15 (53)
Range 24 – 66; Mean 44.32; Median 47; SD 13.42	
Physical Activity Scale for Individuals with Physical Disabilities (PASIPD) (12 questions, scores 0 – 199.5 MET hours/day, higher score indicates greater intensity of activity)	N=28*
0 – 5.0	12 (43)
5.1 – 10	11 (39)
10.1 – 20	3 (11)
>20	2 (7)
Range 0.17 – 29.46; Mean 7.49; Median 6.08; SD 6.98	
Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS) (7 questions, scores 7 – 35, higher score indicates better mental wellbeing)	N=31
< 20	4 (13)
20 – 24	6 (19)
25 – 29	11 (35)
≥30	10 (32)
Range 14 – 33; Mean 26; Median 26; SD 5.11	
Stroke Self-efficacy Questionnaire (SSEQ) (13 questions, scores 0 – 130, higher score indicates better self-efficacy)	N=28*
<100	9 (32)
100 – 109	6 (21)
110 – 119	3 (11)
120 – 130	10 (36)
Range 53 – 130; Mean 104.71; Median 107; SD 21.40	
Self-efficacy Scale for Walking (SESW) (7 questions, scores 7 – 35, higher score indicates better self-efficacy)	N=28*
7 – 10	4 (14)
11 – 20	12 (43)

21 – 30	8 (29)
>30	4 (14)
Range 7 – 35; Mean 18.89; Median 16.5; SD 8.37	

Daily Step Count, activPal Accelerometer	N=27*
Higher count indicates greater number of steps	
<2000	5 (19)
2000-4000	7(27)
4000-6000	7(27)
>6000	7(27)
Range 75-9542; Mean 4041.7; Median 4164; SD 2014.6	

*Denotes participants completing both baseline assessments

Table 3. Baseline and follow-up scores on selected outcome measures: mean difference (SD); Effect Size for difference between baseline and follow-up (Cohen's d); %difference between baseline and follow-up

Measure	Baseline Mean (SD) (n=28)	Follow up Mean (SD) (n=28)	Mean Difference between follow-up and baseline (SD)	Effect Size for difference between baseline and follow-up (Cohen's d); 95%CI	% difference Between baseline and follow-up
NEADL (min=0, max=22)	44.61 (13.47)	48 (14.57)	3.39 (7.02)	0.24 (-0.76, 0.29)	8.3%
PASIPD MET hr/day (higher score = greater energy expenditure)	7.49 (6.98)	7.75 (6.15)	0.26 (5.96)	0.04 (-0.56, 0.48)	3.5%
SWEMWBS (min=7, max=35)	26.79 (4.57)	28.57 (5.59)	1.79 (3.76)	0.35 (-0.61, 0.44)	7.0%
SSEQ* (min=0, max =130)	104.52 (21.78)	107.59 (22.87)	3.07 (14.02)	0.14 (-0.69, 0.42)	4.2%
SEQW (min=7, max=35)	18.89 (8.36)	19.82 (9.77)	0.93 (5.45)	0.10 (-0.61, 0.41)	4.9%
Daily step count (ActivPal)	4041.66 (2543.99)	4575.90 (2937.89)	534.20 (1397.94)	0.20 (-0.70, 0.32)	13.2%
EQ-5D-5L Domains (min=1, max=5) Lower Score indicates better health					
Mobility	2.11 (0.92)	2.14 (0.97)	0.04	-0.04 (-0.54, 0.47)	-1.4%
Self-care	1.75 (1.04)	1.57 (0.88)	0.18	0.19 (-0.33, 0.70)	10.3%
Usual activities	2.29 (1.21)	1.86 (0.97)	0.43	0.35 (-0.13, 0.90)	18.8%
Pain	2.07 (1.05)	2.25 (1.11)	0.18	-0.17 (-0.68, 0.35)	-8.7%
Anxiety	1.75 (1.04)	1.54 (0.96)	0.21	0.21 (-0.31, 0.72)	12.0%
EQ-5D-5L VAS (min = 0, max =100)	63.39 (17.75)	68.75 (23.87)	5.36	0.22 (-0.73, 0.29)	15.0%

*n=27, one participant refused to answer some questions on the SSEQ at follow up.

Note: a higher value at follow-up indicates an improvement in the total score on the following measures:

NEADL: Nottingham Extended Activities of Daily Living Scale: higher score indicates better performance.

PASIPD: Physical Activity Scale for Individuals with Physical Disabilities: higher score indicates more energy expenditure.
SWEMWBS: Short Warwick-Edinburgh Mental Wellbeing Scale: higher score indicates better wellbeing.
SSEQ: Stroke Self-efficacy Questionnaire: higher score indicates better self-efficacy.
SEQW: Self-efficacy Questionnaire for walking: higher score indicates better self-efficacy.
EQ-5D-5L: EuroQuol index of health status. Lower score indicates better health.
EQ-5D-5L VAS: EuroQuol 5D-5L Visual Analogue scale of self-rated health, higher score indicates better health.

Adverse Events

There were no adverse events associated with this study.