

LAND ACKNOWLEDGEMENT

Nova Scotia Health is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq People, and we acknowledge them as the past, present, and future caretakers of this land.

May this acknowledgment demonstrate a commitment to working to dismantle ongoing legacies of oppression and inequities and recognize the current and future contributions of Indigenous communities in Nova Scotia.



Disclaimer

The goal of the ABI Journal club is to foster skills of research critique, promote interprofessional interaction and encourage the inclusion of evidence-based practice.

Please join us in creating a safe and approachable learning environment.

Please note that although presenters may have an interest in the article that is presented, they may not necessarily be an expert in that field.

This event is for your learning only. Please do not distribute slides or recordings. Recordings can be distributed by Journal Club organizers only.



ATTENDANCE

If you are participating as a group, please enter the names of everyone in attendance in the chat.

Thank you!



ABI JOURNAL CLUB



F@ce: a team-based, person-centred intervention for rehabilitation after stroke supported by information and communication technology – a feasibility study.

Authors: Susanne Guidetti, Martha Gustavsson, Kerstin Tham, Magnus Andersson, Uno Fors & Charlotte Ytterberg

Presented by: Katerina Miller, PT
ABI Day Treatment Program



F@ce: a team-based, person-centred intervention for rehabilitation after stroke supported by information and communication technology – a feasibility study.

Why is this a good paper to read for journal club?

It is 2024, (almost) post-COVID era.

“Digitalization can be a valuable tool for increased participation in society for people with disabilities after stroke.”

How/why did you pick it?

We use *Information and Communication Technology* (ICT) already – are there more useful ways?



PRIMARY ISSUE DISCUSSED IN THE ARTICLE:
Under-use of ICT in rehabilitation

Authors were motivated by the Swedish Government's vision of becoming a global leader in digital health solutions by 2025.

Their starting point: ranked amongst the bottom third of over 40 countries worldwide in caring for people with long-term illnesses, safe patient care and patient satisfaction (2014)



COMMON TERMS/ACRONIMS USED:

ADL = Activities in Daily Living

CADL = Client-centred ADL intervention

COPM = Occupational Performance Measure

ICT = Information and Communication Technology

FAI = [Frenchay Activities Index](#)

FSS = Fatigue Severity Scale

HAD = Hospital Anxiety and Depression Scale

LiSat-11 = Life Satisfaction Checklist

MoCA = Montreal Cognitive Assessment

MRC = Medical Research Council

RCT = Randomized Controlled Trial

SIS = Stroke Impact Scale



WHAT WERE THE INTENDED OUTCOMES OF THIS RESEARCH?

To evaluate the FEASIBILITY of:

1. F@ce within in-patient and primary care rehabilitation after stroke
2. The study design and outcome measures used
3. The fidelity, adherence and acceptability of the intervention



Participants

First – professionals: convenience sampling

3 OTs and 3 PTs from the rehabilitation teams at the urban hospital based inpatient rehabilitation unit and 2 corresponding primary care rehabilitation units

Additionally – standard care professionals.



Participants

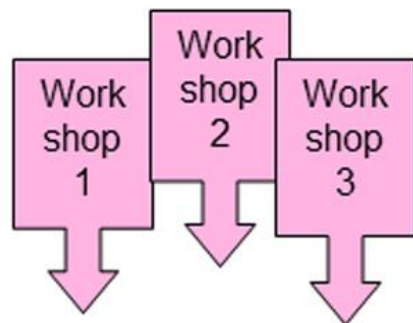
How were participants recruited?

The clinicians were tasked to recruit appropriate participants *in September 2017*

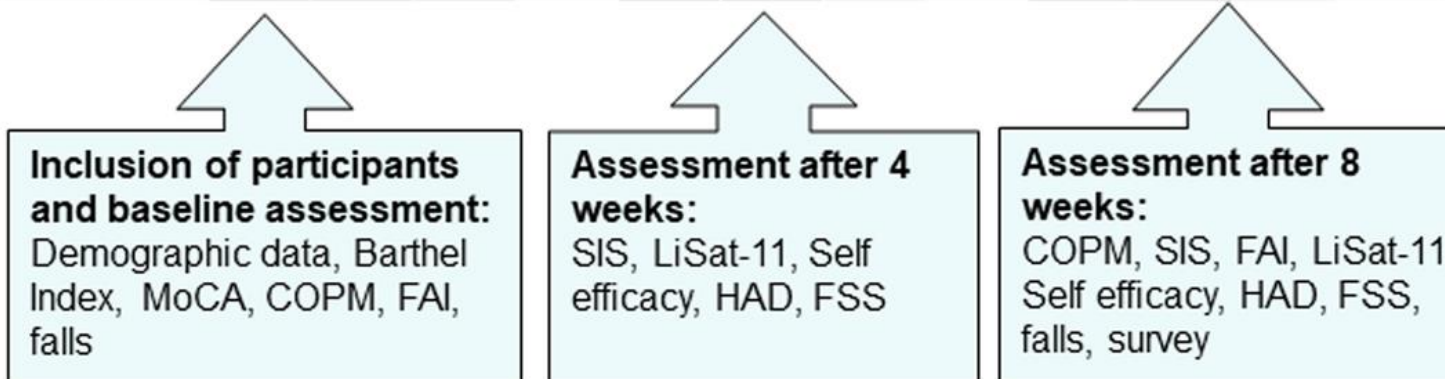
Demographic information: Mean age of the ten participants was 65 years (SD 12), five were men, four lived alone, and five had worked pre-stroke.

Sample characteristics: All participants had suffered a mild stroke. Five had a recent stroke i.e. had suffered a stroke at ≤ 1 month before inclusion and five had suffered a chronic stroke i.e. from 10 to 32 months before inclusion. Three participants had a score on MoCA < 26 indicating cognitive impairment. However, one participant was unable to answer all of the questions in MOCA due to aphasia and thus only scored 9. The participants' current use of ICT was basic in one participant, moderate in three, and advanced in six participants.

METHODS



The process was monitored through field notes by the researchers and notes in logbooks by the team members
 Process was monitored by the researchers and through logbooks



Moca=Montreal Cognitive Assessment, COPM=Canadian Occupational Performance Measure, FAI=Frenchay Activities Index, SIS=Stroke Impact Scale, LiSat=Life Satisfaction Checklist, HAD=Hospital Anxiety and Depression Scale, FSS=Fatigue Severity Scale



F@CE™	Intervention	Basic principles
F Face-to-face meeting	The first meeting: build a relationship with the patient. Provide relevant information including contact information.	Create a therapeutic relationship ⁴ with the patient and adopt person-centred approach ⁴⁻⁸ .
	Allow the patient to describe their abilities, roles and habits (past and present).	Base the rehabilitation on the patient's performance of daily activities ^{4, 8, 9, 10, 11,} their unique life experiences ¹² and narrative ^{4, 8, 11, 13} .
	Make contact with family/significant others, provide relevant information, including contact information.	Involve significant others by providing information and support ¹⁴⁻¹⁷ .
A Assessments	Allow the patient to describe their performance of daily activities. Record an activity on video and let the patient rate their performance.	Sharing is important in a person-centred approach ¹⁸ . Shared assessment, to have common ground for planning the rehabilitation ⁴ .
	Use the COPM as a basis to create goals.	Use the Canadian Occupational Performance Measure (COPM) ¹⁰ , a person-centred outcome measure, for setting goals for each patient.
C Collaboration	Set three goals and create a clear plan with strategies to work on both individually and together with the team.	Be transparent in communication and information in order to achieve a person-centred rehabilitation ¹⁹ . Enable change through setting goals and formulate strategies on the F@ce web platform.
	The patient receives daily alerts through the F@CE web platform and rates their performance each day. The teams are able to keep track of each patient's process through F@CE and offer support to patients and significant others when needed.	Ensure that the patient is actively involved in goal setting and planning rehabilitation ^{1, 2, 4, 8, 9, 10} . Monitor the patient's progress through the ratings ²⁰ .
E Evaluation	Evaluation through the COPM at the end of the eight-week intervention.	Use the COPM at follow-up to evaluate. A difference of two or more between first assessment and follow-up is considered to be clinically significant ²¹ .
	Plan continued rehabilitation by revising the goals or by referring to other units or other professionals.	

INTERVENTION

“The F@ce intervention was an eight-week intervention that aimed to increase perceived participation in everyday life and self-efficacy, and to reduce the impact of stroke.”

Intervention ICT Component:

- Website – for the practitioners, as a reference resource
- Stroke rehabilitation platform
 - Administrator view – for the researchers
 - Team view – for the practitioners to input data (COPM) and monitor their clients
 - Participants view – for the participants ***
- Database – protected for storing the data

A note about Feasibility Study

Peter Craig, Paul Dieppe, Sally Macintyre, Susan Michie, Irwin Nazareth, Mark Petticrew,

Developing and evaluating complex interventions: The new Medical Research Council guidance

International Journal of Nursing Studies,
Volume 50, Issue 5, 2013, Pages 587-592, ISSN 0020-7489,
<https://doi.org/10.1016/j.ijnurstu.2012.09.010>.
(<https://www.sciencedirect.com/science/article/pii/S0020748912003069>)



A note about Feasibility Study

When developing a complex intervention, the researchers should:

1. Identify existing evidence.
2. Assess feasibility

Dictionary (Oxford) definition:

“an assessment of the practicality of a proposed plan or method.”



RESULTS - participants and recruitment

Assessed for eligibility (n=33)

Team 1 (n=10)

Team 2 (n=5)

Team 3 (n=18)

Excluded (n=20)

-Did not meet inclusion criteria (n=14)

-Declined to participate (n=6)

Allocated to intervention (n=13)

Team 1 (n=5) *(These participants were included by team 1, an in-patient rehabilitation team, and then referred to the primary care teams 2 and 3)*

Team 2 (n=3)

Team 3 (n=5)

Excluded (n=3)

-Declined to participate after allocation (n=3)

Analysed (n=10)

Team 2 (n=3+n=1 from Team 1: Total n=4)

Team 3 (n=5+n=1 from Team 1: Total n=6)



RESULTS - primary OMs

COPM

Pat	Goals	Goal 2	Goal 3	Difference in performance (mean)	Difference in satisfaction (mean)
1	Sing	Play the guitar	Give a lecture	1.7	6.7 ^a
2	Write name	Brush teeth	Play the piano	1.2	0.7
3	Using the stairs	Walk outside	Water plants in garden	0.0	0.7
4	Ride the metro/ bus	Use a knife and fork	Tie shoelaces	7.4 ^a	6.3 ^a
5	Visit the gym	Ride the metro/bus	Return to work	5.4 ^a	5.6 ^a
6	Flip through pages in book	Reach for a glass	Open a mobile phone	0.7	0.3
7	Walk up and down a staircase	Visit and manage to use the toilet independently	Put on a t-shirt	2.3 ^a	4.0 ^a
8	Walk up and down a staircase	Reach for a glass	Make a sandwich	2.6 ^a	2.6 ^a
9	Walk using walking sticks	Take the initiative to carry out activities	Improve balance	1.9	4.3 ^a
10	Improve handwriting	Use knife and fork	Pick up object with foot	0.3	0.3

SIS

Patient	1	2	3	4	5	6	7	8	9	10
Strength at 4 weeks	100	56	81	63	100	38	13	38	75	63
at follow up (0-100)	100	100 ^a	94	69	100	56 ^a	38 ^a	31	88	50
Memory at 4 weeks	89	64	96	100	50	86	82	96	50	100
at follow up (0-100)	93	93 ^a	100 ^a	93	68 ^a	86	68	96	43	100
Emotions at 4 weeks	58	67	100	94	58	78	58	89	58	64
at follow up (0-100)	92 ^a	92 ^a	56	86	70	69	44	94	47	88 ^a
Communication at 4 weeks	93	64	100	100	79	93	89	57	71	100
at follow up (0-100)	93	93 ^a	100	100	61	93	64	86 ^a	68	100
ADL/IADL at 4 weeks	100	65	93	88	73	48	48	65	73	68
at follow up (0-100)	98	98 ^a	65	96	96 ^a	56	31	77	73	73
Mobility at 4 weeks	78	83	83	94	94	78	72	64	50	53
at follow up (0-100)	86	86	78	94	94	78	67	75	61	36
Hand function at 4 weeks	100	40	90	94	94	0	0	20	70	25
at follow up (0-100)	100	100 ^a	85	94	94	0	0	5	10	10
Participation at 4 weeks	81	31	81	94	28	56	28	59	31	72
at follow up (0-100)	72	72 ^a	63	88	53 ^a	53	16	78 ^a	41	56
Recovery at 4 weeks	78	30	70	70	50	60	35	40	75	60
at follow up (0-100)	70	45 ^a	95 ^a	75	80 ^a	60	30	50	50	50

PRIMARY OMS - FAI

Only one of the participants with recent stroke had returned to a pre-stroke level of participation. Four of the five participants with chronic stroke had improved their scores and one participant had a lower score compared to their score at inclusion

SECONDARY OMS

LiSart-11 - Among participants with recent stroke, **two** reported a positive change from not satisfied to satisfied and **two** reported a negative change. Among participants with chronic stroke, only **one** reported a positive change.

Self-efficacy scale - All participants were confident in their ability to perform ADL at both 4 weeks and at follow-up.

HAD - Two improved, one got worse

FSS - no changes regarding fatigue were shown

Feasibility of F@ce

Fidelity – good

Adherence – 44-100% of the texts sent got a reply from the participant

Acceptability

- All participants stated that using F@ce was a positive experience
- All participants stated that F@ce had supported their rehabilitation
- Nine of the participants stated that F@ce had supported their everyday lives

EVALUATION OF METHODS

Authors identified that the F@ce intervention was feasible with both inpatient and primary care rehabilitation after stroke

They identified their OMs as feasible as they took 20-40 minutes to complete.

“Even though this study was not designed to evaluate the effects of F@ce as such, clinically significant improvements in the COPM and in the SIS were found in several of the participants after only 4 weeks, which is seen as promising.”



EVALUATION OF METHODS

Authors identified the following improvements should be made:

- “More time for workshop planning and preparation and better procedures for team members for following-up the intervention.”
- Feedback from participants indicated need to be able to update goals more frequently

AUTHOR'S CONCLUSIONS

- “The most beneficial aspects of F@ce was the person-centered goal-setting process and SMS alerts.”
- “It is important for researchers to spend sufficient time building a relationship with professionals and sharing knowledge and experiences using a “healthcare professional-centeredness” perspective.”



JOURNAL ARTICLE EVALUATION - DISCUSSION

Are the methods described in sufficient detail? Do they make sense? Should they have done something differently?

Could you figure out how to implement the intervention from what they wrote?

Did they evaluate the method appropriately?

Do you think it is reasonable to assume that the Primary OMs change DUE TO the intervention?



What do you like about the method, implementation, and evaluation, especially with reference to the Acquired Brain Injury content?

Can the results be translated to a practice that we could adopt?

What might come next?



AUTHORS' CONCLUSIONS

The F@ce interventions appeared to remind and inspire the participants to perform activities and to improve their participation in daily activities after stroke. However, the teams must identify routines for follow-up in order to ensure that they provide appropriate support.

Using the COPM seems to be suitable for evaluation of this type of interventions. Additionally, the results of this study found that several of the patients improved their self-perceived performance and satisfaction of the activities according to the COPM over 8 weeks.



REFERENCES & RECOMMENDED READING

- A team-based, person-centred intervention for rehabilitation after stroke supported by information and communication technology - a feasibility study. *BMC Neurology*, 20(1), 387. <https://doi.org/10.1186/s12883-020-01968-x>.
- Study protocol of a non-randomised controlled trial evaluating the effectiveness of the F@ce 2.0 programme: a person-centred, ICT-supported and interdisciplinary rehabilitation intervention after stroke *BMJ Open* 2022;12:e058748. doi: 10.1136/bmjopen-2021-058748
- Developing and evaluating complex interventions: The new Medical Research Council guidance, *International Journal of Nursing Studies*, Volume 50, Issue 5, 2013, Pages 587-592, ISSN 0020-7489, <https://doi.org/10.1016/j.ijnurstu.2012.09.010>.
- <https://strokengine.ca/en/assessments/frenchay-activities-index-fai/>
- https://scholar.google.ca/scholar?hl=en&as_sdt=2005&sciodt=0,5&cites=8464998123674541518&scipsc=
- https://stats.oecd.org/OECDStat_Metadata/ShowMetadata.ashx?Dataset=GOV_2015&Coords=%5bIND%5d.%5bCS_HC%5d&ShowOnWeb=true&Lang=en

ACKNOWLEDGEMENT

THANK YOU to those who have assisted in choosing, evaluating, discussing & presenting!

THANK YOU to Annie's Café
<http://anniesplacecafe.ca/>

THANK YOU to Nova Scotia Health

THANK YOU to the Nova Scotia ABI Network

THANK YOU to the Brain Repair Center



CONTACT INFORMATION

Katerina.miller@nshealth.ca

