## **Supplementary File**

Development of a short-form Swedish version of the Montreal Cognitive Assessment (s-MoCA-SWE): Protocol for a cross-sectional study

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Supplementary Table 1. Description of variables and their categories respective data set and in the merged dataset.

categories and coding			
		categories and coding	
			Cohorts, binary:
			1 = Väststroke
			2 = EFFECTS
Binary:	Pat_Gender	F = female	Sex, binary:
0 = female		M = male	1 = female
1 = male			2 = male
Scale: range	AGE	Numeric	Age: numeric
Binary:	pat_Living_Arrangements	A = living alone	Living arrangement prior to stroke, binary:
1 = no		B = institutional living	1 = lived alone (Väststroke = 2, EFFECTS = A)
2 = yes		C = other living arrangement	2 = did not live alone (Väststroke = 1, EFFECTS
		D = living with someone else	≥B)
Binary:	Stroke daily	N = no	Needs assistance with ADL before stroke, binary:
1 = no		Y = yes	1 = no
2 = yes			2 = yes
		Note: "N" means that the	
		patient did not require	
		assistance with ADLs prior to	
		stroke.	
Binary:	DIABETES	N = no	Diabetes, nominal:
0 = no		Y = yes	0 = no
1 = yes		U = unknown	1 = yes
			2 = unknown
	0 = female 1 = male Scale: range Binary: 1 = no 2 = yes  Binary: 1 = no 2 = yes  Binary: 0 = no	0 = female 1 = male  Scale: range AGE  Binary: 1 = no 2 = yes  Binary: 1 = no 2 = yes  DIABETES  0 = no	0 = female       M = male         1 = male       M = male         Scale: range       AGE       Numeric         Binary:       Dat_Living_Arrangements       A = living alone         B = institutional living       C = other living arrangement       D = living with someone else         Binary:       N = no       Y = yes         2 = yes       Note: "N" means that the patient did not require assistance with ADLs prior to stroke.         Binary:       DIABETES       N = no         0 = no       Y = yes

O = no	TIA prior to stroke	Binary:	PREV_Stroke_TIA	N = no	Previous TIA or ischemic stroke, nominal:
TIA and previous ischemic stroke are not distinguished.  Stroke diagnosis  Nominal, 3 levels:  1 = I61 2 = I63 3 = I64  Reperfusion  1 = both IVT and endovascular thrombectomy 2 = endovascular thrombectomy 2 = endovascular thrombectomy only 3 = IVT only  NIHSS awareness  Ordinal: range 0-3  Stroke diagnosis, nominal:  1 = ischemic stroke 2 = intracerebral haemorrhage 1 = I63 2 = I63 3 = non-stroke 2 = I61 3 = I64  Reperfusion  1 = both IVT and endovascular thrombectomy 1 = both IVT and endovascular thrombectomy 2 = endovascular thrombectomy 3 = IVT only  NIHSS 1 = not alert, but arousable  NIHSS 1 = not alert 1 = not alert, but arousable  Ordinal: range 0-3		0 = no		Y = yes	0 = no
Stroke diagnosis  Nominal, 3 levels:  1 = 161 2 = 163 3 = 164  Reperfusion  1 = both IVT and endovascular thrombectomy 2 = endovascular thrombectomy only 3 = IVT only  NIHSS awareness  Nominal, 3 levels:  Diagnosis  1 = ischemic stroke 2 = intracerebral haemorrhage 1 = l63 2 = 161 3 = 164  Reperfusion  1 = both IVT and endovascular thrombectomy 1 = both IVT and endovascular thrombectomy 2 = endovascular thrombectomy 3 = IVT only  NIHSS awareness  Nominal, 3 levels: 1 = losh ischemic stroke 2 = intracerebral haemorrhage 1 = lo3 3 = 164  Reperfusion treatment, nominal: 1 = both IVT and endovascular thrombectomy 2 = endovascular thrombectomy only 3 = IVT only  NIHSS 1 = not alert, but arousable 0 = alert  NIHSS 1 = not alert		1 = yes	Note: In EFFECTS, previous	U = unknown	1 = yes
Stroke diagnosis  Nominal, 3 levels:  1 = I61 2 = I63 3 = I64  Reperfusion  1 = both IVT and endovascular thrombectomy 2 = endovascular thrombectomy only 3 = IVT only  NIHSS awareness  Diagnosis  1 = ischemic stroke 2 = intracerebral haemorrhage 1 = I63 3 = non-stroke 2 = I61 3 = I64  Reperfusion treatment, nominal: 1 = both IVT and endovascular thrombectomy 1 = both IVT and endovascular thrombectomy 2 = endovascular thrombectomy only 3 = IVT only  NIHSS awareness  Ordinal: range 0-3  Stroke_NIHSS_1a  Diagnosis  1 = ischemic stroke 2 = intracerebral haemorrhage 1 = I63 3 = I64  Reperfusion treatment, nominal: 1 = both IVT and endovascular thrombectomy 2 = endovascular thrombectomy only 3 = IVT only  NIHSS 1 = not alert, but arousable 0 = alert 0 = alert 0 = alert 0 = alert			TIA and previous ischemic		2 = unknown
1 = I61   2 = intracerebral haemorrhage   2 = I63   3 = non-stroke   2 = I61   3 = I64     Reperfusion   1 = both IVT and endovascular thrombectomy thrombectomy   2 = endovascular thrombectomy only thrombectomy only   3 = IVT only   3 = IVT only   1 = not alert, but arousable   0 = alert   1 = I63   2 = I61   3 = I64     Reperfusion   1 = both IVT and endovascular thrombectomy thrombectomy   1 = both IVT and endovascular thrombectomy   1 = both IVT and endovascular thrombectomy   2 = endovascular thrombectomy only   3 = IVT only   3 = IVT only   3 = IVT only   0 = alert   NIHSS 1a, awareness, ordinal:   1 = not alert, but arousable   0 = alert   0 = alert			stroke are not distinguished.		
2 = I63   3 = non-stroke   2 = I61   3 = I64	Stroke diagnosis	Nominal, 3 levels:	Diagnosis	1 = ischemic stroke	Stroke diagnosis, nominal:
Reperfusion   1 = both IVT and endovascular thrombectomy   2 = endovascular thrombectomy only   2 = endovascular thrombectomy only   3 = IVT only   3 = IVT only   3 = IVT only   NIHSS awareness   Ordinal: range 0-3   Stroke_NIHSS_1a   0 = alert   NIHSS 1a, awareness, ordinal:   1 = not alert, but arousable   0 = alert   0 = alert		1 = I61		2 = intracerebral haemorrhage	1 = I63
Reperfusion  1 = both IVT and endovascular thrombectomy 2 = endovascular thrombectomy only 3 = IVT only  NIHSS awareness  1 = both IVT and endovascular thrombectomy 1 = both IVT and endovascular thrombectomy 2 = endovascular thrombectomy only 3 = IVT only  Stroke_NIHSS_1a  0 = alert 1 = not alert, but arousable  NIHSS 1a, awareness, ordinal: 0 = alert		2 = I63		3 = non-stroke	2 = I61
thrombectomy 2 = endovascular thrombectomy only thrombectomy only 3 = IVT only  1 = both IVT and endovascular thrombectomy 2 = endovascular thrombectomy only 3 = IVT only  NIHSS awareness  Ordinal: range 0–3  Stroke_NIHSS_1a  0 = alert 1 = not alert, but arousable  0 = alert 0 = alert 0 = alert		3 = I64			3 = I64
2 = endovascular thrombectomy only thrombectomy only 3 = IVT only  NIHSS awareness  Ordinal: range 0-3  Stroke_NIHSS_1a  2 = endovascular thrombectomy only 3 = IVT only  NIHSS awareness  NIHSS 1a, awareness, ordinal: 1 = not alert, but arousable  0 = alert  0 = alert  0 = alert	Reperfusion	1 = both IVT and endovascular	Thrombolysis_Trombectomy	1 = both IVT and endovascular	Reperfusion treatment, nominal:
thrombectomy only 3 = IVT only  NIHSS awareness  Ordinal: range 0–3  Stroke_NIHSS_1a  0 = alert 1 = not alert, but arousable  NIHSS 1a, awareness, ordinal: 0 = alert 0 = alert		thrombectomy		thrombectomy	1 = both IVT and endovascular thrombectomy
3 = IVT only  Ordinal: range 0–3  Stroke_NIHSS_1a  0 = alert 1 = not alert, but arousable  0 = alert 0 = alert		2 = endovascular		2 = endovascular	2 = endovascular thrombectomy only
NIHSS awareness Ordinal: range 0–3 Stroke_NIHSS_1a 0 = alert 1 = not alert, but arousable 0 = alert 0 = alert		thrombectomy only		thrombectomy only	3 = IVT only
1 = not alert, but arousable $0 = alert$		3 = IVT only		3 = IVT only	
	NIHSS awareness	Ordinal: range 0–3	Stroke_NIHSS_1a	0 = alert	NIHSS 1a, awareness, ordinal:
with minimal stimulation $1 = \text{not alert}$ , but arousable with minimal				1 = not alert, but arousable	0 = alert
				with minimal stimulation	1 = not alert, but arousable with minimal
2 = not alert, requires repeated stimulation				2 = not alert, requires repeated	stimulation
stimulation 2 = not alert, requires repeated stimulation				stimulation	2 = not alert, requires repeated stimulation
3 = coma $3 = coma$				3 = coma	3 = coma
NIHSS orientation Ordinal: range 0–2 Stroke_NIHSS_1b 0 = answers both correctly NIHSS 1b, orientation, ordinal:	NIHSS orientation	Ordinal: range 0–2	Stroke_NIHSS_1b	0 = answers both correctly	NIHSS 1b, orientation, ordinal:
1 = answers one correctly $0 = $ answers both correctly				1 = answers one correctly	0 = answers both correctly
2 = answers both incorrectly $1 = $ answers one correctly				2 = answers both incorrectly	1 = answers one correctly
2 = answers both incorrectly					2 = answers both incorrectly

NIHSS understanding	Ordinal: range 0–2	Stroke_NIHSS_1c	0 = obeys both correctly	NIHSS 1c, understanding, ordinal:
			1 = obeys one correctly	0 = obeys both correctly
			2 = obeys both incorrectly	1 = obeys one correctly
				2 = obeys both incorrectly
NIHSS eye movement	Ordinal: range 0–2	Stroke_NIHSS_2	0 = normal	NIHSS 2, eye movement, ordinal:
			1 = partial gaze palsy	0 = normal
			2 = total gaze paresis	1 = partial gaze palsy
				2 = total gaze paresis
NIHSS visual field	Ordinal: range 0–3	Stroke_NIHSS_3	0 = no visual field loss	NIHSS 3, visual field, ordinal:
			1 = partial hemianopia	0 = no visual field loss
			2 = complete hemianopia	1 = partial hemianopia
			3 =bilateral hemianopia	2 = complete hemianopia
				3 = bilateral hemianopia
NIHSS facial palsy	Ordinal: range 0–3	Stroke_NIHSS_4	0 = normal symmetrical	NIHSS 4, facial palsy, ordinal:
			movement	0 = normal symmetrical movement
			1 = minor paralysis	1 = minor paralysis
			2 = partial paralysis	2 = partial paralysis
			3 = complete paralysis	3 = complete paralysis
NIHSS motor arm: right	Ordinal: range 0–4	Stroke_NIHSS_7	0 = normal	NIHSS 5, right motor arm, ordinal:
			1 = drift	0 = normal
			2 = some effort against gravity	1 = drift
			3 = no effort against gravity	2 = some effort against gravity
			4 = no effort against gravity	3 = no effort against gravity
				4 = no effort against gravity
			3 =bilateral hemianopia  0 = normal symmetrical movement  1 = minor paralysis  2 = partial paralysis  3 = complete paralysis  0 = normal  1 = drift  2 = some effort against gravity  3 = no effort against gravity	2 = complete hemianopia 3 = bilateral hemianopia NIHSS 4, facial palsy, ordinal: 0 = normal symmetrical movement 1 = minor paralysis 2 = partial paralysis 3 = complete paralysis NIHSS 5, right motor arm, ordinal: 0 = normal 1 = drift 2 = some effort against gravity 3 = no effort against gravity

NIHSS motor arm: left	Ordinal: range 0–4	Stroke_NIHSS_8	0 = normal	NIHSS 6, left motor arm, ordinal:
			1 = drift	0 = normal
			2 = some effort against gravity	1 = drift
			3 = no effort against gravity	2 = some effort against gravity
			4 = no effort against gravity	3 = no effort against gravity
				4 = no effort against gravity
NIHSS motor leg: right	Ordinal: range 0–4	Stroke_NIHSS_5	0 = normal	NIHSS 7, right motor leg, ordinal:
			1 = drift	0 = normal
			2 = some effort against gravity	1 = drift
			3 = no effort against gravity	2 = some effort against gravity
			4 = no effort against gravity	3 = no effort against gravity
				4 = no effort against gravity
NIHSS motor leg: left	Ordinal: range 0–4	Stroke_NIHSS_6	0 = normal	NIHSS 8, left motor leg, ordinal:
			1 = drift	0 = normal
			2 = some effort against gravity	1 = drift
			3 = no effort against gravity	2 = some effort against gravity
			4 = no effort against gravity	3 = no effort against gravity
				4 = no effort against gravity
NIHSS ataxia	Ordinal: range 0–2	Stroke_NIHSS_9	0 = no ataxia	NIHSS 9, ataxia, ordinal:
			1 = present in one limb	0 = no ataxia
			2 = present in two limbs	1 = present in one limb
				2 = present in two limbs
NIHSS sensory	Ordinal: range 0–2	Stroke_NIHSS_10	0 = normal	NIHSS 10, sensory, ordinal:
			1 = mild-to-moderate sensory	0 = normal
			loss	1 = mild-to-moderate sensory loss
			2 = severe or total sensory loss	2 = severe or total sensory loss

NIHSS language	Ordinal: range 0–3	Stroke_NIHSS_11	0 = no aphasia	NIHSS 11, language, ordinal:
			1 = mild-to-moderate aphasia	0 = no aphasia
			2 = severe aphasia	1 = mild-to-moderate aphasia
			3 = mute	2 = severe aphasia
				3 = mute
NIHSS dysarthria	Ordinal: range 0–2	Stroke_NIHSS_12	0 = normal	NIHSS 12, dysarthria, ordinal:
			1 = mild-to-moderate	0 = normal
			dysarthria	1 = mild-to-moderate dysarthria
			2 = severe dysarthria	2 = severe dysarthria
			3 = untestable	3 = untestable
NIHSS neglect	Ordinal: range 0–2	Stroke_NIHSS_13	0 = normal	NIHSS 13, neglect, ordinal:
			1 = inattention to one modality	0 = normal
			2 = severe hemi-inattention	1 = inattention to one modality
				2 = severe hemi-inattention
NIHSS total score	Ordinal: range 0–36	NIHSS	Ordinal: range 0–26	NIHSS total score, ordinal: range 0-36
MoCA visuospatial/executive	Ordinal: range 0–5	MOCA_Base_Viso_exe	Ordinal: range 0–5	MoCA visuospatial/executive functions: trial +
functions: 1A + cube + clock				cube + clock, ordinal: range 0–5
MoCA task: naming	Ordinal: range 0–3	MOCA_Base_Name	Ordinal: range 0–3	MoCA: naming, ordinal: range 0–3
MoCA attention task: numbers	Ordinal: range 0–2	MOCA_Base_Att_fwd_back	Ordinal: range 0–2	MoCA: digit span, ordinal: range 0-2
forward and backward				
MoCA attention task: knock on	Nominal:	MOCA_Base_Att_knock	Nominal:	MoCA: tap on A, binary:
A	0 = no point		0 = no point	0 = no point
	1 = 1 point		1 = 1 point	1 = 1 point
MoCA attention task:	Ordinal: range 0–3	MOCA_Base_Att_subtract	Ordinal: range 0–3	MoCA: serial 7, ordinal: range 0–3
subtraction 100 - 7				

MoCA language task: sentence	Ordinal: range 0–2	MOCA_Base_Lang_rep	Ordinal: range 0–2	MoCA: repetition, ordinal: range 0–2
repetition, 2				
MoCA language task: fluency,	Nominal:	MOCA_Base_Fluency	Nominal:	MoCA: fluency, binary:
F word	0 = no point		0 = no point	0 = no point
	1 = 1 point		1 = 1 point	1 = 1 point
MoCA abstraction task:	Ordinal: range 0–2	MOCA_Base_Abstraction	Ordinal: range 0–2	MoCA: abstraction, ordinal: range 0–2
categorizing of two tasks				
MoCA memory task: recall of	Ordinal: range 0–5	MOCA_Base_Delay	Ordinal: range 0–5	MoCA: delayed recall, ordinal: range 0–5
five words				
MoCA orientation task: six	Ordinal: range 0–6	MOCA_Base_Orientation	Ordinal: range 0–6	MoCA: orientation, ordinal: range 0-6
questions				
MoCA total score	Ordinal: range 1–30	MOCA_Base_Total	Ordinal: range 1–30	MoCA total score, ordinal: range 1–30
MoCA school ≤12 years, +1	Binary:	MOCA_Education	0 = no	MoCA education, binary:
point	0 = no		1 = yes, +1 point	0 = no,
	1 = yes, +1 point			1 = yes, +1 point
				A telephone version of the MoCA, ordinal: range
				0–22
				Aggregated score of the MoCA items: delayed
				recall, digit span, list letters, serial 7, sentence
				repetition, fluency, abstraction, and orientation
				Short-form MoCA, ordinal: range 0–14
				Aggregated score of the MoCA items: delayed
				recall, serial 7, and orientation

				NINDS-CSN-MoCA, ordinal: range 0-12
				Aggregated score of the MoCA items: delayed
				recall, fluency, and orientation
Discharge destination*	Ordinal, 10 levels:	Discharge residence	1 = own home	Discharge destination, ordinal:
	1 = own accommodation		2 = relatives' home	1 = own or relatives' home (Väststroke 1,
	2 = arranged accommodation		3 = residential home	EFFECTS 1 and 2)
	4 = another acute-care		4 = long-term NHS home	2 = residential home (Väststroke 2, EFFECTS 3
	department		6 = another hospital	and 4)
	5 = geriatrics/rehabilitation		7 = other	3 = other hospital (Väststroke 4, 5, 11, and 12,
	6 = deceased during treatment			EFFECTS 6)
	7 = other acute-care			4 = other (Väststroke 7, 9, and 13, EFFECTS 7)
	department (e.g. the patient is			
	resident in another country)			
	9 = not known			
	11 = still in hospital			
	12 = another stroke unit for			
	aftercare			
	13 = health centre with			
	emergency beds			

Abbreviations: ADL, activity of daily living; IVT, intravenous thrombolysis; MoCA, Montreal Cognitive Assessment; NIHSS, National Institutes of Health Stroke Scale; NINDS-CSN, National Institute of Neurological Disorders and Stroke—Canadian Stroke Network; TIA, transient ischemic attack.

Supplemental material

	Categories	Total sample	Väststroke	EFFECTS
		N =	N =	N =
Sex, n (%)	Male			
	Female			
Age, y, mean (SD)				
Living arrangement, n (%)	Lives alone			
	Living with someone else			
Education, 1 point for a maximum of 12 years, n (%)	Yes			
	No			
Assistance with ADLs prior to stroke, n (%)	No			
	Yes			
Having diabetes, n (%)	No			
	Yes			
	Unknown			
Previous TIA or ischemic stroke, n (%)	No			
	Yes			
	Unknown			
Stroke diagnosis, n (%)	I61			
	163			
	I64			

Reperfusion treatment, n (%)	Both IVT and ET
	ET only
	IVT only
NIHSS, median (min-max)	
MoCA, median (min-max)	
Discharge destination, n (%)	Own or relatives' home
	Residential or long-term
	NHS home
	Other hospitals
	Other

Note: The sum may vary due to missing data.

Abbreviations: ADL, activity of daily living; IVT, intravenous thrombolysis; IQR, interquartile range; MoCA, Montreal Cognitive Assessment; NIHSS, National Institutes of Health Stroke Scale; NHS, National Health System; SD, standard deviation; ET, endovascular thrombectomy; TIA, transient ischemic attack.

Variables with missing values, n (%):

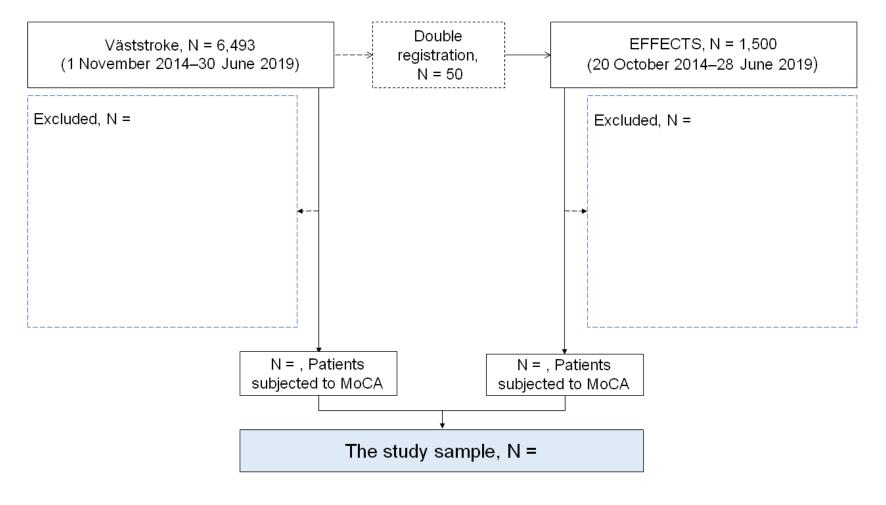
## **Supplementary Table 3.** Description of cognitive functions (template table).

	Total sample	Väststroke	EFFECTS
	N =	N =	N =
Points	n (%)	n (%)	n (%)
0			
1			
2			
3			
4			
5			
0			
1			
2			
3			
0			
1			
2			
0			
1			
0			
1			
	0 1 2 3 4 5 0 1 2 3 0 1 2 3 0 1 2 0 1 0 1	Points n (%)  0 1 2 3 4 5 0 1 2 3 0 1 2 3 0 1 2 0 1 0 1 0 1	N = N = N =   N =   N (%)   N (%)

	2			
	3			
Repetition	0			
	1			
	2			
Fluency	0			
	1			
Abstraction	0			
	1			
	2			
Delayed recall	0			
	1			
	2			
	3			
	4			
	5			
Orientation	0			
	1			
	2			
	3			
	4			
	I	I	I	I

	5		
	6		
MoCA score	Median (IQR)		
T-MoCA	Median (IQR)		
NINDS-CSN-MoCA	Median (IQR)		
SF-MoCA	Median (IQR)		

Abbreviations: IQR, interquartile range; MoCA, Montreal Cognitive Assessment (score range: 1–30); NINDS-CSN–MoCA, National Institute of Neurological Disorders and Stroke–Canadian Stroke Network MoCA (score range: 0–12); SF-MoCA, short-form MoCA (score range: 0–14); T-MoCA, a telephone version of the MoCA (score range: 0–22).



**Supplementary Figure.** Flowchart of patient selection (template diagram). Abbreviations: MoCA, the Montreal Cognitive Assessment; EFFECTS, Efficacy of Fluoxetine—a randomisEd Controlled Trial in Stroke.