Effect of Exercise on Activities of Daily Living among Stroke Patients: An Embedded Mixed Method Study

Code No. ☐

Contact numbers: ☐ **Other Phone No.:** ☐

Hospital Setting: 1. HTH ☐ 2. RTH ☐ 3. ShHCC ☐

Group (case-control study): 1. Case ☐ 2. Control ☐

Group (Experimental study): 1. Experimental ☐ 2. Comparison ☐

Follow-up assessment: 1st (Baseline) ☐ 2nd (after 8 weeks) ☐ 3rd (after 12 weeks) ☐

Part one: Sociodemographic characteristics

Age: ☐ years old

Sex: 1. Male ☐ 2. Female ☐

Level of education:
0. Cannot read and write ☐
1. Can read and write ☐
2. Primary school graduated ☐
3. Intermediate school graduated ☐
4. Secondary school graduated ☐
5. Under-graduated ☐
6. Post-graduated ☐

Marital status: 1. Never married ☐ 2. Married ☐ 3. Separated ☐ 4. Divorced ☐ 5. Widowed/er ☐

Occupational status:
1. Paid work ☐
2. Self employed (own business or farming) ☐
3. Non-paid work (volunteer or charity) ☐
4. Student ☐
5. Keeping house/homemaker ☐
6. Retired ☐
7. Unemployed (health reason) ☐
8. Unemployed (other reason) ☐

Residency area: 1. Urban ☐ 2. Rural ☐

Part two: Past stroke history

Duration of stroke (since of diagnosis): ☐ days

Type of stroke: 1. Ischemic stroke ☐ 2. Hemorrhagic stroke ☐

Part three: Anthropometric measurements and risk factors of stroke

1. **Hypertension:** 0. No☐ 1. Yes☐
   - **Systolic Blood Pressure:** ☐ mmHg
   - **Diastolic Blood Pressure:** ☐ mmHg
2. **Diabetes Mellitus**: 0. No☐ 1. Yes☐
   - **Blood Glucose Level:** ☐ mg/dl
3. **Hypercholesterolemia:** 0. No☐ 1. Yes☐
   - **Serum Cholesterol Level:** ☐ mg/dl
4. **Obesity (BMI):** 0. No ☐ 1. Yes ☐
   - **Weight:** ☐ kg
   - **Height:** ☐ cm
5. **Heart Disease:** 0. No ☐ 1. Yes ☐
6. **Smoking (current):** 0. No ☐ 1. Yes ☐
7. **Family history of stroke:** 0. No ☐ 1. Yes ☐
8. **Physical inactivity:** 0. No ☐ 1. Yes ☐
9. **Others (specify it ……).** 0. No ☐ 1. Yes☐

Part four: Severity assessment of stroke

SN	Problems	Score					
1.A	Level of Consciousness	0	1	2	3		
1.B	LOC question (Age, Month)	0	1	2			
1.C	LOC question (Patient Opens and Close Eyes on Command)	0	1	2			
2	Best Gaze (Horizontal Eye Movement)	0	1	2			
3	Visual field test	0	1	2	3		
4	Facial Palsy	0	1	2	3		
5.A	Motor Arm (Left)	0	1	2	3	4	N/A
5.B	Motor Arm (Right)	0	1	2	3	4	N/A
6.A	Motor Leg (Left)	0	1	2	3	4	N/A
5.B	Motor Leg (Right)	0	1	2	3	4	N/A
7	Limb Ataxia	0	1	2			
8	Sensory	0	1	2			
9	Language	0	1	2	3		
10	Speech (Dysarthria)	0	1	2			N/A
11	Extinction and Inattention	0	1	2			

0= No Stroke Symptoms. 1-4= Minor Stroke. 5-15= Moderate Stroke.

16-20= Moderate to Severe Stroke. 21-42= Severe Stroke.

Part five: Evaluation the effect of the exercise rehabilitation program on the patient's health and life (Stroke Impact Scale Version 3.0)

1. These questions are about the Physical Problems which may have occurred as a result of your stroke.

1. In the past week, how would you rate the strength of your....	A lot of strength	Quite a bit of strength	Some strength	A little strength	No strength at all
a. Arm that was most affected by your stroke?	5	4	3	2	1
b. Grip of your hand that was most affected by your stroke?	5	4	3	2	1
c. Leg that was most affected by your stroke?	5	4	3	2	1
d. Foot/ankle that was most affected by your stroke?	5	4	3	2	1

2. These questions are about your <u>Memory and Thinking</u>.

2. In the past week, how difficult was it for you to...	**Not difficult at all**	**A little difficult**	**Somewhat difficult**	**Very difficult**	**Extremely difficult**
a. Remember things that people just told you?	5	4	3	2	1
b. Remember things that happened the day before?	5	4	3	2	1
c. Remember to do things (e.g. keep scheduled appointments or take medication)?	5	4	3	2	1
d. Remember the day of the week?	5	4	3	2	1
e. Concentrate?	5	4	3	2	1
f. Think quickly?	5	4	3	2	1
g. Solve everyday problems?	5	4	3	2	1

3. These questions are about how you <u>Feel</u>, about Changes in your <u>Mood</u> and about your ability to control your <u>Emotions</u> since your stroke.

3. In the past week, how often did you...	**None of the time**	**A little of the time**	**Some of the time**	**Most of the time**	**All of the time**
a. Feel sad?	5	4	3	2	1
b. Feel that there is nobody you are close to?	5	4	3	2	1
c. Feel that you are a burden to others?	5	4	3	2	1
d. Feel that you have nothing to look forward to?	5	4	3	2	1
e. Blame yourself for mistakes that you made?	5	4	3	2	1
f. Enjoy things as much as ever?	5	4	3	2	1
g. Feel quite nervous?	5	4	3	2	1
h. Feel that life is worth living?	5	4	3	2	1
i. Smile and laugh at least once a day?	5	4	3	2	1

4. The following questions are about your ability to <u>Communicate</u> with other people, as well as your ability to <u>Understand</u> what you read and what you hear in a conversation.

4. In the past week, how difficult was it to...	**Not difficult at all**	**A little difficult**	**Somewhat difficult**	**Very difficult**	**Extremely difficult**
a. Say the name of someone who was in front of you?	5	4	3	2	1
b. Understand what was being said to you in a conversation?	5	4	3	2	1
c. Reply to questions?	5	4	3	2	1
d. Correctly name objects?	5	4	3	2	1
e. Participate in a conversa-tion with a group of people?	5	4	3	2	1
f. Have a conversation on the telephone?	5	4	3	2	1
g. Call another person on the telephone, including selecting the correct phone number and dialing?	5	4	3	2	1

5. The following questions ask about activities you might do during a typical day.

5. In the past 2 weeks, how difficult was it to...	**Not difficult at all**	**A little difficult**	**Somewhat difficult**	**Very difficult**	**Could not do at all**
a. Cut your food with a knife and fork?	5	4	3	2	1
b. Dress the top part of body?	5	4	3	2	1
c. Bathe yourself?	5	4	3	2	1
d. Clip your toenails?	5	4	3	2	1
e. Get to the toilet on time?	5	4	3	2	1
f. Control your bladder (not have an accident)?	5	4	3	2	1
g. Control your bowels (not have an accident)?	5	4	3	2	1
h. Do light household tasks/ chores (e.g. dust, make a bed, take out garbage, do the dishes)?	5	4	3	2	1
i. Go shopping?	5	4	3	2	1
j. Do heavy household chores (e.g. vacuum, laundry or yard work)?	5	4	3	2	1

6. The following questions are about your ability to be Mobile at home and in the community.

6. In the past 2 weeks, how difficult was it to...	**Not difficult at all**	**A little difficult**	**Somewhat difficult**	**Very difficult**	**Could not do at all**
a. Stay sitting without losing your balance?	5	4	3	2	1
b. Stay standing without losing your balance?	5	4	3	2	1
c. Walk without losing your balance?	5	4	3	2	1
d. Move from a bed to a chair?	5	4	3	2	1
e. Walk one block?	5	4	3	2	1
f. Walk fast?	5	4	3	2	1
g. Climb one flight of stairs?	5	4	3	2	1
h. Climb several flights of stairs?	5	4	3	2	1
i. Get in and out of a car?	5	4	3	2	1

7. The following questions are about your ability to Use your hand that was MOST AFFECTED by your stroke.

7. In the past 2 weeks, how difficult was it to use your hand that was most affected by your stroke to...	**Not difficult at all**	**A little difficult**	**Somewhat difficult**	**Very difficult**	**Could not do at all**
a. Carry heavy objects (e.g. bag of groceries)?	5	4	3	2	1
b. Turn a doorknob?	5	4	3	2	1
c. Open a can or jar?	5	4	3	2	1
d. Tie a shoe lace?	5	4	3	2	1
e. Pick up a dime?	5	4	3	2	1

8. The following questions are about how stroke has affected your ability to participate in the activities that you usually do, things that are meaningful to you and help you to find purpose in life.

8. During the past 4 weeks, how much of the time have you been limited in...	**None of the time**	**A little of the time**	**Some of the time**	**Most of the time**	**All of the time**
a. Your work (paid, voluntary or other)	5	4	3	2	1
b. Your social activities?	5	4	3	2	1
c. Quiet recreation (crafts, reading)?	5	4	3	2	1
d. Active recreation (sports, outings, travel)?	5	4	3	2	1
e. Your role as a family member and/or friend?	5	4	3	2	1
f. Your participation in spiritual or religious activities?	5	4	3	2	1
g. Your ability to control your life as you wish?	5	4	3	2	1
h. Your ability to help others?	5	4	3	2	1

<u>Part six</u>: Barriers to adherence to the regular schedule of the post-stroke exercise rehabilitation program

1. What did you find concerning the organizational services in facilitating your exercise program?
2. I would like to hear from you about your experience of participating in the exercise program?
3. What did you get interested or disinterested, when you were involved in the exercise program?
4. What do you think about the positive and negative aspects of the exercise program?
5. Can you tell me more about the barriers that made you withdrew from the exercise program?
6. How do you feel that the exercise program is affecting your activity limitations?
7. How do you think exercise is managing and maintaining you?
8. How did the exercise make you feel better?
9. How did you solve the problems with the exercise program?
10. What was your opinion about the content of the exercise program?