

*The Relationship between Physical Activity
Levels and Pain Coping Strategies among
Stroke Survivors of Bangladesh: A Cross-
Sectional Study.*



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Background

- Stroke is one of the leading causes of long-term disability worldwide, particularly in low- and middle-income countries. Many stroke survivors experience persistent pain that affects daily activities and quality of life and is strongly influenced by coping behaviors.
- **Physical activity (PA)**, a core component of occupational therapy, plays a crucial role in functional recovery and participation after stroke.
- However, limited PA may contribute to **maladaptive pain coping**, leading to fear-avoidance, dependency, and reduced engagement in meaningful occupations.

Problem Statement

- Persistent pain remains a **hidden barrier** to recovery for many stroke survivors.
- Pain reduces engagement in **daily activities and meaningful occupations**
- Low physical activity may reinforce **ineffective pain coping behaviors**.
- In resource-limited settings like Bangladesh, pain coping is **rarely addressed systematically**.
- Evidence linking **physical activity and pain coping strategies** is scarce

Aim and Objectives

Aim: Identify the relationship between PA levels and pain coping strategies among adult stroke survivors in Bangladesh.

Objectives:

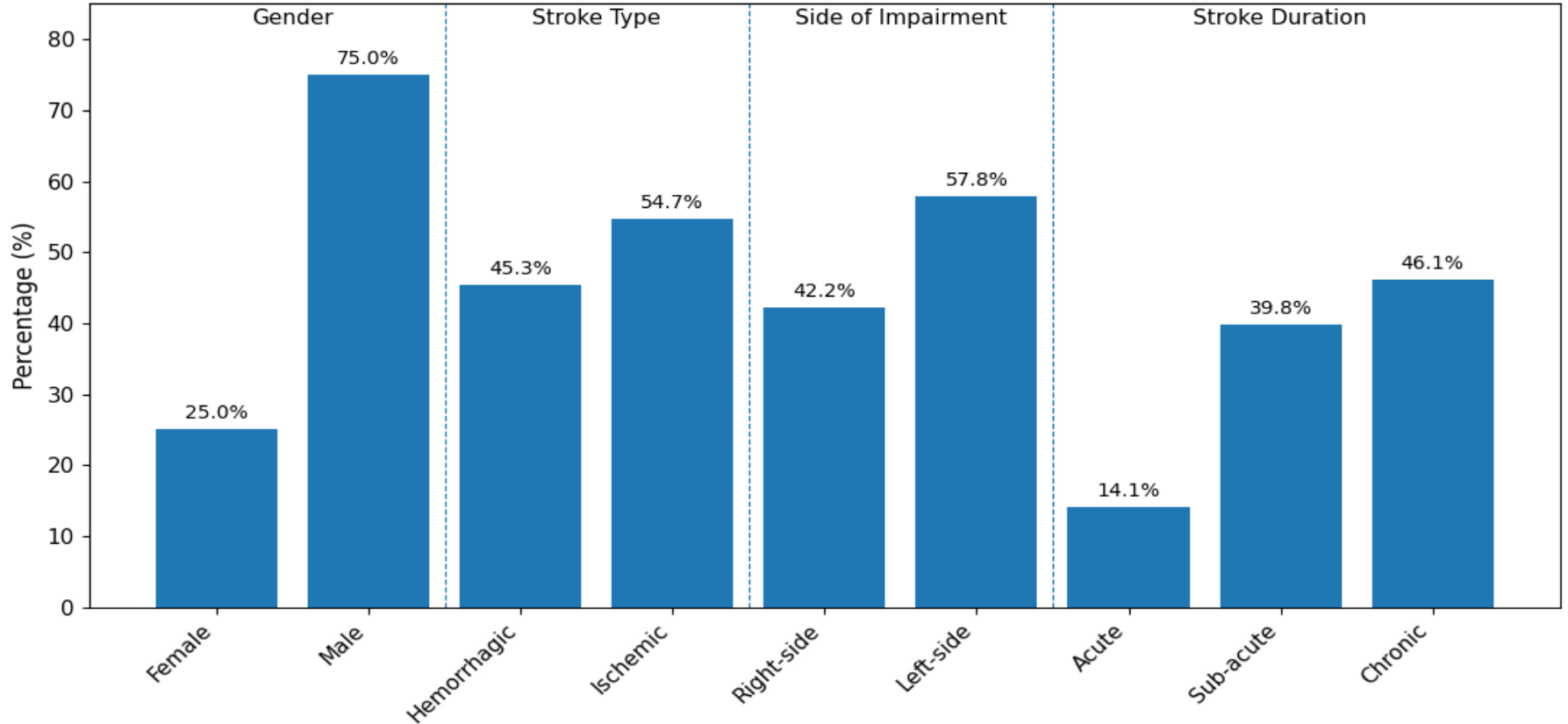
- ✓ To assess the current levels of PA & pain coping strategies among stroke survivors.
- ✓ To assess the association between PA levels and the usage of different pain coping strategies among stroke survivors.

Methodology

<i>Design</i>	<i>Participants</i>	<i>Data Collection Instrument</i>	<i>Data Analysis</i>
Analytical cross- sectional Quantitative study	128 Stroke survivors.	1. International Physical Activity Questionnaire (IPAQ) 2. Pain Coping Inventory (PCI)	Data were analyzed using SPSS v25

Demographic profile

Participant Characteristics (n = 128)



Level of Physical Activity among stroke survivors

Variable		Frequency(n)	Percentage (%)
PA	Low (less than 600 MET-minutes/week)	41	32.0
	Moderate (600-2999 MET-minutes/week)	84	65.6
	Category High (more than 2999 MET-minutes/week)	3	2.3
<p>Mean= 1251.96 MET-minutes/week, SD (± 785.86), Minimum= 198.00 MET-minutes/week, Maximum= 3340.00MET-minutes/week.</p>			

Level of pain coping strategies among stroke survivors

Active Strategies			
Items	Mean \pm SD	Minimum	Maximum
Pain Transformation (4-16)	8.19 \pm 1.94	5	13
Distraction (5-20)	10.98 \pm 1.90	6	15
Reducing Demands (3-12)	6.16 \pm 2.34	3	12
Total Active strategies (12-48)	25.32 \pm 3.72	17	32
Passive Strategies			
Retreating (7-28)	15.59 \pm 3.55	9	24
Worrying (9-36)	20.23 \pm 4.01	12	31
Resting (5-20)	15.33 \pm 2.01	9	20
Total passive (21-84)	51.14 \pm 6.45	33	71

Spearman's correlation matrix

	1	2	3
1. Physical Activity	1		
2. Active coping strategy	.383**	1	
3. Passive coping strategy	-.356**	-.222*	1

Note: ** $p < 0.01$, * $p < 0.05$, 1Physical activity, 2= Active coping strategy, 3= Passive coping strategy.

Multiple linear regression analysis for total physical activity score and associated factors

Predictor Variables	<u>Physical Activity</u>			<u>Physical Activity</u>		
	Unadjusted			Adjusted		
	B(95% CI)	R^2	P value	B (95% CI)	R^2	p-value
Active coping strategy	83.978 (49.76-118.19)	0.157	0.001	57.34(24.14- 90.55)	0.347	.001
Passive coping strategy	-38.880 {(-59.23) – (-18.52)}	0.102	0.001	-15.44(-34.90-4.02)		.119

Occupational Therapy Practice Implication

- Healthcare professionals should routinely assess pain coping strategies and PA levels among stroke survivors using standardized tools to identify individuals needing tailored support. Occupational therapists should implement individualized, structured rehabilitation plans that integrate both physical and psychological support to enhance recovery outcomes.
- Active coping strategies such as **goal-setting, problem-solving, and distraction techniques** should be promoted to encourage physical engagement and emotional resilience.
- Rehabilitation programs should be **culturally sensitive, affordable, and inclusive, to maximize participation and improve long-term outcomes.**

Conclusion

Active and passive pain coping strategies showed **opposing effects on physical activity** among stroke survivors. A one–standard-deviation increase in **active coping** was associated with a **substantial increase in physical activity**, whereas increased **passive coping** was linked to a meaningful decline in activity levels. **Pain severity emerged as a key barrier**, limiting survivors' ability to remain active. These findings highlight the need for rehabilitation programs that strengthen **active coping skills**, address pain effectively, and promote sustained participation, autonomy, and quality of life in community living.

DISCUSSION SESSION

