Examining social and leisure participation in elderly stroke survivors

Tufts University
Department of Occupational Therapy

Sarah M. Lubic, OT/s
Mentor: Elizabeth E. Marfeo, PhD, MPH, OT, OTD, OTR
Peer Collaborators: Emma Haan-Ospina, OT/s & Jenna K. Becker, OT/s

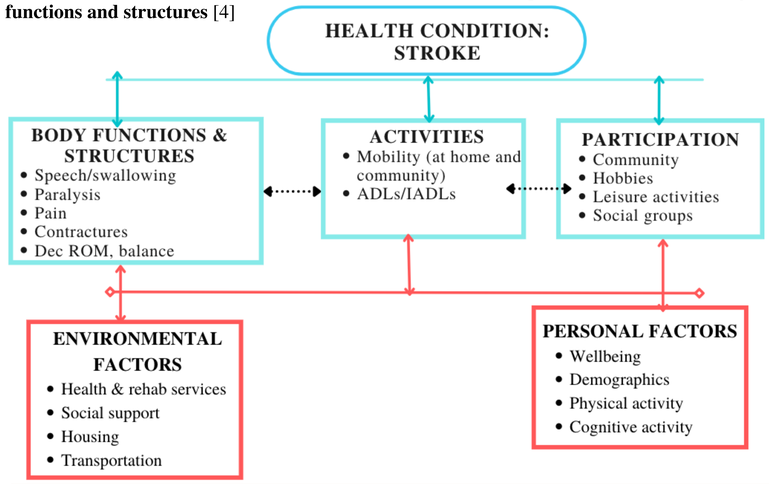
HPAL Health and Productive Aging Lab — Promoting Participation for All

Introduction

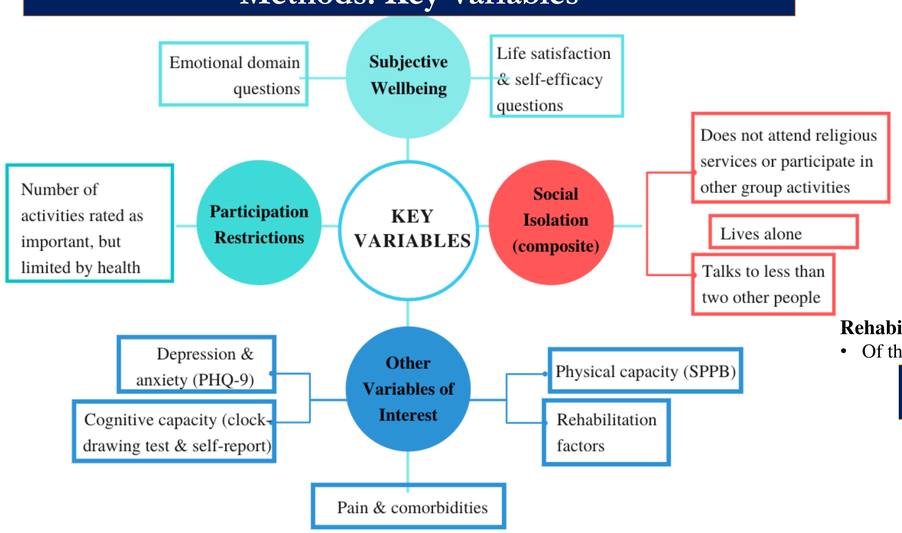
- Stroke is a leading cause of disability in older adulthood, can lead to difficulties participating in meaningful activities and maintaining quality of life [1]
- Several studies have shown that participation in social and leisure activities decline post-stroke and remain lower than pre-stroke levels over time, which may negatively impact stroke survivor's wellbeing [3]
- Notable studies using nationally representative survey data from the National Health and Aging Trends Study (NHATS) have found that stroke survivors may experience more participation restrictions; physical and cognitive capacity and depression and anxiety symptoms may contribute to participation restrictions among stroke survivors, but the nature of this relationship is unclear [1,2]
- **The current study examined the relationships between key variables that may influence participation among stroke survivors <1-year post-stroke**
- Data was used from the National Health & Aging Trends Study (NHATS), 2019

The ICF Framework

This study used the International Classification of Functioning, Disability, and Health (ICF) model to emphasize the **interconnected roles of environmental factors, personal factors, and body functions and structures** [4]



Methods: Key Variables



Methods: Overview

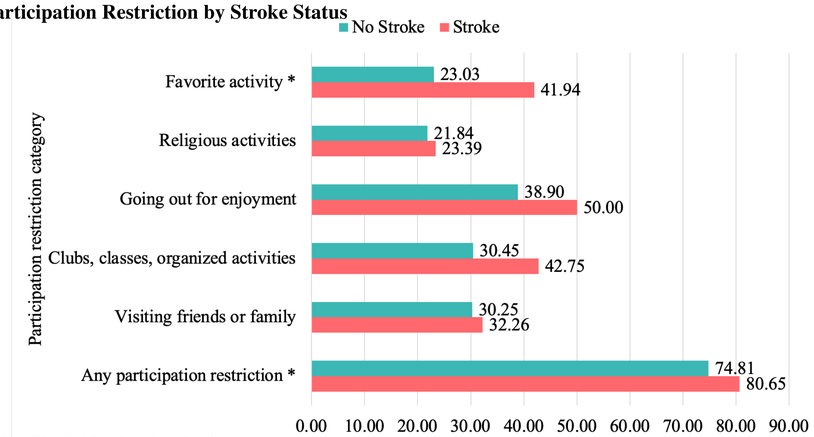
1. **Literature Review**: Gap identification & question development
2. **NHATS Data Review:** Variable selection & groupings, ICF mapping
3. **Data Cleaning:** Recoding variables & composite scores in SAS
4. **Data Analysis:** Descriptive statistics & bivariate analyses
5. **Interpretation:** Key findings, limitations, future directions

Demographics Summary

- 124 w/stroke
- 60% female
- 45% Aged 75-84
- 56% White
- 87% 2+ Comorbidities

Results

Participation Restriction by Stroke Status



Key Variables by Stroke Status

Variables	Stroke (n = 124)		No Stroke (n = 4,330)		p value
	n	%	n	Weighted %	
Personal factors					
Self-rated health					***.00063**
Poor-fair	59	47.58%	1089	21.21%	
Good-very good	61	49.20%	2849	65.64%	
Excellent	4	3.22%	388	10.88%	
Depression: PHQ2 (yes)	**34**	**27.42%**	**512**	**10.51%**	***<.0001**
Anxiety: PHQ2 (yes)	**26**	**20.97%**	**410**	**8.10%**	***<.0001**
Mental Health Symptoms (PHQ-9)					*<.0001
Moderate-Severe	26	25.00%	317	7.32%	
Clock-Drawing Test					*.0017
0: Not recognizable	4	4.00%	33	0.49%	
1: Severely distorted	3	3.00%	146	2.53%	
2: Moderately distorted	15	15.00%	364	7.25%	
Physical Capacity (SPPB)					*<.0001
0-3	58	46.77%	1086	25.08%	
4-6	20	16.13%	961	22.19%	
7-9	21	16.94%	1092	25.22%	
10-12	8	6.45%	750	17.32%	
Participation Restrictions (total)					***.0097**
2 restricted activities	31	25%	943	22.90%	
3 restricted activities	27	21.77%	586	13.77%	
4 restricted activities	12	9.68%	238	5.27%	
5 restricted activities	3	2.42%	64	1.23%	
Social Isolation (total score)					.5155
0: Severe social isolation	3	2.42%	301	8.48%	
1: Social isolation	13	10.48%	928	24.14%	
2-4: Socially integrated	86	69.35%	2685	65.21%	

Rehabilitation Factors

- Of the 124 stroke survivors, only **47.97%** received rehabilitation services in the last year

Duration

- 18.64% less than 1 month
- 49.15% 1 to 3 months
- 16.95% 4 to 5 months
- 15.25% 6 months or more

Goals

- 24.14% improve pain
- 67.24% improve strength
- 67.24% improve ROM
- 25.86% improve participation

Functioning

- 44.74% improved
- 52.63% stayed about the same
- 2.63% varied

Key Findings Summary

Participation

- A significantly greater percent of stroke survivors experienced **more than two participation restrictions** in valued activities
- They also reported **restriction in their favorite activity** due to health-related limitations.

Health Status

- A significantly greater percent of stroke survivors reported **symptoms indicative of depression and anxiety** according to the PHQ-2;
- A greater percent also scored **lower on measures of physical and cognitive capactiy**

Rehabilitation

- Less than **50% of stroke survivors reported receiving rehabilitation services** in the last year, and of those, only **25.86% reported goals to improve participation**
- A majority reported that their **functioning post-rehab stayed the same**

Wellbeing

- Stroke survivors also scored **significantly lower on the Subjective Wellbeing Scale** compared to those who did not experience a stroke

Discussion

- **In this national sample of recent stroke survivors (<1 year), a significant percent experienced restrictions in valued social and leisure activities.**
- Less than half of the stroke survivors in this sample received rehabilitation services in the last year; and of the group that received services, only 25% addressed goals for participation in activities.
- These findings are important because they indicate a gap in rehabilitation services for recent stroke survivors; early, comprehensive rehab that addresses stroke's impact across different domains of health and participation is vital to stroke survivorship [2].
- This study also supports that the most common goals for stroke rehabilitation include improving strength, endurance, and range-of-motion [5].
- Though these are important areas to address, they may not adequately improve participation and wellbeing; results from this study support previous findings that suggest that subjective wellbeing in stroke survivors' is lower than typically-aging populations [3,5]
- Social isolation was similar between the two study groups, which indicates that stroke may not primarily impact social isolation; more research is needed to explore this relationship.

Limitations & Future Research

Limitations

- Small sample size limits generalizability & statistical power to create predictive models
- Did not match groups for socio-demographics & comorbidities
- Stroke diagnosis & most other data derived from self-report
- Stroke diagnosis only reported in the last year – participation trends may change as individuals adapt to their condition
- NHATS – Medicare-only and oversamples the oldest age groups, results may not be generalizable to the stroke population

Future Research

- Larger sample size, more diverse sample characteristics
- Influence of predictor variables (physical & cognitive capacity, mental health) on participation
- Impact of time on participation
- Effectiveness of OT stroke interventions that address participation
- Correlation between participation and wellbeing
- COVID impacts

Contact & References: