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## Occupation-Focused Aquatic Therapy for Stroke Survivors

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# Occupation-Focused Aquatic Therapy for Stroke Survivors

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## BACKGROUND

Stroke is the 5<sup>th</sup> leading cause of death and can cause serious long-term disability, limiting mobility, thus decreasing participation in daily activities (CDC, 2022).

- These symptoms can affect the quality of life (QOL), decrease previous activities, socialize less, and experience frustration to these limitations.
- Previous studies have found that stroke survivors have poor health-related QOL (HRQoL) compared to the general population in Singapore (Yeoh et al., 2019).
- Aquatic therapy has been a prominent method to treat neurological conditions, such as stroke, Parkinsonism, multiple sclerosis, dementia, and cerebral palsy (Becker, 2020).
- Occupational therapists (OTs) in aquatic therapy can be beneficial in providing occupation-focused activities to focus on preparatory activities for occupational engagement. However, it is not as common due to a lack of knowledge of specific occupation-based activities in the aquatic setting (Franken et al., 2013).

## PROBLEM

Limited research on occupation-focused interventions and how participating in aquatic therapy impacts stroke survivors' QOL and engagement in meaningful activities

## PURPOSE

To conduct a qualitative research study on the impact of aquatic therapy on stroke survivors' QOL by utilizing OT's role in program development to promote occupational engagement.

## PROGRAM IMPLEMENTATION

### Program Goals:

1. To make OT in aquatic therapy more broadly available by promoting stroke survivors' QOL towards occupational engagement in aquatic rehabilitation programs
2. To utilize the knowledge gained from the project to educate aquatic therapists on how to better assimilate occupation-focused activities to meet occupational needs to promote stroke survivors' QOL
3. To generate positive relationships and communication between stroke survivors with OTs to explore the impact of occupation-focused aquatic therapy in their QOL during and after the project
4. To identify occupation-focused aquatic interventions for stroke survivors to promote QOL and occupational re-engagement.
5. To learn about stroke survivors' unmet needs and occupational barriers for occupational engagement

**Program Outline:** This program occurred over 12 weeks in 60-minute class sessions. Participants were interviewed to evaluate their current QOL to determine current physical, social, and mental deficits while participating in aquatic therapy.

### Capstone Sites:

- Albany Aquatics Center in collaboration with Physical Therapy Innovations
- Pacific Stroke Association
- Stroke Support Association

**Participants:** Two participants with left-sided deficits from a 5- and 16-year stroke.

### Interventions:

1. Loading/unloading "dishwasher"
2. Emptying/loading the "washer/dryer"
3. Squatting to discontinue need of high-raised toilet seat
4. Engaging in oral care and bathroom tasks with smooth transitions
5. BUE/BLE passive range of motion
6. Improving balance during community mobility

### Outcome Measures:

1. Stroke Impact Scale
2. Health-Related Quality of Life
3. Satisfaction Survey (pre, middle, post)

### Deliverables:

1. PowerPoint Presentation to stroke survivor support groups in the Bay Area
2. Program manual to Physical Therapy Innovations

## IMPLICATIONS

1. OT's role in aquatic therapy
2. Continue development of occupation-focused interventions
3. Addressing and understanding stroke survivors' unmet needs post-facility discharge due to lack of stroke follow-ups
4. Experienced challenges included insurance policies, medical comorbidities, and pool maintenance

## METHODS

### Literature Review:

1. Psychological impact on stroke survivors
2. Unmet needs of stroke survivors
3. Role of OTs in Stroke Rehabilitation
4. Current role of OTs in aquatic therapy
5. Aquatic therapy improving QOL
6. Occupation-focused interventions in aquatic therapy

### Needs Assessment:

1. Clinical observations
2. Stroke Impact Scale
3. Health-Related Quality of Life
4. Modified Interest Checklist
5. Satisfaction Survey (pre, middle, post)
6. Windshield survey

### Theoretical Framework:

Environmental-Health-Occupation-Well-Being (E-HOW) Model

## REFERENCES

References



Deliverables



This project does not include human subjects and does not require IRB approval.

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