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### Using the COPM with Veterans Who Have Sustained a Stroke

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Using the COPM with Veterans Who Have Sustained a Stroke

May 2019

This evidence project, submitted by

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has been approved and accepted  
in partial fulfillment of the requirements for the degree of  
Master of Science in Occupational Therapy from the University of Puget Sound

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Keywords: veterans, stroke, re-engagement, COPM

### Abstract

The authors collaborated with Mary Matthews-Brownell, OTR/L at the American Lake Veterans Affairs (VA). Our research question was, “What evidence is there to support best practices for veteran re-engagement in meaningful activities to promote overall quality of life for veterans who have sustained a stroke?” In response to Mary’s specific interest in the research supporting the use of the Canadian Occupational Performance Measure (COPM) and her desire to have concrete data to support her intervention outcomes, we chose to host an in-service on the use of the COPM for the occupational therapists at the VA.

To monitor the impact of the in-service and use of the COPM in practice, we gave three surveys. The first survey was given before the in-service to measure the therapists’ knowledge of the COPM and its use with clients. The second survey was given immediately after the in-service to rate confidence in implementing the use of the COPM. The final survey was given five weeks post-implementation to gauge perception in the COPM’s usefulness in developing goals and measuring client performance and satisfaction. We recommend continued use of the COPM as a way to identify client interests and promote engagement in meaningful activities for veterans who have sustained a stroke.

### **Executive Summary**

We collaborated with Mary Matthews-Brownell, an OTR/L and CHT, at the American Lake VA which is part of the VA system that serves both inpatient and outpatient clients. Recently, she had noticed many of her clients who sustained a stroke were younger in age. She wanted us to focus our research on what could be done to increase motivation for re-engagement in meaningful occupations and quality of life for these clients. From our discussion, there were four potential topics. In the end, we formed the research question: “What evidence is there to support best practices for veteran re-engagement in meaningful activities to promote overall quality of life for veterans who have sustained a stroke?”

Common themes found in our research included benefits of participating in social groups, considering caregiver satisfaction, addressing psychosocial needs, and maintaining client-driven practice. Client-driven practice is a key component to motivation in therapy. It is important to distinguish client-driven practice from client-centered practice. All occupational therapists are expected to be client-centered in their approach by doing what they think the client will benefit from. However, client-driven practice takes this a step further and uses self-identified goals, which increases the likelihood of goal achievement and thus quality of life. One of the articles found addressed the use of the Canadian Occupational Performance Measure (COPM) (Law, Baptiste, Carswell, McColl, Polatajko & Pollock, 2014) as a way to promote client-driven goal setting and treatment, and measure client performance and satisfaction. Mary thought this assessment would be valuable to her practice, as she wanted a tool that could quantify motivation, goal achievement, and client satisfaction. We recommended holding an in-service for her and other occupational therapists in her department at the VA.

Mary and two other occupational therapists attended the in-service on how to use the COPM in practice. To monitor the impact of the in-service, we took surveys before and after to measure the therapists’ knowledge and confidence to implement the COPM. After five weeks of implementing the COPM with the clients who sustained a stroke at the VA, a third survey was given to measure if the therapists felt the COPM was a valuable tool in goal attainment and measuring client performance and satisfaction. Mary was not able to re-administer the COPM, but still found it extremely useful. On the

survey, she provided feedback and commented, “COPM helped with goal setting and conversation starters to really think about importance, significance, [and] satisfaction...For psychosocial skill data this is my go-to now!”

**CAT Final**

**GUIDELINES FOR THE CRITICALLY APPRAISED TOPIC (CAT) PAPER**

**Focused Question**

What evidence is there to support best practices for veteran re-engagement in meaningful activities to promote overall quality of life for veterans who have sustained a stroke?

**Prepared By**

Jolene Fujita, Kimberly Low, Keili Maldonado, Mikayla Wrolstad

**Date Review Completed**

November 20, 2018

**Professional Practice Scenario**

An outpatient Veterans Administration occupational therapist, Mary Matthews-Brownell, who is treating an increasing number of young clients who have sustained a stroke, is wondering what the best practices are to support them in re-engagement in meaningful activities and increase their quality of life.

**Search Process**

**Inclusion Criteria**

We will be including full-length studies, published in English after January 2000 that address psychosocial factors, including quality of life and occupational engagement, in adult stroke patients.

**Exclusion Criteria**

We will be excluding pediatric stroke clients.

**Search Strategy**

Categories	Key Search Terms
stroke	cerebral vascular accident (CVA), ischemic, hemorrhagic, thrombo*, emboli*
occupational therapy	therap*, rehabilitation
quality of life	satisfact*, function*
occupational performance	occupational engagement, re-engagement
psychosocial factors	motiv*
veterans	vets
young adults	

Databases, Sites, and Sources Searched
<i>PubMed</i>
<i>CINAHL</i>
<i>Primo</i>
<i>Cochrane</i>

<i>PLOSone (VA database)</i>
<i>PsychInfo</i>
<i>AJOT</i>

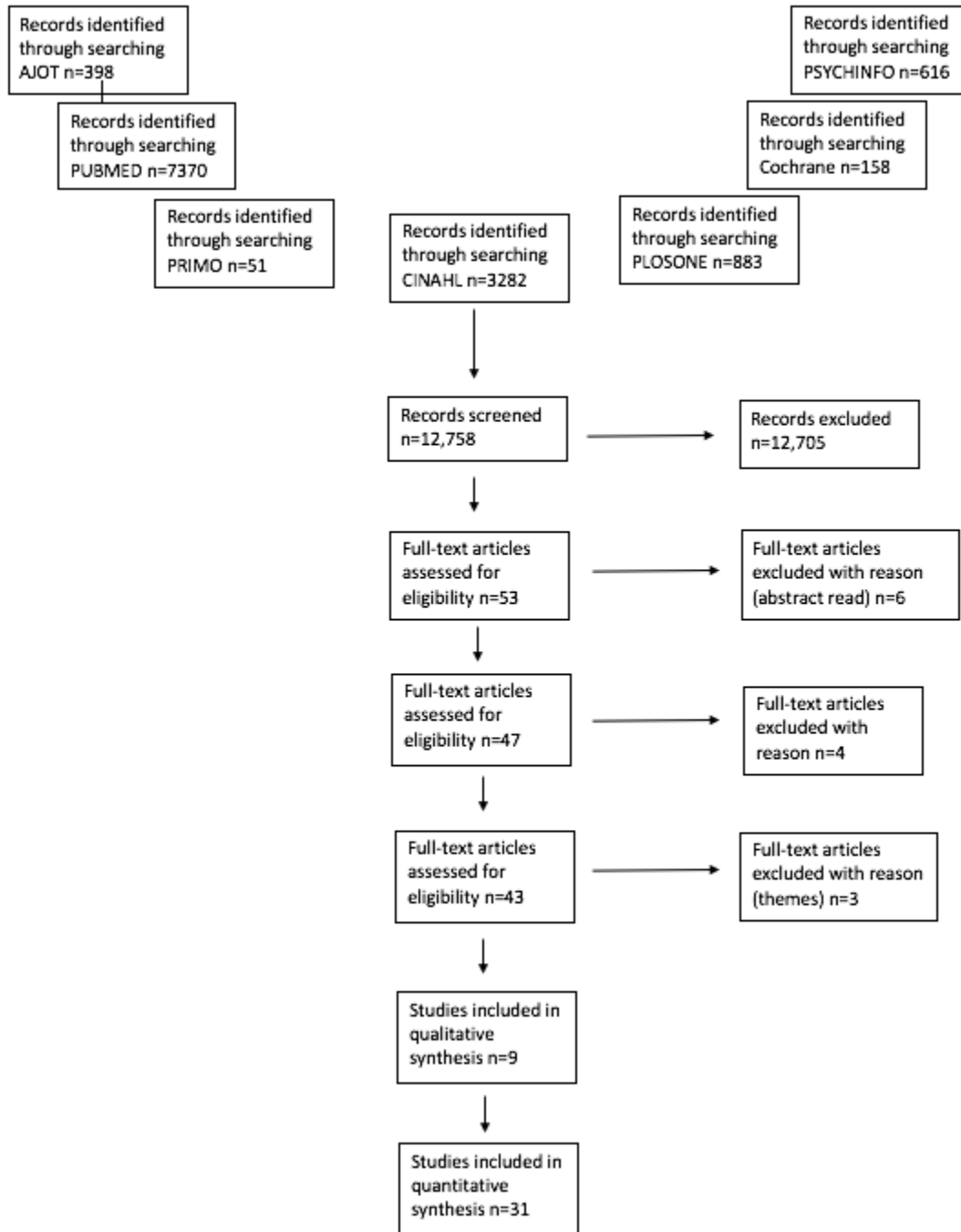
### **Search Outcomes/Quality Control/Review Process**

Mary Matthews-Brownell originally sent us four questions to consider for this project. Two of the questions addressed hand therapy concepts while the other 2 pertained to client education. After communication with our course mentor and project chair, the question we decided to research was, “What evidence is there to support best practices for veteran re-engagement in meaningful activities to promote overall quality of life for veterans who have sustained a stroke?”

Our search process began with identifying inclusion and exclusion criteria, as well as keyword searches. To refine our findings, we narrowed the search criteria to “full texts”, January 1, 2000 to present, and English. 5/398 articles were kept from AJOT. Articles were rejected if they were not relevant to our research question. 1/51 articles were kept from PRIMO. The remaining 50 were not relevant to occupational therapy and life satisfaction. 7/3282 were kept from CINAHL. Those rejected were not relevant to the research question, had no mention of meaningful occupations, or did not match the client population. 1/883 articles were kept from PLOSone. Articles were rejected if they did not mention stroke populations or veterans. 7/616 articles were kept from PSYCHINFO. Those rejected were not relevant to meaningful occupations or quality of life. 19/7370 articles were kept from PUBMED. The articles rejected were not related to therapy interventions or did not meet our inclusion criteria. 0/158 articles were kept from COCHRANE. There was no mention of occupational performance, life satisfaction, or occupational therapy. A total of 40 articles were included.

Key players involved in our process included our collaborator Mary Matthews-Brownell, project chair Kirsten Wilbur, course mentor George Tomlin, and our peers in the 2019 cohort.

**Prisma**





**Results of Search**

*Summary of Study Designs of Articles Selected for the CAT Table*

<b>Pyramid Side</b>	<b>Study Design/Methodology of Selected Articles</b>	<b>Number of Articles Selected</b>
Experimental	3*: Meta-Analyses of Experimental Trials 4: Individual Blinded Randomized Controlled Trials 1: Controlled Clinical Trials 1: Single Subject Studies	9*
Outcome	0: Meta-Analyses of Related Outcome Studies 2: Individual Quasi-Experimental Studies w/ Covariates 0: Case-Control or Pre-existing Groups Studies 0: One Group Pre-Post Studies	2
Qualitative	1*: Meta-Syntheses of Related Qualitative Studies 3: Group Qualitative Studies w/ more Rigor <ul style="list-style-type: none"> <li>● Prolonged engagement with informants</li> <li>● Triangulation of data (multiple sources)</li> <li>● Confirmation (peer/member-checking; audit trail)</li> <li>● Comparisons among individuals, w/i a person</li> </ul> 5: Group Qualitative Studies w/ less Rigor 1: Qualitative Study on a Single Person	9*
Descriptive	0: Systematic Reviews of Related Descriptive Studies 14: Association, Correlational Studies 6: Multiple Case Series, Normative Studies, Descriptive surveys 0: Individual Case Studies	20
AOTA Levels I- 6 II- 1 III- 2 IV- 21 V- 0 NR- 9  Comments: *Fahey was documented as both Q1 and E1, but was only counted as an experimental study in the total tally.		40

<b>Key Terms Search Strategy</b>					
<b>Date</b>	<b>Database</b>	<b>Search strategies</b>	<b>Limits Set</b>	<b>Last Name</b>	<b># kept/total</b>
10/11/18	<i>AJOT</i>	stroke “quality of life”	full-text, 1/1/2000	Eriksson; Polatajko	2/67
10/11/18	<i>AJOT</i>	stroke satisfaction	full-text, 1/1/2000	Phipps; Skubik-Peplaski	2/55
10/11/18	<i>AJOT</i>	stroke “occupational performance”	full-text, 1/1/2000	n/a	0/74
10/11/18	<i>AJOT</i>	stroke “occupational engagement”	full-text, 1/1/2000	n/a	0/19
10/11/18	<i>AJOT</i>	stroke “re-engagement”	full-text, 1/1/2000	n/a	0/6
10/11/18	<i>AJOT</i>	stroke “psychosocial factors”	full-text, 1/1/2000	Ma	1/30
10/11/18	<i>AJOT</i>	stroke motivation	full-text, 1/1/2000	0	0/50
10/11/18	<i>AJOT</i>	CVA AND “quality of life”	full-text, 1/1/2000	n/a	0/1
10/11/18	<i>AJOT</i>	CVA AND satisfaction	full-text, 1/1/2000	n/a	0/7
10/11/18	<i>AJOT</i>	CVA AND “occupational performance”	full-text, 1/1/2000	n/a	0/8
10/11/18	<i>AJOT</i>	CVA “occupational engagement”	full-text, 1/1/2000	n/a	0/2
10/11/18	<i>AJOT</i>	CVA re-engagement	full-text, 1/1/2000	n/a	0/0
10/11/18	<i>AJOT</i>	CVA “psychosocial factors”	full-text, 1/1/2000	n/a	0/0
10/11/18	<i>AJOT</i>	CVA motivation	full-text, 1/1/2000	n/a	0/4
10/11/18	<i>AJOT</i>	ischemic “quality of life”	full-text, 1/1/2000	n/a	0/0
10/11/18	<i>AJOT</i>	ischemic satisfaction	full-text, 1/1/2000	n/a	0/14
10/11/18	<i>AJOT</i>	ischemic “occupational performance”	full-text, 1/1/2000	n/a	0/15
10/11/18	<i>AJOT</i>	ischemic “occupational engagement”	full-text, 1/1/2000	n/a	0/2

10/11/18	<i>AJOT</i>	ischemic re-engagement	full-text, 1/1/2000	n/a	0/1
10/11/18	<i>AJOT</i>	ischemic “psychosocial factors”	full-text, 1/1/2000	n/a	0/1
10/11/18	<i>AJOT</i>	ischemic motivation	full-text, 1/1/2000	n/a	0/10
10/11/18	<i>AJOT</i>	hemorrhagic “quality of life”	full-text, 1/1/2000	n/a	0/6
10/11/18	<i>AJOT</i>	hemorrhagic satisfaction	full-text, 1/1/2000	n/a	0/5
10/11/18	<i>AJOT</i>	hemorrhagic “occupational performance”	full-text, 1/1/2000	n/a	0/5
10/11/18	<i>AJOT</i>	hemorrhagic “occupational engagement”	full-text, 1/1/2000	n/a	0/1
10/11/18	<i>AJOT</i>	hemorrhagic re-engagement	full-text, 1/1/2000	n/a	0/1
10/11/18	<i>AJOT</i>	hemorrhagic “psychosocial factors”	full-text, 1/1/2000	n/a	0/0
10/11/18	<i>AJOT</i>	hemorrhagic motivation	full-text, 1/1/2000	n/a	0/4
10/11/18	<i>AJOT</i>	veteran stroke	full-text, 1/1/2000	n/a	0/4
10/11/18	<i>AJOT</i>	”therapeutic use of self” stroke	full-text, 1/1/2000	n/a	0/4
10/11/18	<i>AJOT</i>	MOHO stroke	full-text, 1/1/2000	n/a	0/2
					<b>5 TOTAL</b>
10/11/18	Primo	stroke AND veterans	articles, English full-text, 2000-2018	Damush	1/51
					<b>1 TOTAL</b>
10/11/18	CINAHL	stroke AND “quality of life”	2000-2018, English, full-text	van Mierlo	1/2140
10/11/18	CINAHL	stroke AND satisfact*	2000-2018, English, full-text	Mavaddat; Vestling	2/142

10/11/18	CINAHL	stroke AND “occupational performance”	2000-2018, English, full-text	Northcott	1/17
10/11/18	CINAHL	stroke AND “occupational engagement”	2000-2018, English, full-text	n/a	0
10/11/18	CINAHL	stroke AND “re-engagement”	2000-2018, English, full-text	n/a	0/2
10/11/18	CINAHL	stroke AND “psychosocial factors”	2000-2018, English, full-text	Perrin	1/373
10/11/18	CINAHL	stroke AND motiv*	2000-2018, English, full-text	n/a	0/106
10/11/18	CINAHL	CVA AND “quality of life”	2000-2018, English, full-text	n/a	0/4
10/11/18	CINAHL	CVA AND satisfact*	2000-2018, English, full-text	n/a	0/3
10/11/18	CINAHL	CVA AND function*	2000-2018, English, full-text	n/a	0/16
10/11/18	CINAHL	CVA AND “occupational performance”	2000-2018, English, full-text	n/a	0/0
10/11/18	CINAHL	CVA AND “occupational engagement”	2000-2018, English, full-text	n/a	0/0
10/11/18	CINAHL	CVA AND re-engagement	2000-2018, English, full-text	n/a	0/0
10/11/18	CINAHL	CVA AND “psychosocial factors”	2000-2018, English, full-text	n/a	0/5
10/11/18	CINAHL	CVA AND motiv*	2000-2018, English, full-text	n/a	0/2
10/11/18	CINAHL	ischemic AND “quality of life”	2000-2018, English, full-text	n/a	0/38

10/11/18	CINAHL	ischemic AND satisfact*	2000-2018, English, full-text	n/a	0/0
10/11/18	CINAHL	hemorrhagic AND “occupational performance”	2000-2018, English, full-text	n/a	0/0
10/11/18	CINAHL	hemorrhagic AND “occupational engagement”	2000-2018, English, full-text	n/a	0/0
10/11/18	CINAHL	hemorrhagic AND re-engagement	2000-2018, English, full-text	n/a	0/0
10/11/18	CINAHL	hemorrhagic AND “psychosocial factors”	2000-2018, English, full-text	n/a	0/29
10/11/18	CINAHL	hemorrhagic AND motiv*	2000-2018, English, full-text	n/a	0/1
10/11/18	CINAHL	thrombo* AND “quality of life”	2000-2018, English, full-text	n/a	0/0
10/11/18	CINAHL	thrombo* AND satisfact*	2000-2018, English, full-text	n/a	0/38
10/11/18	CINAHL	thrombo* AND function*	2000-2018, English, full-text	n/a	0/335
10/11/18	CINAHL	emboli* AND “quality of life”	2000-2018, English, full-text	n/a	0/17
10/11/18	CINAHL	emboli* AND satisfact*	2000-2018, English, full-text	n/a	0/10
10/11/18	CINAHL	emboli* AND “occupational performance”	2000-2018, English, full-text	n/a	0/0
10/11/18	CINAHL	emboli* AND “occupational engagement”	2000-2018, English, full-text	n/a	0/0
10/11/18	CINAHL	veteran AND stroke	2000-2018, English, full-text	n/a	0/0

10/11/18	CINAHL	”therapeutic use of self” AND stroke	2000-2018, English, full-text	n/a	0/0
10/11/18	CINAHL	MOHO AND stroke	2000-2018, English, full-text	n/a	0/0
10/11/18	CINAHL	COPM AND stroke	2000-2018, English, full-text	Wressle	1/4
					<b>6 Total</b>
10/11/18	PLOS ONE	stroke quality of life	research, relevance	Fahey	1/429
10/11/18	PLOS ONE	stroke satisfact	research, relevance	n/a	0/55
10/11/18	PLOS ONE	stroke occupational performance	research, relevance	n/a	0/78
10/11/18	PLOS ONE	stroke occupational engagement	research, relevance	n/a	0/56
10/11/18	PLOS ONE	stroke re-engagement	research, relevance	n/a	0/52
10/11/18	PLOS ONE	stroke psychosocial factors	research, relevance	n/a	0/107
10/11/18	PLOS ONE	stroke motiv	research, relevance	n/a	0/54
10/11/18	PLOS ONE	stroke	research, relevance	n/a	0/52
11/8/18	PLOS ONE	veteran	research, relevance	n/a	0/54
11/8/18	PLOS ONE	veteran quality of life post-stroke	research, relevance	n/a	0/449
11/8/18	PLOS ONE	veteran quality of life stroke	research, relevance	n/a	0/459
					<b>1 Total</b>
10/11/18	PsychINFO	stroke AND “quality of life”	full-text, 2000-2018, English	n/a	0/353
10/11/18	PsychINFO	stroke AND satisfact*	full-text, 2000-2018, English	Banks; Tholin; Cramm; Baumann	4/103
10/11/18	PsychINFO	stroke AND “occupational performance”	full-text, 2000-2018, English	n/a	0/15

10/11/18	PsychINFO	stroke AND “occupational engagement”	full-text, 2000-2018, English	Walder, Mutai	2/5
10/11/18	PsychINFO	stroke AND “re-engagement”	full-text, 2000-2018, English	n/a	0/2
10/11/18	PsychINFO	stroke AND “psychosocial factors”	full-text, 2000-2018, English	Choi; Thomas; Hansson	3/37
10/11/18	PsychINFO	stroke AND motiv*	full-text, 2000-2018, English	n/a	0/101
11/8/18	PsychINFO	stroke AND veterans	full-text, 2000-2018, English	n/a	0/76
					<b>9 TOTAL</b>
10/11/18	PubMed	stroke AND “quality of life” AND therapy	full-text, after 2000, English	Engel-Yeger; Park	2/4027
10/11/18	PubMed	stroke AND personal satisfact*	full-text, after 2000, English	Shifren; Bergstrom; Blomer; Kuluski; Achten; Doosman; Laurent; de Weerd; Haslam; Doble; Hartman-Maeir; Hartman-Maeir; Wallenbert	13/129
10/11/18	PubMed	stroke AND “occupational performance”	full-text, after 2000, English	n/a	0/119
10/11/18	PubMed	stroke AND “occupational engagement”	full-text, after 2000, English	Price	1/2
10/11/18	PubMed	stroke AND “re-engagement”	full-text, after 2000, English	Kubina	1/7
10/11/18	PubMed	stroke AND “psychosocial factors” AND veterans	full-text, after 2000, English	Linder	1/211

10/11/18	PubMed	stroke AND intrinsic motiv*	full-text, after 2000, English	n/a	0/37
10/11/18	PubMed	stroke AND motiv* AND veterans	full-text, after 2000, English	n/a	0/14
10/11/18	PubMed	stroke AND veterans AND “quality of life”	full-text, after 2000, English	n/a	0/92
10/11/18	PubMed	stroke AND veterans	full-text, after 2000, English	n/a	0/2732
					<b>18 Total</b>
10/11/18	Cochrane	veterans stroke	2000-2018	n/a	0/158
					<b>0 Total</b>
					<b>40 Articles Total</b>



## Qualitative

Author, Year, Jrnl, Country	Study Objectives	Study Design/ Search Criteria	Participants Sample Size, description of inclusion & exclusion criteria	Methods for enhancing rigor	Themes & results	Study Limitations
Kubina et al. 2013 <i>Disability &amp; Rehabilitation</i> Canada	Understand the process of re-engagement in valued activities to design interventions for pts post-stroke	Grounded theory Q2 NR	N=6 (3M, 3F), 40-68 yo Incl: 1st stroke 6 mo ago, discharged from inpt acute care or rehab program to non-institutional setting, communicate in English, FIM=3 for comprehension, memory, & problem-solving, live in Ottawa, able to be followed for 2 yrs	Interviews transcribed verbatim, 3 phases of coding, saturation was achieved, triangulation, member checking, feedback, peer debriefing sessions, audit trail	Consider awareness of pt experiences, priorities & goals. Examine pts' valued activities w/in their social networks	Limited transferability- took only people w/o communication problem or discharged to residential care, who had high social awareness
Northcott & Hilari 2018 <i>Disability &amp; Rehabilitation</i> UK	Explore types of support provided by different network members what support fxns are most valued.	Ethnography Q2 NR	N=29  Incl: admitted to hospital for 1st stroke, stay > 3 days, 18+ yo  Excl: h/o mental health problem or cog decline prior to CVA, could not speak English, did not live @ home, severe co-morbidity	Transcribed verbatim using Framework method. Carried out btwn author & researcher to avoid bias.	Spouse main support; other people impt source of emotional & social companionship. Support fxn: not on own, others concerned for them	Participants were older, many were married & confided in spouse rather than friends, some spouses were present in interview w/ participant, only focused on 1 yr post-stroke.

<p>Walder &amp; Molineux 2017 <i>British Journal of Occupational Therapy</i> Australia</p>	<p>Identified process of reintegration back into community &amp; living meaningful life.</p>	<p>Grounded Theory Q2 NR</p>	<p>N=6 (age 34-76 yo)  Incl: 18+ yo; live in South-East Queensland; experience stroke in past 5 yrs  Excl: severe communication or cog difficulties, could not speak English</p>	<p>Interview guide, participant led, probing questions, interview recorded &amp; transcribed verbatim, member checking, code-recode, triangulation</p>	<p>Connecting w/ self: emotional management, motivation, seizing cntrl Occ engagement w/ reality: life prior to stroke changing, becoming aware Developing hope w/ others: forming &amp; maintaining meaningful connections w/ others</p>	<p>Participants self-selected, interview time was vast, so some may not have given as much info as others (skew in data)</p>
<p>Banks 2004 <i>British Association for Sexual Relationship Therapy</i> UK</p>	<p>Explore how stroke impacts differently on the person, their partner, &amp; their relationship.</p>	<p>Longitudinal interview, grounded theory Q3 NR</p>	<p>N=38 (22M, 16F) M age=44 yo 12-15 mo post discharge from hospital  Incl: 18-49 yo, married or in long term relationship @ time of stroke</p>	<p>Interviews were taped &amp; transcribed verbatim. NUDIST computer package used to analyze qualitative data.</p>	<p>No participants who reported experiencing sig difficulty communicating w/ their partner had received guidance about the impact of strokes on relationships. Altered roles &amp; different interpretation of events create distance btwn couples.</p>	<p>Participants were from a younger stroke pop</p>

<p>Mavaddat et al. 2017 <i>NeuroRehabilitation</i> USA</p>	<p>Positivity w/ PosMT for prevention &amp; management of post-stroke psychological problems &amp; help w/ coping</p>	<p>Interview/Grounded theory Q3 NR</p>	<p>N=15 (10 stroke survivors, 5 caregivers)  Incl: evidence of stroke, 18+ yo  Excl: lacked capacity to give informed consent, mod to severe cog deficits, receptive aphasia, did not speak English.</p>	<p>Audio recorded &amp; transcribed verbatim by external agency. Checked for accuracy, 2 members carried out analysis, themes identified.</p>	<p>Pos benefits from listening, found program helpful &amp; would recommend to others. Relaxation, sleep, reduction of anxiety themes described. ↑sense of being able to cope w/ daily life after listening. Improvement in low level mood &amp; lethargy after PosMT</p>	<p>Sample was self-selected, only did 4 wks of program intervention.</p>
<p>Tholin et al. 2014 <i>Scandinavian Journal of Caring Sciences</i> Sweden</p>	<p>Investigate how people w/ stroke experience care, rehab, support, &amp; participation from hospital to community care.</p>	<p>Phenomenology Q3 NR</p>	<p>N=11 (5F, 6M)  Incl: 1st time stroke w/ onset 6–12 mo ago  Excl: cog impairment</p>	<p>Interviews taped &amp; transcribed verbatim. Qualitative analysis</p>	<p>Pts satisfied w/ hospital care but reported mixed experience of continuing care. Most appreciated intense, specific &amp; professional rehab, &amp; experienced these in rehab. Pts receiving community support expressed satisfaction w/ staff but felt lost autonomy. Several did not feel involved in health care planning but relied on judgement of staff.</p>	<p>People w/ aphasia &amp; more severe disability living in ordinary housing not represented in this sample, but incl people living in nursing homes. Informants of Swedish origin- people of foreign origin not represented</p>

<p>Wallenbert &amp; Jonsson 2005 <i>AJOT</i> USA</p>	<p>Explore &amp; understand how habits are experienced in daily occs after CVA</p>	<p>Phenomenology Q3 NR</p>	<p>N=7 (3F, 4M; 42-82 yo)  Incl: in rehab clinic w/ difficulty performing daily occ  Excl: aphasia &amp; severe cog problems</p>	<p>Code-recode, peer review</p>	<p>Overall theme: waiting for dilemma to be resolved Subtheme: lack of reestablishment of former habits; new habits; a symbol of dependence; need to plan &amp; organize</p>	<p>Participants were very early on in recovery</p>
<p>Kuluski et al. 2014 <i>International Journal of Qualitative Studies on Health &amp; Well-Being</i> UK</p>	<p>Understand how young stroke survivors cope w/ changes</p>	<p>Phenomenology Q3 NR</p>	<p>N=17 (6M, 11F)  Incl: 55+ yo, living in UK, community dwelling</p>	<p>Interviews were transcribed verbatim &amp; checked for accuracy, coded for anticipated &amp; emergent themes, additional analyses required more in-depth coding, organized into key themes, themes verified by 2 co-authors</p>	<p>2 themes emerged 1. Altered sense of self-loss of id, family disruption &amp; role change, loss of valued activities 2. Adapted sense of self (seeking external support, restoring normality, pos reflection)</p>	<p>Interviews conducted by multiple people, potential for bias during interviewing, potential for selection bias, low transferability because moving home may not have caused a restored sense of self</p>

<p>Price et al. 2012 <i>SJOT</i> USA</p>	<p>Designed to generate understanding of resiliency following stroke, role in supporting continuity of identity, &amp; ways OTs foster resiliency</p>	<p>Phenomenology Q4 NR</p>	<p><i>N</i>=1 (M in his 70s) Incl: past dx of stroke (20+ yrs ago), spoke English, community dwelling, &amp; ability &amp; desire to articulate experience</p>	<p>Transcribed verbatim &amp; analyzed using thematic analysis, narrative analysis, narrative smoothing, &amp; content analysis using resiliency theory</p>	<p>Resilient characteristics: pos social support, spirituality, internal LOC, past successes &amp; commitment to succeed, action-oriented approach, &amp; pos personal goals for future OTs have opportunity to foster pts' resilient characteristics.</p>	<p>Purposive sampling, low generalizability</p>
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## Descriptive

Author, Year, Jrnl, Country	Study Objectives	Study Design/ Level of evidence	Participants Sample Size, description of inclusion & exclusion criteria	Interventions & Outcome measures	Summary of Results	Study Limitations
Achten et al. 2012 <i>Disability &amp; Rehabilitation</i> Netherlands	Compare LS of stroke pts to their spouses	Cross-sectional study D2 IV 1/3	N=78 Incl: stroke pts admitted to inpt rehab in 1 of 4 rehab centers, w/ a spouse, 18+ yo, 1st stroke w/ 1-sided supratentorial lesion Excl: younger than 18 yo, inability to speak Dutch Excl for spouses: BI<16, have chronic illness	I: Experimental research assistant visited home 3 yrs post-stroke to conduct assessments on pt & spouse O: LS measured w/ LiSat-9, MMSE, Token test, UCO, BI, FAI	Stroke pts were more satisfied than their spouse w/ their relationship (92% vs. 64%; $p<.05$ ) & their life (72% vs. 50%; $p<.05$ ) Satisfaction of stroke pts was sig related to spouses' life satisfaction. Family centered care should be an impt part of rehab process.	Only used pts in inpt rehab, lived w/ spouse, & didn't have aphasia or neuropsychological impairments. Difficulty generalizing to the whole stroke population
Bergstrom et al. 2017 <i>SJOT</i> Scandinavia	Describe relationship btwn satisfaction & participation in everyday occs	Questionnaire D2 IV 1/3	N=69 (39M, 30F), M age= 67 yo Incl: treated in hospital stroke unit, recruited btwn May 2006-2007 w/in 5 days of stroke, follow-up 5 yrs post-stroke Excl: did not respond to 2+ items on OGQ	I: Questionnaire O: OGQ- looks at participation & satisfaction of 30 activities (IADL, work, leisure, social)	Sig higher level of satisfaction for those w/o participation restrictions compared w/ those who did ( $p=.002$ ) Sig association btwn satisfaction & participation in everyday occs Satisfaction is an impt part of participation	How clients perceived satisfaction in relation to their participation in everyday occs is not specified, results only give basic info regarding this complex issue

<p>Blomer et al. 2015 <i>Archives of Physical Medicine &amp; Rehabilitation</i> Netherlands</p>	<p>Investigate changes in frequency of participation 6 mo post-stroke compared w/ pre-stroke</p>	<p>Longitudinal cohort study D2 IV 2/3</p>	<p><math>N=325</math> (213M, 112F), <math>M</math> age= 67 yo Incl: enrolled in Restore4Stroke program, had a stroke, 18+ yo Excl: another serious condition, had been dep in ADLs pre-stroke, BI score &lt;17, inability to speak Dutch, had cog decline pre-stroke w/ HLC score &gt;1, incomplete participation data</p>	<p>I: Follow-up assessments conducted by trained research assistant @ pts residence 6 mo post-stroke IV= demographics &amp; stroke-related factors DV= USER-P- self-report questionnaire w/ 3 scales (frequency of participation, participation restrictions experienced, satisfaction w/ participation)</p>	<p>Frequency of participation ↓ post-stroke compared to pre-stroke (-4.8+/-10.8, <math>p&lt;.001</math>) &amp; is associated w/ participation restrictions experienced &amp; satisfaction w/ participation. Resuming vocational activities, screening, &amp; tx of depressive symptoms should be priorities in rehab</p>	<p>Self-report measure to assess objective participation, possible bias w/ families' answers to frequency scale, most pts had ischemic stroke</p>
<p>Choi 2015 <i>Rehabilitation Psychology</i> Korea</p>	<p>Investigate an integrative path model in examining biopsychosocial predictors of participation restriction post-stroke</p>	<p>Cross-sectional study D2 IV 2/3</p>	<p><math>N=171</math> (112M, 59F) <math>M</math> age= 53.67 yo Incl: dx of stroke, 1st stroke, at least 12 mo post onset, ability to communicate, score &gt;18 on Korean MMSE</p>	<p>IV: demographics &amp; stroke-related factors DV: FM, Impact on Participation &amp; Autonomy, Korean MMSE, Korean CES-D, Dispositional Hope Scale, Self-Esteem scale, Social Support Measuring Tool, Korean MBI</p>	<p>↑ participation, psychosocial factors &amp; biological factors should be included into a multi-dimensional tx approach. Participation ↑ when hopeful thinking &amp; self-esteem are higher &amp; depression is lower. Psychosocial factors (<math>\beta=-.47</math>, <math>p=.01</math>) &amp; ADLs (<math>\beta=-.43</math>, <math>p=.01</math>) played the most sig role, thus a regression was used to predict the degree of participation restriction</p>	<p>Excluded other stroke-related variables from path analysis, participants were functionally I in ADLs</p>

<p>de Weerd et al. 2011 <i>BMC Neurology</i> Netherlands</p>	<p>Examine wellbeing of pts who returned home immediately after discharge compared w/ general pop &amp; determine factors influencing wellbeing</p>	<p>Questionnaires D2 IV 1/3</p>	<p><math>N=57</math> (25M, 32F), <math>M</math> age= 77 yo  Incl: ischemic stroke pts from Martini Hospital Groningen neurology department from Nov 2006-Oct 2007  Excl: 65+ yo, moving to nursing home, rehab center, or other hospital department after discharge, hemorrhaging</p>	<p>I: Interviewed 1yr post-stroke by trained medical practitioner using questionnaires  O: BI, health related QoL SF-36, HADS, CSI, multiple choice questions about habits &amp; daily occ</p>	<p>High prevalence of depression &amp; anxiety disorders in stroke pts affecting QoL. Low QoL is correlated to ↑ caregiver burden Wellbeing could be ↑ if more attention is paid to pt activities.</p>	<p>All pts went home immediately after discharge, high <math>M</math> age of participants, those who refused to participate were excl, difficult to generalize</p>
<p>Doble et al. 2009 <i>Disability &amp; Rehabilitation</i> UK</p>	<p>Is perceived level of social support &amp; # of depressive symptoms different for those who are satisfied vs. dissatisfied post-stroke?</p>	<p>Cross-sectional study D2 IV 1/3</p>	<p><math>N=54</math> (32M, 22F), <math>M</math> age= 68.9 yo, from needs assessment &amp; follow-up survey  Incl: dx of stroke or TIA, 18+ yo, living in community where study took place, informed consent  Excl: acute-care hospitals or rehab centers</p>	<p>I: Trained interviewers conducted face-to-face interviews in subjects' homes  O: Medical outcomes study Social Support Scale (MOS), GDS</p>	<p>64.8% satisfied &amp; 35.2% dissatisfied w/ time use; MOS: Sig differences on Affectionate Support subscale (<math>t= -3.32, p=0.002</math>) &amp; PosSocial Interaction subscale (<math>t= -2.70, p=0.009</math>); GDS: Dissatisfied had more depressive symptoms (<math>t= +1.99, p=0.05</math>) Post-stroke pts who are dissatisfied may not be depressed but could benefit from participation in meaningful social occs</p>	<p>Excl of data w/ no response, no tool to measure satisfaction, possible under-reporting of dissatisfaction, unsure of dissatisfaction prior to stroke</p>



<p>Doosman et al. 2011 <i>Clinical Rehabilitation</i> USA</p>	<p>Determine if social activity contributes to LS 3 yrs post-stroke</p>	<p>Cross-sectional study D2 IV 1/3</p>	<p><math>N=156</math> (85M, 71F), <math>M</math> age= 58.6 yo Incl: 1st stroke, 1-sided supratentorial lesion, 18+ yo Excl: disabling comorbidity, inability to speak Dutch, pts w/ aphasia who couldn't complete the questionnaires</p>	<p>I: Demographics and stroke related factors O: LiSat-9, SSL-12-I, MMSE, FAI</p>	<p>68% of pts were satisfied w/ life as a whole Socially inactive pts sig less likely to be satisfied (50%) than socially mod (74.4%) &amp; socially highly active (81.5%) Social activity was related to LS</p>	<p>Limited view of social activity w/ FAI, info lacking on pre-stroke activity level &amp; LS</p>
<p>Eriksson 2013 <i>AJOT</i> Netherlands</p>	<p>Determine the extent of which perceptions of participation in everyday occ were affected post-stroke</p>	<p>Prospective cross-sectional study D2 IV 2/3</p>	<p><math>N=116</math> (56M, 60F) <math>M</math> age= 62.4 yo Incl: NIHSS score completed at time of hospitalization, completed SIS, ACS, &amp; RNL Excl: acute NIHSS score &gt;15, dementia, schizophrenia, sickle-cell anemia</p>	<p>IV: demographics &amp; stroke-related factors DV: SIS, ACS, RNL</p>	<p>O: SIS median score was 90.6, mod correlation btwn SIS &amp; NIHSS (<math>r=-.25, p&lt;.01</math>), correlation btwn SIS &amp; RNL (<math>r=.71, p&lt;.0001</math>), correlation btwn SIS &amp; ACS (<math>r=.53, p&lt;.001</math>) 3 factors contribute to perception of participation: retention of previous activities, reintegration in home/community, perception of stroke recovery. Perceived recovery contributes to perception of successful participation.</p>	<p>Sample consisted of pts primarily w/ mild stroke, the average age was young, did not measure effects of social support</p>

<p>Hartman-Maeir et al. 2007 <i>Disability &amp; Rehabilitation</i> Israel</p>	<p>Evaluate activity limitations, restricted participation, &amp; dissatisfaction from life &amp; their relationship btwn stroke survivors in the community</p>	<p>Follow-up study, Questionnaires D2 IV 2/3</p>	<p>N=56 (42M, 14F), M age= 57.7 yo Incl: stroke rehab unit at Loewenstein Rehab Hospital, 1st hemispheric stroke, neg neurologic or psychiatric past hx, I living status in community pre-stroke, R handed, 6+ yrs of edu, sufficient language skills to understand &amp; respond to basic interview &amp; questionnaires</p>	<p>I: OT interviewed participants &amp; caregivers in their homes O: FIM, IADLq, ACS, LiSat-9, GDS</p>	<p>39% reported having LS as a whole; Correlation coefficients btwn overall LS &amp; functional outcomes BADL (<math>r=.32, p=.015</math>), IADL (<math>r=.48, p&lt;.001</math>), ACS (<math>r=.57, p&lt;.001</math>) LS is associated more w/ level of participation than w/ I level in BADLs; Dissatisfaction correlated w/ activity limitations &amp; restricted participation. Rehab services should focus on participation in IADL &amp; leisure activities to improve satisfaction</p>	<p>From 1 rehab center, limited generalizability</p>
<p>Haslam et al. 2008 <i>Neuropsychological Rehabilitation</i> UK</p>	<p>Examine stroke survivors who belonged to grps prior to stroke &amp; the maintenance afterwards</p>	<p>Questionnaire D2 IV 1/3</p>	<p>N=53 Incl: stroke, 18+ yo Excl: had any other brain injury, previous psychiatric hx, sig comprehension difficulties</p>	<p>I: Give 4-page questionnaire &amp; debriefed afterwards IV= Grp membership listings, Grp affiliation ratings (EXITS), Cognitive Failures Questionnaire (CFQ) DV= LS &amp; Chronic Stress</p>	<p>Multiple grp memberships before correlated w/ -Maintenance of grp membership after stroke (grp listing: <math>r=.75, p&lt;.01</math>, grp affiliation ratings: <math>r=.47, p&lt;.01</math>) -New grp membership after stroke (affiliation: <math>r=.37, p&lt;.01</math>) -Greater LS Maintenance of grp membership pos correlated w/ LS &amp; neg correlated w/ stress, Perceived cog failures neg correlated w/ maintenance of grp membership</p>	<p>Only correlations determined, lack of process measures, lack of clinical data on severity &amp; location of insult</p>

<p>Laurent et al. 2011 <i>Annals of Physical and Rehabilitation Medicine</i> France</p>	<p>Assess long-term QoL in stroke pts (compared w/ healthy cntrls) &amp; corresponding determinants &amp; predictive factors</p>	<p>Interview D2 IV 2/3</p>	<p>N= 80 (51 M, 29 F) M age= 67. 4 ± 13.5 yrs  Incl: any gender, any type of stroke, any age, 1st stroke pts btwn Jan 1, 2005 &amp; June 30, 2005  Excl: Pts who suffered 1+ stroke, transient ischemic attack or any other pathology altering QoL, did not live in France, French not 1st language, deceased, unable to follow-up, hospitalized @ time of study, &amp; refused to participate following explanation of study objectives</p>	<p>I: M follow-up period of 2 yrs, 24 pts interviewed in home &amp; 56 pts via telephone. Data compared w/ 149 healthy cntrls.  O: BI, ADRS, Sickness Impact Profile (SIP-65), &amp; Satisfaction with Life Scale (LiSat 11)</p>	<p>LS, QoL, &amp; life domains significantly impaired compared w/ cntrls. QoL strongly correlated w/ fxn I, persistence of hemiplegia, &amp; depressive mood.  Difficult to predict fxn I; however, interviews suggest receiving adequate social support might be as impnt to pts as recovering I.</p>	<p>High proportion of pts lost to follow-up (due to death, changes in place of residence, “doctor-hopping”, etc.), biasing study sample’s characteristics &amp; representativeness</p>
<p>Thomas 2006 <i>British Journal of Clinical Psychology</i> UK</p>	<p>Determine which factors predicted the severity of depression at the time of recruitment to a study &amp; 6 mo later</p>	<p>Questionnaire-based longitudinal study D2 IV 2/3</p>	<p>N=123(63M, 60F) M age= 66 yo  Incl: 1 mo post-stroke  Excl: blind, deaf, severe communication problems, did not speak English, dementia, &lt;10 on BI</p>	<p>IV: stroke-related factors &amp; level of depression  DV: BDI, Wakefield Depression Inventory, BI, extended ADL scale, Sheffield Screening Test (SST), Recovery LOC scale</p>	<p>O: greater communication impairment predicted greater depression (OR=0.72, p=.01), greater communication impairment (OR=0.69, p&lt;.05) &amp; more external LOC (OR=.89, p&lt;.05) likely to have depression  LOC &amp; communication impairment relate to depression. Communication impairment is the strongest predictor of depression severity &amp; prognosis. Mild depression is more likely to resolve</p>	<p>Pt sample was highly selective, required consent might mean they had more motivation to improve</p>

<p>van Mierlo et al. 2018 <i>Disability &amp; Rehabilitation</i> Netherlands</p>	<p>Identify trajectory &amp; determine factors of physical &amp; psychosocial that influence health related QoL post-stroke.</p>	<p>Longitudinal multicenter cohort study D2 IV 2/3</p>	<p>N=351 Excl: other serious condition; dep ADL before stroke; did not speak Dutch; cog decline before stroke</p>	<p>I: In-depth Interview O: severity of stroke, gender, age, level of edu, ADLs, comorbidity, cog fxning, neuroticism, extraversion, optimism, pessimism, self-efficacy, proactive &amp; passive coping</p>	<p>4 trajectories identified (low, high, recovery, decline). Decline vs. high physical factors: discharged to rehab setting, less acceptance more neuroticism, pessimism, helplessness, &amp; passive coping. Psychosocial: discharge to rehab setting, less self-efficacy, proactive coping</p>	<p>Large sample size but participants had mild strokes &amp; minor physical disabilities</p>
<p>Vestling et al. 2003 <i>Jrnl of Rehabilitation Medicine</i> Scandinavia</p>	<p>Gaining employment after stroke &amp; addressing factors of readiness for return to work, well-being, life satisfaction</p>	<p>Pre-existing grp D2 III 2/3</p>	<p>N=120 pts who sustained a stroke; found through medical records. Incl: working before stroke, &lt; 60 yo @ time of stroke, live in Malmo, min time of 6 mo post stroke.</p>	<p>I: Returning to work O: Goteberg Quality of Life scale--satisfaction &amp; well-being.</p>	<p>Type of work, walking, cog abilities, basic edu, &amp; level of dep in self-care correlated sig w/ return to work. Individuals who returned to work reported higher level of well-being &amp; life satisfaction. Individuals who returned to work reported higher LS w/ life as whole, financial situation, leisure &amp; friends.</p>	<p>Gathered info through medical documents &amp; questionnaire, self-report on what it means to be satisfied, no actual definition</p>

<p>Baumann et al. 2012 <i>BMC Neurology</i> Luxembourg</p>	<p>Assessed, 2 yrs post-stroke onset, effects of factors on pts' LS &amp; family caregivers' LS in Luxembourg</p>	<p>Retrospective health record audit D3 IV 2/3</p>	<p>N= 156 (94 pts, 62 caregivers) M pt age: 65.5 yrs M caregiver age: 59.3 yrs  Incl: Living in Luxembourg @ stroke onset, hospitalized in Luxembourg btwn July 1 06 &amp; June 30 07, stroke dx, aphasic pts, resident in Luxembourg 2 yrs post, pt or primary caregiver understood Luxembourgish, Portuguese, French, &amp; German, &amp; valid addresses  Excl: TIA dx</p>	<p>I: Pts interviewed 2 yrs post-stroke  O: European single question (range 1–10), Newsqol (11 dimensions), &amp; Whoqol-bref (4 domains) (range 0–100)</p>	<p>↓ sensory, motor, &amp; memory fxns. LS M=7.1/10, SD 1.9, ↑ in F (+12.4) &amp; ↓ among unemployed socio- economically active pts (-13.1). ↓ motor &amp; memory fxn, LS pos correlated w/ scores of Newsqol feelings, sleep, emotion, cog &amp; pain dimensions (r= 0.31, 0.26, 0.22, 0.21, 0.20), did not correlate w/ caregivers' Whoqol-bref domains. Family caregiver' LS M=7.2/10, SD 1.7. ↓ w/ pts w/ impaired memory fxn (-12.8), feelings &amp; emotion (slopes 0.22). Associated w/ all caregivers' Whoqol-bref domains (slopes 0.53 - 0.68).</p>	<p>Low representativeness of sample since 2 yrs post-stroke, low participation rate, pts died, lived in institutions, changed their residence or failed to respond.</p>
<p>Cramm et al. 2011 <i>Quality of Life Research</i> Netherlands</p>	<p>Identify indicators associated w/ QoL of stroke pts &amp; caregivers</p>	<p>Cross sectional study D3 IV 2/3</p>	<p>N=251 Incl: Inpt hospital  Excl: Dx w/ TIA, deceased, questionnaires of pts &amp; caregivers that cannot be connected</p>	<p>I: Info booklets/records, edu, training &amp; counseling, &amp; soc or emotional support  O: EuroQol questionnaire (EQ-5D), BI, Satisfaction with Stroke Care (SASC) &amp; Caregivers' Satisfaction with Stroke Care (C-SASC) questionnaires, Actor-Partner (pt-caregiver) Interdependence Model (APIM)</p>	<p>Pts' &amp; caregivers' age (<math>\beta = -0.15</math>), &amp; edu level (<math>\beta = +0.09</math>) significantly related to QoL. Pts' disability on hospital admission &amp; length of stay associated w/ pts' QoL, &amp; their disability on admission related to caregivers' QoL. No relationship found btwn length of stay &amp; caregivers' QoL. Satisfaction w/ care associated w/ both pts' &amp; caregivers' QoL. APIM distinguished diff roles of pts &amp; caregivers while acknowledging interdependence of their QoL scores. Satisfaction w/ care as pt or caregiver impt indicator of stroke pts' &amp; caregivers' QoL.</p>	<p>Convenience sample, only Dutch stroke services provided limiting generalizability, did not investigate prior caregiving experience, amount of time caregivers spend on task, caregiver perception of stress &amp; effect on QoL, unable to take into account impact of changes over time, did not investigate caregivers' burden &amp; depressive feelings</p>

<p>Hansson et al. 2013 <i>Scandinavian Journal of Caring Sciences</i> Sweden</p>	<p>Study relation of satisfaction w/ how rehab was provided w/ self-perceived QoL, self-perceived fxn, &amp; rehab received, 12 mo after incident</p>	<p>Phenomenology D3 IV 1/3</p>	<p>N= 283 (137F, 146M) M age: 75.2 ± 11.8 yrs  Incl: Pts living in Malmö &amp; tx for stroke at Neurological Department of Skåne University Hospital from March - Dec 07</p>	<p>I: Pts assessed 12 mo post-stroke  O: BI, EuroQol-5D (EQ5D) and EuroQol Visual Analogue Scale (EQ VAS), Levels of Rehab</p>	<p>Pts w/ ↑ values on BI more satisfied w/ how rehab was provided. M pts &amp; pts who received rehab on 3+ levels of care less satisfied. Given assumption pts w/ more severe dysfxn after stroke are being rehabilitated on more levels, might imply not amount of rehab that gives satisfaction but pts self-perceived fxn after rehab.</p>	<p>Varied health conditions of pts, questionnaires may have been answered by relatives or nursing staff</p>
<p>Mutai et al. 2016 <i>Psychogeriatrics</i> Japan</p>	<p>Investigated changes of fxn status in home-dwelling stroke survivors 1–3 yrs after inpt rehab &amp; examined factors associated w/ longitudinal fxn changes &amp; health-related QoL.</p>	<p>Longitudinal study D3 IV 2/3</p>	<p>N=27 (19M, 8F) M age: 69.4 ± 9.9 yrs  Incl: Stroke dx  Excl: Severe confusion, unstable medical complications, or other acute diseases that could impede active rehab</p>	<p>I: Surveys conducted in homes of stroke survivors.  O: FIM, Short Form 36, Frenchay Activities Index, and Hamilton Depression Rating Scale</p>	<p>From time of discharge to follow-up (M: 2.1 ± 0.6 yrs), total &amp; motor FIM scores mildly improved, &amp; cog FIM score significantly improved. On Short Form 36, phys fxn, gen health, &amp; vitality scores ↓ than norm-based scores. Social participation associated w/ long-term improvement in ADL. Health-related QoL correlated w/ ADL &amp; depression.</p>	<p>Study findings may not be generally applicable to community-dwelling stroke survivors &amp; small sample size.</p>

<p>Shifren &amp; Anzaldi 2018 <i>Psychology Health &amp; Medicine</i> UK</p>	<p>Study relations btwn well-being, optimism, depression, self-rated physical health in stroke survivors</p>	<p>Survey D3 IV 2/3</p>	<p>N= 176 (79M, 97F) M= 57.83 yo  Incl: dx of stroke, younger than 18yo</p>	<p>I: Survey  O: optimism (LOT-R), depressive symptoms CES-D), physical health (SF-36; IPQ),</p>	<p>Stroke survivors w/ higher scores on optimism reported more well-being &amp; less depressive symptoms. Higher scores on optimism reported less illness symptoms &amp; better perceived physical health. Optimism played role on relation btwn mental health &amp; overall health.</p>	<p>All were recruited through an online newsletter so there may have been sampling bias.</p>
<p>Park et al. 2017 <i>Journal of Physical Therapy Science</i> Korea</p>	<p>Look at influences of client-centered therapy on level of everyday life performance, level of satisfaction, &amp; QoL of chronic stroke pts.</p>	<p>Case Series D3 IV 2/3</p>	<p>N=2 Participant 1: 58 yo M Participant 2: 56 yo F  Incl: stroke &amp; hemiplegia dx, no cog fxn damage by receiving &gt; 24 points on Mini Mental State Examination-Korean version (MMSE-k).</p>	<p>I: Therapy carried out 1x/day, 5x/wk, 30 min session, for 4 wks  O: COPM, Stroke Specific Quality of Life Scale (SS-QOL)</p>	<p>After application of med tx, both subjects showed pos changes in level of everyday life performance, level of satisfaction, &amp; QoL. Both demonstrated improvements in all aspects of both outcomes implying short client-centered therapy could help chronic stroke pts improve.</p>	<p>Sm sample size, short time period of study, &amp; no cntrl cases secured</p>

Outcomes

Author, Year, Jrnl, Country	Study Objectives	Study Design/ Level of evidence	Participants Sample Size, description of inclusion & exclusion criteria	Interventions & Outcome measures	Summary of Results	Study Limitations
Hartman-Maeir et al. 2007 <i>NeuroRehabilitation</i> USA	Evaluate functional status, leisure activity, & satisfaction in stroke survivors participating in community rehab program compared to no program	2 grp study O3 III 3/6	Grp 1 (community program)= 27 (15M, 12F), <i>M</i> age= 61.59 yo, Time post onset= 35.2 mo Grp 2 (no community program)= 56 (42M, 14F), <i>M</i> age= 57.7 yo, Time post onset= 11.67 mo  Incl: 1st hemispheric stroke, at least 1yr post-stroke, I living status pre-stroke, 6+ yrs of edu & understands English	I: Data on grp 2 gathered 1 yr post-stroke prior to grp 1. Grp 2 assessments performed by OT trained in administration of assessments & not involved in tx of subjects. Evaluated in homes for 1 hr. Grp 1 evaluated at day center for 1 hr  O: FIM, IADLq, ACS, LiSat-9, SIS	Activity level ↑ in program ( $t=-8.10$ , $p<.001$ ) & satisfaction scores were > non-participants (life as a whole: Grp 1=70% satisfied, Grp 2=39% satisfied, $p=.01$ )	No comparison for SIS results, could not examine change in disability levels, caregiver perspective not examined
Phipps 2007 <i>AJOT</i> USA	Determine whether pts w/ TBI/stroke perceived that they reached self-identified goals related to I/ADLs	Retrospective analysis of outcomes O3 IV 5/6	<i>N</i> =155 TBI <i>n</i> =38 CVA <i>n</i> =117 R CVA <i>n</i> =53 L CVA <i>n</i> =64  Excl: severe cog/ language/psychological impairment, unable to complete COPM	IV: demographics & stroke-related factors  DV: achievement of goals COPM	TBI & stroke survivors who received client-centered OT demonstrated sig improvements in fxn & perceived that they reached their self-identified goals O: self-perceived performance & satisfaction w/ I/ADLs w/ client-centered ( $p<.001$ ), no difference in performance & satisfaction btwn TBI & stroke grps, R CVA had stat sig higher satisfaction than L CVA ( $p=.03$ )	Specific pop, interrater reliability btwn evaluators was not assessed



## Experimental

Author, Year, Jrnl, Country	Study Objectives	Study Design/ Level of evidence	Participants Sample Size, description of inclusion & exclusion criteria	Interventions & Outcome measures	Summary of Results	Study Limitations
Damush 2011 <i>Translational Behavioral Medicine</i> USA	Effect of developed stroke specific, self-management intervention on functioning & quality of life	RCT, pre/post/follow-up E2 I 8/10	$N=63M$ Attention cntrl $n=33$ Stroke self-management program $n=30$ 6 biweekly telephone sessions, 12 wk tx  Incl: 18+ yo, ischemic stroke within past mo, able to speak & understand English, no severe cog impairment, access to a telephone, willing to follow up at VA, life expectancy of 12+ mo	IV: cntrl grp or stroke self-management grp  DV: stroke specific quality of life	Participating in stroke self-management intervention improves self-efficacy to communicate with providers, $\uparrow$ time spent exercising, & $\uparrow$ QoL. O: self-efficacy to communicate w/ physician ( $t=2.34, p<.02$ ), $\uparrow$ aerobic activity ( $t=1.18, p<.24$ ), & participation in roles ( $t=-2.04, p<.05$ ) higher in stroke self-management grp than cntrl grp. No difference btwn grps for cog self-management	Modest sample size, no F included, only included people w/ ischemic/TIA stroke
Linder et al. 2015 <i>AJOT</i> USA	Determine effects of home-based robot-assisted rehab coupled w/ home exercise program, compared w/ home exercise program alone on depression & QoL in ppl after stroke	RCT E2 I 6/10	$N=99$  Incl: unilat ischemic/hemorrhagic stroke w/in 6 mo, some UE voluntary movement, limited access to organized stroke rehab program, & preserved cog fxn  Excl: lack of I before stroke, anti-spasticity injection in hemiparetic UE since stroke onset, substantial peri-personal neglect, sensory loss score $\geq 2$ on sensory item of NIHSS & UE hypertonicity score $\geq 3$ on Modified Ashworth Scale	I: Participants randomized into 1 of 2 grps, (1) home exercise program or (2) robot-assisted therapy, 1 home exercise program, & participated in 8 wk home intervention.  O: SIS & Center for Epidemiologic Studies Depression Scale	Stat sig changes in all but 1 domain on the SIS & Center for Epidemiologic Studies Depression Scale for both grps. Robot-assisted intervention coupled w/ home exercise program & home exercise program alone administered using a telerehab model may be valuable approaches to improving QoL & depression in people after stroke.	Relied on participant self-report, impact of spontaneous recovery or compensatory strategies on motor results & self-reported QOL, unable to determine why QOL & depression outcomes $\uparrow$

<p>Perrin et al. 2010 <i>Jrnl of Rehabilati on Research and Developme nt</i> USA</p>	<p>Videophone edu &amp; supportive problem-solving interventions for caregivers improve caregiver MH &amp; functioning of individuals.</p>	<p>RCT E2 I 5/10</p>	<p><math>N=61</math> dyads (<math>n=122</math> people) <math>n=61</math> vets <math>n=61</math> caregivers  Incl: vet treated for CVA &amp; being discharged in 14 mo, had caregiver (w/ a landline telephone, signed informed consent), signed informed consent, ability to communicate over telephone</p>	<p>I: TAP-review of basic stroke, info about caregiving, overview of recovery experience of those w/ CVA  O: caregiver strain, depression, caregiver satisfaction, vet functional status,</p>	<p>Satisfaction: w/ TAP sig correlated w/ caregiver strain (<math>p&lt;0.01</math>) &amp; depression (<math>p&lt;0.01</math>). Caregiver satisfaction w/ TAP <math>\uparrow</math>, neg psychosocial factors of strain &amp; depression. Caregiver strain sig diff btwn tx &amp; cntrl. Vet motor FIM sig linked to caregiver satisfaction w/ TAP (<math>p&lt;0.01</math>).</p>	<p>Only could do 3 mo post discharge, first time using TAP in a study (needs to be adjustments), very limited as vets needed to have a landline</p>
<p>Polatajko 2012 <i>AJOT</i> USA</p>	<p>Compare effects of Cog Orientation to occ performance or standard OT to changes in pt performance on 3 goals post-stroke</p>	<p>RCT E2 I 4/10</p>	<p><math>N=8</math> <math>M= 60.4</math> yo Standard OT <math>n=4</math> Cog orientation to occ performance <math>n= 4</math>  Incl: &gt; 6mo post-stroke, living in the community, NIHSS &lt;13, IQ &gt;80, no more than min aphasia</p>	<p>I: 10, 1hr tx sessions IV: standard task-specific OT/Cog Orientation to occ performance  DV: Performance Quality Rating Scale (PQRS) &amp; COPM</p>	<p>O: Cog Orientation to occ performance grp had stat sig higher improvements in performance (PQRS, <math>p=.02</math>; COPM performance <math>p=.02</math>) compared w/ standard OT grp, but no improvements in satisfaction (<math>p=.38</math>)  Cog orientation to occ performance had greater improvements towards achievement of 3 self-identified goals than standard OT.</p>	<p>Small sample size, high withdrawal rate, non-blinding of assessment administrators</p>

<p>Wressle et al. 2002 <i>Jrnl of Rehabilati on Medicine</i> Scandinavi an</p>	<p>Effect of using COPM on pts' perception of active participation in rehab process</p>	<p>Experime ntal design E3 II 4/7</p>	<p><math>N=210</math>pts, <math>n=155</math> experimental, <math>n=55</math> cntrl Separated by hospital, (1 hospital experimental, 1 hospital cntrl)  Incl: need for rehab interventions, ability to communicate, live &lt; 30 min away</p>	<p>I: COPM given to experimental grp  O: structured interview 2-4 wks after discharge, focus on rehab process, goal setting, planning interventions, results, pt participation &amp; satisfaction</p>	<p>Sig difference in diagnostic grps btwn experiment &amp; cntrl grp (<math>p&lt;0.01</math>). Sig changes @ grp level btwn pre-post test both performance &amp; satisfaction (<math>p&lt;0.001</math>). Pre-test= 0.60 (<math>p&lt;0.005</math>). Post-test= 0.82 (<math>p&lt;0.005</math>). Use of COPM led to active participation during rehab &amp; ↑ satisfaction w/ goals.</p>	<p>Large number of dropouts, bias from therapists due to influence on pts, interviewers were not blind</p>
<p>Skubik-Peplaski 2012 <i>AJOT</i> USA</p>	<p>Effect of occ-based intervention on post-stroke UE motor recovery, neuroplastic change, &amp; occ performance</p>	<p>Single-subject case report pre-post design E4 IV 4/7</p>	<p><math>N=1</math> M, 55 yo  Incl: 1 stroke more than 1 yr ago  Excl: h/o head injury, seizures, severe substance abuse/psychiatric illness/cog deficit, ferromagnetic material near brain, pacemaker</p>	<p>I: 55 min sessions 3x/wk for 5 wks IV: occ-based intervention  DV: FM, SIS, COPM, transcranial magnetic stimulation</p>	<p>O: clinically relevant behavioral outcomes (FMA 3+ ↑, SIS 10+ ↑) &amp; descriptive data revealed enhanced occ performance (COPM 2+ ↑)  Occ-based intervention delivered in hospital-based, home-like environment can lead to post-stroke neuroplastic change, ↑ functional use of affected UE, &amp; improved occ performance</p>	<p>Incl of preparatory methods &amp; purposeful activity may have influenced occ-based tx</p>

## Meta-Analysis

Author Year Journal Country	Study Objectives	Study Design/ Level of Evidence	Number of Papers Included, Incl/ Excl Criteria	Interventions & Outcome Measures	Summary of Results	Study Limitations
Engel-Yeger et al.  2018  <i>Behavioural Neurology</i>  UK	Critically review evidence investigating recovery of participation outcomes following stroke	Scoping Review  E1  I  17 RCTs (E2, I)	<i>N</i> =59, 2001-2017, 7 databases Search criteria: related to study pop, interventions, comparison or outcomes, types of study design  Incl: longitudinal cohort, case cntrl, pre-post test, case series & report, written in English, published up to Apr 2017, at least 2 participation eval time points in same sample w/ same participation instrument  Excl: pediatric stroke, severe comorbidities (Alzheimer's, diabetes, cancer)	I: Participation  O: 22 different measures of participation, most prevalent was SIS-P & LIFE-H	Stroke rehab practice should refer to participation as a major outcome measure of recovery & intervention effectiveness. Assessments that include a broad perspective on participation domains should be used. Participation is often measured 6mo post stroke which may not show true trajectory. Participation as outcome measure should be used in rehab programs.	Variability of studies' designs & methods, differing definitions of participation, not many studies looked at impacts on participation in stroke survivors, multiple interventions & assessments
Fahey et al.  2018  <i>PLOS One</i>  USA	Identify & critically appraise clinical prediction models of mortality & fxn following ischaemic stroke	Metasynthesis  Q1, E1  I  145 studies	<i>N</i> =109 studies in qualitative synthesis <i>N</i> =36 studies in quantitative synthesis  Incl: Any country, both sexes, pts managed in community or hospital, ischemic stroke pts, models suitable for ischemic stroke risk prediction, & studies examining mortality & fxn  Excl: Models predicting outcome following pediatric or recurrent stroke or specific pt subgrps	I: Predictive risk models  O: Critical Appraisal and Data Extraction for Systematic Reviews of Prediction Modelling Studies (CHARMS) Checklist	66 different predictive risk models, 152 predictors of mortality, & 192 predictors of functional outcome identified. No model impact studies identified.	Appraisal identified poor methodological quality & high risk of bias for most models. Generalizability could be improved, < ½ incl models have been externally validated ( <i>N</i> = 27/66).

<p>Ma 2002 <i>AJOT</i> USA</p>	<p>Effects of OT remediating psychosocial, cognitive-perceptual, &amp; sensorimotor impairments</p>	<p>8 RCTs with high internal validity (E2, I), 9 RCTs with 1+ threat to internal validity (E2, I), 9 multiple group comparisons (O2/O3, II), 1 single-case study (D4, IV)  E1  I</p>	<p><i>N</i>=29 studies (832 participants) <i>M</i> age=64.3 yo L CVA <i>n</i>=317 R CVA <i>n</i>=328  Incl: English language, peer-reviewed OT journals, published between 1980-2000, tx administered by OT</p>	<p>I: 17 studies applied research of therapy offered in clinical/home, 12 studies used experimental tx in lab conditions  O: therapeutic goals included psychosocial, cognitive-perceptual, cognition, learning, visual perceptual, endurance, range of motion, muscle strength, coordination, &amp; ↓ spasticity</p>	<p>To improve psychosocial wellbeing depression should be addressed proactively; to improve cognitive abilities use occupational tasks; to ↑ participation use games &amp; other meaningful activities to the patient; to improve performance teach patient to imagine themselves doing the action</p>	<p>Operational definition of OT excluded some tx used by OTs, paucity of research on particular tx</p>
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Abbreviations List	
ACS - Activity Card Sort	Mod - moderate
ADL - Activities of daily living	Mo - months
AMAT - Arm Motor Ability Test	MS - multiple sclerosis
BDI - Beck Depression Inventory	mV - milivolts
BI - Barthel Index	Neg - negative
CES-D - Center for Epidemiological Studies Depression Scale	NIHSS - National Institute of Health Stroke Scale
Cntrl - control	Occ(s) - occupation(s)
Cog - cognitive	OGQ - Occupational Gaps Questionnaire
COPM - Canadian Occupational Performance Measure	Pop - population
CVA- cerebral vascular accident	Pos - positive
Dep - dependent	PosMT- Positive Mental Training
Dx - diagnosis(es)	PRRS - Performance Quality Rating Scale
ECR - extensor carpi radialis	Pts - patients
EDC - extensor digitorum communis	RNL - Reintegration to Normal Living Index
Edu - education	SCI - spinal cord injury
EMG - electromyography	SF-36 - Short Form of Medical Outcomes Study
Excl - exclusion	SIS - Stroke Impact Scale
Ext - extension	SJOT - Scandinavian Journal of Occupational Therapy
FAI - Frenchay Activities Index	SSL-12-I - Social Support List-Interaction
FMA - Fugl-Meyer Assessment	Stat sig - statistically significant
Fxn - function	TAP - Transition Assistance program
GDS - Geriatric Depression Scale	TBI - traumatic brain injury
Grp(s) - group(s)	TENS - transcutaneous electrical nerve stimulation
HLC - Heteroanamnesis List Cognition	TIA - transient ischemic attack
h/o - history of	TOA - task oriented approach
Hx - history	Tx - treatment
I - independent	UCO - Utrecht Communication Observation
IADLq- Lawton Instrumental Activities of Daily Living	UE - upper extremity
Impt – important	Unilat - unilateral
Incl - inclusion	USER-P - Utrecht Scale for Evaluation of Rehabilitation-Participation
Inpt- inpatient	Vet(s) - veteran(s)
IPQ - Illness Perception Questionnaire	Wk(s) - week(s)
LiSat-9 - Life Satisfaction questionnaire	
LOC - locus of control	
LOT-R- Life Orientation Test-Revised	
LS - life satisfaction	
M - mean	
Min - minimal	
MBI - Modified Barthel Index	
MMSE - Mini Mental State Exam	
MMT - manual muscle test	

## Summary of Key Findings

### Summary of Experimental Studies (8)

The experimental studies were focused on different types of treatment and having a client-centered approach to improve quality of life. There was strong evidence for clients creating their own goals, leading to greater satisfaction in goal achievement. There was strong evidence to support the use of outcome measures that assess participation throughout the recovery process of a stroke. There was moderate evidence for treatment strategies including participating in stroke self-management intervention, administering a home program via a telehealth rehabilitation model, and having an occupation-based approach. There was limited evidence that the use of the Canadian Occupational Performance Measure led to greater improvements towards achievement of self-identified goals and satisfaction. There was also limited evidence that the use of Cognitive Orientation of Occupational Performance led to greater improvements towards goals but did not increase satisfaction. There was limited evidence that the use of a Transition Assistance Program increases caregiver satisfaction.

### Summary of Outcome Studies (2)

There were two themes from the outcome studies found. First, there was limited evidence to support that increased social participation through community-based programs increases life satisfaction. Second, there was limited evidence for the theme that client-centered occupational therapy increases function and perceived achievement of goals. Evidence was limited due to only having two outcome studies.

### Summary of Qualitative Studies (10)

The main themes of the qualitative studies were the healthcare system, support systems, awareness of new abilities, and changing roles. There was moderate evidence from a meta-synthesis that found many predictors of mortality and function occupational therapists should be aware of when providing services to stroke patients. There was moderate evidence to show that patients reported satisfaction with hospital care, but both positive and negative experiences with continuing care. There was moderate evidence that reported clients felt they lost their autonomy due to decreased involvement in healthcare planning. There was limited evidence to show the process of re-engagement involves awareness and connecting with self, reality, and others. It is important to consider the patients' awareness of experiences, priorities, and goals. Mixed evidence was found that support systems aid with emotional and social companionship post-stroke; however, few to no patients received guidance about how their relationships would be affected.

### Summary of Descriptive Studies (20)

The main themes of the descriptive studies included how life satisfaction, meaningful occupations, social participation, personal characteristics, and perception of self affected quality of life. There was moderate evidence that life satisfaction of both client and caregivers, re-engagement in meaningful occupation, and participation in social activities all lead to increased quality of life. Additional articles revealed limited evidence to support that certain characteristics of the client or the client's perception of their recovery, which could lead to increased or decreased participation, satisfaction and overall quality of life.

**Implications for Consumers**

Consumers of our research are veterans with stroke and their caregivers. The population we researched were inpatient and home-dwelling clients recovering from stroke. Their ages ranged from young adult to elderly. Research that specifically related to veterans who sustained a stroke had implications for the importance of caregiver satisfaction and introducing a self-management program, namely, that focusing on caregiver's support, satisfaction, and quality of life increased veterans' re-engagement in meaningful occupations. Implementing a self-management program improved the veterans' self-efficacy skills and overall life satisfaction. Additional findings from research that did not explicitly relate to veterans, could be generalized to veteran populations. Consumers can advocate with their provider to ensure they receive information and support around caregiver issues and meaningful occupations. This has been shown through the research to influence quality of life once patients return home in their community. They should also seek out social support groups, which leads to re-engagement in occupations and increased life satisfaction.

**Implications for Practitioners**

For occupational therapists, the main focus is to get clients back to engaging in occupations that are meaningful to them, in order to increase their quality of life. The implications of the above research indicate that occupational therapists need to be aware of the client/caregiver relationship, specific client factors, facilitate resilience characteristics, and make sure to provide quality, client-centered experiences. These themes have been shown to have a positive influence on increasing quality of life for both clients sustaining a stroke and their caregivers. In program development, an occupational therapist should utilize a client-centered approach that focuses on the psychosocial needs of both the client and their caregiver. Education about implications for changes in roles and new functional abilities should be provided prior to discharge. New programming involving stroke rehabilitation should require using client-centered assessments and treatments that focus on aspects of re-engagement and satisfaction to address psychosocial needs. Overall, there is moderate evidence for implementing these strategies in practice.

**Implications for Researchers**

Although there is vast amount of research done on best practice to support patient re-engagement in meaningful occupations for individuals recovering from stroke, many of the studies we found were lower level studies, with a majority being descriptive or qualitative studies. Researchers should focus on developing higher level studies that involve veterans for the purpose of strengthening evidence and determining if common themes are present. We were able to find some experimental studies, but they each utilized a varied type of intervention. One question we would like to pose is: What different treatment approaches should be implemented when working with veterans as opposed to the general population who have sustained a stroke, in order to increase quality of life and re-engagement in meaningful occupations? Another question we are interested in: Is there a difference in how veterans respond to treatment than the general population? We chose these questions because we were unable to find adequate information specifically comparing these two populations. Answering these questions will provide greater insight on how to best address the unique psychosocial needs of veterans.

**Bottom Line for Occupational Therapy Practice/ Recommendations for Best Practice**

Veteran populations come with their own unique psychosocial needs. A majority of the research we found was on people who have sustained a stroke from the general population, however this research has implications for veterans as well. An occupational therapist should consider our main findings and themes from these articles to apply client-driven treatment in their practice settings in order to increase overall quality of life. Common themes we found were participation in social groups, considering caregiver satisfaction, addressing psychosocial needs, and maintaining client-driven practice.



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### **Involvement Plan**

Based on our research findings regarding the limited effectiveness of Canadian Occupational Performance Measure (COPM) (Law, Baptiste, Carswell, McColl, Polatajko & Pollock, 2014) use to facilitate client-driven practice, we developed our involvement plan. Mary was eager to implement the COPM with her clients who are veterans who sustained a stroke. She mentioned the use of the COPM would provide her with the quantitative data that she does not currently have, enabling her to see client progression towards goals in addition to performance and satisfaction ratings. Mary believed other OTs at the American Lake VA would also benefit from learning and implementing the COPM with their clients.

Mary and her colleagues voiced the following concerns regarding the use of the COPM. The first being that the COPM can be confusing to administer if not understood well. Additionally, the COPM takes around 15 to 30 minutes to administer, so it may be challenging for a practitioner to fit it into an evaluation session. Another barrier mentioned was that implementing the COPM could create some push back from the veterans because they may wonder why they are being asked so many questions. Finally, Mary explained that she currently has eight clients who sustained a stroke on her caseload, and she does not foresee getting new clients within the timeframe of our project. Ideally, we would have Mary use the COPM at evaluation and discharge. However, given her current caseload, we decided that for the purpose of this project, the OTs could administer it during treatment in order to obtain a larger sample size.

One benefit of the VA system is that there is more leniency in evaluation sessions being extended in the number of visits reimbursed. Despite the COPM taking 15 to 30 minutes to administer, the OTs within the VA explained that they should be able to justify extended evaluation sessions for use of the COPM if they see better outcomes for veterans by using it. The extended time it takes to complete the COPM could be reimbursed through private insurance entities, such as Tricare. Mary has also purchased the COPM and will be able to implement the assessment after our in-service.

On March 15, we provided an in-service to Mary and two to five of her OT colleagues about how to administer and score the COPM. After the in-service, Mary and her OT colleagues implemented using the COPM with their stroke clients; either at initial evaluation or during intervention. The plan was to

have the COPM re-administered prior to discharge, during a re-evaluation period, or between April 15th through the 19th to document changes in client performance, satisfaction, and progression towards client goals.

### **Context**

There were two organizational factors that are influencing the context. The first was organizational readiness. The tension for change addresses the OTs engagement and motivation for implementing new procedures within their practice area. For Mary specifically, she showed enthusiasm for eliciting a change within their current practice through implementing the COPM with her stroke clients. Mary explained she would like to use the COPM primarily for herself and within her VA setting. Within the VA, OTs have one hour to evaluate clients but can get additional sessions reimbursed if needed. Therefore, if the COPM was shown to be effective in increasing motivation and goal achievement with clients, the OTs will have extended time if needed, to administer the COPM with every stroke client. For consistent use of the COPM, Mary will need to feel competent and knowledgeable about the use of the COPM. The implication assessed and known category considers Mary's competence and knowledge of the COPM, as well as our research supporting the effectiveness of the COPM. Additional implications included increased goal achievement, ultimately leading to greater satisfaction for clients. Our research is not specific to veteran populations; however, we feel our findings can be generalized to them.

The second organizational factor is routinization and sustainability, which means having faithful application and continuation of COPM use. The VA has ample funding to purchase the COPM. Mary already purchased copies of the COPM for her department; therefore, for continued use the only additional expense will be purchasing scoresheets. If the COPM yields better outcomes for their clients as suggested by the research, OTs at the VA will be more likely to use it.

On a departmental level, other OTs within Mary's department have shown interest in learning about the COPM. They see application for its use as a tool for their own clients, who may, or may not, have sustained a stroke. They offered to search through their own caseloads to identify any clients who sustained a stroke and use the COPM on them for our research purposes.

On an individual level, Mary currently has a total of eight clients who have sustained a stroke. One of those clients is a new admit; therefore, instead of using the COPM at evaluation and re-evaluation, we planned for the COPM to be implemented during intervention and re-evaluation with the clients who have been on her caseload longer than one week.

**Task/Products and Target Dates**

Task/Product	Deadline date	Steps with dates to achieve the final outcome
1a. Manualizing an intervention	N/A	N/A
1b. Clinical practice guidelines	N/A	N/A
1c. Information product for clients	N/A	N/A
1d. In-service for practitioners	3/15/19	2/26/19 - Set up date with Mary and other staff at the VA for in-service 3/15/19- Gave “Survey 1” to OTs before providing in-service, provided in-service on COPM to OTs at the VA, gave “Survey 2” to OTs upon completion of the in-service
1e. Outcomes monitoring consultation	4/22/19-4/26/19	4/15/19-4/19/19 – We administered “Survey 3” after implementation of COPM.
1f. Documenting the process of knowledge translation by the practitioners	3/18/19-4/19/19	3/15/19-3/22/19- Therapists began implementation of COPM and we gathered data specifically on the number of times the COPM was used, how confident the OT clinician felt while administering and scoring the COPM, as well as if they were able to obtain information about goal achievement, therapy performance and satisfaction for their client. 3/25/19-4/12/19- We documented the number of times COPM was used for evaluation of new client or prior to discharge for a current client *4/15/19-4/19/19- Therapists planned to re-administer the COPM during re-evaluation, we gather data specifically on the number of times the COPM was used and whether the OT was able to obtain specific information about goal achievement, therapy performance and satisfaction for their client. 4/22/19 – We followed up with OTs to identify their thoughts about COPM use with “Survey 3”



\*OT practitioners were unable to re-evaluate clients using the COPM due to time constraints.

### **Monitoring/Evaluating Outcomes**

The OTs at the American Lake VA administered the COPM with clients who sustained a stroke after the March 15th in-service. We then collected information on whether the COPM was administered at initial evaluation or during intervention. Each OT was intended to complete a re-evaluation using the COPM by April 19th. On April 22nd, we debriefed with Mary and the other OTs who used the COPM to see how they perceived implementation with clients in regard to goal achievement, satisfaction, and performance.

### **Description of Activities and Products Completed**

Our knowledge translation activity began with a phone meeting with Mary and two other OTs regarding our research findings, and their thoughts about the knowledge translation portion of our project. Mary became interested in the article by Wressle et al. and wanted more information about the use of the COPM, the evidence behind it on improved client satisfaction for clients who had sustained a stroke, and how she could use the assessment in her practice. We then suggested an in-service to explain and familiarize her and her colleagues with the COPM.

For our knowledge translation activity, we met with Mary and two other OTs working at the VA. We began with an overview of our research findings to preface the importance of client-driven practice. We highlighted the key findings in the article by Wressle et al. to demonstrate the use of the COPM, and the outcomes resulting in higher goal achievement and client satisfaction. Next, we provided an initial survey to gauge their current knowledge about the COPM. After they completed the survey, we presented an overview of what the COPM assessment is, why it was created, and what it assesses. We then explained how to conduct the COPM and fill out the score sheet by using the example of a completed assessment form found in the COPM manual. This included defining what a problem area is and teaching the practitioners how to help clients self-evaluate their problem areas. We explained that once problem areas were identified, clients would rate importance of the problem, their performance in the problem area, and their perceived satisfaction with their performance on a 1-10 scale. They were then shown where to record client responses on a score sheet. The OTs were asked if they had any clarifying questions before students presented the second survey. The second survey was used to identify confidence in implementation and scoring of the assessment, as well as what kinds of information they were hoping to get from the use of the COPM. The in-service then finished with details about the timeline regarding implementation of the COPM, re-assessment and administration of a final survey.

There were a few obstacles we faced while completing the knowledge translation process. One of these obstacles included the difficulty with timing, and scheduling our meetings and in-service at the VA. Our varying clinic and school schedules conflicted with the OTs' work schedules, creating limited times

to meet to give our in-service about the COPM and communicate our research findings. This also coincided with poor weather, as school closures and winter weather delayed the start of the knowledge translation process. Another obstacle included finding therapists treating veterans who had sustained a stroke, in order to increase the number of clients that the COPM could be used with. Mary stated she had about eight clients that she was currently seeing and had possibly one or two new clients in which she could administer the COPM with for an initial evaluation. The other OTs mentioned trying to see if there were other clients who had sustained a stroke to help increase our population size but did not currently have any on their caseload. Additionally, at the time of our in-service, Mary and her team mentioned they had not received the COPM manual and score sheets due to funding and communication issues within the VA. This created difficulties, as our group had hoped that Mary and the other OTs could begin administering the COPM to their clients as soon as possible. The amount of time between initial administration of the COPM and re-assessment for the therapists had to be shortened for the purposes of our project due to scheduling and timing of the in-service as well as the end of the semester and this project's due date.

**Copy of Products**

**Survey 1**

**How familiar are you with the COPM?**

Not familiar                  Somewhat familiar                  Familiar                  Extremely familiar

**How confident do you feel about administering the COPM?**

Not confident                  Somewhat confident                  Confident                  Extremely confident

**What concerns do you have regarding administering the COPM?**





### **Objectives**

From Jolene Fujita, Kimberly Low, Keili Maldonado & Mikayla Wrolstad. (2019). *Veteran Re-engagement in Meaningful Activities for those who sustained a stroke*

At the end of this poster presentation, participants will be able to:

1. Understand how the research findings provide information regarding themes for client re-engagement in meaningful occupations
2. Identify how the COPM can be utilized in client-driven goal setting with veterans who have sustained a stroke, and measuring client performance and satisfaction

**Interim Dates of Completion Table**

<b>Task</b>	<b>Scheduled Date</b>	<b>Actual Date</b>
First Meeting to Develop Research Question	9/13/19	9/13/17
Meeting to Discuss Initial Findings	11/27/18	11/27/18
Meeting to Present Findings and Paper at its Entirety	2/14/19	2/26/19
in-service for Practitioners (OTs Complete Pre and Post Surveys)	3/8/19	3/15/19
OTs Begin Implementation of COPM for Baseline Data	3/15/19-3/22/19	3/15/19-4/17/19
OTs Re-administer COPM	4/15/19-4/19/19	N/A
OTs Complete Outcomes Survey	4/22/19-4/26/19	4/22/19-4/26/19
Pick up COPM and Printed Outcomes Surveys from VA	4/26/19	4/26/19



### **Outcomes and Effectiveness**

Prior to and immediately following our in-service, we assessed the OTs' knowledge about the COPM and questions they had pertaining to administering through the use of surveys. After the in-service, we provided Mary and the other OTs who attended our in-service with a timeline for administering and re-administering the COPM; therefore, everyone was in agreement. Additionally, we allotted a five-week time frame before providing our follow-up survey of effectiveness of the COPM in practice. This survey assessed the OTs' view of using the COPM, their thoughts regarding client goal achievement, and their impressions of client satisfaction. Mary was unable to meet the re-evaluation deadline with all of her clients; however, she was the only OT who completed the COPM with veterans who sustained a stroke. One other OT attempted to complete the COPM with a veteran who had a cognitive impairment but was unable to complete it. Given these circumstances, we asked both of the OTs to complete the follow-up survey and provide feedback on why they chose to use or forgo using the COPM.

### **Evaluation of Outcomes**

Prior to our in-service, Mary identified she was not familiar or confident with administering the COPM. Immediately after our in-service, Mary said she had a better understanding of the COPM and felt somewhat confident with administering, scoring, and interpreting the assessment. She stated she wanted to use the COPM to develop goals that were meaningful to the client.

Prior to our in-service, the second OT identified she was familiar with the COPM and somewhat confident with administering the COPM. Her main concerns were client buy-in and the time required for client engagement. Immediately after our in-service, the second OT was confident about administering, scoring, and interpreting the COPM. She had a better understanding of how the COPM can be used with a client. She stated she wanted to use the COPM to create meaningful goals to improve compliance with home exercise programs and follow-up treatment.

Prior to our in-service, the third OT identified she was not familiar or confident with administering the COPM. Immediately after our in-service, the third OT was somewhat confident with administering the COPM and confident with scoring and interpreting it. She stated she would like to use the COPM to help her clients identify goals.

Mary was able to complete the COPM with seven of her clients who sustained a stroke. As a result of scheduling and the short time frame due to project due dates, Mary was unable to re-administer the COPM with all seven clients. Despite this, she completed the follow-up survey and provided her feedback on the implementation piece.

Mary explained the COPM helped her to frame goal setting in a new way. Prior to using the COPM, she stated she would create goals she thought the veterans wanted or needed to work towards, instead of considering if it was something meaningful to the veteran. She said using the COPM allowed her to have deeper and more personal conversations with her clients about what mattered most to them. She used it as a tool to discuss the lasting effects of their condition on their occupational performance, as well as how to continue to engage in their chosen occupations despite their impairments. Mary also

mentioned that by using the COPM with her clients, she was able to gather both qualitative and quantitative data about each client's self-identified problem areas.

The second OT attempted to administer the COPM with a client but was unsuccessful. We decided to keep her responses to provide insight for when the COPM might not be effective. She mentioned she tried using it with one of her clients, but it was unsuccessful due to his comorbid cognitive impairment. However, her knowledge of the COPM influenced her to gather more information about what was meaningful to him and what his goals were.

The third OT who attended our in-service did not work with any veterans who sustained a stroke and therefore did not administer the COPM. We chose to not have her respond to the third survey.

Based on the survey results, the in-service was helpful for the OTs to understand the purpose of using the COPM with their clients, and how to administer and score it. By having the OTs complete our surveys, we were able to understand their views of using the COPM in practice. Through the therapists' feedback, it became evident that clinicians are using clinical reasoning to determine which clients the COPM is appropriate for. One must take into consideration the level of cognition required to attend and respond to the questions in a meaningful way. Overall, the COPM appears to be a good assessment tool for the therapists to gather both quantitative and qualitative data to support outcomes for client driven goals and satisfaction with their performance in meaningful occupations.

### **Evaluation of Overall Process of Project**

Through completion of this project, our group learned about the process of gathering data from the literature and how it translated into clinical practice. Initially, we signed up for a research topic focused on hand therapy and got paired with a certified hand therapist. However, per our research collaborator's request, our topic shifted to the psychosocial aspect of veterans who have sustained a stroke. While this was not our original intent, it provided us with a broad range of research to examine. With the help of our research chair, we narrowed the scope of our question to focus primarily on best practices for re-engagement in meaningful occupations to promote quality of life.

The process of combing through the research articles challenged our critical reading and organizational skills. We were able to narrow down the hundreds of results to 40 articles. With these articles, our group adopted a "divide and conquer" strategy and time management was key. Common themes that were found related to the effectiveness of participation in social groups, considering caregiver satisfaction, addressing psychosocial needs, and maintaining client-driven practice. One caveat to our findings was limited evidence specifically focused on the veteran population and stroke. While we recognized veterans have unique psychosocial needs, we believed that our findings can be applied to them as well.

After presenting our CAT findings to our research collaborator, she took specific interest in a single study that focused on the effectiveness of the COPM to address psychosocial needs. This was a learning opportunity for us, as we shifted our knowledge translation to fit the priorities she was interested in implementing into her practice. Although only one study focused in-depth on the use of the COPM, many studies included it as a measure of performance and satisfaction. Given this information, the knowledge we had about the COPM, and having used it in our on-site clinic with our clients, we felt comfortable with leading an in-service on how to implement its use. Throughout the process of planning meetings, scheduling proved to be the most challenging part. Given that our research collaborator is a practicing OT, we needed to be flexible with arranging meetings. This resulted in adjusted timelines for due dates and shortened the overall time to monitor outcomes. Despite providing clear dates for when to

administer the COPM and when to conduct a re-evaluation, we were unable to collect re-evaluation data due to work circumstances. Although our expectations for the knowledge translation piece were not all met, our research collaborator provided positive feedback about her use of the COPM in practice so far. She stated it is now her “go-to” when addressing psychosocial needs, as she is able to enhance rapport building with clients and engage in more meaningful conversations.

Overall, we have learned a lot throughout the entire research experience. Some of the things we learned were specifically related to research, while others can be applied to real world practice as an OT. After having gone through the research process, the concept of using evidence-based practice is not daunting. We feel we are equipped with the knowledge on how to find evidence-based research and implement it into our future practice. We have learned to read critically and understand the importance of clinical significance and its implication in practice. Through completion of this project, we gained experience with presenting information to other OTs, health care professionals, and the general public and feel more confident doing so. Each step of this experience has helped shape us into becoming thoughtful, flexible, and diligent OTs who are ready and equipped to transition into the field.

### **Recommendations for the Future**

At the beginning of this research project our research collaborator stated that her client population has shifted to younger veterans who have sustained a stroke. Through our research, we discovered there is limited evidence pertaining specifically to the veteran population who sustained a stroke. This shift warrants research into the unique psychosocial needs of this specialized population. Given the common themes our research found, individuals who sustained a stroke from the general population can be compared to individuals who sustained a stroke from the veteran population in their responses to the identified interventions.

Based off common overarching themes, it is recommended future research delve further into identification of other methods for client-driven practice. One possible area would be specifically focusing on caregivers. Our research identified that caregiver satisfaction plays a large role in the individual's quality of life. Additionally, social participation and social support systems increase overall quality of life. One unique aspect of the military population is the strong bond and morale among those who serve or have served. Further research regarding this bond and sense of camaraderie could be used to inform interventions regarding social support systems.

Although Mary used the COPM with her clients who have sustained a stroke, she could also administer this assessment to clients with other diagnoses. With a broader range of diagnoses, more evidence-based research for the usefulness of the COPM in OT practice with veterans could be utilized for the knowledge translation portion of the project. In turn, expanding diagnoses for using the COPM for the knowledge translation piece specifically, could allow for more data collection.

**References**

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