Specific Aims

Post-stroke aphasia has profound and lasting negative effects on health-related quality of life[1] at levels greater than cancer, Alzheimer's disease, or Amyotrophic Lateral Sclerosis.[2] Aphasia is a language disorder caused by acquired brain injury that affects 30-40% of stroke survivors and more than 2.5 million people in the United States.[3] For stroke survivors with aphasia, their psychosocial responses to the sudden and unexpected loss of language promote or inhibit their ability to adapt, adjust, and recover after stroke.

To a large extent, practicing rehabilitation professionals are currently unprepared to address the relationship between psychosocial adjustment and aphasia rehabilitation. Traditional evidence-based language interventions fail to address psychosocial factors,[4] and speech-language pathologists report feeling unprepared to address counseling needs during aphasia rehabilitation.[5] In addition, mental health professionals report feeling unprepared to work with people with aphasia.[6] Ultimately, workforce training based on effective behavioral interventions is required to address the specific unmet needs of this vulnerable and underserved population. The first step in this endeavor is to develop and pilot integrated interventions that simultaneously address the counseling and communication needs of stroke survivors with aphasia.

The current Stage I project seeks to develop a new intervention will that integrate language compensation training and **Acceptance and Commitment Therapy (ACT)**. ACT is a behavioral intervention designed to improve **psychological flexibility**, allowing people to take action consistent with their values, even in the presence of persistent emotional distress.[7] Psychological flexibility predicts quality of life and mental health in a variety of populations.[8] In small-scale efficacy studies, ACT has improved psychological flexibility in stroke survivors,[9] and has resulted in large effect sizes when combined with compensatory training in people who stutter.[10] Yet, **no prior work has adapted ACT to meet the specific needs of people with aphasia**, excluding a large and vulnerable subset of stroke survivors from accessing an effective intervention.

ACT is an ideal match for stroke survivors with aphasia and **integrating language compensation training and ACT is more than the sum of its parts.** ACT will only be fully accessible to people with aphasia if modified to include communication supports. In addition, **language compensation training** works by training alternative communication techniques (e.g., writing, gesturing, self-cueing) to maximize functional communication.[11] However, stroke survivors with aphasia must demonstrate psychological flexibility for such training to be effective. They must reconceptualize what it means to communicate and overcome potential fears of how they will be perceived.[12] They must become comfortable using communication techniques in distressing situations they would rather avoid (e.g., communicating with unfamiliar and rude store employees). ACT improves psychological flexibly via approaches such as teaching clients to develop a more flexible response repertoire when pursuing valued life directions and mindfully gaining distance from self-critical thoughts[13]. Improving communication skills and psychological flexibility together will simultaneously address the unmet communication and psychosocial needs of stroke survivors with aphasia. *Therefore, the objective of this Stage I proposal is to develop and pilot an "ACT for Aphasia" treatment manual designed to improve communication participation, psychosocial adjustment, and quality of life for stroke survivors with aphasia.*

Aim 1: Collaborate with a Stakeholder Advisory Board (SAB) to develop and refine an ACT for Aphasia treatment manual via an iterative design process. In year 1, we will work with a SAB of stroke survivors with aphasia and caregivers to develop an initial version of the manual, then refine it using a successive cohort design.[14] The first cohort will consist of 5 participants with aphasia, who will be interviewed after treatment completion and invited to join the SAB to inform manual revisions. In year 2, a second cohort (N=16) will complete the revised intervention and provide feedback via interviews to inform a second manual revision. This will result in a comprehensive, iteratively refined, stakeholder-driven treatment manual.

Aim 2: Establish intervention feasibility and acceptability. ***Feasibility*** will be assessed through intervention adherence, recruitment, participation, and completion rates.[15] ***Acceptability*** will be assessed using the Client Satisfaction Questionnaire – 8[16] post-treatment; ACT for aphasia will be considered acceptable if the group mean is ≥28[17] for the second cohort. As a secondary aim, ***preliminary effect sizes*** will also be estimated on pre-post measures of successful communication participation, psychological distress, and quality of life, along with point estimates and standard deviations to inform power analyses for a Stage II efficacy trial.

Project outcomes will consist of an ACT for Aphasia treatment that 1) improves communication participation, psychosocial adjustment, and quality of life for this vulnerable subgroup of underserved stroke survivors, 2) has the potential to be utilized by speech-language pathologists and mental health professionals, and 3) is primed for larger-scale evaluation in a subsequent R01-funded Stage II efficacy trial.