

Measuring Post-traumatic Growth in People with Aphasia

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Introduction

Background

- Posttraumatic growth (PTG) characterizes positive psychological change following a traumatic or highly challenging life circumstance (Tedeschi and Calhoun, 1996).
- Stroke survivors with aphasia report mental health challenges and negative health-related quality of life (Baker et al., 2018).
- It is important to be able to accurately characterize growth experiences in this population.
- PTG has been studied in stroke survivors, but typically excluding individuals with language and/or cognitive impairments (e.g., Kuennemund et al., 2016).
- Sherratt & Worral (2020) examined PTG in 13 people with aphasia, and reported some evidence of increased PTG longitudinally using an informally-adapted measure of PTG.
- Current barrier to examining PTG in people with aphasia: appropriately modified and validated measures of PTG are required to support continuing research in this domain.**

- The current gold-standard instrument for measuring PTG is the 42-item Post-traumatic Growth Inventory (PTGI-42; Camm, Calhoun, Tedeschi, & Solomon, 2010)
 - queries positive changes: post-traumatic growth (PTG) – 21 items
 - queries negative changes: post-traumatic depreciation (PTD) – 21 items
- Previously, we conducted a stakeholder driven modification of the PTGI-42., integrated insights from people with aphasia (PWA), their caregivers and professionals to develop the PTGI-Aphasia.

The purpose of the present study was to establish initial psychometric properties of the PTGI-Aphasia

Question 1: Does the PTGI-Aphasia show evidence of convergent validity with respect to perceived stress, health-related quality of life scales (the SAQOL-39 and the SLARS), Basic Psychological Need Satisfaction and Frustration, and the Personal Health Questionnaire Depression Scale (POH-8).

Question 2: Does the PTGI-Aphasia correlate with measures of aphasia severity in people with aphasia?

Question 3: Does the PTGI-Aphasia show evidence of test-retest reliability, as measured through repeated administration of the PTGI-Aphasia?

Methods

Study Design and Recruitment

Remote, cross-sectional study with data collection starting in January 2021. The study was preregistered on the Open Science Foundation (<https://osf.io/whzxm/>).

- Participants recruited via email, social media, and flyers through distribution by clinicians and other professionals at organizations that provide services and support to people with aphasia.
- Inclusion: >18 years, >6 mo post-stroke, access to internet/webcam, English a primary language.
- Exclusion: degenerative neurological disease, dementia, diffuse brain injury, or brain disease.

Data Collection

- Participant Demographic Questionnaire
- Quick Aphasia Battery (QAB; Wilson, et al., 2018)
- PTGI-Aphasia
- Stroke and Aphasia Quality of Life Scale-39 (SAQOL-39; Hilary, Byng, Lamping, Smith, 2003)
- Modified Perceived Stress Scale (mPSS; Pompon, Amtmann, Bombardier, & Kendall, 2018)
- Basic Psychological Need Satisfaction and Frustration Scale (BPNSFP; Chen, et al., 2015)
- Successfully Living with Aphasia Rating Scale (SLARS; Brown et al., 2010a)
- Patient Health Questionnaire Depression Scale (PHQ-8; Kroenke, et al., 2009).

Statistical Analysis

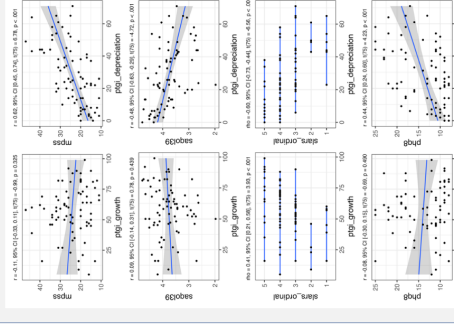
- Correlations used for construct validity, $r > 0.5$ considered evidence of convergent validity.
- Two-way agreement interclass correlation used to measure test-retest reliability
 - 0.75-0.9 indicating good reliability & >0.9 indicating excellent reliability.
 - $p < .05$ set a-priori to determine whether correlation coefficients are statistically significant.

Results

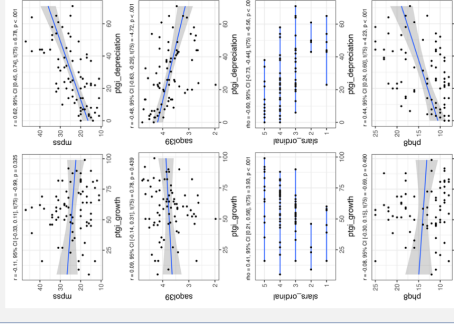
Participants

Characteristic	N = 77
Age (years)	57 (12)
Age at stroke (years)	51 (14)
Gender	
Female	39 (51%)
Male	38 (49%)
Months post onset	81 (70)
Aphasia Severity (QAB)	7.23 (1.99)
Physical Impairment present	62 (81%)
absent	15 (19%)
Graduated college	
yes	56 (73%)
no	21 (27%)
Marital Status	
married/committed relationship	50 (65%)
single/divorced/widowed	27 (35%)
Dx Depression or Anxiety	
yes	16 (21%)
no	61 (79%)
Retired (any reason)	
yes	59 (77%)
no	18 (23%)

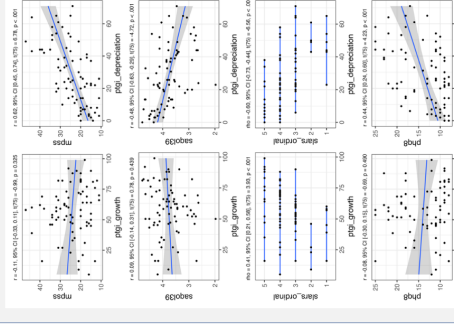
Question 1: Convergent Validity



Question 2: PTGI & Aphasia Severity



Question 3: Test-retest reliability



Discussion

- Low correlations between **Growth** and measures of stress, healthcare related QOL, depression, or psychological needs satisfaction suggest a distinct construct
- Moderate correlations for **Depreciation** suggests depreciation is similar to, but reasonably distinct these measures.
- Minimal correlation between PTGI-Aphasia **Growth** and **Depreciation** is consistent with the PTGI-42: indicates the orthogonal aspect of the two scales was maintained.
- Consistency with existing literature suggests **successful modification** of PTGI-42
- Lack of correlations with aphasia severity (in contrast to demographic analysis) suggests the presence of many interacting factors affecting growth processes.
- PTGI-Aphasia **Growth** and **Depreciation** show good test-retest reliability, suggesting that the instrument can obtain stable estimates of both PTGI-Aphasia constructs.
- Ongoing work: **Qualitative research** study arm aiming to further understand PTG and PTD in aphasia and measurement constructs underlying PTGI-Aphasia.

References

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