

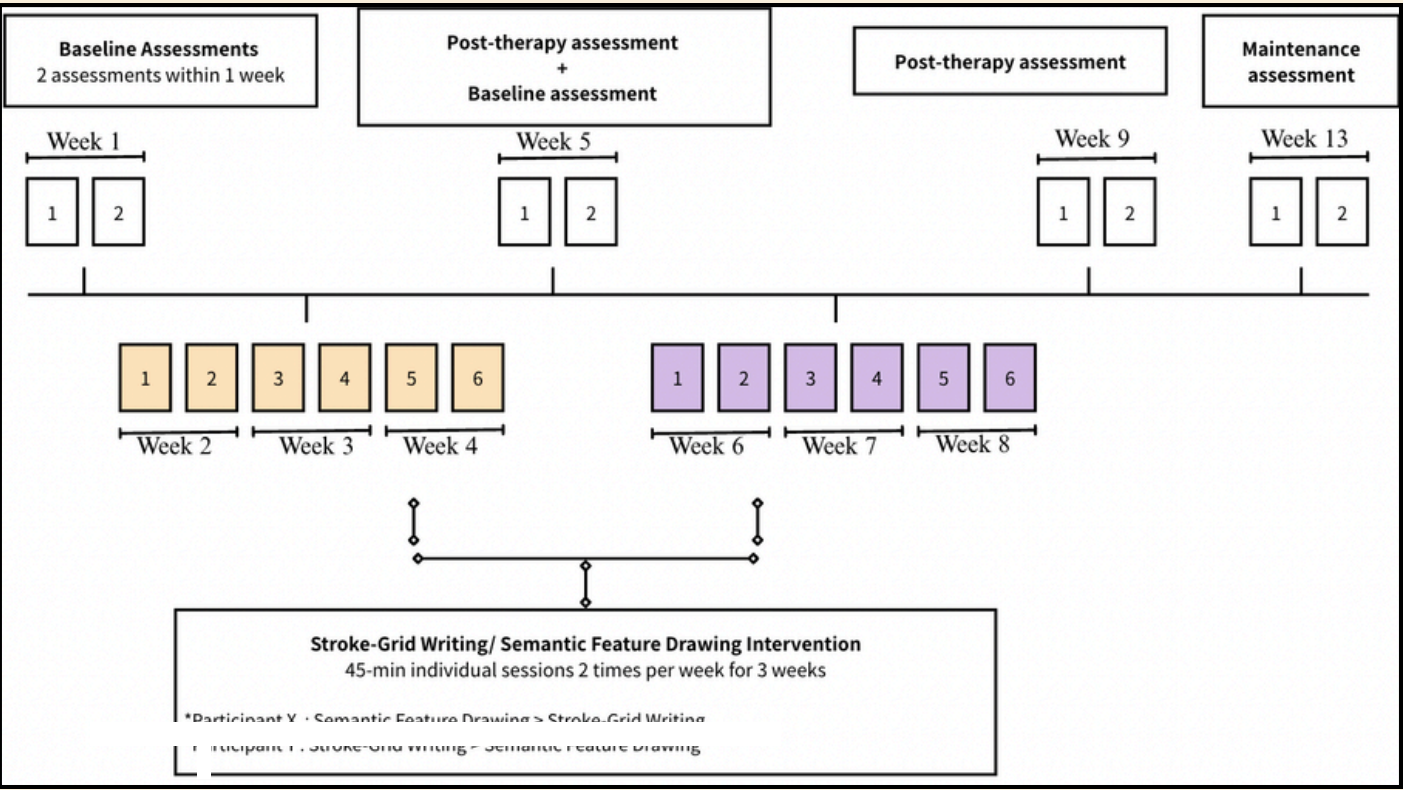
Stroke-grid Writing And Semantic Feature Drawing For Chinese Dysgraphia In Logopenic Primary Progressive Aphasia

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BACKGROUND Written-language rehabilitation in logopenic variant primary progressive aphasia (lvPPA) remains understudied in Chinese languages, despite well-documented impairments in orthographic processing. We investigated two complementary interventions targeting lvPPA-related dysgraphia: Stroke-Grid Writing (SGW), which provides visuospatial–orthographic scaffolding to support stroke sequencing, and Semantic Feature Drawing (SFD) which leverages semantically guided drawing to facilitate Chinese character retrieval.

METHODS A man with lvPPA (aged 74) received both interventions in a crossover design (six 45-minute sessions per intervention; 12 in total). Trained items were scored on a 0–4 dictation rubric and averaged across 80 characters at baseline and post-treatment; untrained items were scored dichotomously (80 items). Pre-post intervention changes were examined sing paired item-level t-tests and reported descriptively.



Stroke-Grid Writing (SGW)
training materials of the character

你 (you)



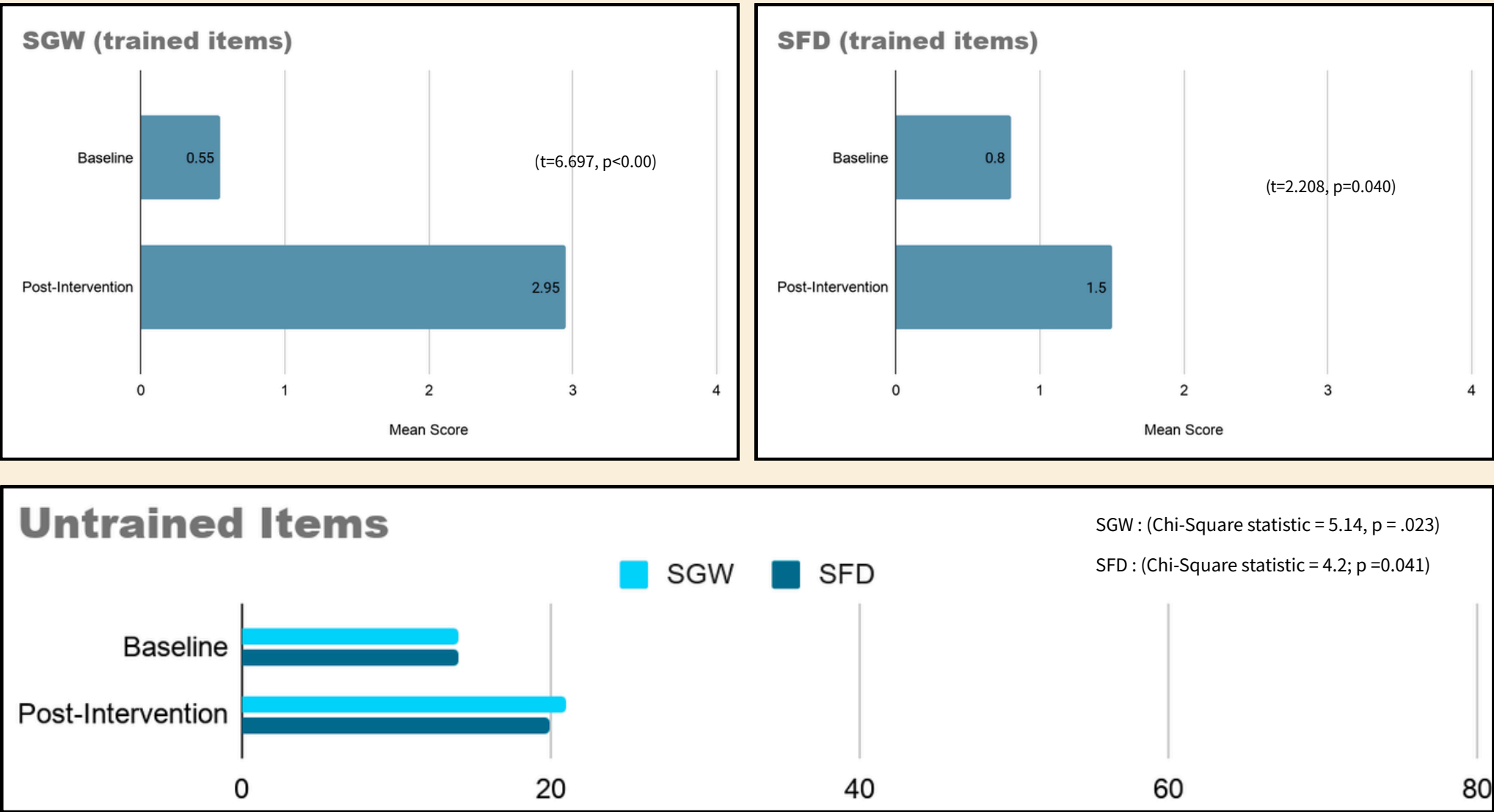
Semantic-Feature Drawing (SFD)
training materials of the character

哭 (cry)



RESULTS: Both interventions were feasible for in-clinic delivery within two six-session blocks.

Participant Y (83M, number of years of education=16) demonstrated significant improvement with SGW on trained items (M=0.55, SD=1.10) to post-intervention (M=2.95, SD=1.61; $t=6.697$, $p<0.00$). There was a significant difference in the proportion of correct items between baseline and post-intervention period measures of the untrained items (14/80 to 21/80) calculated by McNemar’s test (Chi-Square statistic = 5.14, $p = .023$). SFD also yielded gains for Participant Y on trained items (M=0.80, SD=1.54) to post-intervention (M=1.50, SD=1.76; $t=2.208$, $p=0.040$), and significant difference in the increase of proportion of accurate untrained items (14/80 to 20/80) (Chi-Square statistic = 4.2; $p=0.041$).



CONCLUSIONS

SGW and SFD were feasible and associated with post-treatment gains in trained Chinese character dictation in an individual with lvPPA who exhibited clear writing impairments. These findings further suggest that therapy effect of writing intervention would benefit from individualized tailoring of writing stimuli based on language proficiency and educational background.