

Adapting Cantonese version of Communication Outcome after Stroke on Elderly people with visual impairment

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Background

Many dementia-specific measurements evaluating the effects of interventions measure at impairment level only and from clinicians' perspectives, ignoring the input from the people with dementia (PwD). They rarely measure the impact of communication problems on levels of activity and participation and quality of life. Moreover, they are mostly not readily available to PwD with visual impairment (VI).

Objective

This research extends from the pilot study in 2024, with the same aim to study the feasibility of developing a client-centered communication measure for PwD with VI, namely the Cantonese version of Communication Outcome for People with Dementia and Visual Impairment (Can-COPD-VI), which was adapted from the Cantonese version of Communication Outcome after Stroke (Can-COAST; Wong & Kwok, 2025), with a larger subject intake.

Methods

One hundred and thirteen PwD with VI (Mean age: 80.3 years) were recruited from Kowloon Home for the Aged Blind, Jockey Club Tuen Mun Home for the Aged Blind and Yuen Long Home for the Aged Blind. Inclusion criteria included: 1) premorbid fluent Cantonese speakers, 2) having corrected hearing function, 3) being medically diagnosed to have low vision, 4) being able to comprehend questions and commands, and 6) being aged 60 years or above. Exclusion criteria included: 1) being nonverbal and unable to comprehend questions and 2) having other neuropsychological disorders. Written consent from the participants/family members was obtained prior to task administration.

The subjects completed 1) Can-COPD-VI, 2) Cantonese version of the Amsterdam-Nijmegen Everyday Language Test (CANELT) (Wong et al., 2023) and 3) the Hong Kong Montreal Cognitive Assessment for the Visually Impaired (HKMoCA-VI; Yip et al., 2024). Give the presence of visual impairment of PwD, adaptations were made in Can-COPD-VI, mainly concerning questions related to reading and writing. A total of 102 participants also completed a retest in 3 weeks. Test-retest reliability and internal consistency were evaluated.

Results

A mean score of 52.8 (s.d. = 8.99) and 54.7 (s.d. = 8.06) were obtained in the two assessment time points, respectively. Correlation between subscales within Can-COPD-VI, and correlation between each subscale and the total score of Can-COPD-VI, were found to be significant, at both test and retest. Good internal consistency was found in Can-COPD-VI at test and retest (Cronbach's alpha = 0.864 at the first assessment point; Cronbach's alpha = 0.827 at the second assessment time point). Significant correlations were also found between Can-COPD-VI and CANELT at both test and retest ($r = 0.36$; $p < .001$). Test-retest reliability of Can-COPD-VI was found to be good and acceptable (Cronbach's alpha = 0.758).

Conclusion

Can-COPD-VI seems to be feasible with good internal consistency, good and acceptable test-retest reliability and significant correlation with CANELT. Investigation into extending Can-COPD-VI to PwD without visual impairment is recommended.

Keywords

Dementia, Visual Impairment, Communication Measures

Learning Outcomes

1. Identify the lack of dementia-specific measurements evaluating the effects of interventions
2. Analyze a feasible a client-centered communication measure for people with dementia and with visual impairment
3. Identify the feasibility of adapting the Cantonese version of Communication Outcome after Stroke (Can-COAST) to other populations