Measuring Pragmatic Competence of Discourse Output Among Chinese-Speaking Individuals with Traumatic Brain Injury

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Introduction

Pragmatic competence is the ability to effectively use language in a contextually appropriate fashion. Previous studies suggested that many individuals with traumatic brain injury (TBI) had relatively intact language ability but demonstrated difficulties to communicate appropriately and effectively across contexts due to their impaired pragmatic skills (Dahlberg et al., 2007). Most previous studies have focused on discrete levels of linguistic analysis of TBI discourse production and often neglected one's pragmatic competence. This study aimed to examine how pragmatic competence may be impaired and reflected in the discourse produced by TBI survivors. Moreover, whether (and which) discourse production task can be more sensitive and clinically effective to highlight pragmatic impairments in TBI would be explored.

Methods

Language samples of five discourse tasks, produced by ten TBI survivors (five Cantonese and five Mandarin speakers) and ten controls matched in age and education, were extracted from the unpublished Chinese TBI-Bank (see database description in Kong, Lau, & Cheng, 2020). These genres included a single picture description 'Cat Rescue', a multiple-picture description 'Refused Umbrella', a story-telling 'The Boy Who Cried Wolf', a procedural discourse 'Egg and Ham Sandwich', and a personal narrative (i.e., monologue) 'An Important Event'. Each sample was analyzed with 16 indices, adopted and modified from Andreetta et al. (2012), Cummings (2021), Galski et al. (1998), and Kong and Law (2004), which were further categorized in terms of Grice's Maxim (Grice, 1975):

- Maxim of Quality: i) Number of error (Er), ii) Index of Error (IEr), iii) Index of Syntactic Accuracy (ISA), and iv) Repairs and revisions of error
- Maxim of Quantity: v) Total number of words per task (N), vi) Number of information words (I-word), vii) Number of Terminable units (T-units), and viii) Words per T-unit

- Maxim of Relation: ix) Global coherence errors, x) Percentage of global coherence errors, xi) Local coherence errors, and xii) Percentage of local coherence errors
- Maxim of Manner: xiii) Repetition of words and phrases, xiv) Index of Lexical Efficiency (ILE), xv) Index of Communication Efficiency (ICE), and xvi) Number of cohesive devices per T-units

Preliminary results and Discussion

Preliminary results suggested that speakers with TBI had more deficits in Maxim of Relation and Maxim of Manner, but the pragmatic impairments seemed to be highly individualized. The TBI speakers' pragmatic performance also tended to be related to their attention and visuospatial problems, as reflected by their scores on the Cognitive Linguistic Quick Test (CLQT; Helm-Estabrooks, 2001). Specifically, an increased violation of Maxim of Relation was found in genre where there was decreased amount of visual supports. More global coherence errors were also found in procedural discourse than in storytelling, but a clear genre effect could not be concluded.

Further data analyses are underway. The association between pragmatic measures and the types of discourse, amount of visual supports, and TBI survivors' severity of language impairment and cognitive deficits will be assessed. We believe the final findings will allow us to examine pragmatic deficits in TBI and to compare the manifestation across different genres.

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