

## **Reading and Listening Comprehension in Cantonese Speakers with Right Hemisphere Damage**

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**Background:** Compared to the left hemisphere, the role of right hemisphere in language comprehension is less unequivocal. Some studies also suggested that more right hemisphere cortical regions were involved in Chinese reading relative to that of English reading, attributed to its logographic system.

**Purpose:** This study explores the reading and listening comprehension of Cantonese-speaking individuals with right hemisphere damage (RHD), left hemisphere damage, and neurotypical healthy controls using the Cantonese Computerized Revised Token Test (CRTT-Cantonese).

**Method:** Eighteen native Cantonese-speaking individuals with RHD, 32 individuals with left hemisphere damage and aphasia (PWA), and 42 healthy controls participated in this study. All the participants completed the Cantonese Aphasia Battery, Hong Kong Oxford Cognitive Screen, the listening comprehension version of CRTT-Cantonese, and the reading comprehension version of CRTT-Cantonese across different sessions.

**Results:** Linear mixed-effect analysis revealed significant differences among the groups in CRTT-Cantonese tests but no significant difference between the listening comprehension and reading comprehension versions of the CRTT-Cantonese within the PWA, RHD and healthy control groups. Post-hoc analysis showed that PWA scored significantly lower than RHD and healthy control groups in both listening comprehension and reading comprehension versions of the CRTT-Cantonese, and the RHD group scored significantly lower than healthy control group only on the reading comprehension version of the CRTT-Cantonese.

**Conclusion:** The current study demonstrated that the listening comprehension and reading comprehension versions of the CRTT-Cantonese differentiated language comprehension abilities among PWA, RHD and healthy control groups. Although the current findings did not document any diversion between reading and listening comprehension in RHD group, this group showed poorer performance in reading comprehension when compared to healthy controls. The latter findings may support the view that the right hemisphere plays a role in reading comprehension in Chinese.