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### **Proceedings of the Annual Meeting of the Cognitive Science Society**

#### **Title**

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#### **Permalink**

<https://escholarship.org/uc/item/2tt186qd>

#### **Journal**

Proceedings of the Annual Meeting of the Cognitive Science Society, 41(0)

#### **Authors**

Chan, Ronald

Kwok, Chin-wai

Liu, Duo

et al.

#### **Publication Date**

2019

Peer reviewed

# **Visual Spatial Attention Skills and Holistic Processing in High School Students With and Without Dyslexia**

**Ronald Chan**

The Education University of Hong Kong, Hong Kong, Hong Kong

**Chin-wai Kwok**

The Education University of Hong Kong, Hong Kong, Hong Kong

**Duo Liu**

The Education University of Hong Kong, Hong Kong, Hong Kong

**Ricky Van-yip Tso**

The Education University of Hong Kong, Taipo, N.T., Hong Kong

## **Abstract**

Visual-spatial attention has been shown to influence literacy development, yet studies investigating its influence on reading in non-alphabetic scripts such as Chinese are scarce, despite recent studies demonstrating orthographic and visuo-spatial skills to be key deficits in people with dyslexia in Chinese. Here, we investigate visual-spatial processing skills in Chinese adolescents by measuring their 1) exogenous and endogenous attentional orienting, and 2) holistic processing a phenomenon typically demonstrated in face perception in Chinese character recognition. Compared with typically developing students, Chinese high-school students with dyslexia showed deficits in both endogenous and exogenous visual-spatial attention. Dyslexics also perceived characters more holistically than the controls, suggesting that they selectively attended to individual components within Chinese characters less readily. These results demonstrated irregularities in visual-spatial processing skills in students in dyslexia. This study provides implications for reading intervention programs in order to facilitate selective attention to character components to enhance literacy.