



Department of Psychology
The University of Hong Kong

香港大學心理學系

Brown Bag Lunchtime Seminar (Via Zoom)
(Theme: Social and Health Psychology)

The Mediating Role of Non-Symbolic Magnitude Processing and Symbolic-Nonsymbolic Mapping in the Relation between Spontaneous Focusing on Numerosity and Mathematical Achievement

12:30 p.m. – 1:30 p.m. | July 14, 2022 (Thursday)



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Abstract

When given something to observe, individual may pay attention to different aspects, such as colour, size and quantity. Research has shown that children who have the self-initiated tendency to focus on numerosity (i.e., spontaneous focusing on numerosity; SFON) performed better in mathematics and the relation could be observed years later the test. To better understand the mechanism behind, this longitudinal study examined the potential mediating roles of non-symbolic magnitude processing and mapping between symbolic and non-symbolic representation in the relation between spontaneous focusing on numerosity and mathematical achievement. One hundred and fifty kindergarteners were recruited and tested at three time points. They were first assessed in the second semester in lower kindergarten (Time 1), and reassessed in the first semester (Time 2) and second semester (Time 3) in upper kindergarten.

Mediation analysis showed that there were two independent pathways leading from spontaneous focusing on numerosity to mathematical performance, namely the numerosity pathway and the mapping pathway. The findings contributed to the existing literature by providing a better model that explained how spontaneous focusing on numerosity predicted children's later mathematical achievement. Activities which nurture SFON tendency may be included in the kindergarten curriculum as they may be potentially useful to promote young children's later mathematical success.

About the speaker

Reanna is a final year MPhil student under the supervision of Dr. Winnie Wai-lan Chan. She is interested in children's learning and development. Her current research focused on the relationship between spontaneous focusing on numerosity and mathematical development.

Zoom

<https://hku.zoom.us/j/3951550048?pwd=SncvL3RYakEycUtpL29vdDJEdlEwdz09>

Meeting ID: 395 155 0048 | Password: psyc



~All are Welcome~

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