

Guess What I think? The Reliability and Validity of Chinese Theory of Mind Tasks and Performance in the Elderly

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Purpose: Theory of Mind (ToM) refers to the ability to represent mental states, such as beliefs and intentions, and is distinct from the ability to represent ‘real’ states of affairs. It enables us to make attributions and to reason about mental states and, in doing so, to understand and predict the behavior of other people. Research has suggested that theory of mind may represent a dissociable, modular brain system that is related to, but separable from, other brain functions, including memory, language, and executive functions. Studies with neuroimaging provide further evidence that the ventromedial regions of the prefrontal cortex are associated with ToM.

However, the Chinese standardized instrument of brain function of the ventromedial prefrontal cortex is lacking in Taiwan. Thus, it is indeed a pressing task to establish a related assessment tool. Validation of this tool will provide an appropriate research implement for studying the concept of mental reasoning that could also be used as a functional index of the ventromedial prefrontal cortex in clinical neuropsychological settings. The purposes of this study were to establish the reliability and validity of theory of mind tasks and to explore whether healthy elderly people exhibit impairment on those tasks.

Method: 175 subjects aged from 18 to 88, and 15 subjects with autism and Asperger’s syndrome, were recruited as the normal and clinical groups, respectively. We also completed test-retest measurement of 30 subjects from the normal group. The groups were controlled for level of education, level of intelligence, and memory. The materials used for the theory of mind tasks included false beliefs, Faux Pas, implication stories, and non-verbal tasks.

Result: The results showed that there is acceptable reliability and validity in that Chinese theory of mind tasks except false beliefs. There is no significant difference between young and elderly adult on these tasks, even with memory function and socio-economic status taken into account.

Keywords: *false belief, Faux Pas task, reliability, theory of mind, validity*