

# The comparison of screening performance between BRIEF-P, Thai version and a new Executive Function rating scales in Thai preschool-aged children

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## Abstract

Executive function (EF) is a set of brain processes that regulate emotions, thoughts, and behaviors. EF dysfunction affects child development, later academic achievement, health status, and quality of life. Early detection of EF dysfunction with standardized assessment tools has an impact on early EF intervention. The aim of this study was to analyze the screening performance of a new Thai EF rating scale compared with BRIEF-P, Thai version. We recruited 114 preschool-aged children in Kindergarten-3. Parents rated EF skill with BRIEF-P, Thai version. Teachers rated EF with BRIEF-P, Thai version, and a new Thai EF rating scales. Results showed fair agreement between teachers' and parents' ratings in Inhibitory Control, with kappa = 0.2. No other subtests agreement was found. Both BRIEF-P, Thai version and the Thai EF rating scales had a strong correlation in inhibitory Control ( $r_s = 0.53$ ,  $P < 0.001$ ) and Plan/Organize ( $r_s = 0.525$ ,  $P < 0.001$ ) subtests, and a moderate correlation in Working Memory ( $r_s = 0.428$ ,  $P < 0.001$ ), ISCI ( $r_s = 0.442$ ,  $P < 0.001$ ), EMI ( $r_s = 0.487$ ,  $P < 0.001$ ), and GEC ( $r_s = 0.439$ ,  $P < 0.001$ ) subtests. Most of the rated EF difficulties by BRIEF-P, Thai version (T-score  $\geq 65$ ) had acceptable EF development (T-score  $\geq 45$ ), and unobvious behavioral problems related to EF dysfunction (T-score  $< 55$ ) by the Thai EF rating scales. Hence, the one who uses the Thai EF rating scale must be aware of the underestimation of EF dysfunction.

**Keywords:** Executive functions, Preschool-aged children, BRIEF-P, Thai version, MU.EF-101/102, Thai EF rating scales, screening performance