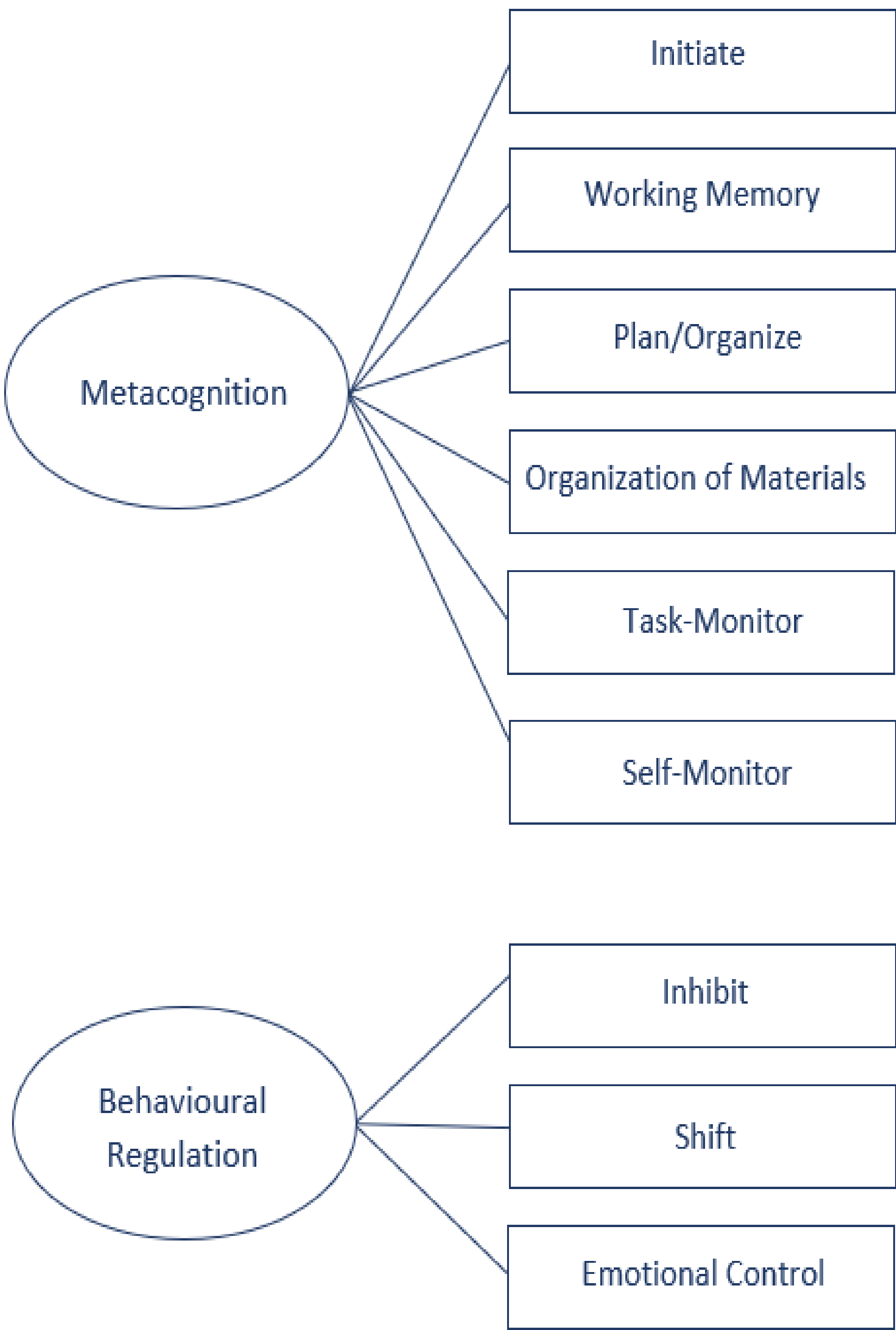


# Assessing the factor structure of the Behavior Rating Inventory of Executive Function (BRIEF) in a Tourette's population

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Is the BRIEF a valid measure of TS patients' executive functioning?



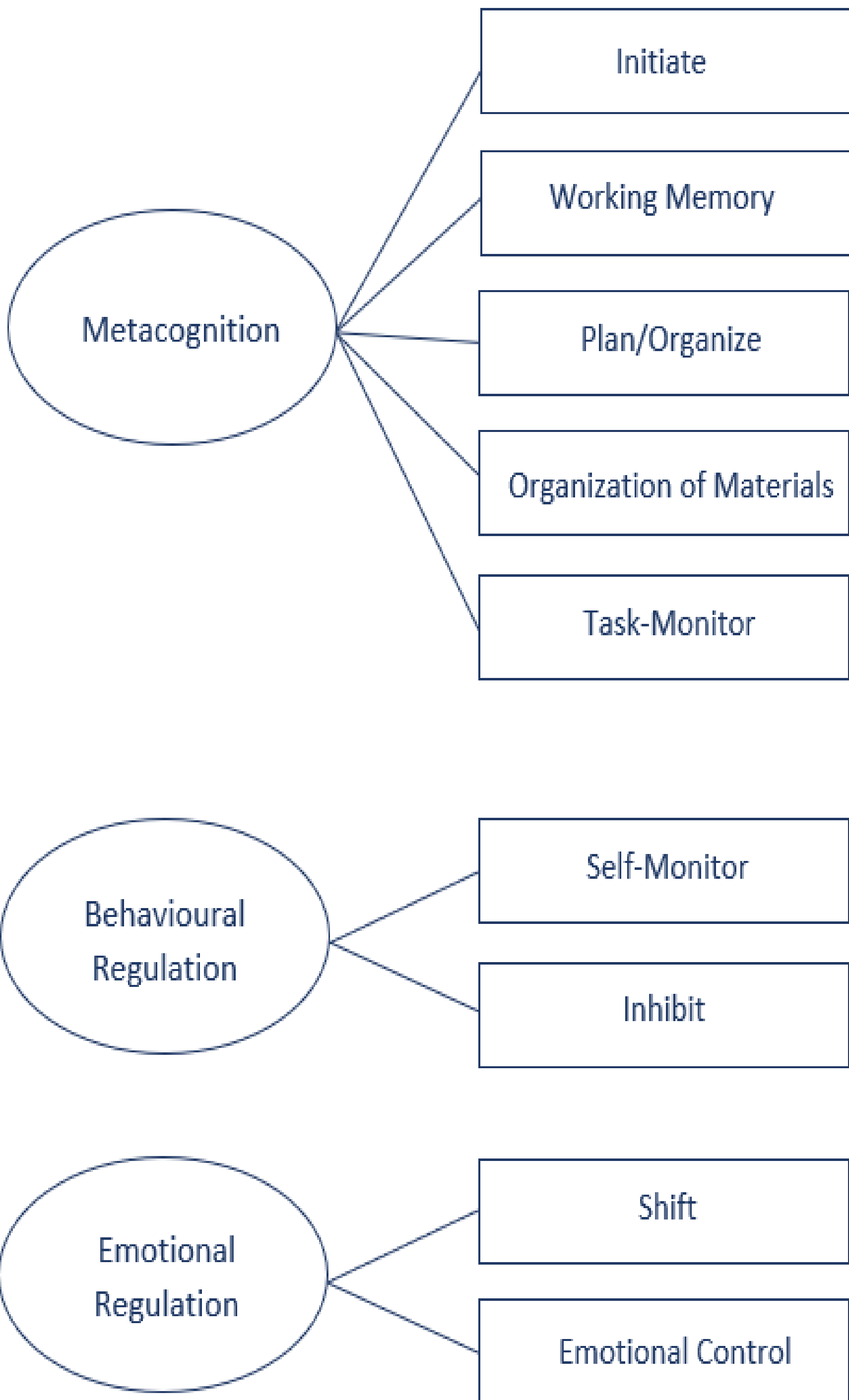
Two Factor Model

## KEY MESSAGE

The results support the use of the BRIEF as a valid measure of executive functioning in a TS population.

## INTRODUCTION

- Significant attention has been paid to the role of executive functions in Tourette Syndrome
- One prominent way to measure executive functions is the BRIEF
- Because of its nine subscales, the BRIEF helps clinicians describe patients' executive functioning
- Therefore important to assess whether the BRIEF is a valid measure of executive functioning for TS patients



Three Factor Model

## METHODS

Confirmatory Factor Analysis assessed the data against a two factor solution and a three factor solution in three participant cohorts.



Patients (n = 215)



Parents (n = 211)



Teachers (n = 127)

## RESULTS

Factor loadings were significant and some fit indices met recommended thresholds of <0.05 for RMSEA and SRMR and >0.95 for CFI and TLI.

Model	Fit Indices			
	RMSEA	SRMR	CFI	TLI
Patient Self Report – Two Factor Solution	0.154	0.063	0.913	0.880
Patient Self Report – Three Factor Solution	0.121	0.046**	0.951**	0.926*
Parent Informant Report – Two Factor Solution	0.177	0.059*	0.910	0.875
Parent Informant Report – Three Factor Solution	0.147	0.043**	0.943*	0.914
Teacher Informant Report – Two Factor Solution	0.198	0.057*	0.900	0.853
Teacher Informant Report – Three Factor Solution	0.198	0.054*	0.906	0.854

\*\* meets specified fit criteria, \* approaches specified fit criteria

## CONCLUSION & IMPLICATIONS

The significant factor loadings and borderline fit indices support the validity of the BRIEF in a TS population. The three factor solution demonstrated relatively better fit, suggesting that the BRIEF data best represents executive functioning as a construct with three underlying facets. In light of this, it may be worth re-evaluating the current practice of collapsing patient BRIEF subscale scores into two composite indices.

The cohesive internal structure of the BRIEF supports its use as a clinical tool. Specifically, the data's acceptable performance in factor analysis supports one of the main advantages of the BRIEF – its easy to understand subscores.

Finally, the support for the BRIEF's validity in a TS population means that these scores can be compared to BRIEF data in other validated populations. This is particularly important given the high prevalence of comorbidity in TS.