ASSESSMENT OF EMOTIONAL MANAGEMENT ABILITY: A RASCH MODEL ANALYSIS OF THE BRIEF SITUATIONAL TEST OF EMOTIONAL MANAGEMENT (STEM-B)

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INTRODUCTION

Emotional Management (EM) is a complex and pivotal skill to cope with complex interpersonal situations across different life areas. It consists in the use of the individuals' and/or others' emotional responses to guide one's behavior and achieve meaningful goals. Hence, in high stakes scenarios (e.g. job applications, clinical assessment), ability measures of EM skills are preferable to subjective self-report evaluations, which may be biased by the respondent. The widespread demand of such skills stresses the need for versatile and psychometrically sound measurements of EM ability.

METHOD

Sample: 899 participants (14 - 72 years old) from the general Portuguese population.

Measure: the Situational Test of Emotional Management – Brief (STEM-B; Allen et al., 2014; da Motta, Barreto Carvalho & Castilho, 2018), was developed based on Situational Judgment Paradigm, consisting of 18 vignettes describing interpersonal scenarios, that are rated in multiple-choice format and yield a dichotomous output (correct/ incorrect).

RESULTS

26 participants with problematic response patterns (*careless/lucky guessing*) were excluded. Person reliability and separation values were .64 and 1.33, respectively, suggesting the ability to discriminate participants in the sample according to their level of performance between low and high performers. Item reliability and separation were .99 and 11.83, suggesting a good item difficulty hierarchy. All items presented adequate adjustments, with average Infit ($M = .99$; $SD = .09$) and Outfit ($M = .98$; $SD = .16$) values. The Cronbach alpha (KR-20) for the scale was .62.

Table 1. Global fit statistic of STEM-B (N = 873)

	Reliability	Separation		Measure (θ)	Model Error	Infit	Outfit
Person fit	.64	1.33	M	.27	.56	1.00	.98
			SD	.94	.07	.22	.33
			Max	3.21	1.05	1.72	2.27
			Min	-3.20	.52	.56	.25
Item fit	.99	11.83	M	.00	.08	.99	.98
			SD	.95	.01	.09	.16
			Max	1.90	.10	1.12	1.19
			Min	-1.68	.07	.77	.61

Differential item functioning analysis showed item's do not vary between genders, but may vary according to age, without compromising the overall test score.

Item's logit map showed most of the 18 scenarios aligning vertically across the scale, within an adequate range of item difficulty and item fit

Comparison of items' difficulty measures (by gender)

Comparison of items' difficulty (by age group)

Figure 2. Differential item functioning according to gender and age (N = 873)

CONCLUSION

The STEM-B showed a good model fit and is a psychometrically sound measure for specific testing of emotional management skills, developed according to new paradigms of EI ability assessment. It is widely applicable across several research and interventions fields, and its availability in

Portugal increases its potential utility for transcultural studies.

References: Allen, V. D., Rahman, N., Weissman, A., MacCann, C., Lewis, C., & Roberts, R. D. (2014). The Situational Test of Emotional Management - Brief (STEM-B): Development and validation using item response theory and latent class analysis. *Personality and Individual Differences*, 81, 195–200. DOI: 10.1016/j.paid.2015.01.053

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