

Confirmatory Factor Analysis of the Behavioural Regulation in Exercise Questionnaire – Portuguese Version

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INTRODUCTION

Exercise constitutes one of the pillars of a healthy lifestyle (USDHHS, 1996). Paradoxically, more than 40% of Europeans are sedentary (Eurobarometer 213, 2004), although some interventions, at both community and individual levels, have been established to improve this situation. Some of these interventions are based on Self-Determination Theory (SDT: Deci & Ryan, 1985), which state that more internalized types of behaviour regulation lead to feelings of self-determination in one's chosen activities and, consequently, to greater likelihood of behavioural adherence. Today, SDT is one of the most popular approaches to the study of exercise, thus the cross-cultural validation of instruments that can measure its constructs is a necessary step to further advance in the study of exercise motivation.

PURPOSE

The purpose of this study was to assess the factorial validity of a Portuguese version of the Behavioural Regulation in Exercise Questionnaire-2 (BREQ-2; Markland & Tobin, 2004).

METHODS

PARTICIPANTS:

The sample included 703 subjects (431 women, 272 men; age=27.3±9.0y, 56% in the maintenance stage of change towards exercise) derived from university students and health club clients.

MEASURES:

The BREQ-2 was originally developed by Markland and Tobin (2004), while the Portuguese version was produced through a translation-retroversion methodology, that resulted in sound exploratory analysis results (Palmeira & Teixeira, 2006). The instrument is composed of 19 items on a five-point Likert-type scale measuring amotivated, external, introjected, identified, and intrinsic regulation of exercise behaviour.

STATISTICAL ANALYSIS:

Confirmatory factor analysis of the proposed the 5 dimensional factor structure of the original scale was conducted using the Robust Maximum Likelihood method. The software used was the LISREL 8.8.

RESULTS

Confirmatory factor analyses provided support for the tenability of the hypothesised factor structure of the Portuguese BREQ-2 (Satorra-Bentler $\chi^2=447.84$ [142], $p<.001$; RMSEA=.057 (0.051-0.063); CFI=.96) and for the invariance of the factor loadings and inter-factor covariances across gender. The subscale reliabilities of this factor structure were acceptable. In line with the theoretical model, subscale intercorrelations conformed to a simplex-like pattern.

Figure 1. Diagram and Standardized Solutions for the Factorial Structure of the BREQ-2

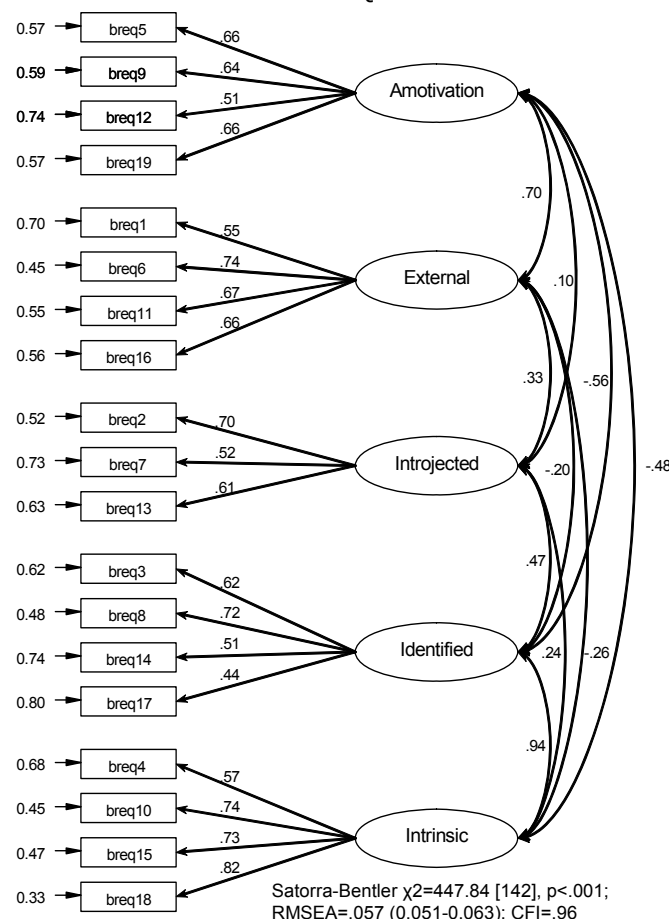


Table 1. Means, Standard Deviations and correlations among the variables. Cronbach's alpha reliabilities are presented on the diagonal

	M	SD	1	2	3	4	5
1 Amotivation	0.97	2.15	$\alpha=0.71$				
2 External	1.50	2.41	0.55 ***	$\alpha=0.74$			
3 Introjected	3.87	2.84	0.12 ***	0.25 ***	$\alpha=0.63$		
4 Identified	11.25	3.11	-0.28 ***	-0.09 *	0.38 ***	$\alpha=0.64$	
5 Intrinsic	12.33	3.53	-0.34 ***	-0.19 ***	0.17 ***	0.65 ***	$\alpha=0.79$

Note: * $p<.05$, *** $p<.001$

CONCLUSIONS

- The results indicate that the factorial validity and reliability of the Portuguese version of the BREQ-2 are acceptable.
- This version extends the possibility of enhancing our understanding of exercise motivation from the perspective of Self-Determination Theory to populations in Portuguese-speaking countries.

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