# Statistical modeling of burnout in college students as a second order construct

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### Talk Abstract

Burnout in college students has been studied considering a three-factor structure, in line with the conceptualization proposed by the Maslach Burnout Inventory – Student Survey (MBI-SS) scale. The expansion to a secondorder hierarchical structure has also been proposed with Confirmatory Factor Analysis and the maximum likelihood method. Here we considered a higher order structural equation model (SEM), where burnout in students is a 2nd order construct, and used the consistent Partial Least Squares (PLSc) estimator, which performs a correction of reflective constructs' correlations to make results consistent with a factor-model. At a Portuguese Polytechnic Institute, an online survey was carried out using the 15 questions of the MBI-SS, in which the data from the sample collected (n = 144) did not present a multivariate normal distribution. Thus, we applied the PLSc-SEM, which is a non-parametric method that makes no distributional assumptions and can be used with relatively small sample sizes. In particular, we applied the disjoint two-stage approach to estimate a reflective-reflective second order model of students' burnout with "emotional exhaustion", "disbelief" and "personal effectiveness" as first-order constructs. The internal consistency values for the first-order dimensions are quite reasonable (higher than or equal to 0.799). The estimated model, which verified the key criteria in the evaluation process of the outer and inner submodels, can then be used to obtain the global burnout score of students at the institution under analysis.

**Keywords:** higher-order constructs, likert-type scale, partial least squares, structural equation model, survey.

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