Supplementary Material

Factor Validity

Factor validity concerns the extent to which the selected observable items adequately cover the model specification of the latent construct(s) being studied. The model specification is a set of equations that should reproduce the theoretical relationships across variables; in the context of factor validity, these relationships mainly include loadings of observed variables on latent ones (i.e., constructs) and correlations among the latters. In other words, testing for the factor validity of a theoretical construct concerns defining the model specifications that best fits the available data. The statistical technique of Confirmatory Factor Analysis (CFA) is the most appropriate to test factor validity and compare different model specifications, thus it has been chosen to conduct these analyses.

Measurement and Structural Invariance

The measurement invariance test allowed to check whether the psychometric properties of the latent construct and, therefore, the equations used to create the latent factor scores can be considered equal across sub-populations of interest (1). One of the major threats to this assumption is represented by the risk of measurement bias. It consists in a potential difference between the estimated and the true parameter resulting from the presence of a nuisance factor that produces an undesirable source of measurement variance (2,3). If not seriously taken into account, this kind of bias could drive to inaccurate inferences about the results of any comparative analysis, especially if it works differently on the different sub-populations of interest (1). Considering that one of the purposes of this study was to properly quantify the average differences on PPS-M and PPS-F across groups, we kept under control these interfering factors applying the standard procedure for testing measurement invariance through the *Multi-Group Confirmatory Factor Analysis* (MG-CFA) (4,5). The same technique has also been adopted to evaluate the degree of variability in the first order latent factors variance (i.e., PPS-M and PPS-F) and their correlational relationships across groups of students. This additional

analysis, commonly referred as structural invariance test in the literature (6,7), allowed to check the cross-group stability in both the distribution of PPM-F and PPM-M and the way they relate to each other. Both measurement and structural invariance tests are based on the comparison of the fit of a series of hierarchically nested models. In each step of the analysis, an increasing number of equality constraints were fixed among the estimated parameters, allowing to check the presence of any significant difference in the model specification across groups.

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