**Online Supplemental Material**

To ensure longitudinal invariance of the measures for self-control demands (SCDs) and affective strain (Geiser et al., 2010; van de Schoot et al., 2012), I examined a series of confirmatory factor analyses (CFAs) with specific parameter restrictions at Time 1 and 2 (T1 and T2), separately for SCDs and affective strain: configural invariance (equal specification of the latent constructs without restrictions at both Times), metric invariance (all factor loadings are constrained to be equal at both Times), scalar invariance (all indicator intercepts are constrained to be equal at both Times), and invariant residual variances (residuals of manifest variables are constrained to be equal at both Times). Since these parameter restrictions refer to CFA models which are nested, I conducted comparative fit tests between configural vs. metric invariance, metric vs. scalar invariance and scalar vs. invariant residual variances. The comparative fit tests are based on χ²-difference tests (Toker & Biron, 2012), ΔCFI (Cheung & Rensvold, 2009) and conventional fit indices (van de Schoot et al., 2012).

**Results of analyses of measurement invariance.** Table S1 (Sample 1) and S2 (Sample 2) provide the results on the measurement invariance for SCDs (Model 2a-d) and affective strain (Model 3a-d). In lending support for measurement invariance, the overall fits of the Models 2a-d and 3a-d were generally satisfactory and did not seriously decrease with more restrictions. Robust chi²-difference tests showed that the parameter restrictions of Model 2c lead to a significant decrease (*p* = .009) in model fit in Sample 1, whereas Model 2b (*p* = .023) and Model 3b (*p* = .040) fitted the data significantly worse than Model 2a and 3a in Sample 2, respectively. All other comparisons of model fit were not significant. As chi²-values might have been confounded by the sample sizes, measurement invariance should be also evaluated on the basis of fit indices and ΔCFI (Cheung & Rensvold, 2009; Toker & Biron, 2012). Because these indices suggest acceptable model fit for all parameter restrictions and all ΔCFIs were **≥ -**.007 and ≤ .002, longitudinal invariance for the measures of SCDs and affective strain can be assumed in both samples. Therefore, temporal differences in both latent variables are supposed to reflect “true” changes over time and are not biased by potential variations in the measurement on both times.

**References**

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Table S1.

*Results of the Confirmatory Factor Analyses for Testing Construct Validity and Measurement Invariance over Time for Sample 1 (N = 389)*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Factor and model | χ² | | *df* | RMSEA | *CI90% (RMSEA)* | | | SRMR | CFI | ΔCFI |
|  |  |  |  |  |  |  |  |  |  |  |
| *Longitudinal invariant models for self-control demands* |  |  |  |  |  |  |  |  |  |  |
| Model 2a: Configural Invariance (equal form: SCDs at both times) | 8.924 | n. s. | 5 | 0.045 | 0.000 | − | 0.092 | 0.015 | 0.997 |  |
| Model 2b: Metric invariance (equal factor loadings) | 15.304 | n. s. | 8 | 0.048 | 0.000 | − | 0.085 | 0.034 | 0.995 | -.002 |
| Model 2c: Scalar invariance (equal indicator intercepts) | 26.372 | \*\* | 11 | 0.060 | 0.031 | − | 0.090 | 0.049 | 0.990 | -.005 |
| Model 2d: Invariant residual variance (equal indicator error variances) | 26.201 | \* | 14 | 0.047 | 0.017 | − | 0.075 | 0.047 | 0.992 | .002 |
|  |  |  |  |  |  | | |  |  |  |
| *Longitudinal invariant models for affective strain* |  |  |  |  |  |  |  |  |  |  |
| Model 3a: Configural Invariance (equal form: affective strain at both times) | 8.418 | n. s. | 5 | 0.042 | 0.000 | − | 0.090 | 0.022 | 0.997 |  |
| Model 3b: Metric invariance (equal factor loadings) | 9.372 | n. s. | 8 | 0.021 | 0.000 | − | 0.065 | 0.023 | 0.999 | .002 |
| Model 3c: Scalar invariance (equal indicator intercepts) | 13.486 | n. s. | 11 | 0.024 | 0.000 | − | 0.061 | 0.030 | 0.998 | -.001 |
| Model 3d: Invariant residual variance (equal indicator error variances) | 13.826 | n. s. | 14 | 0.000 | 0.000 | − | 0.048 | 0.036 | 1.000 | .002 |
|  |  |  |  |  |  |  |  |  |  |  |

*Note.* Longitudinal invariant models were separately tested for self-control demands and affective strain. Based on ΔCFI (Cheung & Rensvold, 2009) and χ²-difference tests, I compared configural invariance (Model 2a and 3a) with metric invariance (Model 2b and 3b), metric invariance with scalar invariance (Model 2c and 3c) and scalar invariance with invariant residual variance (Model 2d and 3d), respectively. SCDs = self-control demands; SOC = Strategies of selection, optimization and compensation; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual; CFI = comparative fit index. n. s. = not significant.\* *p* < .05. \*\* *p* < .01. Table S2.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Factor and model | χ² | | *df* | RMSEA | *CI90% (RMSEA)* | | | SRMR | CFI | ΔCFI |
|  |  |  |  |  |  |  |  |  |  |  |
| *Longitudinal invariant models for self-control demands* |  |  |  |  |  |  |  |  |  |  |
| Model 2a: Configural Invariance (equal form: SCDs at both times) | 5.436 | n. s. | 5 | 0.017 | 0.000 | − | 0.082 | 0.019 | 1.000 |  |
| Model 2b: Metric invariance (equal factor loadings) | 13.925 | n. s. | 8 | 0.049 | 0.000 | − | 0.090 | 0.102 | 0.993 | -.007 |
| Model 2c: Scalar invariance (equal indicator intercepts) | 18.071 | n. s. | 11 | 0.045 | 0.000 | − | 0.081 | 0.104 | 0.992 | -.001 |
| Model 2d: Invariant residual variance (equal indicator error variances) | 20.645 | n. s. | 14 | 0.039 | 0.000 | − | 0.072 | 0.097 | 0.993 | .001 |
|  |  |  |  |  |  | | |  |  |  |
| *Longitudinal invariant models for affective strain* |  |  |  |  |  |  |  |  |  |  |
| Model 3a: Configural Invariance (equal form: affective strain at both times) | 2.802 | n. s. | 5 | 0.000 | 0.000 | − | 0.057 | 0.014 | 1.000 |  |
| Model 3b: Metric invariance (equal factor loadings) | 10.104 | n. s. | 8 | 0.029 | 0.000 | − | 0.076 | 0.045 | 0.998 | -.002 |
| Model 3c: Scalar invariance (equal indicator intercepts) | 16.563 | n. s. | 11 | 0.040 | 0.000 | − | 0.077 | 0.049 | 0.994 | -.004 |
| Model 3d: Invariant residual variance (equal indicator error variances) | 22.691 | n. s. | 14 | 0.045 | 0.000 | − | 0.077 | 0.037 | 0.991 | -.003 |
|  |  |  |  |  |  |  |  |  |  |  |

*Results of the Confirmatory Factor Analyses for Testing Construct Validity and Measurement Invariance over Time for Sample 2 (N = 313)*

*Note.* Longitudinal invariant models were separately tested for self-control demands and affective strain. Based on ΔCFI (Cheung & Rensvold, 2009) and χ²-difference tests, I compared configural invariance (Model 2a and 3a) with metric invariance (Model 2b and 3b), metric invariance with scalar invariance (Model 2c and 3c) and scalar invariance with invariant residual variance (Model 2d and 3d), respectively. SCDs = self-control demands; SOC = Strategies of selection, optimization and compensation; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual; CFI = comparative fit index. n. s. = not significant.\* *p* < .05. \*\* *p* < .01.