Results

Baseline

Model fit

				Baseline test			Difference test		
	AIC	BIC	n	χ^2	df	p	$\Delta\chi^2$	Δdf	p
Model 1	8320.653	8474.524	382	429.497	26	< .001	429.497	26	< .001

Additional fit measures

Fit indices

Index	Value
Comparative Fit Index (CFI)	0.864
T-size CFI	0.823
Tucker-Lewis Index (TLI)	0.765
Bentler-Bonett Non-normed Fit Index (NNFI)	0.765
Bentler-Bonett Normed Fit Index (NFI)	0.858
Parsimony Normed Fit Index (PNFI)	0.496
Bollen's Relative Fit Index (RFI)	0.754
Bollen's Incremental Fit Index (IFI)	0.865
Relative Noncentrality Index (RNI)	0.864

Note. T-size CFI is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional CFI cut-off values (poor < 0.90 < fair < 0.95 < close) are **poor < 0.85 < fair < 0.915 < close** for model: Model 1

Information criteria

	Value
Log-likelihood	-4121.327
Number of free parameters	39.000
Akaike (AIC)	8320.653
Bayesian (BIC)	8474.524
Sample-size adjusted Bayesian (SSABIC)	8350.784

Other fit measures

Metric	Value
Root mean square error of approximation (RMSEA)	0.202
RMSEA 90% CI lower bound	0.185
RMSEA 90% CI upper bound	0.219
RMSEA p-value	0.000
T-size RMSEA	0.219
Standardized root mean square residual (SRMR)	0.111
Hoelter's critical N (α = .05)	35.585
Hoelter's critical N (α = .01)	41.594
Goodness of fit index (GFI)	0.828

McDonald fit index (MFI)	0.590
Expected cross validation index (ECVI)	1.329

Note. T-size RMSEA is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional RMSEA cut-off values (close < 0.05 < fair < 0.08 < poor) are **close < 0.071 < fair < 0.099 < poor** for model: Model 1

R-Squared

	R^2
Score3A	0.154
Total	1.000
Score1A	0.194
Score1B	0.100
Score1C	0.231
Score2A	-4.493
Score2B	-0.007
Score2C	-1.382
Score3B	0.097
Score3C	0.392
EF	

Parameter estimates

Factor Loadings

						95% Confidence Interval	
Latent	Indicator	Estimate	Std. Error	z-value	p	Lower	Upper
EF	Total	1.000	0.000			1.000	1.000
P1	Score1A	1.000	0.000			1.000	1.000
	Score1B	0.716	0.072	9.961	< .001	0.576	0.857
	Score1C	1.092	0.093	11.730	< .001	0.909	1.274
P2	Score2A	1.000	0.000			1.000	1.000
	Score2B	0.040	0.070	0.574	0.566	-0.097	0.178
	Score2C	-0.555	0.076	-7.321	< .001	-0.703	-0.406
P3	Score3A	1.000	0.000			1.000	1.000
	Score3B	0.794	0.076	10.467	< .001	0.645	0.942
	Score3C	1.597	0.140	11.419	< .001	1.323	1.871

Regression coefficients

						95% Confidence Interval	
Predictor	Outcome	Estimate	Std. Error	z-value	p	Lower	Upper
P1	EF	-0.653	0.512	-1.276	0.202	-1.656	0.350
P2	EF	-0.013	0.027	-0.503	0.615	-0.066	0.039
P3	EF	-2.188	0.561	-3.898	< .001	-3.288	-1.088

Factor variances

					95% Confidence Interval	
Variable	Estimate	Std. Error	z-value	p	Lower	Upper

EF	-0.449	0.066	-6.811	< .001	-0.578	-0.320
P1	0.194	0.058	3.330	< .001	0.080	0.308
P2	-4.481	9.118	-0.491	0.623	-22.351	13.389
P3	0.153	0.035	4.346	< .001	0.084	0.222

Factor covariances

					95% Confidence Interval	
Variables	Estimate	Std. Error	z-value	p	Lower	Upper
P1 - P2	0.277	0.036	7.591	< .001	0.205	0.348
P1 - P3	0.214	0.029	7.272	< .001	0.157	0.272
P2 - P3	0.211	0.030	7.120	< .001	0.153	0.269

Residual variances

					95% Confidence Interval	
Variable	Estimate	Std. Error	z-value	p	Lower	Upper
Score3A	0.844	0.059	14.275	< .001	0.728	0.960
Total	0.000	0.000			0.000	0.000
Score1A	0.804	0.070	11.479	< .001	0.667	0.941
Score1B	0.898	0.069	12.963	< .001	0.762	1.034
Score1C	0.767	0.079	9.744	< .001	0.612	0.921
Score2A	5.478	9.158	0.598	0.550	-12.471	23.427
Score2B	1.005	0.074	13.553	< .001	0.859	1.150
Score2C	2.376	2.743	0.866	0.386	-3.001	7.753
Score3B	0.901	0.062	14.452	< .001	0.779	1.023
Score3C	0.607	0.051	11.923	< .001	0.507	0.706

Residual covariances

					95% Confidence Interval	
Variables	Estimate	Std. Error	z-value	p	Lower	Upper
Score1A- Score1B	0.207	0.057	3.647	< .001	0.096	0.319
Score1A- Score1C	0.012	0.057	0.220	0.826	-0.099	0.124
Score2A- Score2B	-0.353	0.107	-3.310	< .001	-0.562	-0.144
Score2A- Score2C	-2.569	5.003	-0.513	0.608	-12.374	7.236

Means

					95% Confidence Interval	
Variable	Estimate	Std. Error	z-value	p	Lower	Upper
Total	6.209×10^{-8}	0.051	1.215×10^{-6}	1.000	-0.100	0.100
Score1A	-3.429×10^{-8}	0.051	-6.711×10^{-7}	1.000	-0.100	0.100
Score1B	-4.048×10^{-8}	0.051	-7.921×10^{-7}	1.000	-0.100	0.100
Score1C	-6.462×10^{-8}	0.051	-1.265×10^{-6}	1.000	-0.100	0.100
Score2A	-4.685×10^{-8}	0.051	-9.169×10^{-7}	1.000	-0.100	0.100
Score2B	2.755×10^{-8}	0.051	5.392×10^{-7}	1.000	-0.100	0.100

Score2C	2.762×10^{-8}	0.051	5.404×10^{-7}	1.000	-0.100	0.100
Score3A	-2.978×10^{-8}	0.051	-5.828×10^{-7}	1.000	-0.100	0.100
Score3B	-2.482×10^{-8}	0.051	-4.857×10^{-7}	1.000	-0.100	0.100
Score3C	-2.582×10^{-8}	0.051	-5.052×10^{-7}	1.000	-0.100	0.100
EF	0.000	0.000			0.000	0.000
P1	0.000	0.000			0.000	0.000
P2	0.000	0.000			0.000	0.000
P3	0.000	0.000			0.000	0.000

Path diagram

Path diagram

With New Variable

Model fit

				Baseline test			Difference test		
	AIC	BIC	n	χ^2	df	p	$\Delta\chi^2$	Δdf	p
Model 1	-5765.013	-5611.141	382	313.192	26	< .001	313.192	26	< .001

Additional fit measures

Fit indices

Index	Value

Comparative Fit Index (CFI)	0.871
T-size CFI	0.823
Tucker-Lewis Index (TLI)	0.776
Bentler-Bonett Non-normed Fit Index (NNFI)	0.776
Bentler-Bonett Normed Fit Index (NFI)	0.862
Parsimony Normed Fit Index (PNFI)	0.498
Bollen's Relative Fit Index (RFI)	0.761
Bollen's Incremental Fit Index (IFI)	0.872
Relative Noncentrality Index (RNI)	0.871

Note. T-size CFI is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional CFI cut-off values (poor < 0.90 < fair < 0.95 < close) are **poor < 0.85 < fair < 0.915 < close** for model: Model 1

Information criteria

	Value
Log-likelihood	2921.506
Number of free parameters	39.000
Akaike (AIC)	-5765.013
Bayesian (BIC)	-5611.141
Sample-size adjusted Bayesian (SSABIC)	-5734.882

Other fit measures

Metric	Value
Root mean square error of approximation (RMSEA)	0.170
RMSEA 90% CI lower bound	0.153
RMSEA 90% CI upper bound	0.187
RMSEA p-value	0.000
T-size RMSEA	0.187
Standardized root mean square residual (SRMR)	0.101
Hoelter's critical N (α = .05)	48.428
Hoelter's critical N (α = .01)	56.669
Goodness of fit index (GFI)	1.000
McDonald fit index (MFI)	0.687
Expected cross validation index (ECVI)	1.024

Note. T-size RMSEA is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional RMSEA cut-off values (close < 0.05 < fair < 0.08 < poor) are **close < 0.071 < fair < 0.099 < poor** for model: Model 1

Parameter estimates

Factor Loadings

						95% Confidence Interval	
Latent	Indicator	Estimate	Std. Error	z-value	p	Lower	Upper
EF	Total	1.000	0.000			1.000	1.000
P1	Score1A	1.000	0.000			1.000	1.000
	Score1B	1.190	0.124	9.594	< .001	0.947	1.433
	Score1C	1.550	0.138	11.221	< .001	1.279	1.821
P2	Score2A	1.000	0.000			1.000	1.000
	Score2B	0.037	0.045	0.827	0.408	-0.051	0.124

	Score2C	-0.190	0.034	-5.669	< .001	-0.256	-0.124
P3	Score3B	1.000	0.000			1.000	1.000
	Score3C	5.972	0.754	7.922	< .001	4.494	7.449
	New3A	0.010	0.045	0.218	0.828	-0.078	0.098

Regression coefficients

						95% Confidence Interval	
Predictor	Outcome	Estimate	Std. Error	z-value	p	Lower	Upper
P1	EF	-3.149	0.400	-7.868	< .001	-3.934	-2.365
P2	EF	-0.034	0.048	-0.717	0.473	-0.129	0.060
P3	EF	-2.378	1.307	-1.820	0.069	-4.940	0.183

Factor variances

					95% Confidence Interval	
Variable	Estimate	Std. Error	z-value	p	Lower	Upper
EF	-0.020	0.006	-3.443	< .001	-0.031	-0.008
P1	0.002	6.892×10^{-4}	3.297	< .001	9.216×10^{-4}	0.004
P2	-0.247	0.367	-0.674	0.500	-0.967	0.472
P3	1.576×10^{-4}	1.808×10^{-4}	0.871	0.384	-1.969×10^{-4}	5.120×10^{-4}

Factor covariances

					95% Confidence Interval	
Variables	Estimate	Std. Error	z-value	p	Lower	Upper
P1 - P2	0.008	0.001	7.606	< .001	0.006	0.010
P1 - P3	0.002	2.496×10^{-4}	6.448	< .001	0.001	0.002
P2 - P3	0.004	6.342×10^{-4}	6.487	< .001	0.003	0.005

Residual variances

					95% Confidence Interval	
Variable	Estimate	Std. Error	z-value	p	Lower	Upper
New3A	0.009	6.278×10^{-4}	13.820	< .001	0.007	0.010
Total	0.000	0.000			0.000	0.000
Score1A	0.009	8.167×10^{-4}	11.253	< .001	0.008	0.011
Score1B	0.029	0.002	12.912	< .001	0.024	0.033
Score1C	0.019	0.002	9.785	< .001	0.015	0.022
Score2A	0.315	0.370	0.853	0.394	-0.409	1.039
Score2B	0.024	0.002	13.304	< .001	0.020	0.027
Score2C	0.022	0.013	1.668	0.095	-0.004	0.047
Score3B	0.006	4.729×10^{-4}	13.112	< .001	0.005	0.007
Score3C	0.055	0.007	8.292	< .001	0.042	0.068

Residual covariances

Residual covariances

Variables	Estimate	Std. Error	z-value	p	95% Confidence Interval Lower	Upper
Score1A- Score1B	0.004	0.001	3.571	< .001	0.002	0.006
Score1A- Score1C	2.001×10^{-4}	9.558×10^{-4}	0.209	0.834	-0.002	0.002
Score2A- Score2B	-0.012	0.005	-2.318	0.020	-0.023	-0.002
Score2A- Score2C	-0.049	0.069	-0.720	0.471	-0.184	0.085

Means

Variable	Estimate	Std. Error	z-value	p	95% Confidence Interval Lower	Upper
Total	0.585	0.009	65.927	< .001	0.568	0.603
Score1A	0.330	0.005	60.286	< .001	0.320	0.341
Score1B	0.215	0.009	23.544	< .001	0.197	0.233
Score1C	0.286	0.008	36.088	< .001	0.270	0.301
Score2A	0.480	0.013	36.054	< .001	0.454	0.506
Score2B	0.389	0.008	49.635	< .001	0.374	0.405
Score2C	0.827	0.006	143.502	< .001	0.816	0.838
Score3B	0.162	0.004	39.752	< .001	0.154	0.170
Score3C	0.335	0.013	26.533	< .001	0.310	0.360
New3A	0.013	0.005	2.712	0.007	0.004	0.022
EF	0.000	0.000			0.000	0.000
P1	0.000	0.000			0.000	0.000
P2	0.000	0.000			0.000	0.000
P3	0.000	0.000			0.000	0.000

Path diagram

Path diagram