

**Electronic Supplementary Material for
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 assessment center ratings. A study using confirmatory factor analysis. *Journal of Personnel Psychology*.
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Table E1. Model–data fit indices for confirmatory factor analyses models for Sample 1

Model	Model termination	Admissibility	χ^2	<i>df</i>	<i>p</i> value	SRMR	RMSEA	TLI	CFI
<i>Model 1: Correlated Dimensions-Correlated Exercises</i>									
Baseline model									
1 Parcel	Yes	No	12.99	12	0.37	0.02	0.02	1.00	1.00
Parceling strategy: Random									
2 Parcel	Yes	Yes	282.46	111	0	0.07	0.08	0.94	0.95
3 Parcel	Yes	Yes	612.76	291	0	0.06	0.07	0.92	0.94
Parceling strategy: Factorial									
2 Parcel	Yes	No	209.73	111	0	0.06	0.06	0.96	0.97
3 Parcel	Yes	Yes	889.97	292	0	0.54	0.09	0.85	0.88
Parceling strategy: Correlational									
2 Parcel	Yes	Yes	224.65	111	0	0.05	0.07	0.95	0.96
3 Parcel	Yes	Yes	711.38	291	0	0.06	0.08	0.88	0.90
<i>Model 2: Correlated Dimensions</i>									
Baseline model									
1 Parcel	Yes	Yes	652.23	24	0	0.17	0.33	0.39	0.60
Parceling strategy: Random									
2 Parcel	Yes	Yes	1765.17	132	0	0.20	0.23	0.48	0.55
3 Parcel	Yes	Yes	2773.64	321	0	0.19	0.18	0.47	0.52

Item Parceling Ratios and Strategies for Assessment Center Research – ESM 1

Model	Model termination	Admissibility	χ^2	<i>df</i>	<i>p</i> value	SRMR	RMSEA	TLI	CFI
Parceling strategy: Factorial									
2 Parcel	Yes	Yes	1812.27	132	0	0.20	0.23	0.45	0.53
3 Parcel	Yes	Yes	2911.16	322	0	0.54	0.18	0.42	0.46
Parceling strategy: Correlational									
2 Parcel	Yes	Yes	1548.99	132	0	0.19	0.21	0.48	0.55
3 Parcel	Yes	Yes	2470.00	321	0	0.17	0.17	0.45	0.50
<i>Model 3: Correlated Exercises</i>									
Baseline model									
1 Parcel	Yes	Yes	42.64	24	0.01	0.04	0.06	0.98	0.99
Parceling strategy: Random									
2 Parcel	Yes	Yes	479.03	132	0	0.07	0.10	0.89	0.91
3 Parcel	Yes	Yes	907.28	321	0	0.06	0.09	0.87	0.89
Parceling strategy: Factorial									
2 Parcel	Yes	Yes	421.89	132	0	0.06	0.10	0.91	0.92
3 Parcel	Yes	Yes	856.75	321	0	0.06	0.08	0.88	0.89
Parceling strategy: Correlational									
2 Parcel	Yes	Yes	406.14	132	0	0.06	0.09	0.90	0.91
3 Parcel	Yes	Yes	953.34	321	0	0.06	0.09	0.84	0.85
<i>Model 4: Correlated Dimensions + General Performance Factor</i>									
Baseline model									
1 Parcel	Yes	Yes	190.18	15	0	0.10	0.22	0.73	0.89
Parceling strategy: Random									
2 Parcel	Yes	Yes	880.45	114	0	0.13	0.17	0.72	0.79
3 Parcel	Yes	Yes	1452.64	294	0	0.12	0.13	0.73	0.77
Parceling strategy: Factorial									
2 Parcel	Yes	Yes	1160.98	114	0	0.15	0.19	0.61	0.71
3 Parcel	Yes	Yes	1609.92	295	0	0.51	0.14	0.68	0.73

Item Parceling Ratios and Strategies for Assessment Center Research – ESM 1

Model	Model termination	Admissibility	χ^2	df	p value	SRMR	RMSEA	TLI	CFI
Parceling strategy: Correlational									
2 Parcel	Yes	Yes	755.59	114	0	0.12	0.15	0.73	0.80
3 Parcel	Yes	Yes	1405.58	294	0	0.11	0.12	0.69	0.74
<i>Model 5: Correlated Exercises + General Performance Factor</i>									
Baseline model									
1 Parcel	Yes	Yes	19.26	15	0.2	0.02	0.03	0.99	1.00
Parceling strategy: Random									
2 Parcel	Yes	Yes	362.47	114	0	0.05	0.10	0.91	0.93
3 Parcel	Yes	Yes	760.57	294	0	0.05	0.08	0.89	0.91
Parceling strategy: Factorial									
2 Parcel	Yes	Yes	306.58	114	0	0.05	0.08	0.93	0.95
3 Parcel	Yes	Yes	744.00	294	0	0.05	0.08	0.89	0.91
Parceling strategy: Correlational									
2 Parcel	Yes	Yes	267.53	114	0	0.04	0.07	0.93	0.95
3 Parcel	Yes	Yes	820.74	294	0	0.06	0.09	0.85	0.88

Note. Model termination = converged to a solution; admissibility = no out-of-bounds estimates; df = model degrees of freedom; χ^2 = chi-square test of independence; SRMR = standardized root squared mean residual; RMSEA = root mean squared error of approximation; TLI = Tucker-Lewis index; CFI = comparative fit index.

Table E2. Model–data fit indices for confirmatory factor analyses models for Sample 2

Model	Model Termination	Admissibility	χ^2	<i>df</i>	<i>p</i> value	SRMR	RMSEA	TLI	CFI
<i>Model 1: Correlated Dimensions-Correlated Exercises</i>									
Baseline model									
1 Parcel	No	No							
Parceling strategy: Random									
2 Parcel	Yes	Yes	60.16	38	0.01	0.02	0.04	0.98	0.99
3 Parcel	Yes	Yes	193.23	113	0	0.03	0.05	0.96	0.97
Parceling strategy: Factorial									
2 Parcel	Yes	Yes	74.93	38	0	0.02	0.06	0.97	0.98
3 Parcel	Yes	Yes	32.17	38	0.74	0.02	0.00	1.01	1.00
Parceling strategy: Correlational									
2 Parcel	Yes	Yes	52.84	38	0.06	0.02	0.04	0.99	0.99
3 Parcel	No	No							
<i>Model 2: Correlated Dimensions</i>									
Baseline model									
1 Parcel	Yes	Yes	154.28	6	0	0.08	0.29	0.58	0.83
Parceling strategy: Random									
2 Parcel	Yes	Yes	629.45	51	0	0.13	0.19	0.64	0.72
3 Parcel	Yes	Yes	983.70	132	0	0.11	0.15	0.66	0.71
Parceling strategy: Factorial									
2 Parcel	Yes	Yes	604.60	51	0	0.10	0.19	0.65	0.73
3 Parcel	Yes	Yes	356.78	51	0	0.09	0.14	0.76	0.81
Parceling strategy: Correlational									
2 Parcel	Yes	Yes	751.99	51	0	0.12	0.21	0.57	0.66
3 Parcel	Yes	Yes	593.19	51	0	0.15	0.18	0.64	0.72

Item Parceling Ratios and Strategies for Assessment Center Research – ESM 1

Model	Model Termination	Admissibility	χ^2	<i>df</i>	<i>p</i> value	SRMR	RMSEA	TLI	CFI
<i>Model 3: Correlated Exercises</i>									
Baseline model									
1 Parcel	Yes	Yes	49.63	8	0	0.04	0.13	0.91	0.95
Parceling strategy: Random									
2 Parcel	Yes	Yes	319.25	53	0	0.09	0.13	0.84	0.87
3 Parcel	Yes	Yes	488.58	134	0	0.08	0.09	0.86	0.88
Parceling strategy: Factorial									
2 Parcel	Yes	Yes	299.73	53	0	0.08	0.12	0.85	0.88
3 Parcel	Yes	Yes	210.74	53	0	0.07	0.10	0.88	0.90
Parceling strategy: Correlational									
2 Parcel	Yes	Yes	364.28	53	0	0.11	0.14	0.81	0.85
3 Parcel	Yes	Yes	378.15	53	0	0.13	0.14	0.79	0.83
<i>Model 4: Correlated Dimensions + GPF</i>									
Baseline model									
1 Parcel	Yes	No	0.01	0	0	0.00	0.00	1.00	1.00
Parceling strategy: Random									
2 Parcel	Yes	Yes	61.05	39	0	0.02	0.04	0.98	0.99
3 Parcel	Yes	Yes	189.39	114	0	0.03	0.05	0.97	0.97
Parceling strategy: Factorial									
2 Parcel	Yes	Yes	75.07	39	0	0.02	0.06	0.97	0.98
3 Parcel	Yes	Yes	41.32	39	0.37	0.02	0.01	1.00	0.99
Parceling strategy: Correlational									
2 Parcel	Yes	Yes	55.42	39	0.04	0.02	0.04	0.99	0.99
3 Parcel	No	No							
<i>Model 5: Correlated Exercises + General Performance Factor</i>									
Baseline model									
1 Parcel	Yes	Yes	495.35	149	0	0.06	0.09	0.90	0.92

Item Parceling Ratios and Strategies for Assessment Center Research – ESM 1

Model	Model Termination	Admissibility	χ^2	df	p value	SRMR	RMSEA	TLI	CFI
Parceling strategy: Random									
2 Parcel	Yes	Yes	121.38	41	0	0.05	0.08	0.94	0.96
3 Parcel	Yes	Yes	346.20	116	0	0.06	0.08	0.90	0.92
Parceling strategy: Factorial									
2 Parcel	Yes	Yes	173.63	41	0	0.05	0.10	0.90	0.94
3 Parcel	Yes	Yes	63.13	41	0.01	0.03	0.04	0.98	0.99
Parceling strategy: Correlational									
2 Parcel	Yes	Yes	121.42	41	0	0.03	0.08	0.94	0.96
3 Parcel	Yes	Yes	126.28	41	0	0.03	0.08	0.93	0.96

Note. Model termination = converged to a solution; admissibility = no out-of-bounds estimates; df = model degrees of freedom; χ^2 = chi-square test of independence; SRMR = standardized root squared mean residual; RMSEA = root mean squared error of approximation; TLI = Tucker-Lewis index; CFI = comparative fit index.

Table E3. Summary of model parameters across models for Sample 1

Model	Lowest Estimate	Highest Estimate	Number of out-of-bounds Estimates	Average Factor Loading
<i>Model 1: Correlated Dimensions-Correlated Exercises</i>				
Baseline model				
1 Parcel	0.22	0.89	1	0.58
Parceling strategy: Random				
2 Parcel	0.01	0.94	0	0.60
3 Parcel	0.00	0.93	0	0.54
Parceling strategy: Factorial				
2 Parcel	0.01	0.94	1	0.57
3 Parcel	0.01	0.91	0	0.59
Parceling strategy: Correlational				
2 Parcel	0.01	0.93	0	0.58
3 Parcel	0.01	0.92	0	0.47
<i>Model 2: Correlated Dimensions</i>				
Baseline model				
1 Parcel	0.19	0.85	0	0.48
Parceling strategy: Random				
2 Parcel	0.12	0.95	0	0.49
3 Parcel	0.16	0.94	0	0.48
Parceling strategy: Factorial				
2 Parcel	0.16	0.94	0	0.49
3 Parcel	0.18	0.97	0	0.63
Parceling strategy: Correlational				
2 Parcel	0.17	0.91	0	0.48
3 Parcel	0.16	0.89	0	0.46
<i>Model 3: Correlated Exercises</i>				
Baseline model				
1 Parcel	0.50	0.96	0	0.83
Parceling strategy: Random				
2 Parcel	0.46	0.94	0	0.79
3 Parcel	0.47	0.93	0	0.76
Parceling strategy: Factorial				
2 Parcel	0.53	0.94	0	0.80
3 Parcel	0.51	0.91	0	0.75
Parceling strategy: Correlational				
2 Parcel	0.47	0.93	0	0.77
3 Parcel	0.50	0.92	0	0.72

Item Parceling Ratios and Strategies for Assessment Center Research – ESM 1

Model	Lowest Estimate	Highest Estimate	Number of out-of-bounds Estimates	Average Factor Loading
<i>Model 4: Correlated Dimensions + General Factor</i>				
Baseline model				
1 Parcel	0.02	0.99	0	0.45
Parceling strategy: Random				
2 Parcel	0.03	0.93	0	0.48
3 Parcel	0.02	0.93	0	0.45
Parceling strategy: Factorial				
2 Parcel	0.01	0.94	0	0.43
3 Parcel	0.02	0.95	0	0.42
Parceling strategy: Correlational				
2 Parcel	0.02	0.93	0	0.43
3 Parcel	0.04	0.91	0	0.44
<i>Model 5: Correlated Exercises + General Factor</i>				
Baseline model				
1 Parcel	0.19	0.89	0	0.57
Parceling strategy: Random				
2 Parcel	0.09	0.88	0	0.54
3 Parcel	0.03	0.89	0	0.49
Parceling strategy: Factorial				
2 Parcel	0.12	0.88	0	0.54
3 Parcel	0.03	0.89	0	0.49
Parceling strategy: Correlational				
2 Parcel	0.10	0.90	0	0.69
3 Parcel	0.02	0.93	0	0.47

Note. The number of out-of-bounds estimates refers to any variances and residual variances that are negative.

Table E4. Summary of model parameters across models for Sample 2

Model	Lowest Estimate	Highest Estimate	Number of out-of-bounds Estimates	Average Factor Loading
<i>Model 1: Correlated Dimensions-Correlated Exercises</i>				
Baseline model				
1 Parcel				
Parceling strategy: Random				
2 Parcel	0.00	0.92	0	0.59
3 Parcel	0.03	0.86	0	0.52
Parceling strategy: Factorial				
2 Parcel	0.08	0.84	0	0.54
3 Parcel	0.01	0.87	0	0.51
Parceling strategy: Correlational				
2 Parcel	0.02	0.88	0	0.59
3 Parcel				
<i>Model 2: Correlated Dimensions</i>				
Baseline model				
1 Parcel				
2 Parcel	0.65	0.78	0	0.71
Parceling strategy: Random				
2 Parcel	0.52	0.90	0	0.70
3 Parcel	0.52	0.83	0	0.67
Parceling strategy: Factorial				
2 Parcel	0.61	0.82	0	0.72
3 Parcel	0.49	0.85	0	0.71
Parceling strategy: Correlational				
2 Parcel	0.57	0.81	0	0.68
3 Parcel	0.47	0.85	0	0.68
<i>Model 3: Correlated Exercises</i>				
Baseline model				
1 Parcel				
2 Parcel	0.79	0.88	0	0.83
Parceling strategy: Random				
2 Parcel	0.49	0.89	0	0.77
3 Parcel	0.56	0.84	0	0.72
Parceling strategy: Factorial				
2 Parcel	0.63	0.86	0	0.77
3 Parcel	0.53	0.82	0	0.75
Parceling strategy: Correlational				
2 Parcel	0.48	0.85	0	0.74
3 Parcel	0.45	0.83	0	0.72
<i>Model 4: Correlated Dimensions + General Factor</i>				
Baseline model				
1 Parcel				
2 Parcel	0.09	0.91	2	0.53
2 Parcel	0.02	0.91	0	0.53
3 Parcel	0.04	0.85	0	0.52

Item Parceling Ratios and Strategies for Assessment Center Research – ESM 1

Model	Lowest Estimate	Highest Estimate	Number of out-of-bounds Estimates	Average Factor Loading
Parceling strategy: Factorial				
2 Parcel	0.04	0.81	0	0.60
3 Parcel	0.03	0.84	0	0.53
Parceling strategy: Correlational				
2 Parcel	0.20	0.87	0	0.61
3 Parcel				
<i>Model 5: Correlated Exercises + General Factor</i>				
Baseline model				
1 Parcel	0.36	0.88	0	0.64
Parceling strategy: Random				
2 Parcel	0.16	0.84	0	0.55
3 Parcel	0.06	0.86	0	0.49
Parceling strategy: Factorial				
2 Parcel	0.04	0.79	0	0.54
3 Parcel	0.16	0.83	0	0.52
Parceling strategy: Correlational				
2 Parcel	0.05	0.86	0	0.53
3 Parcel	0.04	0.82	0	0.57

Note. The number of out-of-bounds estimates refers to any variances and residual variances that are negative.