Online Supplemental Results

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Table 1

Percent Bias in Models Omitting the Unique Factor Correlations by Parameter and Simulation Condition, Simulation 1: N = 125, 1 Unique Factor Correlation.

	Regression FS			Bartlett FS			Croon			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
						Unique Factor Correlation = .1						
$\alpha(.7)$												
CS	**-29.65**	**-29.14**	**-50.08**	**-29.83**	**-29.11**	**-50.34**	-0.92	-3.22	-4.11	2.13	-0.40	1.57
MS	**-29.65**	**-10.07**	**-36.14**	**-29.83**	**-10.1**	**-36.44**	-0.92	**26.67**	**26.29**	**14.28**	**39.98**	**60.85**
$\alpha(.8)$												
CS	**-18.84**	**-18.97**	**-34.18**	**-18.88**	**-18.55**	**-33.93**	0.46	-0.28	0.30	1.95	1.30	3.45
MS	**-18.84**	4.33	**-14.78**	**-18.88**	4.85	**-14.43**	0.46	**29.83**	**31.04**	**10.96**	**38.14**	**53.97**
$\alpha(.9)$												
CS	-9.96	-9.97	**-18.93**	-9.99	-9.93	**-18.97**	-0.23	-0.47	-0.74	0.32	0.14	0.43
MS	-9.96	**16.66**	5.52	-9.99	**16.71**	5.50	-0.23	**29.35**	**29.5**	5.29	**33.23**	**40.78**
						Unique Factor Correlation = .3						
$\alpha(.7)$												
CS	**-26.67**	**-26.7**	**-46.28**	**-26.7**	**-26.67**	**-46.37**	3.25	1.24	4.57	8.24	6.05	**14.93**
MS	**-26.67**	-6.74	**-31.14**	**-26.7**	-6.75	**-31.22**	3.25	**31.33**	**36.26**	**19.83**	**46.01**	**75.53**
$\alpha(.8)$												
CS	**-17.33**	**-17.31**	**-31.52**	**-17.47**	**-17.08**	**-31.55**	2.40	1.90	4.50	4.38	3.78	8.47
MS	**-17.33**	6.23	**-11.63**	**-17.47**	6.48	**-11.63**	2.40	**31.93**	**35.7**	**13.35**	**40.72**	**60.15**
$\alpha(.9)$												
CS	-9.35	-9.35	**-17.8**	-9.28	-9.34	**-17.77**	0.44	0.2	0.64	1.11	0.84	1.96
MS	-9.35	**17.96**	7.46	-9.28	**17.95**	7.51	0.44	**30.71**	**31.81**	6.29	**34.8**	**43.84**
						Unique Factor Correlation = .5						
$\alpha(.7)$												
CS	**-24.49**	**-25.05**	**-43.41**	**-24.32**	**-25.21**	**-43.47**	6.73	4.07	**11.37**	**16.93**	**12.41**	**31.99**
MS	**-24.49**	-3.69	**-26.72**	**-24.32**	-3.90	**-26.71**	6.73	**35.87**	**45.86**	**28.5**	**54.77**	**99.57**
$\alpha(.8)$												
CS	**-16.55**	**-16.94**	**-30.58**	**-16.67**	**-16.8**	**-30.62**	3.50	2.39	6.08	6.88	5.28	**12.58**
MS	**-16.55**	7.12	**-10.03**	**-16.67**	7.28	**-10.04**	3.50	**33.12**	**38.38**	**16.19**	**43.59**	**67.43**
$\alpha(.9)$												
CS	-8.31	-8.73	**-16.25**	-8.34	-8.63	**-16.21**	1.61	1.06	2.74	2.48	1.93	4.53
MS	-8.31	**18.64**	9.28	-8.34	**18.76**	9.34	1.61	**31.62**	**34.22**	7.65	**35.97**	**46.89**

Note: Regression FS = regression FSR method, Bartlett FS = Bartlett FSR method, Croon = Croon's method using the original formulas uncorrected for unique factor correlations, SEM = Structural Equation Modeling (Simultaneous Estimation) under the assumption of conditionally independent uniquenesses, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 2

Percent Bias in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: *N* = 125, 1 Unique Factor Correlation.

	Hoshino-Bentler			Croon FM			Croon MM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	1.64	-0.79	0.71	-2.73	-4.65	-7.31	-0.06	-1.87	-2.11	-0.06	-1.87	-2.11
MS	1.64	**30.13**	**33.02**	-2.73	**24.71**	**22.09**	-0.06	**28.49**	**29.12**	**12.09**	**37.73**	**55.29**
$\alpha(.8)$												
CS	1.76	1.13	3.09	-0.59	-0.95	-1.44	0.75	0.53	1.43	0.75	0.53	1.43
MS	1.76	31.6	34.55	-0.59	28.80	28.66	0.75	**30.67**	**32.27**	9.71	**37.00**	**51.03**
$\alpha(.9)$												
CS	0.26	0.10	0.33	-0.71	-0.82	-1.56	-0.21	-0.18	-0.41	-0.21	-0.18	-0.41
MS	0.26	30.05	30.85	-0.71	28.84	28.37	-0.21	29.60	29.79	4.71	32.71	39.46
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	5.43	3.94	9.63	-2.32	-2.92	-5.3	0.46	0.83	1.21	0.46	0.83	1.21
MS	5.43	**34.25**	**42.17**	-2.32	**25.55**	**23.25**	0.46	**29.64**	**30.84**	**11.56**	**38.04**	**54.72**
$\alpha(.8)$												
CS	3.28	2.81	6.31	-0.90	-0.58	-1.34	0.28	0.76	1.18	0.28	0.76	1.18
MS	3.28	**33.22**	**38.19**	-0.90	**28.47**	**27.94**	0.28	**30.22**	31.21	8.57	**36.00**	**48.38**
$\alpha(.9)$												
CS	0.79	0.60	1.39	-1.02	-0.82	-1.83	-0.56	-0.23	-0.79	-0.56	-0.23	-0.79
MS	0.79	**31.24**	**32.80**	-1.02	**29.22**	**28.42**	-0.56	**29.94**	**29.74**	4.15	**32.87**	**38.96**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	8.27	6.77	**15.85**	-2.54	-3.29	-5.74	-0.18	0.84	0.66	-0.18	0.84	0.66
MS	8.27	**38.42**	**50.67**	-2.54	**25.90**	**23.52**	-0.18	**29.95**	**30.47**	**10.59**	**38.07**	**53.65**
$\alpha(.8)$												
CS	4.23	3.13	7.53	-1.94	-1.60	-3.45	-0.82	-0.18	-0.98	-0.82	-0.18	-0.98
MS	4.23	**34.22**	**40.48**	-1.94	**27.42**	**25.58**	-0.82	**29.17**	**28.72**	6.91	**34.52**	**44.55**
$\alpha(.9)$												
CS	1.89	1.41	3.39	-0.85	-0.64	-1.42	-0.43	-0.04	-0.40	-0.43	-0.04	-0.4
MS	1.89	**32.07**	**35.06**	-0.85	**29.09**	**28.50**	-0.43	**29.78**	**29.74**	3.70	**32.37**	**37.82**

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, Croon MM = Croon's method corrected for correlated uniquenesses at the measurement model level, SEM = Structural Equation Modeling (Simultaneous Estimation) correctly specifying the correlated residual structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 3

Percent Bias in Models Omitting the Unique Factor Correlations by Parameter and Simulation Condition, Simulation 1: N = 250, 1 Unique Factor Correlation.

	Regression FS			Bartlett FS			Croon			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	**-29.10**	**-27.71**	**-48.71**	**-28.98**	**-27.50**	**-48.50**	0.66	0.36	1.10	2.24	1.90	4.29
MS	**-29.10**	-8.62	**-34.94**	**-28.98**	-8.37	**-34.65**	0.66	**30.18**	**31.43**	**14.15**	**41.31**	**61.71**
$\alpha(.8)$												
CS	**-19.46**	**-18.33**	**-34.19**	**-19.43**	**-18.38**	**-34.26**	0.41	0.53	0.97	1.16	1.27	2.46
MS	**-19.46**	4.72	**-15.42**	**-19.43**	4.64	**-15.47**	0.41	**30.47**	**31.26**	**10.22**	**37.74**	**52.10**
$\alpha(.9)$												
CS	-9.96	**-10.03**	**-18.99**	**-10.00**	**-10.03**	**-19.04**	-0.10	-0.56	-0.67	0.18	-0.26	-0.10
MS	-9.96	**16.79**	5.41	**-10.00**	**16.79**	5.36	-0.10	**29.60**	**29.73**	5.19	**33.13**	**40.31**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	**-26.72**	**-25.33**	**-45.22**	**-26.86**	**-25.32**	**-45.37**	3.86	3.60	7.75	7.02	6.41	**14.06**
MS	**-26.72**	-5.33	**-30.30**	**-26.86**	-5.34	**-30.45**	3.86	**34.21**	**39.86**	**18.99**	**46.91**	**75.23**
$\alpha(.8)$												
CS	**-17.92**	**-17.33**	**-32.11**	**-17.81**	**-17.53**	**-32.22**	2.43	1.82	4.33	3.67	3.01	6.83
MS	**-17.92**	6.50	**-12.31**	**-17.81**	6.23	**-12.43**	2.43	**32.58**	**36.11**	**13.01**	**40.61**	**59.24**
$\alpha(.9)$												
CS	-8.98	-8.92	**-17.06**	-9.02	-8.92	**-17.13**	1.03	0.80	1.86	1.42	1.16	2.61
MS	-8.98	**18.14**	7.80	-9.02	**18.12**	7.72	1.03	**31.13**	**32.75**	**6.53**	**34.79**	**43.88**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	**-23.29**	**-24.19**	**-41.79**	**-23.21**	**-24.25**	**-41.83**	8.81	5.56	**15.06**	**17.13**	**11.89**	**31.33**
MS	**-23.29**	-2.54	**-24.93**	**-23.21**	-2.65	**-24.97**	8.81	**38.09**	**50.66**	**28.74**	**55.40**	**100.43**
$\alpha(.8)$												
CS	**-15.52**	**-16.52**	**-29.42**	**-15.59**	**-16.38**	**-29.41**	5.05	3.00	8.26	7.68	5.27	**13.42**
MS	**-15.52**	8.21	-8.29	**-15.59**	8.37	-8.26	5.05	**34.78**	**41.91**	**17.08**	**44.37**	**69.37**
$\alpha(.9)$												
CS	-7.72	-8.40	**-15.48**	-7.66	-8.45	**-15.48**	2.40	1.41	3.83	3.00	2.00	5.03
MS	-7.72	**19.17**	**10.19**	-7.66	**19.10**	**10.19**	2.40	**32.18**	**35.56**	8.20	**36.17**	**47.56**

Note: Regression FS = regression FSR method, Bartlett FS = Bartlett FSR method, Croon = Croon's method using the original formulas uncorrected for unique factor correlations, SEM = Structural Equation Modeling (Simultaneous Estimation) under the assumption of conditionally independent uniquenesses, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 4

Percent Bias in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: *N* = 250, 1 Unique Factor Correlation.

	Hoshino-Bentler			Croon FM			Croon MM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	1.88	1.60	3.61	-1.17	-0.86	-1.93	0.16	0.58	0.84	0.16	0.58	0.84
MS	1.88	**31.84**	**34.71**	-1.17	**28.3**	**27.21**	0.16	**30.16**	**30.78**	**12.01**	**39.20**	**56.35**
$\alpha(.8)$												
CS	1.01	1.17	2.20	-0.66	-0.24	-0.88	0.00	0.48	0.48	0.00	0.48	0.48
MS	1.01	**31.28**	**32.85**	-0.66	**29.34**	**28.73**	0.00	**30.25**	**30.48**	9.00	**36.55**	**49.13**
$\alpha(.9)$												
CS	0.13	-0.31	-0.19	-0.60	-0.90	-1.50	-0.35	-0.61	-0.97	-0.35	-0.61	-0.97
MS	0.13	**29.92**	**30.35**	-0.60	**29.10**	**28.59**	-0.35	**29.46**	**29.26**	4.60	**32.59**	**38.96**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	4.47	4.61	9.45	-1.81	-0.57	-2.29	-0.60	1.21	0.72	-0.60	1.21	0.72
MS	4.47	**35.34**	**41.86**	-1.81	**28.30**	**26.42**	-0.60	**30.29**	**29.96**	**10.79**	**38.75**	**54.18**
$\alpha(.8)$												
CS	2.68	2.28	5.06	-0.94	-0.55	-1.46	-0.34	0.29	-0.02	-0.34	0.29	-0.02
MS	2.68	**33.08**	**36.96**	-0.94	**29.11**	**28.22**	-0.34	**30.07**	**29.95**	8.32	**36.05**	**47.74**
$\alpha(.9)$												
CS	1.11	0.92	2.06	-0.47	-0.22	-0.67	-0.25	0.04	-0.18	-0.25	0.04	-0.18
MS	1.11	**31.28**	**33.01**	-0.47	**29.59**	**29.26**	-0.25	**29.93**	**29.88**	4.41	**32.84**	**38.99**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	9.09	6.51	**16.37**	-0.66	-1.44	-2.06	0.46	0.54	1.08	0.46	0.54	1.08
MS	9.09	**39.01**	**52.09**	-0.66	**28.25**	**27.76**	0.46	**30.30**	**31.30**	**11.27**	**38.37**	**54.43**
$\alpha(.8)$												
CS	5.22	3.36	8.81	-0.50	-0.82	-1.29	0.09	0.05	0.18	0.09	0.05	0.18
MS	5.22	**35.13**	**42.50**	-0.50	**29.13**	**28.79**	0.09	**30.06**	**30.49**	7.89	**35.45**	**46.51**
$\alpha(.9)$												
CS	2.46	1.59	4.06	-0.08	-0.29	-0.39	0.16	0.07	0.21	0.16	0.07	0.21
MS	2.46	**32.33**	**35.79**	-0.08	**29.65**	**29.76**	0.16	**30.02**	**30.45**	4.31	**32.61**	**38.56**

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, Croon MM = Croon's method corrected for correlated uniquenesses at the measurement model level, SEM = Structural Equation Modeling (Simultaneous Estimation) correctly specifying the correlated residual structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 5

Percent Bias in Models Omitting the Unique Factor Correlations by Parameter and Simulation Condition, Simulation 1: N = 250, 2 Unique Factor Correlations.

	Regression FS			Bartlett FS			Croon			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	**-27.93**	**-26.68**	**-47.12**	**-27.35**	**-26.96**	**-46.97**	2.72	1.88	4.76	4.34	3.54	8.18
MS	**-27.93**	-6.94	**-32.68**	**-27.35**	-7.32	**-32.45**	2.72	**32.07**	**36.03**	**16.25**	**43.32**	**66.96**
$\alpha(.8)$												
CS	**-18.03**	**-17.89**	**-32.64**	**-18.01**	**-17.89**	**-32.65**	2.03	1.11	3.25	2.79	1.99	4.93
MS	**-18.03**	5.71	**-13.08**	**-18.01**	5.70	**-13.08**	2.03	**31.58**	**34.56**	**11.87**	**38.99**	**55.82**
$\alpha(.9)$												
CS	-9.16	-9.08	**-17.35**	-9.10	-9.14	**-17.36**	0.87	0.65	1.58	1.15	0.96	2.18
MS	-9.16	**17.91**	7.37	-9.10	**17.83**	7.36	0.87	**30.84**	**32.23**	6.25	**34.42**	**43.09**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	**-22.45**	**-23.98**	**-40.99**	**-22.32**	**-24.12**	**-41.04**	**10.10**	5.97	**16.91**	**13.53**	8.87	**23.87**
MS	**-22.45**	-1.91	**-23.64**	**-22.32**	-2.09	**-23.66**	**10.10**	**39.05**	**53.49**	**25.66**	**52.28**	**91.67**
$\alpha(.8)$												
CS	**-14.98**	**-15.71**	**-28.29**	**-15.02**	**-15.72**	**-28.38**	5.93	4.16	**10.39**	7.35	5.52	**13.34**
MS	**-14.98**	9.29	-6.82	**-15.02**	**9.27**	-6.92	5.93	**36.15**	**44.51**	**16.84**	**44.42**	**69.06**
$\alpha(.9)$												
CS	-7.51	-8.42	-15.3	-7.46	-8.41	-15.28	2.65	1.42	4.07	3.05	1.83	4.90
MS	-7.51	19.38	10.62	-7.46	19.37	10.65	2.65	32.48	36.18	8.28	36.28	47.77
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	**-16.96**	**-20.15**	**-33.65**	**-16.84**	**-19.99**	**-33.47**	**17.70**	**13.47**	**33.87**	**25.21**	**19.86**	**50.43**
MS	**-16.96**	4.14	**-13.24**	**-16.84**	4.32	**-12.98**	**17.70**	**47.93**	**74.48**	**36.28**	**63.87**	**123.47**
$\alpha(.8)$												
CS	**-11.31**	**-13.80**	**-23.50**	**-11.38**	**-13.76**	**-23.56**	**10.51**	**7.11**	**18.43**	**13.37**	9.63	**24.37**
MS	**-11.31**	**12.66**	0.20	**-11.38**	**12.70**	0.14	**10.51**	**40.46**	**55.49**	**23.08**	**50.37**	**85.34**
$\alpha(.9)$												
CS	-5.75	-6.86	-12.18	-5.79	-6.84	**-12.22**	4.59	3.32	8.09	5.28	4.00	9.53
MS	-5.75	**21.35**	**14.60**	-5.79	**21.37**	**14.56**	4.59	**34.69**	**41.09**	**10.62**	**38.83**	**53.82**

Note: Regression FS = regression FSR method, Bartlett FS = Bartlett FSR method, Croon = Croon's method using the original formulas uncorrected for unique factor correlations, SEM = Structural Equation Modeling (Simultaneous Estimation) under the assumption of conditionally independent uniquenesses, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 6

Percent Bias in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: *N* = 250, 2 Unique Factor Correlations.

	Hoshino-Bentler			Croon FM			Croon MM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	3.78	3.11	7.12	-1.02	-0.88	-1.81	0.22	0.74	1.05	0.22	0.74	1.05
MS	3.78	**33.61**	**39.02**	-1.02	**28.18**	**27.25**	0.22	**30.10**	**30.76**	**12.06**	**39.19**	**56.38**
$\alpha(.8)$												
CS	2.55	1.82	4.53	-0.17	-0.49	-0.58	0.46	0.38	0.92	0.46	0.38	0.92
MS	2.55	**32.37**	**36.07**	-0.17	**29.28**	**29.37**	0.46	**30.24**	**31.15**	9.37	**36.53**	**49.67**
$\alpha(.9)$												
CS	1.07	0.90	2.04	-0.12	-0.05	-0.10	0.12	0.26	0.44	0.12	0.26	0.44
MS	1.07	**31.14**	**32.80**	-0.12	**29.80**	**29.91**	0.12	**30.17**	**30.58**	5.07	**33.29**	**40.33**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	**10.04**	6.04	**16.90**	-1.25	-2.33	-3.45	-0.30	-0.83	-1.00	-0.3	-0.83	-1.00
MS	**10.04**	**39.29**	**53.68**	-1.25	**27.35**	**26.16**	-0.30	**29.09**	**29.13**	**10.81**	**37.45**	**52.79**
$\alpha(.8)$												
CS	5.88	4.43	**10.64**	-0.74	-0.38	-1.08	-0.21	0.44	0.27	-0.21	0.44	0.27
MS	5.88	**36.29**	**44.60**	-0.74	**29.41**	**28.76**	-0.21	**30.26**	**30.30**	7.88	**35.82**	**46.89**
$\alpha(.9)$												
CS	2.58	1.53	4.11	-0.29	-0.61	-0.93	-0.11	-0.27	-0.41	-0.11	-0.27	-0.41
MS	2.58	**32.52**	**36.12**	-0.29	**29.44**	**29.27**	-0.11	**29.77**	**29.84**	4.19	**32.46**	**38.23**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	**16.41**	**12.47**	**31.14**	-1.02	-0.87	-1.83	-0.36	0.54	0.26	-0.36	0.54	0.26
MS	**16.41**	**46.94**	**71.43**	-1.02	**28.63**	**27.71**	-0.36	**30.13**	**30.09**	9.11	**37.06**	**50.05**
$\alpha(.8)$												
CS	9.75	6.73	**17.22**	-0.56	-0.64	-1.16	-0.20	0.00	-0.13	-0.2	0.00	-0.13
MS	9.75	**39.82**	**53.76**	-0.56	**29.17**	**28.78**	-0.20	**29.85**	**29.94**	6.48	**34.37**	**43.50**
$\alpha(.9)$												
CS	4.27	3.23	7.68	-0.41	-0.04	-0.42	-0.23	0.31	0.12	-0.23	0.31	0.12
MS	4.27	**34.42**	**40.40**	-0.41	**29.66**	**29.37**	-0.23	**29.97**	**29.93**	3.12	**31.99**	**36.39**

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, Croon MM = Croon's method corrected for correlated uniquenesses at the measurement model level, SEM = Structural Equation Modeling (Simultaneous Estimation) correctly specifying the correlated residual structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 7

Percent Bias in Models Omitting the Unique Factor Correlations by Parameter and Simulation Condition, Simulation 1: N = 500, 1 Unique Factor Correlation.

	Regression FS			Bartlett FS			Croon			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	**-29.11**	**-27.42**	**-48.54**	**-29.21**	**-27.36**	**-48.58**	0.92	0.32	1.28	1.82	1.22	3.09
MS	**-29.11**	-8.19	**-34.78**	**-29.21**	-8.11	**-34.82**	0.92	**30.84**	**32.24**	**13.85**	**41.03**	**60.78**
$\alpha(.8)$												
CS	**-19.23**	**-18.62**	**-34.26**	**-19.22**	**-18.65**	**-34.30**	0.83	0.18	1.03	1.26	0.61	1.89
MS	**-19.23**	4.57	**-15.41**	**-19.22**	4.53	**-15.46**	0.83	**30.50**	**31.72**	**10.30**	**37.36**	**51.66**
$\alpha(.9)$												
CS	-9.69	-9.81	**-18.56**	-9.73	-9.78	**-18.57**	0.26	-0.25	0.01	0.41	-0.10	0.30
MS	-9.69	**17.11**	5.88	-9.73	**17.15**	5.86	0.26	**30.06**	**30.51**	5.44	**33.41**	**40.79**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	**-26.09**	**-25.41**	**-44.85**	**-25.94**	**-25.45**	**-44.79**	5.25	3.87	9.43	7.61	5.83	**14.00**
MS	**-26.09**	-5.02	**-29.67**	**-25.94**	-5.08	**-29.57**	5.25	**35.20**	**42.51**	**19.61**	**46.92**	**75.92**
$\alpha(.8)$												
CS	**-17.51**	**-17.01**	**-31.52**	**-17.52**	**-17.06**	**-31.60**	2.88	2.33	5.29	3.80	3.12	7.04
MS	**-17.51**	6.77	**-11.79**	**-17.52**	6.70	**-11.88**	2.88	**33.07**	**37.03**	**12.96**	**40.48**	**58.83**
$\alpha(.9)$												
CS	-8.44	-9.06	**-16.74**	-8.47	-9.02	**-16.74**	1.63	0.68	2.31	1.88	0.93	2.81
MS	-8.44	**18.15**	8.30	-8.47	**18.20**	8.30	1.63	**31.21**	**33.46**	6.94	**34.71**	**44.17**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	**-23.03**	**-24.14**	**-41.59**	**-23.05**	**-24.22**	**-41.71**	9.70	5.99	**16.32**	**17.24**	**11.45**	**30.75**
MS	**-23.03**	-2.54	**-24.82**	**-23.05**	-2.67	**-24.97**	9.70	**38.73**	**52.40**	**28.81**	**55.11**	**100.01**
$\alpha(.8)$												
CS	**-15.74**	**-16.26**	**-29.44**	**-15.66**	**-16.31**	**-29.43**	5.19	3.58	8.95	7.41	5.51	**13.33**
MS	**-15.74**	8.31	-8.60	**-15.66**	8.24	-8.58	5.19	**35.14**	**42.29**	**16.80**	**44.23**	**68.61**
$\alpha(.9)$												
CS	-7.47	-8.43	**-15.26**	-7.50	-8.40	**-15.26**	2.72	1.46	4.24	3.17	1.89	5.13
MS	-7.47	**19.14**	10.36	-7.50	**19.17**	**10.36**	2.72	**32.31**	**36.02**	8.31	**36.08**	**47.51**

Note: Regression FS = regression FSR method, Bartlett FS = Bartlett FSR method, Croon = Croon's method using the original formulas uncorrected for unique factor correlations, SEM = Structural Equation Modeling (Simultaneous Estimation) under the assumption of conditionally independent uniquenesses, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 8

Percent Bias in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: *N* = 500, 1 Unique Factor Correlation.

	Hoshino-Bentler			Croon FM			Croon MM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	1.52	0.99	2.55	-1.00	-0.95	-1.92	-0.29	-0.19	-0.46	-0.29	-0.19	-0.46
MS	1.52	**31.61**	**33.80**	-1.00	**28.91**	**27.81**	-0.29	**29.82**	**29.64**	**11.68**	**38.87**	**55.32**
$\alpha(.8)$												
CS	1.12	0.51	1.65	-0.35	-0.54	-0.87	0.00	-0.14	-0.13	0.00	-0.14	-0.13
MS	1.12	30.9	32.5	-0.35	29.38	29.07	0.00	29.86	30.00	8.98	**36.15**	**48.54**
$\alpha(.9)$												
CS	0.36	-0.14	0.22	-0.25	-0.58	-0.83	-0.12	-0.45	-0.57	-0.12	-0.45	-0.57
MS	0.36	**30.20**	**30.79**	-0.25	**29.55**	**29.35**	-0.12	**29.73**	**29.69**	4.84	**32.86**	**39.42**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	5.19	4.03	9.54	-0.53	-0.25	-0.72	0.06	0.57	0.71	0.06	0.57	0.71
MS	5.19	**35.30**	**42.54**	-0.53	**29.23**	**28.74**	0.06	**30.12**	**30.41**	**11.45**	**38.68**	**54.79**
$\alpha(.8)$												
CS	2.88	2.38	5.35	-0.48	0.06	-0.43	-0.13	0.41	0.29	-0.13	0.41	0.29
MS	2.88	**33.10**	**37.07**	-0.48	**29.69**	**29.19**	-0.13	**30.12**	**30.09**	**8.34**	**35.99**	**47.49**
$\alpha(.9)$												
CS	1.59	0.70	2.30	0.13	-0.31	-0.19	0.25	-0.17	0.07	0.25	-0.17	0.07
MS	1.59	**31.23**	**33.43**	0.13	**29.69**	**29.98**	0.25	**29.88**	**30.32**	4.85	**32.78**	**39.34**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	9.35	6.11	**16.09**	0.00	-0.85	-0.86	0.51	0.19	0.71	0.51	0.19	0.71
MS	9.35	**38.71**	**51.91**	0.00	**28.87**	**29.06**	0.51	**29.91**	**30.78**	**11.17**	**37.88**	**53.54**
$\alpha(.8)$												
CS	5.01	3.62	8.82	-0.47	-0.25	-0.72	-0.20	0.18	-0.02	-0.20	0.18	-0.02
MS	5.01	**35.11**	**42.03**	-0.47	**29.45**	**28.99**	-0.20	**29.94**	**29.83**	7.62	**35.32**	**45.80**
$\alpha(.9)$												
CS	2.65	1.45	4.16	0.22	-0.19	0.05	0.35	-0.04	0.33	0.35	-0.04	0.33
MS	2.65	**32.24**	**35.87**	0.22	**29.79**	**30.19**	0.35	**29.94**	**30.52**	4.46	**32.51**	**38.55**

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, Croon MM = Croon's method corrected for correlated uniquenesses at the measurement model level, SEM = Structural Equation Modeling (Simultaneous Estimation) correctly specifying the correlated residual structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 9

Percent Bias in Models Omitting the Unique Factor Correlations by Parameter and Simulation Condition, Simulation 1: N = 500, 2 Unique Factor Correlations.

	Regression FS			Bartlett FS			Croon			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	**-27.47**	**-26.41**	**-46.61**	**-27.42**	**-26.47**	**-46.64**	3.26	2.04	5.43	4.13	2.91	7.21
MS	**-27.47**	-6.62	**-32.14**	**-27.42**	-6.70	**-32.16**	3.26	**32.86**	**37.38**	**16.08**	**43.06**	**66.23**
$\alpha(.8)$												
CS	**-18.36**	**-18.03**	**-33.08**	**-18.39**	**-17.94**	**-33.05**	1.83	1.09	2.94	2.26	1.54	3.84
MS	**-18.36**	5.44	**-13.81**	**-18.39**	5.56	**-13.75**	1.83	**31.68**	**34.21**	**11.32**	**38.56**	**54.38**
$\alpha(.9)$												
CS	-9.36	-9.26	**-17.74**	-9.35	-9.29	**-17.78**	0.68	0.41	1.10	0.84	0.56	1.40
MS	-9.36	**17.73**	6.84	-9.35	**17.68**	6.80	0.68	**30.71**	**31.73**	5.92	**34.08**	**42.15**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	**-21.96**	**-23.02**	**-39.93**	**-22.14**	**-22.89**	**-40.00**	**10.91**	7.64	**19.43**	**13.50**	9.92	**24.84**
MS	**-21.96**	-0.90	**-22.54**	**-22.14**	-0.76	**-22.61**	**10.91**	**41.04**	**56.62**	**25.55**	**53.08**	**92.38**
$\alpha(.8)$												
CS	**-14.62**	**-16.07**	**-28.33**	**-14.55**	**-16.13**	**-28.34**	6.64	3.85	**10.75**	7.68	4.82	**12.87**
MS	**-14.62**	9.09	-6.73	**-14.55**	9.01	-6.74	6.64	**36.17**	**45.34**	**17.14**	**44.02**	**68.84**
$\alpha(.9)$												
CS	-7.55	-7.86	**-14.78**	-7.51	-7.90	**-14.80**	2.68	2.13	4.89	2.95	2.39	5.43
MS	-7.55	**19.67**	**10.77**	-7.51	**19.61**	**10.75**	2.68	**32.85**	**36.54**	8.14	**36.41**	**47.64**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	**-17.15**	**-20.38**	**-34.01**	**-17.11**	**-20.31**	**-33.94**	**18.11**	**13.00**	**33.58**	**24.93**	**18.77**	**48.50**
MS	**-17.15**	3.96	**-13.72**	**-17.11**	4.05	**-13.60**	**18.11**	**48.36**	**75.43**	**36.25**	**63.88**	**123.38**
$\alpha(.8)$												
CS	**-10.99**	**-13.60**	**-23.10**	**-11.09**	**-13.53**	**-23.15**	**10.96**	7.39	**19.15**	**13.36**	9.50	**24.13**
MS	**-10.99**	**12.94**	0.65	**-11.09**	**13.02**	0.59	**10.96**	**40.91**	**56.47**	**23.02**	**50.28**	**84.99**
$\alpha(.9)$												
CS	-5.50	-7.34	**-12.45**	-5.48	-7.33	**-12.42**	4.92	2.74	7.77	5.45	3.25	8.86
MS	-5.50	**21.30**	**14.73**	-5.48	**21.32**	**14.76**	4.92	**34.70**	**41.42**	**10.83**	38.70	**53.82**

Note: Regression FS = regression FSR method, Bartlett FS = Bartlett FSR method, Croon = Croon's method using the original formulas uncorrected for unique factor correlations, SEM = Structural Equation Modeling (Simultaneous Estimation) under the assumption of conditionally independent uniquenesses, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 10

Percent Bias in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: *N* = 500, 2 Unique Factor Correlations.

	Hoshino-Bentler			Croon FM			Croon MM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	3.68	2.58	6.41	-0.53	-0.59	-1.09	0.07	0.16	0.25	0.07	0.16	0.25
MS	3.68	**33.51**	**38.61**	-0.53	**28.98**	**28.48**	0.07	**29.89**	**30.15**	11.93	**38.90**	**55.66**
$\alpha(.8)$												
CS	2.06	1.39	3.48	-0.40	-0.37	-0.78	-0.08	0.03	-0.07	-0.08	0.03	-0.07
MS	2.06	**32.02**	**34.86**	-0.40	**29.44**	**29.04**	-0.08	**29.90**	**29.92**	8.83	**36.18**	**48.35**
$\alpha(.9)$												
CS	0.77	0.49	1.26	-0.30	-0.27	-0.57	-0.18	-0.16	-0.33	-0.18	-0.16	-0.33
MS	0.77	**30.82**	**31.95**	-0.30	**29.69**	**29.43**	-0.18	**29.85**	**29.74**	4.76	**32.97**	**39.42**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	**10.33**	7.53	**18.69**	-0.51	-0.21	-0.74	-0.03	0.56	0.53	-0.03	0.56	0.53
MS	**10.33**	**40.71**	**55.44**	-0.51	**29.54**	**29.05**	-0.03	**30.38**	**30.52**	**11.01**	**38.57**	**54.07**
$\alpha(.8)$												
CS	6.28	3.87	**10.40**	-0.10	-0.71	-0.82	0.15	-0.21	-0.06	0.15	-0.21	-0.06
MS	6.28	**35.99**	**44.66**	-0.10	**29.34**	**29.36**	0.15	**29.84**	**30.18**	8.22	**35.44**	**46.75**
$\alpha(.9)$												
CS	2.48	2.05	4.60	-0.34	0.10	-0.22	-0.29	0.25	-0.02	-0.29	0.25	-0.02
MS	2.48	**32.73**	**36.14**	-0.34	**29.82**	**29.50**	-0.29	**30.00**	29.75	3.97	**32.63**	**38.04**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	**16.44**	**11.74**	**30.21**	-1.20	-0.88	-2.03	-0.77	-0.20	-0.93	-0.77	-0.20	-0.93
MS	**16.44**	**46.70**	**71.03**	-1.20	**28.81**	**27.49**	-0.77	**29.52**	**28.75**	8.80	**36.50**	**48.78**
$\alpha(.8)$												
CS	**10.03**	6.87	**17.59**	-0.25	-0.32	-0.59	0.02	0.15	0.16	0.02	0.15	0.16
MS	**10.03**	**40.02**	**54.20**	-0.25	**29.63**	**29.45**	0.02	**30.06**	**30.23**	6.64	**34.54**	**43.65**
$\alpha(.9)$												
CS	4.44	2.55	7.09	-0.09	-0.60	-0.71	-0.03	-0.38	-0.43	-0.03	-0.38	-0.43
MS	4.44	**34.31**	**40.37**	-0.09	**29.65**	**29.64**	-0.03	**29.82**	**29.89**	3.35	**31.89**	**36.43**

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, Croon MM = Croon's method corrected for correlated uniquenesses at the measurement model level, SEM = Structural Equation Modeling (Simultaneous Estimation) correctly specifying the correlated residual structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 11

Percent Bias in Models Omitting the Unique Factor Correlations by Parameter and Simulation Condition, Simulation 1: N = 1000, 1 Unique Factor Correlation.

	Regression FS			Bartlett FS			Croon			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
						Unique Factor Correlation = .1						
$\alpha(.7)$												
CS	**-28.47**	**-27.09**	**-47.84**	**-28.41**	**-27.08**	**-47.80**	1.97	1.05	3.06	2.47	1.54	4.07
MS	**-28.47**	-7.67	**-33.89**	**-28.41**	-7.66	**-33.83**	1.97	**31.64**	**34.32**	**14.40**	**41.32**	**61.77**
$\alpha(.8)$												
CS	**-19.14**	**-18.50**	**-34.09**	**-19.08**	**-18.47**	**-34.03**	1.02	0.50	1.54	1.24	0.72	1.98
MS	**-19.14**	4.72	**-15.26**	**-19.08**	4.75	**-15.17**	1.02	**30.89**	**32.30**	**10.28**	**37.48**	**51.70**
$\alpha(.9)$												
CS	-9.56	-9.48	**-18.11**	-9.52	-9.48	**-18.09**	0.46	0.20	0.68	0.54	0.30	0.86
MS	-9.56	**17.38**	6.23	-9.52	**17.38**	6.27	0.46	**30.39**	**31.05**	5.57	**33.64**	**41.15**
						Unique Factor Correlation = .3						
$\alpha(.7)$												
CS	**-26.06**	**-25.58**	**-44.97**	**-26.20**	**-25.5**	**-45.03**	5.41	3.44	9.05	7.41	4.88	**12.68**
MS	**-26.06**	-5.13	**-29.78**	**-26.20**	-5.03	**-29.85**	5.41	**35.40**	42.81	**19.56**	**46.69**	**75.48**
$\alpha(.8)$												
CS	**-17.49**	**-17.18**	**-31.65**	**-17.46**	**-17.16**	**-31.63**	3.07	2.33	5.49	3.77	2.95	6.85
MS	**-17.49**	6.62	**-11.95**	**-17.46**	6.63	**-11.92**	3.07	**33.21**	**37.38**	**12.95**	**40.42**	**58.69**
$\alpha(.9)$												
CS	-8.70	-9.04	**-16.95**	-8.67	-9.06	**-16.95**	1.44	0.70	2.15	1.62	0.87	2.50
MS	-8.70	**18.33**	8.10	-8.67	**18.30**	8.10	1.44	**31.44**	**33.39**	6.77	**34.88**	**44.08**
						Unique Factor Correlation = .5						
$\alpha(.7)$												
CS	**-23.17**	**-24.14**	**-41.71**	**-23.23**	**-24.09**	**-41.75**	9.56	5.97	**16.11**	**16.8**	**11.05**	**29.74**
MS	**-23.17**	-2.50	**-25.02**	**-23.23**	-2.44	**-25.06**	9.56	**39.12**	**52.50**	**28.60**	**55.23**	**99.70**
$\alpha(.8)$												
CS	**-15.35**	**-16.28**	**-29.12**	**-15.44**	**-16.22**	**-29.16**	5.68	3.53	9.41	7.70	5.14	**13.25**
MS	**-15.35**	8.46	-8.13	**-15.44**	8.52	-8.18	5.68	**35.49**	**43.24**	**17.11**	**44.28**	**69.04**
$\alpha(.9)$												
CS	-7.88	-8.19	**-15.43**	-7.88	-8.17	**-15.42**	2.32	1.75	4.10	2.70	2.10	4.85
MS	-7.88	**19.27**	9.93	-7.88	**19.30**	9.95	2.32	**32.51**	**35.64**	7.88	**36.19**	**46.98**

Note: Regression FS = regression FSR method, Bartlett FS = Bartlett FSR method, Croon = Croon's method using the original formulas uncorrected for unique factor correlations, SEM = Structural Equation Modeling (Simultaneous Estimation) under the assumption of conditionally independent uniquenesses, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 12

Percent Bias in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: *N* = 1000, 1 Unique Factor Correlation.

	Hoshino-Bentler			Croon FM			Croon MM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	2.20	1.35	3.60	0.05	-0.25	-0.19	0.39	0.16	0.57	0.39	0.16	0.57
MS	2.20	**32.00**	**34.99**	0.05	**29.70**	**29.86**	0.39	**30.20**	**30.80**	**12.26**	**39.20**	**56.37**
$\alpha(.8)$												
CS	1.11	0.63	1.76	-0.08	-0.25	-0.32	0.07	-0.07	0.02	0.07	-0.07	0.02
MS	1.11	**31.05**	**32.57**	-0.08	**29.73**	**29.70**	0.07	**29.96**	**30.14**	9.05	**36.26**	**48.67**
$\alpha(.9)$												
CS	0.50	0.27	0.79	-0.04	-0.11	-0.15	0.02	-0.02	0.01	0.02	-0.02	0.02
MS	0.50	**30.45**	**31.17**	-0.04	**29.89**	**29.89**	0.02	**29.98**	**30.08**	4.98	**33.11**	**39.81**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	5.10	3.24	8.52	-0.42	-0.43	-0.85	-0.11	-0.15	-0.26	-0.11	-0.15	-0.26
MS	5.10	**35.10**	**42.08**	-0.42	**29.56**	**29.10**	-0.11	**29.94**	**29.88**	**11.41**	**38.58**	**54.50**
$\alpha(.8)$												
CS	2.84	2.27	5.20	-0.32	0.08	-0.23	-0.18	0.27	0.11	-0.18	0.27	0.11
MS	2.84	**33.06**	**36.92**	-0.32	**29.79**	**29.45**	-0.18	**30.01**	**29.86**	8.31	**35.90**	**47.28**
$\alpha(.9)$												
CS	1.34	0.67	2.02	-0.08	-0.27	-0.35	-0.02	-0.20	-0.22	-0.02	-0.20	-0.22
MS	1.34	**31.37**	**33.19**	-0.08	**29.93**	**29.89**	-0.02	**30.02**	**30.06**	4.67	**32.95**	**39.23**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	8.99	5.78	15.30	-0.24	-0.83	-1.09	0.01	-0.24	-0.25	0.01	-0.24	-0.25
MS	8.99	**38.71**	**51.26**	-0.24	**29.22**	**28.97**	0.01	**29.79**	**29.88**	**10.81**	**37.84**	**52.83**
$\alpha(.8)$												
CS	5.34	3.28	8.81	-0.02	-0.22	-0.23	0.11	-0.10	0.01	0.11	-0.10	0.01
MS	5.34	**35.17**	**42.46**	-0.02	**29.80**	**29.85**	0.11	**29.99**	**30.20**	7.95	**35.40**	**46.26**
$\alpha(.9)$												
CS	2.16	1.65	3.84	-0.20	0.11	-0.11	-0.16	0.16	-0.02	-0.16	0.16	-0.02
MS	2.16	**32.36**	**35.28**	-0.20	**29.99**	**29.78**	-0.16	**30.06**	**29.90**	3.97	**32.63**	**37.96**

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, Croon MM = Croon's method corrected for correlated uniquenesses at the measurement model level, SEM = Structural Equation Modeling (Simultaneous Estimation) correctly specifying the correlated residual structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 13

Percent Bias in Models Omitting the Unique Factor Correlations by Parameter and Simulation Condition, Simulation 1: N = 1000, 2 Unique Factor Correlations.

	Regression FS			Bartlett FS			Croon			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	**-27.27**	**-26.40**	**-46.47**	**-27.33**	**-26.37**	**-46.50**	3.66	2.08	5.85	4.21	2.59	6.95
MS	**-27.27**	-6.47	**-31.91**	**-27.33**	-6.43	**-31.94**	3.66	**33.38**	**38.36**	**16.25**	**43.17**	**66.54**
$\alpha(.8)$												
CS	**-18.38**	**-17.78**	**-32.88**	**-18.43**	**-17.70**	**-32.86**	1.91	1.47	3.43	2.14	1.71	3.91
MS	**-18.38**	5.67	**-13.68**	**-18.43**	5.77	**-13.65**	1.91	**32.08**	**34.69**	**11.22**	**38.70**	**54.36**
$\alpha(.9)$												
CS	-9.24	-9.26	**-17.64**	-9.25	-9.28	**-17.67**	0.84	0.45	1.29	0.92	0.52	1.46
MS	-9.24	**17.74**	6.92	-9.25	**17.71**	6.88	0.84	**30.79**	**31.95**	5.99	**34.07**	**42.17**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	**-22.00**	**-23.03**	**-39.96**	**-22.02**	**-23.02**	**-39.98**	**11.26**	7.92	**20.08**	**13.49**	9.79	**24.62**
MS	**-22.00**	-0.92	**-22.66**	**-22.02**	-0.90	**-22.67**	**11.26**	**41.36**	**57.34**	**25.51**	**52.91**	**91.99**
$\alpha(.8)$												
CS	**-14.94**	**-15.39**	**-28.02**	**-14.97**	**-15.35**	**-28.02**	6.20	4.85	**11.36**	7.03	5.54	**12.97**
MS	**-14.94**	9.43	-6.85	**-14.97**	9.49	-6.84	6.20	**36.70**	**45.25**	**16.44**	**44.15**	**67.92**
$\alpha(.9)$												
CS	-7.26	-8.15	**-14.81**	-7.25	-8.17	**-14.83**	3.02	1.76	4.83	3.22	1.95	5.24
MS	-7.26	**19.66**	**11.03**	-7.25	**19.63**	**11.01**	3.02	**32.89**	**36.95**	8.43	**36.39**	**47.95**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	**-16.35**	**-20.01**	**-33.08**	**-16.35**	**-20.04**	**-33.11**	**19.40**	**13.86**	**36.02**	**25.65**	**19.31**	**49.99**
MS	**-16.35**	4.42	**-12.58**	**-16.35**	4.38	**-12.62**	**19.40**	**49.00**	**78.00**	**36.61**	**63.77**	**123.78**
$\alpha(.8)$												
CS	**-10.99**	**-13.79**	**-23.24**	**-11.04**	**-13.76**	**-23.28**	**11.17**	7.23	**19.23**	**13.34**	9.14	**23.72**
MS	**-10.99**	**12.86**	0.54	**-11.04**	**12.89**	0.50	**11.17**	**41.00**	**56.84**	**23.07**	**50.20**	**84.94**
$\alpha(.9)$												
CS	-5.30	-6.92	**-11.84**	-5.30	-6.91	**-11.84**	5.18	3.30	8.67	5.64	3.72	9.59
MS	-5.30	**21.51**	**15.14**	-5.30	**21.52**	**15.14**	5.18	**34.97**	**42.02**	**10.96**	**38.81**	**54.09**

Note: Regression FS = regression FSR method, Bartlett FS = Bartlett FSR method, Croon = Croon's method using the original formulas uncorrected for unique factor correlations, SEM = Structural Equation Modeling (Simultaneous Estimation) under the assumption of conditionally independent uniquenesses, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 14

Percent Bias in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: *N* = 1000, 2 Unique Factor Correlations.

	Hoshino-Bentler			Croon FM			Croon MM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	3.81	2.29	6.22	-0.19	-0.47	-0.65	0.13	-0.10	0.06	0.13	-0.10	0.06
MS	3.81	**33.62**	**38.81**	-0.19	**29.49**	**29.33**	0.13	**29.94**	**30.21**	**12.05**	**38.99**	**55.85**
$\alpha(.8)$												
CS	1.96	1.58	3.59	-0.33	-0.01	-0.33	-0.19	0.17	0.00	-0.19	0.17	0.00
MS	1.96	**32.19**	**34.86**	-0.33	**29.81**	**29.46**	-0.19	**30.02**	**29.86**	**8.74**	**36.28**	**48.29**
$\alpha(.9)$												
CS	0.86	0.48	1.35	-0.18	-0.21	-0.38	-0.12	-0.14	-0.25	-0.12	-0.14	-0.25
MS	0.86	**30.83**	**32.02**	-0.18	**29.78**	**29.60**	-0.12	**29.86**	**29.77**	4.81	**32.97**	**39.43**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	**10.43**	7.49	**18.72**	-0.42	-0.03	-0.46	-0.16	0.37	0.20	-0.16	0.37	0.20
MS	**10.43**	**40.62**	**55.37**	-0.42	**29.70**	**29.23**	-0.16	**30.12**	**29.99**	**10.84**	**38.30**	**53.41**
$\alpha(.8)$												
CS	5.69	4.51	**10.47**	-0.60	0.28	-0.31	-0.49	0.40	-0.08	-0.49	0.40	-0.08
MS	5.69	**36.23**	**44.05**	-0.60	**29.89**	**29.18**	-0.49	**30.06**	**29.50**	7.54	**35.56**	**45.87**
$\alpha(.9)$												
CS	2.80	1.64	4.48	0.01	-0.25	-0.24	0.07	-0.17	-0.10	0.07	-0.17	-0.10
MS	2.80	**32.68**	**36.44**	0.01	**29.84**	**29.91**	0.07	**29.92**	**30.07**	4.34	**32.59**	**38.41**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	**17.53**	**12.36**	**32.12**	-0.06	-0.27	-0.31	0.16	0.16	0.35	0.16	0.16	0.35
MS	**17.53**	**47.17**	**73.07**	-0.06	**29.45**	**29.47**	0.16	**29.89**	**30.21**	9.62	**36.80**	**50.09**
$\alpha(.8)$												
CS	**10.01**	6.55	**17.24**	-0.18	-0.49	-0.65	-0.10	-0.24	-0.33	-0.10	-0.24	-0.33
MS	**10.01**	**39.94**	**54.04**	-0.18	**29.60**	**29.47**	-0.10	**29.84**	**29.80**	6.58	**34.35**	**43.30**
$\alpha(.9)$												
CS	4.69	2.97	7.81	0.14	-0.04	0.12	0.20	0.01	0.22	0.20	0.01	0.22
MS	4.69	**34.45**	**40.82**	0.14	**29.92**	**30.16**	0.20	**29.96**	**30.29**	3.54	**32.00**	**36.76**

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, Croon MM = Croon's method corrected for correlated uniquenesses at the measurement model level, SEM = Structural Equation Modeling (Simultaneous Estimation) correctly specifying the correlated residual structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 15

Mean square error ratios in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: N = 125, 1 Unique Factor Correlation.

	Hoshino-Bentler			Croon FM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
				Unique Factor Correlation = .1					
$\alpha(.7)$									
CS	0.99	1.02	1.05	0.96	0.92	0.91	1.00	1.00	1.00
MS	0.99	1.08	1.14	0.96	0.82	0.78	1.27	1.54	2.21
$\alpha(.8)$									
CS	1.00	1.02	1.05	0.99	0.96	0.92	1.00	1.00	1.00
MS	1.00	1.05	1.09	0.99	0.9	0.86	1.27	1.38	1.89
$\alpha(.9)$									
CS	1.00	1.01	1.01	0.99	0.98	0.97	1.00	1.00	1.00
MS	1.00	1.03	1.05	0.99	0.95	0.93	1.06	1.19	1.49
				Unique Factor Correlation = .3					
$\alpha(.7)$									
CS	1.07	1.11	1.26	0.99	0.95	0.91	1.00	1.00	1.00
MS	1.07	1.25	1.46	0.99	0.81	0.76	1.24	1.48	2.08
$\alpha(.8)$									
CS	1.03	1.07	1.13	0.98	0.97	0.94	1.00	1.00	1.00
MS	1.03	1.18	1.30	0.98	0.91	0.87	1.23	1.35	1.85
$\alpha(.9)$									
CS	1.00	1.02	1.03	1.00	0.99	0.99	1.00	1.00	1.00
MS	1.00	1.08	1.14	1.00	0.96	0.94	1.05	1.18	1.47
				Unique Factor Correlation = .5					
$\alpha(.7)$									
CS	1.21	1.30	1.65	1.03	1.03	0.97	1.00	1.00	1.00
MS	1.21	1.50	1.92	1.03	0.82	0.80	1.27	1.48	2.08
$\alpha(.8)$									
CS	1.04	1.11	1.22	1.03	1.04	1.03	1.00	1.00	1.00
MS	1.04	1.31	1.56	1.03	0.92	0.89	1.16	1.33	1.83
$\alpha(.9)$									
CS	1.01	1.05	1.08	1.01	1.00	0.99	1.00	1.00	1.00
MS	1.01	1.14	1.26	1.01	0.96	0.95	1.06	1.16	1.42

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, SEM = Structural Equation Modeling (Simultaneous Estimation), with correctly specified unique factor structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). All MSE ratios are divided by the MSE for Croon's method corrected for correlated uniquenesses at the measurement model level (Croon MM), i.e., $MSE_{Estimator}/MSE_{Croon\_MM}$.

Table 16

Mean square error ratios in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: $N = 250$, 1 Unique Factor Correlation.

	Hoshino-Bentler			Croon FM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1									
$\alpha(.7)$									
CS	1.01	1.02	1.06	0.99	0.95	0.93	1.00	1.00	1.00
MS	1.01	1.10	1.18	0.99	0.90	0.85	1.69	1.59	2.54
$\alpha(.8)$									
CS	1.01	1.01	1.04	0.99	0.98	0.98	1.00	1.00	1.00
MS	1.01	1.06	1.12	0.99	0.95	0.91	1.62	1.41	2.19
$\alpha(.9)$									
CS	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MS	0.99	1.03	1.06	1.00	0.98	0.96	1.17	1.21	1.60
Unique Factor Correlation = .3									
$\alpha(.7)$									
CS	1.08	1.16	1.33	1.00	0.97	0.95	1.00	1.00	1.00
MS	1.08	1.32	1.61	1.00	0.89	0.85	1.43	1.55	2.40
$\alpha(.8)$									
CS	1.04	1.08	1.17	1.00	1.00	0.98	1.00	1.00	1.00
MS	1.04	1.19	1.38	1.00	0.94	0.91	1.54	1.40	2.14
$\alpha(.9)$									
CS	1.00	1.03	1.06	1.00	1.01	1.00	1.00	1.00	1.00
MS	1.00	1.09	1.17	1.00	0.98	0.97	1.18	1.19	1.55
Unique Factor Correlation = .5									
$\alpha(.7)$									
CS	1.50	1.32	1.86	1.03	1.08	1.02	1.00	1.00	1.00
MS	1.50	1.58	2.22	1.03	0.90	0.85	1.72	1.52	2.38
$\alpha(.8)$									
CS	1.25	1.17	1.44	1.01	1.06	1.02	1.00	1.00	1.00
MS	1.25	1.34	1.72	1.01	0.95	0.92	1.53	1.36	2.01
$\alpha(.9)$									
CS	1.05	1.06	1.13	1.01	1.02	1.00	1.00	1.00	1.00
MS	1.05	1.15	1.30	1.01	0.98	0.96	1.19	1.17	1.49

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, SEM = Structural Equation Modeling (Simultaneous Estimation), with correctly specified unique factor structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). All MSE ratios are divided by the MSE for Croon's method corrected for correlated uniquenesses at the measurement model level (Croon MM), i.e., $MSE_{Estimator}/MSE_{Croon\_MM}$.

Table 17

Mean square error ratios in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: $N = 250$, 2 Unique Factor Correlations.

	Hoshino-Bentler			Croon FM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1									
$\alpha(.7)$									
CS	1.04	1.06	1.17	0.98	0.96	0.94	1.00	1.00	1.00
MS	1.04	1.21	1.40	0.98	0.89	0.85	1.74	1.59	2.55
$\alpha(.8)$									
CS	1.03	1.04	1.11	0.98	0.98	0.95	1.00	1.00	1.00
MS	1.03	1.13	1.25	0.98	0.94	0.91	1.65	1.42	2.15
$\alpha(.9)$									
CS	1.01	1.01	1.03	1.00	0.99	0.98	1.00	1.00	1.00
MS	1.01	1.06	1.12	1.00	0.98	0.96	1.24	1.20	1.59
Unique Factor Correlation = .3									
$\alpha(.7)$									
CS	1.56	1.38	2.00	1.00	1.02	0.99	1.00	1.00	1.00
MS	1.56	1.71	2.55	1.00	0.90	0.87	1.59	1.57	2.48
$\alpha(.8)$									
CS	1.29	1.22	1.57	1.01	1.00	0.99	1.00	1.00	1.00
MS	1.29	1.40	1.87	1.01	0.95	0.93	1.52	1.37	2.05
$\alpha(.9)$									
CS	1.06	1.07	1.16	1.00	1.01	1.00	1.00	1.00	1.00
MS	1.06	1.18	1.37	1.00	0.98	0.97	1.18	1.18	1.52
Unique Factor Correlation = .5									
$\alpha(.7)$									
CS	2.59	2.18	4.05	1.02	1.12	1.04	1.00	1.00	1.00
MS	2.59	2.28	4.10	1.02	0.93	0.90	1.46	1.46	2.20
$\alpha(.8)$									
CS	1.77	1.52	2.33	1.02	1.04	1.00	1.00	1.00	1.00
MS	1.77	1.71	2.61	1.02	0.96	0.94	1.34	1.30	1.83
$\alpha(.9)$									
CS	1.20	1.20	1.42	1.02	1.01	1.00	1.00	1.00	1.00
MS	1.20	1.30	1.65	1.02	0.98	0.97	1.11	1.13	1.39

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, SEM = Structural Equation Modeling (Simultaneous Estimation), with correctly specified unique factor structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). All MSE ratios are divided by the MSE for Croon's method corrected for correlated uniquenesses at the measurement model level (Croon MM), i.e., $MSE_{Estimator}/MSE_{Croon\_MM}$.

Table 18

Mean square error ratios in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: *N* = 500, 1 Unique Factor Correlation.

	Hoshino-Bentler			Croon FM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1									
$\alpha(.7)$									
CS	1.01	1.02	1.07	0.99	0.98	0.97	1.00	1.00	1.00
MS	1.01	1.11	1.23	0.99	0.94	0.9	2.43	1.64	2.93
$\alpha(.8)$									
CS	1.01	1.03	1.05	0.99	1.00	0.99	1.00	1.00	1.00
MS	1.01	1.07	1.15	0.99	0.97	0.95	2.22	1.44	2.37
$\alpha(.9)$									
CS	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MS	0.99	1.03	1.07	1.00	0.99	0.98	1.50	1.22	1.68
Unique Factor Correlation = .3									
$\alpha(.7)$									
CS	1.31	1.21	1.54	0.99	1.01	0.97	1.00	1.00	1.00
MS	1.31	1.35	1.77	0.99	0.95	0.91	2.36	1.60	2.76
$\alpha(.8)$									
CS	1.13	1.10	1.27	1.01	1.00	0.98	1.00	1.00	1.00
MS	1.13	1.20	1.44	1.01	0.97	0.95	2.13	1.41	2.27
$\alpha(.9)$									
CS	1.04	1.03	1.08	1.00	1.01	1.00	1.00	1.00	1.00
MS	1.04	1.09	1.19	1.00	0.99	0.98	1.47	1.20	1.61
Unique Factor Correlation = .5									
$\alpha(.7)$									
CS	2.03	1.46	2.49	1.01	1.09	1.02	1.00	1.00	1.00
MS	2.03	1.63	2.49	1.01	0.94	0.92	2.43	1.56	2.63
$\alpha(.8)$									
CS	1.37	1.27	1.71	1.02	1.06	1.03	1.00	1.00	1.00
MS	1.37	1.36	1.83	1.02	0.97	0.96	1.83	1.38	2.14
$\alpha(.9)$									
CS	1.14	1.07	1.22	1.01	1.05	1.02	1.00	1.00	1.00
MS	1.14	1.15	1.34	1.01	0.99	0.98	1.40	1.17	1.53

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, SEM = Structural Equation Modeling (Simultaneous Estimation), with correctly specified unique factor structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). All MSE ratios are divided by the MSE for Croon's method corrected for correlated uniquenesses at the measurement model level (Croon MM), i.e., $MSE_{Estimator}/MSE_{Croon\_MM}$.

Table 19

Mean square error ratios in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: N = 500, 2 Unique Factor Correlations.

	Hoshino-Bentler			Croon FM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
				Unique Factor Correlation = .1					
$\alpha(.7)$									
CS	1.15	1.11	1.30	0.99	0.99	0.98	1.00	1.00	1.00
MS	1.15	1.24	1.51	0.99	0.94	0.91	2.58	1.64	2.90
$\alpha(.8)$									
CS	1.07	1.03	1.14	0.99	1.00	0.99	1.00	1.00	1.00
MS	1.07	1.14	1.31	0.99	0.97	0.95	2.29	1.44	2.38
$\alpha(.9)$									
CS	1.00	1.01	1.03	1.00	1.00	1.00	1.00	1.00	1.00
MS	1.00	1.06	1.13	1.00	0.99	0.98	1.44	1.21	1.66
				Unique Factor Correlation = .3					
$\alpha(.7)$									
CS	2.19	1.70	3.02	1.01	1.04	1.00	1.00	1.00	1.00
MS	2.19	1.75	2.85	1.01	0.95	0.93	2.3	1.58	2.72
$\alpha(.8)$									
CS	1.67	1.29	1.95	1.01	1.04	1.01	1.00	1.00	1.00
MS	1.67	1.44	2.01	1.01	0.97	0.95	2.13	1.39	2.2
$\alpha(.9)$									
CS	1.12	1.13	1.27	1.00	1.01	1.00	1.00	1.00	1.00
MS	1.12	1.18	1.41	1.00	0.99	0.99	1.31	1.18	1.56
				Unique Factor Correlation = .5					
$\alpha(.7)$									
CS	4.31	2.71	6.28	1.03	1.20	1.12	1.00	1.00	1.00
MS	4.31	2.41	5.00	1.03	0.97	0.94	1.91	1.50	2.49
$\alpha(.8)$									
CS	2.71	1.87	3.68	1.01	1.11	1.04	1.00	1.00	1.00
MS	2.71	1.74	2.89	1.01	0.98	0.96	1.74	1.31	1.94
$\alpha(.9)$									
CS	1.46	1.23	1.71	1.01	1.06	1.03	1.00	1.00	1.00
MS	1.46	1.31	1.73	1.01	0.99	0.99	1.27	1.14	1.44

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, SEM = Structural Equation Modeling (Simultaneous Estimation), with correctly specified unique factor structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). All MSE ratios are divided by the MSE for Croon's method corrected for correlated uniquenesses at the measurement model level (Croon MM), i.e., $MSE_{Estimator}/MSE_{Croon\_MM}$.

Table 20

Mean square error ratios in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: *N* = 1000, 1 Unique Factor Correlation.

	Hoshino-Bentler			Croon FM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1									
$\alpha(.7)$									
CS	1.09	1.05	1.14	0.99	0.98	0.97	1.00	1.00	1.00
MS	1.09	1.12	1.26	0.99	0.97	0.95	4.08	1.66	3.06
$\alpha(.8)$									
CS	1.03	1.02	1.06	1.00	1.00	1.00	1.00	1.00	1.00
MS	1.03	1.07	1.15	1.00	0.98	0.97	3.26	1.45	2.46
$\alpha(.9)$									
CS	1.01	1.01	1.02	1.00	1.00	1.00	1.00	1.00	1.00
MS	1.01	1.03	1.07	1.00	0.99	0.99	2.12	1.22	1.71
Unique Factor Correlation = .3									
$\alpha(.7)$									
CS	1.60	1.24	1.80	1.01	1.01	1.00	1.00	1.00	1.00
MS	1.60	1.36	1.87	1.01	0.98	0.95	3.96	1.64	3.05
$\alpha(.8)$									
CS	1.24	1.17	1.42	1.01	1.01	1.00	1.00	1.00	1.00
MS	1.24	1.21	1.48	1.01	0.99	0.97	3.16	1.42	2.38
$\alpha(.9)$									
CS	1.07	1.03	1.10	1.00	1.00	1.00	1.00	1.00	1.00
MS	1.07	1.09	1.20	1.00	0.99	0.99	1.88	1.20	1.66
Unique Factor Correlation = .5									
$\alpha(.7)$									
CS	3.03	1.72	3.69	1.03	1.11	1.06	1.00	1.00	1.00
MS	3.03	1.67	2.74	1.03	0.97	0.95	3.87	1.59	2.90
$\alpha(.8)$									
CS	2.05	1.31	2.19	1.01	1.09	1.05	1.00	1.00	1.00
MS	2.05	1.37	1.90	1.01	0.99	0.98	3.31	1.38	2.24
$\alpha(.9)$									
CS	1.20	1.14	1.37	1.02	1.05	1.03	1.00	1.00	1.00
MS	1.20	1.16	1.37	1.02	1.00	0.99	1.70	1.18	1.58

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, SEM = Structural Equation Modeling (Simultaneous Estimation), with correctly specified unique factor structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). All MSE ratios are divided by the MSE for Croon's method corrected for correlated uniquenesses at the measurement model level (Croon MM), i.e., $MSE_{Estimator}/MSE_{Croon\_MM}$.

Table 21

Mean square error ratios in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 1: *N* = 1000, 2 Unique Factor Correlations.

	Hoshino-Bentler			Croon FM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
				Unique Factor Correlation = .1					
$\alpha(.7)$									
CS	1.27	1.10	1.38	0.99	0.99	0.98	1.00	1.00	1.00
MS	1.27	1.25	1.57	0.99	0.97	0.95	3.85	1.67	3.10
$\alpha(.8)$									
CS	1.11	1.07	1.19	1.00	1.00	0.99	1.00	1.00	1.00
MS	1.11	1.15	1.33	1.00	0.99	0.98	3.21	1.45	2.46
$\alpha(.9)$									
CS	1.01	1.02	1.05	1.00	1.00	1.00	1.00	1.00	1.00
MS	1.01	1.06	1.15	1.00	0.99	0.99	1.97	1.22	1.70
				Unique Factor Correlation = .3					
$\alpha(.7)$									
CS	3.72	2.14	4.86	1.01	1.05	1.02	1.00	1.00	1.00
MS	3.72	1.79	3.15	1.01	0.98	0.96	3.91	1.60	2.94
$\alpha(.8)$									
CS	2.00	1.67	2.73	1.00	1.04	1.03	1.00	1.00	1.00
MS	2.00	1.44	2.12	1.00	0.99	0.98	2.75	1.39	2.29
$\alpha(.9)$									
CS	1.33	1.14	1.48	1.00	1.01	1.01	1.00	1.00	1.00
MS	1.33	1.19	1.44	1.00	0.99	0.99	1.83	1.18	1.59
				Unique Factor Correlation = .5					
$\alpha(.7)$									
CS	9.13	4.24	12.18	1.04	1.10	1.07	1.00	1.00	1.00
MS	9.13	2.45	5.33	1.04	0.97	0.96	3.42	1.5	2.57
$\alpha(.8)$									
CS	4.08	2.39	5.53	1.00	1.09	1.06	1.00	1.00	1.00
MS	4.08	1.78	3.08	1.00	0.99	0.98	2.32	1.32	2.01
$\alpha(.9)$									
CS	1.93	1.44	2.32	1.01	1.04	1.03	1.00	1.00	1.00
MS	1.93	1.32	1.76	1.01	1.00	0.99	1.53	1.14	1.44

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, SEM = Structural Equation Modeling (Simultaneous Estimation), with correctly specified unique factor structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). All MSE ratios are divided by the MSE for Croon's method corrected for correlated uniquenesses at the measurement model level (Croon MM), i.e., $MSE_{Estimator}/MSE_{Croon\_MM}$.

Table 22

Percent Bias in Models Omitting the Unique Factor Correlations by Parameter and Simulation Condition, Simulation 2: $N = 250$

	Regression FS			Bartlett FS			Croon			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
						Unique Factor Correlation = .1						
$\alpha(.7)$												
CS	**-32.73**	**-29.70**	**-52.65**	**-32.75**	**-29.58**	**-52.63**	-6.57	-5.25	**-11.41**	-4.36	-2.94	-7.09
MS	**-32.73**	**-11.92**	**-40.42**	**-32.75**	**-11.78**	**-40.38**	-6.57	**22.56**	**14.97**	6.98	**34.13**	**43.99**
$\alpha(.8)$												
CS	**-21.32**	**-20.42**	**-37.37**	**-21.33**	**-20.43**	**-37.41**	-2.85	-3.21	-5.93	-1.78	-2.09	-3.80
MS	**-21.32**	1.88	**-19.58**	**-21.33**	1.87	**-19.61**	-2.85	**25.80**	**22.51**	6.73	**33.18**	**42.48**
$\alpha(.9)$												
CS	**-11.02**	**-10.21**	**-20.06**	**-11.00**	**-10.21**	**-20.06**	-1.54	-0.98	-2.47	-1.18	-0.62	-1.76
MS	**-11.02**	**15.93**	3.44	**-11.00**	**15.92**	3.45	-1.54	**28.29**	**26.60**	3.62	31.77	**36.83**
						Unique Factor Correlation = .3						
$\alpha(.7)$												
CS	**-38.57**	**-35.46**	**-60.30**	**-38.57**	**-35.33**	**-60.25**	**-19.50**	**-18.05**	**-33.98**	**-15.23**	**-13.00**	**-26.18**
MS	**-38.57**	**-20.11**	**-50.56**	**-38.57**	**-19.96**	**-50.50**	**-19.50**	4.88	**-15.02**	-5.95	**18.66**	**12.39**
$\alpha(.8)$												
CS	**-26.16**	**-23.19**	**-43.28**	**-26.11**	**-23.25**	**-43.29**	**-11.36**	-9.28	**-19.59**	-9.23	-6.81	**-15.40**
MS	**-26.16**	-3.20	**-28.26**	**-26.11**	-3.27	**-28.26**	**-11.36**	**16.12**	3.24	**-2.09**	**24.38**	**22.15**
$\alpha(.9)$												
CS	**-12.93**	**-12.82**	**-24.09**	**-12.96**	**-12.79**	**-24.11**	-4.63	-5.03	-9.46	-3.95	-4.20	-8.02
MS	**-12.93**	**12.97**	-1.38	**-12.96**	**13.00**	-1.39	-4.63	**23.78**	**18.30**	0.39	**27.58**	**28.36**
						Unique Factor Correlation = .5						
$\alpha(.7)$												
CS	**-47.09**	**-42.99**	**-69.87**	**-47.05**	**-43.01**	**-69.85**	**-36.42**	**-33.12**	**-57.56**	**-33.49**	**-29.98**	**-53.48**
MS	**-47.09**	**-31.12**	**-63.32**	**-47.05**	**-31.12**	**-63.29**	**-36.42**	**-17.21**	**-47.05**	**-28.65**	-9.23	**-34.66**
$\alpha(.8)$												
CS	**-32.21**	**-30.36**	**-52.82**	**-32.18**	**-30.37**	**-52.81**	**-22.52**	**-21.72**	**-39.40**	**-20.23**	**-18.94**	**-35.38**
MS	**-32.21**	**-12.55**	**-40.49**	**-32.18**	**-12.56**	**-40.47**	**-22.52**	-0.05	**-22.29**	**-15.32**	7.18	-8.83
$\alpha(.9)$												
CS	**-16.21**	**-15.90**	**-29.53**	**-16.19**	**-15.91**	**-29.54**	-9.96	**-10.14**	**-19.12**	-8.96	-8.85	**-17.03**
MS	**-16.21**	8.26	-9.03	**-16.19**	8.24	-9.03	-9.96	**16.31**	5.00	-5.65	**20.13**	**13.65**

Note: Regression FS = regression FSR method, Bartlett FS = Bartlett FSR method, Croon = Croon's method using the original formulas uncorrected for unique factor correlations, SEM = Structural Equation Modeling (Simultaneous Estimation) under the assumption of conditionally independent uniquenesses, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 23

Percent Bias in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 2: $N = 250$

	Hoshino-Bentler			Croon FM			Croon MM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	-1.04	0.25	-0.65	-4.74	-3.91	-8.34	-1.04	0.25	-0.65	-1.04	0.25	-0.65
MS	-1.04	**29.72**	**28.88**	-4.74	**24.50**	**19.13**	-1.04	**29.72**	**28.88**	**11.73**	**39.66**	**56.57**
$\alpha(.8)$												
CS	0.14	-0.13	0.05	-1.69	-1.86	-3.48	0.14	-0.13	0.05	0.14	-0.13	0.05
MS	0.14	**29.73**	**30.21**	-1.69	**27.44**	**25.60**	0.14	**29.73**	**30.21**	9.70	**36.63**	**50.24**
$\alpha(.9)$												
CS	-0.30	0.24	-0.04	-0.96	-0.38	-1.30	-0.30	0.24	-0.04	-0.30	0.24	-0.04
MS	-0.30	**29.87**	**29.75**	-0.96	**29.04**	**28.08**	-0.30	**29.87**	**29.75**	5.02	**33.28**	**40.27**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	-0.30	0.79	0.57	-4.24	-3.18	-7.20	-0.30	0.79	0.57	-0.30	0.79	0.57
MS	-0.30	**30.28**	**30.37**	-4.24	**25.11**	**20.33**	-0.30	**30.28**	**30.37**	**12.69**	**40.50**	**58.91**
$\alpha(.8)$												
CS	-0.67	0.84	0.20	-2.40	-1.02	-3.36	-0.67	0.84	0.20	-0.67	0.84	0.20
MS	-0.67	**29.88**	**29.29**	-2.40	**27.46**	**24.70**	-0.67	**29.88**	**29.29**	9.08	**36.90**	**49.64**
$\alpha(.9)$												
CS	-0.05	-0.63	-0.71	-0.74	-1.30	-2.04	-0.05	-0.63	-0.71	-0.05	-0.63	-0.71
MS	-0.05	**29.53**	**29.70**	-0.74	**28.67**	**27.97**	-0.05	**29.53**	**29.70**	5.63	**33.22**	**40.99**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	-0.19	1.07	1.00	-4.26	-3.17	-7.21	-0.19	1.07	1.00	-0.19	1.07	1.00
MS	-0.19	**29.74**	**29.93**	-4.26	**24.44**	**19.63**	-0.19	**29.74**	**29.93**	**12.60**	**39.85**	**57.92**
$\alpha(.8)$												
CS	0.12	-0.24	-0.20	-1.79	-2.16	-4.00	0.12	-0.24	-0.20	0.12	-0.24	-0.20
MS	0.12	**29.63**	**30.02**	-1.79	**27.19**	**25.16**	0.12	**29.63**	**30.02**	**10.22**	**37.07**	**51.38**
$\alpha(.9)$												
CS	0.26	0.01	0.24	-0.40	-0.59	-1.02	0.26	0.01	0.24	0.26	0.01	0.24
MS	0.26	**29.79**	**30.36**	-0.40	**28.97**	**28.68**	0.26	**29.79**	**30.36**	6.05	**33.56**	**41.90**

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, Croon MM = Croon's method corrected for correlated uniquenesses at the measurement model level, SEM = Structural Equation Modeling (Simultaneous Estimation) correctly specifying the correlated residual structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 24

Percent Bias in Models Omitting the Unique Factor Correlations by Parameter and Simulation Condition, Simulation 2: $N = 500$

	Regression FS			Bartlett FS			Croon			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
						Unique Factor Correlation = .1						
$\alpha(.7)$												
CS	**-32.12**	**-29.39**	**-52.04**	**-32.15**	**-29.46**	**-52.13**	-5.03	-4.49	-9.22	-3.77	-3.18	-6.75
MS	**-32.12**	**-11.38**	**-39.71**	**-32.15**	**-11.48**	**-39.81**	-5.03	**23.84**	**17.82**	7.66	**34.18**	**44.71**
$\alpha(.8)$												
CS	**-21.30**	**-19.81**	**-36.84**	**-21.32**	**-19.75**	**-36.84**	-2.68	-2.27	-4.84	-2.10	-1.65	-3.67
MS	**-21.30**	2.50	**-19.16**	**-21.32**	2.56	**-19.15**	-2.68	**26.83**	**23.63**	6.42	**33.57**	**42.36**
$\alpha(.9)$												
CS	**-10.71**	**-10.39**	**-19.97**	**-10.68**	**-10.41**	**-19.97**	-1.12	-1.20	-2.29	-0.92	-0.97	-1.87
MS	**-10.71**	**16.13**	3.82	**-10.68**	**16.11**	3.82	-1.12	**28.59**	**27.27**	3.94	**31.92**	**37.23**
						Unique Factor Correlation = .3						
$\alpha(.7)$												
CS	**-38.08**	**-34.73**	**-59.56**	**-38.13**	**-34.67**	**-59.58**	**-18.58**	**-16.98**	**-32.39**	**-15.07**	**-12.78**	**-25.92**
MS	**-38.08**	**-19.17**	**-49.77**	**-38.13**	**-19.10**	**-49.80**	**-18.58**	6.38	**-13.14**	-5.69	**19.07**	**12.64**
$\alpha(.8)$												
CS	**-25.14**	**-23.77**	**-42.91**	**-25.16**	**-23.78**	**-42.95**	**-10.08**	**-10.09**	**-19.13**	-8.32	-7.85	**-15.50**
MS	**-25.14**	-3.05	**-27.27**	**-25.16**	-3.07	**-27.31**	**-10.08**	**16.44**	4.89	-1.05	**24.43**	**23.35**
$\alpha(.9)$												
CS	**-12.80**	**-12.49**	**-23.68**	**-12.79**	**-12.45**	**-23.64**	-4.42	-4.54	-8.75	-3.91	-3.91	-7.66
MS	**-12.80**	**13.16**	-1.21	**-12.79**	**13.21**	-1.15	-4.42	**24.10**	**18.75**	0.37	**27.63**	**28.24**
						Unique Factor Correlation = .5						
$\alpha(.7)$												
CS	**-46.96**	**-43.06**	**-69.77**	**-46.95**	**-43.07**	**-69.77**	**-35.97**	**-33.01**	**-57.07**	**-33.69**	**-30.29**	**-53.71**
MS	**-46.96**	**-31.05**	**-63.27**	**-46.95**	**-31.07**	**-63.27**	**-35.97**	**-16.77**	**-46.48**	**-28.86**	-9.47	**-35.22**
$\alpha(.8)$												
CS	**-32.63**	**-29.95**	**-52.75**	**-32.64**	**-29.95**	**-52.77**	**-22.82**	**-21.12**	**-39.06**	**-20.83**	**-18.68**	**-35.55**
MS	**-32.63**	**-12.19**	**-40.67**	**-32.64**	**-12.21**	**-40.69**	**-22.82**	0.57	**-22.17**	**-15.87**	7.36	-9.41
$\alpha(.9)$												
CS	**-16.53**	**-15.99**	**-29.88**	**-16.51**	**-15.99**	**-29.87**	**-10.20**	**-10.17**	**-19.34**	-9.33	-8.97	**-17.47**
MS	**-16.53**	8.22	-9.55	**-16.51**	8.22	-9.53	**-10.20**	**16.43**	4.67	-5.99	**20.12**	**13.06**

Note: Regression FS = regression FSR method, Bartlett FS = Bartlett FSR method, Croon = Croon's method using the original formulas uncorrected for unique factor correlations, SEM = Structural Equation Modeling (Simultaneous Estimation) under the assumption of conditionally independent uniquenesses, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 25

Percent Bias in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 2: $N = 500$

	Hoshino-Bentler			Croon FM			Croon MM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	-0.51	-0.04	-0.46	-2.39	-1.81	-4.07	-0.51	-0.04	-0.46	-0.51	-0.04	-0.46
MS	-0.51	**29.85**	**29.40**	-2.39	**27.48**	**24.66**	-0.51	**29.85**	**29.40**	**12.31**	**39.83**	**57.30**
$\alpha(.8)$												
CS	-0.14	0.32	0.21	-1.02	-0.55	-1.53	-0.14	0.32	0.21	-0.14	0.32	0.21
MS	-0.14	**30.18**	**30.18**	-1.02	**29.04**	**27.91**	-0.14	**30.18**	**30.18**	9.43	**37.06**	**50.19**
$\alpha(.9)$												
CS	-0.04	-0.09	-0.11	-0.37	-0.44	-0.80	-0.04	-0.09	-0.11	-0.04	-0.09	-0.11
MS	-0.04	**30.02**	**30.08**	-0.37	**29.59**	**29.22**	-0.04	**30.02**	**30.08**	5.35	**33.48**	**40.74**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	-0.23	0.69	0.44	-2.11	-1.37	-3.46	-0.23	0.69	0.44	-0.23	0.69	0.44
MS	-0.23	**30.41**	**30.31**	-2.11	**27.83**	**25.35**	-0.23	**30.41**	**30.31**	**12.77**	**40.60**	**58.79**
$\alpha(.8)$												
CS	0.17	0.02	0.19	-0.72	-0.92	-1.64	0.17	0.02	0.19	0.17	0.02	0.19
MS	0.17	**29.91**	**30.28**	-0.72	**28.71**	**27.93**	0.17	**29.91**	**30.28**	**10.05**	**37.07**	**51.01**
$\alpha(.9)$												
CS	-0.20	-0.43	-0.63	-0.52	-0.74	-1.26	-0.20	-0.43	-0.63	-0.20	-0.43	-0.63
MS	-0.20	**29.56**	**29.40**	-0.52	**29.15**	**28.59**	-0.20	**29.56**	**29.40**	**5.41**	**33.19**	**40.53**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	-0.34	0.75	0.45	-2.32	-1.33	-3.55	-0.34	0.75	0.45	-0.34	0.75	0.45
MS	-0.34	**30.04**	**29.80**	-2.32	**27.46**	**24.74**	-0.34	**30.04**	**29.80**	**12.70**	**40.31**	**58.35**
$\alpha(.8)$												
CS	-0.29	-0.15	-0.35	-1.16	-1.05	-2.13	-0.29	-0.15	-0.35	-0.29	-0.15	-0.35
MS	-0.29	**29.78**	**29.59**	-1.16	**28.62**	**27.32**	-0.29	**29.78**	**29.59**	9.98	**37.25**	**51.15**
$\alpha(.9)$												
CS	-0.27	-0.34	-0.62	-0.59	-0.68	-1.28	-0.27	-0.34	-0.62	-0.27	-0.34	-0.62
MS	-0.27	**29.78**	**29.54**	-0.59	**29.34**	**28.68**	-0.27	**29.78**	**29.54**	5.63	**33.61**	**41.25**

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, Croon MM = Croon's method corrected for correlated uniquenesses at the measurement model level, SEM = Structural Equation Modeling (Simultaneous Estimation) correctly specifying the correlated residual structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 26

Percent Bias in Models Omitting the Unique Factor Correlations by Parameter and Simulation Condition, Simulation 2: $N = 1000$

	Regression FS			Bartlett FS			Croon			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	**-31.70**	**-29.01**	**-51.52**	**-31.87**	**-28.97**	**-51.63**	-4.43	-3.82	-8.09	-3.60	-2.88	-6.39
MS	**-31.70**	**-11.00**	**-39.14**	**-31.87**	**-10.95**	**-39.27**	-4.43	**24.61**	**19.19**	7.63	**34.24**	**44.60**
$\alpha(.8)$												
CS	**-21.20**	**-19.79**	**-36.78**	**-21.28**	**-19.66**	**-36.76**	-2.49	-2.19	-4.60	-2.12	-1.77	-3.83
MS	**-21.20**	2.58	**-19.09**	**-21.28**	2.74	**-19.06**	-2.49	**27.14**	**24.06**	6.44	**33.62**	**42.31**
$\alpha(.9)$												
CS	**-10.60**	**-10.09**	**-19.60**	**-10.61**	**-10.08**	**-19.61**	-0.97	-0.83	-1.77	-0.86	-0.70	-1.53
MS	**-10.60**	**16.32**	4.07	**-10.61**	**16.33**	4.05	-0.97	**28.85**	**27.67**	3.97	**32.04**	**37.35**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	**-37.99**	**-34.88**	**-59.61**	**-38.00**	**-34.95**	**-59.66**	**-18.22**	**-17.14**	**-32.23**	**-14.96**	**-13.26**	**-26.23**
MS	**-37.99**	**-19.30**	**-49.88**	**-38.00**	**-19.39**	**-49.95**	**-18.22**	6.32	**-12.94**	-5.64	**18.55**	**12.04**
$\alpha(.8)$												
CS	**-25.45**	**-23.84**	**-43.21**	**-25.47**	**-23.79**	**-43.19**	**-10.33**	**-10.05**	**-19.33**	-8.76	-8.06	**-16.10**
MS	**-25.45**	-3.12	**-27.69**	**-25.47**	-3.06	**-27.67**	**-10.33**	**16.61**	4.67	-1.43	**24.34**	**22.69**
$\alpha(.9)$												
CS	**-12.52**	**-11.85**	**-22.89**	**-12.54**	**-11.83**	**-22.89**	-4.10	-3.85	-7.80	-3.65	-3.26	-6.80
MS	**-12.52**	**13.82**	-0.37	**-12.54**	**13.84**	-0.38	-4.10	**24.80**	**19.73**	0.64	**28.25**	**29.14**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	**-46.62**	**-42.88**	**-69.48**	**-46.70**	**-42.83**	**-69.50**	**-35.52**	**-32.77**	**-56.62**	**-33.50**	**-30.38**	**-53.67**
MS	**-46.62**	**-30.68**	**-62.90**	**-46.70**	**-30.63**	**-62.93**	**-35.52**	**-16.21**	**-45.84**	**-28.69**	-9.35	**-35.15**
$\alpha(.8)$												
CS	**-32.37**	**-29.84**	**-52.55**	**-32.40**	**-29.82**	**-52.56**	**-22.50**	**-20.97**	**-38.76**	**-20.70**	**-18.68**	**-35.51**
MS	**-32.37**	**-12.03**	**-40.43**	**-32.40**	**-12.01**	**-40.45**	**-22.50**	0.82	**-21.78**	**-15.82**	7.35	-9.50
$\alpha(.9)$												
CS	**-16.65**	**-15.90**	**-29.89**	**-16.64**	**-15.90**	**-29.88**	**-10.32**	**-10.08**	**-19.34**	-9.50	-8.95	**-17.58**
MS	**-16.65**	8.29	-9.67	**-16.64**	8.28	-9.66	**-10.32**	**16.51**	4.56	-6.15	**20.10**	**12.79**

Note: Regression FS = regression FSR method, Bartlett FS = Bartlett FSR method, Croon = Croon's method using the original formulas uncorrected for unique factor correlations, SEM = Structural Equation Modeling (Simultaneous Estimation) under the assumption of conditionally independent uniquenesses, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 27

Percent Bias in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 2: $N = 1000$

	Hoshino-Bentler			Croon FM			Croon MM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1												
$\alpha(.7)$												
CS	-0.32	0.30	-0.02	-1.19	-0.56	-1.74	-0.32	0.30	-0.02	-0.32	0.30	-0.02
MS	-0.32	**30.06**	**29.76**	-1.19	**28.91**	**27.49**	-0.32	**30.06**	**29.76**	**12.27**	**39.84**	**57.12**
$\alpha(.8)$												
CS	-0.17	0.14	0.00	-0.63	-0.34	-0.95	-0.17	0.14	0.00	-0.17	0.14	0.00
MS	-0.17	**30.17**	**30.04**	-0.63	**29.56**	**28.82**	-0.17	**30.17**	**30.04**	9.47	**37.07**	**50.15**
$\alpha(.9)$												
CS	0.00	0.18	0.21	-0.16	0.01	-0.12	0.00	0.18	0.21	0.00	0.18	0.21
MS	0.00	**30.15**	**30.23**	-0.16	**29.94**	**29.81**	0.00	**30.15**	**30.23**	5.36	**33.57**	**40.81**
Unique Factor Correlation = .3												
$\alpha(.7)$												
CS	-0.04	0.10	0.07	-0.98	-0.81	-1.77	-0.04	0.10	0.07	-0.04	0.10	0.07
MS	-0.04	**29.92**	**29.97**	-0.98	**28.72**	**27.56**	-0.04	**29.92**	**29.97**	**12.90**	**40.05**	**58.24**
$\alpha(.8)$												
CS	-0.42	-0.43	-0.83	-0.86	-0.89	-1.74	-0.42	-0.43	-0.83	-0.42	-0.43	-0.83
MS	-0.42	**29.63**	**29.18**	-0.86	**29.04**	**28.03**	-0.42	**29.63**	**29.18**	9.53	**36.83**	**49.97**
$\alpha(.9)$												
CS	0.14	0.21	0.35	-0.03	0.05	0.02	0.14	0.21	0.35	0.14	0.21	0.35
MS	0.14	**30.22**	**30.46**	-0.03	**30.01**	**30.03**	0.14	**30.22**	**30.46**	5.76	**33.83**	**41.61**
Unique Factor Correlation = .5												
$\alpha(.7)$												
CS	-0.18	-0.19	-0.33	-1.10	-1.12	-2.17	-0.18	-0.19	-0.33	-0.18	-0.19	-0.33
MS	-0.18	**29.85**	**29.75**	-1.10	**28.59**	**27.31**	-0.18	**29.85**	**29.75**	**13.07**	**40.31**	**58.80**
$\alpha(.8)$												
CS	-0.27	-0.10	-0.37	-0.72	-0.53	-1.26	-0.27	-0.10	-0.37	-0.27	-0.10	-0.37
MS	-0.27	**29.84**	**29.56**	-0.72	**29.25**	**28.39**	-0.27	**29.84**	**29.56**	9.97	**37.27**	**51.04**
$\alpha(.9)$												
CS	-0.12	-0.18	-0.29	-0.28	-0.32	-0.60	-0.12	-0.18	-0.29	-0.12	-0.18	-0.29
MS	-0.12	**29.76**	**29.67**	-0.28	**29.55**	**29.25**	-0.12	**29.76**	**29.67**	5.74	**33.56**	**41.30**

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, Croon MM = Croon's method corrected for correlated uniquenesses at the measurement model level, SEM = Structural Equation Modeling (Simultaneous Estimation) correctly specifying the correlated residual structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). Bold entries indicate absolute values of percent bias > 10.

Table 28

Mean square error ratios in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 2: $N = 250$.

	Hoshino-Bentler			Croon FM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1									
$\alpha(.7)$									
CS	1.00	1.00	1.00	1.09	1.00	0.99	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.09	0.74	0.65	1.57	1.65	2.69
$\alpha(.8)$									
CS	1.00	1.00	1.00	1.00	0.98	0.97	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.00	0.87	0.79	1.59	1.47	2.26
$\alpha(.9)$									
CS	1.00	1.00	1.00	1.01	0.98	0.99	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.01	0.95	0.92	1.21	1.22	1.64
Unique Factor Correlation = .3									
$\alpha(.7)$									
CS	1.00	1.00	1.00	1.07	0.94	0.94	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.07	0.74	0.64	1.69	1.67	2.71
$\alpha(.8)$									
CS	1.00	1.00	1.00	1.04	0.95	0.96	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.04	0.86	0.80	1.49	1.47	2.31
$\alpha(.9)$									
CS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.00	0.95	0.91	1.28	1.25	1.7
Unique Factor Correlation = .5									
$\alpha(.7)$									
CS	1.00	1.00	1.00	1.05	0.90	0.88	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.05	0.73	0.64	1.53	1.66	2.59
$\alpha(.8)$									
CS	1.00	1.00	1.00	1.01	0.98	0.97	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.01	0.86	0.78	1.62	1.50	2.37
$\alpha(.9)$									
CS	1.00	1.00	1.00	1.00	0.99	0.99	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.00	0.95	0.92	1.31	1.25	1.71

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, SEM = Structural Equation Modeling (Simultaneous Estimation), with correctly specified unique factor structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). All MSE ratios are divided by the MSE for Croon's method corrected for correlated uniquenesses at the measurement model level (Croon MM), i.e., $MSE_{Estimator}/MSE_{Croon\_MM}$.

Table 29

Mean square error ratios in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 2: $N = 500$.

	Hoshino-Bentler			Croon FM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1									
$\alpha(.7)$									
CS	1.00	1.00	1.00	1.07	1.01	1.02	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.07	0.87	0.78	2.52	1.72	3.14
$\alpha(.8)$									
CS	1.00	1.00	1.00	1.02	0.99	0.99	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.02	0.93	0.88	2.19	1.48	2.46
$\alpha(.9)$									
CS	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.00	0.97	0.95	1.63	1.24	1.74
Unique Factor Correlation = .3									
$\alpha(.7)$									
CS	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.03	0.85	0.77	2.41	1.71	3.08
$\alpha(.8)$									
CS	1.00	1.00	1.00	1.01	1.00	0.99	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.01	0.93	0.88	2.44	1.50	2.53
$\alpha(.9)$									
CS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.00	0.97	0.95	1.63	1.25	1.79
Unique Factor Correlation = .5									
$\alpha(.7)$									
CS	1.00	1.00	1.00	1.04	0.96	0.97	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.04	0.85	0.77	2.30	1.72	3.10
$\alpha(.8)$									
CS	1.00	1.00	1.00	1.02	0.99	0.98	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.02	0.93	0.88	2.28	1.53	2.61
$\alpha(.9)$									
CS	1.00	1.00	1.00	1.01	0.99	1.00	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.01	0.97	0.95	1.68	1.26	1.84

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, SEM = Structural Equation Modeling (Simultaneous Estimation), with correctly specified unique factor structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). All MSE ratios are divided by the MSE for Croon's method corrected for correlated uniquenesses at the measurement model level (Croon MM), i.e., $MSE_{Estimator}/MSE_{Croon\_MM}$.

Table 30

Mean square error ratios in Models Correctly Specifying the Unique Factor Structure by Parameter and Simulation Condition, Simulation 2: $N = 1000$.

	Hoshino-Bentler			Croon FM			SEM		
Path:	*a*	*b*	*ab*	*a*	*b*	*ab*	*a*	*b*	*ab*
Unique Factor Correlation = .1									
$\alpha(.7)$									
CS	1.00	1.00	1.00	1.02	1.01	1.02	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.02	0.93	0.87	3.77	1.73	3.32
$\alpha(.8)$									
CS	1.00	1.00	1.00	1.02	1.00	1.00	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.02	0.96	0.93	3.63	1.50	2.62
$\alpha(.9)$									
CS	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.00	0.99	0.97	2.28	1.24	1.77
Unique Factor Correlation = .3									
$\alpha(.7)$									
CS	1.00	1.00	1.00	1.02	0.98	0.98	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.02	0.92	0.87	4.11	1.76	3.4
$\alpha(.8)$									
CS	1.00	1.00	1.00	1.01	1.00	1.01	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.01	0.96	0.93	3.37	1.53	2.72
$\alpha(.9)$									
CS	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.00	0.99	0.97	2.43	1.25	1.81
Unique Factor Correlation = .5									
$\alpha(.7)$									
CS	1.00	1.00	1.00	1.03	0.99	1.00	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.03	0.92	0.87	4.05	1.78	3.47
$\alpha(.8)$									
CS	1.00	1.00	1.00	1.01	0.99	1.00	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.01	0.96	0.93	3.76	1.55	2.79
$\alpha(.9)$									
CS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MS	1.00	1.00	1.00	1.00	0.99	0.97	2.37	1.27	1.87

Note: Hoshino-Bentler indicates Hoshino and Bentler's (2013) FSR method, Croon FM = Croon's method corrected for correlated uniquenesses at the factor model level, SEM = Structural Equation Modeling (Simultaneous Estimation), with correctly specified unique factor structure, CS = correct structural model specification (*c*' path freely estimated), MS = structural misspecification (*c*' path constrained to 0). All MSE ratios are divided by the MSE for Croon's method corrected for correlated uniquenesses at the measurement model level (Croon MM), i.e., $MSE_{Estimator}/MSE_{Croon\_MM}$.