## **Errors & Warnings**

In the following all different warning and error messages raised during the studies are listed (see Table 1) and shown how often they occurred under various fitting conditions (see Table 2).

**Table 1:** List of Unique Warnings and Errors

ID	Message						
1	lavaan WARNING: the optimizer warns that a solution has NOT been found!						
2	lavaan WARNING: some estimated ov variances are negative						
3	lavaan WARNING: the optimizer (NLMINB) claimed the model converged, but not all						
	elements of the gradient are (near) zero; the optimizer may not have found a local solution						
	use check. $gradient = FALSE$ to skip this check.						
4	lavaan WARNING: covariance matrix of latent variables is not positive definite; use						
	lavInspect(fit, "cov.lv") to investigate.						
5	lavaan WARNING: some estimated ly variances are negative						

Note. This table lists all unique warnings and errors encountered during the simulation studies.

Table 2: Summary of Warnings and Errors by Condition with ID for All Studies

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	Study	Model Type	N	Reliability	Method	MessageType	Count	Message ID
	Study 1	1.3	400	0.3	SEM	Warning	10	1
	Study 1	1.3	400	0.5	SEM	Warning	10	2
	Study 1	1.3	6400	0.3	SEM	Warning	10	1
	Study 1	1.3	6400	0.5	SEM	Warning	10	2
	Study 1	1.3	100	0.3	SEM	Warning	9	1
	Study 1	1.3	100	0.5	SEM	Warning	8	2
	Study 1	1.3	100	0.7	SEM	Warning	7	2

**Table 2:** Summary of Warnings and Errors by Condition with ID for All Studies *(continued)* 

Study	Model Type	N	Reliability	Method	MessageType	Count	Message ID
Study 1	1.2	100	0.3	SEM	Warning	4	2
Study 1	1.4	100	0.3	SEM	Warning	4	2
Study 1	1.2	100	0.5	SEM	Warning	3	2
Study 1	1.1	100	0.3	SEM	Warning	2	2
Study 1	1.2	100	0.3	SEM	Warning	2	3
Study 1	1.3	100	0.5	SEM	Warning	2	1
Study 1	1.3	400	0.7	SEM	Warning	2	2
Study 1	1.4	100	0.3	SEM	Warning	2	1
Study 1	1.1	100	0.3	SEM	Warning	1	1
Study 1	1.2	100	0.3	SEM	Warning	1	1
Study 1	1.2	100	0.7	SEM	Warning	1	2
Study 1	1.2	400	0.7	SEM	Warning	1	2
Study 1	1.3	100	0.3	SEM	Warning	1	3
Study 2	$2.2$ _exo	100	0.3	SEM	Warning	8	2
Study 2	$2.2$ _both	100	0.3	SEM	Warning	6	2
Study 2	2.1	100	0.3	SEM	Warning	4	2
Study 2	$2.2$ _endo	100	0.3	SEM	Warning	4	2
Study 2	$2.2\_both$	100	0.7	SEM	Warning	4	2
Study 2	$2.2$ _exo	100	0.5	SEM	Warning	3	2
Study 2	$2.2$ _endo	100	0.7	SEM	Warning	3	2
Study 2	$2.2$ _both	100	0.3	SEM	Warning	3	1
Study 2	2.1	100	0.3	SEM	Warning	2	1
Study 2	$2.2$ _exo	100	0.7	SEM	Warning	2	2
Study 2	$2.2$ _both	100	0.5	SEM	Warning	1	2
Study 3	3.1	50	0.3	SEM	Warning	1	4
Study 3	$3.1$ _negative	50	0.3	gSAM	Warning	1	5

Note. This table summarizes the count of warnings and errors for each condition in all three simulation studies with the respective ID number corresponding to table 1.