Table 32-2 ICC for Models 2 and 3 Based on Repeated Measures ANOVA

Note that the results of the ANOVA for model 2 and 3 are identical, regardless of which model is specified. However, the ICC differs because of how the values are used in calculation. See the Chapter 32 Supplement 1 for further illustration of calculating ICCs using SPSS and by hand.

```
RELIABILITY
  /VARIABLES=rater1 rater2 rater3 rater4
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=CORR ANOVA
  /ICC=MODEL(RANDOM) TYPE(ABSOLUTE) CIN=95 TESTVAL=0.
```

Reliability

Run using Scale > Reliability Analysis

Scale: ALL VARIABLES

This analysis is for Model 2. Statistics: Intraclass correlation coefficient / ANOVA table: F test / Model: Two-Way Random / Type: Absolute Agreement

Case Processing Summary

		N	%
Cases	Valid	8	100.0
	Excluded[a]	0	.0
	Total	8	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.977	.981	4

Inter-Item Correlation Matrix

	rater1	rater2	rater3	rater4
rater1	1.000	.973	.917	.977
rater2	.973	1.000	.918	.933
rater3	.917	.918	1.000	.858
rater4	.977	.933	.858	1.000

ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		4330.719	7	618.674		
Within People	Between Items	30.156	3	10.052	.715	.554
	Residual	295.344	21	14.064		
	Total	325.500	24	13.562		
Total		4656.219	31	150.201		

Grand Mean = 19.594

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.918[a]	.787	.980	43.990	7	21	.000
Average Measures	.978	.937	.995	43.990	7	21	.000

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

```
RELIABILITY
  /VARIABLES=rater1 rater2 rater3 rater4
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=CORR ANOVA
  /ICC=MODEL(MIXED) TYPE(CONSISTENCY) CIN=95 TESTVAL=0.
```

Reliability

Scale: ALL VARIABLES

This analysis is for Model 3. Statistics: Intraclass correlation coefficient / ANOVA table: F test / Model: Two-Way Mixed / Type: Consistency

Case Processing Summary

		N	%
Cases	Valid	8	100.0
	Excluded[a]	0	.0
	Total	8	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.977	.981	4

Inter-Item Correlation Matrix

	rater1	rater2	rater3	rater4
rater1	1.000	.973	.917	.977
rater2	.973	1.000	.918	.933
rater3	.917	.918	1.000	.858
rater4	.977	.933	.858	1.000

ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		4330.719	7	618.674		
Within People	Between Items	30.156	3	10.052	.715	.554
	Residual	295.344	21	14.064		
	Total	325.500	24	13.562		
Total		4656.219	31	150.201		

Grand Mean = 19.594

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.915[a]	.776	.980	43.990	7	21	.000
Average Measures	.977[c]	.933	.995	43.990	7	21	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type C intraclass correlation coefficients using a consistency definition. The between-measure variance is excluded from the denominator variance.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.