



Pretest-Posttest Comparisons Across Devereux Assessments

The purpose of this guide is to assist programs in comparing pretest and posttest *T*-scores across Devereux assessments for individual children. Changes in a child's *T*-scores over time can be evaluated when a period of at least 4 weeks between the ratings has elapsed, so that the latter rating represents a new sample of behaviors. Whenever possible, the same rater should be used for both the pretest and the posttest rating. It is essential, however, that the same type of rater (parent or teacher) be used at both administrations.

When comparing a child's scores over a period of time, it is possible that the child may age out of the Devereux assessment used for the pretest rating and be rated on a different Devereux assessment at posttest. In these cases, it is still possible to determine the statistical significance of the difference between pretest and posttest scores across two different assessments. However the following recommendations by the Devereux Center for Resilient Children apply:

1. Comparisons should be made on the Total Protective Factors (TPF, for the DECA-I, T, and P) and Social-Emotional Composite/Total (SEC, for the DESSA and DESSA-SSE; SET for the DESSA-mini) Scale *T*-scores.
2. Comparisons should not be made on the individual scales. The reason for this is because the actual items across the Devereux assessments differ, which makes it difficult to directly compare scales. An exception to this rule occurs only when comparing the DECA Protective Factor and Behavioral Concern scales to these same scales on the DECA-P2, as the majority of the items across these two assessments remain unchanged.
3. Comparisons should only be made across adjacent age levels (e.g., DECA Infant to DECA Toddler).

If the above recommendations are met, the following process can be used to determine whether the variation between the child's pretest and posttest scores exceeds the amount that would be expected due to chance. The table below provides the differences needed for significance at both the 95% level (.05) and 99% level (.01) of significance. The values in these tables are based on the standard error of the difference between the scores, calculated using the formula provided by Anastasi and Urbina (1997), a z value of 1.96 for the 95% level of significance (2.58 for the 99% level), and the standard errors of measurement provided in the manuals for each Devereux assessment.

To use this table, first find the row of the table for the appropriate Devereux assessment comparison (e.g.,

DECA-P2 to DESSA). Then, reading to the right, find the column that corresponds to the appropriate rater (parent or teacher) and significance level (.05 or .01). To be significant, the difference between the pretest and posttest *T*-scores must be equal to or greater than the tabled value.

For example, if the pretest rating was completed by a parent using the DECA-P2 and the Total Protective Factors scale *T*-score is 36, and the posttest rating was completed on the DESSA and the Social-Emotional Composite *T*-score is 43, the 7-point difference is compared to the value in the table below. In this example, the difference is significant at the 95% level of significance (the table shows that a difference of 7 or more points is needed). This result would be interpreted as meaning that the child's scores significantly increased between pretest and posttest.

**Differences Required for Significance When Comparing Pretest and Posttest
T-Scores Across Devereux Assessments**

	Parents		Teachers	
	.05	.01	.05	.01
DECA Infant to DECA Toddler (TPF)	8	10	7	9
DECA Toddler to DECA (TPF)	8	10	7	9
DECA Toddler to DECA-P2 (TPF)	8	10	7	9
DECA to DECA-P2 (TPF)	9	11	7	9
DECA IN to DECA-P2 IN (Initiative)	11	14	9	11
DECA SC to DECA-P2 SR (Self-Control/Regulation)	10	13	8	11
DECA AT to DECA-P2 A/R (Attachment/Relationships)	14	18	11	15
DECA BC to DECA-P2 BC (Behavioral Concerns)	14	19	12	15
DECA TPF to DESSA SEC	7	9	6	7
DECA-P2 TPF to DESSA SEC	7	9	5	7
DECA TPF to DESSA-mini SET			8	10
DECA-P2 TPF to DESSA-mini SET			8	10
DECA TPF to DESSA-SSE SEC	8	10	6	8
DECA-P2 TPF to DESSA-SSE SEC	7	9	6	7

For further assistance or questions, please contact Jennifer Fleming at jfleming2@devereux.org.