

# DECA Outcomes Report 2015-2016 Program Year

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## Building Blocks Preschool

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A summary of findings is provided below for all children with complete pre and posttest DECA ratings enrolled in Building Blocks Preschool. These findings illustrate the change in children’s within-child protective factors and behavioral concerns throughout the program year. The within-child protective factors evaluated by the DECA provide a measure of children’s social and emotional competence, both globally and within individual social-emotional domains. A total of 62 children enrolled in Building Block Preschool were rated on the DECA at two time points during the 2015-16 program year. 54% of the children included in this analysis were female, and 46% of the children were male.

Two questions were of particular interest when examining children’s within-child protective factors during the 2015-2016 program year. These questions include:

1. Were there improvements in children’s overall within-child protective factors, as measured by the DECA Total Protective Factors score (TPF)?
2. Were there improvements in specific protective factor areas, as measured by the three DECA scales (Initiative, Self-Regulation, and Attachment/Relationships) and the Behavioral Concerns screener?

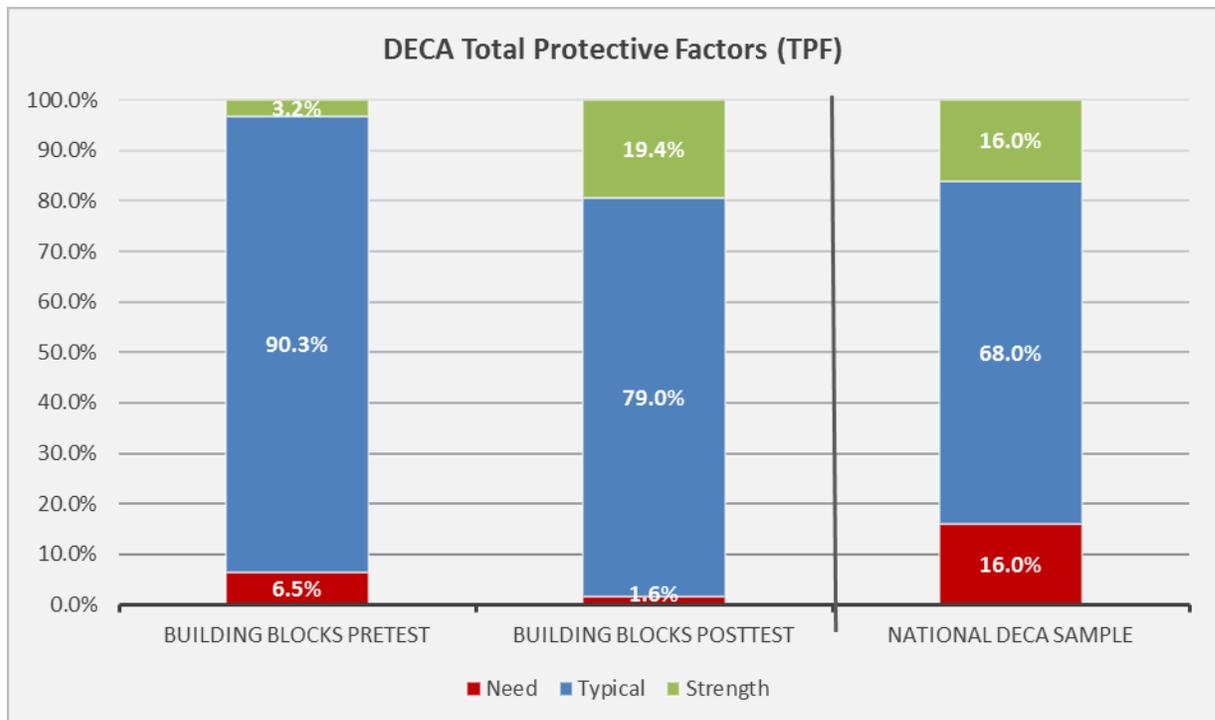
To examine these questions, paired samples *t*-tests were conducted to examine whether statistically significant changes were evident across mean pre and posttest *T*-scores on the TPF, three protective factor scales, and Behavioral Concerns screener. The distribution of children’s DECA scores across the three descriptive categories (Strength, Typical, and Area of Need ranges) from the Time 1 to Time 2 rating were also examined to assess whether children moved across categories (e.g., from the Need to the Typical range).

### **Question #1: Were there improvements in children’s overall within-child protective factors, as measured by the DECA Total Protective Factors (TPF) across the program year?**

Children at Building Blocks Preschool showed *a statistically significant improvement in their overall within-child protective factors* from the beginning to the end of the program year. This means that children are showing improvements beyond what would be expected based on chance variation in scores alone. At pretest, the DECA Total Protective Factors (TPF) *T*-score for the 62 children assessed was 49.0 (SD = 6.2). At posttest, the mean DECA TPF *T*-score for these same children was 54.4 (SD = 7.2), indicating an increase of 5.4 *T*-score points during the year.

To further explore children’s overall within-child protective factors, we examined the distribution of children’s scores across the three DECA descriptive categories (Strength, Typical, and Area of Need ranges),

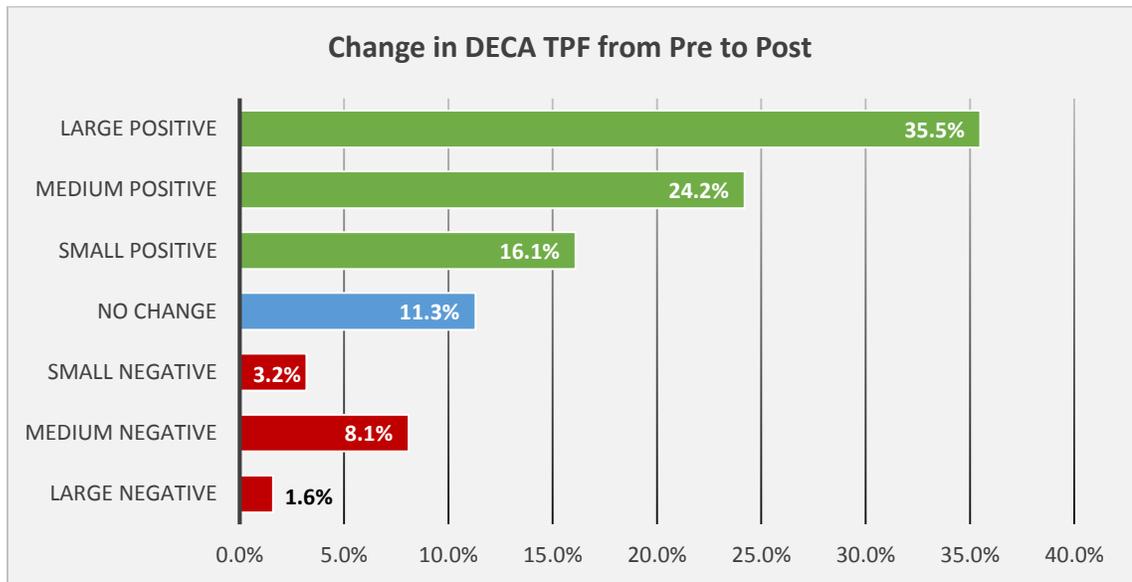
which were determined through collecting a nationally representative sample of DECA scores. The bar graph on the next page provides these descriptive categories for this program and for the national DECA data (for comparison purposes). As can be seen in this graph, the percentage of children at Building Blocks Preschool with overall protective factors in the Strength range increased from Time 1 to Time 2, while the percentage of children in the Area of Need range decreased across the program year, indicating positive improvements in children’s overall protective factors over time. By posttest, nearly all the children assessed at Building Blocks Preschool demonstrated strong to typical levels of within-child protective factors.



It is also of interest to better understand the degree of change in individual children’s pre to posttest *T*-Scores on the DECA TPF. To do this, a change score (posttest rating minus pretest rating) was calculated for each child, and children were classified into the change categories shown in the box on the right. These data are presented in the bar graph on the next page, which shows that over a third of children (35.5%) in this program showed a large positive change during the program year. Furthermore, the majority of children assessed (75.8%) showed a positive change in their overall within-child protective factors throughout

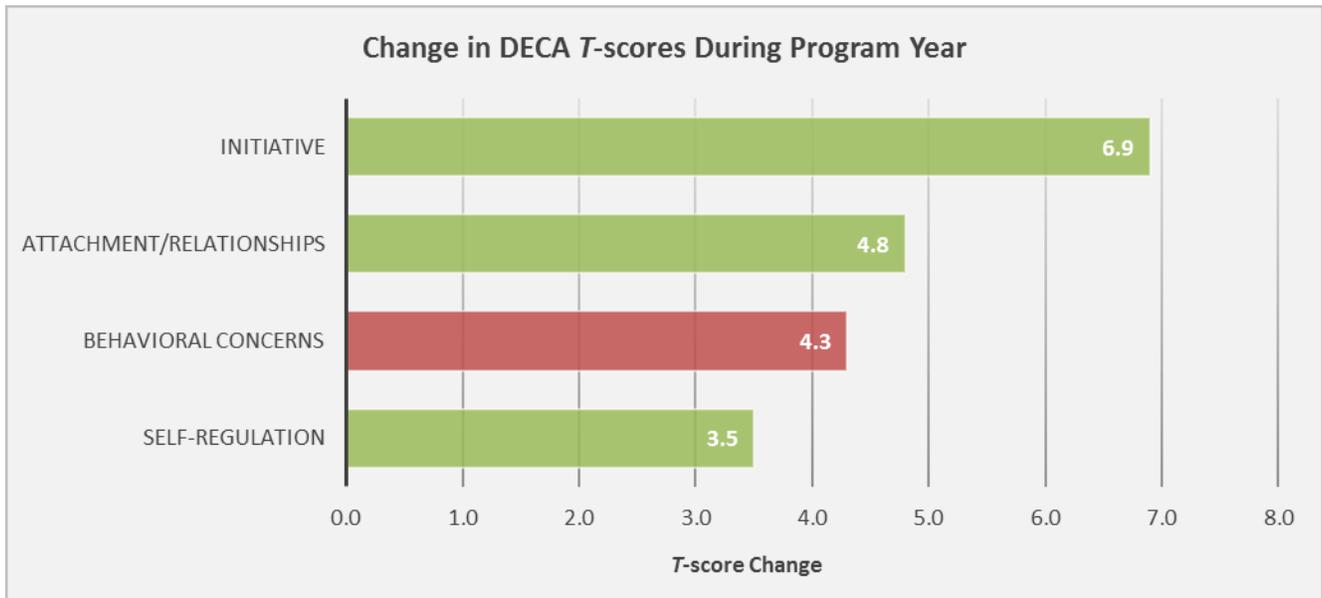
No change	-1 to 1 <i>T</i> -score points
Small positive or negative change	2 to 4 <i>T</i> -score points
Medium positive or negative change	5 to 7 <i>T</i> -score points
Large positive or negative change	8 or more <i>T</i> -score points

the program year. It may be of interest to explore key characteristics (e.g., program attendance, demographics, etc.) of the children showing a decline or no change in total protective factors in order to guide future resilience-building efforts.

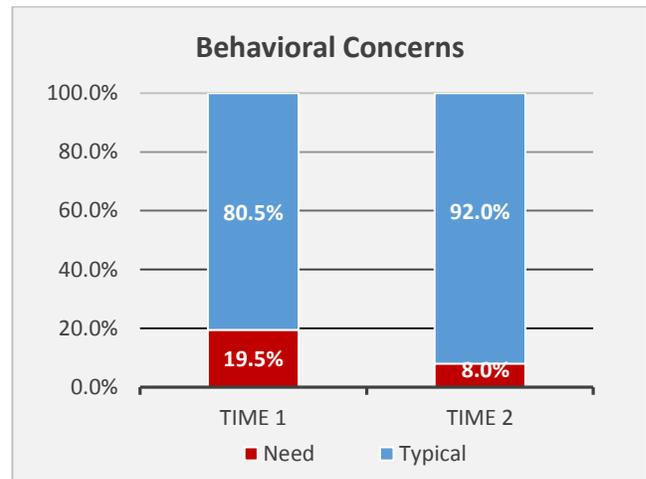
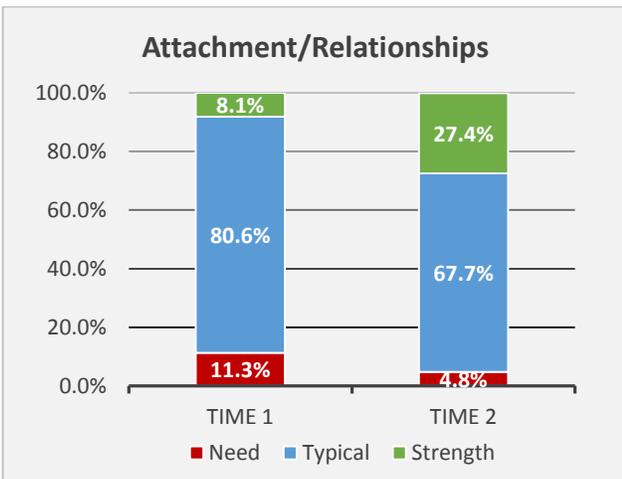
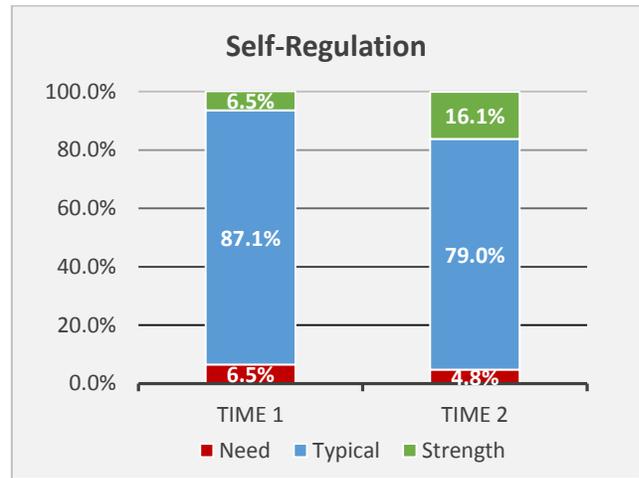
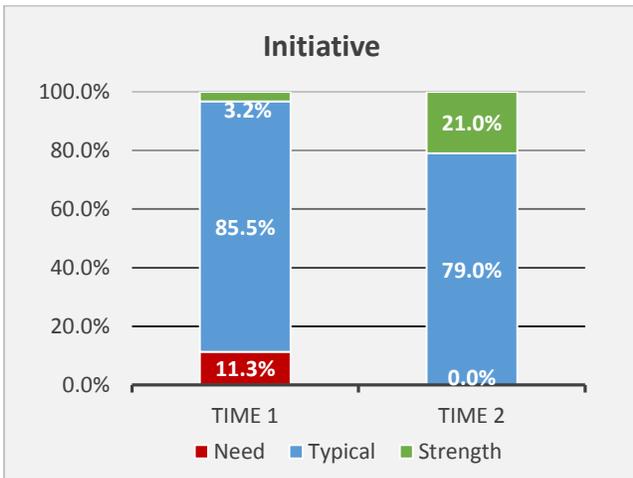


### Question #2: Were there improvements in specific protective factor areas, as measured by the three protective factor DECA scales and the Behavioral Concerns screener?

In addition to examining children’s overall within-child protective factors, pre and posttest *T*-scores on each DECA scale were examined. Overall, children showed a ***statistically significant improvement on all three DECA protective factor scales*** from the beginning to the end of the program year, with a range of 3.5 to 6.9 mean *T*-score point increases between pre and posttest. Additionally, children showed a ***statistically significant decrease on the Behavioral Concerns screener*** from the beginning to the end of the program year. Mean *T*-score changes are displayed in the graph on the next page. For more specific information on these scores and analyses, please refer to the appendix at the end of this report.



To further examine the pre and posttest scores on each DECA scale, the distribution of children’s pre and posttest descriptive categories (based on the child’s *T*-score for each scale) are provided below for all three protective factor scales and the Behavioral Concerns screener. Across the protective factor scales, the percentage of children within the “Strength” range increased from pre to posttest, while the percentage of children within the “Need” range decreased from pre to posttest, indicating improvements in within-child protective factors. Additionally, the percentage of children identified as displaying Behavioral Concerns decreased from pre to posttest. When considering the national distribution, the children enrolled in this program showed more resilience-related “Strengths” than would be expected in a typical population of children across all protective factor domains measured by the DECA. By posttest, nearly all children were within the “Typical” or “Strength” range across all DECA scales.



## Summary

The results summarized above indicate that the children enrolled in Building Blocks Preschool made significant improvements in their overall within-child protective factors (as measured by the DECA TPF), in the three protective factor domains measured by the DECA scales, and on the Behavioral Concerns screener across the 2015-2016 program year. Across all of the scales, the percentage of children within the “Strength” range increased from pre to posttest, while the percentage of children within the “Need” range decreased across the program year. By posttest, nearly all the children at this site demonstrated protective factors within the “Typical” or “Strength” ranges.

## Appendix

### DECA Pre and Posttest Results for Building Blocks Preschool

	DECA Pre (N =62)		DECA Post (N =62)		Mean <i>T</i> - score Difference	<i>t</i> -value	Effect Size ( <i>d</i> )
	Mean	SD	Mean	SD			
<b>Initiative</b>	47.9	6.3	54.8	7.6	6.9	-7.23*	0.98
<b>Self-Regulation</b>	49.6	6.7	53.1	8.1	3.5	-3.36*	0.47
<b>Attachment/Relationships</b>	49.0	7.2	53.8	8.7	4.8	-4.78*	0.59
<b>Behavioral Concerns</b>	53.5	7.5	49.2	6.4	-4.3	4.61*	0.61
<b>Total Protective Factors</b>	49.0	6.2	54.4	7.2	5.4	-6.67*	0.81

*Note.* \* Indicates statistically significant difference. To account for the multiple comparisons being made, a Bonferroni alpha level of .01 was used when determining significance on the DECA TPF and scale comparisons.

Effect size estimates are based on the following guidelines proposed by Cohen (1988): Negligible change = less than .20; Small change = .20-.49; Medium change = .50-.79; Large change = .80 and above.