

Research Report #5

Pilot Study

Year 2

Introduction

In addition to the well-documented risk factors experienced by some children, such as poverty, family discord, and developmental problems, all children may encounter significant stress or adversity during their lifetime. For example:

- 6-7% of all individuals, including children, witness significant trauma, or experience a major natural disaster each year.
- Violence can occur in any neighborhood or school.

Stresses such as these can threaten healthy social and emotional development, and lead to the development of significant emotional and behavioral problems. Resilience theory suggests that the strengthening of protective factors, both within children and in their environments, can help counterbalance the negative effects of risk factors and help individuals overcome adversity.

The Devereux Early Childhood Assessment (DECA) Program - Based on resilience theory, the DECA Program is a comprehensive, strength-based primary prevention program designed to foster healthy social and emotional growth in all preschool children ages 2 through 5. Focusing on the development of "within-child protective factors," the DECA Program strengthens quality early childhood care and education programs, as well as supports and facilitates parent-professional collaboration.

The current study – This study presents an evaluation of the DECA Program and its effectiveness in building within-child protective factors. At the beginning of the study, it was hypothesized that Target group children would show greater increases in protective factors and greater decreases in behavior concerns over the course of one school year compared to Control group children.

Method

Participants – Three hundred and forty two children, ages two through five, from the Audubon Area Head Start Program in Kentucky participated in this study. Different program sites were used for the Target and the Control conditions to avoid unintentional dissemination of the DECA Program to the Control condition teachers. The Target group consisted of 133 children. The Control group consisted of 209 children.

Measures – The dependent variable used in this study was the *Devereux Early Childhood Assessment* (DECA), a 37-item, nationally normed and standardized behavior rating scale for preschool children ages two through five. The DECA assesses three within-child protective factors related to resilience: Initiative, Self-control and Attachment, as well as provides a Total Protective Factors Scale and a Behavioral Concerns Scale (See Figure 1). The DECA can be completed by parents or early childhood care and education staff. In this study, all results of each scale are reported in T-scores, which have a mean of 50 and a standard deviation of 10.

Procedure – This study used a pretest-posttest control group design. Existing sites and classrooms were assigned to either the Target or the Control conditions.

Target condition – Target classrooms participated in all aspects of the comprehensive DECA Program.

- Teachers received training in the DECA Program.
- Teachers rated each child using a DECA form.
- DECA results were used to create classroom action plans, individualized positive guidance plans (for children found to have significant behavioral concerns), and individualized protective factor development plans (for children found to have comparatively low or "weak" protective factors). These plans were then implemented within the classrooms.
- To examine generalization of behavioral changes to the home environment, Parents also rated their children.

Control condition – Teachers and parents in the Control condition only rated their children using the DECA. This condition did not receive training and did not participate in the other aspects of the program.

Both Target and Control groups administered the pretest DECA in October/November and the posttest DECA in April/May. The Target group implemented the DECA program for 4 or more months prior to posttest evaluations.

Results

Due to space limitations, these results will focus only on the Total Protective Factor Scale and the Behavioral Concerns Scale.

Baseline Data - The DECA scores provided by both parent and teacher raters for both Target and Control children at baseline (Pretest) were analyzed to look at similarities and differences between all children.

- The means for parents and teachers on the Total Protective Factors Scale were very close to the national mean of 50, and indicate that the children participating in this study did not differ markedly from most preschool children.
- There were no significant differences on the Total Protective Factor scores between the Target and Control groups at baseline.
- For the Behavioral Concerns Scale, teacher ratings for the Target and Control groups did not differ, but the mean score for parent ratings of the Target group was significantly higher than the parent ratings of the Control group.

Posttest Data – In order to analyze the changes between pre- and posttests, only children who had a complete set of Time 1 and Time 2 DECA ratings completed by either a parent or teacher were included in the sample. The final sample size was 113 Target and 182 Control children rated by teachers, and 82 Target and 171 Control children rated by parents. Paired sample t-tests and repeated measures ANOVAs were used to analyze the results. The results are presented in Figures 1 through 4.

Protective Factor Results - Figures 1 and 2 present the results for Total Protective Factors as rated by teachers and parents respectively.

- For teacher raters, children in both the Target and the Control groups showed significant increases in their Total Protective Factor scale scores.
- Children in the Target group showed greater increases than children in the Control group.
- For parent raters, only the Target group showed an increase in their Total Protective Factor scale scores.
- The magnitude of these increases (i.e. effect size) was small for parents and moderate for teachers.

Behavioral Concerns Results - Figures 3 and 4 present the results for Behavioral Concerns.

- The teacher ratings of Behavioral Concerns show a significant decrease for the Target group and a significant **increase** for the Control group
- For parent raters, there was no significant decrease for the Target group. However, there was a significant **increase** in behavioral concerns for the Control group.
- The effect sizes for these changes were also small.

Discussion

This study provides consistent evidence for the effectiveness of the DECA program in both increasing children's protective factors and decreasing their behavioral concerns. For the Target group, as rated by both parents and teachers, protective factors increased significantly over the course of the year. Although parents did not report an increase in Protective Factors for the children in the Control group, teachers did. This finding might be due to pretest sensitization or "compensatory control group effects" -the tendency of Control group teachers to second-guess and self-administer the intervention so as not to look "bad" in comparison to the Target group. For both parent and teacher raters, behavioral concerns increased significantly for the Control group. A decrease in behavioral concerns in the Target group was reported only by the teachers.

Although consistent with the experimental hypotheses, and statistically significant, the effect sizes reported in this study tended to be small. However, this is not surprising in that this program was implemented under naturalistic conditions. That is, teachers in the Target group were trained, but were not closely supervised in their implementation of the DECA program. Therefore, these results are probably representative of what a typical program, without benefit of extensive training, supervision or consultation, could expect.

Most importantly, these data indicate that children's' protective factors can be increased through a teacher-implemented, classroom-based program. The long-term effects of these changes on children's success in school and life in general are being investigated in ongoing longitudinal studies.

Abstract

The Devereux Early Childhood Assessment Program helps early childhood teachers, staff, and parents promote within child protective factors in children in order to counter balance the negative effects of risk factors or stress. This study was conducted to assess the efficacy of this program. Three hundred and forty two children from a Head Start program in Kentucky were divided into Target and Control conditions. Both teachers and parents completed DECAs on each child at the beginning and end of the school year. Target classrooms implemented the DECA program, while Control classrooms did not. It was hypothesized that Target children would have greater increases in protective factors and greater decreases in behavior concerns compared to Control children. In general, the hypotheses were supported by the data. Significant increases in protective factors were noted by both parents and teachers in the Target children. In addition, there were significant decreases in behavioral concerns noted by teacher ratings of Target children. Behavioral concerns of Control group children were perceived as worsening by both parent and teacher ratings. In general, the effect sizes tended to be small. However, because this program was implemented in a naturalistic fashion, these small effect sizes are encouraging. Taken together, these results support the contention that a teacher-implemented, classroom-based program can be effective in increasing young children's protective factors and decreasing their behavior concerns.

Figure 1.

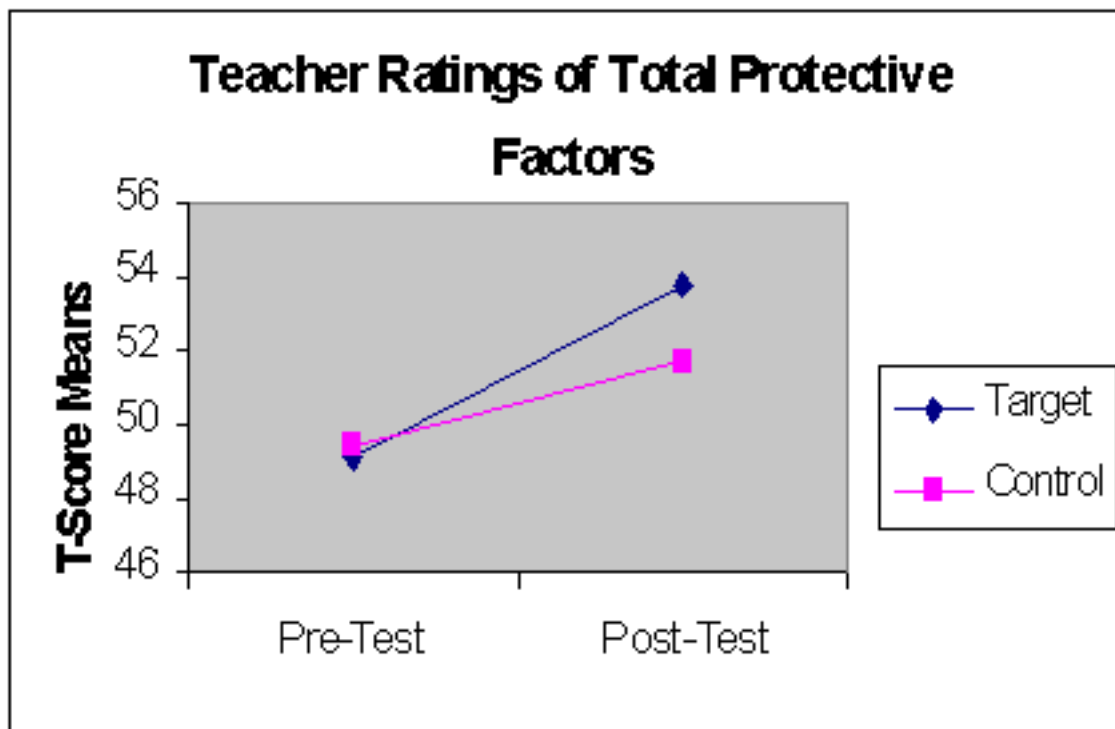


Figure 2.

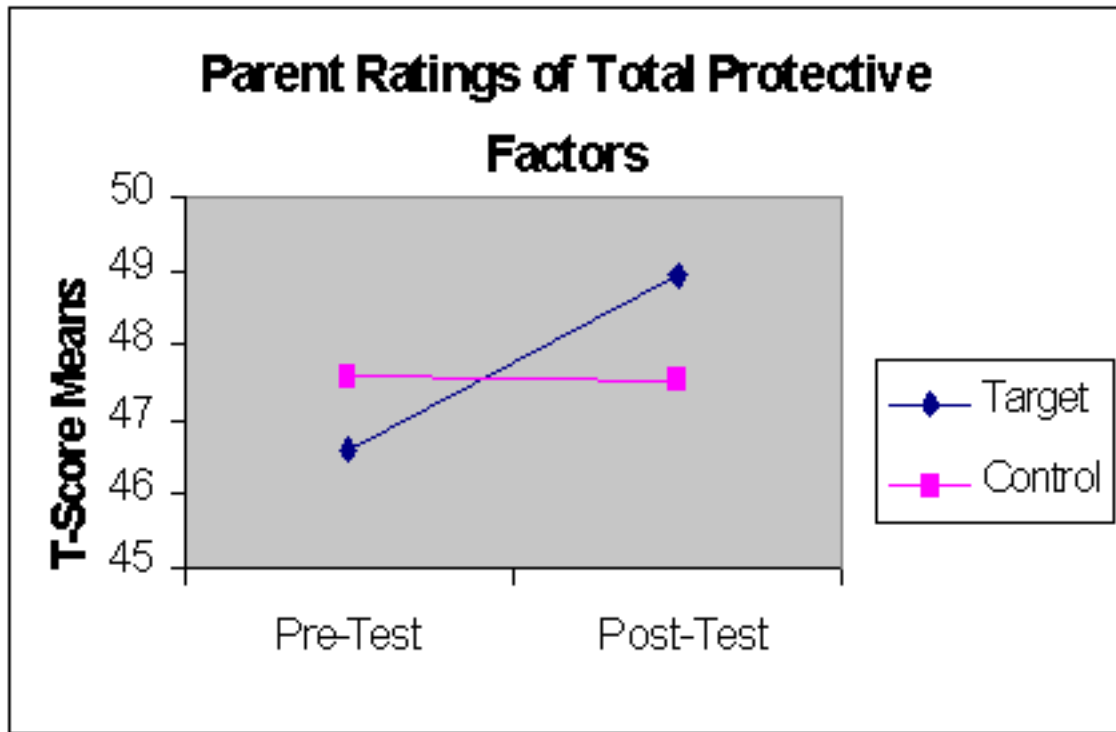


Figure 3.

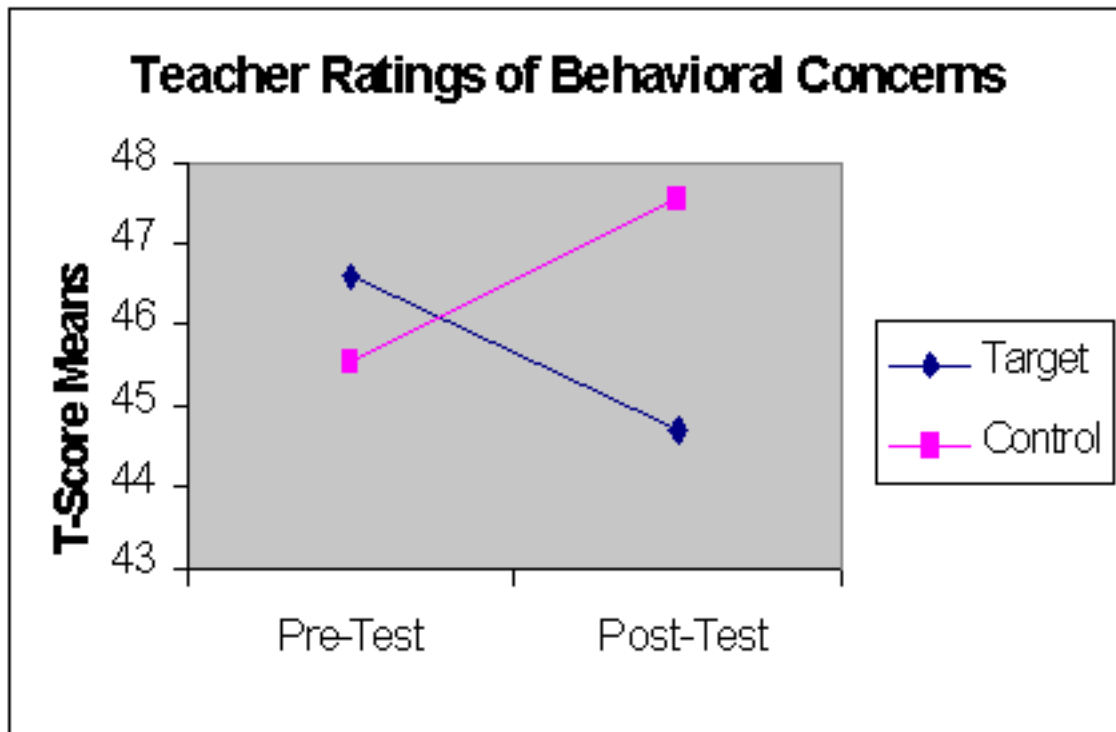
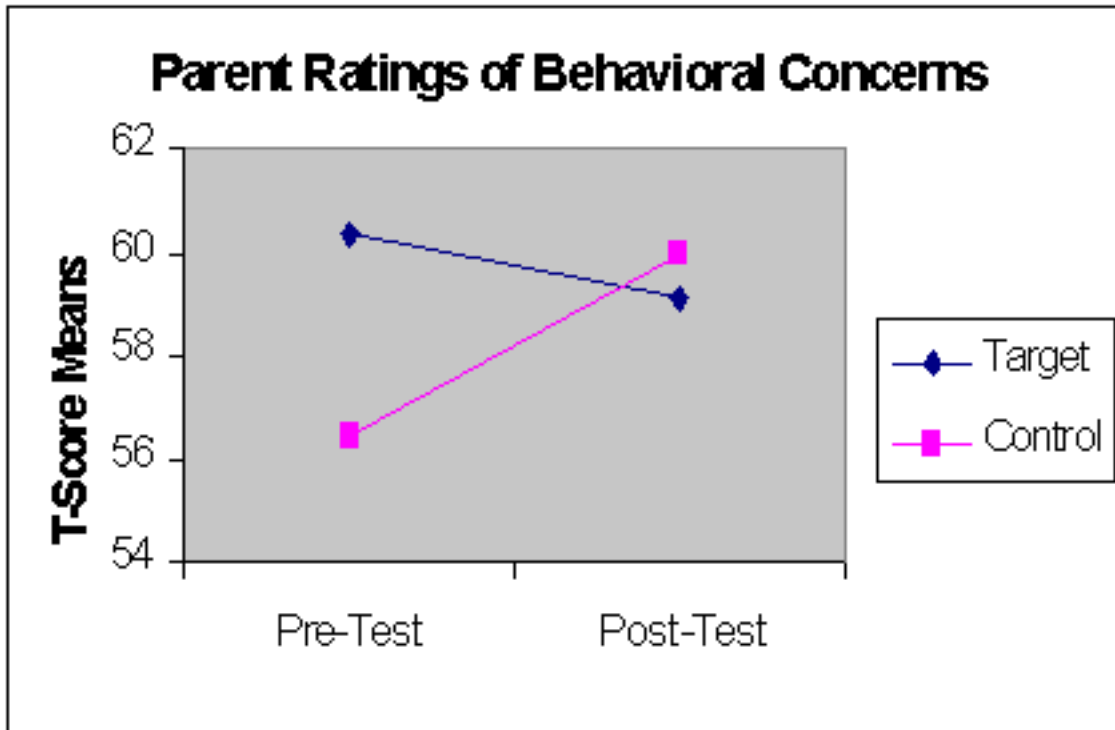


Figure 4.



Can we Foster Resilience in Young Children?

Research that says Yes!



**A poster presented at the
2001 NAEYC Convention
Paul LeBuffe & Linda Likins
The Devereux Early Childhood Initiative
Villanova, PA
(610) 542-3108**