The Validity of Protective Factors for Predicting Behavioral Concerns of Preschoolers across the School Year

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The concept of resilience, as well as approaches that promote resilience, has become well accepted within behavioral health and early care and education. At the core of resilience theory is the hypothesis that protective factors decrease the impact of risk in children's lives and lead to better than expected outcomes. Conversely, children with low protective factors are predicted to be at greater risk for negative developmental outcomes such as challenging behaviors. This assertion, if true, raises the possibility of avoiding at least some instances of challenging behavior by identifying young children who have comparatively weak protective factors and then proactively developing those strengths prior to the onset of challenging behaviors. Unfortunately, there is little evidence in the literature to support these assertions.

The Devereux Early Childhood Assessment (DECA: LeBuffe & Naglieri, 1999) is a nationally-normed teacher and parent completed behavioral rating scale that is widely used in Head Start programs. The DECA assesses within-child protective factors and provides an overall index of a child's behaviors related to resilience - the Total Protective Factor Scale as well as a Behavioral Concern Screener. The purpose of this study was to determine the predictive validity of the DECA Total Protective Factors Scale in identifying children that are likely to develop behavioral concerns by the end of the school year.

The specific research question for this study was, to what extent does a child's score on the Total Protective Factors Scale at the beginning of a school year predict the likelihood of having challenging behaviors, as measured by the DECA Behavioral Concern Screener, at the end of the same school year?

A total of 406 students from Chemung County, New York participated in this study. A pretest(January)/posttest(May) model was used with approximately five months between ratings. The DECA was used as the dependent variable; specifically the Total Protective Factors (TPF) *T*-score and the Behavioral Concerns Screener (BC) *T*-score. TPF *T*-scores can be categorized into one of three descriptive ranges: *Strength* ($T \geq 60$), *Typical* ($T = 41 - 59$ inclusive), or *Concern* ($T \leq 40$). For BC, *T*-scores less than or equal to 59 are categorized as *Typical*, while *T*-scores greater than or equal to 60 are described as *Concerns*.

Results

As a preliminary analysis, overall changes in TPF and BC across the time interval of the study were examined. In general, for the entire sample, the mean level of BC stayed constant between pretest ($M = 48.64$, $SD = 10.62$) and posttest ($M = 47.98$, $SD = 11.59$) as did TPF at pretest ($M = 50.94$, $SD = 10.12$) and posttest ($M = 54.70$, $SD = 10.66$).

To specifically test the research question, the sample of children was divided into three groups based on their pretest TPF score (*strength, typical* and *concern*). Then their classification on BC at posttest (*concern* vs. *typical*) was examined. Of the 55 children who had a *concern* on TPF at pretest, approximately 70% (n = 38) had a BC score at posttest in the *concern* range. For the 275 preschoolers who had typical TPF score at pretest, only 13% (n = 37) had a BC *concern* at posttest. Finally, out of the 76 children who had a strength in TPF at pretest, none (0%) had a BC *concern* at posttest.

Because in this study TPF and BC had a strong concurrent negative correlation ($r = -.64$, $p <$ .001), many of the children with concerns in TPF at pretest already had concurrent behavioral concerns. For these children, the low TPF score does not predict the *subsequent* development of BC. However, of the 75 children with behavioral concerns at posttest, 30 (40%) did not have behavioral concerns at pretest. These 30 children developed behavioral concerns during the five month inter-rating period. Of these 30 children, 13 (43%) had TPF scores in the *concern* range at pretest and 25 (83%) had TPF scores below the normative 50th percentile. None (0%) had TPF scores in the *strength* range. These are children that might have benefited from true primary prevention strategies.

To further examine the independent and combined effects of TPF and BC at pretest on BC at posttest, a series of linear regressions were conducted. TPF at pretest accounted for 41% of the variance in posttest BC, $R^2 = .401$, $F(1,404) = 277.17$, $p < .001$, which indicates the model accounted for a moderate level of variance. When pretest BC was added to the equation, creating a multiple linear regression model, the amount of variance accounted for increased to 56%, $R^2 = .562$, $F(2,403) = 259.05$, $p < .001$. These results indicate that both TPF and BC, as measured during the school year, are moderate predictors of preschoolers' behavioral concerns by the end of the same school year.

Conclusions and Implications

This study demonstrates first that within-child protective factors as measured by the DECA are related to the development of behavioral concerns across time. Many of the children who had low protective factors in January already had developed behavioral concerns. For other children, however, low protective factors were associated with the *subsequent* development of behavioral concerns. In this study of 406 children, 75 had significant behavioral concerns at posttest. Of those 75, 13 (17%) could

have been proactively identified at pretest by a low protective factor score and in the absence of significant behavioral concerns. Subsequently, those children could have received prevention strategies designed to enhance protective factors that would moderate the effects of any present risk factors.

These results also raise the possibility that even more of the 75 children might have been proactively identified by low TPF, if the pretest had occurred earlier in the school year rather than in January (i.e., mid-year). Overall, the implications of this study include further promoting the validity of protective factors as predictors of behavioral concerns across time. The 13 children identified within this study using only TPF represents 3.2% of the original sample of 406 children. Given that Head Start serves approximately one million children, this suggests the possibility that more than 30,000 children at risk of developing behavioral concerns might be identified by assessing their protective factors early in the school year. Furthermore, this study promotes the utility of strength-based assessment and prevention/intervention work as a method for helping preschoolers in Head Start to gain more social-emotional competence at a younger age.

References

LeBuffe, P., & Naglieri, J. (1999) *Devereux Early Childhood Assessment*. Lewisville, NC: Kaplan Press.