

## **An Examination of the Devereux Student Strengths Assessment (DESSA) as Related to the Social and Work Skills Subscales on the ABAS-II with Intellectual and Developmental Disabilities and Co-occurring Autism Spectrum Disorders**

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### **Abstract**

Standardized strength-based assessments for individuals with intellectual disabilities and autism spectrum disorders are virtually nonexistent in the current literature. In the current study, correlational data suggest conceptually related constructs being assessed between the DESSA Social-Emotional Composite (SEC) and the Social subscale and to a lesser degree the Worker subscale on the ABAS-II providing preliminary evidence for convergent validity. A lower correlation between the DESSA SEC and the Self-Care subscale on ABAS-II, as predicted, suggests less conceptually similar constructs. Further analysis also found “Need for Instruction” status on the SEC of the DESSA appears conceptually related to low to very low scores on the Social subscale on ABAS-II. It should be noted that because of the small N and small count in one of the cells, results should be interpreted with caution. No relationship was found for worker subscale scores of  $\leq 4$  related to “Need for Instruction” status on the DESSA. Clinical applications of these findings include utilizing the DESSA assessment in treatment planning for adults with moderate to mild intellectual disabilities and co-morbid autism spectrum disorders. A more specific strength-based skill assessment can provide a more precise road map to treat social emotional deficits as well as aid in the delineation of skills deficits during behavior assessments in this population.

### **Introduction**

Recently, resiliency has become more of a focus in the field of psychology (Goldstein & Brooks, 2005). This is particularly true given the current zeitgeist of strength-based approaches to treatment and supports. Resiliency is thought to be an individual’s ability to accomplish positive outcomes and avoid negative outcomes when faced with aversive conditions (Wyman et al., 1999). The concept of resiliency is often studied through analyzing protective factors/strengths, or those factors which are thought to reduce one’s vulnerability to adverse conditions (Goldstein & Brooks, 2005). Social emotional skills related to resiliency, such as social-awareness, self-awareness, relationship skills, and emotional stability are vital for individuals to be successful in the community and workplace (Goleman, 2000; Sutin, et al., 2009). Further, individuals with intellectual disabilities (IDD), including those on the autism spectrum (ASD), have greater challenges in vocation placement, long term job success and much lower employment rates when compared to the general population (Taanila et al., 2005). Currently, multiple measures exist which attempt to operationalize resiliency constructs both for children and adults (Prince-Embury, 2007; Windle et al., 2011). For example, the Devereux Student Strengths Assessment (DESSA; LeBuffe, Shapiro & Naglieri, 2008) is a standardized rating scale which measures social-

emotional competencies/protective factors related to resilience, but is normed for children in kindergarten through the eighth grade. Standardized strength-based assessments, however, for the IDD and the ASD population are virtually nonexistent in the current literature (see Windle, et al., 2011 for review of assessments). Such assessments would seem essential in assessing social-emotional skills related to vocational readiness for this population.

The purpose of the current study was to begin to examine the validity of the DESSA with the IDD population. The Social-Emotional Composite (SEC) of the DESSA was examined to determine if it was significantly related to scores on the Social and Work subscales on the ABAS-II. The DESSA may be a useful assessment tool to identify social-emotional strengths and needs among individuals with mild to moderate intellectual disabilities, including those on the autism spectrum. If appropriate for this population, the use of the DESSA may add validity to the assessment process as a strength-based tool to inform strengths and, therefore, develop treatment objectives.

## Method

The ABAS-II assessment and DESSA were completed for thirty-five adults with mild to moderate intellectual disability including individuals with a comorbid diagnosis of autism regarding their behavior in home, day program and community settings. They were selected based on a review of current program enrollment demographics. Members of a large treatment center for Adults with Intellectual and Developmental Disabilities in PA identified those individuals with mild to moderate intellectual disability including individuals with a comorbid diagnosis of autism at the Devereux Pocono Center. The DESSA and ABAS-II Assessment were administered to Devereux program specialists who work with each individual. This study was a Correlational design examining scores on the Social-Emotional Composite of the DESSA in relation to worker skills and social skills as measured on the ABAS-II. Dependent measures included the total Social-Emotional Composite scores on the DESSA and the Social subscale and the Work subscale on the ABAS-II.

***Devereux Student Strengths Assessment (DESSA).*** The DESSA (LeBuffe et al., 2008) is a 72-item standardized rating scale which measures social-emotional competencies/protective factors related to resilience in children. The measure was designed to be completed by caregivers or professional staff (teachers, social service workers, etc.) for children in kindergarten through the eighth grade. The DESSA yields *T* scores (mean = 50, SD = 10) for a total Social-Emotional Composite and eight subscales including: Self-Awareness, Social-Awareness, Self-Management, Goal-Directed Behavior, Relationship Skills, Personal Responsibility, Decision Making, and Optimistic Thinking. *T*-Scores of 60 and above indicate that the individual has social-emotional “strengths”, *T*-scores of 41-59 on the DESSA indicate that the child is showing a “typical” amount of positive behaviors related to social and emotional competence, and *T*-scores of 40 and below indicate that the child has a “need” to further develop social and emotional skills as compared to the national standardization sample of children ages 5-14 years old. Reliability coefficients for parent raters (.98) and teacher raters (.99) were found to be very high for the total Social Emotional Composite. Internal reliability for parent and teacher raters ranged from .82 and .94 across all 8 subscales.

***Adaptive Behavior Assessment System-Second Edition (ABAS-II).*** The ABAS-II (Harrison & Oakland, 2003) provides a comprehensive, norm-referenced assessment of the adaptive behavior and skills of individuals from birth to age 89. It measure 10 specific adaptive skills across three domains

including: Conceptual (communication, functional academics, and self-direction skills subscales), Social (leisure and social skills subscales), and Practical (community use, home or school living, health and safety, and self-care subscales). Work skills also are assessed but not included in any of the three domains. Scores across domains are combined to create a general adaptive composite (GAC) score. All subscales including Social, Work and Self-care skills are measured as scaled scores with a mean of 10 and standard deviation of 3. Scaled scores of 7-6 and below are considered below average, scaled scores of 4-5 are considered Low and scaled scores 3 and below are considered Extremely Low. Raters can include caregivers and or professional staff (i.e. support coordinators, direct care staff, etc.) whom indicate the individual's level of independence for each item. Previous evaluations of the ABAS-II report it to be a highly valid and reliable assessment (i.e. Meikamp & Suppa, 2005; Rust & Wallace, 2004).

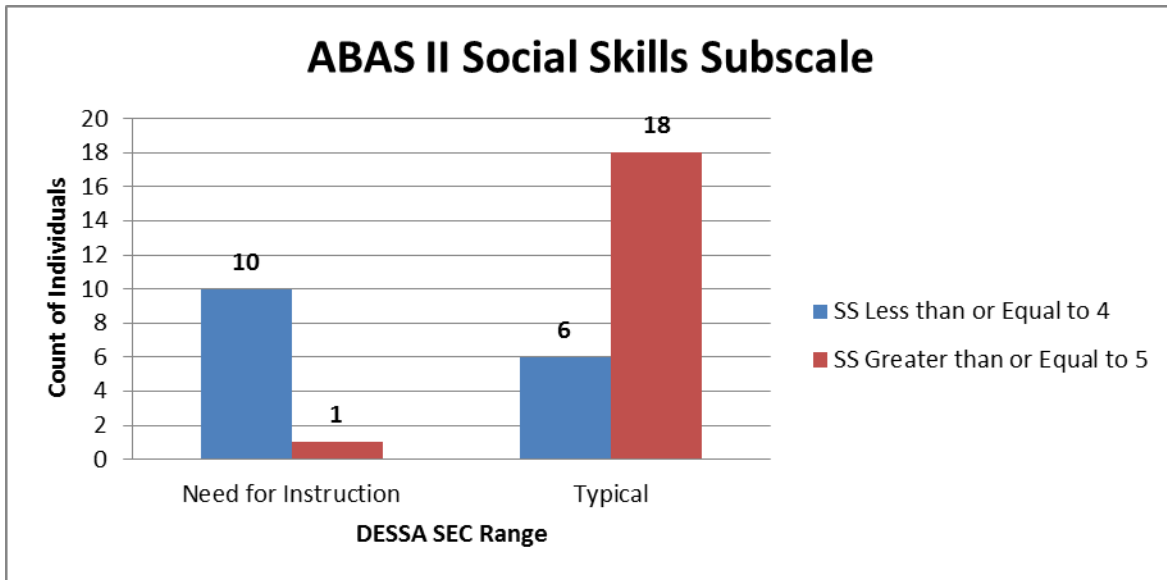
## Results

To determine if the DESSA was significantly associated with social skills as measured with the ABAS-II, a Pearson correlation was run to correlate the Social-Emotional Composite (SEC) *T*-scores with the scaled scores on both the Social and Work subscales on the ABAS-II. To provide a contrast to this analysis, a Pearson correlation was used to correlate the SEC on the DESSA with the Self-Care subscale on the ABAS-II to determine if the DESSA would not be related to a conceptually unrelated construct on the ABAS-II. Secondly, to determine if the "Need for Instruction" status on the DESSA would be significantly associated with below average-low status on the ABAS-II Social and Work subscales, a chi-square analysis was conducted to determine if at-risk status on the DESSA SEC (*T*-score of less than 41) was related to a scaled score of 7 or below on the ABAS-II Social and Work subscales. The chi-square analysis was supplemented by an analysis of the sensitivity and specificity of the DESSA in predicting Below Average status on the ABAS-II subscales.

The study included 35 clients with a mean age of 33 years (range of 20-65 years of age), 20 males, 15 females. The participants had a length of stay (in Devereux programs) for a mean of 32 mos. (range of 6-89 mos.). IDD Severity included 7 moderate (20%), 16 mild (45.7%), 8 unspecified (22.9%), 3 (8.6%) ASD only and 1 (TBI). Ten cases (28.6%) were comorbid for ASD. Program Type for participants included 27 (77.1%) at a community vocational training facility, 4 (11.4%) at a campus training facility, 2 (5.7%) working in the community, 1 in secondary school and 1 retired.

A significant correlation was found between the SEC composite on the DESSA and the Social subscale on the ABAS-II,  $r = .82$ ,  $r^2 = .68$ ,  $p < .001$  (one-tailed). A significant correlation was also found between the SEC composite on the DESSA and the Worker subscale on the ABAS-II,  $r = .66$ ,  $r^2 = .43$ ,  $p < .001$  (one-tailed). A significant but much **weaker** correlation was found between the SEC composite on the DESSA and the Self-care subscale on the ABAS-II,  $r = .36$ ,  $r^2 = .13$ ,  $p < .001$  (one-tailed). A Chi-square analysis found that "Need for Instruction" status ( $< 41$ ) on the DESSA's SEC was not significantly related to below average scores ( $\leq 7$ ) on the either the Social or Work subscales of the ABAS-II. A subsequent analysis found that "Need for Instruction" status ( $< 41$ ) on DESSA's SEC was significantly related to  $\leq 4$  (Low range and below) on the Social subscales of the ABAS-II,  $\chi^2(1) = 13.203$ ,  $p < .001$ . However the presences of a cell count of 1 in one of the cells violates the assumption of at least a count of 3-5 for each cell. Sensitivity for those in the "Need for Instruction" range on the DESSA being also  $\leq 4$  (Low range and below) on the ABAS-II Social subscale was 91%. Specificity for those "Typical" on the DESSA being also  $\geq 5$  (Low to average range) on the ABAS-II Social

subscale was 75%. No participant scores on the DESSA’s SEC composite were found to be in the strengths range ( $\geq 60$ ). An effect size was calculated, Cramer’s  $V = .81$  (strong association). No significance was found, however, for the ABAS-II Worker Skills subscale.



### Discussion

Correlational data suggest conceptually related constructs being assessed between the DESSA SEC and the Social subscale and to a lesser degree the Worker subscale on the ABAS-II providing preliminary evidence for current validity. A lower and moderate positive correlation between the DESSA SEC and the Self-care subscale on ABAS-II, as predicted, suggests conceptually unrelated constructs. The moderate correlation may reflect that some of the items on the DESSA relate to Self-care (i.e. “23. Do routine tasks or chores without being reminded” and “21. prepare for school, activities, or upcoming events”

The chi-square analysis was conducted to examine if scores falling in the “Need for Instruction” range on the DESSA would predict Below Average status on the ABAS-II subscales. Indeed, the analysis indicated that “Need for Instruction” ratings on the SEC for the DESSA tended to have low to very low ( $\leq 4$ ) scores on the ABAS-II Social subscale. In contrast, those with typical ratings on the SEC for the DESSA tended to have scores more toward the low-average range ( $\geq 5$ ) on the ABAS-II Social Skills subscale. Thus, “Need for Instruction” status on SEC on the DESSA appears conceptually related to low to very low scores on social subscale on ABAS-II. It should be noted that because of the small sample size and small count in one of the cells, results should be interpreted with caution. No relationship was found for the ABAS-II Work subscale scores of  $\leq 4$  related to at risk status on the DESSA.

Limitations of the study include a small sample size of 35, and the possibility that the current results may not generalize to other locations. Future studies should focus on replicating these results, including increasing the overall number of participants as well as the number of participants with ASD. Further, future exploration of the validity of DESSA with mild to moderate IDD and ASD population as

well as those in the severe and profound range should be done. Exploration of the validity of DESSA mini for use as follow-up may also be a fruitful area of focus.

Clinical applications of these findings include utilizing the DESSA assessment in treatment planning for programs that serve individuals with moderate to mild intellectual disabilities and comorbid autism spectrum disorders. A measure of more specific strength-based skill domains may provide a more precise road map to treat social-emotional deficits as well as aid in the delineation of skills deficits during behavior assessments. Profile analysis of common deficit areas may also aid in the development of positive behavior support Tier II group interventions. For example, if goal-directed behavior is identified as a “Need for Instruction” in the profile analysis at a particular program, skill-based group instruction may be designed to address this need program-wide.

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