

The Vista School: An effective model for combining education and ABA for children with autism



The Vista School[®] **AUTISM**
CENTRAL PA



CENTRAL PA REGIONAL AUTISM PARTNERSHIP
PENN STATE COLLEGE OF MEDICINE
PHILHAVEN
THE VISTA FOUNDATION

Kirsten K. L. Yurich, M.A., BCBA
The Vista School

Amanda M. Pearl, Ph.D
Penn State College of Medicine

Krina C. Durica, B.S.
The Vista School

ABSTRACT

Autism practitioners are frequently occupied by several questions to which there are few answers: what types of programs or curricula can support learners with autism, what settings support these models, and how can mandated education services be effectively coordinated with evidence-based applied behavior analysis (ABA). For any program to be effective, it must meet the educational and behavioral needs of its learners. The effects of an ABA treatment over time on several variables, including adaptive behavior, symptoms of autism, and communication competencies are presented. Overall, results suggest that while the targeted skills are mostly changing in the expected direction as reported by school personnel, these changes may not be generalizing to the home environment.

PROGRAM OVERVIEW

Recommended Practices for Individuals with Autism. Vista delivers recommended practices using the following program design (National Research Council, 2001).

Program Design. The Vista organization is a dually licensed facility. Its school, a Licensed Private Academic School, provides special education services to its enrolled population. Vista's Educationally-Integrated Behavioral Support Program is a Licensed Partial Hospitalization Program through the PA Department of Welfare and receives Medicaid funding in order to provide specialized behavioral health services to the students in The Vista School. Each organization operates within the same physical space (i.e. classroom) and delivers complimentary and coordinated treatment to a singular enrolled population. Finally, small class sizes and a structured program provide the basic framework to implement the following components effectively.

Staffing Design. School and partial program professionals make up the multi-disciplinary teams (MDT). MDT members consist of a special education teacher, speech-language pathologist, occupational therapist, behavior analyst, and a classroom coordinator. Coordinated teaming procedures ensure all disciplines are essentially co-treating each student. Students have unified Individualized Education Plans and Behavior Treatment Plans used to guide daily intervention. See Table 1 for other demographic information.

Table 1. Vista demographics 2010-2011 School Year

Position:	Number
Students	68
Management/Supervisors	6
Educational Professionals	16
Educational Para-Professionals	5
Related Service Professionals	10
Behavioral Health Professionals	5
Behavioral Health Support Staff	62

Use of Best Practices. The Vista School implements empirically supported treatments including those established through the field of Applied Behavior Analysis, Precision Teaching, and Direct Instruction. Students are given many opportunities to be successful each day across a variety of identified goals and curricula focusing primarily on core deficits and using highly motivating instructional conditions to bring about the desired learning.

Vista's services conform to the seven defining characteristics of Applied Behavior Analysis (ABA), that is program services are (1) applied, (2) behavioral, (3) analytic, (4) technological, (5) conceptually systematic, (6) effective, and (7) general.

Other key program elements include weekly community-based interventions to generalize attained skills and weekly in-home treatment provided by bachelors level therapists including parent training.

Training. The unique design of Vista allows for all primary interventionists to receive a single (core) curriculum of staff training. Training for all staff emphasizes using ABA as a framework for formulating, delivering, and monitoring treatment.

Supervision. A combined supervision model is employed across both the School and the Partial programs. Co-supervision and management models form the basis for employee management. Program service quality is kept high through universally expected practices.

Data Collection and Progress Monitoring. Relevant data are collected at appropriate intervals in order to measure both micro and macro analyses of student outcomes. Student specific data are collected across IEP and Treatment Plan objectives by MDT staff and are used to monitor daily to monthly progress. Further, an annual progress monitoring process administers standardized measures to all students to track yearly progress.

The following study investigated the effects of an ABA treatment over time on several variables related to student success. Each variable was measured as part of the student's annual progress monitoring.

HYPOTHESES

- As a result of attendance at Vista:
 - Adaptive behavior skills will increase.
 - Symptoms associated with ASDs will decrease.
 - Communication competencies, specifically auditory and expressive communication, will increase.

METHOD

Participants. Data was collected from 43 students (38 males; 5 females) at The Vista School across three years. The mean child age at Time 1 was 7.75 years (SD = 3.20) while mean caregiver age was 40.28 (SD = 7.95). 91% of students were Caucasian. The mean IQ was

62.69 (SD = 28.09). 86% of caregivers were in dual relationships. The average number of years of caregiver education was 14.84 years (SD = 4.12). Finally, 95% of caregivers were employed and the average annual family income was \$35,150 (SD = \$8,898).

Procedure. Caregivers and teachers of students completed several questionnaires administered yearly which measured adaptive skills and child behavior. Caregivers and teachers of students completed the adaptive skill measures, behavior analysts working at the school completed the autism symptoms measure, and speech-language pathologists (SLPs) rated communication competencies.

Measures.

- Vineland Adaptive Behavior Scales, Second Edition (Vineland – II; Sparrow, Cicchetti, & Balla, 2005, 2008)** measures personal and social skills needed for everyday living.
- Gilliam Autism Rating Scale (GARS – 2; South et al., 2002)** measures the severity of autism spectrum symptoms.
- Preschool Language Scale (PLS – 4; Zimmerman, Steiner, & Evatt Pond, 2002)** measures progress in language development. The PLS – 4 is only normed to age 6:11, but was utilized to measure language progress in predominantly nonverbal children and adolescents.

RESULTS

One-factor repeated measures ANOVAs were conducted to compare the effect of the Vista School's interventions on adaptive behavior, autism symptoms, and communication competencies over three years. See Table 2 for summary of results.

Table 2. Results

	Means			Direction of change	p
	Time 1	Time 2	Time 3		
Vineland – 2 (Caregiver)					
Expressive language	5.61	5.22	4.39	Decreasing	< .001
Written language	8.17	7.87	7.22	Decreasing	< .001
Community skills	6.26	6.43	5.52	Decreasing	< .01
Vineland – 2 (Teacher)					
Play and leisure skills	6.76	7.39	7.51	Increasing	< .001
Coping skills	7.21	7.98	7.88	Increasing	
Socialization skills	54.17	56.79	57.62	Increasing	< .001
GARS – 2 (MHP)					
Autism Index	91.45	88.17	82.10	Decreasing	
Stereotyped Behaviors	8.38	7.34	6.00	Decreasing	< .001
PLS – 4 (SLP)					
Auditory Comprehension	51.33	60.59	61.93	Increasing	< .001
Expressive Communication	44.63	47.89	51.89	Increasing	< .001

DISCUSSION

The Vista School has successfully developed a model that links education and medical funding in order to deliver effective and intensive treatment to children and adolescents with autism. Effectively engineering learning environments for children with autism is a complex and dynamic process. Effective tools, system support, and competency-based staff training represent several program components necessary for effective center-based autism programs.

An empirical examination of the Vista annual progress monitoring data suggests that in regards to adaptive behavior, neither caregivers nor teachers reported significant change in either direction over time for the majority of skills. Caregivers reported that their children's expressive and written language, as well as their children's community skills, decreased with time. On the other hand, teachers reported that children's play and leisure skills, coping skills, and socialization skills increased with time. Mental health professionals rated their student's ASD symptoms overall, as well as stereotyped behaviors, as decreasing with time. Finally, according to children's SLPs ratings, both auditory and expressive comprehension scores increased with time. Overall, results suggest that while the targeted skills are mostly changing in the expected direction as reported by school personnel, these changes may not be generalizing to the home environment.

Implications. Despite these limitations, the present study expands existing knowledge of the efficacy of ABA treatments for children/adolescents with moderate to severe ASD symptoms. Moreover, the results support the Vista model as an effective program model for educating (and treating) individuals with autism.

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