

## *Autism Program Environment Rating Scale (APERS)*

From the National Professional Development Center (NPDC) on Autism Spectrum Disorders

### **Nature of Intervention:** *Autism Program Environment Rating Scale (APERS)*

The APERS is one of several components of the National Professional Development Center on ASD (NPDC) that make up a comprehensive professional development model for teachers and service providers working with children with Autism Spectrum Disorders. Although an essential part of this comprehensive model, the APERS can be used as a standalone instrument to assess the quality of programs for learners with ASD.

The APERS is an environmental rating tool that contains between 64 to 69 items grouped into either 10 or 11 domains, depending on the version. It can be used to rate both inclusive and self-contained programs for learners with ASD at the preschool, elementary, middle, and high school levels. Two versions of the instrument have been developed: preschool/elementary and middle/high school. The APERS can be used to measure baseline program quality at the beginning of the academic year and again in the end of academic year to measure change in program quality during the course of the academic year. After the APERS is administered, an APERS report is generated that communicates the overall results. This report has two major features: a graphic summary of the results that illustrates the relative strengths and weaknesses in a given program by domain, and a narrative highlighting the qualitative nature of program strengths and specific suggestions for improvement. Two graphic summaries are used to convey results. One displays domain scores, while the other provides a more detailed graphic display of individual item scores by domains. A teacher self-assessment of program quality rating form has been developed and provides useful information from the teacher that is added to the overall discussion of findings and recommendations. With the help of technical assistance providers, teachers and team members work to build on strengths and address weaknesses using the suggestions from the report.

Technical assistants, coaches, autism specialists, and mentors have found the results of the APERS particularly useful to focus attention on those elements in the educational environment for learners with ASD that correlate with better instructional outcomes in both inclusive and self-contained classrooms, thus facilitating improvement in the program. The results of the APERS are displayed graphically so that teachers, team members, and other instructional staff can view their program strengths as well as areas that may require improvement. This contributes to the team developing a plan for program improvement that is focused, strategic, and achievable. Teams have found an end-of-the-year APERS, when compared with an initial APERS, can help to quantify the improvements that have been made during the academic year as well as set the stage for future improvement. Finally, the level of program quality established by the APERS serves as a platform for the successful implementation of specific evidence-based practices with individual learners with ASD.

### **Training Details:**

**Trainer.** Trainers of the APERS are individuals who have experience with its development and use in a variety of educational settings. They include staff of the NPDC and others who have been trained and are reliable. These individuals have trained numerous groups of professionals on the use of this instrument. Ann Cox, Suzanne Kucharczyk, and Evelyn Shaw are APERS developers and trainers.

**Trainees.** Trainees are typically technical assistance providers, coaches, and other professional development staff who work with preschool, elementary, middle, or high school programs (teachers and team members) for learners with autism spectrum disorders. These individuals, once trained, can administer the APERS to assess the quality of a school program for students with ASD and can use results of the APERS to assist programs develop a

professional development plan to improve the quality of their program. Trainees who complete the entire cycle of training are able to train others on the use of the APERS.

Frequency and location of training. APERS training can occur at the University of North Carolina or in the trainees' setting as negotiated with the training team.

A small trainer to trainee ratio is required to learn about the APERS and how to administer and score the APERS. Training includes didactic (classroom) training using PowerPoint slides, video samples, scoring practice, and report preparation. This portion of the training can accommodate a larger number of trainees (up to 15).

After the didactic training, participants will have the opportunity to administer APERS with trainers. One administration is led by the training team with trainees shadowing the process. The other administration is led by trainees with support from the training team, either on site or through remote coaching. Administration of the instrument requires an observation of students in classrooms (at least 3 hours); interviews (at least 45 minutes each) with teachers, team members, and a parent; and student record reviews. The observation time will vary between inclusive and self-contained environments, with inclusive settings requiring more observation time. For administration in a school, each trainer will support two trainees in order to minimize disruption in the classroom and to allow for maximum engagement in the process by trainees. Upon completion of the administration, each trainee will learn to and prepare a report of the findings with specific recommendations for improving the program and must present the findings to the program.

Train the trainers. In order to be trained to train others on the use of the APERS, trainees will be offered an additional day of content. During this day, trainees will learn how to deliver the didactic training and discuss potential challenges and solutions relevant to the administration of the APERS across multiple programs. Trained trainers will have access to the APERS training team for remote problem solving support for the length of one year post training.

The APERS has been taught to skilled coaches and technical assistance providers who then continue its use by training others. This has been done in the United States and in Saudi Arabia and Bangladesh. Representatives from these countries have traveled to North Carolina for the initial training and demonstration of proficiency. NPDC staff have traveled to other countries to conduct this training as well. However, the APERS is written in English. It has been translated to Arabic by our colleagues in Saudi Arabia and for their use.

Manual. At this time, there is no formal manual for the APERS. The administration protocol is part of the initial introductory section of the instrument. In the future, a manual will be developed.

#### **Evidence – base for the intervention:**

Using observational assessments to collect data on classroom and teacher variables that contribute to overall program quality is a well-researched and validated practice in the education literature (Pianta, Howes, Burchinal, Bryant, Clifford, Early, & Barbarin, 2005). The *Early Childhood Environment Rating Scale-Revised*, or ECERS-R (Harms, Clifford, & Cryer, 1998) and the *Infant/Toddler Environment Rating Scale-Revised*, or ITERS-R (Harms, Cryer, & Clifford, 2006) are two of the most widely used environmental rating scales. These rating scales include subscales to assess space and furnishings, routines, language-reasoning practices, activities, interactions in the classroom, program structure, and addressing the needs of parents and providers (Harms et al., 1998). A range of research projects have found significantly positive associations between the ECERS-R ratings (used as a general assessment of early childhood program quality) and (a) language and communication outcomes (Burchinal et al., 2000; Peisner-Feinberg et al., 1999), (b) cognitive outcomes (Burchinal et al., 2000; Peisner-Feinberg et al., 1999), (c) social outcomes (Peisner-Feinberg et al., 1999), and (d) children's behavior patterns (Peisner-Feinberg et al., 1999).

The development of the APERS has been systematic and iterative. The selection of items and the format for the APERS began with a review of the literature on assessment of program and learning environments for children and youth who are typically developing and individuals with ASD. Table 1 describes each of the environmental scales reviewed during the development of the APERS.

Table 1. Environmental Scales Reviewed During the Development of the APERS

<b>Scale</b>	<b>Author(s)</b>	<b>Description</b>	<b>Type of Environment</b>
<i>Assessment of Practices in Early Elementary Classrooms (APEEC)</i>	Hemmeter, Maxwell, Ault & Schuster	Evaluates the instructional, physical, and social contexts of early elementary environments that serve children with and without disabilities	Inclusive programs/classrooms that serve children in grades K-3
<i>Autism Program Quality Indicators (APQI)</i>	Crimmins, Durand, Theurer-Kaufman, & Everett	Designed to assess programs that serve children with autism	Programs/classrooms that serve children with autism
<i>Classroom Assessment Scoring System (CLASS)</i>	Pianta, La Paro, & Hamre	Designed to assess adult-child interactions in the classroom setting as an indicator of the quality of the environment	Programs/classrooms that serve typically developing children ages ****
<i>Denver</i>	Rogers	Developed as part of the Denver Model to evaluate programs that serve young children with autism	Programs/classrooms that serve young children with autism ages *****
<i>Early Childhood Environment Rating Scale-Revised (ECERS-R)</i>	Harms, Clifford, & Cryer	Designed to assess program quality in early childhood settings	Inclusive programs/classrooms that serve children ages 2 ½ to 5 years
<i>Effective Implementation and Support of Illinois Educational Program for Autism</i>	Sugai, Horner, & Todd	Adapted from the EBS Self-Assessment Survey version 2.0 developed by Sugai, Horner, and Todd	Programs that serve children with autism
<i>Enhancing Instructional Contexts for Students with Autism Spectrum Disorders (EIC-ASD)</i>	Heflin, & Hess	Designed to evaluate current practices in programs that serve children with autism and to identify elements in need of improvement	Programs/classrooms that serve children with autism
<i>Environmental Rating Scale (ERS)</i>	Van Bourgendein, Reichle, Campbell, & Mesibov	Designed to evaluate residential environments for adolescents and adults with autism	Residential environments for adolescents and adults with autism
<i>OCALI environmental</i>	Ohio Center for	Designed to assist	Programs/classrooms

<i>Assessment</i>	Autism and Low Incidence Disabilities	educators and parents in assessing and designing effective educational environments for learners with autism	that serve children with autism
<i>Professional Development in Autism</i>	Schwartz	Developed as part of the Professional Development in Autism Center to evaluate programs that serve children with autism	Programs/classrooms that serve children with autism ages *****
<i>Quality of Inclusive Experiences Measure (QIEM)</i>	Wolery, Pauca, Brashers, & Gran	Designed to assess program goals and purposes, staff supports and perceptions, accessibility of the physical environment, individualization of goals and interventions, children's participation and engagement, and adult-child and child-child contacts and interactions	Inclusive programs/classrooms that serve young children
<i>School-Age Environment Rating Scale (SACERS)</i>	Harms, Jacobs, & Romano	Designed to assess to programs that serve school-age children	Inclusive programs/classrooms that serve children ages 5 to 12 years
<i>Ziggurat Model and Comprehensive Planning System</i>	Aspy & Grossman	Designed to assess programs trained in the Ziggurat model	Programs/classrooms trained in the Ziggurat model that serve children with autism

The APERS has been used to assess program quality in at least 76 school programs in 12 states in the United States. Currently, we are completing an analysis of items for each version of the APERS and calculating initial reliability of total and domain scores using Cronbach's alpha. Further use and analyses are anticipated.

**Provisions for Cultural Adaptation:**

The APERS is being used in Saudi Arabia and in Bangladesh as well as in at least 12 states in the United States.

**Contact Information:**

For more information about the instrument and to learn about training opportunities, please contact Ann W, Cox, Ph.D. Scientist, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. [ann.cox@unc.edu](mailto:ann.cox@unc.edu) Phone: 919-966-9517