CR Assessments: A New Way to Assess

The Behavioral Health Center of Excellence (BHCOE) has developed a white paper discussing how behavior analysts should conceptualize a systematic approach for selecting instruments to assess and plan treatment for individuals with autism spectrum disorder (ASD). They also recommended utilizing the data from the assessment to develop effective treatment plans and report on treatment outcomes.

The application of applied behavior analysis (ABA) to support individuals with autism and IDD to achieve optimal outcomes is a uniquely individualized process, on the part of the practitioner as well as the client. While the field of behavior analysis continues to grapple with a consensus on the definition of optimal outcomes, many practitioners can agree that increased independence, improved quality of life, and access to resources are optimal (Chong, 2023; Mainz, 2003).

The certification of behavior analysts has multiplied in recent years (BACB, n.d.). However, the increase in practicing behavior analysts does not meet the needs of individuals that require ABA as an intervention. In addition to the sharp rise of certificants as well as the clients requiring services, the field of behavior analysis is evolving. The application of behavior analysis as a medical form of treatment has thrust practitioners into not only learning to apply the science of our field but also learning billing codes, MUE limitations, authorization requirements, peer to peer reviews, and justification of treatment for individuals impacted by autism. This surge has also increased the need for assessment tools and methodologies that support practicing behavior analysts in developing robust interventions in a timely manner.

There are several articles that indicate the need for a more systematic approach to selecting instruments to assess individuals with autism (BHCOE, 2019; Padilla et al., 2023). However, practicing behavior analysts report that they are not adequately trained in how to select and administer the various assessments available to them (Padilla, 2020). In addition to a lack of training on assessment selection and administration, there appears to be confusion between criterion-referenced assessments as tools versus curricula. The definition of assessments as tools vs. curricula is beyond the scope of this paper. The behavior analysts at CentralReach are currently developing a paper to meet this gap in the literature.

Assessments as Tools

Behavior analysts have access to norm-referenced assessments and criterion referenced assessments in their application of ABA. Criterion-referenced assessments measure a learners skill performance across commonly accepted developmental milestones (Cooper et al., 2020). Additionally, criterion referenced assessments evaluate behavior that the assessor observes a client can do, compared to an externally established set of criteria. Norm referenced

assessments provide scores that should be compared to a norm group or a population the assessment was designed for (Padilla et al., 2023). There are numerous criterion-referenced assessments available to practicing behavior analysts. Two of the most widely administered assessments are the Assessment of Basic Language and Learning Skills- Revised (ABLLS-R) and the Verbal Behavior Milestones Placement and Programming (VB-MAPP) (Padilla, 2020). In addition to the ABLLS-R and the VB-MAPP, the Assessment of Functional Living Skills (AFLS) has been reported as a widely administered assessment for individuals with autism as they move toward functional living skills programs. This paper will discuss each of the assessment tools and the need for practicing behavior analysts to begin to conceptualize a standardized method for assessment administration, as well as how to support individuals across the lifespan.

ABLLS: 1998
The Assessment of Basic Living Skills was authored in 1998 by Dr. James Partington and Mark Sundberg. The original ABLLS was designed utilizing Skinner's analysis of Verbal Behavior to teach language and early foundational skills to individuals. It provided a method for assessing and tracking the development of specific skills from four areas: basic language and learning skills, academic, self-help and motor skills, and included a programming guide that provided basis for a curriculum for individuals with developmental delays.

ABLLS-R: 2006 and 2010
The Assessment of Basic Living Skills- Revised was authored by Dr. James Partington in 2006. The updated version of the ABLLS included a revision of 68 additional new skills within the original assessment based upon data from individuals who were being tracked using the original ABLLS. The revision also incorporated a substantial number of additional skills to provide for a more thorough analysis of many skill repertoires including, but not limited to, motor and vocal imitation, specific language skills, and social skills. The ABLLS-R was developed to identify skills an individual needs in their repertoire to engage in communication with others. Results from the ABLLS-R support the development of a comprehensive curriculum, focused on the development of language. Shortly after the publication of the ABLLS-R, the digital version of the assessment, the WebABLLS, became available to practicing behavior analysts, educators, and parents.

The ABLLS-R contains 544 skills across 25 repertoires of behavior. These are labeled from A to Z and are listed as follows: Cooperation and reinforcer effectiveness (A), visual performance (B), receptive language (C), motor imitation (D), vocal imitation (E), requests (F), labeling (G), intraverbal (H), spontaneous vocalizations (I), syntax and grammar (J), play and leisure (K), social interactions (L), group instructions (M), follow classroom routines (N), generalized responding (P), reading skills (Q), math skills (R), writing (S), spelling (T), dressing skills (U), eating skills (V), grooming skills (W), toileting skills (X), gross motor skills (Y), and fine motor skills (Z). Skills in the A through H sections of the ABLLS-R are foundational learning skills recommended for learners working on the basics of learning to learn. These skills are often utilized in early intervention programs as well as with learners that are new to treatment and intervention. Once a learner has acquired foundation learning skills, it is recommended that skills across the other skill domain areas are assessed and taught to ensure a comprehensive treatment design package.

The ABLLS-R was designed for individuals working with a learner to identify skills a learner demonstrated during an observation or assessment based on 1) familiarity with learner, 2)

observed engagement in the skill, and 3) interview with stakeholders paired with direct observation of the skill. The use of skills tracking grids, scored in the ABLLS-R were designed to allow for visual analysis of learner performance at the time of assessment as well as during follow up assessments. The skills addressed in the ABLLS-R assessment are those skills that neurotypical individuals acquire prior to entering a kindergarten setting (Partington et al., 2018).

The ABLLS-R consists of a Scoring Guide, IEP Development Guide, and Protocol book. The guidelines for scoring, assessing, and developing goals are all presented across each of the texts associated with the assessment. These materials are now available digitally to support documentation and assessment in an efficient and technologically advanced manner.

VB-MAPP
The Verbal Behavior Milestones Placement Program was authored by Dr. Mark Sundberg in 2008. The VB-MAPP is a criterion referenced assessment, curriculum guide, and skill tracking system that was designed to assess individuals with autism or those with language deficits. The VB-MAPP was written based on B.F. Skinner's analysis of verbal behavior, similar to the ABLLS-R.

The VB-MAPP contains five components which, when combined, provide an evaluation of a learner's baseline performance, treatment objectives, skills tracking system, and support for developing skills to teach a learner. The VB-MAPP Milestones Assessment was designed to provide a sample of a child's existing skill repertoire across areas such as verbal communication and other related skills across three development age levels (0-18 months, 18-30 months, and 30-48 months). The VB-MAPP milestones also includes the Early Echoic Skills Assessment (EESA) which measures an individual's vocal imitation repertoire. The VB-MAPP Barriers Assessment evaluates a learner's engagement in learning and language barriers to acquiring skills.

The VB-MAPP includes a few additional components related to the assessment, these are the VB-MAPP Transition Assessment, the Task Analysis and Supporting Skills, and the VB-MAPP Placement and IEP Goals. Utilized with the VB-MAPP Milestones Assessment these additional materials support the assessment of skills for early learners as a tool for monitoring skill acquisition and early developmental progress (Gould et al., 2011; Padilla et al., 2023; Sundberg, 2014).

AFLS: 2012
The Assessment of Functional Living Skills was authored by Dr. James Partington and Dr. Michael Mueller in 2012. This assessment was developed using the same format as the ABLLS-R and extended the self-help skills included in the ABLLS-R into six assessment protocols: Basic Living Skills, Home Skills, Community Skills, School Skills, Vocational Skills, and Independent Living Skills. The skills included in this assessment provide for a comprehensive analysis of the skills that are necessary for individuals to reach their highest level of independence.

The AFLS is a criterion referenced skills assessment tool that supports the development of skills targeting increased independence for learners from an early age through adulthood. The skills assessed in the AFLS assessment are skills evaluated across a variety of locations such as an individual's home, community, school setting, job setting, and social settings. The AFLS contains six assessment protocols which are comprised of numerous skill content areas evaluating a learner's engagement in skills associated with the content area. An example of the Basic Living Skills Domain includes skills related to self-management (e.g., maintaining appropriate behavior when in close proximity with others), basic communication (e.g., labeling common objects to

basic reading), toileting, grooming, bathing, and nighttime routines. Many of the skills evaluated in the AFLS assessment are skills that an individual should demonstrate as they age and increase their level of independence and participation in the community. The AFLS became available online as the AFLSOnline in 2019.

CR Assessments: ABLLS-R + AFLS 2023
BHCOE reports that one of the difficulties practicing behavior analysts face is systematic evaluation of the effectiveness of ABA. This is due in part to the difficulty of administering the same measurement instruments for individuals at different ages. The combination of the ABLLS-R and AFLS assessments as CR Assessments now allows practicing behavior analysts the ability to utilize the same assessment tool for repeated measures across an individual's treatment journey. The skills that will be assessed along with the locations of the assessments, teaching environments, and referral rationale will vary depending on the learner's age, level of disability, language ability, living arrangements, school setting and other considerations. Combining two of the most utilized assessments in behavior analysis allows practicing behavior analysts the option to combine clinical judgement, training, and individualized needs of clients to select appropriate skills to evaluate and assess during the assessment process. The increase from 544 skills in the ABLLS-R and the 1,900 skills in the AFLS offers the practicing behavior analysts 2,400 skills to evaluate and examine in an individual's repertoire.
The use of an assessment that combines foundational learning skills, language and communication skills, and independent living skills that individuals require to become independent partners in their treatment journey improves the ability for practicing behavior analysts to assess optimal treatment outcomes across patients as well as for the same patient over time.

As the field of behavior analysis continues to evolve to include conceptualizing treatment that is holistic in supporting the individual (e.g., assent, trauma informed, and compassionate) it is also time that practicing behavior analysts begin to evaluate across the lifespan. Considering client progress from diagnosis to treatment, across all points in their treatment journey, it is essential that practicing behavior analysts also begin to utilize assessment tools that can be administered numerous times from early childhood to end of life. These repeated measures support a wholistic approach to intervention, considerations of social validity, and future for individuals that can demonstrate treatment progress or lack of progress for months, years, and decades of a client's life. The combination of the ABLLS-R and AFLS to design the CR Assessment offers the field a unified approach for a global analysis of the effectiveness of behavior analytic intervention.

References

Behavioral Health Center of Excellence (2021). Selecting appropriate assessment instruments to measure treatment outcomes for individuals with autism spectrum disorder. Guidelines for clinicians, payors, patients, and other stakeholders. Los Angeles, CA: Author.

Chong, I. (2023). ABA Inside Track: Developing a standard set for autism outcomes with Dr. Ivy Chong. ABA Inside Track, Episode 233.

Cooper, J.O., Heron, T.E., & Heward, W.L. (2020). Applied behavior analysis 2nd edition. Upper Saddle River, NJ: Pearson.

Gould, E., Dixon, D. R., Najdowski, A.C., Smith, M. N., & Tarbox, J. (2011). A review of assessments for determining the content of early intensive behavioral intervention programs for autism spectrum disorders. *Research in Autism Spectrum Disorders, 5,* 990-1002.

Mainz, J. (2003). Defining and classifying indicators for quality improvement. International Journal for Quality in Health Care, 15, 523-530.

Mueller, M .M. (2022). The assessment of functional living skills. www.aflsonline.com

Padilla, K.L., Weston, R., Morgan, G. B., Lively, P., & O'Guinn, N. (2023). Validity and reliability evidence for assessments based in applied behavior analysis: a systematic review. *Behavior Modification, 47 (1)*, 247-288.

Partington, J.W. (2010). The ABLLS-R: *Assessment of basic language and learning skills- revised.* Walnut Creek, CA: Behavior Analysts Inc.

Partington, J. W., Bailey, A., Partington, S. W. (2018). A pilot study examining the Test-Retest and internal consistenty reliabilty of the ABLLS-R. J*ournal of Pyschoeducational Assessment, 36,* 405-410.

Partington, J.W., Mueller, M.M. (2013). The assessment of functional living skills: School skills, assessment protocol. San Francisco: Behavior Analysts, Inc. & Stimulus Publications.

Sundberg, M. L. (2008). *VB-MAPP: Verbal behavior milestones assessment and placement program: A language and social skills assessment program for children with autism or other developmental disabilities*. AVB Press.