

Preschool Assessment: Appreciating Developmental Differences Through Play

Millions of young children are diagnosed with developmental disabilities which can profoundly affect their health and functioning. Indeed, approximately 13 percent of children have a developmental disability, ranging from mild disabilities such as some speech and language impairments to serious developmental disabilities, such as intellectual disabilities, cerebral palsy, and autism. An average of 1 in 91 children will be diagnosed with some type of Autism Spectrum Disorder including Asperger's Syndrome.¹ Studies estimate that three to seven percent of school age children suffer from Attention Deficit/Hyperactivity Disorder and the diagnosis of ADHD has increased an average of three percent per year from 1997 to 2006.²

Psychological assessments are pivotal in deciding the type of early intervention a child with special needs will receive. More focused assessment and evaluation of developmental disabilities in young children can inform targeted early intervention strategies for minimizing functional limitations and lifetime disability. When screeners such as pediatricians and teachers identify at risk children, they refer them for further evaluation with the goal to identify strengths and weaknesses that can be targeted for intervention. There are many psychological measures that can be used to assess a child prior to or during preschool. Assessment scales, such as the Affect in Play Scale developed by Dr. Sandra Russ that Dr. Short

utilizes in her work highlighted herein, allow researchers and evaluators to broaden the context and content of their assessment to incorporate meaningful child interactions through play.³ This is especially important when assessing children with developmental delays, as traditional diagnostic assessments utilize individualistic approaches which can miss ecological factors in problem behavior and some of the subtle differences between children who have different developmental diagnoses.

Many children with developmental delays are more successful if they receive early intervention at the preschool level. There is some evidence that early intervention for children diagnosed with Autism Spectrum Disorders increases their functionality, especially in cognitive development, self-regulation skills and social communication skills.⁴ A 2006 study showed how early intervention helped to such a degree that more than half the children who received it were not only able to access the general education environment but also succeeded in the curriculum when they got to kindergarten and first grade.⁵ Recognizing that developmental differences impact the ways in which children learn, researchers at Case Western Reserve University are exploring how play-based assessments can provide more detailed information about these children, better identify weaknesses and lead to more targeted early interventions to strengthen social, emotional and cognitive functioning.

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Dr. Elizabeth J. Short is professor of psychology at Case Western Reserve University. Trained as a developmental, clinical, and cognitive psychologist, her research has focused on better understanding the processes underlying cognitive development in young children. In her clinical research, she combines static and dynamic assessment techniques to examine the unique academic and social consequences of developmental disabilities, including attention deficit hyperactivity disorder, reading disabilities, specific language delays, and learning disabilities.

Study Design⁶

In an ongoing pilot study with 55 preschool children ages four to seven years with diagnosed Autism Spectrum Disorder (ASD; n=6), Speech Language Impairment (SLI; n=11), Attention-Deficit/Hyperactivity Disorder (ADHD; n=22), combined SLI and ADHD (n=7), and Typicals (n=9), Dr. Short investigated the group differences in symbolic play, functional play, behavior, and language using the Affect in Play Scale (APS) to score videotaped structured-play of the children.⁷ This study examined whether a brief play assessment would be useful for identifying reliable and meaningful differences in play as a function of type of developmental disability. Because of the language, attention, and comfort demands of traditional preschool testing, these tests are very difficult for children with developmental delays to complete. In this research, Short and her colleagues explore how play, as an alternative to standardized measures, may serve as an effective vehicle for assessing independent, emergent, and deficient skills in young children.

Study Results

Standardized measures of cognition, language, and behavior differentiated the groups somewhat. That is, the SLI groups scored more poorly on the nonverbal intelligence tests than the others. Behavioral differences were noted as well, with ADHD more impaired than the rest of the groups. Although few but predictable differences were noted on standardized measures, more dramatic differences were observed using the play assessment. Cognitive aspects of play (i.e., organization, imagination, and comfort) differentiated the children with developmental disabilities,

with the ADHD-diagnosed children earning the highest ratings on their cognitive aspects while those diagnosed with ASD received the lowest cognitive ratings. The Typical and ADHD groups showed more affect in their play than either the SLI or ASD groups, with these differences consistent when examining both positive and negative affect. Additionally, the majority of the time spent in play by the ASD group was functional, with symbolic more prominent in the other groups. Marked behavioral differences were noted between the groups (see chart at right).

Findings and Future Directions

Though only the beginning of a larger research project, initial data are promising regarding the utility of a brief play assessment in the identification of cognitive, affective, and behavioral differences among young children. This ongoing study suggests that by using play-based assessment psychologists can discern subtle but significant diagnostic differences between the four groups (ADHD, SLI, ASD and ADHD+SLI). Moreover, compared to more traditional assessments, the APS appears ideally suited as an assessment tool with young children with developmental disabilities because of its brevity (it can be completed in approximately five minutes), ease of administration, standardization, and ease of scoring. Its capacity to provide so much data in such a short time period makes play assessments potentially useful both for initial diagnosis and for ongoing monitoring of intervention effectiveness.

PLAY ASSESSMENT OUTCOMES & IMPLICATIONS:
Differences in Young Children by Type of Developmental Disability

DIAGNOSIS	TYPES OF PLAY	BEHAVIOR	COGNITION & LANGUAGE	AFFECT	PLAY AS A POTENTIAL EARLY INTERVENTION
Typical	Primarily symbolic play, with unique & well developed themes.	Conduct, hyperactivity, and learning levels normal.	Show normal levels of imagination, organization, and comfort at play.	High levels of Positive & Negative Affect.	N/A
SLI	Some imitative and novel play. Predominantly symbolic, but less so than typical.	Behaviorally compliant-patient & passive during instructions.	Highly engaged but quiet throughout play, lower complexity & organization. Low levels of verbalization.	Less Positive Affect in their play.	Medium to practice new linguistic skills.
ADHD	Numerous play themes. Underdeveloped and brief themes. Predominantly symbolic, but less so than typical.	Behaviorally energized; little downtime. Somewhat noncompliant. Did not wait for end of instructions before playing.	High ratings on cognitive aspects, comfort level comparable to typical. Very talkative.	High levels of Positive & Negative Affect.	Medium to increase self-control & sustained attention.
ADHD + SLI	Short-lived themes, with some novel and imitative play. Predominantly symbolic, but less so than typical.	Behaviorally energized and required considerable redirection.	Highly engaged but talkative throughout play, lower complexity & organization. Less talkative than ADHD but more so than SLI.	Moderate levels of Affect, but ¾ Negative.	Medium to increase self control, sustained attention & language.
ASD	Greater functional play; some imitative but no novel play.	Behaviorally compliant; patient & passive during instructions. Needed constant prompting to engage in play.	Lowest cognitive ratings on play; lowest level of organization. Not talkative.	More restrictive Affect was exhibited.	Play may be a useful medium for developing greater symbolic play.

As a logical extension of this work, new research is underway by Dr. Short and her colleagues on the effectiveness of play-based interventions with children diagnosed with certain developmental disabilities. The hope is that through play, a natural and nonthreatening

medium for young children, one can capitalize on parent-child interaction and use targeted interventions to enhance children's cognitive, linguistic, and behavior skills, thus strengthening their developmental foundation for continued learning and growth in the future.

¹ Centers for Disease Control and Prevention. Autism Spectrum Disorders (ASDs). (n.d.) Retrieved October 25, 2009, from <http://www.cdc.gov/ncbddd/autism/data.html>; Kogan, M.D., Blumberg, S., Schieve, L., Boyle, C., Perrin J., Ghandour, R., Singh, G., Strickland, B., Trevathan, E., van Dyck, P., (October 5, 2009). Prevalence of Parent-Reported Diagnosis of Autism Spectrum Disorder Among Children in the U.S., 2007. *Pediatrics* 2009 [Electronic publication] Retrieved October 30, 2009, from <http://pediatrics.aappublications.org/cgi/content/abstract/peds.2009-1522v1>

² Centers for Disease Control and Prevention. Attention-Deficit/Hyperactivity Disorder (ADHD). (n.d.) Retrieved October 25, 2009, from <http://www.cdc.gov/ncbddd/adhd/data.html>

³ Fewell, R.R. (2000). "Assessment of children with special needs: Foundations for tomorrow." *Topics in Early Childhood Special Education*. 20(1), 38-42.

⁴ Boulware, G., Schwartz, I.S., Sandall, S.R., McBride, B.J. (2006). "Project DATA for toddlers: An inclusive approach to very young children with autism spectrum disorder." *Topics in Early Childhood Special Education*. 26(2), 94-105.

⁵ *ibid*

⁶ Short, E. J., Noeder, M., Gorovoy, S., Manos, M. J., & Lewis, B. (in press). The Importance of Play in Both the Assessment and Treatment of Young Children. In S. Russ & L. Niec (Eds). *An Evidence-Based Approach to Play in Intervention and Prevention: Integrating Developmental and Clinical Science*. Guilford.

⁷ Kaugers, A. and Russ, S. (2009) "Assessing preschool children's play: Preliminary validation of the Affect in Play Scale-Preschool version." *Early Education and Development*. 20, 733-755.

IMPLICATIONS FOR POLICY AND PRACTICE

Improving the effectiveness of psychological assessments for young children has implications for clinicians, families, preschool teachers and other early intervention programs and services. Demonstrating the effectiveness of the play-based assessments, such as the APS, with young children provides clinicians with enhanced tools for ongoing evaluation and fine-tuning of developmental diagnoses. While further research remains, this line of inquiry is also beginning to explore the usefulness of specific kinds of play as an intervention for children with developmental disabilities. As a nonthreatening place to learn, to practice and to refine skills, the play arena appears to offer an ideal medium for a child to master skills needed for daily living.

Educating parents, preschool teachers, and early care providers, such as Help Me Grow (HMG) home visitors, and specialized services providers about the potential for play as an effective evaluation tool, and possibly as a targeted early intervention, for children with developmental diagnoses will be an important task for early childhood programs. The Individuals with Disabilities Education Act funds states to assist young children with disabilities. The infant and toddler program under Part C creates family-centered services, typically called early intervention (EI) programs for children birth to three years of age with developmental

disabilities.⁸ Part B includes children aged three to five with developmental disabilities or delays and provides preschool special education and related services to ensure children have access to a free appropriate public education to meet each child's unique needs.⁹ In Ohio, Part B funds are allocated to the local education agencies (LEA) and Part C early intervention is administered through HMG. Since the inception of EI programs in 1994, they have grown astronomically in size and cost throughout the country, with states often taking drastic measures to reduce costs.¹⁰ Many of these cost reduction strategies have had unintended consequences such as increased long-term expenses, loss of services for children in need, and disproportionate impact on low-income families.¹¹ Additionally, because children under three years old who have been abused or neglected have been shown to be at increased risk for developmental delays, federal law now requires states to develop policies mandating referral of children with substantiated abuse or neglect to EI systems.¹² The extension of Part C means that more children will be in need of evaluation and EI services. Securing adequate funding, along with interagency training and collaboration, to support these needed assessments and interventions is an ongoing public policy priority. Ensuring mini-

mal delay in services as children transition from Part C to Part B services is critical so that developmental gains made in EI programs are not lost by delays in the process. While many of these children are entitled to services, delays or gaps in services may occur, in part because Part C and Part B services are administered by different entities and may operate on different calendars. Also, as the focus shifts from EI and family support to a child's education needs, new evaluations are required by the LEA. Findings from this research showing the effectiveness of play-based assessments may be particularly relevant given that Part B specifically calls for "scientific, research-based" interventions.

By utilizing play as a method of evaluation, the goal is to ensure more children with special needs are better understood and classified, particularly those with developmental delays, so that they can receive the help that they need with appropriate early interventions. Such interventions should not only have a long-term positive impact on the individual children who receive them, but also may lessen the financial burden of keeping them in special education for more extended periods. Additional research is also necessary to explore the opportunity the play environment provides for early and ongoing intervention supports and services.

⁸ Individuals with Disabilities Education Improvement Act of 2004, § 20 U.S.C. 1400, Part C, § 631, *Infant and Toddlers with Disabilities* (2004).

⁹ Individuals with Disabilities Education Improvement Act of 2004, § 20 U.S.C. 1419, Part B, § 619, *Preschool Grants* (2004).

¹⁰ Grant, R. (2005). "State strategies to contain costs in the early intervention program: Policy and evidence." *Topics in Early Childhood Special Education*. 25(4), 243-250.

¹¹ *ibid*

¹² Derrington, T.M., and Lippitt, J.A. (2008). "State-level impact of mandated referrals from child welfare to part C early intervention." *Topics in Early Childhood Special Education*. 28(2), 90-98.



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