

EXPLORING THE QUANTIFICATION OF COMMUNICATION IN PUERTO RICAN CHILDREN WITH AUTISM SPECTRUM DISORDERS

By Nicolas Linares

Current ASD assessment procedures are mostly qualitative, which results in a large degree of imprecision when conducted by health professionals who deal with subjective terms that appear in ASD diagnostic protocols like the DSM-IV (1994). The DSM-IV includes communication skills as one of the core ASD symptoms, but its statements on communication impairments for ASD are vague. Words that are in bold in the following DSM-IV definitions can cause clinician discrepancies: “For Typical Autism the **qualitative** communication impairments are a **delay** in, or total lack of, the development of spoken language not accompanied by an **attempt to compensate** through alternative modes of communication such as gesture or mime; in individuals with **adequate** speech, **marked** impairment in the ability to initiate or sustain a conversation with others; and lack of **varied**, spontaneous, make-believe play or social imitative play **appropriate** to developmental level; for Asperger syndrome disorders: No clinically **significant** general delay in language; and for PDD-NOS the category should be used when there is a **severe** and **pervasive** impairment in the development of reciprocal social interaction, verbal and nonverbal communication skills, or when the stereotyped behavior, interest and activities are present, but the criteria are not met by a specific Pervasive Developmental Disorder, Schizophrenia, Schizotypal Personality Disorder or Avoidant Personality Disorder.”

In a brief conversation of Dr. Nicolas Linares with Dr. Francis Collins, Director of the National Human Genome Research Institute at NIH (Personal communication, 2006), Dr. Collins emphasized the need for behavioral scientists to arrive at more numerical and precise assessments of human behavior phenotypes. Current attempts to quantify ASD phenotypes are in place but none of those reported have dealt with children who speak Spanish, a highly inflected language with its own sociolinguistic rules.

Several studies have been carried out in order to improve ASD diagnosis precision. One of these (Tomanik et al, 2006) revealed that even the combination of observation schedules like the Autism Diagnostic Interview-Revised (Lord et al, 1994) and the Autism Diagnostic Observation Schedules (Lord et al, 1994) in examining children with suspected autism can only reach 84% diagnostic accuracy. These findings suggest that when clinicians obtain discrepant diagnostic information, an assessment of an individual's adaptive functioning may reduce diagnostic errors. However, these

findings pertain to older children with ASD and we still need to know how to improve assessment precision for younger Latino children with suspected ASD.

Many ASD assessments are conducted using instruments and some research has addressed the lack of concordance between these instruments. A study by Rellini et al (2004) verified the Childhood Autism Rating Scale (CARS; Schoppler et al, 1988) and the Autism Behavior Checklist (ABC; Krug et al, 1980; instruments tests widely used for screening and diagnosis of autism) to see how both correspond and conflict with a diagnosis made with the DSM-IV criteria. This study revealed a complete agreement between DSM-IV and CARS, whereas the ABC did not distinguish individuals with autistic disorders from other cases of developmental disorders as well as in the CARS. Thus, there are concerns regarding autism variance as well as assessment variance. Separating essential from complex autism in very young Latino children in Puerto Rico should be the first diagnostic step for children with ASD as it will allow better prognostication and genetic counseling. Definition of more homogeneous populations should increase power of behavior and genetic research analyses (Miles et al, 2005).

The early identification of young children at risk for ASD depends on early behavioral symptoms. Early intervention for ASD has proven to be a successful strategy for remediation of many difficulties experienced by these children. As a result, an early accurate diagnosis of children with this range of disorders has become critical (Matson, 2006). Because communication is one of the core developmental areas affected by ASD, clinicians and teachers need to support children with ASD and their families at the earliest stage of intervention (Smith & Dillenbeck, 2006). Recent research has demonstrated that social communication, sensory regulation, and play patterns of behavior in children under two years of age can be used to distinguish those with autism from those who are developing typically or those with other developmental disabilities (Crais et al, 2006). Little is known about when or how development becomes disrupted in the first two years of life in autism. However, variations from typical language development are detectable in many children with ASD using measures of general development by 24 months of age (Landa & Garret-Mayer, 2006).

A recent survey (unpublished research, Linares-Orama & Mendez, 2006) conducted at FILIUS-UPR with clinicians in our Childhood Autism Laboratory revealed that the child's communication and social interaction skills are the assessment areas that cause the most clinician discrepancies. These clinicians indicated that reasons related to these diagnosis discrepancies include the use of subjective terms in ASD definitions, the clinician skill in eliciting child responses, the diversity of experience years of the clinicians, the lack of assessment protocols that are applicable for Spanish speakers, the

differential administrative status of the clinicians in the assessment group, and the reduced opportunity for consultation among clinicians when confronted with difficult cases.