It was an honor to receive the Sara Sparrow Early Career Award from Division 33 at this summer’s APA Convention. During my Sparrow award talk at APA, I spoke about the early childhood experiences of children with autism spectrum disorders (ASD), focusing on two research areas I have been involved with: screening and early detection of ASD and the early school experiences of children with ASD. In this article, I highlight some key take-home messages from these two fields of research.

**Screening and Early Detection of ASD**

Children with ASD who are identified early stand to benefit from additional months and years of interventions, which in turn are linked to improved long-term functioning and optimal outcomes. Unfortunately, health disparities are present in access to a timely diagnosis of ASD. Children who are racial minorities, English language learners, or from low-income households experience lower rates of detection of ASD relative to their White, English-speaking, middle- and upper-income peers; when they do receive ASD diagnoses, they are 1-2 years older, on average, than these peers. This constitutes an important health disparity. Indeed, access to screening, to diagnostic evaluation services, and to early treatment, is not distributed evenly. The timeliness, quality, and appropriateness are also not equitable across race, income, and English proficiency.

In our research, through the ABCD Early Screening Project (PIs: Alice Carter, myself, Angel Fettig, and Chris Sheldrick; funded by HRSA and NIMH), we have implemented a multi-stage ASD screening and assessment protocol for toddlers who are participating in Early Intervention (EI) services. Figure 1 shows the 3-stage screening model. In the ABCD Project model, two screening stages (a paper-and-pencil screener and a subsequent play-based screening measure) are delivered by service providers at our partner EI agencies within the existing Part C Early Intervention system. In the third stage, a diagnostic assessment is offered by our clinical team to those screening positive. The process enables access to a timely diagnosis and, in turn, access to ASD-specific early intervention services.

In this work, we have identified several important messages that can guide our subsequent efforts to improve early detection and reduce disparities.

**Lessons Learned**

- Early screening that builds on existing family-provider relationships is a promising route toward earlier detection and earlier access to services for ASD.

Embedding a screening process within the Part C Early Intervention services (also known as birth-to-three services) may be one way of enabling better, more equitable access to screening, especially for children from groups that are currently under-identified. Relative to pediatricians, EI professionals have frequent (often weekly) contact with families. By embedding the screening process within families’ already-occurring Early Intervention services, we capitalize on the positive relationships already in place between EI service providers and families. These existing alliances make difficult conversations around ASD concerns easier.

- HOWEVER, EI specialists and pediatricians feel under-prepared to have difficult conversations around ASD with families.
The health care providers we work with report a lack of readiness to initiate conversations with parents about social communication concerns, and express fears of rupturing their relationship with families or distressing already-stressed families. This lack of readiness leads to avoidance of these conversations, especially for children whose symptoms are less clear-cut. Psychologists are well-positioned to play a key role in supporting and training pediatricians, EI specialists, and other service providers to feel prepared to have conversations with families around their ASD concerns.

- Within the Early Intervention context, we should NOT wait to screen until parents express concerns.

To date, we have screened 1259 families (1259 at Stage 1, 316 at Stage 2), conducted diagnostic assessments with 207, and diagnosed 172 children with ASD. However, only 65% of the parents whose children were eventually diagnosed expressed concern about ASD at the time of the initial screening. This suggests that it is crucial to screen all children -- especially all children who are already presenting at Early Intervention -- for ASD, rather than only screening in case of parent concern. Relying on parental concern to trigger the screening process may result in missing ≥ 35% of children. This finding is relevant to the recent US Preventive Services Task Force recommendations (2016). The USPSTF guidelines asserted that there was insufficient evidence to recommend screening children for ASD except in cases where parents or providers were already concerned; our findings would suggest that a concern-based approach to screening would result in many delayed or missed diagnoses.

- The screening process is not only a means of identifying at-risk children; it is also an intervention tool in and of itself.

By the time families come in for a diagnostic evaluation, they have already had multiple conversations about autism with their EI service providers, at each earlier point of the multi-stage screening process. With each conversation, they have had multiple opportunities to reflect on their child’s behaviors and symptoms with their EI providers. They are better positioned to consider an autism diagnosis for their child and are better prepared to advocate for their child.

Once children are identified, the hope is that early detection will lead to improved outcomes and greater readiness to learn in school. In the next section, I discuss our research on promoting school adaptation for children with ASD in the early school years.

The Early School Experiences of Children with ASD

Early schooling places new demands on children’s academic & social skills, behavior, and self-regulation. The quality of relationships with teachers in the early school years is a vital aspect of school adjustment, one that has implications for long-term outcomes. We know from the research on typically developing children that student-teacher relationships are powerful drivers, or at least predictors, of long-term adjustment. The quality of relationships with teachers predicts academic performance, social acceptance and social skills, loneliness, anxiety, and behavior problems in subsequent grades.

We can understand this impact through the lens of attachment theory; children who are able to develop a secure attachment with their teachers will be comfortable and confident to explore their classroom environment and try new tasks or skills, with the teacher as a secure base. They will see school as a safe place where they can learn to take risks.

However, we know very little about the nature of these relationships for children with ASD. With Jan Blacher at UC-Riverside, we recently conducted a two-site, longitudinal study of about 180 children with ASD during their early years of school (the Smooth Sailing Study, funded by IES, PI: Blacher). Children were ages 4-7 and entering Pre-K, or K or 1st grade at the time of enrollment; they were assessed three more times over two school years, usually spanning two teachers and two classrooms. Roughly half of participants were attending gen-
eral education or integrated classrooms for at least 50% of the school day, whereas half were enrolled in special education classrooms.

In this study, we have identified some key lessons that can guide our future efforts to improve the school adjustment of young children with ASD:

- Teachers, especially general education teachers, report a lack of preparedness to teach students with ASD.
- Of the roughly 150 teachers we surveyed, all of whom had students with ASD who were participating in our longitudinal study, only 25% report having any professional training in autism. This includes 46% of special education teachers and 9% of general education teachers.
- Less than half of general education teachers feel prepared to teach students with ASD.
- Of the teachers we surveyed, all of whom were teaching at least one student with ASD, 94% of special education teachers reported feeling “pretty prepared” or “very prepared” to teach students with autism (vs. “somewhat” or “not at all prepared”), but only 42% of general education teachers felt very or pretty prepared.
- Children with ASD have poorer relationships with teachers, with lower student-teacher closeness and higher conflict, relative to normative samples.
- These problems may interfere with academic growth, including development of reading skills. As a result, interventions that target student-teacher relationships may be beneficial in indirectly improving academic outcomes.
- On the positive side, nearly one-third of children with ASD do achieve positive relationships with teachers, laying a foundation for school adjustment. Future research should examine the teacher, child, and classroom qualities that promote such positive connections.

I am grateful to Division 33 for the opportunity to share these research interests at APA, and for the support and encouragement provided by Division 33 mentors for the research endeavors of students and early career professionals. In light of Sara Sparrow’s own legacy of mentoring and collaboration, I want to thank several mentors who are foundational to my research. Jan Blacher and Alice Carter, collaborators on these two projects, and Bruce Baker, my grad school advisor, exemplify what it means to be a mentor.

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