EDITORIAL

Early Assessment and Intervention: Introduction to the Special Issue

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This special issue of *Advances in Neurodevelopmental Disorders* aims to highlight advances in research related to early assessment/identification and early intervention/support. The papers in this special issue have considerable implications for advancing both research and practice in early assessment/identification and early intervention/support. The ultimate goal of such research and practice efforts should be to improve the overall quality life for individuals with neurodevelopmental conditions and their families. There are known ways to achieve this goal, but there is always room for developing new and more effective early assessments and early intervention/supports.

A focus on improving quality of life for individuals with neurodevelopmental conditions ties in with the move towards proactive and holistic supports and the evolving conceptualizations of neurodevelopmental conditions and terminology in the field. For example, many members of the autistic and autism communities argue for replacing terms such as intervention and disorder with support and conditions, which are viewed as more acceptable and in line with the neurodiversity movement (Monk et al., 2022; Pellicano & den Houting, 2022). At the present time, current accepted terminology varies by geographical location and discipline, which is why the papers in the present special issue include a diversity of terminology.

Scientific evidence supporting specific early assessment/identification practices and early interventions or supports has been accumulating and advancing since at least the 1960s. There is now a general international consensus among professionals that early assessment/identification and intervention/support is critical for optimizing outcomes for children with neurodevelopmental conditions (Lipkin et al., 2020; Singh & Anekar, 2018). Early assessment and intervention/support can also be highly transformative for the family by, for example, helping family members gain a better understanding their child's strengths and needs, reducing stress, improving parent–child relationships, and enabling family members to take a more active role in helping their child learn and develop (Martinez-Rico et al., 2022). Early assessment and intervention/support also makes sense from a social-economic standpoint. Kern Koegel et al. (2014), for example, argued that early intervention is "more cost and time efficient than a "wait and see" approach." (p. 50). There is, in short, ample reason to continue advancing towards ever more effective early assessments and interventions/supports for children with neurodevelopmental conditions and their families.

To this end, the present collection of 15 papers covers a range of topics that provide new data, new approaches, and/or new perspectives on early assessment and early intervention/support for children with neurodevelopmental conditions. In this special issue, there are papers covering early assessment and identification as well as papers evaluating specific early assessments and specific early interventions/supports. There are also contributions that explore stakeholders' experiences and perspectives related to early assessment and early intervention/support.

In the lead paper, for example, Marschik et al. (2022) focus on assessing the emergence of pre-babbling vocalizations in infants with developmental concerns. The novelty of this work lies in the description of observational and computational methods including acoustic characteristics of infant vocalizations. Another important aspect of this work is the team's particular focus on neurodevelopmental conditions that are often only detected in later infancy. It is possible that assessment of early vocalizations could help children with these conditions to be identified earlier. Carrasco and Carrasco (2022) also explore early identification, but their focus is on dyslexia and their approach assesses neuronal responses. If the assessment of infant vocalizations and neuronal responses can enable earlier detection, then this, in turn, could allow earlier support, which may optimize child outcomes.

A number of other papers in this special issue focus on developing or evaluating new/adapted early intervention/

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support and service provision. Mincic et al. (2022), for example, sought to document the necessary adaptations to early childhood education program policies, procedures, and funding in relation to implementing the pyramid training model. Their findings highlight important factors for successful implementation of that training model. The paper by Neely et al. (2022) similarly advances the field of early intervention/support by exploring delayed communication and emergence of problematic forms of behavior in young children. This study extends the evidence-base supporting the use of functional communication training with young children. Their data suggest that early use of this established support during critical periods in a young child's development may have clinically significant and lasting positive effects.

Cleary et al. (2022) focus on very early support for newborns at familial likelihood of autism. In this novel pilot study, parents of newborns with a familial history of autism participated in a video-aided support beginning in pregnancy. Results suggest that this approach was perceived to be feasible and acceptable and as leading to improvements in parents' communication with their infant. The ability to provide support before a child is even born is novel and potentially game changing.

In support of children with severe intellectual disability, Ogletree et al. (2022) offer a unique perspective on the evolution of communication assessment strategies. They review assessment efforts that have been used to document the range of abilities of learners with severe intellectual disability. Their work has clear relevance to the design of interventions and support planning for this population.

Finally, a paper by Carnett et al. (2022) asks us to consider the role of happiness in child-caregiver relationships and early intervention/support research and practice. This team argues that the happiness is an important variable to consider in early intervention/support. The important message is that happiness should be seen as an important outcome in its own right. Indeed, is there anything more delightful than a happy child?

We have purposely not summarized all the papers that are included in this special issue so that readers can discover for themselves the gems and surprises that are included among the present collection of special issue papers. These 15 contributions capture well the emerging trends and advances in early assessment/identification and early intervention/support for children with neurodevelopmental conditions. Our hope is that you will be tempted by our teaser editorial to read each of the included papers. You will find much value and will be amply rewarded for your efforts.

Declarations

Conflict of Interest The authors declare no competing interests.

References

Carnett, A., Neely, L., Chen, M-T., Cantrell, K., Santos, E., & Ala'i-Rosales, S. (2022). How might indices of happiness inform early intervention research and decision making? *Advances in Neurodevelopmental Disorders*. Advance of Print. https://doi.org/10.1007/s41252-022-00288-0

Carrasco A., & Carrasco K. D. (2022). The use of neuronal response signals as early biomarkers of dyslexia. *Advances in Neurodevelopmental Disorders*. Advance of Print. https://doi.org/10.1007/s41252-022-00297-z

Cleary, D. B., Bunney, A., Henry, L., Renton, M., Granich, J., Green, J., ... & Whitehouse, A. J. (2022). A Parent-mediated intervention for newborns at familial likelihood of autism: Initial feasibility study in the general population. *Advances in Neurodevelopmental Disorders.* Advance of Print. https://doi.org/10.1007/s41252-022-00262-w

Kern Koegel, L., Koegel, R. L., Ashbaugh, K., & Bradshaw, J. (2014). The importance of early identification and intervention for children with or at risk for autism spectrum disorders. *International Journal of Speech-Language Pathology, 16*(1), 50–56. https://doi.org/10.3109/17549507.2013.861511

Lipkin, P. H., Macias, M. M., AAP Council on Children with Disabilities, Section on Developmental and Behavioral Pediatrics. (2020). Promoting optimal development: Identifying infants and young children with developmental disorders through developmental surveillance and screening. *Pediatrics, 145*(1), e20193449.

Marschik, P. B., Widmann, C. A. A., Lang, S., Kulvicius, T., Boterberg, S., Nielsen-Saines, K., . . . Zhang, D. (2022). Emerging verbal functions in early infancy: Lessons from observational and computational approaches on typical development and neurodevelopmental disorders. *Advances in Neurodevelopmental Disorders*. Advance of Print. https://doi.org/10.1007/s41252-022-00300-7

Martinez-Rico, G., Simon, C., Canádas, M., & Mcwilliam, R. (2022). Support networks and family empowerment in early intervention. *International Journal of Environmental Research and Public Health*, 19(4). https://doi.org/10.3390/ijerph19042001

Mincic, M. S., Ostryn, C., & Smith, B. J. (2022). An evaluation of early childhood program adaptations for implementing the pyramid model for children with and without developmental disabilities. *Advances in Neurodevelopmental Disorders*. Advance of Print. https://doi.org/10.1007/s41252-022-00247-9

Monk, R., Whitehouse, A. J., & Waddington, H. (2022). The use of language in autism research. *Trends in Neurosciences*. Advance of print. https://doi.org/10.1016/j.tins.2022.08.009

Neely, L., Carnett, A., Cantrell, K., Stegmann, S., & Svoboda, M. (2022). *Functional communication training for toddlers at-risk for autism with early problem behavior. Advances in Neurodevelopmental Disorders.* Advance of print.

Ogletree, B.T., Wofford, M.C., & Barton-Hulsey, A.E. (2022). Practical approaches and socially valid assessment considerations for learners with emergent communication and severe intellectual disability. *Advances in Neurodevelopmental Disorders*. Advance of print.

Pellicano, E., & den Houting, J. (2022). Annual research review: Shifting from 'normal science' to neurodiversity in autism science. *Journal of Child Psychology and Psychiatry, 63*(4), 381–396. https://doi.org/10.1111/jcpp.13534

Singh, P., & Anekar, U. (2018). The importance of early identification and intervention for children with developmental delays. *Indian Journal of Positive Psychology, 9*(2), 233–237. https://www.proquest.com/openview/4613e81c9911faf5e37cf2ea7a1e3037/1?pq-origsite=gscholar&cbl=2032133