Neonatal Abstinence Syndrome

DEVELOPMENTAL OUTCOMES FOR COMMUNICATION

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Speech & Language Development

Emerging research suggests that a portion of children with NAS/prenatal opioid exposure experience delays in speech & language development [1, 38, 214, 255, 273]

An article published in ASHA's Leader Magazine expresses the importance of expanding the current knowledge on NAS and it's relationship to infant feeding skills, communication, and literacy for children and adults who were born prenatally exposed to opioids. [273]

The following slides will discuss some studies on speech and language development for school aged children.

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School Aged

In a 2018 study from the Tennessee Department of Health, linking Tennessee Medicaid, birth certificate and special education data for 1,185 children with NAS, and 5,441 children without NAS the following Speech-Language outcomes were observed [38]

- A significantly higher proportion of children with a history of NAS were diagnosed with a speech or language impairment (10.3% vs. 8.3%, p=.001)
- Children with a history of NAS were significantly more likely to receive speech therapy than children without a history of NAS (14% vs. 10.8%, p=.0002)

What this suggests – Children born with NAS can experience learning challenges in childhood. There is also a need for more studies to better understand the long-term effects on language development for this population.

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School Aged

A graduate thesis from 2017 using an online survey, explored speech language pathologists' (SLP) experiences with the presentation of communication difficulties of children with known or suspected NAS. [272]

- 258 School-based SLP responses from across the US
- Most commonly identified comorbid communication difficulties identified for children with known or suspected NAS by SLPs' included:
  - Language Disorders
    - Sub Skills - Receptive Language & Expressive Language
  - Literacy Disorders
    - Sub Skills - Phonological Awareness & Reading Comprehension
  - Speech Sound Disorders

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Long Term Outcome (Birth to 10)

A recently published longitudinal study observed the presence of language delays in children during their first 10 years of life (birth, 1, 5, and 10 year data) comparing children with NAS and a "high risk" control group [214]

Sample: 658 Children with NAS and 730 non-exposed controls

- At 1 year follow up – 65% of children with NAS had language delay, compared to 74% of children without NAS
- At 5 year follow up – 81% of children with NAS had language delay, compared to 82% of children without NAS
- **At 10 year follow up – 24% of children with NAS had language delay, compared to 12% of children without NAS**
- What this suggests - Children with NAS had a significantly different pattern of language delay over time, which calls for increased need for developmental surveillance throughout early and middle childhood.

"This seems counterintuitive; however, it is possible that the elevated rates of language delays are related to the high-risk sample. For the current study, nearly 77% of the sample experienced in utero polysubstance (varying combinations of tobacco, alcohol, cocaine, opioids, and marijuana) exposure, with 79.5% of the NAS group and 73.6% of the non-NAS group exposed to substances in utero."

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