Higher-order Repetitive Behaviors in Toddlers Born Preterm

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Background

- Preterm birth is associated with lower IQ, impaired self-regulation, and social communication deficits.
- Preterm infants are also more likely to receive psychiatric diagnoses including ASD, the prevalence of which is 7% in children born preterm (as compared to 1.5% in the general population)1.
- These findings add to the extant literature suggesting the heterogeneous etiology of ASD, and highlight the need for screening tools that capture the dimensionality and heterogeneity in contributing mechanisms and clinical outcomes of ASD.
- Though Restricted and Repetitive Behaviors (RRBs) have been studied extensively in ASD populations, less is known about dimensional differences in RRBs in toddlers born preterm.

Methods

Participants. Parents of toddlers between 17 and 23 months were recruited from a community sample (n = 1,995).

Exclusionary Criteria:
- Failure to complete both measures (384 excluded).
- Gestation lengths classified as Extremely preterm (< 28 weeks gestation length) or Post-term (>42 weeks gestation length) or Term (all other groups) were excluded.

Aim 1: Measure dimensional features of Restricted and Repetitive Behaviors in a large, community sample.

Aim 2: Compare Restricted and Repetitive Behaviors in toddlers born preterm to fullterm controls.

Aim 3: Determine how group differences are related to Reciprocal Social Behaviors in this Sample.

Results

- Toddlers born preterm demonstrated a higher degree of RRBs than fullterm controls on the Restrictive topography subscale.
- This effect was driven primarily by the Moderately Preterm Group (gestation length = 32-33 weeks).
- Reciprocal Social Behaviors were associated with the Frequency of Occurrence of Restricted Items. This effect interacted with Preterm Birth, such that vr-RSB scores were more predictive of the Frequency of Restricted Items for toddlers born preterm.

Discussion and Future Directions

- The present study has important implications for understanding RRBs, a key diagnostic features of ASD. These findings suggest that the RBS-EC can be used to examine:
  1. The dimensionality of sub-clinical RRBs.
  2. Differences in Restricted and Repetitive Behaviors in toddlers born preterm.
  3. How Restricted and Repetitive Behaviors relate to Reciprocal Social Behaviors.

- Future analyses will:
  - Use dimensional measures of gestation length and birthweight to model the relationship between preterm birth and Restricted and Repetitive Behaviors.
  - Work towards understanding the non-linear relationship between gestation length and Restricted topographies (Figure 3).

References


Contact Information

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