What effect does drug exposure in utero have on children?

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Introduction

Prenatal drug exposure is an often-overlooked form of child maltreatment that can cause serious long-term effects on a child's development.

Prenatal drug exposure has been linked to premature birth, low birth weight, Neonatal Abstinence Syndrome (NAS), and lasting neurological impacts such as attention deficits, impulsivity, and poor emotional regulation.

This study examines how in utero exposure to these substances affects developmental outcomes in children ages 0–6 in foster care. Data were drawn from a caregiver-completed screener:

- **Ages and Stages Questionnaire 3rd edition (ASQ)**: Assesses communication, motor, problem-solving, and social development

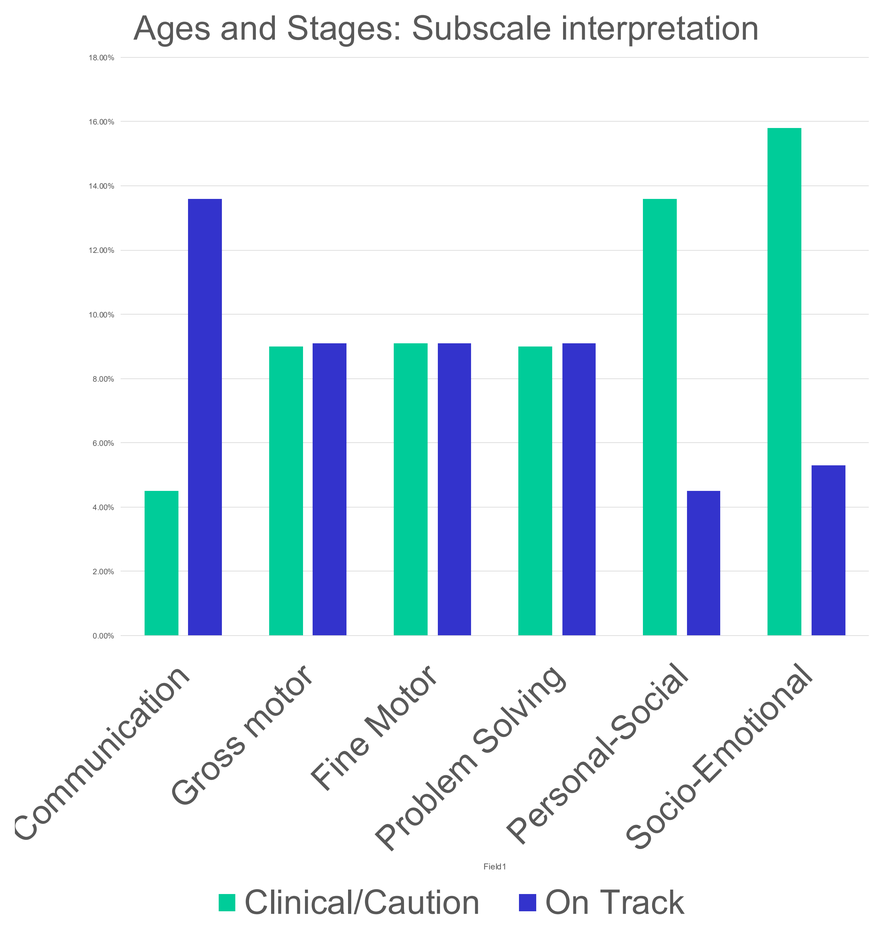
Study Aims

- Our goal was to determine whether there are noticeable developmental differences between children with documented prenatal drug exposure and those without.
- By identifying early patterns — especially in areas like emotional regulation and problem-solving — we hope to highlight the importance of early screening and continued monitoring in at-risk populations.
- In a system where many children already face complex challenges, catching developmental concerns early can create opportunities for intervention that support long-term well-being.

Methods

A chart review was completed for families involved with the Department of Children and Family Services for accusations of child abuse or neglect. We compared developmental scores for the ASQ-3rd edition from children who were exposed to drugs in utero. Because our sample was small and the data didn't follow a normal distribution, we used a **Kruskal–Wallis test** (a non-parametric One-Way ANOVA) to analyze the results.

Figure 1: Ages and Stages subscale interpretation



Results

- In this study, we recorded 40 children in foster care, and of those 40, 57.5% were male and 42.5% were female.
- In this sample 47.5% of cases noted that mom had a substance use problem.
- Of that 47.5%, 20.0% of moms were faced with allegations of having a drug exposed baby.
- Results showed, with children exposed to drugs, were approaching significance with the ASQ social-emotional scale (χ^2 (1) = 3.48; p = 0.06).
- Furthermore, the mean of the scores for the ASQ communication, fine motor, problem solving, and personal social categories were between the normal and borderline range. While this doesn't show statistical concern, clinically, it should be monitored.

Conclusion

- This study reviewed 40 foster care cases to explore how prenatal drug exposure affects child development using ASQ screening.
- Our research focused on in developmental impacts that come with prenatal drug exposure in children who are currently or formerly in foster care.
- Overall, findings showed no significant declines in any areas, however, they were approaching significance in the social-emotional development in children with drug exposure.
- While some results did not show much statistical significance, several scores fell between the normal and borderline range, which could be a concern clinically. These children should be monitored to keep track of developmental progress, even if statistically they are not delayed.
- Limitations impacting our results include our small sample size, inconsistent ages of testing, and incomplete case data.
- Further research using a larger and uniform database is needed to confirm the findings and guide intervention systems.

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