

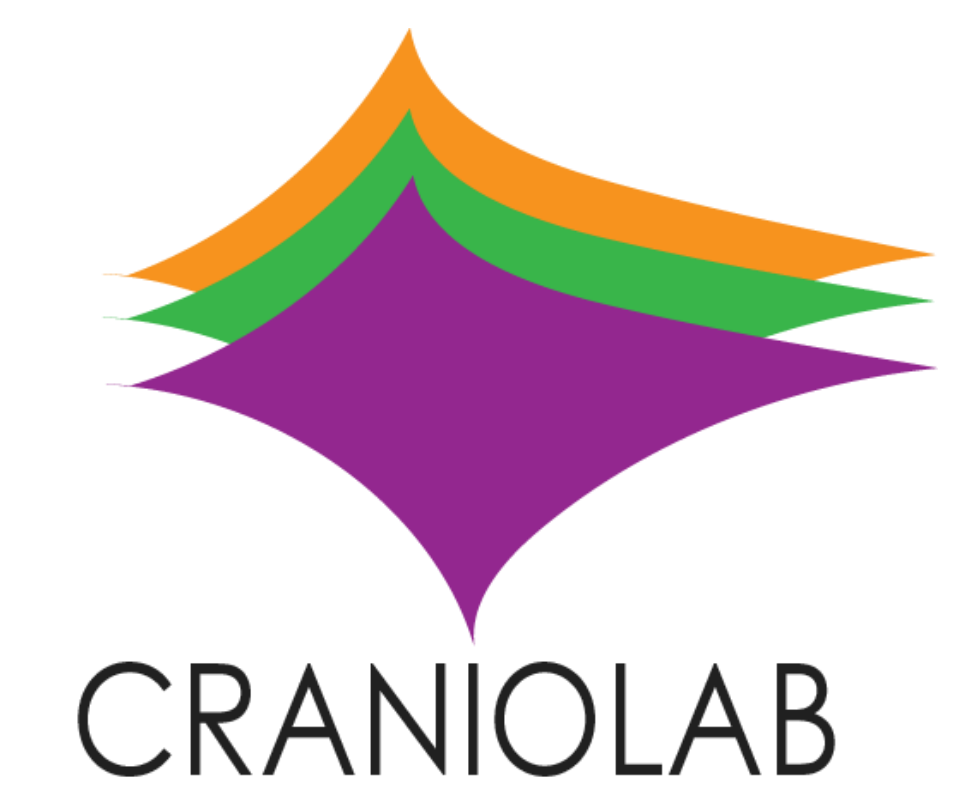


Neurodevelopmental and Psychiatric Outcomes in Children with Craniosynostosis: A Retrospective Risk Analysis

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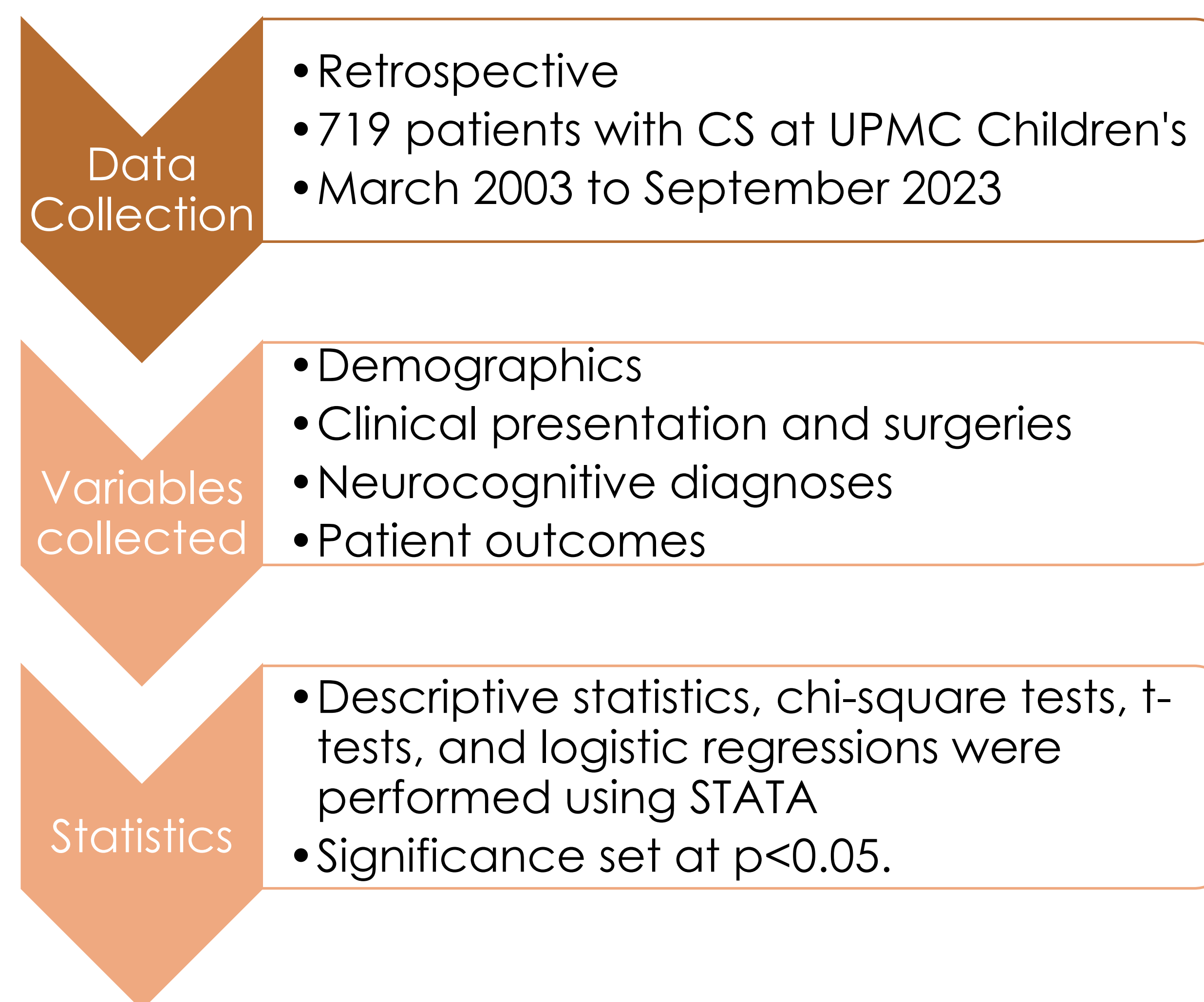
Introduction

- Patients with craniosynostosis (CS) are at higher risk for **neurodevelopmental and psychiatric sequelae**.
- This can cause an **emotional and psychological burden** on the family, including stress, anxiety, and potential financial strain from ongoing medical care.

Objective

- To explore the neuropsychiatric **outcomes and potential risk factors** in patients diagnosed with craniosynostosis.

Methodology



Results

- Average follow-up duration:** 5.68 ± 3.99 years
- Demographics:** 64.3% male, 83.0% Caucasian
- Mean age at diagnosis:** 36.77 ± 43.61 months
- 132 patients with Neurocognitive and Psychiatric diagnoses:
 - PSC score:** 17.68 ± 9.24
 - GAD-7 score:** 6.78 ± 8.11
 - PHQ-9 score:** 5.32 ± 6.10

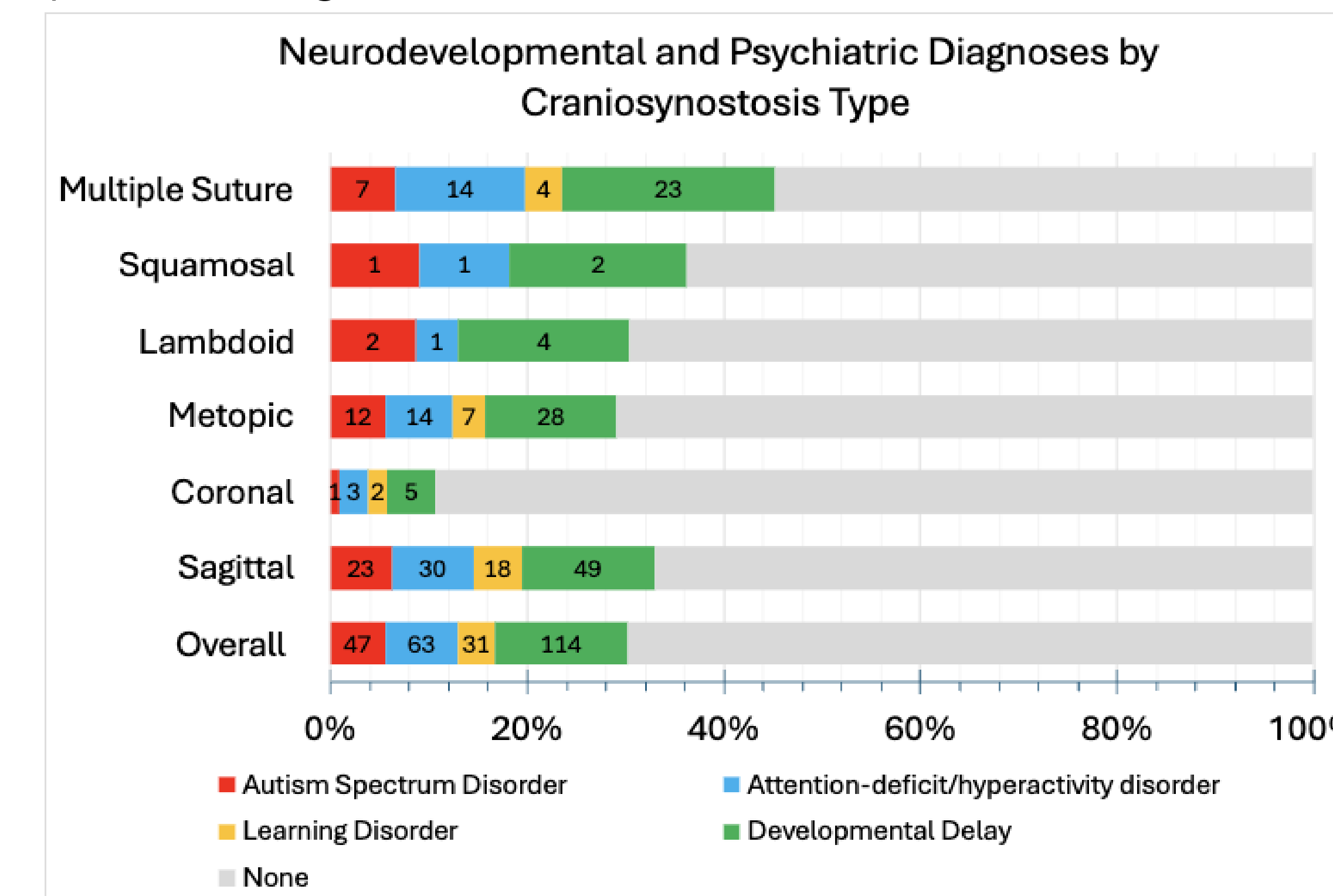


Figure 1. Breakdown of diagnosis type by suture type

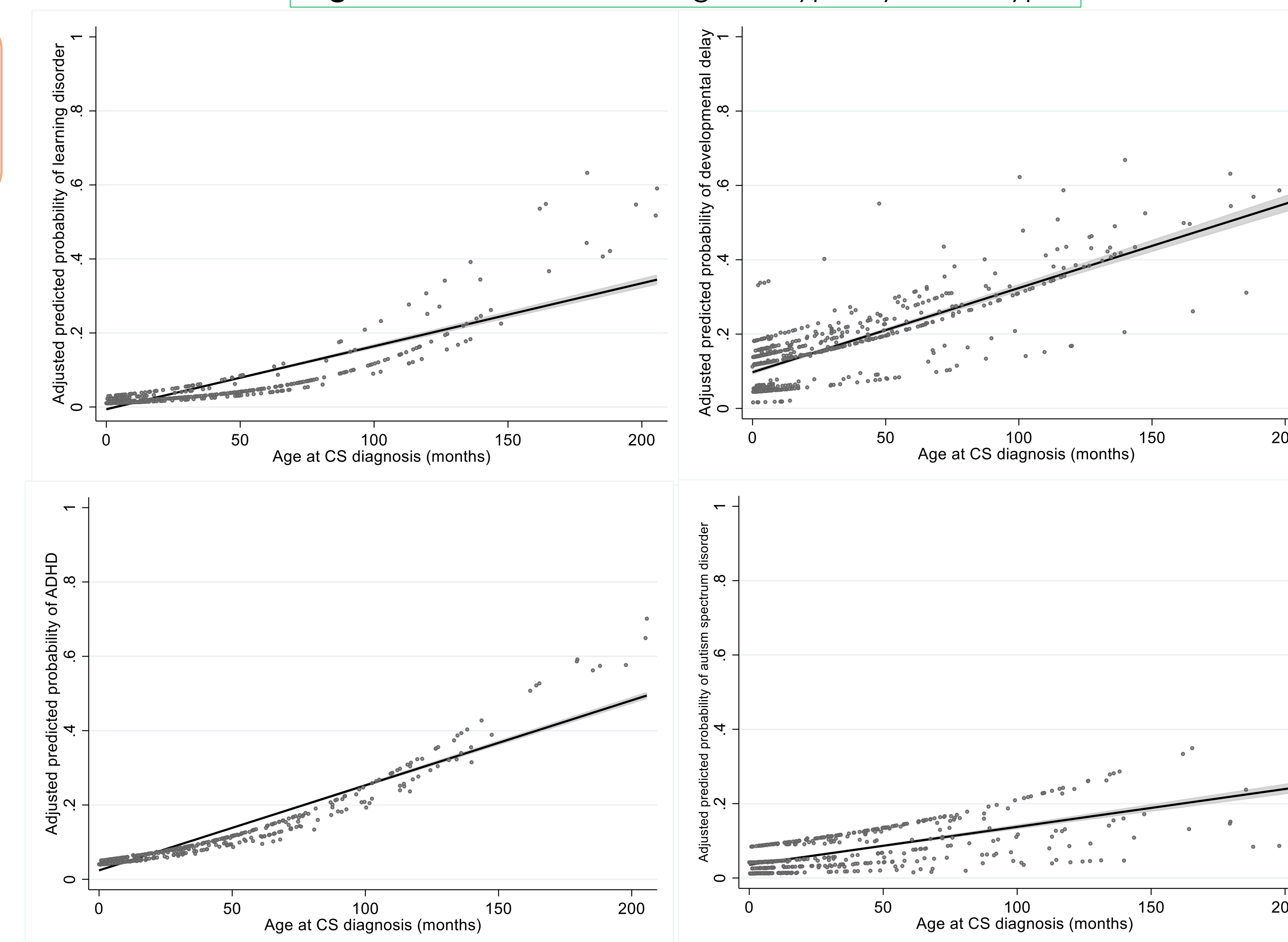


Figure 2. Logistic regression curves assessing the impact of delayed diagnosis on LD, DD, ADHD, and ASD

Conclusion

- Patients who developed neurocognitive and psychiatric outcomes:
 - Were **diagnosed** with craniosynostosis at a **later age** (57.62 ± 44.56 vs. 30.10 ± 41.21 ; $p < 0.001$)
 - Were **older at their initial PRS visit** (48.63 ± 40.75 vs. 29.15 ± 41.21 ; $p < 0.001$)
 - Had a **longer follow-up** duration in PRS (81.70 ± 54.71 vs. 57.73 ± 47.58 ; $p = 0.002$)

Condition	Increase in Odds per Additional Month of Age	p-value	Adjusted For
ASD	0.37%	0.72	Age at initial visit, surgery, and sex
ADHD	1.52%	0.40	-
Learning disorders	1.99%	<0.001	-
Developmental delay	2.28%	<0.001	Age at initial visit, type of insurance, and suture location

- This study underscores the critical importance of **early diagnosis and characterization of craniosynostosis**.