Examining the Relation Between Non-Nutritive Suck and the Battelle Developmental Inventory in a Puerto Rican Cohort

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BACKGROUND

Non-Nutritive Suck (NNS) is a patterned suck signal that originates between burns of sucking and pause periods for respiration [1].

- NNS is generated by the lab’s NNS device and ADInstruments’ software LabChart 8 for NNS collection and analysis.
- The sCPG is highly adaptable to sensory inputs and infants use these inputs to modulate their suck response [2, 3, 4].
- When an infant struggles to suck and feed, the efficacy of these neural connections and coordination is questioned as difficulties can arise in early development.

METHODS

- NNS is a patterned suck signal that alternates between bursts of sucking and pause periods for respiration [1].
- Gestational Age (weeks) and Birth Weight (lbs)

RESULTS

- There were no significant correlations between any measures of NNS (average duration, average frequency, average height, average cycles per burst, average cycles per minute, and average cycles per minute) and the BDI Communication Raw Score or the BDI Total Raw Score.
- NNS variables that were positively correlated with BDI Communication Score were NNS Duration, NNS Frequency, NNS cycles/burst and NNS cycles amount variables.
- The Battelle Developmental Inventory (BDI), Second Edition (BDI-2) is a measure that assesses infant development across five domains including Cognitive, Adaptive, Motor, Communication, and Personal-Social development. Each of these domains then has subdomains which are scored separately and aggregated. Infants and children can be tested from birth until 7 years of age [10].
- This study was preliminary, and we hope to continue exploring whether BDI and NNS are correlated as we obtain more data.
- We will also be comparing NNS to other early metrics of neurofunction, like eye tracking.

CONCLUSIONS

- This study was preliminary, and we hope to continue exploring whether BDI and NNS are correlated as we obtain more data.
- We will also be comparing NNS to other early metrics of neurofunction, like eye tracking.

REFERENCES


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