



THE DEVELOPMENTAL OUTCOME BY THE AGE OF 18 MONTHS OF NEWBORNS DELIVERED TO SARS-COV-2 POSITIVE MOTHERS

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Increasing evidence links maternal COVID-19 infection and enhanced cytokine expression with increased risk of neurodevelopmental disorders.

Previous studies noted expressive and motor delays at 1 year old

Limited data on the perinatal outcome and complications of COVID-19, including the longterm outcome

Follow up study of a descriptive study by Duyongco, et. al. where two infants delivered to SARS-CoV-2 positive mothers had gross motor and expressive language delays



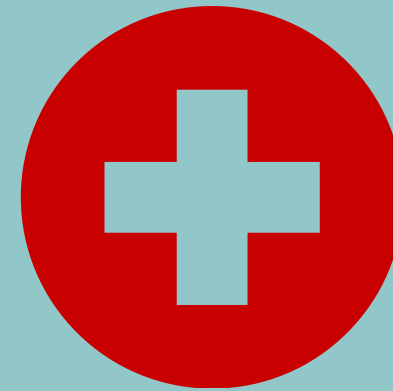
Objective: To compare the developmental outcome of newborns delivered from SARS-CoV-2 positive and negative mothers in 2 private tertiary hospitals from April 2020–January 2022 at 18 months old

Methodology and Results:

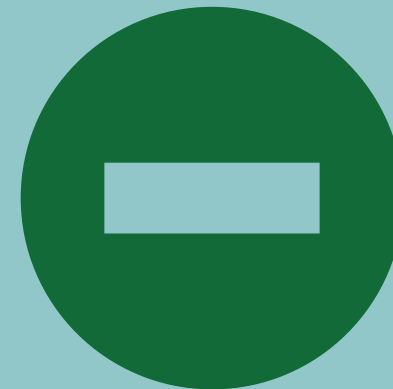
Analytic cross-sectional study in two private tertiary hospitals in Cebu

- Demographics: Chart review
- Developmental milestones: Interview
- Data analysis: Chi-square test of independence

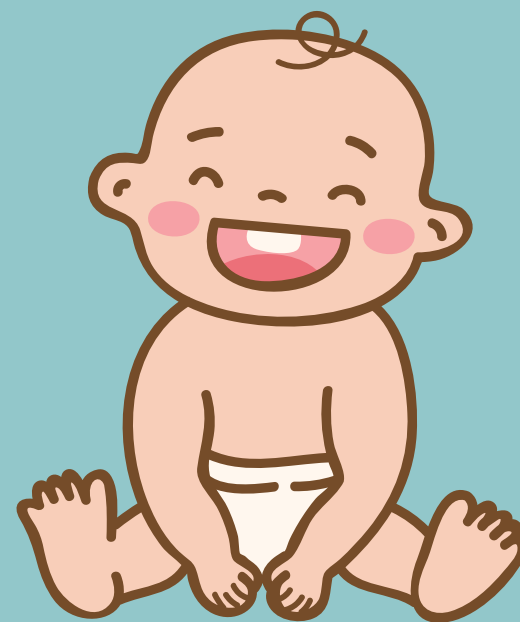
- Maternal demographics and pertinent perinatal data were collected by the researcher (pediatric resident) through chart review.
- Assessment of the neurodevelopmental outcome of infants delivered from April 2020–January 2022 at 18 months old was done through a phone call by the researcher. A pediatric neurologist also reviewed the findings. The neurodevelopmental assessment was done using the Denver II Developmental Chart. Developmental milestones were then be recorded as Developmental Quotients [(Developmental Age / Chronological Age) x 100].
- Analysis of data was done through Chi square test in order to compare the two groups.



118 out of 3,102 mothers



2,984 out of 3,102 mothers



Sample size: 30



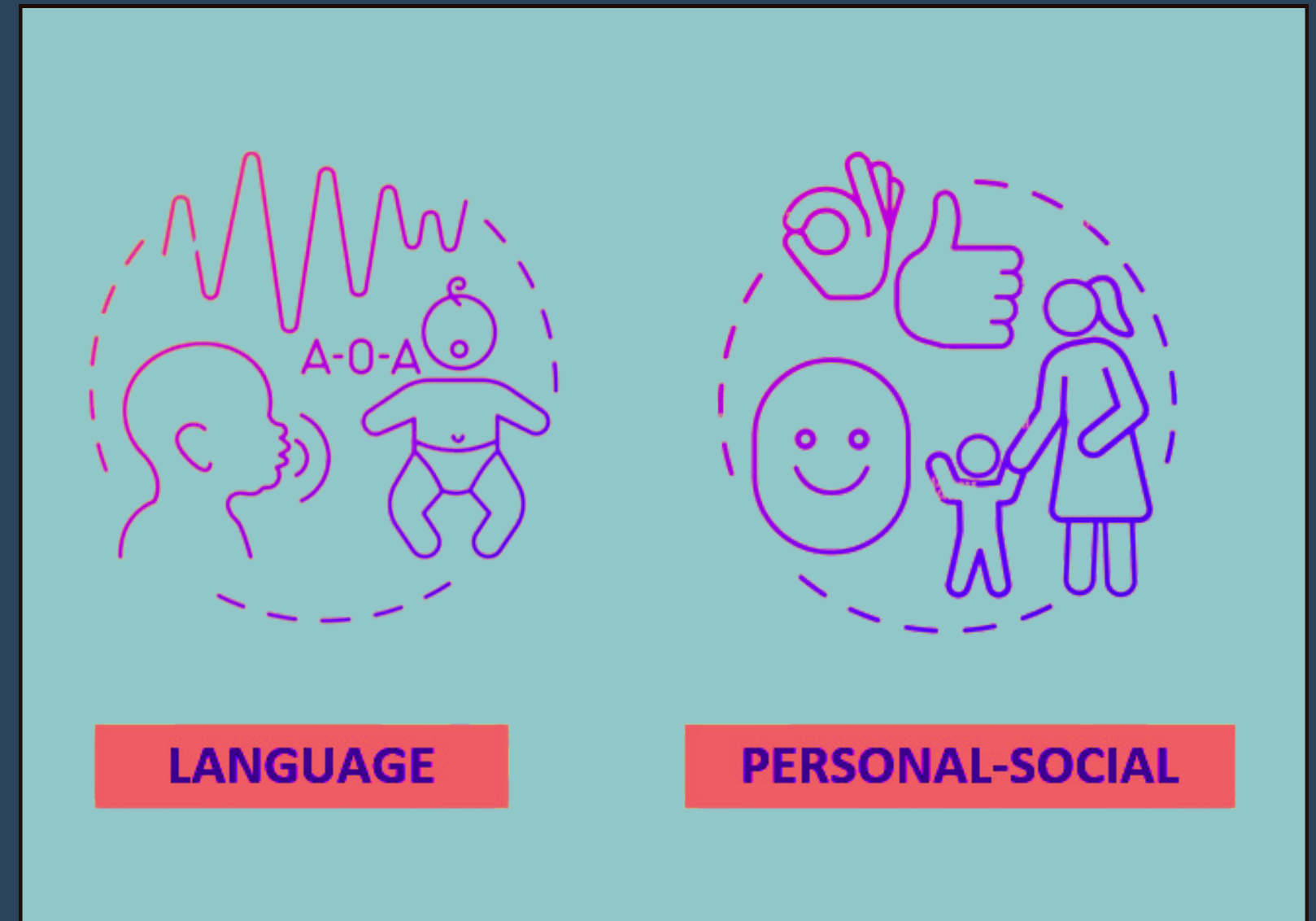
Developmental Outcome Among Infants Delivered to SARS-CoV-2 POSITIVE Mothers

Domain	Developmental Quotient		Chi-square (x^2)	p-value (two-tailed)
	Normal	Delayed		
Gross Motor	30	0	7.74	0.05
Fine Motor	30	0		
Language	26	4		
Personal Social	27	3		

Developmental Outcome Among Infants Delivered to SARS-CoV-2 NEGATIVE Mothers

Domain	Developmental Quotient		Chi-square (x^2)	p-value (two-tailed)
	Normal	Delayed		
Gross Motor	30	0	3.03	0.39
Fine Motor	30	0		
Language	29	1		
Personal Social	30	0		

Conclusion: There was significant developmental delay, particularly in the language and personal-social domains of development in the SARS-CoV-2 positive group of infants. However, this data should still be interpreted with caution due to confounders that could predispose infants to neurodevelopmental delays.



Recommendations: The researcher recommends conducting a prospective analytical study. Gathering data from government hospitals who see a significantly higher number of COVID-19 cases is also recommended, as well as correlating the severity of maternal COVID-19 infection to these neurodevelopmental delays.

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