

# Early mother-infant interaction after delivery: A naturalistic study

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## Introduction

Several studies have demonstrated the impact of maternal emotional state on infant's behavior (Tronick & Weinberg, 1997). Field (1998) showed behavioral, physiological and biochemical dysregulation in newborns of depressive mothers. This is the first Brazilian study focused on neonatal behavior immediately after delivery to understand if maternal emotional state during pregnancy, childbirth type, and newborn's characteristics can influence the behavior of the mother-infant dyad. The study integrates an extended research project about factors associated to postpartum depression (PPD) in a sample of lower-middle class women living in São Paulo city, Brazil.



## Results

**Mother's Caress**  
> Boys

### Calm down

- > Weigh
- > Girls
- > Normal
- < Forceps
- > Emotional State
- > Skin-to-skin

### Infant's cry

- > PPD
- > Boys
- < Weight
- > Normal
- < Forceps

## Aim

Investigate if maternal emotional state, childbirth type and infant's characteristics influence on early mother-infant interaction

## Methods and Materials

Mother-infant dyads (N = 60) were recorded by nurses immediately after birth when the newborns were placed naked on their mother's chest in skin-to-skin contact (N=36) or without (N=24) at the University Hospital in São Paulo, Brazil.

Behaviors were coded every ten seconds using Interact (version 9): mother's caress, infant's cry and calming down.

The frequency of each behavior was divided into quartiles and compared using Multiple Ordinal Regressions considering the following variables:

Table 1. Estimates, Wald and p-value of Ordinal Regression

	INFANT'S CRY			MOTHER'S CARESS			CALM DOWN		
	Est	Wald	p-value	Est	Wald	p-value	Est	Wald	p-value
<b>WEIGHT</b>	-0	4,12	<b>0,042*</b>	0	0,091	0,763	0	11	<b>0,001*</b>
<b>SEX</b>	2	7,12	<b>0,008*</b>	1,4	4,302	<b>0,038*</b>	-2	6,9	<b>0,009*</b>
<b>SKIN TO SKIN</b>	0,7	0,87	0,351	-1	2,525	0,112	-1	3,3	0,069
<b>CHILDBIRTH</b>	1,6	4,43	<b>0,035*</b>	-1	1,857	0,173	-2	5,1	<b>0,024*</b>
<b>EMOTIONAL</b>	1,5	2,57	0,109	-1	1,719	0,190	-3	7	<b>0,008*</b>
<b>PPD</b>	-1,9	4,9	<b>0,027*</b>	0,2	0,122	0,726	0,7	0,7	0,410

## Discussion

Our results suggest that mother-infant interaction was influenced by mother's emotional state, infant characteristics, nursing procedures and childbirth type.

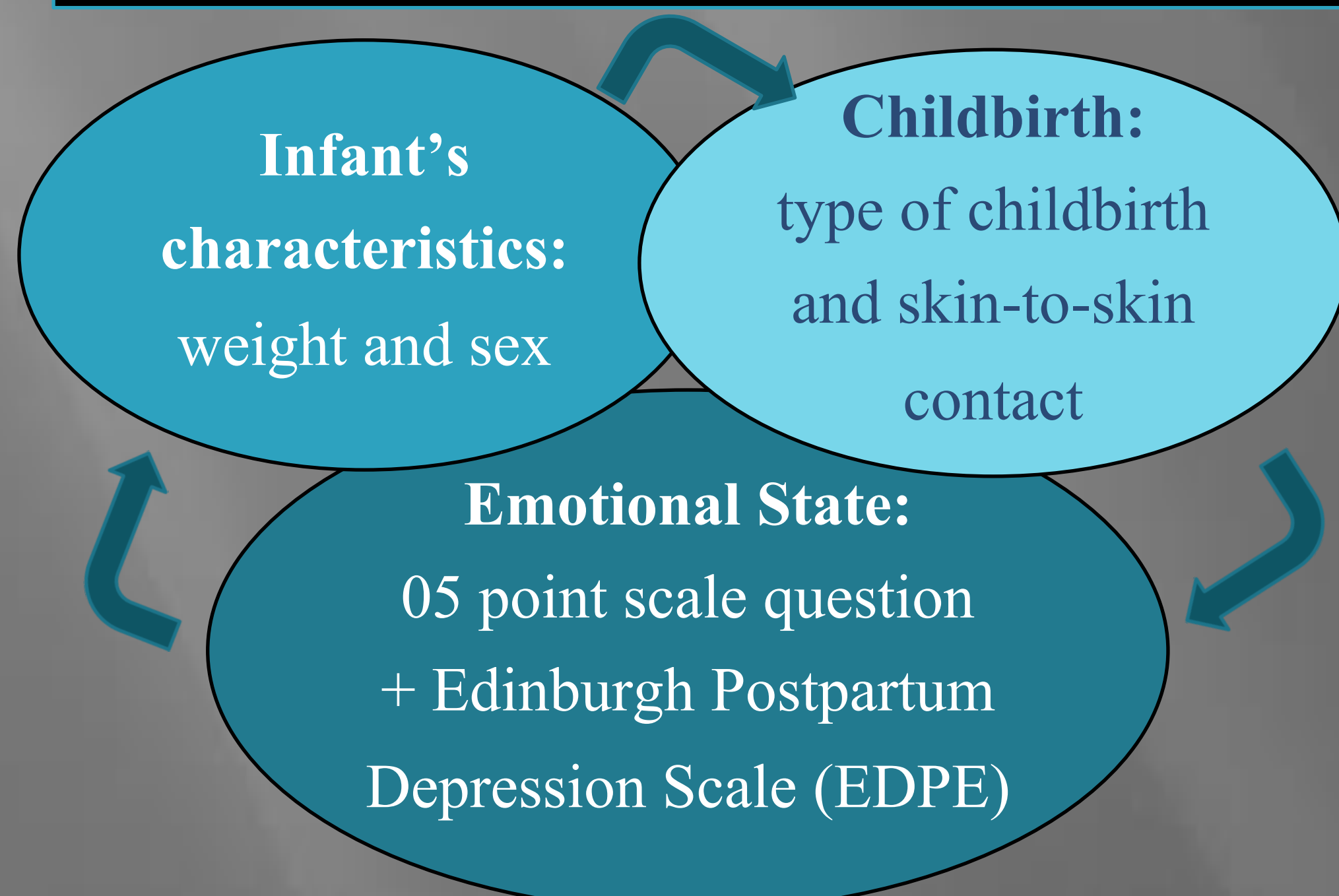
## Conclusions

Individual development will depend on complex interactions between mother-infant genes, environmental conditions and reciprocal relations between individuals and their surrounding contexts.

We observed that individuals play an active role in their development from the first moments after birth, and probably before birth (Ingold, 2001; Gottlieb 2007).

## References

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