# How does Stress affect Maternal and Paternal Perceptions of Relationship Strain after Preterm Birth?

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## Background

Strain on couple relationships is associated with lower well-being, mental disorders, and depression. As premature birth is known to pose stress to parents, this study explores whether relationship strain comes to pass within mothers and fathers with a premature infant in a neonatal intensive care unit (NICU). The study's goal is to increase knowledge regarding the role of stress in interparental relationships in the NICU context.
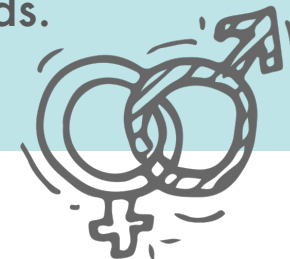
## Methods

- Retrospective cross-sectional study

- Targeting parents who experienced the preterm birth of an infant with a birth weight below 1,500 g

- Linear regression was used to analyse associations between the perceived stress (PSS:NICU) and relationship strain

## Main Messages

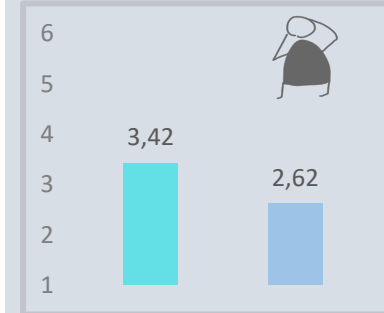Mothers show higher levels of stress and relationship strain than fathers.

However, for fathers, the infant's behaviours and appearance show a stronger association on relationship strain than for mothers.

Research should focus on stress prevention measures in NICUs to meet both maternal and paternal needs.
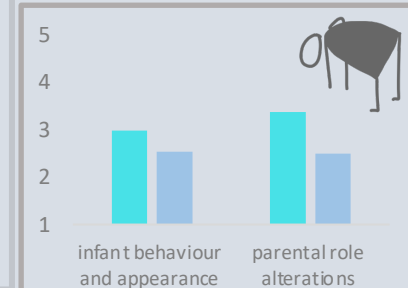
## Results

Mothers (n=437)
Fathers (n=301)

### Relationship Strain

6
5
4    3,42
3
2         2,62
1

1 (no perceived relationship strain) to
6 (strong perceived relationship strain)

### PSS:NICU

5
4
3
2
1
    infant behaviour        parental role
    and appearance          alterations

1 ('not at all stressful') to 5 ('extremely stressful')

### Regression Analysis

Association between Parental Stress due to Infant Appearance and Behaviour and Parental Role Alterations and Maternally and Paternally Experienced Relationship Strain

| Mothers | | | | | Fathers/Partners | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | B | SE | β | p | [95% CI] | B | SE | β | p | [95% CI] |
| Parental role alterations | 0.36 | 0.09 | 0.21 | ≤ 0.001 | [0.18; 0.54] | 0.12 | 0.11 | 0.08 | 0.280 | [-0.10; 0.33] |
| Infant appearance and behaviour | 0.27 | 0.08 | 0.16 | 0.02 | [0.09; 0.44] | 0.42 | 0.11 | 0.27 | 0.002 | [0.19; 0.65] |
| Presence of further children | -0.04 | 0.18 | -0.01 | 0.833 | [-0.38; 0.31] | -0.23 | 0.18 | -0.08 | 0.194 | [-0.58; 0.12] |
| Parental age | 0.01 | 0.02 | 0.01 | 0.804 | [-0.03; 0.04] | -0.003 | 0.015 | -0.01 | 0.801 | [-0.03; 0.03] |
| *Educ. degree* | | | | | | | | | | |
| Completed vocational training | 0.98 | 0.58 | 0.27 | 0.090 | [-0.15; 2.11] | -0.95 | 0.44 | -0.3 | 0.16 | [-1.81; -0.08] |
| Completed specialist training | 1.15 | 0.61 | 0.21 | 0.062 | [-0.06; 2.35] | -1.14 | 0.46 | -0.3 | 0.08 | [-2.04; -0.24] |
| University or college degree | 0.94 | 0.58 | 0.28 | 0.103 | [-0.19; 2.08] | -0.68 | 0.43 | -0.23 | 0.119 | [-1.53; 0.18] |

R² = 0.1056, adjusted R² = 0.0894          R² = 0.1394, adjusted R² = 0.1174

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