

Skin to Skin Contact Between Mothers and Their Babies in the NICU and the Effects on Mothers’ Stress & Anxiety

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Background

Mothers with infants admitted to the NICU report significantly higher levels of anxiety and stress compared to infants not admitted to the NICU, attributed to the disruption in their instinctual maternal role to hold, care for, and protect their infant.^{1,2} Mothers have to be separated from their neonate who is taken into critical care where they are stabilized which causes deep separation anxiety and other related mental health problems for NICU mothers.¹ Skin to skin contact (SSC) stimulates natural oxytocin release and inversely decreases cortisol levels, heart rate, and blood pressure in these mothers.^{1,3} SSC between neonatal patients and their mothers has been shown to be effective in decreasing anxiety and stress in mothers of NICU patients.^{1,4,5}

PICOT Question

P: Mothers with babies in the NICU.
I: Skin to skin contact.
C: Mothers that don’t do skin to skin contact with babies in the NICU.
O: Mothers of NICU patients have decreased levels of anxiety and stress

Literature Search

Key terms:

- Skin to skin contact
- Postpartum mother anxiety
- Postpartum stress
- Postpartum happiness
- Benefits of skin-skin, neonate
- Kangaroo mothering
- Stress neonatal mother

Database:

- CINAHL
- UH Library Database
- Google scholar
- PubMed

Article Selection Criteria:

- Peer-reviewed articles or journals
- Published in English
- Published between 2018 and 2022
- Aligns with research question
- Includes NICU mothers

Synthesis of Findings

- Skin to skin contact (SSC) of at least 60 minutes between mothers and their infants in the neonatal intensive care unit significantly reduced maternal anxiety and stress (p<0.05), with increased effectiveness with increased repetition of SSC.^{1-4, 6- 8}
- SSC significantly decreased maternal salivary cortisol levels (p<0.05), indicative of reduced maternal physiological stress, compared to their baseline counterparts without SSC during and after SSC.^{2, 4, 8}
- SSC was found to significantly reduce maternal heart rate and blood pressure (p<0.05) compared to measurements taken before SSC, suggesting SSC between mothers and neonates as a stress reducing intervention.³
- Maternal salivary oxytocin was shown to increase during skin to skin contact (p<0.05) compared to before SSC, indicative of a strengthened mother-infant bond.^{4, 8}



Sanderson, M. (2018). *Kangaroo care: Connecting parents and babies through skin-to-skin*. Your Health Matters. <https://health.sunnybrook.ca/nicu/kangaroo-care-skin-to-skin-babies-newborns/>

Decision to Change

- Implementing skin to skin contact between mothers and their babies in the NICU would decrease stress and anxiety in NICU mothers.
- Skin to skin contact improves mother-infant bonding which could help improve development and growth of the babies in the NICU.

Evaluation

- By the end of the 3 months implementation period, skin to skin contact between mothers and their infants in the NICU will decrease stress and anxiety in mothers by 5%.
- Anxiety Evaluation Tools:
 - The State-Trait Anxiety Inventory (STAI)^{1, 4}
 - Visual Anxiety Scale⁸
- Stress Evaluation Tools:
 - Parental Stress Scale: NICU (PSS:NICU)^{1, 6, 7}
 - Measuring maternal heart rate, blood pressure, salivary cortisol levels, and oxytocin levels will be used to evaluate outcomes.^{2, 3, 4, 8}

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