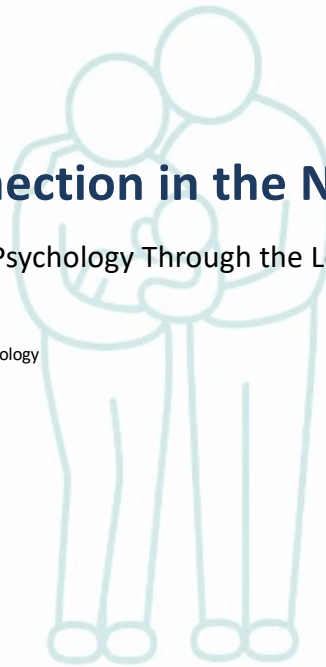




Restoring Connection in the NICU and Beyond

An Introduction to NICU Psychology Through the Lens of Relationships

Cara Solness, PhD, LP
Munroe Meyer Institute Department of Psychology



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Objectives



- Mental Health in the NICU
- Why Connection Matters in the NICU
- How NICU Hospitalization Disrupts Connection
- The Role and Scope of NICU Psychology
- Restoring Connections
- Supporting Connection with Healthcare Teams and Communities
- Emerging Targets & Future Directions

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Disclosures

- Use of AI
- No financial disclosures
- NICU/Neonatal/Perinatal/
Medical Complexity Expert
(not a loneliness expert)
- Triggers and self-care



Gamma AI

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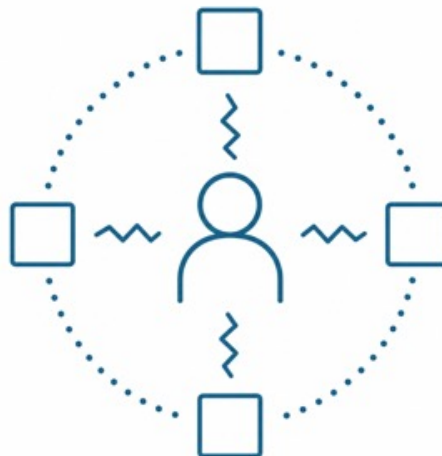
Definition

Loneliness is the **unpleasant** experience that that occurs when a person's **network** of social relations is **deficient** in some important way, either **quantitatively or qualitatively**.

Perlman and Peplau

Loneliness can arise when connection is insufficient **across multiple relationships** (*social loneliness*) – or when a **singular, highly meaningful** relationship (*intimate loneliness*) fails to provide the needed form of connection.

Cacioppo et al., 2015



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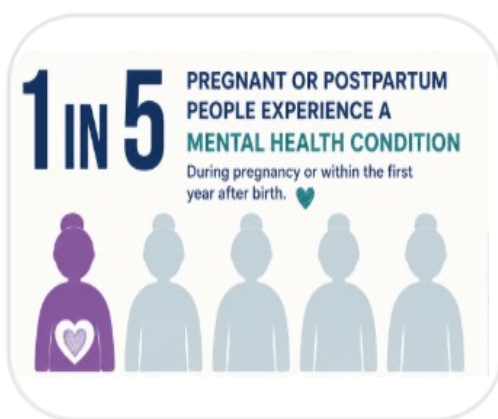
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Psychological Landscape of NICU Admission

PMADs = Perinatal Mood and Anxiety Disorders



PMADs:

- Most common complication of pregnancy and postpartum
- Mental health (suicide + overdose) is leading cause of mortality for postpartum women



Many individuals remain unidentified and untreated

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Psychological Landscape of NICU Admission



In Nebraska, compared to White mothers PPD is ~2x as prevalent in African American, American Indian, and Asian/Pacific Islander.

People from racial and ethnic minority groups experience a greater burden of risk factors for preterm birth than do their White counterparts.

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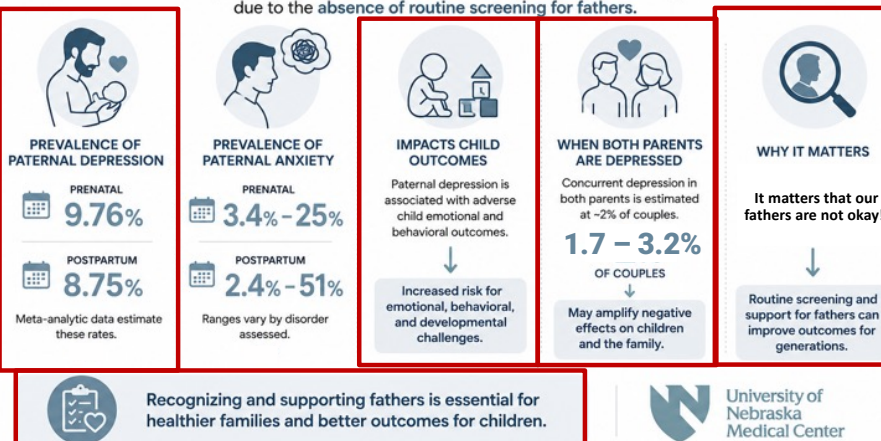
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Psychological Landscape of NICU Admission



Perinatal Mental Health in Fathers: Underrecognized but Common

Paternal perinatal depression and anxiety are significantly underrecognized due to the absence of routine screening for fathers.



Healthy fathers. Strong families. Thriving children. ♥

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High Risk Period / High Risk Exposures



Psychiatric Admissions

- 22x more likely in month following childbirth

Pre-Existing Bipolar Disorder

- 20% postnatal relapse

Postpartum Psychosis

- 1-2/1000

Anxiety ~20%; ~42% NICU

- Compared to 9% in general population

PPD in mothers ~17%; ~33% NICU population

- Compared to 8.3% MDD in general population

PPD in fathers ~8%; ~17% NICU population

- Moderate correlation between PPD in mothers and fathers

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Impact of Perinatal Mental Health Concerns



Whole family effects

Family Functioning



Parent-infant bonding:
2-4x more bonding difficulties



Parenting strain:
High parental stress



Partner relationships:
Maternal and paternal depression are correlated



Breastfeeding continuation:
3 weeks earlier discontinuation
Lower rates of breastfeeding



Increased risk of child maltreatment:
Harsher parenting practices
PMADs are a risk factor, not an indication

Child Development

Attachment and Relationships:
Less sensitivity and responsiveness

Social-Emotional Development:
Emotional regulation, behavior, anxiety

Sleep:
More sleep difficulties and awakenings

Language and Cognition:
Increased risk for developmental delays

Motor Development:
Small but measurable increased risk of delays



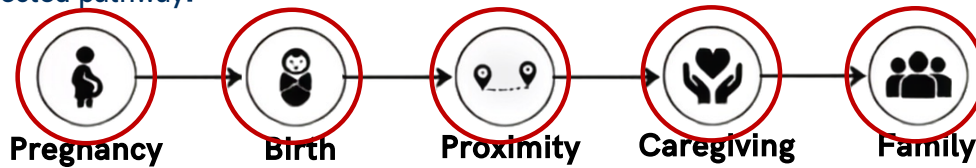
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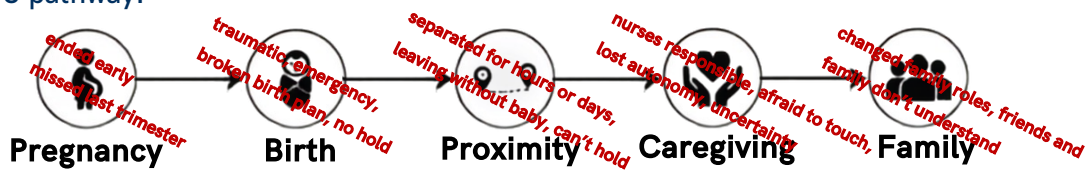
The NICU as a Disruption of Connection



Expected pathway:



NICU pathway:



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Overview of NICU Environment



Medical Setting

High-acuity environment designed for premature and medically fragile newborns.

Complex medical equipment and constant monitoring create unique atmosphere.

Emotional Climate

Parents experience shock, grief, uncertainty, and hope simultaneously.

Families have to learn to understand the medical language (healthcare navigation)

Families navigate medical decisions under extreme stress.

Multidisciplinary Team

Neonatologists, nurses, respiratory therapists, social workers collaborate daily.

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Visual Reality of the NICU



24 weeks

Extremely Preterm

Micro-preemie (<28wk GA or <800g)

<https://www.bing.com/images/>

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Visual Reality of the NICU



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Connection Framework



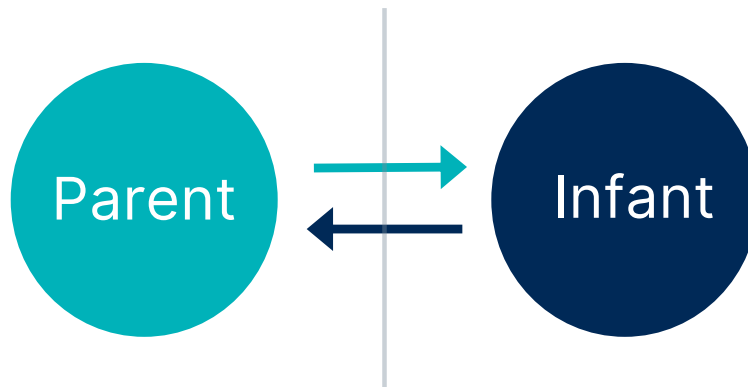
- Parent ↔ Infant
- Parent ↔ Parental Identity
- Parent ↔ Partner
- Parent ↔ Family
- Parent ↔ Community
- Parent ↔ Healthcare Team



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Parent ↔ Infant



disrupted access

"I didn't get that first hold and now I don't think my baby knows me."

"My baby is in a plastic box. I can't even comfort him."

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Parent ↔ Parental Identity



"I had a hard time looking at my baby when they were born because they looked like an alien. What kind of mom says that?"

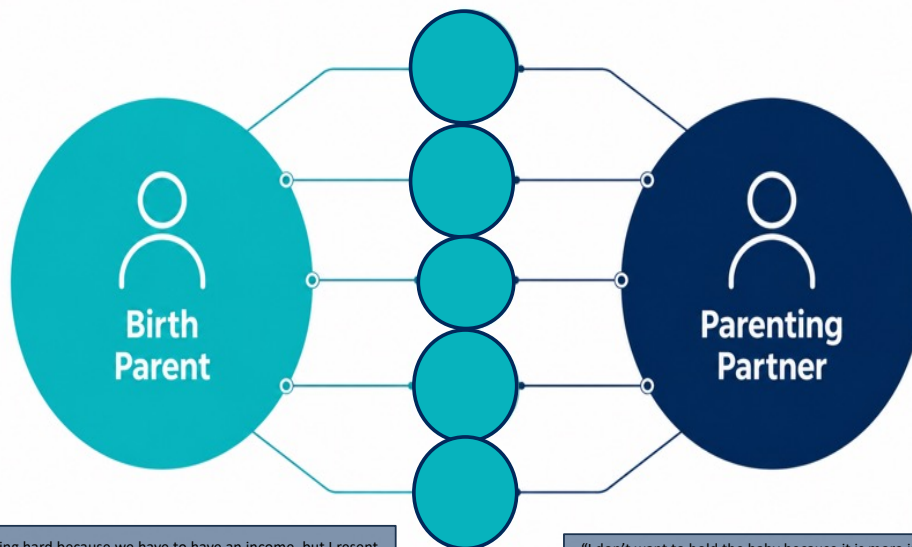
"I really wanted the connection of breastfeed but now all I do is pump for a baby that I don't even have with me."



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Birth Parent ↔ Parenting Partner (Non-Gestational Parent)



"I know he is working hard because we have to have an income, but I resent that he is not here with me and spending time with our baby."

"I don't want to hold the baby because it is more important for her as the mom to get those things."

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Parent ↔ Community and Healthcare Team



"My family just keeps telling me I should be happy because she is alive."

"I am jealous of my friends who are posting about their babies on social media."

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Loneliness / Unmet Needs for Connection



> Psychol Health Med. 2019 Jul;24(6):667-679. doi: 10.1080/13548506.2018.1554251. Epub 2018 Dec 5.

Maternal loneliness: concurrent and longitudinal associations with depressive symptoms and child adjustment

Ilona Luoma^{1,2,3,4}, Marie Korhonen^{1,5}, Kaija Puura^{1,2}, Raii K Salmelin^{2,6}

Affiliations + expand

PMID: 30514104 DOI: 10.1080/13548506.2018.1554251

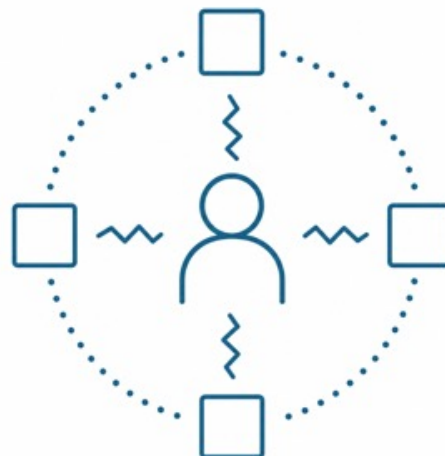
> Perspect Public Health. 2021 Jul;141(4):214-225. doi: 10.1177/17579139211018243.

Experiencing loneliness in parenthood: a scoping review

R. Nowland¹, G Thomson², L McNally², T Smith², K Whittaker²

Affiliations + expand

PMID: 34286652 PMCID: PMC8580382 DOI: 10.1177/17579139211018243



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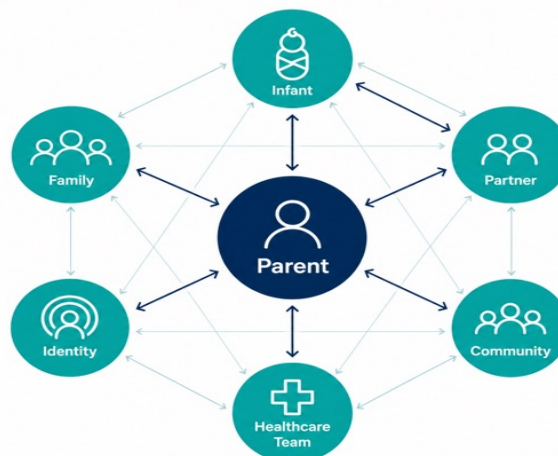
Disidentification Framework



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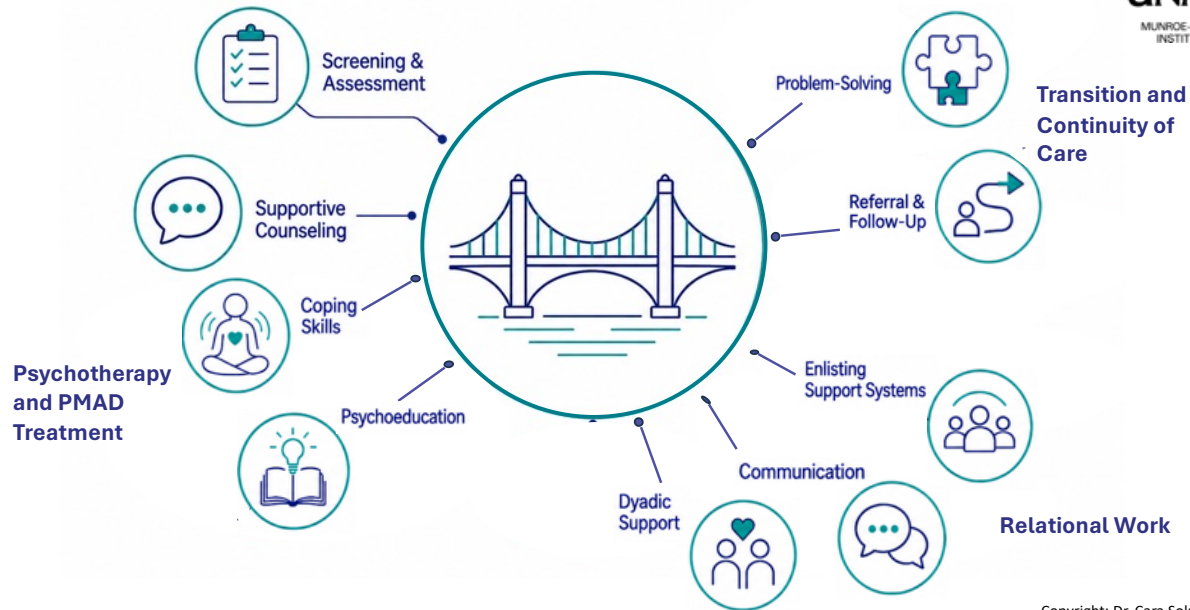
What Does a NICU Psychologist Do?



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What Does a NICU Psychologist Do?



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Does it Work?

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J Educ Health Promot. 2021 Sep 30;10:337. doi: 10.4103/jehp.1620.2020

Relationship between mindfulness and maternal stress and mother-infant bonding in neonatal intensive care

Ashraf Khoramirad¹, Zahra Abedini^{1,2}, Zohre Khalajinia¹

Author information • Article notes • Copyright and License

PMCID: PMC8552262 PMID: 34761023

PEDIATRICS

Volume 118, Issue 5
November 2006

ARTICLES | NOVEMBER 01 2006

Reducing Premature Infants' Length of Stay and Improving Parents' Mental Health Outcomes With the Creating Opportunities for Parent Empowerment (COPE) Neonatal Intensive Care Unit Program: A Randomized, Controlled Trial

PHD, RN, FAAC; Nancy F. Fein, PhD, RN, FAAC; Hugh F. Crean, PhD; Robert A. S. Allen, PhD; Steven J. Gross, MD; Bernadette Mazurek Melnyk, PhD, FAAN; AZ 85004. E-mail: bernadette.melnik@arizona.edu

10.1093/peds/118.5.2005-2010

Article history

JAN
Leading Global Nursing Research

Original Research

The effectiveness of early intervention on paternal stress for infants admitted to a neonatal intensive

Ng MN RN, Kuan-Chia Lin PhD, Chien-Huei Kao PhD RN

doi.org/10.1111/j.1365-2648.2012.06097.x | Citations: 43

REVIEW article

Front. Psychol., 06 January 2025
Sec. Pediatric Psychology
Volume 15 - 2024 |
https://doi.org/10.3389/fpsyg.2024.1374756

This article is part of the Research Topic
Psychological Implications of Preterm Birth
View all 12 articles >

Six weeks that changed the preterm infant brain: lessons learned from the Family Nurture Intervention randomized controlled trials

Robert J. Ludwig^{1,2*}, Michael M. Myers^{1,2}, Martha G. Welch^{1,2}

¹ Department of Pediatrics, Columbia University Medical Center, New York, NY, United States
² Martha G. Welch Center, New York, NY, United States

THE JOURNAL OF PERINATAL & NEONATAL NURSING

Articles & Issues Collections CE For Authors Journal Info Special Issue Guidelines

FEATURE ARTICLES

The Effectiveness of an Intervention Program for Fathers of Hospitalized Preterm Infants on Paternal Support and Attachment 1 Month After Discharge

Chen, Yi-Ling RN, RN; Lee, Tzu-Ying PhD, RN; Gau, Meel-Ling PhD, RN; Lin, Kuan-Chia PhD

Author Information @

The Journal of Perinatal & Neonatal Nursing 33(2):p 160-169, April/June 2019. | DOI: 10.1097/JPN.0000000000000406

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Future Directions



- Father-inclusive neonatal mental health
- Loneliness as a measurable clinical construct
- Improved continuity of care for medically complex families (antepartum – NICU – outpatient)
- Implementation science:
 - screening, increasing access by increasing number of embedded psychologists in Nebraska NICUs
 - telehealth to reduce barriers and increase connection
 - sustainability



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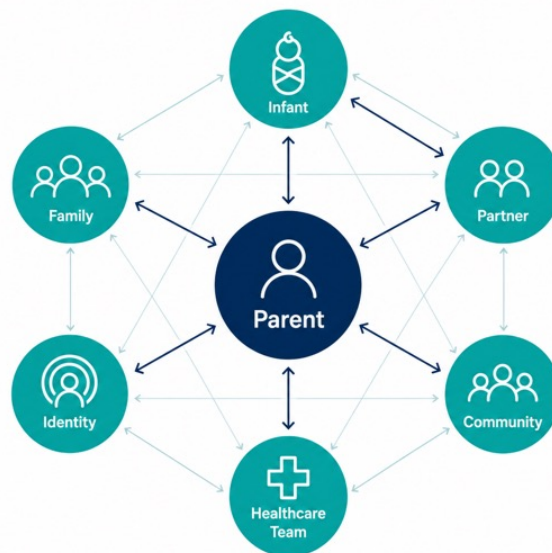
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Key Take-Aways: The Connection Framework



NICU psychology is the application of psychological science to protect and restore the relationship through which infants and families develop and eventually thrive.

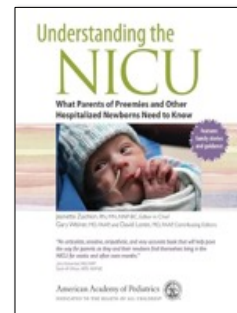
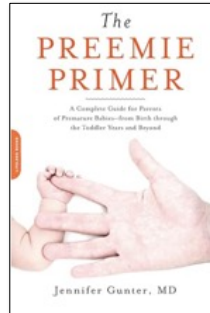
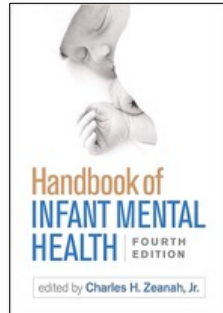
Loneliness may be one mechanism linking these disruptions in connection to the mental health outcomes observed in the NICU



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Recommended Reading



[Health Psych Currents Podcast - Society for Health Psychology](#)
(20:30-22:45)
(24:08-25:25)

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Questions



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