

Development & Initiating Routine Postpartum Screening in the NICU

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Governor's Transformation
Advisory Board

Plan and Objectives

- Postpartum Mood and Anxiety
 - Prevalence; NICU; Risk Factors
- NICU Postpartum Screening Research Project
 - Goal / Purpose; Results; Conclusions
- Current NICU Postpartum Screening Initiative
 - Goals; Process; Progress to date

Maternity Blues

- Transitory phenomenon occurring in 50%-80% of new mothers (Miller & Rukstalis, 1999)
- Tearfulness, mood swings, and fatigue
- Usually present the first few days and may only last hours

Postpartum Depression

- Estimated to occur in approximately 15.7% of new mothers (CDC, 2007)
- In Oklahoma one in four new mothers report symptoms of postpartum depression (OK PRAMS, 2008)
- Mothers of preterm infants experience PPD at higher rates than mothers who deliver full-term (Veddovi et al., 2001)

Postpartum Anxiety

- PTSD estimated to occur in up to 5% of births and partial symptoms in 25% of births (Creedy et al., 2000; Czarnocka et al., 2000).
- OCD symptoms found to occur in 3-5% of mothers (Indman & Bennett, 2006).
- High co-morbidity between depression and anxiety symptoms in perinatal women (Moses-Kolko et al., 2005)

The NICU Experience

- Parents of NICU patients commonly experience:
 - high levels of stress
 - feelings of helplessness
 - lack of knowledge on how to parent, interact and care for their neonates during the NICU stay (Cusson, 2003; Melnyk et al., 2001; Pinelli, 2002)
 - uncertainty

Depression/Anxiety in the NICU

- PPD rates in the NICU range from 28% to 70% (Mounts, 2009)
- Rates of anxiety have also been found to be significantly higher in NICU samples (Carter et al., 2007)
- Greater risk for PTSD given NICU experience (Beck, 2003)

Postpartum Depression Risk Factors

- Social Support
 - Prenatal Depression
 - Life Stress
 - Marital Relationships
 - Depression History
 - Infant Temperament
 - Prenatal Anxiety
 - Childcare Stress
 - Maternity Blues
 - Self Esteem*
 - Marital Status*
 - Socioeconomic Status*
 - Unplanned/unwanted pregnancy*
- (Beck, 2001; Beck 1996)



The Contribution of
Postpartum Psychosocial
Variables to Infant Length of
Stay in the Neonatal Intensive
Care Unit

Purpose

- *Central tenet* –
 - Poor maternal psychological functioning would be associated with increased neonate Length of Stay (LOS) in the NICU.
- **Goals:**
 - Assess related psychosocial variables in mothers of neonates admitted to the NICU and
 - Assess the contribution of psychosocial variables to neonate LOS in the NICU.

Design and Methods

- Data collection site was the NICU at OUHSC.
- Inclusion Criteria
 - Mother of neonate in the NICU at two weeks postpartum.
- Exclusion Criteria
 - Infant with congenital anomalies, require surgery, have significant cardiac abnormalities, or chromosomal defects
 - Mother reads below the 8th grade level
 - Mother does not speak English

Assessment Measures

- Demographics
- Postpartum Depression Screening Scale (Beck, 2002)
- Postpartum Support Questionnaire (Logsdon, 2002)
- The Parental Stressor Scale-Neonatal Intensive Care (Miles, 1989)

Assessment Measures

- The State-Trait Anxiety Inventory (Spielberger, 1977)
- The Clinical Risk Index for Babies (Richardson et al., 1988)
- Length of Stay

Descriptive Statistics

- $n = 111$
- Demographics
 - Ethnicity: 61% Caucasian; 18% African American; 11% Native American; 5% Hispanic; and 5% other ethnicity.
 - Mean Age of 25.39 years.
 - Marital status: 43.2% Married; 23 % Single; 27% Partnered; 4% Divorced; and 3% Separated.
 - Education: most of the participants (49.5%) indicated receiving some college or higher level of education
 - Insurance: 77.5% Medicaid; 17.1% Private Insurance; and 2.7% Both

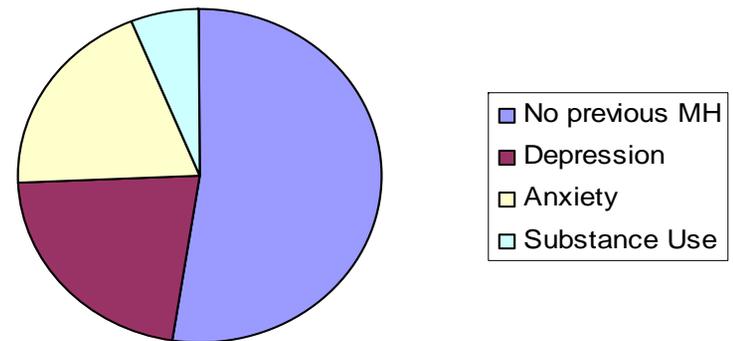
Descriptive Statistics

- 39.1% First pregnancy
- 63.1% Pregnancy not planned
- The mean score (40.33) for trait anxiety was significantly higher than published norms.

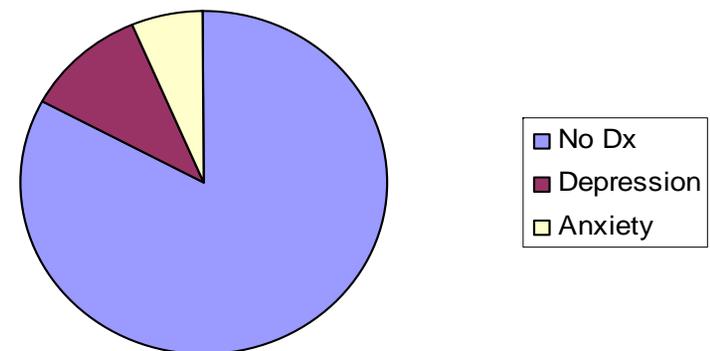
Mental Health History

- n = 111
- 39.6% reported previous diagnosis and/or treatment for depression, anxiety, or substance use.

Mental Health Diagnosis/Treatment Prior to Pregnancy

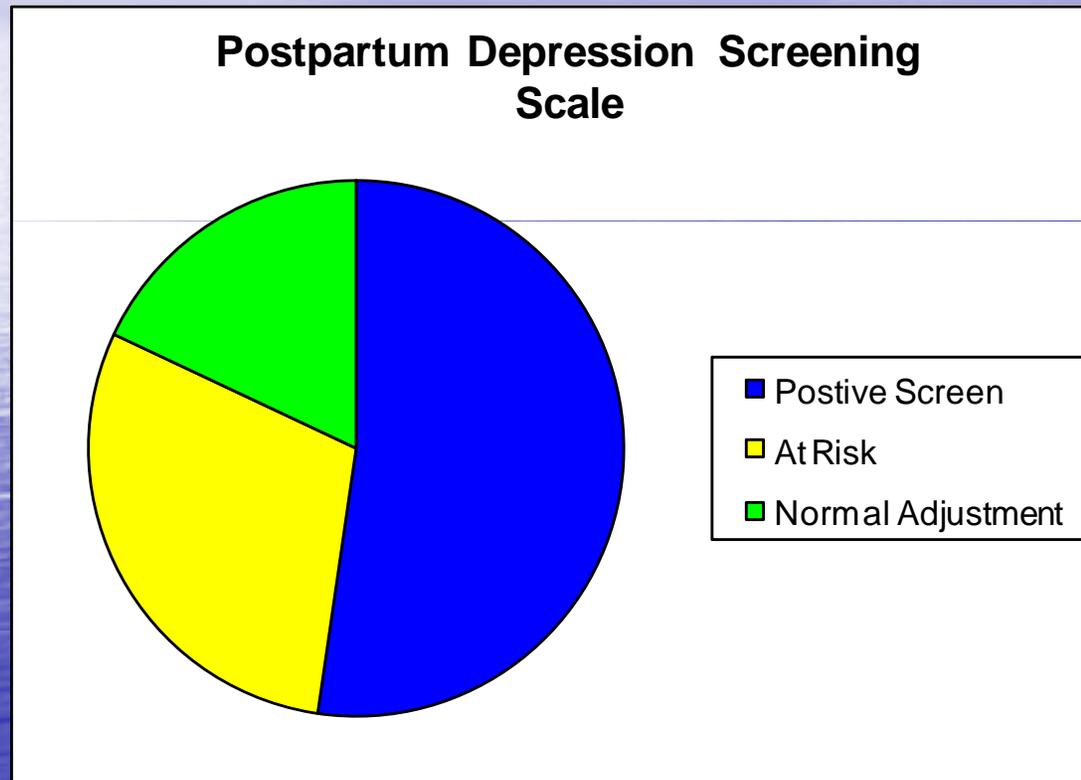


Mental Health Diagnosis/Treatment During Pregnancy



Postpartum Depression

PPD Screening



- 52.3 % Positive Screening
- 29.7% At risk level of symptoms
- 18% Normal Adjustment

Results

- When we control for illness severity, anxiety ($r = .267$) and stress associated with infant appearance ($r = .271$) remain correlated with LOS for mothers without a previous mental health history.

Conclusions

- The majority of participants had a positive screening for postpartum depression, had elevated anxiety, and elevated stress related to the NICU environment.

Conclusions

- The significant correlations of trait anxiety and stressors associated with the physical appearance of the infant with length of stay in the NICU support the tenet that postpartum psychological functioning is related to length of stay for infants in the NICU.

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 - **Amy Cherry, Ph.D.**, Department of Pediatrics, University of Oklahoma Health Sciences Center

The background of the slide is a blue-tinted photograph of a vast ocean under a cloudy sky. The water is a deep blue with subtle ripples, and the sky is a lighter blue with wispy white clouds. The horizon line is visible in the middle of the frame.

Transformation Grant

Postpartum Screening in the NICU

- Advocating for screening in the NICU
 - Beck, 2003
 - AAP Policy Statement, 2008
 - Hospital Discharge of the High-Risk Neonate
 - Mounts, 2009
- Barriers
 - Patient-centered
 - Staff-centered
 - Systems-centered

Postpartum Screening in the NICU

- Typical mental health system versus public health model
- We must change the culture through education and system development

Postpartum Screening in the NICU

- Goals
 - Develop routine screening process
 - Make appropriate referrals
 - Develop referral network
 - Assess barriers to referrals
 - Develop tools for screening and referral process

Postpartum Screening in the NICU

- Screening Criteria
 - All mother with infants on the NICU
 - Screening to be done at 2 weeks or greater
- Screening Measure
 - Postpartum Depression Screening Scale
 - English and Spanish

Postpartum Screening in the NICU

- Process
 - All mothers screened at 2 weeks postpartum
 - Project Coordinator
 - Mothers with a positive screen are referred to psychologists for diagnostic interview
 - Psychologist makes community referrals

Postpartum Screening in the NICU

- Nursing Education
 - In services
 - PKU – second newborn screen
- Progress so far
 - Total # screened
 - Total number of positive screens

Postpartum Screening in the NICU

- Process development
 - Collaboration
 - Women's & Newborn Services; OHCA; FQHC
 - Forms
 - Brochure; Fax Form; Referral Directory
- Presentations
 - Local and Regional
- Publications

Questions?

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