Risk and Resilience for Postpartum Depression in Mothers of Infants Who Required NICU Hospitalization

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INTRODUCTION

- Transitioning to parenthood or adding to one's family is often associated with an increase in perceived stress (Beck, 2002; Belsky, et al., 1985; Edhborg, et al., 2005; Epifano et al., 2005).
- Mothers whose infants require Neonatal Intensive Care Unit (NICU) hospitalization, and are referred for developmental monitoring, may be exposed to significantly high levels of stress during this time (Beck, 2003; Holditch-Davis et al., 2009; Vigod et al., 2010).
- Exposure to high levels of stress and risk for depression are strongly linked (Charney & Manji, 2004; Hammen, 2005; McEwen 2008, 2012).
- However, evidence indicates that access to supportive relationships and practical supports are associated with resilience to depression (Karatsoreos & McEwen, 2013; Ozbay et al., 2007; Thoits, 2010,2011).
- Mothers' mental health exerts a powerful influence on their enjoyment of motherhood and their ability to engage their infants and young children in development enhancing interactions (Edhborg et al.,2005; Tronick & Reck, 2009; Tronick & Beeghly, 2011).
- Developing an easily administered tool to screen mothers for risk as well as resilience factors would allow interventions to be targeted for mother-infant dyads at high risk for experiencing negative outcomes.

Present Study

- This study used hierarchical multiple regression (HMR) analyses to examine which factors are most relevant in screening mothers' risk for, as well as resilience to, developing symptoms of postpartum depression (PPD).

METHOD

Participants: 148 mothers of infants/toddlers receiving care in the NICU or attending the Follow-Up Clinic.

Table 1.

Demographics	Percent	*N*	*M*	*SD*
Black/African American	46.6	69		
White	39.2	58		
Other	14.6	21		
First child	48.9	68		
In a relationship	82.4	122		
Income			$43,700	2.36
Maternal Age			30.31	6.68
Infant Gestational Age (wks)			30.75	4.34
Infant Birth Weight (gms)			1412.28	747.94

Table 2.
Measures and Constructs

Outcome Measure	
Edinburgh Postnatal Depression Scale (EPDS)*	
Risk Factors	**Resilience Factors**
Infant Illness	Practical Social Support
Developmental Delay	Relationship Satisfaction
Pregnancy Unhappiness	
Perceived Stress	
Avoidance Coping (AvoidCope)	

*Cox et al., 1987

RESULTS

- In individual HMR analyses, pregnancy unhappiness, perceived stress, avoidance coping and relationship satisfaction predicted mothers' EPDS scores.
- Social support moderated the effects of stress on mothers' EPDS scores.
- In the inclusive model HMR (this model included all factors significant in individual analyses), avoidance coping, relationship satisfaction and the Social Support X Stress interaction term predicted mothers' EPDS scores.

Table 3.
Predictors of PPD-Individual HMR Analyses

Predictor	*B*	*SEB*	β/*t*	R^2 /ΔR^2	*p*
Prg.Unhp	-.13	.41	-.26	.19/.06	*p* = .00
Stress	.46	.04	.66	.60/.47	*p* = .00
AvoidCope	.99	.12	.55	.41/.26	*p* = .00
Relsatfxn	-.55	.07	-.56	.42/.28	*p* = .00
Soc. Support	-.48	.05	-.06	.45/.32	*p* = .00
SocSupxStress	-.01	.01	-2.62		*p* = .01

Table 4.
Predictors of PPD-Inclusive Model HMR

Predictor	*B*	*SEB*	β/*t*	R^2 /ΔR^2	*p*
				.709/.018	*p* = .01
AvoidCope	.294	.120	.163		*p* = .02
Relsatfxn	-.234	.065	-.240		*p* = .00
SocSupxStress	-.013	.005	-2.621		*p* = .01

CONCLUSIONS

- To develop a meaningful PPD risk screening tool it will be important to include factors associated with resilience as well as risk for PPD.
- Assessing mothers' perceived stress, coping strategies and access to supportive relationships and practical supports, will assist providers in targeting interventions for at-risk mothers.
- Interventions beginning in the NICU can promote healthy mother-infant relationships thus decreasing negative outcomes for mothers and their vulnerable infants.

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