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Anxiety Screening During Assessment of Emotional Distress in Mothers of Hospitalized Newborns

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ABSTRACT

Objectives: To examine the incremental identification of emotional distress in mothers of hospitalized newborns by screening for anxiety in addition to depression and to provide practical information about anxiety screening scales to facilitate instrument selection and screening implementation by nurses in the NICU.

Design: In this secondary data analysis, screening data from the recruitment phase of a feasibility trial to evaluate a nurse-delivered counseling intervention for emotionally distressed mothers of newborns in the NICU were used to examine the effect of anxiety screening.

Setting: A Level IV NICU at a large academic medical center in the Midwestern United States.

Participants: Women 18 years of age and older ($N = 190$) with newborns in the NICU.

Methods: Participants completed multiple measures of depression and anxiety symptoms.

Results: Of participants who had negative screening results on a depression-only screening instrument, 4.7% to 14.7% endorsed clinically significant anxiety symptoms depending on the screening instrument used.

Conclusion: Screening for anxiety in mothers of newborns in the NICU resulted in identification of distressed mothers who would otherwise have been missed during routine depression-only screening. Multiple options for anxiety screening exist that add incremental information to depression-only screening and require little additional burden on providers and mothers of newborns in the NICU.

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In 2016, the U.S. Preventive Services Task Force revised the recommendation to screen all adults for depression by adding a specification for pregnant and postpartum women (Siu & U.S. Preventive Services Task Force, 2016). This specification was based on Grade B evidence, which indicates high certainty of moderate benefit of screening or moderate certainty of substantial benefit of screening. Because the Patient Protection and Affordable Care Act requires implementation of all U.S. Preventive Services Task Force recommendations that are based on Grade B evidence or greater, depression screening in the perinatal period is now federally required (Rhodes & Segre, 2013). This formal development represents a major step forward in policy and clinical practice. Nevertheless, an exclusive focus on the identification of depression symptoms may mean that clinically significant emotional distress that manifests in the form of anxiety symptoms is missed. Indeed, previous researchers highlighted the comorbidity of depression and anxiety among women in the perinatal period (Navarro et al., 2008) and showed that a noteworthy percentage of those diagnosed with an anxiety disorder would be missed by depression-only screening (Matthey, 2008). Although the current federal mandate does not include recommendations for anxiety screening, the International Marcé Society, an interdisciplinary group focused on perinatal mental health, highlighted the need for broader assessment, including anxiety symptoms (Austin & Marcé Society Postion Statement Advisory Committee, 2014).

Hospitalization of a newborn in the NICU is often an unanticipated event that results in a myriad of stressful experiences. These experiences include but are not limited to concern caused by the immature physical appearance of the newborn; worry about the newborn's well-being; perceived

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Clinically significant emotional distress expressed in the form of anxiety may be missed with an exclusive focus on depression symptoms.

loss of the maternal role to nurses and physicians; financial stressors associated with hospital costs; exposure to unfamiliar, highly technological equipment; distressing signs and sounds; and lack of familiarity with medical terminology (Tahirkheli, Cherry, Tackett, McCaffree, & Gillaspy, 2014). Screening mothers of newborns in the NICU for the presence of clinically significant emotional distress is critical to ensure that they receive adequate support and appropriate referrals for treatment. Indeed, a number of efficacious psychosocial interventions have been identified for use with mothers of newborns in the NICU (Welch & Myers, 2016).

Among mothers of premature newborns who are hospitalized in the NICU, prevalence estimates for clinically significant depression symptoms range from 25.5% to 63% (Segre, McCabe, Chuffo-Siewert, & O'Hara, 2014; Shelton, Meaney-Delman, Hunter, & Lee, 2014). Given the comorbidity of anxiety and depression symptoms in perinatal women (Navarro et al., 2008) combined with the significant stressor of having a hospitalized newborn (Tahirkheli et al., 2014), it is not surprising that state anxiety symptoms are also prevalent among mothers of newborns in the NICU. In a recent study of 232 mothers, 57% reported elevated levels of state anxiety symptoms at newborn admission (Holditch-Davis et al., 2015). Similarly, in a study of 200 mothers of newborns in the NICU, 27.7% reported significant state anxiety symptoms in the moderate to severe range (Segre et al., 2014). In studies with control groups of mothers of term newborns, rates of anxiety symptoms were significantly greater among mothers of newborns in the NICU (Brandon et al., 2011; Vanderbilt, Bushley, Young, & Frank, 2009). Moreover, several investigators reported greater prevalence rates of acute stress disorder in this population of women, ranging from 28% to 32% (Jubinville, Newburn-Cook, Hegadoren, & Lacaze-Masmonteil, 2012; Lefkowitz, Baxt, & Evans, 2010; Shaw et al., 2006).

The prevalence of anxiety symptoms in mothers of hospitalized infants and the omission of anxiety screening recommendations from the National Perinatal Association (Hall et al., 2015) are the basis for the present study. Our overarching aim in this article is to describe strategies to expand extant depression screening protocols to include the assessment of anxiety symptoms. Specifically, based on secondary analysis of data collected from 190 mothers of hospitalized newborns during the recruitment phase of a NICU-based depression treatment trial (Segre, Chuffo-Siewert, Brock, & O'Hara, 2013), we examined the incremental identification of emotional distress afforded by the addition of three different state anxiety screening scales to the widely used depression screening tool: the Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987). Secondarily, we provide practical information about these three anxiety screening scales to facilitate instrument selection and screening implementation by nurses who work in NICUs.

Methods

Participants and Procedure

The method and study design of the original depression treatment trial are described in detail elsewhere (Segre et al., 2013). Briefly, mothers of hospitalized infants who were 18 years of age and older were recruited from a Level IV NICU at a large academic medical center in the Midwestern United States. Interested participants completed measures to assess emotional distress, and those with elevated depression symptoms were offered enrollment in a feasibility trial of a nurse-delivered counseling intervention. The present analyses were conducted on the screening data from this feasibility trial. Of the 200 women who completed initial assessment, 190 completed all screening measures. All procedures were approved by the University of Iowa Institutional Review Board.

On average, participants were 28.1 years old (standard deviation [SD] = 5.7); predominately married (61.9%), White (90.4%), non-Hispanic (94.6%), and employed (66.7%); and had a mean education length of 14.6 years ($SD = 2.5$). Q2 The average number of live births per participant was 1.85 ($SD = 1.0$), and participants completed study measures within the 2 weeks after birth ($M = 13.6$ days; $SD = 24.8$ days).

Measures

Edinburgh Postnatal Depression Scale. The EPDS was developed specifically as a screening tool to assess depression symptoms in perinatal women (Cox et al., 1987). Each of the 10 items are rated on a 4-point (range = 0–3) Likert scale, referring to symptoms in the past 7 days. Item

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