



## MOTHERS AND MIDWIVES' EXPERIENCES WITH THE CARE OF BABIES IN THE NEONATAL INTENSIVE CARE UNIT (NICU) OF FEDERAL MEDICAL CENTRE, ASABA

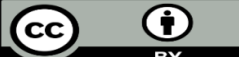
**Oburoh Ethel T<sup>1</sup>, Gbobbo Josephine<sup>2</sup>, Onasoga, Olayinka A.<sup>3</sup>**

*Department of Nursing Science, African Centre of Excellence for Public Health and Toxicology Research (ACE-PUTOR), University of Port Harcourt, Nigeria<sup>1</sup>*

*Department of Nursing Science, University of Port Harcourt, Nigeria<sup>2</sup>*

*Department of Nursing Science, Faculty of Clinical Sciences, College of Health Sciences, University of Ilorin, Ilorin, Nigeria<sup>3</sup>*

**\*Corresponding author's email:** [ethel\\_oburoh@uniport.edu.ng](mailto:ethel_oburoh@uniport.edu.ng); +234 (0) 8023273929

Article History	Abstract
Received: 30 Nov 2025 Accepted: 22 Dec 2025 Published: 23 Jan 2026	The Neonatal Intensive Care Unit (NICU) presents a highly emotional and stressful environment for both mothers and midwives. Understanding their lived experiences is critical to improving family-centered care and staff well-being. This study aimed to explore the experiences, emotional responses, and coping strategies of mothers and midwives involved in NICU care at the Federal Medical Centre (FMC), Asaba, Delta State, Nigeria. A qualitative design was employed. Data was collected through face-to-face interview with 20 mothers of NICU-admitted neonates and 10 midwives providing direct neonatal care. Interviews were transcribed verbatim and analyzed using thematic analysis, facilitated by NVivo software. Results revealed eleven themes reflecting emotional, psychological, and operational dimensions of NICU care. These include, overwhelming fear and anxiety, guilt and self-blame, and separation anxiety for mothers. Midwives expressed emotional burnout, grief over infant death, and challenges in high-stress environments. Coping strategies included peer support, faith-based, collegial debriefing and mindfulness practices. In conclusion, this study highlighted the relevance of structured and functional emotional support systems, family-centred approach to care and a boost in NICU staff. The incorporation of these strategies in NICU care could greatly improve the quality of neonatal care, and the well-being of mothers and midwives.
<b>License: CC BY 4.0<sup>♦</sup></b>  <b>Open Access article.</b>	<b>Keywords:</b> Mothers, midwives, emotional experiences, coping strategies, NICU, family-centred care, FMC Asaba.

**How to cite this paper:** Ethel O. T. et al., (2026). Mothers and Midwives' Experiences with the Care of Babies in the Neonatal Intensive Care Unit (NICU) of Federal Medical Centre, Asaba. *Journal of Public Health and Toxicological Research*, 3(1): 169-177.

<sup>♦</sup>This work is published open access under the [Creative Commons Attribution License 4.0](https://creativecommons.org/licenses/by/4.0/), which permits free reuse, remix, redistribution and transformation provided due credit is given.

## Introduction

A Neonatal Intensive Care Unit (NICU) is a unit within a healthcare Centre where premature and very sick neonates have access specialized treatment. This specialized unit is characterized by innovative advanced medical technology and a high level of clinical expertise, making the setting a highly professional unit, without which these extremely vulnerable newborns cannot live or survive (Wang et al., 2021). Having a baby in the NICU is a highly stressful situation for mothers and can markedly influence their psychological and emotional development, even with medical intervention and technical advancements at hand (Wang et al., 2021). Being primary caregivers and support persons to both neonates and parents in a NICU could increase the chances of Midwives developing considerable emotional and professional challenges. Geraghty et al. (2019) identified Midwives as one of the healthcare professionals who are usually exposed to tremendous stress and burnout in their clinical environment, which causes depletion of their physical and mental abilities and impedes good practice. Depression and anxiety are some of the prominent psychological distresses that are common among NICU mothers, and this is due to the unfamiliar NICU terrain, invasive processes, as well as the sense of helplessness and fear of losing their neonates (Shields-Poë and Pinelli 2020).

These stressors can interrupt early mother-infant bonding, which is essential for emotional and developmental health. The sustained repercussions of this stress may be detrimental to the mother's mental health and the infant's development.

In resource-limited settings like Nigeria, challenges such as insufficient medical resources, high patient loads, and inadequate support systems significantly intensify job stress for midwives. Onasoga et al. (2019) emphasized three strategies for midwives to cope with stress: professional development, peer support, and personal care. Nevertheless, while these strategies were being implemented, there were still barriers posed by systemic constraints to best practices and emotional support in NICUs. Adama et al. (2016) believe that midwives should become peer-cooperative and embrace professional development, which should enhance resilience and delivery of care. To improve the outcome of NICU care and environment, knowledge of the coping strategies employed by mothers and midwives is also needed. Providing efficient maternal support has been asserted to be one of the most important factors that help reduce anxiety and depression in mothers throughout the NICU experience.

Mothers of preterm babies are usually at high risk for post-traumatic stress, anxiety, and depression (Cook et al., 2022). Emotional tension is the result of a number of factors such as being apart from the infant, not knowing what will happen, and having to balance hospital stays with household responsibilities (Frost et al., 2021;

Aftyka et al., 2021; Patel et al., 2022). These encounters more often than not generate feelings of social isolation, guilt, hopelessness and helplessness.

To address these issues, healthcare providers are increasingly adopting family-centred care models. Franck et al. (2022) emphasized that involving parents in their infant's care reduces stress and promotes bonding. Additional techniques, such as peer networks, counselling, and educational support, also successfully enhance maternal resilience (Gooding et al., 2021; Brett et al., 2021).

## Methodology

**Study Area and Population:** This study was carried out at the Federal Medical Centre (FMC), Asaba in Delta State, Nigeria. FMC Asaba is a tertiary health institution that provides specialized health care services, including neonatal intensive care to communities in Asaba, Delta State, and its environs. The research population comprised of two key groups: mothers of neonates and midwives engaged in neonatal care in the NICU. These peculiar characteristics of participants enabled insights to be drawn from those with direct and ongoing experiences in the unit.

**Sampling and Sample Size Determination:** A non-random, purposive sampling technique was employed to select participants who possess relevant NICU experiences. Sample size determination was based on the principle of data saturation, which is the point in qualitative research where no new information emerges from additional data collection. Thirty (30) participants, Twenty (20) mothers and ten (10) midwives were selected.

**Inclusion and Exclusion Criteria:** Mothers who had at least one neonate with at least one week's stay in the NICU and Midwives that are currently working in the NICU, with at least one year of experience in neonatal care, and gave informed consent were included in the study. Exclusion criteria ruled out mothers with no NICU experience or those unable to communicate effectively, and midwives on temporary postings or not directly involved in patient care.

**Nature and Sources of Data:** The data collected were non-numerical, descriptive, and rich in detail, reflecting the subjective experiences and perceptions of participants. The study utilized primary data, gathered firsthand through interviews.

**Data Collection Methods:** The primary method of data collection was one-on-one, in-depth, semi-structured interviews with both mothers and midwives. These interviews were guided by a pre-designed interview guide covering topics such as emotional experiences, coping strategies, support systems, challenges, and perceptions of NICU care. Interviews were conducted in private to ensure confidentiality and comfort. All interviews were audio-recorded with participant consent and transcribed verbatim. Anonymity was maintained by

assigning participant codes (e.g., MP1 for Mother Participant 1, MWP1 for Midwife Participant 1).

**Data Analysis:** Data were analyzed using thematic analysis and NVivo software was employed to facilitate systematic coding and theme development. This approach allowed for the discovery of patterns and the development of a comprehensive understanding of participant experiences.

**Research Rigor for Trust Worthiness:** To ensure transferability, the study provided detailed contextual and participant descriptions. Dependability was established through clear and consistent documentation of data collection and analysis procedures, enhancing the study's credibility and conformity.

**Ethical Considerations:** Ethical approval was obtained from the Ethics Committee of the University of Port Harcourt and FMC Asaba. Key ethical principles adhered to included informed consent, confidentiality, voluntary participation, and emotional support. Participants were fully informed about the study and had the right to withdraw at any time. Data confidentiality was strictly maintained, and psychological support services were available when necessary due to the sensitive nature of the topic.

## Results

### Presentation of Results

A total of eleven main themes emerged from the data, categorized under the research objectives.

#### Theme 1: Overwhelming Fear and Anxiety (Mothers)

Mothers experienced intense fear concerning their baby's survival. The NICU environment, filled with machines and alarms, amplified this distress.

*"The first time I saw my baby, I was heartbroken...she was so small...they said she would still shed weight...I was really scared."* (MP6)

Physical bonding was disrupted due to the baby's fragility:

*"My baby was so tiny...I didn't know where to hold."* (MP4)

#### Theme 2: Guilt and Self-Blame (Mothers)

Feelings of guilt and self-blame were common as mothers questioned their role in their babies' conditions.

*"I don't know what I didn't do right that led to this..."* (MP7)

*"When I see term babies, they look like giants."* (MP6)

#### Theme 3: Separation Anxiety (Mothers)

Separation from their babies, especially post-caesarean, caused emotional distress.

*"I could not see my baby for like the first two days."* (MP3)

*"I became anxious and scared knowing I won't see my baby."* (MP4)

#### Theme 4: Emotional Burnout (Midwives)

Midwives described feeling emotionally exhausted due to high demands and emotional toll.

*"When the child gets worse despite efforts...it brings discouragement."* (MWP7)

#### Theme 5: Grief and Coping with Infant Death (Midwives)

Coping with the death of infants, especially those born after years of infertility, was deeply traumatic.

*"Losing a precious baby...can be very traumatic to the team and the family."* (MWP5)

*"We have to keep working as if we are fine."* (MWP4)

#### Theme 6: Workload in a High-Stress Environment (Midwives)

The heavy workload and emotional pressure were notable stressors.

*"We have up to 24 babies at times...we work like the day will never end."* (MWP4)

Theme	Low Workload	High Workload
Emotional Burnout	Moderate stress, manageable work-life balance	Extreme exhaustion, frequent emotional breakdowns
Grief (Infant Deaths)	Occasional grief, time to process emotions	Constant exposure to loss, suppressed emotions due to workload
Difficult Patient	More time to empathize with mothers	Increased frustration from mothers, strained relationships

#### Theme 7: Faith-Based Coping (Mothers)

Mothers relied heavily on religion and faith-based practices.

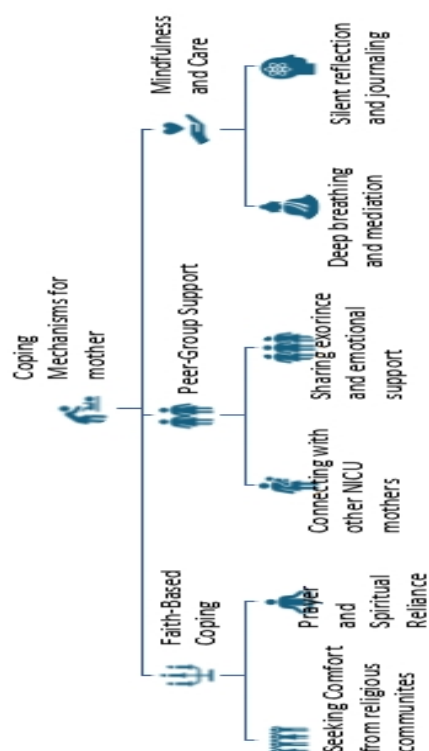
*"My faith kept me going. I prayed constantly."* (MP3)

*"I sacrificed a life animal at the altar for my baby."* (MP2)

#### Theme 8: Peer Support Groups (Mothers)

Interaction with other NICU mothers offered emotional comfort and practical advice.

*"Speaking with other NICU mothers helped...we encouraged each other."* (MP8)



### Theme 9: Collegial Debriefing (Midwives)

Peer support among midwives helped relieve stress and process difficult cases.

*"We encourage ourselves to keep trying...when we work as a team, it helps." (MWP6)*

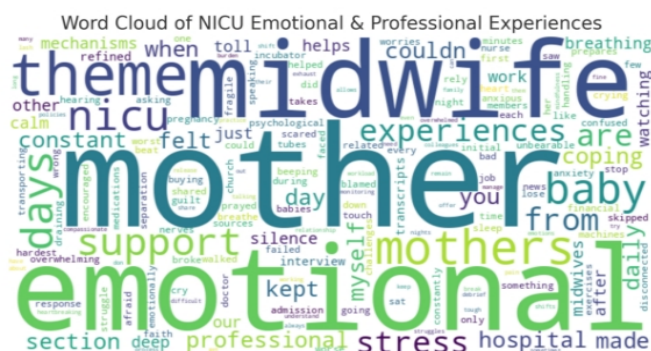
## Theme 10: Mindfulness Practices (Midwives)

**Theme 10: Mindfulness Practices (Mindfulness)**  
Simple self-care practices such as deep breathing and short breaks were reported.

"Sometimes I just step out for a while to breathe and recompose myself." (MWP2)

## Theme 11: Word Cloud Visualization

NVivo-generated word cloud analysis revealed common terms such as ‘mother’, ‘emotional’, ‘support’, and ‘baby’, reflecting the emotionally intense nature of the NICU experience.



## Discussion

The Neonatal Intensive Care Unit (NICU) experience was profoundly distressing for mothers, which triggered

a spectrum of intense emotional and psychological responses. This study identified three central themes in mothers' experiences: overwhelming fear and anxiety, guilt and self-blame, and separation anxiety. These findings aligned with existing literature on maternal mental health in NICU settings (Obeidat et al., 2020; Hynan et al., 2018).

### Overwhelming Fear and Anxiety

One of the most pronounced emotional responses reported by mothers was overwhelming fear and anxiety. The critical condition of their new-borns, uncertainty about survival, and the intimidating clinical NICU environment were key contributors to maternal distress (Feeley et al., 2016). Most of the mothers described a high degree of powerlessness—that was not entirely due to restrictions on care-giving, but also, because they were afraid of engaging with their fragile infants, particularly due to their small size and health conditions.

Earlier studies were in agreement that maternal anxiety in the NICU was based on the constraints in control, fear of the loss of their infants, and poor understanding of medical procedures (Melnik et al., 2021). These fears, aggravated by witnessed invasive procedures, might result to symptoms like acute stress and post-traumatic stress disorder (Shaw et al., 2021). Gaps in communication from healthcare providers further increased the level of maternal anxiety and the feelings of helplessness (Obeidat et al., 2020). Moreover, the long NICU stay, coupled with the complex health conditions of their infants had been associated with higher levels of maternal anxiety (Holditch-Davis et al., 2019).

### **Guilt and Self-Blame**

Another major emotional theme was guilt and self-blame. Mothers most often blamed their behaviours during pregnancy, their health conditions, or the circumstances surrounding their delivery, for their newborn's condition. This, aligned with the findings by Muniraman et al. (2019), who reported that mothers perceived that their infants' health conditions were a result of their failings. This psychological burden, if not well addressed, might result to symptoms of depression and poor maternal self-efficacy (Benzies et al., 2020). The highlights from these findings supported the need for targeted interventions such as peer support groups, mental health aids and counselling to help mothers process their emotions and promote psychological resilience (Melnik et al., 2021).

## Separation Anxiety

An additional significant source of stress for mothers was the separation from their infants related to limited physical contact. Most mothers neither express grief over being unable to cuddle, nor breastfeed, nor soothe their babies due to the restriction of the basic maternal behaviours in NICUs. This separation affected early bonding and could disrupt maternal role development. (Franck et al., 2017; Benzie et al., 2020).



Though practices like kangaroo mother care have been shown to enhance bonding and minimize maternal stress, they were not always achievable in critical care settings, contributed to feelings of helplessness (Hynan et al., 2018). Prolonged separation has been associated with increased postpartum depression risk and reduced maternal-infant bonding (Obeidat et al., 2020). Promotion of measures that increased parental presence and participation in infant care routines were paramount for improved maternal outcomes (Melnik et al., 2021).

### **Professional and Emotional Challenges of Midwives in the NICU**

Midwives in NICU encountered complex emotional and professional challenges, such as emotional burnout, grief from infant deaths, and strained patient interactions. These findings aligned with previous studies that examined the toll of neonatal care settings on healthcare workers (Manning et al., 2022; Spinelli et al., 2020).

#### **Emotional Burnout among Midwives**

Also, Maslach and Leiter (2017) identified burnout as one of the challenges encountered by Midwives in line with their clinical duties. Burnout is characterized by a personal and depersonalized attitude, by emotional exhaustion, and by a reduced sense of personal accomplishment. It was considered one of those major problems. The midwives talked about the ongoing tiredness that comes with looking after very sick neonates in the Intensive Care and helped intensely chaotic families. The emotional pressure was compounded by the high-stakes decision-making that was inherent to NICU care (Spinelli et al., 2020).

From empirical data, NICU midwife's burnout more than midwives in various other units, being correlated to longer shifts, intense emotional demands, and high workloads (Kim et al., 2022; O'Reilly et al., 2021). Emotional Labour was one sort of work that increased their psychic load; it required suppressed feelings in order to show compassion for clients (Hunter & Warren, 2019). However, there was no formalized debrief process or mental health support network to alleviate this burnout, which made it worse (Pezaro et al., 2017).

#### **Grief and Coping with Infant Death**

Repeated instances of infant death could have a devastating effect on midwives as they tend to emotionally attach themselves to both the NICU mother and the child. NICU midwives were prone to experience acute sorrow, apathy, and self-doubt following neonatal loss.

There have been instances in which such experiences had led to post-traumatic stress disorder and compassion fatigue in midwives (Chan et al., 2018; Wright et al., 2019). Unfortunately, by the very nature of their profession, many midwives felt compelled to suppress their feelings, which might result in chronic trauma (Wallbank & Robertson, 2018). It was, therefore, imperative that support systems were developed so that colleagues could provide debriefing, and counseling

could be offered to sufferers, and workplace wellness was promoted by institutions (Zwack & Schweitzer, 2019).

### **Difficult Patient Interactions**

Part of the major problem encountered was the emotionally charged interactions among the distressed or grieved parents and the midwives. Midwives reported occasions where parents projected their frustration, fear, or blame onto the caregivers, especially in times of unpleasant news or poor infant outcomes (Spinelli et al., 2020).

Cultural differences occasionally heightened these encounters, especially when families gave preference to traditional remedies over medical recommendations (Dahlen et al., 2020). These situations required cultural sensitivity, active listening, and emotional intelligence; these were skills that could be enhanced through training (Zwack & Schweitzer, 2019; Kim et al., 2022).

#### **Faith-Based Coping among Mothers**

Faith-based coping was a vital and culturally relevant strategy among mothers. Spiritual practices such as prayer, religious rituals, and trust in divine intervention provided comfort and psychological balance.

Studies revealed that mothers who engaged in faith-based coping reported lower degree of emotional distress and greater hopefulness (Scheer et al., 2020; Hall et al., 2020). Religious belief also helped mothers to draw strength during their NICU stay. Some mothers reported that they earnestly hope a higher power helped their baby's recovery, cited faith and confidence in their religious communities. These religious beliefs were protective factors (emotional and social support systems) for NICU mothers.

#### **Coping and Resilience Strategies**

NICU mothers and midwives also relied on other resilience factors in addition to religious activities, these included;

#### **Peer Support and Emotional Resilience**

Peer support groups helped mothers feel a little less isolated by allowing them to share stories, exchange information, and validate feelings (Obeidat et al., 2018; Hynan et al., 2019). The groups helped with emotional treatment, sense of belonging and practical tips for living the NICU life.

#### **Online Support Platforms**

Transitions in digital community life through WhatsApp, Telegram or Facebook brought offers for instant advice and connection. The virtual peer support systems came in handy, especially for mothers who couldn't attend the physical meetings (Linton et al., 2021).

#### **Mindfulness and Self-Care**

Mindfulness activities such as breathing exercises, meditation, and reading were practiced to foster emotional regulation (Zhu et al., 2018). Minshaw, Shaw, et al. (2017) stated that: "Mindfulness-based stress reduction (MBSR) showed promising results in lowering maternal cortisol and improving mood"; however, such

brief mindfulness interventions, alongside colleague debriefing, were sometimes used by midwives to reduce work-related stress (Goodman & Schorling, 2015; Flarity et al., 2016).

### Professional Therapy and Psychological Support

Therapy interventions, such as cognitive-behavioural therapy, utilized by mothers, had been found to enhance their capacity to process anxiety and depressive symptoms (Meyer et al., 2022). Midwives also benefited from receiving structured psychological interventions and conducted peer debriefing sessions.

### Family and Social Support Systems

Strong family support provided emotional resilience for both mothers and midwives. Shared one's concerns with a spouse, relatives, or good friends relieved some of the psychological distress due to work (Kinman et al., 2020; Mealer et al., 2017).

### Active Care-giving

Despite the medical barriers, care-giving activities like diapering, singing, and talking to the babies gave the mothers some emotional relief. These moments provided support while also strengthened the maternal identity and bonding, even within a clinical setting.

## Conclusion

The current study showed that both mothers and midwives at Federal Medical Centre, Asaba, experienced emotional, psychological, and physical challenges in taking care of babies in the NICU. Mothers mostly experienced anxiety, fear, and helplessness, being unable to duly participate in the care of their babies, whereas midwives experienced stress regarding their workload, emotional issues, and insufficient resources. Despite these challenges, both mothers and midwives agreed that NICU care played a critical role in improving neonatal outcomes. The findings, therefore, emphasized the importance of improved communication, emotional support, and family-centred care to enhance the NICU experience for mothers and midwives.

## Acknowledgments

The author expresses sincere gratitude to the supervisors, Dr. Gbobbo Josephine and Dr Onasoga, Olayinka A. for their unflinching support, guidance, and encouragement throughout the course of this study. Special appreciation also goes to the management and staff of Federal Medical Centre (FMC) Asaba, particularly the Neonatal Intensive Care Unit for granting access and providing the necessary support for data collection, and to the Mothers and Midwives that generously shared their experiences and participated in the study.

## Conflict of Interest

The authors declare that there are no conflicts of interest regarding the conduct or publication of this study, no sponsorship funds from any organization, and all co-authors are academic supervisors who contributed within their supervisory roles with no connections that could be perceived to influence the study.

## Financial Support

The authors have no affiliation with any organization with a direct or indirect financial interest in the subject matter discussed in the manuscript.

## References

- Adama, E. A., Sundin, D., & Bayes, S. (2016). Parents' experiences of caring for preterm infants after discharge from neonatal intensive care unit: A meta-synthesis of the literature. *Journal of Neonatal Nursing*, 22(1), 27–51. <https://doi.org/10.1016/j.jnn.2015.07.006>
- Aftyka, A., Rozalska-Walaszek, I., Rosa, W., Wrobel, A., & Samardakiewicz, M. (2021). Perceived stress, marital satisfaction, and parental sense of competence in parents of preterm-born children. *BMC Psychology*, 9(1), 44. <https://doi.org/10.1186/s40359-021-00547-6>
- Benzies, KM, Mychasiuk, R., Tough, S., Edwards, N., & Donnelly, C. (2020). Maternal self-efficacy and the mental health of mothers of preterm infants: A systematic review. *Early Human Development*, 142, 104956. <https://doi.org/10.1016/j.earlhumdev.2020.104956>
- Brett, J., Staniszewska, S., Newburn, M., Jones, N., Taylor, L., & Santos, M. (2021). A systematic mapping review of effective interventions for communicating with, supporting and providing information to parents of preterm infants. *BMJ Open*, 11(3), e044393. <https://doi.org/10.1136/bmjopen-2020-044393>
- Chan, G. K., Bitton, J. R., Allgeyer, R. L., Elliott, D., Hudson, L. R., & Mueggenborg, M. G. (2018). *Secondary traumatic stress and compassion fatigue in nurses who work with traumatized patients: A literature review*. *Journal of Trauma Nursing*, 25(1), 16–23. <https://doi.org/10.1097/JTN.0000000000000335>

- Cook, N., Rogowski, J. A., & Smith, L. (2022). The impact of NICU experience on maternal mental health and family functioning: A longitudinal study. *Journal of Perinatal & Neonatal Nursing*, 36(2), 121–130. <https://doi.org/10.1097/JPN.0000000000000629>
- Dahlen, H. G., Hastie, C., Andrews, C., & Schmied, V. (2020). Cultural safety in childbirth: An evolving concept to advance respectful maternity care. *Women and Birth*, 33(3), 197–203. <https://doi.org/10.1016/j.wombi.2019.06.004>
- Feeley, N., Cossette, S., Côté, J., Héon, M., Stremler, R., Martorella, G., ... & Grondin, G. (2016). The importance of relationships in understanding the experiences of neonatal nurses in providing end-of-life care: A qualitative study. *Palliative and Supportive Care*, 14(1), 15–26.
- Flarity, K., Gentry, J. E., & Mesnikoff, N. (2016). The effectiveness of an educational program on preventing and mitigating compassion fatigue in emergency nurses. *Advanced Emergency Nursing Journal*, 38(2), 147–156. <https://doi.org/10.1097/TME.0000000000000109>
- Franck, L. S., McNulty, A., & Alderdice, F. (2017). The perinatal-neonatal care journey for parents of preterm infants: What is working and what can be improved. *Journal of Perinatal & Neonatal Nursing*, 31(3), 244–255. <https://doi.org/10.1097/JPN.0000000000000273>
- Frost, M., Shaw, R., & Tucker, R. (2021). Experiences of parents of preterm infants in neonatal intensive care units: A meta-synthesis. *Journal of Pediatric Nursing*, 56, 52–63. <https://doi.org/10.1016/j.pedn.2020.08.003>
- Geraghty S., Speelman C, & Bayes S. (2019): Fighting a losing battle: Midwives experiences of workplace stress, *Women and Birth*, 32, 3, e297-e306, ISSN 1871-5192.
- Gooding, J. S., Cooper, L. G., Blaine, A. I., Franck, L. S., Howse, J. L., & Berns, S. D. (2021). Family support and family-centered care in the neonatal intensive care unit: Origins, advances, impact. *Seminars in Perinatology*, 45(6), 151392. <https://doi.org/10.1016/j.semperi.2021.151392>
- Goodman, M. J., & Schorling, J. B. (2015). A mindfulness course decreases burnout and improves well-being among healthcare providers. *International Journal of Psychiatry in Medicine*, 50(1), 57–69. <https://doi.org/10.2190/PM.50.1.e>
- Hall, S. L., Cross, J., Selix, N. W., Patterson, C., Segre, L., Chuffo-Siewert, R., & Goyal, D. (2020). Recommendations for enhancing psychosocial support of NICU parents through staff education and support. *Journal of Perinatology*, 40(1), 61–68. <https://doi.org/10.1038/s41372-019-0524-7>
- Holditch-Davis, D., White-Traut, R. C., Levy, J. A., O'Shea, T. M., Geraldo, V., & David, R. J. (2019). Maternal mental health and neurobehavior of infants born preterm. *Early Human Development*, 91(4), 207–212. <https://doi.org/10.1016/j.earlhumdev.2015.01.006>
- Hunter, B., & Warren, L. (2019). Midwives' experiences of workplace resilience. *Midwifery*, 79, 102552. <https://doi.org/10.1016/j.midw.2019.102552>
- Hynan, M. T., Mounts, K. O., & Vanderbilt, D. L. (2018). Screening parents of high-risk infants for emotional distress: Rationale and recommendations. *Journal of Perinatology*, 35(1), S10–S16. <https://doi.org/10.1038/jp.2015.144>
- Kim, H., Sefcik, J. S., & Bradway, C. (2022). Burnout and related factors among neonatal intensive care unit nurses: A systematic review. *Journal of Pediatric Nursing*, 62, 71–79. <https://doi.org/10.1016/j.pedn.2021.07.018>
- Kinman, G., Teoh, K., & Harriss, A. (2020). Supporting the well-being of healthcare workers during and after COVID-19. *Occupational Medicine*, 70(5), 294–296. <https://doi.org/10.1093/occmed/kqaa096>
- Linton, K. F., Shafer, K., & Shonkoff, E. T. (2021). Parenting during the COVID-19 pandemic: The role of social support and virtual connections. *Journal of Child and Family Studies*, 30, 2820–2831. <https://doi.org/10.1007/s10826-021-02080-9>

- Manning, J. C., Hemingway, P., Redsell, S. A., & Sidhu, R. (2022). *Neonatal death: A qualitative study of the experiences of neonatal nurses and midwives*. *BMC Pregnancy and Childbirth*, 22(1), 68. <https://doi.org/10.1186/s12884-021-04337-5>
- Maslach, C., & Leiter, M. P. (2017). Understanding burnout: New models. In C. L. Cooper & J. C. Quick (Eds.), *The handbook of stress and health: A guide to research and practice* (pp. 36–56). Wiley Blackwell. <https://doi.org/10.1002/9781118993811.ch3>
- Mealer, M., Jones, J., & Moss, M. (2017). A qualitative study of resilience and posttraumatic stress disorder in United States ICU nurses. *Intensive Care Medicine*, 38(9), 1445–1451. <https://doi.org/10.1007/s00134-012-2600-6>
- Melnyk, B. M., Feinstein, N. F., Alpert-Gillis, L., Fairbanks, E., Schultz-Czarniak, J., Hust, D., ... & Gross, S. J. (2021). Reducing premature infants' length of stay and improving parents' mental health outcomes with the COPE NICU program: A randomized controlled trial. *Pediatrics*, 118(5), e1414–e1427. <https://doi.org/10.1542/peds.2005-2580>
- Meyer, R. L., Crawford, M. E., & Ortega, D. B. (2022). Maternal stress and its long-term impact on child behavior: A NICU perspective. *Infant Mental Health Journal*, 43(2), 168–182. <https://doi.org/10.1002/imhj.21937>
- Minshawi, F., Shaw, R. J., & Ong, M. W. (2017). *Mindfulness-based interventions in pregnancy and the postpartum period: A systematic review and meta-analysis*. *Psychiatry Research*, 257, 758–770. <https://doi.org/10.1016/j.psychres.2017.08.056>
- Muniraman, H., Ali, M., Coad, J., & Lakhanpaul, M. (2019). *Parental perceptions of neonatal care in neonatal units in the UK: A systematic review*. *BMJ Open*, 9(7), e025478. [Mhttps://doi.org/10.1136/bmjopen-2018-025478](https://doi.org/10.1136/bmjopen-2018-025478)
- Obeidat, H. M., Bond, E. A., & Callister, L. C. (2020). The parental experience of having an infant in the newborn intensive care unit. *Journal of Perinatal Education*, 18(3), 23–29. <https://doi.org/10.1624/105812409X461199>
- Onasoga, O. A., Ogbebor, A. E., & Osaji, T. A. (2019). Coping strategies of nurses working in tertiary hospitals in South-West Nigeria. *International Journal of Caring Sciences*, 12(2), 1171–1180. [https://www.internationaljournalofcaringsciences.org/docs/54\\_onasoga\\_original\\_12\\_2.pdf](https://www.internationaljournalofcaringsciences.org/docs/54_onasoga_original_12_2.pdf)
- O'Reilly, J. A., Peters, K., & Beale, B. (2021). Nurses' experiences of working in neonatal intensive care: An integrative review. *Journal of Neonatal Nursing*, 27(4), 200–208. <https://doi.org/10.1016/j.jnn.2020.11.003>
- Pezaro S, Clyne W, Fulton E. (2017). A systematic mixed-methods review of interventions, outcomes and experiences for midwives and student midwives in work-related psychological distress. *Midwifery* 2017 Jul;50:163-173 [FREE Full text] [doi: 10.1016/j.midw.2017.04.003] [Medline: 28458125]
- Patel, N., Ball, K., & Carter, B. (2022). Mothers of NICU babies: Stress, coping, and the struggle for normality. *Journal of Neonatal Nursing*, 28(4), 205–213. <https://doi.org/10.1016/j.jnn.2022.01.007>
- Scheer, J. R., Tkachuck, M. A., & Crosswell, A. D. (2020). *Religious coping and psychological well-being in mothers of children admitted to NICUs*. *Psychology of Religion and Spirituality*, 12(2), 138–146. <https://doi.org/10.1037/rel0000262>
- Shaw, R. J., Bernard, R. S., DeBlois, T., Stahl, S. M., & Oppenheim, D. (2021). The relationship between acute stress disorder and posttraumatic stress disorder in the neonatal intensive care unit. *Psychosomatics*, 62(2), 200–208. <https://doi.org/10.1016/j.psych.2020.10.004>
- Shields-Poë, D., & Pinelli, J. (2020). Variables associated with maternal stress in the neonatal intensive care unit. *Neonatal Network*, 39(3), 157–165. <https://doi.org/10.1891/0730-0832.39.3.157>
- Wallbank, S., & Robertson, N. (2018). *Midwives' experiences of traumatic perinatal events: A qualitative study*. *British Journal of Midwifery*, 26(8), 504–511.



- 4
- Wang LL, Ma JJ, Meng HH, Zhou J. (2021). Mothers' experiences of neonatal intensive care: A systematic review and implications for clinical practice *World J Clin Cases* 2021; 9(24): 7062-7072
- Zhu, X., Zhang, H., Lo, C. K. M., Li, W., & Li, M. (2018). *Mindfulness-based stress reduction for pregnant women: A systematic review and meta-analysis*. *Complementary Therapies in Clinical Practice*, 33, 6–12. <https://doi.org/10.1016/j.ctcp.2018.07.001>
- Zwack, J., & Schweitzer, J. (2019). *If every fifth physician is affected by burnout, what about the other four? Resilience strategies of experienced physicians*. *Academic Medicine*, 88(3), 382–389. <https://doi.org/10.1097/ACM.0b013e318281696b>