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From Overwhelm to Adaptation: A Transactional Model of Maternal Stress and Coping in the Care of Low-Birth-Weight Infants

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Abstract

The birth of a low-birth-weight (LBW) infant and the admission that often follows to a neonatal intensive or special care unit is one of the most psychologically demanding events a mother can face. Alongside the physical tasks of thermal protection, feeding, hygiene, and Kangaroo Mother Care (KMC) examined elsewhere in this literature, mothers must also manage fear, uncertainty, guilt, and disrupted expectations of early motherhood. Evidence from India and other low- and middle-income settings indicates that a substantial proportion of these mothers experience clinically significant stress, anxiety, or depressive symptoms, both during neonatal unit admission and after discharge, yet psychological adjustment remains comparatively under-addressed in routine nursing care. This chapter uses Lazarus and Folkman's Transactional Model of Stress and Coping to examine how mothers appraise the demands of caring for an LBW infant, the resources they draw upon, and the problem-focused and emotion-focused coping strategies they use to manage this appraisal. It reviews the prevalence and determinants of maternal stress, tools available for its assessment, and the evidence base for nursing and psychosocial interventions — including KMC, mindfulness-based approaches, family-integrated care, and structured peer support — that can buffer stress and strengthen coping. The chapter situates this evidence within a planned programme of nurse-led, home-based support for mothers of LBW infants in Kollam District, Kerala, consistent with the broader programme of work presented in this thesis. The chapter argues that psychological adjustment and physical caregiving competence are inseparable: a mother who is overwhelmed by appraisal of threat and lacking coping resources is less likely to sustain safe, consistent home care, regardless of how much factual knowledge she has been given. Nurses are positioned as central to interrupting this pathway, through early screening, honest information-sharing, active involvement of mothers in care, emotional and social support, monitoring across the transition from hospital to home, and timely referral when distress is severe. The chapter closes with an integrated conceptual framework, implications for nursing practice, education, and

policy, and a future research agenda centred on longitudinal, culturally grounded, and intervention-focused study of maternal coping.

Keywords: *Maternal Stress, Coping, Low Birth Weight, Preterm Infant, Neonatal Intensive Care, Transactional Model, Lazarus And Folkman, Kangaroo Mother Care, Psychosocial Support, Nursing Intervention, Kerala.*

Introduction

The Psychological Weight of a Low-Birth-Weight Birth

A low weight (LBW) birth (defined by the World Health Organisation as less than 2,500 g birth weight at any gestation) is primarily a medical phenomenon, but is also, inevitably, immediately, a psychological phenomenon. It is estimated that approximately 20 million babies, or 1 in every 7 births, are born with low birth weight every year, with the highest prevalence in Southern Asia (Blencowe et al., 2019). Every number behind these represents a mother whose pregnancy didn't end the way she envisioned, whose infant is perhaps small and fragile, plugged in to monitors and tubes and whose learning curve for what she needs to know and do is often steep and is usually required to begin within days of an unscheduled delivery, in a place of fear and uncertainty.

As is natural, nursing scholarship and practice have focussed on the physical aspects of LBW and preterm care – thermal protection, feeding and breastfeeding support, Kangaroo Mother Care (KMC), infection prevention and danger sign recognition. These remain essential. However, a large and growing body of evidence suggests that a mother's psychological state—how she views the situation that she is in and how she deals with that view—is not a lesser issue, but a determinant of caregiving itself. Acute distress and powerlessness in the neonatal unit or leaving hospital feeling fearful and self blameful make it harder to absorb learning, harder to be confident and skilled in carrying out activities like KMC and feeding, and harder to access follow-up care.

This chapter is a companion to the foregoing consideration of the knowledge-practice gap in home-based care of LBW infants and looks at the same clinical population (mothers of LBW and preterm infants transitioning from hospital to home) but from a different and complementary perspective – not what mothers know or do, but how they appraise and cope with what is demanded of them. The chapter adopts a psychological perspective on stress, one that views stress as an active, ongoing process instead of a trait or a single, diagnosable outcome (Lazarus and Folkman, 1984), to investigate maternal stress.

There are two purposes to the chapter. The first is conceptual: to systematically outline the appraisal and coping process of mothers of LBW infants and what makes this process resolve adaptively or maladaptively. The second is pragmatic: to link this conceptual narrative to nursing practices, namely, screening, education, involvement in care, emotional and social support, monitoring, and referral that can be provided in already-established roles in the field of neonatal and community nursing, in this case, in the home-based nursing intervention currently being developed for mothers in Kollam District, Kerala, as part of the larger programme of research this thesis represents.

Extent of the Problem: Maternal Stress, Anxiety and Depression

While it is difficult to quantify maternal psychological distress in LBW and neonatal unit admissions due to variations in measures, timing of assessment and population, the overall trend of the recent systematic reviews is consistent that distress is common rather than exceptional.

A systematic review and meta-analysis conducted in 2024 showed that among parents of neonates admitted to an NICU, mothers had a pooled prevalence of 51% for anxiety, 41% for stress and 31% for depression, with corresponding figures for fathers being roughly half, indicating the mothers' disproportionate contribution to the psychological burden (Shetty et al., 2024).

This is confirmed by India-specific evidence. A systematic review and meta-analysis of stressors faced by parents of high-risk neonates in the NICUs of India concluded that various stressors were consistently high across different domains, including appearance and behaviour of infant, sights and sounds in the NICU, and role change of the parents, with mothers being more affected than fathers (Siva et al., 2024a). The broader postpartum period has related work finding a prevalence of 20% for PND in the general postpartum population in Ernakrum District, Kerala through a cross sectional study, prenatal stress exposure, loneliness and socio-economic marginalisation being important risk factors (Abraham et al., 2024). Mothers of LBW infants in the same region can be reasonably expected to be at or above this baseline since LBW birth and admission to the neonatal unit is itself a potent source of prenatal and peripartum stress.

Two implications follow. First, there is a population level effect of maternal psychological distress after an LBW birth, in that a meaningful proportion of mothers experience this distress, and its effect is not limited to a few mothers who are psychologically vulnerable; services organised around universal screening would therefore better match the scale of the problem than services only offered when distress is visibly severe. Second, distress which starts in the neonatal unit doesn't stop when the mother and baby are discharged and in some cases it increases when

the practical and social supports of the hospital world disappear and the mother and family bear full responsibility for the care of the infant at home.

Theoretical Foundation: Lazarus and Folkman's Transactional Model of Stress and Coping

Lazarus and Folkman's (1984) Transactional Model of Stress and Coping seems to be a good fit for the situation of mothers of LBW infants since it views stress as a property of a transaction over time between an event and a person, rather than a fixed characteristic of either. In this model, stress is a function of the demands of a situation and the individual's assessment of his capacity to cope with these demands. This means that two mothers can have the same LBW birth, and see it very differently based on each finding meaning in her experience and the resources she thinks she has to her disposal.

The model highlights two key appraisal processes. Primary appraisal is the first assessment of whether a situation is irrelevant, benign or stressful and if stressful whether it is a harm which has already happened, a threat which may happen or a challenge which requires dealing with but will enable growth or mastery. Secondary appraisal ensues and assesses what can be done about it; what personal, social and material resources are available and what will be their efficacy in this situation. Importantly, the primary and secondary appraisal processes work in an ongoing way – something initially perceived as a huge threat can become perceived as a challenge when a mother learns something new, feels confident, or gets support; and vice versa.

In Lazarus and Folkman's model coping involves a person's cognitive and behavioural strategies for dealing with demands that are appraised as taxing and/or exceeding her resources. Coping can be generally conceptualized as having two functions. Problem-focused coping is aimed at the stressor and involves, for instance, getting more information about the baby's condition, mastering a skill in caring for the baby, or making specific plans for discharge. Emotion-focused coping focuses on how to cope with the emotional reaction to the stressor, rather than the stressor itself, such as getting emotional support, reappraising the situation to be less negative, distraction, or relying on religious or spiritual beliefs. Both modes are adaptive and maladaptive depending on the degree of control of the underlying situation and most mothers employ a variable balance of both throughout their neonatal admission.

This pathway is outlined for a mother of an LBW infant in Figure 1, from first encounter of the stressor through primary and secondary appraisal, the choice of coping strategy and outcome of adaptation or maladaptation – and a feedback loop is included to convey the model's key point that appraisal and coping is not a one-off decision, but a process which is ongoing and can be updated throughout the infant's hospital stay and after discharge.

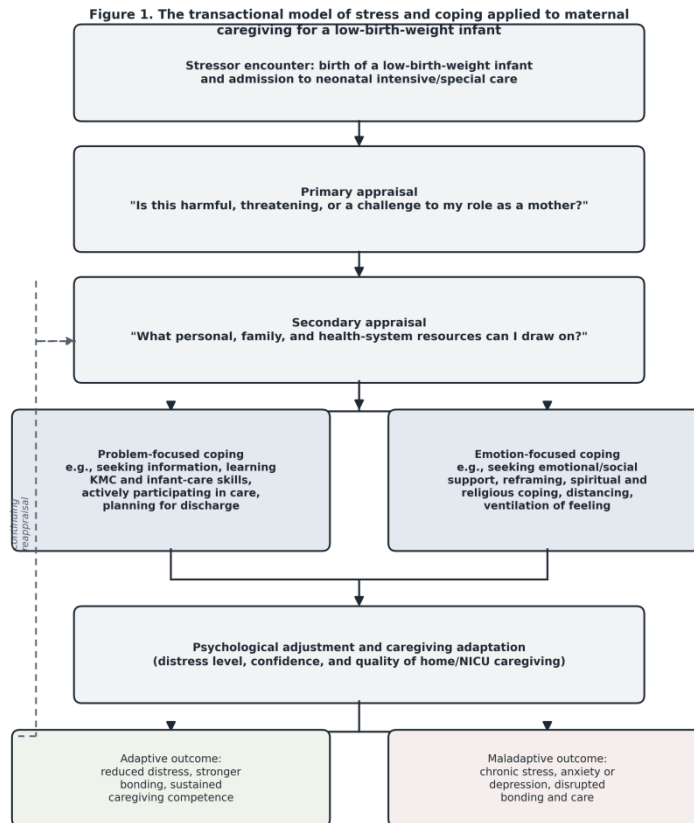


Figure 1: The transactional model of stress and coping applied to maternal caregiving for a low-birth-weight infant

Primary Appraisal: Interpreting the Threat of an LBW Birth and NICU Admission

Most mothers will have had a primary appraisal of an LBW birth under circumstances where threat is likely to have been made: the birth is often unexpected and may occur before the threat is realised, the infant may appear small and/or may have monitoring equipment and/or respiratory equipment attached, and the mother may not have yet recovered from the birth, often by cesarean section, and may not be with her infant. There are some common themes in the qualitative and mixed-methods literature related to this appraisal process.

Almost the most important theme is the new role of the parent. In the neonate unit, mothers often report feeling more like an observer than caregiver, as the majority of hands-on care is done by staff in the early days. This may be felt as a loss, not only of the mother's anticipated role as a caretaker from birth, but where the baby's prognosis is good.

Appearance and behaviour of the infant also directly influences appraisal. Small size, fragile skin, weak or absent cry and reliance on tubing or monitors may be interpreted as evidence of severity, which is greater than the actual clinical risk, especially if mothers have not been prepared for what a neonatal unit is like.

It is compounded by uncertainty about outcome, which is the visual and role-related cues. When clinicians are "cautiously optimistic," mothers often are unable to get the kind of definitive reassurance they would like, and this lack of information is often judged as more distressing than a clear, even serious, diagnosis.

From a nursing perspective, primary appraisal is not a single event which is once made and never changed—primary appraisal is susceptible to influence at each contact. In plain and honest terms, preparing a mother for what she will see upon arriving for the first visit to the unit; naming the purpose of each piece of equipment; and naming "what is good" as well as "what needs monitoring" are all concrete ways nurses can help change a mother's primary appraisal from sense of threat to a more specific, and therefore more manageable, understanding of her infant's situation.

The Second Appraisal of Resources, Self-Efficacy, Perceived Control

Evaluation of what can be done (secondary appraisal) relies heavily on a mother's perception of her access to personal, family and health-system resources and confidence (or self-efficacy) that she can make effective use of these resources.

Personal resources refer to previous caring experience, problem solving disposition, physical recovery from delivery, and existing mental health. Primiparous mothers, women who have suffered a previous pregnancy loss, or women who have pre-existing anxiety or depression difficulties, regardless of the infant's actual level of clinical severity, tend to appraise the resources they have available as more limited.

Family is a supportive partner, other family members who can also help with the children and household chores, and being able to be free from financial pressures to allow hospital visits and eventually home care. Where these resources are limited, such as when a mother has to leave the infant earlier than she would like to attend to other children or paid work, or to travel long distances and at high cost to the hospital, secondary appraisal is more negative.

Resources are also important to the health system, and are the resources that nursing has the most direct influence over. Regular, clear communication by staff; being involved in the care of her baby rather than a passive observer; the same nurses or a consistent group of nurses help to support a mother's feeling she has resources she can use.

Specifically, self-efficacy, which is a mother's confidence in her ability to do something, rather than the availability of a resource to do it, should be studied. A mother might have access to KMC, breastfeeding support and clear information, but may not be given a chance to practise KMC and breastfeeding under supervision and

get corrective and encouraging feedback and thus appraise her own competence as inadequate. Structured, hands-on teaching therefore does more than transmit a skill, it will directly target secondary appraisal by providing a mother with first-hand evidence of her increasing competence.

Problem-Focused and Emotion-Focused Pathways to Coping Strategies

After the appraisal of a situation as stressful and the assessment of the resources, mothers use a combination of problem-focused and emotion-focused coping strategies which may change as situations evolve.

The most typical problem-focused coping behaviors in this population were seeking information about the infant's condition and prognosis, learning and engaging in specific infant care behaviors (KMC, breastfeeding, thermal care), documenting infant feeds, weight or medical events and taking an active role in discharge planning. This coping style is most effective when the mother actually can change the situation, such as when a parenting ability can truly be acquired and rehearsed to mastery.

Emotion-focused coping often involves seeking emotional and social support from a partner, family member, peer, or staff member; relying on religious or spiritual beliefs and practices, which is a very common and culturally significant coping resource among mothers in South Asian contexts; and, sometimes, distancing or temporarily avoiding information that is too overwhelming. Emotion-based approaches are likely to be most adaptive when the aspect of the situation is truly beyond the mother's control, like the underlying medical condition that could lead to a preterm birth, and become more maladaptive when they are used in lieu of those aspects that are actually under the mother's control, such as learning how to feed or handle her baby.

There are two additional considerations for nursing. Second, coping strategies are not mutually exclusive; a mother may be able to cope competently with the problem (KMC) and also use prayer and family reassurance as a way of coping (emotion-focused) and this may be altogether appropriate. Second, there are factors of opportunity as well as disposition: a mother who is denied significant access to her infant's care in the neonatal unit is denied the opportunity of problem-focused coping, which may by default push her toward emotion-focused coping, such as avoidance, which she might not even choose. Thus, nursing care that optimises the appropriate involvement of the mother in the care process does not only develop skill but also extends the repertoire of coping mechanisms truly available to the mother.

Determinants of Maternal Stress

Bringing together the appraisal and coping literature reviewed above, maternal stress in the context of LBW and neonatal unit care can be understood as arising from an interaction of infant-related, maternal/psychological, family/social, and

health-system determinants. Table 1 summarises these domains alongside their corresponding nursing implications.

Table 1: Determinants of maternal stress in the neonatal-unit-to-home transition and corresponding nursing implications

Domain	Illustrative determinants	Nursing implication
Infant-related	Severity of illness, birth weight and gestational age, length and unpredictability of neonatal unit stay, visible medical equipment	Explain equipment and procedures in plain language; prepare mothers for what they will see before the first NICU visit
Maternal/psychological	Primipara status, prior pregnancy loss, guilt and self-blame, low self-efficacy, pre-existing anxiety or depression	Screen early with a validated tool; normalise feelings of guilt and fear as common, not exceptional
Family/social	Partner and family support, family income and disruption to household roles, distance from the facility, cultural beliefs about LBW and its causes	Involve family members in education and demonstration; identify a consistent support person early
Health-system	Restricted visiting or KMC access, inconsistent staff communication, absence of psychosocial services, lack of continuity between hospital and community follow-up	Standardise communication practices; build a nurse-led bridge between hospital discharge and home/community follow-up

No single determinant operates in isolation. A mother with strong family support but an infant with a prolonged, medically complex course may still experience severe stress; conversely, a mother whose infant recovers quickly but who lacks any family or health-system support may experience a comparably difficult appraisal and coping process. This interaction is precisely what the transactional model captures, and it argues against any nursing approach that assumes maternal stress can be predicted from a single risk factor, such as birth weight alone.

Measuring Maternal Stress and Coping

While clinical impression may under-detect distress in mothers who are outwardly composed or who are reluctant to report distress, systematic identification requires increasingly available and routinely used validated assessment tools.

Of these, the Parental Stressor Scale: Neonatal Intensive Care Unit (PSS:NICU) (Miles et al., 1993) is the most widely used and most extensively validated instrument for the purpose internationally. It evaluates parental stress in

domains that are related to the primary-appraisal themes mentioned earlier in the chapter, such as the infant's appearance and behaviour, the sights and sounds of the unit and the changed parental role, and has been adapted and validated in several languages and health-care settings since its original development.

General screening instruments for anxiety and depression (such as the Edinburgh Postnatal Depression Scale or brief anxiety screens) continue to have relevance as they will capture distress that may extend beyond the neonatal unit stay itself and that may happen in the wider postpartum period (as seen in Ernakulam District in Section 2, Abraham et al., 2024).

The key for nursing practice is that some type of brief and validated screening should take place at predetermined intervals, in this case, close to admission, before discharge and early in the home follow-up process, not just when there is obvious distress. Screening at multiple times also enables nurses to see if appraisal and coping is becoming better, the same or worse over time as the transactional model suggests that it is a process, not a measurement.

What is at Stake: Mother–Infant Bonding and Attachment

The impact of unresolved maternal stress is not just on the mother's own mental health, but has well-documented effects on the developing mother–infant relationship. Limited skin-to-skin contact, separation and emotional demands of neonatal unit stay can all disrupt the early bonding process which, under normal circumstances, is facilitated by uninterrupted skin-to-skin contact and frequent and responsive interaction.

A systematic review of the evidence from randomised controlled trials of attachment- and relationship-based interventions during neonatal unit hospitalisation revealed that such support interventions—specifically, those focused on supporting parent–infant interaction—were effective at reducing maternal traumatic stress and depressive symptoms, as well as having some positive effects on infant weight gain and developmental outcomes; this suggests that bonding-focused support is not just a psychosocial add-on, but is also associated with measurable infant outcomes (Kim & Kim, 2022).

This evidence puts bonding support in a new light as a proper clinical need, not just a nice comfort item. One of the most effective and easily implementable measures to support bonding directly is Kangaroo Mother Care, which will be detailed in the next section, as it brings the mother physically closer and gives her an active/hands-on role at a time when other forms of participation may be limited. In summarizing, nurses who actively promote KMC, maintain eye to eye contact and gentle touch while caring for the infant and engage mothers in reading and understanding the cues their infant gives, are thus promoting maternal coping and protecting the infant/mother relationship.

Kangaroo Mother Care (KMC) as Stress-Buffering Nursing Intervention

Although the physiological and survival benefits of KMC for LBW and preterm infants are well documented (Sivanandan & Sankar, 2023; WHO Immediate KMC Study Group, 2021), it is the psychological benefits reported for mothers that make it one of the most clearly understood examples of an intervention that is both a physical-care practice and a coping resource.

Postpartum depressive symptoms were also reduced significantly in mothers of preterm and low birth weight infants with KMC delivery, as demonstrated by a systematic review and meta-analysis (Anwar et al., 2023). More specifically, a trial-level complementary finding revealed that KMC was effective in lowering depression, anxiety, and stress scores as compared to standard care in mothers of premature infants (Mehrpisheh et al., 2023).

Transactionally, KMC works on both primary and secondary appraisal at the same time. It can alter primary appraisal by providing the mother direct, close range physical data on her baby's state and responsiveness rather than an assessment based on a great deal of monitors and equipment that she cannot see up close. It also enhances secondary appraisal and self-efficacy, providing for the mother's active and competent role as a carer – arguably the only most tangible form of problem focused coping that she can use in the neonatal unit itself.

Since the practice of KMC also has psychological effects, nursing practices that promote early, frequent, and well-supported KMC should be regarded as essential to psychological care of the mother and not just physical care of the infant, as detailed in the companion chapter on home-based LBW care.

Mindfulness-Based and Cognitive-Behavioural Approaches

Outside of KMC, there has been some evidence that structured psychological interventions, along with standard neonatal care, can help reduce maternal stress and specifically, improve coping.

One study conducted a randomized controlled trial (Ouyang et al., 2024) to investigate the effectiveness of KMC plus nurse-assisted mindfulness training versus KMC alone for reducing maternal stress. Stress reduction was significantly greater with the combined intervention group compared to the KMC only group, indicating that structured attention-based techniques can provide an added benefit to the stress-buffering effect of KMC.

In turn, a brief, four-session mindfulness based cognitive therapy intervention administered to mothers with babies in neonatal intensive care units (NICUs) was shown to increase problem-focused coping strategies in particular, suggesting that this type of psychological intervention can not only influence mothers' stress levels but also the way they approach coping — directly relevant to the transactional

model's focus on coping as a teachable, modifiable process, rather than a personal trait (MoghimianShahrbabaki et al., 2025).

The implications for nursing services are that a brief mindfulness or cognitive-behavioural element might not need to be long term specialist therapy in order to have tangible effect; that short, structured, nurse-led mindfulness or cognitive-behavioural sessions, for instance brief breathing or grounding techniques integrated into KMC sessions, could be a viable approach to bringing evidence-based psychological support to routine neonatal care without the need for a separate mental-health workforce to care for every mother.

Family-Integrated Care and Family Support as Coping Resources

Family-Integrated Care (FICare) reorganises neonatal unit routines so that parents, rather than staff alone, take primary responsibility for their infant's day-to-day care under nursing supervision and guidance. A large multicentre, multinational, cluster-randomised controlled trial found that this model improved infant weight gain and breastfeeding rates while also reducing parental stress and anxiety relative to standard neonatal unit care (O'Brien et al., 2018).

FICare is best understood, within the transactional model used in this chapter, as an intervention that directly targets secondary appraisal at a structural level: rather than relying solely on individual nurses to invite maternal involvement opportunistically, it makes active parental participation the default model of care. This distinction matters because secondary appraisal depends on genuinely available resources, and a unit culture that formally expects and enables parental involvement provides a more consistent resource than involvement that depends on which staff member happens to be on duty.

Family support beyond the health-care setting is equally consequential. Involving partners, mothers, mothers-in-law, and other family members in education and demonstration sessions — rather than directing all teaching exclusively at the mother — helps distribute caregiving responsibility, reduces the likelihood of conflicting advice once the family is at home, and provides the mother with a wider circle of people who understand, and can reinforce, recommended care practices. In many South Asian family structures, in which extended family plays an active role in early infant care, family-inclusive teaching is not a supplementary nicety but a necessary adaptation to how caregiving decisions are actually made.

Peer Support and Continuity Beyond Discharge

Because maternal stress does not necessarily resolve at hospital discharge, structured continuity of support into the home and community period is a critical, and frequently neglected, component of coping-focused nursing care.

A randomised trial of a structured peer-support programme for parents following neonatal intensive care unit discharge found improvements in parental self-

efficacy and reductions in parenting stress among parents who received peer support from a trained parent of a NICU graduate, compared with parents who received standard discharge support alone (Fratantoni et al., 2022). Peer support functions differently from professional support: a peer who has personally experienced neonatal unit admission and the transition home offers a form of validating, experience-based reassurance that professional staff, however skilled, cannot fully replicate.

A scoping review focused specifically on low- and middle-income countries identified a range of interventional strategies — including structured education, peer and family support, and mindfulness-based approaches — capable of mitigating maternal stress and strengthening coping during neonatal admission, while also noting that such interventions remain unevenly implemented and under-researched in these settings relative to high-income countries (Siva et al., 2024b). This gap is directly relevant to the Indian and Kerala context addressed later in this chapter, and underlines those low- and middle-income settings as most in need of feasible, low-cost, and nurse-deliverable coping-support models, rather than models transplanted without adaptation from better-resourced health systems.

Practical continuity mechanisms that nursing services can realistically implement include a structured discharge conversation that explicitly addresses the mother's emotional state and not only the infant's physical care plan, telephone or home-visit follow-up scheduled within the first one to two weeks after discharge, and connection to an existing or newly formed peer group of mothers of LBW or preterm infants, where such groups can be organised locally.

Contextualising Maternal Coping: The Kollam District, Kerala Perspective

Kerala presents a distinctive combination of conditions relevant to maternal stress and coping in LBW care. The state has achieved comparatively strong maternal and child health indicators by national standards, high rates of institutional delivery, and high female literacy, all of which are generally protective for problem-focused coping, since informed, literate mothers are typically better placed to seek information, follow instructions, and engage actively with health services. At the same time, evidence from Ernakulam District demonstrates that postnatal depression and its associated risk factors — including prenatal stress, loneliness, and marginalisation by caste or religious minority status — remain clinically significant even within this generally favourable health system context, at a prevalence of one in five postpartum women (Abraham et al., 2024).

For mothers of LBW infants specifically, several regionally relevant considerations are likely to shape appraisal and coping in Kollam District. Strong extended-family structures can function as a substantial coping resource when family members are appropriately included in education and support, consistent with the

family-integrated approach discussed in Section 12, but can equally become a source of additional strain when family expectations, advice, or beliefs about the causes of LBW conflict with clinical guidance. Religious and spiritual practice is a prominent and culturally normative emotion-focused coping resource across Kerala's religious communities and should be respected and, where appropriate, actively supported rather than viewed as a distraction from clinical engagement. Health-system familiarity — Kerala's relatively strong primary health care and Accredited Social Health Activist (ASHA) network — provides an existing infrastructure through which nurse-led follow-up and peer-support contact could realistically be organised without requiring entirely new service structures.

These considerations directly inform the design of the home-based nursing intervention being developed for mothers of LBW infants in Kollam District as part of this thesis. Rather than treating psychological support as a separate, add-on component, the intervention is intended to embed stress screening, coping-oriented education, and family involvement within the same home-visiting structure used for physical caregiving support, on the premise — argued throughout this chapter — that psychological adjustment and physical caregiving competence are two expressions of the same underlying appraisal-and-coping process, not two separate problems requiring two separate solutions.

Barriers and Facilitators to Effective Coping and Support

Several barriers can prevent mothers from coping effectively, and can prevent nursing support from reaching mothers who need it most. Stigma surrounding mental health difficulty can discourage mothers from disclosing distress, particularly where psychological difficulty is perceived as a sign of personal or maternal inadequacy rather than an understandable response to a genuinely difficult situation. Restricted neonatal unit visiting policies or limited KMC access can constrain problem-focused coping by removing the mother's main avenue for active involvement. Staff time pressure in busy neonatal units can mean that psychosocial conversation is deprioritised relative to physical-care tasks, even when staff recognise its importance. Financial and geographic constraints can limit a family's ability to sustain hospital visits or attend follow-up appointments, independently of the family's motivation to do so. Fragmented communication — in which different staff members give differing or inconsistent information — can itself become a source of stress rather than reassurance.

Facilitators identified across the evidence reviewed in this chapter point toward a correspondingly clear set of enabling conditions: consistent, honest, and plainly communicated information from a stable staff team; genuine, structurally supported opportunities for maternal involvement in care, as modelled by family-integrated care; routine, universal screening for stress and depressive symptoms rather than screening only on clinical suspicion; explicit inclusion of family members

in education, consistent with local caregiving structures; and continuity of support that bridges the hospital-to-home transition rather than concluding abruptly at discharge.

Because many of these facilitators are matters of service organisation rather than requiring new technology or substantial additional resource, they represent a realistic and achievable target for quality improvement within existing neonatal and community nursing services.

An Integrated Conceptual Framework for Nurse-Led Stress and Coping Support

Integrating the theoretical description and evidence presented in this chapter, a seven-stage, cyclical model of nurse-led practice is proposed that could be implemented to buffer maternal stress and enhance coping from admission to the neonatal unit through to continued home care (Figure 2).

This cycle starts with the screening for maternal stress, anxiety and depressive symptoms at specific points in the care pathway, rather than when they are seen to be distressed. Inform follows and the content of the information is truthful and clear, relating to the infant's condition and the environment of the unit, and directly addressing the primary appraisal. Involve actively involves the mother in the process of caring for the baby directly, including KMC, feeding and basic care, while enhancing self-efficacy and problem solving coping ability. Support is delivered directly to the emotional and social needs through structured conversation, family involvement, peer connection, and, if appropriate, very short-term mindfulness exercises. Monitor continues assessment in the transition from hospital to home, given that distress may arise and/or continue after leaving hospital. Consolidating is the repetition of a caring skill and coping strategies, encouragement and positive feedback on progress made. Refer is the final step in the process to link mothers with the right mental health provider, when their distress is too intense or continues over time, which then starts the process over again with continued screening.

This process is purposely not linear, but circular, addressing the nonlinear nature of the transactional model itself, which focuses on stress and coping as a process, not a single event, with a single resolution. It also aims to be implementable by the current neonatal and community nursing staff without the need for a separate specialist mental-health workforce for each mother, whilst clearly establishing a pathway for referrals to that higher level of support for the small proportion of mothers where additional support is required to address their distress.

Figure 2. The seven-stage nurse-led cycle for buffering maternal stress and strengthening coping across the NICU-to-home transition

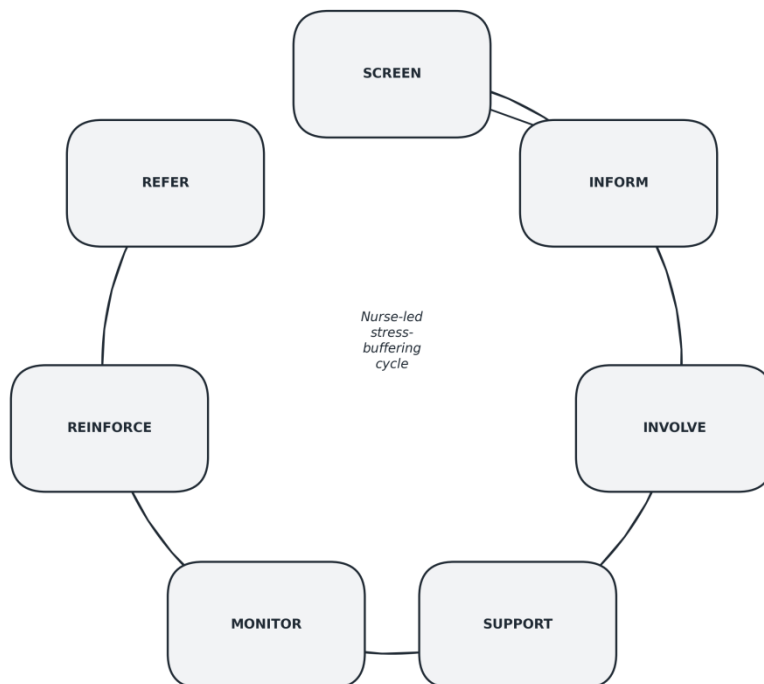


Figure 2: The seven-stage nurse-led cycle for buffering maternal stress and strengthening coping across the NICU-to-home transition

Implications for Nursing Practice and Education

For nursing practice, the evidence and framework presented in this chapter support several concrete changes to routine care. Stress and depression screening using a brief, validated tool should be incorporated as a standard component of neonatal unit admission and discharge processes, alongside the physical and educational assessments already routinely performed. Maternal involvement in hands-on caregiving should be maximised as a matter of unit policy and culture, rather than left to the discretion of individual staff members or shifts. Discharge preparation should explicitly address the mother's emotional readiness alongside her practical caregiving competence, since the two have been shown throughout this chapter to be interdependent rather than separate concerns. Follow-up contact within the first two weeks after discharge should be considered a standard component of the care pathway, not an optional extra dependent on available staff time.

For nursing education, curricula preparing nurses for neonatal and maternal-child health practice should explicitly teach the transactional model of stress and coping, alongside the more commonly taught adaptation and family-systems

frameworks, so that students understand psychological support as a structured, teachable component of practice rather than an informal extension of general kindness or communication skill. Training should include practical skills in brief screening, active listening, and delivering difficult or uncertain information in a way that supports, rather than undermines, maternal appraisal. Simulation-based education, already valuable for teaching physical caregiving skills such as KMC and feeding support, can be extended to include simulated conversations with distressed or anxious parents, giving students the opportunity to practise these skills under supervision before encountering them in live clinical settings.

Policy Implications

On a policy level, the psychological well-being of mothers after LBW and admission to the NBU should not be addressed indirectly through a general postpartum mental health service that does not necessarily target mothers of LBWs, but should be explicitly recognised in maternal and newborn health programmes.

Standardised screening would be implemented as part of the admission and discharge documentation in the neonatal unit, and would ensure a consistent approach to identifying mothers who may be at risk, whatever the setting or individual neonatal nurse or midwife they may come into contact with. Referral pathways from neonatal units to readily available mental health services must be clearly established and effective, otherwise there's a risk of a screening programme increasing awareness but having no impact on outcome.

Moreover, the policy focus should not be just on how to get community-based health workers to support health care services during the inpatient period, but also how to train and support them to sustain and extend nurse-led stress-screening and coping-support activities to the post-discharge phase, creating continuity between facility-based and community-based care instead of functioning as two silos. Similar to the economic and workforce feasibility of any proposed physical care intervention, the economic and workforce feasibility of any proposed psychosocial support intervention should be explicitly evaluated, as an intervention that is effective in research settings but is not sustainable given routine staffing levels will not provide benefit at the population level.

Future Research Directions

Several research gaps follow directly from the evidence reviewed in this chapter. Longitudinal research is needed that follows mothers from neonatal unit admission through the early months at home, since most existing studies measure stress at a single time point and cannot describe how appraisal and coping actually evolve across this extended transition.

Intervention research conducted specifically in low- and middle-income and South Asian settings remains comparatively limited relative to high-income contexts,

despite these settings carrying a disproportionate share of the global LBW burden; the scoping review by Siva and colleagues (2024b) makes this gap explicit and identifies it as a priority for future work. Research is also needed that examines coping, not only distress, as an outcome in its own right — that is, studies that measure whether an intervention shifts mothers toward more adaptive problem-focused strategies, rather than measuring only whether reported distress scores decline.

Further work should also examine family and paternal experience alongside maternal experience, given the family-integrated evidence reviewed in this chapter, and should explore whether digitally supported follow-up can extend nurse-led stress screening and coping support to mothers in more remote or under-resourced areas without requiring proportional increases in nursing staff time. Finally, implementation research specific to Kerala and comparable Indian settings is needed to establish whether a nurse-led, cyclical model of the kind proposed in Figure 2 can be feasibly delivered within existing community and neonatal nursing workloads, and what adaptations are required to make such a model sustainable at scale.

Conclusion

Maternal stress following an LBW birth is common, consequential, and — the evidence reviewed in this chapter suggests — modifiable. Lazarus and Folkman's Transactional Model of Stress and Coping offers a way of understanding this experience that avoids treating distress as either an inevitable, untreatable by-product of a difficult birth or a fixed characteristic of individual mothers, and instead frames it as an ongoing, influenceable process of appraisal and coping in which nursing care can play a direct and active part.

The evidence reviewed here indicates that interventions already familiar within neonatal nursing — Kangaroo Mother Care, family-integrated approaches to care, and structured discharge and follow-up support — carry demonstrated psychological benefit alongside their established physical benefits, and that additional, low-intensity approaches such as brief mindfulness-based techniques and structured peer support can meaningfully extend this benefit. What is required is not, primarily, new technology or specialist resource, but a more deliberate and systematic integration of stress screening, honest communication, active maternal involvement, emotional and social support, and continuity of care across the hospital-to-home transition.

This chapter's proposed integrated framework is intended as a practical bridge between this evidence and everyday nursing practice, and is directly relevant to the home-based intervention being developed for mothers of LBW infants in Kollam District, Kerala. Read alongside the companion chapter's account of the knowledge–practice gap in physical home care, this chapter argues that closing that

gap depends, in no small part, on first attending to a mother's psychological capacity to receive, absorb, and act on the knowledge and skills nurses work so hard to provide. A mother who is supported to appraise her situation as manageable, and who is equipped with genuine coping resources, is better positioned not only to feel less distressed, but to provide the safe, consistent, and confident care her infant needs.

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