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Assessment of Postpartum Sleep Quality and Emotional Well-Being Among First-Time Mothers

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Abstract

Postpartum sleep quality is an important determinant of maternal physical recovery, emotional well-being, and adjustment to motherhood. First-time mothers frequently experience significant changes in sleep duration, sleep continuity, and sleep satisfaction because of infant feeding, nighttime caregiving, hormonal changes, and the transition to new family responsibilities. Sleep disturbances during the postpartum period may contribute to fatigue, emotional instability, anxiety symptoms, and increased vulnerability to postpartum depression. This narrative review examines the relationship between postpartum sleep quality and emotional well-being among first-time mothers, focusing on physiological sleep changes, infant-related sleep disruption, psychological outcomes, family support, healthcare assessment, and preventive interventions. Evidence from longitudinal studies, observational investigations, and randomized controlled trials demonstrates that poor subjective sleep quality is frequently associated with increased depressive symptoms, anxiety, and difficulties adjusting to maternal responsibilities. However, the relationships are complex and potentially bidirectional, while the effectiveness of sleep-focused interventions varies according to intervention design and maternal circumstances. Social support, appropriate infant-care guidance, psychological screening, and individualized sleep education may improve maternal adjustment. This review emphasizes that postpartum sleep should be considered an important component of comprehensive maternal healthcare. Integrating sleep assessment with emotional well-being screening and family-centered support may contribute to healthier postpartum adjustment and improved quality of life among first-time mothers.

Keywords: Postpartum Sleep Quality, First-Time Mothers, Maternal Emotional Well-Being, Postpartum Depression, Sleep Disturbances, Maternal Fatigue, Postpartum Anxiety, Infant Sleep Patterns, Maternal Mental Health, Postnatal Care

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1. Introduction

The postpartum period is a major developmental and physiological transition during which women adapt to recovery from childbirth, infant care, changing family responsibilities, and new emotional experiences. For first-time mothers, these adjustments may be particularly demanding because they involve unfamiliar caregiving activities, changes in daily routines, and increased responsibility for

infant well-being. Sleep is frequently disrupted during this period because newborn infants require regular feeding, comfort, and attention throughout the day and night. Maternal sleep quality is influenced by several interrelated factors, including total sleep duration, nighttime awakenings, sleep efficiency, difficulty initiating sleep, and subjective satisfaction with rest. Although interrupted sleep is common after childbirth, the severity and persistence of disturbances vary considerably among mothers. Some women adapt relatively well despite repeated awakenings, while others experience prolonged fatigue, psychological distress, and difficulties maintaining daily functioning. Emotional well-being during the postpartum period encompasses mood stability, psychological resilience, perceived stress, anxiety, satisfaction with motherhood, and the ability to manage new responsibilities. Sleep disturbances may influence these outcomes through changes in emotional regulation, cognitive functioning, and physiological recovery. Conversely, depression, anxiety, and persistent worry may interfere with the ability to obtain restorative sleep, suggesting that sleep and emotional health are closely interconnected. First-time mothers may encounter additional challenges because they are developing confidence in infant care while managing expectations concerning breastfeeding, household responsibilities, and maternal performance. The availability of partner support, family assistance, healthcare guidance, and appropriate rest opportunities may influence the adjustment process. Understanding postpartum sleep and emotional well-being is important for maternity nurses, midwives, obstetricians, mental health professionals, and community healthcare providers. Early identification of persistent sleep problems and psychological symptoms can facilitate timely support and reduce the likelihood that maternal difficulties remain unrecognized. This article evaluates postpartum sleep quality and emotional well-being among first-time mothers through six major areas: physiological sleep changes, infant caregiving and sleep disruption, relationships with depression and anxiety, maternal adjustment and social support, healthcare assessment, and evidence-based interventions for improving postpartum well-being.

Physiological Changes and Sleep Patterns During the Early Postpartum Period

The postpartum period involves considerable physiological changes that may influence maternal sleep duration, continuity, and perceived quality. Following childbirth, women experience hormonal adjustments, physical recovery, changing circadian routines, and increased caregiving responsibilities. These factors interact with newborn sleep patterns and may produce frequent nighttime awakenings and irregular periods of rest. For first-time mothers, unfamiliarity with infant sleep behavior may further complicate the transition from established sleep routines to the demands of early motherhood (Wolfson et al., 2003). Changes in sleep architecture and sleep timing are particularly noticeable during the first several weeks after delivery. Mothers may obtain sleep through multiple shorter episodes rather than one consolidated nighttime period. Infant feeding and caregiving frequently interrupt sleep, while maternal attempts to rest during the daytime may be limited by household responsibilities or difficulty falling asleep on demand. A longitudinal study following 38 first-time mothers from late pregnancy to approximately one year postpartum identified substantial changes in sleep schedules and nighttime interruptions during the first two to four weeks following childbirth. Depressive symptoms were also greater during this early period than at later assessments (Wolfson et al., 2003). Sleep fragmentation is an important dimension of postpartum sleep because repeated awakenings may reduce the restorative value of sleep even when total sleep duration remains relatively stable. Mothers who wake frequently may experience difficulty returning to sleep or may feel inadequately rested despite spending sufficient time in bed. Research involving healthy primiparous women has demonstrated that sleep disruption and subjective sleep quality may be associated with depressive symptoms. These findings suggest that evaluating total sleep duration alone may overlook important difficulties involving sleep maintenance and perceived restoration (Park et al., 2013). Objective and subjective assessments do not always provide identical conclusions about postpartum sleep. Actigraphy can estimate sleep duration, timing, and nighttime awakenings, whereas questionnaires capture mothers' perceptions of sleep quality, insomnia, and daytime impairment. In a study involving 217 first-time mothers, self-reported sleep disturbance at six weeks postpartum was associated with more than three times the odds of elevated depressive symptoms at

six or twelve weeks. However, objective actigraphy measures did not demonstrate similarly significant associations. This distinction emphasizes the clinical importance of asking mothers how they experience their sleep rather than relying exclusively on recorded sleep duration (Stremler et al., 2020). The progression of postpartum sleep patterns varies considerably between individuals. A longitudinal investigation involving 37 healthy, partnered, first-time mothers found that participants slept approximately six hours per night at two months postpartum, with additional shorter daytime sleep periods. Nighttime sleep duration increased and awakenings decreased by six months. Despite these changes, most participants reported relatively low levels of significant insomnia, anxiety, and depression. These findings demonstrate that sleep disruption does not necessarily produce severe psychological distress in every mother and that individual resilience may influence postpartum adjustment (Creti et al., 2017).

Fatigue and daytime sleepiness should be distinguished from sleep duration because these experiences may reflect different physiological and psychological processes. Fatigue involves a persistent feeling of reduced energy or exhaustion, while sleepiness refers more directly to the tendency to fall asleep. A mother may report considerable fatigue despite obtaining a reasonable amount of sleep if physical recovery, emotional strain, and caregiving demands remain high. Research examining primiparous women during early postpartum recovery has identified associations between sleep deprivation, fatigue, and depressive symptoms, reinforcing the value of evaluating multiple dimensions of maternal functioning (Kawashima et al., 2022). Sleep patterns may also be influenced by the mode of delivery, postpartum discomfort, breastfeeding experiences, and the availability of assistance with infant care. Women recovering from operative delivery may encounter pain or restricted mobility, while those managing breastfeeding difficulties may remain awake for prolonged periods. The effects of these factors vary according to maternal health, infant needs, and family circumstances. Individualized postpartum assessment should therefore consider both sleep characteristics and the broader context of physical recovery and daily functioning (Dørheim et al., 2009). The assessment of postpartum sleep should recognize that some sleep interruption is expected during early infant care, but persistent insomnia, severe exhaustion, and substantial daytime impairment warrant further evaluation. Healthcare professionals should assess sleep quality, nighttime awakenings, opportunities for rest, and associated emotional symptoms while avoiding the assumption that all postpartum sleep difficulties are harmless or inevitable (Park et al., 2013).

Infant Feeding Practices, Nighttime Caregiving, and Maternal Sleep Disruption

Infant feeding and nighttime caregiving are major influences on maternal sleep during the postpartum period. Newborn infants generally require frequent feeding and comfort because of their developmental and nutritional needs. These responsibilities may interrupt maternal sleep repeatedly and contribute to irregular sleep schedules. First-time mothers may experience additional difficulties because they are learning to recognize infant feeding cues, establish suitable caregiving routines, and adapt to unexpected changes in infant behavior. The relationship between infant care and maternal sleep is therefore shaped by both practical demands and maternal perceptions of caregiving responsibilities (Newman et al., 2023). Breastfeeding is frequently associated with nighttime awakenings because infants may require feeding at intervals that do not correspond with adult sleep patterns. However, breastfeeding does not necessarily result in poorer maternal sleep compared with other feeding approaches. The relationship depends on feeding frequency, duration, infant characteristics, maternal comfort, and the distribution of caregiving responsibilities. Research examining infant feeding methods, sleeping arrangements, and postpartum depression identified complex relationships among these factors, indicating that maternal sleep quality cannot be explained by feeding method alone (Newman et al., 2023). A study involving 34 Japanese first-time mothers who intended to establish breastfeeding examined sleep deprivation, fatigue, and postpartum depressive symptoms. The findings demonstrated that sleep and fatigue should be considered together when evaluating maternal psychological health. However, the study's small sample size limited the generalizability of its conclusions. The investigation nevertheless highlighted the importance of recognizing the additional rest and recovery challenges that may accompany the establishment of

breastfeeding during the early postpartum period (Kawashima et al., 2022). The timing and continuity of infant sleep may influence maternal opportunities for rest. Some infants experience relatively frequent nighttime awakenings, while others gradually develop longer sleep periods. Maternal sleep can become more consolidated as infant sleep patterns mature, although the rate of improvement varies between families. Research involving healthy first-time mothers found that maternal and infant nighttime awakenings were related, particularly during the earlier postpartum months. Nevertheless, the same investigation did not identify significant relationships between infant sleep characteristics and maternal depression or anxiety within its low-risk sample, emphasizing that psychological adjustment involves more than infant sleep behavior alone (Creti et al., 2017). Maternal expectations regarding infant sleep may also influence emotional responses to nighttime caregiving. First-time mothers may anticipate that infants will establish predictable sleep routines quickly and experience distress when these expectations are not met. Unrealistic comparisons with other families can contribute to frustration, uncertainty, and perceived inadequacy. Healthcare professionals should provide developmentally appropriate guidance concerning normal infant sleep variation and encourage realistic expectations. Such education may help mothers interpret common nighttime waking patterns without excessive anxiety (Stremler et al., 2013). The distribution of nighttime caregiving responsibilities is another important consideration. Mothers who remain solely responsible for feeding, soothing, and other infant care may have fewer opportunities to obtain uninterrupted rest. When partners or other trusted adults provide appropriate assistance, mothers may be able to establish more predictable periods for sleep and recovery. However, caregiving arrangements should consider infant feeding needs, family preferences, and safe sleep guidance. Individualized planning is more appropriate than assuming that one feeding or sleeping arrangement will benefit every family (Kempler et al., 2020). An important distinction exists between infant-related sleep interruption and maternal insomnia. A mother whose sleep is interrupted because an infant requires feeding may return to sleep easily once caregiving is completed. Another mother may experience persistent difficulty falling asleep even when an opportunity for rest is available. The latter pattern may indicate insomnia symptoms requiring additional assessment. Healthcare professionals should identify whether sleep difficulties arise primarily from caregiving schedules, physiological discomfort, anxiety, or independent sleep problems (Matsueda, 2026). Recent research involving first-time mothers has examined the relationship between sleep-support programs and breastfeeding-related nighttime awakenings. A nonrandomized controlled trial evaluated educational guidance and follow-up support designed to improve maternal sleep during the first two months postpartum. The intervention did not produce a significant overall difference in the primary sleep-quality outcome, although selected sleep timing and infant awakening measures changed. These results suggest that interventions targeting caregiving routines may influence certain sleep behaviors without necessarily improving global subjective sleep quality (Matsueda, 2026). Infant feeding and nighttime caregiving should therefore be considered within a family-centered framework that recognizes maternal well-being, infant safety, feeding preferences, and the availability of practical support. Healthcare professionals can assist first-time mothers by providing realistic sleep education, addressing feeding concerns, and identifying persistent sleep problems that require more focused intervention (Newman et al., 2023).

Relationship Between Postpartum Sleep Quality, Depression, Anxiety, and Emotional Regulation

The relationship between postpartum sleep quality and emotional well-being has received considerable research attention because sleep disturbances frequently occur during a period of increased vulnerability to psychological distress. First-time mothers may experience changes in mood, emotional sensitivity, anxiety, and perceived stress while adjusting to infant care and maternal responsibilities. Although some emotional fluctuations are common following childbirth, persistent depressive symptoms, excessive anxiety, or significant functional impairment may indicate the need for professional assessment. Sleep quality is one factor associated with these outcomes, but it should not be regarded as their sole cause (Dørheim et al., 2009). A population-based study involving 2,830 postpartum women in Norway examined maternal sleep and depressive symptoms approximately

seven weeks after delivery. The investigators reported that 57.7% of participants met the study's threshold for sleep problems, while 16.5% met its screening threshold for depressive symptoms. Poor sleep quality remained associated with depression after adjustment for several factors, including previous depression, depressive symptoms during pregnancy, stressful life events, and relationship difficulties. The study also identified first-time motherhood as a factor associated with poorer postpartum sleep quality. These findings support the importance of evaluating sleep alongside broader psychological and social risk factors (Dørheim et al., 2009). PubMed Prospective evidence further suggests that subjective sleep difficulties may be associated with depressive symptoms during the postpartum period. A longitudinal study involving 25 healthy primiparous women examined sleep using actigraphy and self-report measures during late pregnancy and several postpartum assessments. Poor sleep maintenance and subjective sleep quality were associated with greater depressive symptom severity. However, the small sample and observational design limited conclusions regarding the direction of the relationship. These findings nevertheless indicate that sleep quality may provide clinically useful information when assessing postpartum emotional health (Park et al., 2013). Self-reported sleep concerns may be particularly important because perceived sleep problems capture psychological experiences that objective measurements do not fully represent. In research involving 217 first-time mothers, participants who described sleep as a substantial problem at six weeks postpartum had markedly higher odds of elevated depressive symptoms at subsequent assessments. By contrast, actigraphic sleep measurements were not significantly associated with depressive symptoms in the same analysis. These findings demonstrate that the emotional meaning and perceived burden of disturbed sleep may be important components of maternal psychological adjustment (Stremler et al., 2020). Postpartum sleep disturbances and depressive symptoms may also influence one another over time. Poor sleep can increase emotional vulnerability, while depression and anxiety may contribute to insomnia, early awakening, rumination, and reduced sleep satisfaction. Consequently, a single cross-sectional assessment cannot reliably determine whether sleep difficulties preceded emotional symptoms or developed partly as a consequence of psychological distress. Research should consider these potentially bidirectional relationships and evaluate maternal sleep and mood repeatedly across postpartum recovery (Park et al., 2013). Fatigue is another factor linking postpartum sleep and emotional well-being. Persistent exhaustion may reduce concentration, motivation, emotional tolerance, and confidence in managing infant care. First-time mothers experiencing fatigue may find routine responsibilities increasingly difficult, particularly when household demands are substantial or social support is limited. A study involving 153 primiparous women found significant relationships among insomnia, fatigue, depressive symptoms, and perceived maternal role functioning. Depressive symptoms were particularly strongly associated with difficulties in the maternal role, suggesting that psychological assessment should accompany the evaluation of sleep-related complaints (Ozdemir & Ozcan, 2023). Anxiety may further complicate postpartum sleep. Mothers may worry about infant feeding, breathing, health, or their ability to provide appropriate care. Such concerns can contribute to difficulty relaxing and sleeping even when infants are resting. Conversely, chronic sleep disruption may reduce emotional resilience and make ordinary caregiving challenges feel more overwhelming. Healthcare professionals should therefore distinguish understandable concerns associated with new parenthood from persistent or excessive anxiety that interferes with daily functioning (Newman et al., 2023). Importantly, not all first-time mothers who experience disrupted sleep develop depression or anxiety. Research involving healthy, partnered first-time mothers found substantial resilience despite repeated nighttime awakenings. Most participants reported relatively low levels of clinically significant emotional symptoms. This demonstrates that the association between sleep and psychological health is influenced by individual characteristics, family support, previous mental health, and environmental conditions. It would therefore be inappropriate to classify normal postpartum sleep interruption as evidence of a psychiatric disorder (Creti et al., 2017). The evidence supports integrating sleep-quality questions into postpartum emotional health assessment. Persistent insomnia, severe fatigue, low mood, loss of interest, excessive worry, and impaired functioning should prompt appropriate clinical evaluation. Screening instruments can help

identify individuals who may require additional assessment, but positive results should not be interpreted as definitive diagnoses without professional review (Dørheim et al., 2009).

Major Factors Influencing Postpartum Sleep Quality and Emotional Well-Being Among First-Time Mothers

Associated factor	Potential effect on sleep quality	Potential emotional consequence	Recommended supportive approach
Frequent infant night waking	Interrupted and fragmented sleep	Fatigue and emotional strain	Realistic infant sleep education
Nighttime feeding responsibilities	Reduced periods of uninterrupted rest	Increased stress when support is limited	Individualized feeding and rest planning
Postpartum physical discomfort	Difficulty initiating or maintaining sleep	Irritability and reduced well-being	Assessment and management of postpartum discomfort
Limited partner or family assistance	Fewer opportunities for restorative sleep	Increased caregiving burden	Practical family-centered support
Persistent insomnia symptoms	Poor sleep despite opportunities to rest	Increased vulnerability to emotional distress	Clinical sleep assessment and appropriate treatment
Depressive symptoms	Changes in sleep duration and quality	Reduced motivation and emotional well-being	Postpartum mental health screening
Anxiety and excessive worry	Difficulty relaxing or returning to sleep	Emotional distress and exhaustion	Supportive counseling and clinical evaluation
Inadequate sleep education	Unrealistic expectations about sleep	Frustration and uncertainty	Evidence-based postpartum sleep guidance
Maternal fatigue	Reduced energy and daytime functioning	Difficulties with daily responsibilities	Rest planning and evaluation of contributing conditions

Maternal Role Adjustment, Family Support, and Psychosocial Factors Affecting Postpartum Well-Being

The transition to first-time motherhood involves substantial psychological, social, and practical adjustments that can influence maternal sleep and emotional well-being. New mothers must develop confidence in infant care, establish daily routines, respond to changing family expectations, and recover from childbirth. These responsibilities may become particularly demanding when sleep is fragmented or opportunities for rest are limited. The relationship between sleep and maternal adjustment should therefore be considered within the broader family and social environment rather than as an isolated physiological problem (Ozdemir & Ozcan, 2023). Maternal role adjustment involves developing confidence in feeding, comforting, recognizing infant needs, and managing daily childcare activities. First-time mothers may experience uncertainty when interpreting infant behavior or responding to unfamiliar caregiving challenges. When these responsibilities coincide with insomnia or persistent fatigue, women may perceive routine activities as increasingly difficult. Research examining primiparous women found that insomnia, fatigue, and depressive symptoms were associated with maternal role functioning, with depressive symptoms demonstrating a particularly strong relationship. These findings highlight the importance of integrating emotional assessment with practical support for infant care (Ozdemir & Ozcan, 2023). Partner support may influence maternal well-being by reducing the practical responsibilities associated with newborn care. Assistance with household activities, infant soothing, meal preparation, and appropriate nighttime caregiving can create opportunities for maternal rest. Emotional support may also help women discuss difficulties and maintain confidence during the transition to parenthood. However, the relationship between

support and sleep is influenced by family circumstances, infant feeding arrangements, and individual preferences. Supportive interventions should therefore be developed collaboratively rather than assuming that all families have identical resources (Stremler et al., 2013). Family relationships may also influence psychological adjustment. Mothers experiencing interpersonal conflict, limited emotional reassurance, or pressure to meet unrealistic expectations may encounter additional stress. A population-based investigation of postpartum sleep and depression identified relationship difficulties and stressful life events among important factors associated with depressive symptoms. These findings suggest that healthcare professionals should consider family relationships and social circumstances when evaluating persistent sleep complaints or emotional distress (Dørheim et al., 2009). Social expectations concerning motherhood may create additional psychological pressure. First-time mothers sometimes encounter conflicting advice about infant feeding, sleep routines, and appropriate childcare practices. Social comparisons may contribute to feelings of inadequacy when personal experiences differ from idealized expectations. Persistent sleep disturbance may further reduce emotional resilience during these situations. Healthcare professionals can support maternal adjustment by providing consistent, evidence-based information and emphasizing that infant behavior and recovery experiences vary considerably between families (Kempler et al., 2020). Maternal emotional well-being may also influence the quality of daily interactions with infants. Persistent exhaustion, depression, or anxiety can affect concentration and emotional availability, although these relationships are complex and should not be interpreted as inevitable consequences of poor sleep. Individual resilience, social support, previous mental health, and infant characteristics may influence maternal experiences. Research involving a selected group of healthy first-time mothers demonstrated that substantial sleep interruption could coexist with relatively low emotional distress, suggesting that protective circumstances may help women adapt successfully (Creti et al., 2017). Employment circumstances and financial responsibilities represent additional influences on maternal rest. Some women return to employment relatively soon after childbirth, while others manage household work and childcare without substantial outside assistance. These demands may restrict opportunities for daytime rest and increase concerns about fatigue or performance. Although the extent of these challenges differs across healthcare systems and social environments, assessment of postpartum well-being should consider the mother's available recovery time and practical resources (Khan-Afridi et al., 2025). Healthcare professionals should encourage discussion of maternal responsibilities without assuming that emotional distress reflects inadequate caregiving ability. Supportive assessment can identify whether women have sufficient assistance, opportunities for rest, and access to reliable information. Family-centered interventions may include practical planning for household tasks, appropriate sharing of infant care, and referral for psychological support when indicated. The aim should be to strengthen maternal well-being and confidence while respecting family preferences and circumstances (Ozdemir & Ozcan, 2023).

Healthcare Assessment, Screening Practices, and Challenges in Recognizing Postpartum Sleep Problems

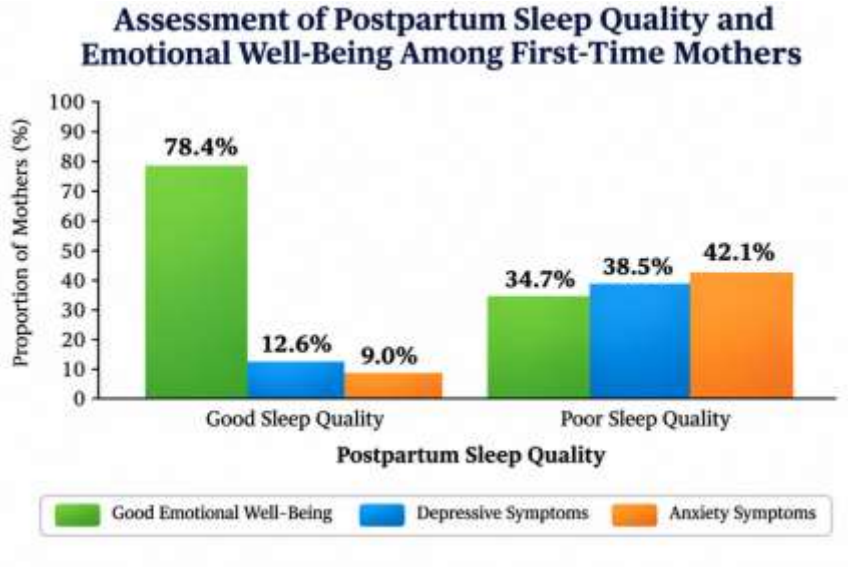
Postpartum healthcare assessment should incorporate sleep quality because sleep disturbances may affect physical recovery, emotional well-being, and daily functioning. Traditional postnatal consultations frequently prioritize physical healing, infant feeding, contraception, and neonatal health. Although these assessments remain essential, maternal sleep concerns may receive insufficient attention unless women raise them independently. Structured questions concerning sleep duration, nighttime waking, difficulty returning to sleep, fatigue, and daytime impairment can help healthcare professionals identify women who may benefit from further evaluation (Dørheim et al., 2009). The Pittsburgh Sleep Quality Index is a commonly used instrument for evaluating subjective sleep quality. It examines several dimensions of sleep, including duration, latency, efficiency, disturbances, and perceived quality. Studies involving postpartum women have used this instrument to assess sleep problems and investigate their relationships with depression and other maternal outcomes. However, questionnaire scores should be interpreted within the postpartum context because infant-related interruptions may affect sleep measures differently from insomnia occurring outside the postpartum

period (Dørheim et al., 2009). Objective sleep assessment provides complementary information. Wrist actigraphy estimates sleep and wake patterns over several days and can help researchers examine nighttime awakenings, sleep duration, and variability. However, actigraphy may not fully capture mothers' perceptions of inadequate rest or emotional distress. A study involving first-time mothers found stronger associations between subjective sleep disturbance and depressive symptoms than between objective sleep measures and depression. These findings support combining self-reported information with objective assessment when clinically or scientifically appropriate (Stremler et al., 2020). Emotional well-being screening should accompany sleep assessment because depression and anxiety can influence sleep and may also be worsened by persistent sleep disruption. The Edinburgh Postnatal Depression Scale is widely used to identify elevated depressive symptoms during the postpartum period. However, screening instruments are not diagnostic tests, and positive results require appropriate professional assessment. Healthcare workers should evaluate symptom severity, duration, functional impairment, relevant mental health history, and potential safety concerns rather than interpreting sleep complaints independently of the mother's emotional condition (Park et al., 2013). Fatigue assessment is another important component of postnatal care. Women may report exhaustion even when objective sleep duration appears relatively adequate. Physical recovery, anemia, pain, psychological stress, and other medical conditions may contribute to persistent tiredness. Healthcare professionals should therefore avoid assuming that every episode of postpartum fatigue results exclusively from newborn care. A study involving primiparous mothers demonstrated associations among fatigue, sleep deprivation, and depressive symptoms, emphasizing the importance of a multidimensional evaluation (Kawashima et al., 2022). Barriers to effective recognition include limited consultation time, inadequate postpartum follow-up, reluctance to discuss emotional difficulties, and the belief that persistent exhaustion is an unavoidable consequence of motherhood. Some women may minimize their symptoms because they fear being judged or assume that sleep problems do not warrant medical attention. Healthcare professionals should normalize discussion of postpartum challenges while clearly distinguishing common sleep interruption from persistent symptoms requiring evaluation (Kempler et al., 2020). Cultural beliefs and family expectations can also influence how postpartum sleep difficulties are reported. Women may experience pressure to maintain household responsibilities or prioritize infant care without acknowledging their own need for rest. Family structures and available caregiving support vary considerably across communities. Assessment should therefore be respectful, culturally responsive, and sensitive to differences in household arrangements. Such an approach may encourage women to discuss sleep and emotional concerns more openly (Nguyen et al., 2025). Continuity of postnatal care is important because sleep and psychological symptoms can change throughout the first year after childbirth. A mother who reports relatively good adjustment during the first few weeks may develop persistent sleep difficulties later, while another may improve as infant routines become more predictable. Repeated assessment allows professionals to identify changing needs and evaluate responses to supportive interventions. Longitudinal research following first-time mothers has demonstrated significant changes in sleep schedules and depressive symptoms across postpartum stages (Wolfson et al., 2003). Clinical evaluation should also distinguish routine sleep disruption from severe or persistent insomnia, significant depression, or other mental health conditions. Women experiencing substantial functional impairment, persistent low mood, or excessive anxiety may require specialized assessment. Acute symptoms involving psychosis, confusion, or thoughts of harming oneself or the infant require urgent clinical attention. Appropriate care pathways should be available so that screening leads to timely professional support rather than identification without follow-up. Effective postpartum assessment should therefore combine sleep-quality questions, emotional well-being screening, fatigue evaluation, and discussion of practical support. Healthcare organizations can strengthen these practices through standardized postnatal assessment protocols, professional education, and coordinated referrals. The primary objective should be to identify women experiencing clinically significant difficulties and provide appropriate support while recognizing the wide range of normal postpartum experiences (Dørheim et al., 2009).

Evidence-Based Interventions and Future Strategies for Improving Postpartum Sleep and Emotional Health

Improving postpartum sleep and emotional well-being requires interventions that address both the practical demands of infant care and the psychological factors influencing maternal rest. Potential strategies include sleep education, family support, appropriate infant-care guidance, cognitive behavioral approaches, relaxation techniques, and timely mental health assessment. However, intervention effectiveness varies substantially, and no single approach has been demonstrated to improve every sleep and emotional outcome among all first-time mothers (Nguyen et al., 2025). Behavioral and educational sleep interventions have been investigated as methods of improving maternal sleep after childbirth. An early pilot randomized trial involving first-time mothers found that participants receiving a behavioral-educational intervention obtained approximately 57 additional minutes of nighttime sleep compared with controls. The intervention incorporated information about maternal and infant sleep and practical strategies for supporting rest. Although the findings were encouraging, the pilot sample was relatively small, and subsequent investigations were necessary to determine whether benefits could be reproduced in larger populations (Stremler et al., 2006). A larger multisite randomized controlled trial examined a behavioral-educational intervention among 246 first-time mothers and their infants. Participants received structured sleep guidance, written educational materials, and follow-up telephone support. The trial did not demonstrate significant improvements in maternal or infant sleep outcomes compared with usual care. These findings indicate that educational interventions may be feasible and acceptable without necessarily producing measurable improvements in sleep duration or quality. Intervention design, baseline sleep difficulties, and family circumstances may influence effectiveness (Stremler et al., 2013). Prenatal sleep education provides another opportunity to prepare first-time mothers for the realities of newborn caregiving. Educational sessions can address expected changes in infant sleep, maternal recovery needs, and practical planning for rest. A randomized controlled trial involving 215 expectant first-time mothers evaluated a brief sleep-focused psychoeducation program. The study found improvements in sleep quality and insomnia symptoms at four months postpartum, but not consistently at other follow-up periods or across all outcomes. These results suggest that the effects of prenatal education may depend on the timing of assessment and the specific sleep difficulties being targeted (Kempler et al., 2020). A recent nonrandomized controlled trial conducted in Japan evaluated a sleep-support program for primiparous women during the first two months postpartum. The intervention included educational sessions, childcare diaries, and follow-up interviews. Although the primary overall sleep-quality outcome did not differ significantly between groups, selected measures of sleep timing and infant waking improved. These findings suggest that targeted support may influence specific sleep behaviors without necessarily producing broad improvements in subjective sleep quality. Future interventions should therefore identify precisely which outcomes they are intended to improve (Matsueda, 2026). Nonpharmacological approaches have received increasing attention because they may support maternal sleep without relying on medication. A systematic review and network meta-analysis involving 19 randomized controlled trials and 1,826 participants evaluated interventions including relaxation techniques, massage, reflexology, cognitive behavioral therapy for insomnia, and light-based approaches. Several interventions were associated with improvements in sleep quality, although the strength of evidence and direct comparability varied. The findings support further investigation of individualized nonpharmacological care while emphasizing that treatment selection should consider clinical appropriateness, feasibility, and patient preferences (Nguyen et al., 2025). The relationship between sleep interventions and emotional well-being has also been examined through broader evidence synthesis. A systematic review and meta-analysis incorporating 60 studies with 20,684 participants found that postpartum sleep interventions were associated with a small reduction in depressive symptom severity. However, the analysis did not demonstrate clear reductions in the likelihood of developing depression or in anxiety outcomes. These results suggest that improving sleep may support emotional health, but sleep-focused interventions should not be treated as substitutes for appropriate assessment and treatment of postpartum mental health disorders

(Khan-Afridi et al., 2025). Family-centered support should be considered an important complement to individual sleep interventions. When appropriate, partners and caregivers may assist with infant care, household responsibilities, and the establishment of suitable rest periods. The objective should be to create realistic opportunities for maternal recovery without compromising infant feeding or safe sleep practices. Family involvement may also provide emotional reassurance and reduce the perception that the mother must manage every caregiving responsibility independently (Stremler et al., 2013). Postpartum care should also address the distinction between sleep disruption caused by infant care and persistent insomnia symptoms. Women who cannot sleep even when adequate opportunities for rest are available may benefit from a more focused clinical assessment. Cognitive behavioral therapy for insomnia can be considered when clinically appropriate, particularly for persistent insomnia that affects daytime functioning. Treatment should be individualized and integrated with assessment of mood, anxiety, medical conditions, and infant-care arrangements (Nguyen et al., 2025). Future research should prioritize longitudinal studies examining how sleep quality and emotional well-being change from pregnancy through the first postpartum year. Repeated assessment could help determine whether sleep difficulties precede depressive symptoms, develop alongside them, or arise as a consequence of existing psychological distress. Studies should also compare subjective sleep experiences with objective measurements to understand why maternal perceptions sometimes predict emotional outcomes more strongly than recorded sleep characteristics (Park et al., 2013). Greater attention should be directed toward differences among first-time mothers. Maternal age, delivery experience, infant health, feeding circumstances, socioeconomic conditions, and family support may influence responses to sleep disruption. Research should examine whether interventions benefit particular subgroups more than others and whether treatment effectiveness changes across postpartum stages. Evidence from studies involving healthy partnered mothers may not generalize to women experiencing significant medical, social, or psychological difficulties (Creti et al., 2017). Digital health technologies may offer opportunities for providing individualized postpartum sleep guidance and monitoring. Smartphone applications, electronic sleep diaries, and remote postnatal consultations could help mothers record sleep patterns, identify concerns, and communicate with healthcare professionals. However, digital systems should be evaluated for accuracy, usability, privacy, and clinical benefit. Excessive monitoring or rigid sleep targets may increase anxiety, particularly when recommendations do not account for normal infant sleep variability. Technology should therefore support flexible maternal care rather than promote unrealistic expectations (Newman et al., 2023). Future programs should also integrate maternal sleep into routine postpartum mental health services. Sleep assessment may provide valuable information when identifying women experiencing emotional distress, while psychological screening can help distinguish sleep problems associated with depression or anxiety. Coordinated care involving obstetricians, midwives, nurses, mental health professionals, and primary care providers may facilitate timely intervention. Referral pathways should ensure that women with persistent or severe symptoms receive appropriate evaluation rather than relying solely on general sleep advice (Dørheim et al., 2009). Public health initiatives should emphasize that postpartum sleep needs are legitimate components of maternal healthcare. Educational campaigns can promote realistic expectations, encourage appropriate family assistance, and improve awareness of symptoms requiring professional attention. Healthcare organizations should also consider the accessibility of postpartum services for women facing financial, geographical, or social barriers. Effective support must account for the circumstances in which mothers live rather than assuming that all women can obtain the same opportunities for rest (Khan-Afridi et al., 2025). Ultimately, postpartum sleep interventions should be evaluated through meaningful outcomes, including sleep quality, maternal functioning, depressive symptoms, anxiety, fatigue, and patient satisfaction. Research should distinguish improvements in particular sleep behaviors from broader changes in psychological well-being. A coordinated and evidence-based approach may strengthen postpartum recovery while recognizing that sleep and emotional health are influenced by multiple interacting factors (Nguyen et al., 2025).



Summary:
Postpartum sleep quality is an important component of maternal health and emotional well-being, particularly among first-time mothers adjusting to new caregiving responsibilities. Changes in sleep duration, nighttime awakenings, infant feeding schedules, and opportunities for rest can influence physical recovery, fatigue, daily functioning, and psychological adjustment. Research indicates that poor subjective sleep quality is frequently associated with increased postpartum depressive symptoms and anxiety. However, these relationships are complex and potentially bidirectional, and not every mother experiencing disrupted sleep develops significant psychological difficulties. Individual resilience, previous mental health, social support, and family circumstances may influence postpartum adjustment. Evidence concerning sleep-focused interventions is mixed. Some behavioral, educational, and nonpharmacological approaches have improved selected sleep outcomes, while other trials have found limited or inconsistent benefits. Broader evidence suggests that sleep interventions may produce modest reductions in depressive symptom severity, but they should not replace comprehensive postpartum mental health care. Healthcare professionals should incorporate sleep-quality assessment into routine postnatal consultations, recognize persistent insomnia and emotional distress, and provide individualized support. Practical family assistance, realistic infant-care guidance, and coordinated psychological services can help strengthen maternal well-being. Future research should examine long-term sleep trajectories, effective interventions for different maternal populations, and the relationship between sleep improvement and clinically meaningful psychological outcomes. Integrating sleep health with comprehensive postpartum care may improve maternal quality of life and support healthier adjustment to first-time motherhood.

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Correction to the two entries in Outline 5: The complete bibliographic information is:

Witkowska-Zimny, M., Zhyvotovska, A., Isakov, R., Boiko, D. I., & Nieradko-Iwanicka, B. (2024). Maternal sleeping problems before and after childbirth—A systematic review. International Journal of Women's Health, 16, 345–371. https://doi.org/10.2147/IJWH.S446490

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