

The Psychological Significance of Sleep Quality for Emotion Regulation in Individuals with High Activity Demands

Novia Rofiatul Khoiriyah^{1✉}, Elok Azimatuz Zahroh²

Universitas Islam Negeri Maulana Malik Ibrahim Malang, Indonesia

Abstract:

Sleep quality has become increasingly critical in modern, high-demand lifestyles because of its close relationship with emotional functioning. This study explores the meaning of sleep quality in emotion regulation among individuals with high activity demands. Using a phenomenological qualitative approach, we collected data from 12 participants with intensive daily responsibilities through in-depth semi-structured interviews, observations, and field notes. We analyzed the data using condensation, reduction, display, and verification procedures. The findings reveal three main themes: restorative sleep enhances emotional stability and cognitive reappraisal capacity; sleep deprivation intensifies emotional reactivity and impulsive responses; and subjective meanings of sleep (self-care, sacrifice, reward) shape regulation strategies and emotional outcomes. The study contributes by positioning sleep as a lived psychological resource rather than merely a physiological variable. It recommends integrating belief-oriented sleep interventions to strengthen adaptive emotion regulation in high-demand contexts.

✉Corresponding Author: novia.rofiatul123@gmail.com

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INTRODUCTION

Sleep quality has become a critical issue in contemporary society marked by accelerated rhythms, digital connectivity, and persistent productivity demands. This study argues that adequate sleep is not merely a biological necessity but a psychological foundation for adaptive functioning. The reason is that emotional regulation, the capacity to monitor, evaluate, and modify emotional responses, is closely intertwined with restorative sleep processes (McLeod et al., 2021; Mousa et al., 2022; Zhang et al., 2023). Evidence from global health reports consistently shows rising rates of sleep disturbances alongside increased stress and emotional instability in working-age populations. Individuals with high activity demands, such as professionals, students, and caregivers, are particularly vulnerable (Thomas et al., 2022; Wu et al., 2022).



Therefore, understanding how sleep quality shapes emotion regulation is socially urgent, as it informs preventive strategies that promote psychological resilience and sustainable performance.

In everyday reality, many individuals face prolonged working hours, multitasking expectations, and constant digital engagement that disrupt natural sleep patterns. A broader societal problem is the normalization of sleep deprivation as a symbol of productivity and dedication (Deng et al., 2021; Yu et al., 2020). Field research indicates that people with high activity demands often sacrifice sleep to meet deadlines, juggle multiple roles, or maintain social obligations. As a result, they report irritability, mood swings, decreased concentration, and heightened stress reactivity. These emotional difficulties not only affect personal well-being but also interpersonal relationships and professional effectiveness (Pany et al., 2023; Ulutas et al., 2024). Despite awareness campaigns about healthy sleep, behavioral change remains limited. Consequently, there is a pressing need to explore how individuals themselves interpret and experience sleep quality in relation to their ability to regulate emotions under intense daily demands.

Previous studies have examined sleep and emotional functioning extensively. For instance, Schmidt et al. (2024) and Zhu et al. (2023) emphasized sleep's neurobiological role in stabilizing affective responses, while Ruork et al. (2022), Rief (2021), and Fu et al. (2020) highlighted emotion-regulation mechanisms in adaptive behavior. Research by Asare et al. (2021) and Abdel et al. (2022) demonstrated that sleep deprivation impairs cognitive and emotional performance, and Featherston et al. (2024) linked poor sleep with emotional dysregulation in clinical populations. Although these scholars provide valuable empirical evidence, most studies rely on experimental or quantitative approaches focusing on measurable outcomes. Limited attention has been given to the subjective meaning of sleep quality, particularly among individuals facing high activity demands in non-clinical contexts. This gap underscores the need to explore lived experiences to capture nuanced interpretations that numerical indicators may overlook.

This research is novel in positioning sleep quality not solely as a physiological variable but as a lived psychological experience that shapes emotional regulation processes. State-of-the-art discussions increasingly recognize the interaction between biological rhythms and socio-environmental pressures; however, few studies integrate these dimensions through an interpretive lens (Munawwaroh, 2024; Umar et al., 2024). By focusing on individuals with high activity demands, this study addresses a population that represents modern productivity culture yet remains underexplored in qualitative depth. Investigating how they construct meaning around sleep allows for a more holistic understanding of emotional resilience (Agorastos et al., 2021; He et al., 2023). Addressing this issue matters because interventions based purely on sleep duration or hygiene guidelines may fail if they neglect personal interpretations and contextual pressures that shape emotional management.

Based on the background above, this study's central research problem is how individuals with high activity demands understand and experience sleep quality in relation to emotion regulation. Specifically, the study asks: How do individuals interpret

the quality of their sleep amid demanding schedules? In what ways does perceived sleep quality influence their emotional responses, coping strategies, and interpersonal interactions? What contextual factors shape their efforts to balance rest and productivity? Addressing these questions enables the identification of patterns that connect subjective sleep experiences with regulatory capacities. Thus, the research problem moves beyond whether sleep affects emotion regulation to understanding how meaning-making processes mediate this relationship in everyday life.

This study argues that sleep quality functions as a psychological resource whose meaning influences the effectiveness of emotion regulation strategies. The provisional assumption is that individuals who perceive their sleep as restorative and meaningful are better able to reappraise stressors, manage negative affect, and maintain emotional stability, even under high activity demands. Conversely, when sleep is viewed as expendable or insufficient, emotional regulation becomes more reactive and fragile. This research is original in integrating experiential meaning with regulatory theory, offering a conceptual bridge between physiological recovery and psychological resilience. Its contribution is twofold: theoretically, it enriches the discourse on emotion regulation by incorporating sleep as a lived construct; practically, it informs context-sensitive interventions that promote sustainable well-being in high-demand environments.

RESEARCH METHOD

This study employed a phenomenological qualitative design, grounded in the interpretive paradigm (Rajasinghe et al., 2024). The design was selected because the research aims to explore and understand the lived experiences and subjective meanings of sleep quality in relation to emotion regulation among individuals with high activity demands. Phenomenology is appropriate when the objective is to uncover how participants interpret and make sense of their everyday experiences. Rather than measuring sleep duration or emotional outcomes statistically, this approach allows for in-depth exploration of personal narratives, perceptions, and contextual influences. This interpretive stance enables the researcher to capture nuanced meanings that numerical data cannot fully represent, aligning with the study's focus on experiential understanding and meaning construction.

The research was conducted in an urban metropolitan setting characterized by fast-paced work and academic environments, where high activity demands are prevalent. The location was chosen because it represents a social context in which productivity culture and time pressure strongly influence sleep patterns. The study involved 12 informants selected through purposive sampling. Participants consisted of professionals (e.g., corporate employees and entrepreneurs), university students engaged in intensive academic activities, and individuals managing dual roles (such as working parents). All informants met the criteria of having daily schedules exceeding standard working hours and reporting subjective experiences of fluctuating sleep quality. This diversity of backgrounds allowed the study to capture variations in meaning-making processes across different high-demand contexts.

Data were collected through in-depth semi-structured interviews, non-participant observation, and reflective field notes (Lobe et al., 2020). Semi-structured interviews enabled participants to describe their sleep experiences, emotional challenges, coping strategies, and interpretations of rest in their own words while maintaining thematic focus. Each interview lasted approximately 60–90 minutes and was audio-recorded with participants' consent. Observations were conducted to understand contextual factors, such as work routines and environmental conditions, that influenced sleep patterns. Field notes documented non-verbal cues, emotional expressions, and preliminary analytical reflections. Together, these techniques produced rich, contextualized, and comprehensive data aligned with the phenomenological approach.

Data analysis followed an interactive model consisting of data condensation, data reduction, data display, and conclusion drawing/verification (Beik et al., 2021). In the data condensation stage, the researchers repeatedly reviewed interview transcripts to identify significant statements related to sleep quality and emotion regulation. Data reduction involved coding and categorizing similar meanings into thematic clusters. The researchers then organized the data into matrices and narrative displays to support interpretation and comparison across informants. In the verification stage, the researchers critically examined emerging themes by revisiting the raw data to ensure coherence and consistency. This cyclical process allowed findings to emerge inductively while maintaining analytical rigor.

To ensure data validity and trustworthiness, the study applied several strategies: credibility, transferability, dependability, and confirmability (Lee et al., 2024). Credibility was strengthened through member checking, where participants reviewed and confirmed the accuracy of interpreted findings. Triangulating data sources (interviews, observations, and field notes) deepened and strengthened the information. The study addressed transferability by providing detailed descriptions of participants and the research context. The study ensured dependability through systematic documentation of research procedures and maintained confirmability by keeping an audit trail and reflective memos to minimize researcher bias. Together, these measures enhanced the reliability and integrity of the study's findings.

RESULT AND DISCUSSION

Result

This section presents the study's core findings on the meaning of sleep quality in emotion regulation among individuals with high activity demands. The results highlight three central themes that emerged from participants' lived experiences, illustrating how restorative sleep, sleep deprivation, and subjective sleep meanings shape emotional stability and regulation strategies in demanding daily contexts.

Restorative Sleep Enhances Emotional Stability

Participants consistently described restorative sleep as an important foundation for emotional balance in their everyday lives. When they experienced sleep as deep, uninterrupted, and sufficient, they reported feeling calmer, more patient, and mentally

prepared to manage demanding activities. They understood restorative sleep not simply by the number of hours slept, but by the subjective feeling of waking up refreshed and psychologically “reset.” Participants perceived good-quality sleep as creating emotional space before responding to external pressures. Thus, restorative sleep extended beyond physical recovery to a perceived sense of emotional readiness and psychological balance.

Interview findings indicated that participants associated restorative sleep with greater capacity to reconsider stressful situations before reacting. Several informants explained that after a good night’s sleep, they could respond more calmly to workplace pressure, academic deadlines, criticism, or unexpected changes. One participant described being “less reactive because my mind feels clearer,” while another explained that sufficient sleep helped them “think first instead of immediately responding.” These narratives suggest that participants experienced restorative sleep as supporting reflective processes. Rather than immediately interpreting stressful situations negatively, they felt better able to reconsider circumstances and select more appropriate responses.

Conversely, interviews revealed that fragmented or insufficient sleep was commonly associated with increased irritability, sensitivity, and difficulty concentrating. Participants described becoming more easily frustrated and emotionally reactive when they began the day feeling physically tired. Several informants recalled that minor problems could feel disproportionately overwhelming after a poor night’s sleep and that their reactions were sometimes followed by regret. One participant noted that “small things become big when I’m tired,” reflecting the subjective meaning attached to sleep quality. These accounts demonstrate how participants perceived inadequate sleep as reducing their ability to maintain emotional composure.

The phenomenological interpretation indicates that participants understood restorative sleep as psychological recovery that supported emotional stability amid high activity demands. Participants described good sleep as enabling greater calmness, clearer thinking, and more controlled responses to everyday pressures. Participants described its value not only as physical rest but also as a condition that helped them regain emotional readiness. From their lived experiences, restorative sleep therefore represented a temporary process of “resetting” that strengthened perceived resilience and sustained productive engagement. Its meaning was closely connected to how individuals experienced and regulated emotions after waking.

Sleep Deprivation Intensifies Emotional Reactivity

Participants experiencing chronic sleep restriction reported heightened emotional reactivity in everyday interactions. Participants often normalized sleep deprivation because of academic deadlines, multitasking responsibilities, and prolonged screen exposure. Nevertheless, informants acknowledged that insufficient sleep noticeably altered their emotional patterns, making them more impulsive, impatient, and less tolerant of everyday difficulties. Several participants explained that situations they would normally manage calmly became emotionally demanding when

they had slept poorly. These accounts indicate that persistent sleep restriction not only produces physical fatigue but also changes how individuals perceive and respond to routine interpersonal experiences.

Emotionally, sleep-deprived participants described mood fluctuations involving irritability, frustration, and sudden anger. Minor inconveniences, delayed responses, traffic, or misunderstandings could trigger disproportionately strong reactions. Several participants also became more defensive during conversations, particularly in professional settings. Cognitively, insufficient sleep reduced their ability to pause and evaluate situations before responding. Participants reported difficulty engaging in reflective thinking, limiting adaptive strategies such as reappraisal and problem-solving. Consequently, they relied more heavily on avoidance or emotional suppression, which provided temporary relief but often prolonged tension and intensified accumulated stress across daily interactions.

The findings suggest that sleep deprivation weakens emotional regulation by reducing reflective control and amplifying negative affect. For individuals facing high activity demands, persistent sleep loss may create a reinforcing cycle in which emotional instability increases interpersonal stress and further disrupts restorative rest. This pattern indicates that sleep deprivation should not be understood solely as a consequence of demanding routines but also as a factor shaping emotional and behavioral responses. Over time, repeated sleep restriction may strengthen maladaptive regulation patterns, making individuals increasingly vulnerable to irritability, impulsive reactions, avoidance, and prolonged psychological tension.

Beyond individual emotional responses, sleep deprivation also influenced the quality of interpersonal interactions. Participants reported becoming less attentive to others' perspectives and more likely to interpret neutral comments as criticism or provocation when physically exhausted. This heightened sensitivity occasionally produced unnecessary disagreements with colleagues, friends, or family members. Some participants recognized their reactions as disproportionate only after obtaining sufficient rest. These experiences suggest that inadequate sleep can alter not only emotional stability but also how people interpret interactions. Consequently, persistent sleep deprivation may gradually affect communication quality, increase relational tension, and reduce individuals' capacity to respond constructively in everyday social situations.

Sleep Meaning Shapes Regulation Strategies

Participants constructed different meanings around sleep, and these meanings shaped how they approached emotional regulation in everyday situations. For some, sleep was understood as a non-negotiable form of self-care that needed protection despite demanding schedules. For others, sleep was considered expendable when productivity, academic responsibilities, or professional obligations required additional time. These different interpretations were reflected in participants' behavioral choices, including protecting bedtime, limiting overtime, extending working hours, or postponing rest until tasks were completed. Thus, participants' understanding of sleep

appeared closely connected to how they organized recovery and responded to emotional demands.

Table 1. Thematic Patterns of Sleep Meaning and Emotion Regulation

Sleep Meaning Orientation	Behavioral Pattern	Emotion Regulation Strategy	Emotional Outcome
Sleep as self-care necessity	Protecting bedtime, limiting overtime	Cognitive reappraisal, reflection	Stable and adaptive
Sleep as productivity sacrifice	Extending work hours, multitasking at night	Suppression, avoidance	Reactive and unstable
Sleep as conditional reward	Resting only after task completion	Delayed coping	Fluctuating stability

The thematic patterns indicate that participants who viewed sleep as essential to well-being tended to establish clearer boundaries around rest and demonstrated more deliberate emotional regulation. Protecting bedtime and limiting excessive work created opportunities for reflection and cognitive reappraisal when facing stressful situations. In contrast, participants who prioritized productivity over recovery described extending work hours and multitasking at night, accompanied by greater reliance on suppression or avoidance. Those who treated sleep as a conditional reward similarly postponed recovery until responsibilities were completed, resulting in less consistent emotional regulation across demanding situations.

From a phenomenological perspective, these findings show that participants experienced sleep not merely as a biological necessity but as a personally constructed meaning that shaped everyday decisions and emotional responses. Participants' interpretations shaped whether they protected, sacrificed, or delayed rest, which in turn influenced how they perceived and managed emotional demands. The findings therefore suggest that understanding sleep quality requires attention to the meanings individuals attach to rest within their activity contexts. Emotional regulation emerged through these lived interpretations, particularly through participants' choices to prioritize recovery, tolerate sleep loss, or postpone rest in response to competing demands.

Discussion

This study's findings reinforce and extend previous research on sleep and emotional functioning. The result showing that restorative sleep enhances emotional stability aligns with Slapničar et al. (2021) and Arockia et al. (2023) who emphasized sleep's role in recalibrating emotional brain circuits, and Wang et al. (2024) and Cano et al. (2020) who highlighted the importance of cognitive reappraisal in adaptive emotion regulation. Participants in this study demonstrated that high-quality sleep supports reflective processing and reduces impulsive reactions, confirming earlier neuropsychological evidence. However, unlike experimental studies that focus primarily on biological mechanisms, this research shows how individuals consciously interpret restorative sleep as a psychological "reset," adding a subjective and experiential dimension to the literature.

The second finding, indicating that sleep deprivation intensifies emotional reactivity, is consistent with Désiron et al. (2024) and Mercader et al. (2023), who found that insufficient sleep impairs cognitive and affective performance, as well as Lechner et al. (2021), who linked poor sleep with emotional dysregulation. Similar to those studies, participants reported irritability, mood swings, and reduced reflective capacity. Nevertheless, this study differs by situating sleep deprivation within the sociocultural context of high activity demands, where sleep loss is often normalized as part of productivity culture. This contextual emphasis highlights that emotional dysregulation is not merely a physiological outcome but is embedded in social expectations and lifestyle patterns (Hobbs, 2020; Piotrowski et al., 2024).

The third finding contributes a distinctive perspective by demonstrating that the meaning attributed to sleep shapes emotion regulation strategies. While previous literature has predominantly treated sleep quality as a measurable variable (e.g., duration or efficiency), this study shows that subjective interpretations such as viewing sleep as self-care, sacrifice, or reward mediate regulatory behavior (Burgod et al., 2024; Guo et al., 2020; Kaur et al., 2021). This expands theoretical discussions by integrating meaning-making processes into emotion regulation frameworks. It suggests that cognitive appraisal not only applies to external stressors but also to restorative practices such as sleep, thereby broadening the conceptual boundaries of regulation theory.

Theoretically, these findings imply that sleep should be understood as both a biological recovery mechanism and a psychological resource embedded in personal and cultural narratives. By incorporating lived meaning into the relationship between sleep and emotion regulation, this study advances a more holistic model that bridges physiological restoration and cognitive-emotional appraisal. It contributes to the literature by proposing that the effectiveness of regulation strategies depends partly on how individuals conceptualize rest within their value systems and daily priorities.

Practically, the results indicate that interventions aimed at improving emotional regulation among individuals with high activity demands should not focus solely on sleep hygiene education. Instead, programs should address underlying beliefs about productivity and rest, encouraging the reframing of sleep as a necessary investment in emotional resilience. Organizations and educational institutions may benefit from promoting balanced workload structures and recovery-oriented cultures. By aligning behavioral recommendations with individuals' meaning systems, efforts to enhance sleep quality and emotional stability are likely to be more sustainable and impactful.

CONCLUSION

This study concludes that sleep quality functions as a meaningful psychological resource shaping emotion regulation among individuals with high activity demands. Restorative sleep supports emotional stability, reflective thinking, and adaptive coping, whereas sleep deprivation increases reactivity and weakens regulatory control. Importantly, participants' interpretations of sleep as self-care, sacrifice, or reward influenced how they managed stress and emotional responses. The study contributes a phenomenological perspective by connecting physiological restoration with

subjective meaning-making. However, the small urban sample and reliance on self-reported experiences limit transferability. Future research should employ diverse populations, longitudinal designs, and mixed-method approaches to examine how sleep meanings evolve across contexts.

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