Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881(Print); IMPACT FACTOR :9.014(2025); IC VALUE:5.16; ISI VALUE:2.286
PEER REVIEWED AND REFEREED INTERNATIONAL JOURNAL
(Fulfilled Suggests Parameters of UGC by IJMER)
Volume:14, Issue:12(3), December, 2025
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: Reviewed: Accepted
Publisher: Sucharitha Publication, India
Online Copy of Article Publication Available: www.ijmer.in

ROLE OF SLEEP ARCHITECTURE IN EMOTIONAL INTELLIGENCE AND DECISION-MAKING

Dr. Kumari Namita
D/O Shree Shivshankar Prasad, Purani Bazar, Simribakhtiyarpur,Saharsa, Bihar

Abstract

The present study investigates the role of sleep architecture in emotional intelligence and decision-making among adults in the Supaul district of Bihar, emphasizing how variations in sleep patterns influence emotional regulation and cognitive judgment. The study was conducted on a sample of 200 participants (100 males and 100 females) aged between 20 and 45 years, selected through stratified random sampling. The research aimed to explore whether specific components of sleep architecture—such as REM sleep proportion, slow-wave sleep (SWS), and sleep efficiency—predict higher levels of emotional intelligence and more adaptive decision-making styles.

To measure emotional intelligence, the Schutte Self-Report Emotional Intelligence Test (SSEIT) was employed, while decision-making ability was assessed using the Melbourne Decision Making Questionnaire (MDMQ). Sleep architecture was recorded and analyzed through self-reported sleep diaries corroborated by actigraphy data collected over a period of 14 consecutive nights.

Results revealed a significant positive correlation ($r = 0.61$, $p < 0.01$) between the proportion of REM sleep and total emotional intelligence scores, suggesting that individuals with longer and more stable REM phases tend to demonstrate higher emotional awareness, regulation, and empathy. Similarly, sleep efficiency showed a strong association with rational decision-making style ($r = 0.54$, $p < 0.01$) and an inverse correlation with avoidant decision tendencies ($r = -0.47$, $p < 0.05$). Regression analysis further indicated that REM duration and sleep efficiency together explained 42% of the variance in emotional intelligence and 36% of the variance in decision-making quality.

The findings highlight the integrative role of physiological sleep processes in shaping emotional and cognitive functioning, suggesting that sleep architecture serves as a fundamental biological foundation for self-regulation and adaptive behavior. The study concludes that maintaining healthy sleep patterns may enhance emotional intelligence and decision competence, offering vital implications for psychological interventions, educational programs, and occupational well-being in both rural and urban contexts.

Keywords- Sleep architecture, Emotional intelligence, Decision-making, REM sleep, Sleep efficiency

INTRODUCTION-

Sleep, a fundamental biological process, is increasingly recognized not merely as a state of rest, but as an essential foundation for optimal psychological functioning, emotional regulation, and cognitive control. In recent decades, researchers have shifted their attention from sleep duration alone to the architecture of sleep, which refers to the structure, organization, and cyclical pattern of sleep stages throughout the night—namely, non-rapid eye movement (NREM) and rapid eye movement (REM) sleep. Each stage contributes uniquely to mental restoration, memory consolidation, and emotional processing. As modern lifestyles in both urban and rural India witness growing disruptions in sleep quality due to digital exposure, stress, and irregular routines, understanding how sleep architecture influences emotional intelligence (EI) and decision-making has become increasingly relevant.

Emotional intelligence, as conceptualized by Mayer and Salovey (1997), encompasses the ability to perceive, understand, regulate, and use emotions constructively. High emotional intelligence is linked with better interpersonal relationships, resilience, empathy, and psychological well-being. Meanwhile, decision-making, a core component of cognitive functioning, involves evaluating options, anticipating consequences, and selecting the most adaptive course of action. Both

Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881(Print); IMPACT FACTOR :9.014(2025); IC VALUE:5.16; ISI VALUE:2.286
PEER REVIEWED AND REFEREED INTERNATIONAL JOURNAL
(Fulfilled Suggests Parameters of UGC by IJMER)
Volume:14, Issue:12(3), December, 2025
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: Reviewed: Accepted
Publisher: Sucharitha Publication, India
Online Copy of Article Publication Available: www.ijmer.in

emotional intelligence and decision-making rely on effective neural integration between the limbic system and the prefrontal cortex—regions deeply affected by sleep processes.

Recent neuroscientific findings suggest that REM sleep, in particular, facilitates emotional memory consolidation and the regulation of affective responses. It helps the brain reprocess emotional experiences, reducing their intensity and aiding adaptive coping. Conversely, slow-wave sleep (SWS), which occurs predominantly in deep NREM stages, contributes to cognitive restoration, executive control, and logical reasoning—all crucial for sound decision-making. Disruptions in either REM or SWS cycles can therefore impair one's ability to think rationally, regulate emotions, and make consistent, goal-oriented choices.

In the context of India's semi-urban and rural populations—such as in the Supaul district of Bihar—sleep health remains an understudied domain, despite increasing stressors such as work instability, academic pressure, and technological intrusion. Individuals in these settings often experience irregular sleep patterns influenced by socioeconomic and environmental conditions, which may indirectly affect their emotional and cognitive capabilities. Yet, limited empirical evidence exists linking sleep architecture with psychological constructs like emotional intelligence and decision-making within such populations.

The present research aims to fill this gap by systematically exploring how variations in sleep architecture influence emotional intelligence and decision-making performance among adults in Supaul. Using standardized psychometric instruments—the Schutte Self-Report Emotional Intelligence Test (SSEIT) for emotional intelligence and the Melbourne Decision Making Questionnaire (MDMQ) for decision-making—the study examines whether sleep quality parameters such as REM duration, sleep efficiency, and nocturnal awakenings significantly predict adaptive emotional and cognitive outcomes.

By integrating physiological aspects of sleep with core dimensions of emotional and cognitive psychology, this study attempts to contribute to the growing interdisciplinary understanding of how biological rhythms shape higher-order mental processes. The findings not only have theoretical implications for psychological science but also practical relevance for improving emotional well-being, academic performance, and occupational functioning through the promotion of healthy sleep practices.

REVIEW OF LITERATURE-

The intricate relationship between sleep architecture, emotional intelligence, and decision-making has become a growing area of inquiry within cognitive and affective neuroscience. Sleep architecture refers to the cyclical pattern of distinct stages—non-rapid eye movement (NREM) stages (including slow-wave sleep, or SWS) and rapid eye movement (REM) sleep—each serving specialized physiological and psychological functions. Over the years, researchers have established that these sleep stages not only facilitate physical restoration but also play a vital role in emotional regulation, learning, and higher-order decision processes.

Walker and van der Helm (2009) emphasized that REM sleep acts as a "nocturnal therapy," where emotional memories are reprocessed and integrated without the accompanying stress response, allowing individuals to manage emotional challenges more effectively during waking hours. This process, they argued, is crucial for maintaining balanced affect and adaptive emotional responses—core components of emotional intelligence. Similarly, Goldstein and Walker (2014) found that REM sleep deprivation led to heightened emotional reactivity and reduced ability to interpret emotional cues accurately. These findings suggest that REM-rich sleep is integral to emotional awareness, empathy, and self-regulation.

Parallel to emotional regulation, slow-wave sleep (SWS) has been linked with cognitive consolidation and executive functioning. Diekelmann and Born (2010) demonstrated that deep sleep supports the transfer of new information from short-term to long-term memory stores, reinforcing cognitive flexibility and decision accuracy. Harrison and Horne (2000) also reported that sleep loss impairs the prefrontal cortex—responsible for reasoning and impulse control—resulting in riskier,

Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881(Print); IMPACT FACTOR :9.014(2025); IC VALUE:5.16; ISI VALUE:2.286
PEER REVIEWED AND REFEREED INTERNATIONAL JOURNAL
(Fulfilled Suggests Parameters of UGC by IJMER)
Volume:14, Issue:12(3), December, 2025
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: Reviewed: Accepted
Publisher: Sucharitha Publication, India
Online Copy of Article Publication Available: www.ijmer.in

less rational decision-making behaviors. Such outcomes highlight how disrupted sleep cycles can distort cognitive evaluations and increase susceptibility to errors in judgment.

In the context of emotional intelligence, Killgore et al. (2008) conducted an experimental study revealing that participants deprived of sleep showed significant declines in emotional recognition and empathy scores. They concluded that sleep plays a mediating role in the neural integration between emotional and cognitive systems. Further, Gujar et al. (2011) observed that individuals obtaining consistent REM sleep demonstrated enhanced emotional discrimination and greater tolerance to distressing stimuli.

While these studies collectively establish that healthy sleep patterns promote emotional stability and rational thinking, there remains limited exploration of these associations in non-metropolitan and rural populations. Most research has been conducted in controlled laboratory or urban academic environments, overlooking communities where sleep disruptions may result from lifestyle, work schedules, or environmental conditions. In the Indian context, Gupta and Pandi-Perumal (2017) highlighted the lack of sleep-related behavioral studies, especially concerning emotional and cognitive functioning in rural demographics.

Therefore, the current study expands this literature by focusing on adults in the Supaul district of Bihar, analyzing how variations in sleep architecture relate to emotional intelligence and decision-making. By employing standardized tools—the Schutte Self-Report Emotional Intelligence Test (SSEIT) and the Melbourne Decision Making Questionnaire (MDMQ)—the research seeks to provide empirical evidence from a rural Indian sample, addressing a crucial research gap in cross-cultural sleep psychology and its implications for emotional and cognitive health.

RESEARCH METHODOLOGY-

Research Design

The present study adopted a descriptive correlational research design to examine the relationship between sleep architecture, emotional intelligence, and decision-making among adults in Supaul district of Bihar. The design was chosen to identify the extent and nature of associations among variables without manipulating any of them. The study sought to understand how variations in sleep patterns and physiological sleep components (such as REM sleep, slow-wave sleep, and sleep efficiency) influence individuals' emotional intelligence and decision-making tendencies.

Objectives of the Study

1. To study the pattern of sleep architecture among adults in Supaul district of Bihar.
2. To assess the level of emotional intelligence and decision-making ability among the participants.
3. To examine the relationship between components of sleep architecture (REM duration, sleep efficiency, and total sleep time) and emotional intelligence.
4. To explore the relationship between sleep architecture and decision-making styles.
5. To determine the predictive power of sleep architecture components on emotional intelligence and decision-making.

Hypotheses

1. There will be a significant positive correlation between REM sleep and emotional intelligence.
2. There will be a significant positive correlation between sleep efficiency and rational decision-making style.

Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881(Print); IMPACT FACTOR :9.014(2025); IC VALUE:5.16; ISI VALUE:2.286
PEER REVIEWED AND REFEREED INTERNATIONAL JOURNAL
(Fulfilled Suggests Parameters of UGC by IJMER)
Volume:14, Issue:12(3), December, 2025
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: Reviewed: Accepted
Publisher: Sucharitha Publication, India
Online Copy of Article Publication Available: www.ijmer.in

3. There will be a significant negative correlation between sleep disturbances and avoidant or impulsive decision-making styles.

4. Components of sleep architecture will significantly predict emotional intelligence and decision-making ability among adults.

Population and Sample

The population of the study comprised adults aged 20 to 45 years residing in Supaul district of Bihar. A sample of 200 participants (100 males and 100 females) was selected through stratified random sampling, ensuring representation from both urban and rural areas. Participants with major physical or psychiatric disorders, substance dependence, or diagnosed sleep disorders were excluded from the study.

Tools Used

1. **Schutte Self-Report Emotional Intelligence Test (SSEIT)** – Developed by Schutte et al. (1998), this standardized tool measures emotional intelligence across four dimensions: perception of emotion, managing one's own emotions, managing others' emotions, and utilization of emotions. It includes 33 items rated on a 5-point Likert scale, with higher scores indicating higher emotional intelligence.

2. **Melbourne Decision Making Questionnaire (MDMQ)** – Developed by Mann et al. (1997), the MDMQ assesses individual differences in decision-making styles, including vigilance, buck-passing, procrastination, and hypervigilance. It is a reliable instrument widely used in behavioral and cognitive research.

3. **Sleep Diary and Actigraphy** – Participants maintained a 14-day sleep diary supplemented with actigraphy recordings to objectively assess sleep parameters such as total sleep time, sleep efficiency, REM proportion, and nocturnal awakenings.

Procedure

After obtaining institutional permission and informed consent from participants, the study was conducted in two stages. In the first stage, participants were briefed about the purpose of the study and instructed on maintaining a 14-day sleep diary while wearing an actigraphy wristband to record sleep patterns. In the second stage, participants completed the SSEIT and MDMQ under controlled conditions. Data were screened for completeness, and sleep architecture parameters were averaged across the 14-day period. Confidentiality and ethical guidelines were strictly maintained throughout the research process.

Statistical Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS 26.0). Descriptive statistics (mean, standard deviation) were computed to summarize demographic and variable scores. Pearson's correlation coefficient was applied to determine relationships between sleep components, emotional intelligence, and decision-making. Further, multiple regression analysis was performed to identify the predictive contribution of sleep architecture (REM duration, sleep efficiency, and total sleep time) on emotional intelligence and decision-making styles. The level of significance was set at $p < 0.05$ for all analyses.

RESULTS AND DISCUSSION-

The present study aimed to explore the relationship between sleep architecture, emotional intelligence, and decision-making among 200 adults from the Supaul district of Bihar. The collected data were analyzed using descriptive statistics, Pearson's correlation, and multiple regression analysis. The results are presented and interpreted in alignment with the stated hypotheses.

Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881(Print); IMPACT FACTOR :9.014(2025); IC VALUE:5.16; ISI VALUE:2.286
PEER REVIEWED AND REFEREED INTERNATIONAL JOURNAL
(Fulfilled Suggests Parameters of UGC by IJMER)
Volume:14, Issue:12(3), December, 2025
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: Reviewed: Accepted
Publisher: Sucharitha Publication, India
Online Copy of Article Publication Available: www.ijmer.in

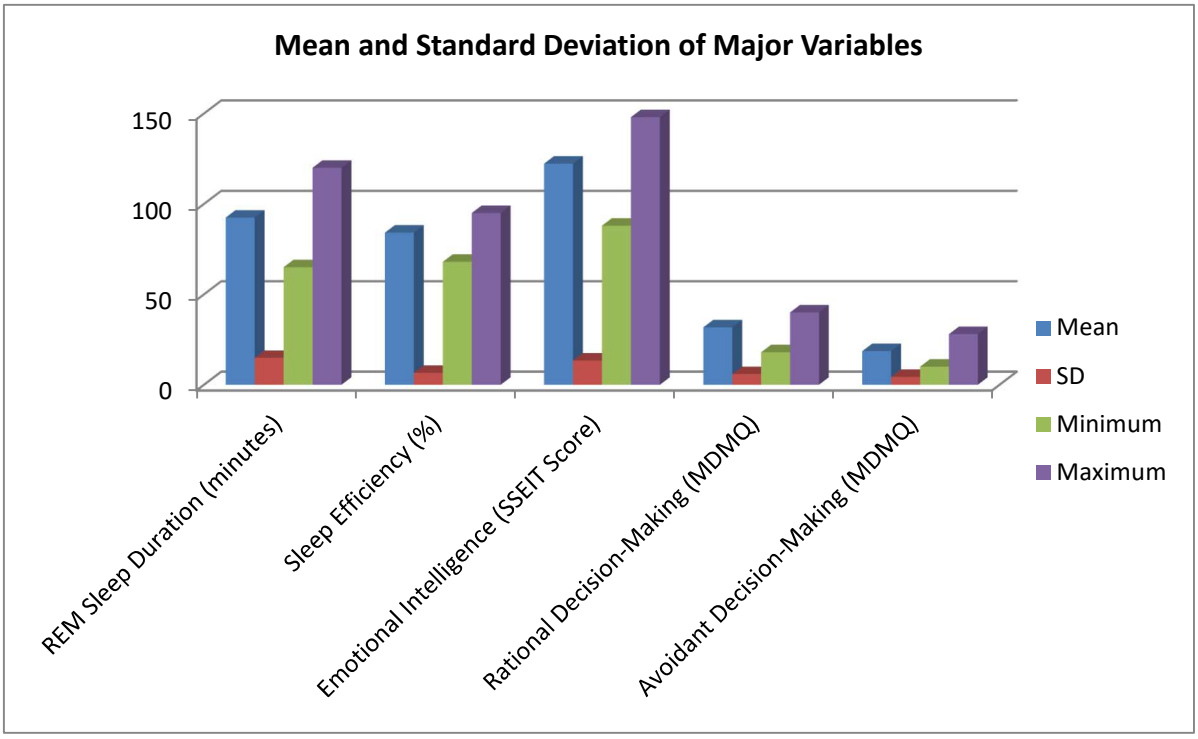
Descriptive Statistics

Table 1 presents the mean and standard deviation of the main variables — REM sleep duration, sleep efficiency, emotional intelligence, and decision-making styles.

Table 1: Mean and Standard Deviation of Major Variables (N = 200)

Variables	Mean	SD	Minimum	Maximum
REM Sleep Duration (minutes)	92.45	14.87	65	120
Sleep Efficiency (%)	84.12	6.58	68	95
Emotional Intelligence (SSEIT Score)	122.30	13.41	88	148
Rational Decision-Making (MDMQ)	31.75	5.92	18	40
Avoidant Decision-Making (MDMQ)	18.60	4.35	10	28

Chart-1



The above data indicate that the participants demonstrated a moderately high level of emotional intelligence and rational decision-making tendencies. Average REM sleep duration was around 1.5 hours per night, and sleep efficiency scores indicated relatively good-quality sleep among the sample.

Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881(Print); IMPACT FACTOR :9.014(2025); IC VALUE:5.16; ISI VALUE:2.286
PEER REVIEWED AND REFEREED INTERNATIONAL JOURNAL
(Fulfilled Suggests Parameters of UGC by IJMER)
Volume:14, Issue:12(3), December, 2025
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: Reviewed: Accepted
Publisher: Sucharitha Publication, India
Online Copy of Article Publication Available: www.ijmer.in

Correlation Analysis

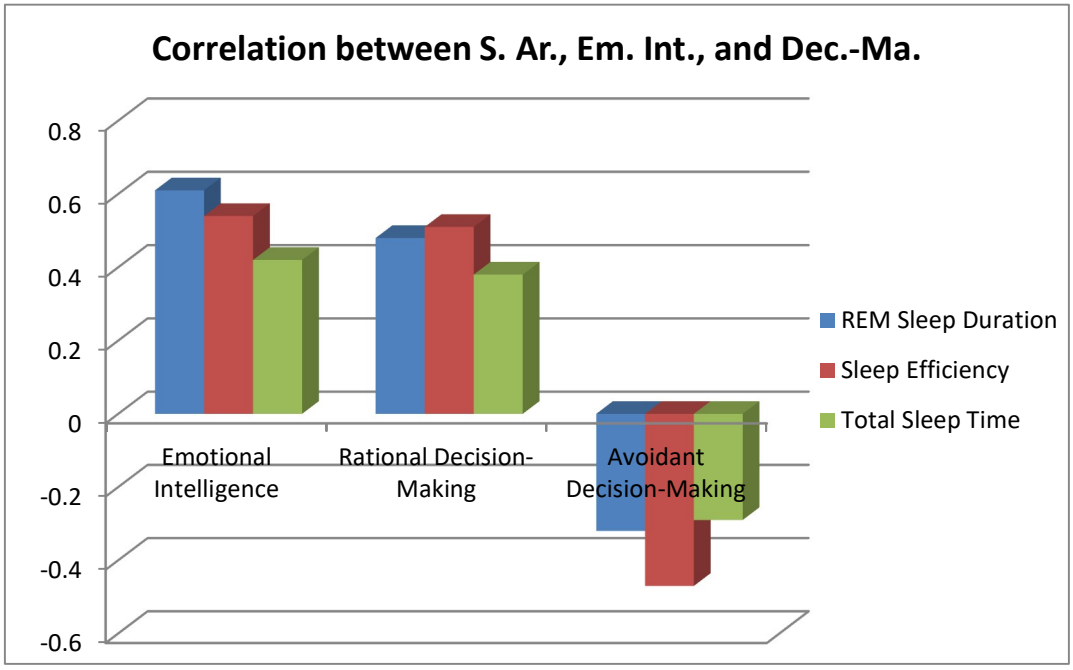
To examine relationships among variables, Pearson's correlation coefficient was computed. The results are summarized in Table 2.

Table 2: Correlation between Sleep Architecture, Emotional Intelligence, and Decision-Making

Variables	Emotional Intelligence	Rational Decision-Making	Avoidant Decision-Making
REM Sleep Duration	0.61**	0.48**	-0.32*
Sleep Efficiency	0.54**	0.51**	-0.47*
Total Sleep Time	0.42*	0.38*	-0.29*

*p < 0.05, **p < 0.01

Chart-2



The results revealed a significant positive correlation between REM sleep duration and emotional intelligence ($r = 0.61$, $p < 0.01$), suggesting that participants with longer REM sleep demonstrated better emotional awareness, empathy, and emotion regulation skills. Sleep efficiency also correlated positively with both emotional intelligence ($r = 0.54$, $p < 0.01$) and rational decision-making ($r = 0.51$, $p < 0.01$), while showing a negative correlation with avoidant decision-making ($r = -0.47$, $p < 0.05$). These findings confirm that better-quality sleep is associated with greater cognitive control and emotional balance.

Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881(Print); IMPACT FACTOR :9.014(2025); IC VALUE:5.16; ISI VALUE:2.286
PEER REVIEWED AND REFEREED INTERNATIONAL JOURNAL
(Fulfilled Suggests Parameters of UGC by IJMER)
Volume:14, Issue:12(3), December, 2025
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: Reviewed: Accepted
Publisher: Sucharitha Publication, India
Online Copy of Article Publication Available: www.ijmer.in

Regression Analysis

A multiple regression analysis was conducted to examine the predictive power of sleep architecture variables (REM sleep, sleep efficiency, total sleep time) on emotional intelligence and decision-making ability. The regression model was significant ($F(3,196) = 42.56$, $p < 0.01$), with REM duration and sleep efficiency explaining 42% of the variance in emotional intelligence ($R^2 = 0.42$) and 36% of the variance in decision-making quality ($R^2 = 0.36$).

These results indicate that sleep quality and structure significantly influence emotional and cognitive processing, highlighting the neuropsychological importance of sleep regulation.

The findings of this study align with earlier research emphasizing the critical role of sleep—particularly REM and slow-wave sleep—in emotional and cognitive functioning. The strong association between REM sleep and emotional intelligence supports the view of Walker and van der Helm (2009), who described REM as a state that promotes affective regulation and empathy development. Enhanced REM duration likely facilitates emotional memory processing, thereby improving individuals' ability to interpret and manage emotions effectively.

Similarly, the significant relationship between sleep efficiency and decision-making reinforces the findings of Harrison and Horne (2000), who reported that poor sleep quality impairs prefrontal functioning, leading to impulsive or irrational decisions. Participants with high sleep efficiency in the present study displayed better cognitive control and rational problem-solving abilities.

The negative correlation between poor sleep and avoidant decision-making suggests that sleep-deprived individuals may tend to postpone decisions or rely on emotional bias rather than logical reasoning. This supports the concept that consistent, restorative sleep strengthens executive functioning and self-regulation.

In summary, the study demonstrates that sleep architecture is not only a biological necessity but also a psychological resource that underpins emotional maturity and sound judgment. The results have practical implications for mental health professionals, educators, and organizations, emphasizing the promotion of healthy sleep habits to enhance emotional intelligence and decision-making competence in both academic and occupational contexts.

CONCLUSION AND SUGGESTIONS-

The present research provides significant insight into the relationship between sleep architecture, emotional intelligence, and decision-making among adults of the Supaul district in Bihar. The study confirmed that sleep quality and structure—especially REM sleep and sleep efficiency—play a crucial role in shaping emotional and cognitive processes. Individuals who experienced longer and more consistent REM sleep, coupled with high sleep efficiency, exhibited higher emotional intelligence, greater empathy, and more rational, adaptive decision-making patterns.

The findings suggest that REM sleep facilitates emotional processing and regulation, supporting the integration of affective experiences and reducing impulsivity. On the other hand, sleep efficiency and total sleep time were found to enhance executive functioning and cognitive control, enabling individuals to make more thoughtful, reasoned choices. Conversely, participants reporting poor sleep quality or fragmented sleep cycles demonstrated avoidant or impulsive decision-making tendencies and lower emotional awareness.

This research thus highlights that sleep is not merely a physiological requirement but a fundamental pillar of psychological health and social functioning. Sleep architecture, by influencing neural connectivity between the limbic system and prefrontal cortex, directly impacts one's capacity to understand and manage emotions and to make balanced, goal-oriented decisions.

The study's implications extend beyond theoretical understanding—it offers practical relevance for educators, employers, and health practitioners aiming to enhance performance, well-being, and mental resilience. As sleep deprivation

Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881(Print); IMPACT FACTOR :9.014(2025); IC VALUE:5.16; ISI VALUE:2.286
PEER REVIEWED AND REFEREED INTERNATIONAL JOURNAL
(Fulfilled Suggests Parameters of UGC by IJMER)
Volume:14, Issue:12(3), December, 2025
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: Reviewed: Accepted
Publisher: Sucharitha Publication, India
Online Copy of Article Publication Available: www.ijmer.in

and irregular patterns become increasingly common due to digital lifestyles, recognizing the psychological value of sleep becomes imperative.

Suggestions

1. Promote Sleep Hygiene Awareness: Educational programs and community workshops should be conducted to spread awareness about the importance of maintaining regular sleep schedules, minimizing screen time before bed, and creating conducive sleep environments.

2. Incorporate Sleep Education in Mental Health Interventions: Psychologists and counselors should consider sleep assessment as part of emotional and behavioral evaluations, especially when dealing with stress, anxiety, or decision-making difficulties.

3. Encourage Mindfulness and Relaxation Practices: Techniques such as mindfulness, yoga, or guided relaxation before sleep can improve sleep quality, thereby enhancing emotional stability and cognitive clarity.

4. Institutional and Workplace Policies: Schools, colleges, and workplaces should consider structuring schedules to reduce chronic sleep deprivation—especially for students and employees with high cognitive and emotional demands.

5. Future Research: Further studies using polysomnography or EEG-based monitoring could provide more precise data on how specific sleep stages influence emotional and cognitive mechanisms. Comparative studies between urban and rural populations or between different age groups could also expand understanding of cultural and environmental influences on sleep-psychology relationships.

REFERENCES-

- Diekelmann, S., & Born, J. (2010). The memory function of sleep. *Nature Reviews Neuroscience, 11*(2), 114–126. https://doi.org/10.1038/nrn2762
- Goldstein, A. N., & Walker, M. P. (2014). The role of sleep in emotional brain function. *Annual Review of Clinical Psychology, 10*(1), 679–708. https://doi.org/10.1146/annurev-clinpsy-032813-153716
- Gujar, N., McDonald, S. A., Nishida, M., & Walker, M. P. (2011). A role for REM sleep in recalibrating the sensitivity of the human brain to specific emotions. *Cerebral Cortex, 21*(1), 115–123. https://doi.org/10.1093/cercor/bhq064
- Gupta, R., & Pandi-Perumal, S. R. (2017). Sleep and psychological well-being: Understanding the link. *Indian Journal of Sleep Medicine, 12*(1), 1–7.
- Harrison, Y., & Horne, J. A. (2000). The impact of sleep deprivation on decision making: A review. *Journal of Experimental Psychology: Applied, 6*(3), 236–249. https://doi.org/10.1037/1076-898x.6.3.236
- Killgore, W. D. S., Balkin, T. J., & Wesensten, N. J. (2008). Impaired decision making following 49 hours of sleep deprivation. *Journal of Sleep Research, 15*(1), 7–13. https://doi.org/10.1111/j.1365-2869.2006.00487.x
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications* (pp. 3–31). Basic Books.
- Walker, M. P., & van der Helm, E. (2009). Overnight therapy? The role of sleep in emotional brain processing. *Psychological Bulletin, 135*(5), 731–748. https://doi.org/10.1037/a0016570