



Exploring the Relationship between Attachment Styles, Relationship Satisfaction, and Sleep Disturbances among Young Adults in India

¹**Ateena Aleyamma Iype**, M.Sc. Psychology (Counselling Psychology), Department of Psychology,

Kristu Jayanti College (Autonomous), Bangalore - 560077, Karnataka, India

ateena247@gmail.com

²**Dr. Lokesh L.**, Assistant Professor, Department of Psychology, Kristu Jayanti College

(Autonomous), Bangalore - 560077, Karnataka, India

Abstract: This study examined the relationships between attachment styles, relationship satisfaction, and sleep disturbances among 300 young adults (mean age = 21.7 years) in India, specifically testing whether relationship satisfaction mediates the attachment-sleep pathway. Participants in committed romantic relationships completed the Experiences in Close Relationships-Revised Short Form (ECR-R), Relationship Assessment Scale (RAS), and Pittsburgh Sleep Quality Index (PSQI). Correlation analyses revealed significant associations: attachment insecurity positively correlated with sleep disturbances ($r = .530, p < .001$), negatively correlated with relationship satisfaction ($r = -.498, p < .001$), and relationship satisfaction showed strong negative correlation with sleep disturbances ($r = -.759, p < .001$). Mediation analysis demonstrated that relationship satisfaction partially mediated the attachment-sleep relationship, with 62% of the total effect ($B = 0.280$) operating indirectly through relationship satisfaction ($B = 0.173$), while the direct effect remained significant ($B = 0.107$). The mean PSQI score of 9.18 ($SD = 5.22$) indicated that a substantial proportion of participants experienced clinically significant sleep disturbances. Results support integrative models linking emotional security through relational quality to physiological health outcomes in collectivist cultural contexts, with implications for interventions targeting both attachment patterns and relationship quality to improve sleep health.

Keywords: Attachment Styles, Attachment Anxiety, Attachment Avoidance, Relationship Satisfaction, Sleep Disturbances, Sleep Quality, Young Adults, India.

1. Introduction

This study investigates the relationships between attachment styles, relationship satisfaction, and sleep disturbances among young adults in India. Young adulthood represents a critical developmental period characterized by significant transitions in identity formation, romantic relationship establishment, and health behaviors. The quality of romantic relationships and underlying attachment patterns profoundly influence both emotional and physiological well-being, yet the mechanisms linking these psychological processes to sleep outcomes remain insufficiently understood, particularly in non-Western cultural contexts.

Attachment theory, originally formulated by Bowlby (1982) and empirically validated by Ainsworth et al. (1978), posits that early relational experiences with caregivers create enduring internal working models that fundamentally shape emotional regulation, stress responses, and intimate relationship functioning throughout the lifespan. These attachment patterns extend into adult romantic relationships, influencing how individuals seek proximity, provide and receive support, and regulate emotions in the context of intimate partnerships (Hazan & Shaver, 1987). Secure attachment, characterized by comfort with intimacy and confidence in partner availability, promotes adaptive emotion regulation and relationship satisfaction. In contrast, insecure attachment styles—including anxious attachment marked by fears of abandonment and avoidant attachment characterized by discomfort with closeness—create maladaptive relational patterns that undermine relationship quality (Mikulincer & Shaver, 2007).

The consequences of attachment insecurity and relationship distress extend beyond psychological well-being to influence fundamental physiological processes, particularly sleep. Sleep represents a universal biological need essential for physical and mental health, yet it is exquisitely sensitive to psychological states and interpersonal contexts. The capacity for restorative sleep requires physiological down-regulation and a sense of safety that allows vigilance to decrease. Insecure attachment, by creating chronic states of threat perception and hyperarousal, directly interferes with these prerequisites for healthy sleep (Troxel et al., 2007; Adams & McWilliams, 2015).

The stress-buffering hypothesis provides a theoretical framework for understanding how relationship quality influences health outcomes. This model posits that high-quality romantic relationships provide crucial emotional support and co-regulation that mitigate stress responses, promote adaptive coping, and facilitate physiological recovery processes including sleep (Mikulincer & Shaver, 2005). Conversely, relationship dissatisfaction signals

interpersonal threat, activating stress systems that directly disrupt sleep architecture (Riemann et al., 2010).

Despite robust evidence from Western populations documenting associations among attachment styles, relationship satisfaction, and sleep quality, critical gaps remain in understanding these processes in collectivist cultural contexts. India, characterized by collectivist cultural values emphasizing interdependence, family cohesion, and relational harmony (Chadda & Deb, 2013), represents a crucial context for examining whether attachment-relationship-sleep dynamics operate similarly or show cultural variations. Young adults in India navigate unique developmental challenges as they balance traditional family expectations with emerging autonomy in romantic relationships.

The present study addresses these gaps by investigating the relationships among attachment styles, relationship satisfaction, and sleep disturbances in a sample of 300 young adults aged 18-25 years in India, with specific focus on testing relationship satisfaction as a mediating mechanism. We hypothesized that: (1) attachment insecurity would positively correlate with sleep disturbances; (2) attachment insecurity would negatively correlate with relationship satisfaction; (3) relationship satisfaction would negatively correlate with sleep disturbances; and (4) relationship satisfaction would mediate the relationship between attachment styles and sleep disturbances.

2. Method

2.1 Participants

The sample consisted of 300 young adults (mean age = 21.7 years, SD = 2.07) recruited from universities and colleges across urban and semi-urban centers in India. Participants were selected using purposive non-probability sampling to ensure specific relational and demographic criteria were met. Inclusion criteria required participants to: (1) be aged 18-25 years; (2) be currently enrolled in undergraduate, graduate, or post-graduate programs; (3) be engaged in a romantic relationship of at least six months duration; and (4) provide informed consent. Exclusion criteria included: (1) current or past diagnosis of major psychiatric disorders; (2) diagnosed primary sleep disorders; and (3) current use of psychotropic or sleep medications. These exclusion criteria were implemented to isolate attachment and relationship factors from confounding clinical variables that independently affect sleep quality. The sample size of 300 provided adequate statistical power for correlational and mediation analyses.

2.2 Measures

Three validated self-report instruments were employed. Attachment styles were measured using the Experiences in Close Relationships-Revised Short Form (ECR-R-SF; Fraley et al., 2000), a 12-item questionnaire assessing two dimensions of adult romantic attachment: anxiety (fear of rejection and abandonment) and avoidance (discomfort with intimacy and closeness). Items are rated on a 7-point Likert scale, with higher scores indicating greater attachment insecurity. The ECR-R demonstrates excellent psychometric properties with internal consistency coefficients exceeding .90 for both subscales.

Relationship satisfaction was assessed using the Relationship Assessment Scale (RAS; Hendrick, 1988), a brief 7-item measure of global satisfaction with romantic relationships. Items are rated on a 5-point Likert scale, with higher scores indicating greater satisfaction. The RAS demonstrates strong internal consistency (Cronbach's $\alpha = .86-.94$).

Sleep quality and disturbances were measured using the Pittsburgh Sleep Quality Index (PSQI; Buysse et al., 1989), assessing subjective sleep quality over the past month. The PSQI evaluates seven components including sleep latency, duration, efficiency, disturbances, medication use, and daytime dysfunction. Component scores combine to yield a global score ranging from 0-21, with higher scores indicating poorer sleep quality. Scores above 5 indicate clinically significant poor sleep quality. The PSQI demonstrates high internal consistency ($\alpha = .83$) and excellent diagnostic sensitivity (89.6%) and specificity (86.5%).

2.3 Procedure

Data collection was conducted online using secure survey platforms following approval from the institutional ethics committee and adherence to American Psychological Association ethical guidelines. Potential participants were recruited through institutional emails, academic networks, and social media platforms. Upon accessing the survey, participants reviewed an informed consent form explaining the study's purpose, procedures, confidentiality protections, and voluntary nature of participation. Only those providing electronic consent proceeded to the questionnaires. All responses were collected anonymously with no personally identifiable information retained. Data were stored in password-protected files accessible only to the research team. The survey assessed demographic information followed by the three psychological measures. Completion time averaged 5-10 minutes. A debriefing screen provided contact information for mental health services to ensure support access if participants experienced distress.

2.4 Statistical Analysis

Statistical analyses were performed using Jamovi statistical software with significance level set at $\alpha = 0.05$ (two-tailed). Descriptive statistics (means, standard deviations) characterized the sample and study variables. Pearson product-moment correlations examined bivariate relationships among attachment dimensions, relationship satisfaction, and sleep disturbances. Mediation analysis tested the hypothesized indirect effect of attachment insecurity on sleep disturbances through relationship satisfaction using regression-based bootstrapping methods with 5,000 bootstrap samples. The analysis estimated total effects, direct effects, and indirect effects with standard errors and significance tests. Age and gender were included as covariates to control for their potential moderating influences.

3. Results

3.1 Descriptive Statistics

Descriptive statistics for the primary study variables are presented in Table 1. Participants reported moderate levels of attachment avoidance ($M = 23.0$, $SD = 4.78$) and attachment anxiety ($M = 24.1$, $SD = 6.53$), with a mean total attachment insecurity score of 47.1 ($SD = 9.87$). Relationship satisfaction was relatively high ($M = 23.3$, $SD = 7.92$). The mean global PSQI score was 9.18 ($SD = 5.22$), with scores ranging from 0 to 21. Given that PSQI scores above 5 indicate poor sleep quality, the average score suggests that a substantial proportion of participants experienced clinically relevant sleep disturbances. These findings are consistent with prior research documenting elevated sleep difficulties among university students. Shapiro–Wilk tests indicated deviations from normality for several variables ($p < .001$), although attachment avoidance approached normal distribution ($p = .051$). Given the large sample size ($N = 300$), parametric analyses were considered appropriate based on the robustness of estimates under the Central Limit Theorem.

Table 1. Descriptive statistics for main study variables ($N = 300$)

Variable	Mean	SD	Min	Max
Attachment Avoidance	23.0	4.78	6	37
Attachment Anxiety	24.1	6.53	10	38
Total Attachment Insecurity (ECR-S)	47.1	9.87	17	75
Relationship Satisfaction (RAS)	23.3	7.92	7	35
Sleep Disturbances (PSQI)	9.18	5.22	0	21

3.2 Correlational Analysis

Pearson correlations among study variables are presented in Table 2. Results supported the first three hypotheses. Total attachment insecurity was significantly positively correlated with sleep disturbances, $r(298) = .530$, $p < .001$, indicating that higher attachment insecurity was associated with poorer sleep quality. Attachment insecurity was significantly negatively correlated with relationship satisfaction, $r(298) = -.498$, $p < .001$, suggesting that individuals with higher insecurity reported lower satisfaction in romantic relationships. Relationship satisfaction demonstrated a strong negative association with sleep disturbances, $r(298) = -.759$, $p < .001$. This correlation indicates substantial shared variance between relational quality and sleep outcomes ($r^2 \approx .58$). Collinearity diagnostics in subsequent regression analyses indicated acceptable variance inflation ($VIF = 1.33$), suggesting that multicollinearity did not bias parameter estimates.

Table 2. *Correlation matrix for study variables (N = 300)*

Variable	ECR-S	PSQI	RAS
ECR-S (Attachment Insecurity)	—		
PSQI (Sleep Disturbances)	.530***	—	
RAS (Relationship Satisfaction)	-.498***	-.759***	—

Note. *** $p < .001$

3.3 Mediation Analysis

A mediation analysis using bootstrapped confidence intervals (5,000 samples) examined whether relationship satisfaction mediated the association between attachment insecurity and sleep disturbances. The total effect of attachment insecurity on sleep disturbances was significant ($B = 0.280$, $SE = 0.026$, $p < .001$). The indirect effect through relationship satisfaction was also significant ($B = 0.173$, $SE = 0.023$, $Z = 7.60$, $p < .001$), indicating that higher attachment insecurity predicted lower relationship satisfaction, which in turn predicted greater sleep disturbances. The direct effect remained significant ($B = 0.107$, $SE = 0.022$, $Z = 4.84$, $p < .001$), indicating partial mediation. Approximately 62% of the total effect of attachment insecurity on sleep disturbances operated indirectly through relationship satisfaction. These findings suggest that relational processes account for a substantial portion of the association between attachment insecurity and sleep disturbances, while a meaningful direct pathway remains independent of relationship satisfaction.

Table 3. *Mediation analysis results*

Effect Type	B	SE	Z	p
Indirect	0.173	0.023	7.60	<.001
Direct	0.107	0.022	4.84	<.001
Total	0.280	0.026	10.77	<.001

4. Discussion

The present findings indicate that attachment insecurity, relationship satisfaction, and sleep disturbances are significantly interconnected among young adults. Attachment insecurity was associated with poorer sleep quality both directly and indirectly through relationship satisfaction.

The positive association between attachment insecurity and sleep disturbances ($r = .530$) supports theoretical models suggesting that insecure attachment is linked to heightened emotional arousal and reduced perceived safety, which may interfere with sleep initiation and maintenance. Individuals with higher attachment anxiety may experience rumination and pre-sleep cognitive activation, whereas avoidant individuals may experience physiological costs associated with emotional suppression.

The strong negative association between relationship satisfaction and sleep disturbances ($r = -.759$) highlights the relevance of relational quality for sleep health. This robust correlation, explaining approximately 58% of variance in sleep outcomes, underscores that satisfying romantic relationships may facilitate emotional security and co-regulation, promoting physiological down-regulation necessary for restorative sleep. The stress-buffering hypothesis provides a framework for understanding this relationship, suggesting that high-quality relationships mitigate stress responses and promote adaptive coping mechanisms that support healthy sleep patterns.

The mediation findings indicate that relationship satisfaction accounts for a substantial proportion (62%) of the attachment–sleep link. However, the persistence of a significant direct effect (38% of total effect) suggests that attachment-related sleep disturbances are not fully explained by relationship quality alone, pointing to additional intrapersonal regulatory mechanisms. This partial mediation pattern indicates that attachment insecurity influences sleep through dual pathways: the relationship dissatisfaction created by maladaptive relational patterns, plus intrinsic characteristics including chronic physiological hyperarousal, emotion dysregulation, and cognitive rumination that persist independently of overall relationship satisfaction levels.

The mean PSQI score of 9.18, well above the clinical cutoff of 5, indicates that a substantial proportion of participants experienced clinically significant sleep disturbances. This finding aligns with research documenting high prevalence of sleep problems among university students globally. The elevated sleep disturbance rates underscore the public health significance of understanding psychological and relational factors that promote or undermine sleep health in young adult populations.

These findings have important implications. Clinically, assessment of attachment patterns and relationship functioning may be relevant when addressing sleep complaints among young adults. Traditional sleep-focused interventions may be insufficient for attachment-related problems, suggesting the value of integrated approaches targeting both relational quality and emotion regulation capacities. Attachment-based therapies that enhance emotional security, improve communication patterns, and develop adaptive coping strategies may yield dual benefits for both relationship satisfaction and sleep outcomes.

From a theoretical perspective, the results support integrative biopsychosocial models linking emotional security and relational functioning to health outcomes. The robust replication of attachment-relationship-sleep dynamics in an Indian collectivist cultural context suggests these represent relatively universal mechanisms, though cultural values emphasizing interdependence and relational harmony may modulate specific manifestations. Future research should explicitly examine cultural factors as potential moderators of these pathways.

5. Conclusion

This study demonstrates that attachment insecurity is associated with sleep disturbances among young adults, with relationship satisfaction serving as a significant partial mediator. A substantial proportion (62%) of the attachment–sleep association operates through relational quality, underscoring the role of interpersonal processes in sleep health. However, the significant direct effect (38%) indicates that attachment influences sleep through additional mechanisms beyond relationship satisfaction, including intrinsic patterns of emotional arousal and regulation. The findings reveal robust interconnections among attachment styles, relationship satisfaction, and sleep disturbances in an Indian young adult sample, highlighting the public health relevance of these psychological and relational processes for physiological well-being. The results suggest that interventions targeting attachment-related emotion regulation and relationship functioning may contribute to

improved sleep outcomes. Future research should employ longitudinal designs, incorporate objective sleep measures, and examine diverse populations to further clarify causal mechanisms.

References

- Adams, G. C., & McWilliams, L. A. (2015). Relationships between adult attachment style ratings and sleep disturbances in a nationally representative sample. *Journal of Psychosomatic Research*, 79(1), 37–42.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Lawrence Erlbaum.
- Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment* (2nd ed.). Basic Books.
- Buyse, D. J., Reynolds, C. F., Monk, T. H., Berman, S. R., & Kupfer, D. J. (1989). The Pittsburgh Sleep Quality Index: A new instrument for psychiatric practice and research. *Psychiatry Research*, 28(2), 193–213.
- Chadda, R. K., & Deb, K. S. (2013). Indian family systems, collectivistic society and psychotherapy. *Indian Journal of Psychiatry*, 55(6), 299–309.
- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, 78(2), 350–365.
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52(3), 511–524.
- Hendrick, S. S. (1988). A generic measure of relationship satisfaction. *Journal of Marriage and Family*, 50(1), 93–98.
- Mikulincer, M., & Shaver, P. R. (2005). Mental representations of attachment security: Theoretical foundation for a positive social psychology. In M. W. Baldwin (Ed.), *Interpersonal cognition* (pp. 233–266). Guilford Press.
- Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. Guilford Press.
- Riemann, D., Spiegelhalder, K., Feige, B., Voderholzer, U., Berger, M., & Perlis, M. (2010). The hyperarousal model of insomnia: A review of the concept and its evidence. *Sleep Medicine Reviews*, 14(1), 19–31.

Troxel, W. M., Cyranowski, J. M., Hall, M., Frank, E., & Buysse, D. J. (2007). Attachment anxiety, relationship context, and sleep in women with recurrent major depression. *Psychosomatic Medicine*, 69(7), 692–699.