

EMOTION REGULATION AND SLEEP QUALITY THE MODERATING ROLE OF ATTACHMENT AMONG UNIVERSITY STUDENTS

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Abstract

Objective: Close relationships play an essential role in physical and psychological well-being. Yet, the mechanisms through which relationship factors may enable individuals to maintain overall health have not been widely explored. **Aim of the present research** is to examine the moderating role of attachment between emotion regulation and quality of sleep among university students. **Method:** The cross sectional and co relational research design was used to find out the moderating effect of attachment between emotion regulation and quality of life. G power software was used to compute sample size, and a total of 250 participants between the ages of 18 and 25 were chosen using the convenient sampling procedure. The information was gathered from two universities in Pakistan, one in Islamabad and the other in Rawalpindi. Participants' data was collected using the Demographic sheet, the Emotion Regulation Questionnaire (ERQ), the Pittsburgh Sleep Quality Index (PSQI), and the Inventory of Parent and Peer Attachment (IPPA). The data was examined with SPSS version 25, and the degree of relationship was determined using the multiple regression tests. **Results:** The results of the current study suggest that Parents and Peer attachment have significant negative association with quality of sleep. Secondly, the significant positively associated with emotion reappraisal and negatively associated with emotional suppression among youth was found. Thirdly, the findings also demonstrated that significant association exists between emotional regulation and sleep quality. **Conclusion:** The current study concluded that the attachment plays a significant role in emotion regulation and sleep quality.

Keywords Attachment, Emotion Regulation, Sleep Quality, University Students

Introduction

One of the most crucial aspects of living a meaningful life is having close relationships with people¹. Improved mental and physical health is one of the numerous advantages of satisfying social relationships². People who have long-term, positive relationships live longer and healthier lives than those who do not have close relationships. Through physical, psychological, and emotional care, relationships with people predict favorable health outcomes³. We may be more motivated and able to engage in health behaviors if we have someone to hold us accountable for our medical regimes and aid us in these regimes. Close relationships also give closeness and social support, both of which are linked to higher wellbeing, a lower risk of disease, and a better prognosis when sickness does strike^{3, 2}.

Individual and interpersonal attachment orientations can both be used to predict behavior. John Bowlby proposed the attachment hypothesis in 1969⁴, claiming that one's early experiences with one's primary caregivers influence how one sees, feels, and evaluates close relationships later in life. Individuals develop an internal working model of how dependable close folks are in their life from their interactions with others. When a threat to a connection is sensed, this internal working

model activates attachment-related actions. Attachment styles were first defined as secure and insecure attachment patterns, and they were used to predict children's behavior^{5, 4}. Attachment theory was later used by Hazan and Shaver (1987)⁶ to predict behavior in adult romantic relationships. At the moment, attachment is thought to be divided into two dimensions: attachment anxiety and attachment avoidance⁷. Attachment anxiety patients are afraid of being abandoned, have severe negative feelings during disagreement, engage in cognitive rumination, and want excessive reassurance that they will not be abandoned. Individuals who have a high level of attachment avoidance are afraid of intimacy and want to keep their autonomy and distance from their relationships amid disagreement. These two dimensions are moderately associated, with an average correlation of .41, $p < .001$, according to a recent meta-analysis⁸. Attachment orientations have been shown to predict how people would react to stress and interpersonal conflict. Many health-related consequences are linked to attachment orientations. Individuals with high attachment anxiety and/or avoidance have poorer health as a result of hyper activation of the hypothalamus pituitary adrenal axis (HPA axis; governs the body during times of stress) and weakened immunological responses (fewer

cells fighting off infection and illness¹⁰. Attachment anxiety and/or avoidance are also linked to elevated cortisol levels during stressful situations¹¹. Cortisol is a stress hormone that plays a role in the body's response to stress. When compared to securely attached individuals, persons with attachment anxiety and/or avoidance have higher cortisol levels prior to addressing their romantic relationships^{12, 13}.

Attachment theory has been defined as a theory of emotion control^{14, 15}. When an infant does not receive consistent and reliable protection and support from its primary caregiver(s), it develops a hyper activation or deactivation model of the attachment system in order to achieve attachment-directed goals, which is partially accomplished through the emotion regulation process¹⁶. The act of altering one's emotional experiences by initiating, maintaining, or modifying their frequency, intensity, or length is known as emotion regulation¹⁷. When a caregiver is unable to engage in consistent, sensitive, or responsive interactions with their newborn, a hyper activation attachment model (i.e., attachment anxiety) emerges. Individuals who have a higher level of anxious attachment tendencies are more likely to up-regulate their emotions, causing them to overreact and sustain a high level of unpleasant mood¹⁴. People who score relatively high on the attachment avoidance dimension use deactivating methods. Attachment avoidance is linked to low levels of intimacy and emotional involvement in close relationships, as well as the suppression of painful thoughts, the repression of negative memories, the lack of cognitive accessibility to negative self-representations, the projection of negative self-traits onto others, the failure to acknowledge negative emotions, and the denial of basic fears¹⁷.

I'm curious about the mechanics underlying the link between attachment emotion management and sleep quality. I hypothesized that people with high attachment have low level of emotion regulation and had poor quality sleep would have worse health outcomes, especially after a romantic disagreement (as compared to people with low attachment avoidance who had slept well). Attachment orientations and sleep disturbances are linked in an increasing body of research¹⁸. Adams and McWilliams (2015)¹⁹ looked at the link between attachment insecurity and sleep while controlling for prior mental and physical health issues, and found that the link was still there. In a diary study, women with high attachment anxiety reported lower sleep efficiency (the ratio of time spent sleeping vs. time spent in bed) and lower sleep quality on nights after high disclosure of relationship issues, compared to nights with low dis-

closure and individuals with low attachment anxiety. Attachment anxiety has been associated to sleep problems^{20, 21}, across the lifetime²², and notably following relationship conflict^{20, 21, and 23}. A unique physical difference in brain waves (alpha waves) was seen in persons with high attachment anxiety compared to those with low attachment anxiety during the relaxed state prior to sleep²⁴. Although the relevance of this difference is unknown, it does reveal physiological differences between people who have high attachment anxiety and those who have low attachment anxiety while sleeping.

According to research, nervously attached people adopt hyper activating attachment methods such as paying attention to bad ideas and emotions, as well as intensifying and expressing negative emotions strongly^{25, 26 & 27}. However, there have been some discrepancies in the research on the relationship between attachment anxiety and emotional expression. While some studies have identified a positive relationship between these characteristics²⁸, others have found a negative relationship²⁸. Discrepancies in results could be linked to anxiously attached people's ambiguity about how to respond to concerns about the availability of an attachment figure. These ambivalent people may end up expressing attachment requirements in indirect ways (e.g., disparities in verbal and nonverbal presentation of emotions)²⁹, which could lead to varied results about emotionality depending on which channels of expression are studied. Individuals who avoid attachment place a high priority on strength and emotional independence²⁹. They use attachment deactivation tactics such as diverting attention away from threat-related emotions, denying emotional experiences, repressing unpleasant feelings, and restricting emotional expressiveness to regulate their affect^{26, 30, 31 & 27}.

A dyadic method has been used in a few researches to look at the link between attachment and emotion regulation. Winterheld (2015)²⁷ discovered that those who are more anxiously attached experience more unpleasant emotions, particularly when their spouses are less avoidant. Only when their partners were very avoidant did anxiously attached people hide greater emotion. When their spouses were highly avoidant, however, avoidant attached people suppressed their feelings more²⁷. Paley, Cox, Burchinal, and Payne (1999)³² discovered that when participants' spouses were more avoidant attached, they reported more negative feelings during conflict exchanges. Individuals' behavior and emotion management are related to their partners' attachment orientations, according to a series of laboratory-based

observational research 33, 34. These findings back up the theory that a romantic partner's attachment orientation influences the other's emotion regulation attempts.

The Study Purpose

Despite a thorough examination of the literature, no published research on sleep quality among Pakistani university students, particularly in the context of attachment, was discovered in Pakistan. However, because Pakistan's cultural background is collectivist, students here are extremely reliant on parents and other close relatives for emotional support and significant life decisions, it is critical to investigate developmental health issues of youth and adolescents with attachment. According to a survey conducted in Karachi, a large percentage of young people (58.9%) obtain less than eight hours of sleep per day. As a result of the poor sleep quality, many cognitive and emotional regulation distresses emerge, which warrant additional investigation. This study, when seen in the context of attachment, has the potential to provide important information for youth's health and psychological concerns, as it will help to better understand the interpersonal context of adolescents, as well as sleep quality and emotional regulation.

Methodology

The moderating relationship between attachment, emotion control, and sleep quality among university students was investigated using a cross-sectional and correlational approach. The information was gathered for the sake of convenience. The participants were drawn from Rawalpindi and Islamabad's data universities. The participants were chosen using a simple sampling method. Convenient sampling is a type of non-probability sampling in which participants are picked only for their convenience to the researcher. The key benefit of convenient sampling is that it has the fewest impediments, is cost-effective, quick, and takes less time. A total of 250 people were enlisted to take part in the study. The data was selected by using the G power software. The participants ranged in age from 18 to 25 years old. Males and females studying at two different universities were included in the sample. Questionnaires were used to collect data.

The demographic sheet was used to collect information about the participant's name, age, gender, birth order, educational institution, parent's occupation, and family setup. Gross and John created the Emotional Regulation Questionnaire (ERQ) (2003). Individual variations in the habitual use of two emotion control strategies: cognitive reappraisal and expressive suppression are as-

sessed using this questionnaire. With an alpha reliability of 0.79 for reappraisal and 0.73 for suppression, the scale has been confirmed to be reliable (Gross, 2003). The Pittsburgh Sleep Quality Index (PSQI) was established by Buysse et al., (1989) and is a self-administered questionnaire that measures seven areas to distinguish "poor" from "excellent" sleep. Previous studies have found that the alpha reliability of the PSQI Urdu version is .83 (Hashmi, 2014). Gay Armsden created the updated Inventory of Parent and Peer Attachment (1987). The IPPA examines teenagers' perceptions of the good and negative cognitive aspects of their relationships with their parents and close friends. The tool is a self-report questionnaire with a five-point Likert scale response format. Durability (Cronbach's alpha) in Urdu has been revised to 0.87 for mother attachment, 0.87 for father attachment, and 0.92 for peer attachment (Zahrah, 2016).

The statistical Package of Social Sciences (SPSS) version 25 was used to analyze the data. The moderating regression test was applied to check the moderating relationship between variables.

The Ethical Review Board, Department of Psychology, IIUI, Ethics Committee, and the institute's head gave the ethical approval. In addition, informed consent was obtained from the participants, as well as assurances of privacy and confidentiality.

The data was gathered from Rawalpindi and Islamabad universities. During university hours, participants were approached directly. Some participants accepted to participate in the study, while others declined. Participants who accepted to participate in the study were given a demographic sheet to fill out as well as the scales. All participants signed a written consent form. The participants were informed about the study's topic, nature, and objectives, as well as the protocol for completing the questionnaire and its significance. They were told that any information they submitted would be kept private and solely used for research purposes. Each participant was given their own instructions. All of the participants were instructed to carefully read each item and then react using the alternatives provided. The whole data for this study was collected over the course of three weeks, with each participant spending an average of 15-20 minutes filling out the questionnaire. Participants were acknowledged for their cooperation and involvement at the end of the session.

Results

A total of 250 individuals were chosen, ranging in age from 18 to 25, with a mean age of 20.23 ± 7.3 .

Table 1 shows bivariate correlations between various measurements. Attachment is negatively associated with sleep quality ($r = -.237^{**}$) and emotional regula-

tion ($r = -.089$) among university students, as shown in the table. Emotion control was also found to be negatively connected with sleep quality ($r = -.025$).

Table: 1 Inter-correlations among attachment, emotion regulation and sleep quality.

Variables	1	2	3
Attachment	---	-.237**	-.089
EmotionRegulation		---	-.025
Sleep Quality			

** $p < 0.01$., * $p < 0.05$ Coefficients are for University Students (N = 250).

The Hierarchical Regression analysis was run to check the possible moderating effect of attachment between emotion regulation and sleep quality among university students. The Independent variables were entered as a covariate in the first step. In Step2, scores for sleep quality, birth order and qualification were entered. Attachment scores were entered in phase 3. Finally, in the third phase to investigate the moderating effects, the relationships between sleep quality and attachment fol-

lowing centering procedures were entered into (Aiken and West, 1991). Table 2 summarizes the outcomes of these studies. We can see in Table 2, that the birth order and qualification is significantly positively moderated in relationship of emotion regulation and sleep quality [$\beta = .362^{**}$, $.298^{*} = 0.764$, $p < 0.05$]. While the Attachment is significantly negative moderated between emotion regulation and sleep quality [$\beta = -.798^{**}$, $= 0.78$, $p < 0.05$] among university students.

Table: 2. Hierarchical Regression analysis results for the Moderating effect of Attachment between Emotion Regulation and Sleep Quality among University Students.

Variables	ΔR	B	P
Model1	0.764		
Birthorder		.362**	.000
Qualification		.298*	.000
Model2	0.86		
Sleep Quality		-.345	
R	.256		
R2	.132		
F	1.98		
Model 3	0.89		
Emotion Regulation		-.091	.004
R	.298		
R2	.134		
F	2.89		
Model 4	0.78		

Moderator variable		-.798**	000
R	.345		
R ²	.256		
F	2.78		

Note: Note: Dependent Variable: Emotion Regulation (ER), Sleep Quality (SQ) & moderator is Attachment.

Discussion

Finding of the present paper shows that the moderating role of attachment between emotion regulation and sleep quality among university students. The hypothesis of the study is that the attachment would be moderator between emotion regulations and sleep quality among university students. The current result of the study indicated that of attachment significantly negative moderated in relationship of emotion regulation and sleep quality among university students. The results of the present study are consistent with a number of previously studies 14, 15,16,18,19 &20. Individuals with a higher anxiety or insecure attachment propensity are more likely to up-regulate their emotions, causing them to overreact and retain high levels of unpleasant emotion. People who score relatively high on the attachment avoidance dimension used deactivating methods 12, 13, 14. Low levels of intimacy and emotional involvement in close relationships are linked to attachment avoidance, as well as the suppression of painful thoughts, repression of negative memories, lack of cognitive accessibility to negative self-representations, projection of negative self-traits onto others, failure to acknowledge negative emotions, denial of basic fears, and poor sleep quality. In fact, insecure attachment and emotional dysregulation have been linked in a number of studies, and these two factors appear to have a role in maladaptive behavior and affective difficulties such problematic internet use, eating disorders, anxiety and depression, and sleep issues 16,19,23,24 &25. Emotional dysregulation is a risk factor for substance (e.g., alcohol and drug misuse) and behavioral addiction (e.g., gambling disorder, video game addiction, and smartphone addiction) as well as sleep quality. For example, the internet could be used to help people escape distress and cope with stress, worry, and depression while also reducing sleep quality. The link between emotion regulation and attachment has also been established, with more difficulty in emotion management being linked to worse sleep quality 29, 30 & 31.

The overall findings were supported to our hypotheses, which illustrate that attachment is significant negative moderating between emotion regulation and sleep qual-

ity. The individuals who have secure attachment they didn't have difficulty in regulating their emotions and haven't tendencies of problem is sleep quality, but those individuals who are insecure attachment have problems in emotion regulation and have poor sleep cycle.

Conclusion

The present study explored the moderating effect of attachment patterns, emotional regulation and sleep quality among university students. The findings of present study suggest that relationship does exist between attachment patterns and quality of sleep among university students. Additionally, the findings of current study also demonstrated that significant association exists between emotional regulation and sleep quality.

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References

- Berscheid, E. (1985). Interpersonal attraction. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology*, (pp. 413-484). New York: Random House.
- Tay, L., Tan, K., Diener, E., & Gonzalez, E. (2013). Social relations, health behaviors, and health outcomes: A survey and synthesis. *Applied Psychology: Health and Well-Being*, 5(1), 28-78. doi: 10.1111/aphw.12000
- Reis, H. T., & Franks, P. (1994). The role of intimacy and social support in health outcomes: Two processes or one? *Personal Relationships*, 1(2), 185-197. doi: 10.1111/j.1475-6811.1994.tb00061.x
- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Oxford, England: Lawrence Erlbaum.
- Hazan, C., & Shaver, P. (1987). Romantic love con-

- ceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52(3), 511-524. doi: 0022-3514/87/\$00.75
- Fraley, R. C., & Waller, N. G. (1998). Adult attachment patterns: A test of the typological model. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and closerelationships* (pp. 77-114). New York, NY: Guilford Press.
 - Cameron, J. J., Finnegan, H., & Morry, M. M. (2012). Orthogonal dreams in an oblique world: Ameta- analysis of the association between attachment anxiety and avoidance. *Journal of Research in Personality*, 46(5), 472-476. doi: 10.1016/j.jrp.2012.05.001
 - Simpson, J. A., & Rholes, W. S. (2012). A d u l t attachment orientations, stress, and romantic relationships. In P. Devine & A. Plant (Eds.), *Advances in experimental social psychology* (Vol. 45, pp. 279-328). San Diego, CA: Academic Press.
 - Stanton, S. C. E., & Campbell, L. (2014). Psychological and physiological predictors of health in romantic relationships: An attachment perspective. *Journal of Personality*, 82(6), 528-538. doi: 10.1111/jopy.12056
 - Pietromonaco, P. R., DeBuse, C. J., & Powers, S. I. (2013). Does attachment get under the skin? Adult romantic attachment and cortisol responses to stress. *Current Directions in Psychological Science*, 22(1), 63-68. d o i : 10.1177/0963721412463229
 - Brooks, K. P., Robles, T. F., & Schetter, C. D. (2011). Adult attachment and cortisol responses to discussions with a romantic partner. *Personal Relationships*, 18(2), 302- 320. doi: 10.1111/j.1475-6811.2011.01357.x
 - Powers, S. I., Pietromonaco, P. R., Gunlicks, M., & Sayer, A. (2006). Dating couples' attachment styles and patterns of cortisol reactivity and recovery in response to a relationship conflict. *Journal of Personality and Social Psychology*, 90(4), 613-628. doi: 10.1037/0022-3514.90.4.613
 - Mikulincer, M., Shaver, P. R., and Pereg, D. J. M. (2003). Attachment theory and affect regulation: the dynamics, development, and cognitive consequences of attachment-related strategies. *Motiv. Emot.* 27, 77-102.
 - Schore, J. R., and Schore, A. N. (2008). Modern attachment theory: the central role of affect regulation in development and treatment. *Clin. Soc. Work J.* 36, 9-20. doi: 10.1007/s10615-007-0111-7
 - Cassidy, J. (1994). Emotion regulation: influences of attachment relationships. *Monogr. Soc. Res. Child Dev.* 59, 228-249. doi: 10.2307/1166148
 - Kobak, R. R., Cole, H. E., Ferenz- Gillies, R., Fleming, W. S., and Gamble, W. (1993). Attachment and emotion regulation during mother- teen problem solving: a control theory analysis. *Child Dev.* 64, 231- 245. doi: 10.1111/j.1467-8624.1993.tb02906.x
 - Robles, T. F., & Kane, H. S. (2014). The attachment system and physiology in adulthood: Normative processes, individual differences, and implications for health. *Journal of Personality*, 82(6), 515-527. doi: 10.1111/jopy.12052
 - 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. doi:10.1016/j.jpsychores.2014.12.017
 - Carmichael, C. L., & Reis, H. T. (2005). Attachment, sleep quality, and depressed affect. *Health Psychology*, 24(5), 526-531. doi: 10.1037/0278-6133.24.5.526
 - Scharfe, E., & Eldredge, D. (2001). Associations between attachment representations and health behaviours in late adolescence. *Journal of Health Psychology*, 6(3), 295-307. d o i : 10.1177/135910530100600303
 - Adams, G. C., Stoops, M. A., & Skomro, R. P. (2014). Sleep tight: Exploring the relationship between sleep and attachment style across the lifespan. *Sleep Medicine Reviews*, 18(6), 495-507. doi: 10.1016/j.smrv.2014.03.002
 - Hicks, A. M., & Diamond, L. M. (2011). Don't go to bed angry: Attachment, conflict, and affective and physiological reactivity. *Personal Relationships*, 18(2), 266- 284. doi:10.1111/j.1475-6811.2011.01355.x
 - Sloan, E. P., Maunder, R. G., Hunter, J. J., & Moldofsky, H. (2007). Insecure attachment is associated with the α -EEG anomaly during sleep. *BioPsychoSocial Medicine*, 1(20), 1-6. doi: 10.1186/1751-0759-1-20
 - Burnette, J. L., Davis, D. E., Green, J. D., Worthington, E. L. Jr, & Bradfield, E. (2009). Insecure attachment and depressive symptoms: The mediating role of rumination, e m p a - thy and forgiveness. *Personality and Individual Differences*, 46, 276-280. <https://doi.org/10.1016/j.paid.2008.10.016>
 - Caldwell, J. G., & Shaver, P. R. (2012). Exploring the cognitive- emotional pathways between adult at-

tachment and ego-resiliency. *Individual Differences Research*, 10, 141–152.

- Winterheld, H. A. (2015). Calibrating use of emotion regulation strategies to the relationship context: An attachment perspective. *Journal of Personality*. Advance online publication. <https://doi.org/10.1111/jopy.12165>
- Tan, R., Overall, N. C., & Taylor, J.K. (2012). Let's talk about us: Attachment, relationship-focused disclosure, and relationship quality. *Personal Relationships*, 19, 521–534. <https://doi.org/10.1111/j.1475-6811.2011.01383.x>
- Mikulincer, M., & Shaver, P. R. (2016). *Attachment in adulthood: Structure, dynamics, and change* (2nd ed.). New York, NY: Guilford Press.
- Karreman, A., & Vingerhoets, A. J.J. M. (2012). Attachment and wellbeing: The mediating role of emotion regulation and resilience. *Personality and Individual Differences*, 53, 821–826. <https://doi.org/10.1016/j.paid.2012.06.014>
- Monti, J. D., & Rudolph, K. D. (2014). Emotion-al awareness as a pathway linking adult attachment to subsequent depression. *Journal of Counseling Psychology*, 61, 374–382. <https://doi.org/10.1037/cou0000016>
- Paley, B., Cox, M. J., Burchinal, M. R., & Payne, C. C. (1999). Attachment and marital functioning: Comparison of spouses with continuous-secure, earned-secure, dismissing, and preoccupied attachment stances. *Journal of Family Psychology*, 13(4), 580. <https://doi.org/10.1037/0893-3200.13.4.580>
- Farrell, A. K., Simpson, J. A., Overall, N. C., & Shallcross, S. L. (2016). Buffering the responses of avoidantly attached romantic partners in strain test situations. *Journal of Family Psychology*, 30(5), 580. <https://doi.org/10.1037/fam0000186>
- Lemay, E. P. Jr., & Dudley, K. L. (2011). Caution: Fragile! Regulating the interpersonal security of chronically insecure partners. *Journal of Personality and Social Psychology*, 100(4), 681. <https://doi.org/10.1037/a0021655>