

College student insomnia: The influence of insomnia on emotional aggression

Sheldya Kayla Chintya, Najwa Putri Chairi, Yuliana Mukti Rahmawati*

Universitas Al Azhar Indonesia, Jl. Sisingamangaraja, Jakarta, Indonesia

*Penulis korespondensi, Surel: yuliana.rahmawati@uai.ac.id

Abstract

Poor sleep quality, particularly insomnia, can affect emotional regulation and increase emotional aggression. This study aims to investigate the relationship between insomnia symptoms and emotional aggression in university students. This study employed a quantitative approach, adapting the Regensburg Insomnia Scale (RIS) to assess student insomnia and the Brief Aggression Questionnaire (BAQ) to measure emotional aggression. Both instruments use Cronbach's alpha for reliability and construct validity. This study involved 69 college students with sleeping problems, selected using a convenience sampling technique. Data were collected using an online questionnaire via Google Forms. Data analysis used correlational statistical methods to explore the role of insomnia to emotional aggression. This study found a significant contribution of insomnia to emotional aggression in college students. The results of the analysis show that the higher a person's level of insomnia, the higher the level of emotional aggression. These findings are expected to provide a further understanding of the impact of insomnia on the emotional aggression of university students, as well as a reference for the development of intervention strategies to improve sleep quality and reduce emotional aggression among university students.

Keywords: college students, emotional aggression, insomnia sleep quality

Abstrak

Kualitas tidur yang buruk, terutama insomnia, dapat memengaruhi regulasi emosi dan meningkatkan agresi emosional. Penelitian ini bertujuan untuk menyelidiki hubungan antara gejala insomnia dan agresi emosional pada mahasiswa. Penelitian ini menggunakan pendekatan kuantitatif dan mengadaptasi *Regensburg Insomnia Scale* (RIS) yang mengukur insomnia dan *Brief Aggression Questionnaire* (BAQ) mengukur agresi emosi. Kedua alat ukur tersebut menggunakan reliabilitas Cronbach alfa dan validitas konstruk. Penelitian ini melibatkan 69 mahasiswa yang memiliki masalah tidur, yang dipilih dengan menggunakan teknik *convenience sampling*. Data dikumpulkan dengan menggunakan kuesioner *online* melalui *Google Forms*. Analisis data menggunakan metode statistik korelasional untuk mengeksplorasi peran gejala insomnia terhadap agresi emosional. Hasil dari penelitian ini menemukan adanya peran yang signifikan gejala insomnia terhadap agresi emosi mahasiswa. Individu yang memiliki tingkat insomnia yang tinggi memiliki tingkat agresi emosi yang tinggi pula. Temuan ini diharapkan dapat memberikan pemahaman lebih lanjut mengenai dampak insomnia terhadap agresi emosional mahasiswa, serta menjadi acuan pengembangan strategi intervensi untuk meningkatkan kualitas tidur dan menurunkan agresi emosional di kalangan mahasiswa.

Kata kunci: agresi emosional; insomnia; kualitas tidur; mahasiswa

1. Introduction

Emotional aggression is a behavior where a person has intense or excessive negative emotions, such as anger. Although emotional aggression is quite different from physical aggression, emotional aggression itself is as dangerous as physical or verbal aggression. Even this excessive sense of negative emotion can be a factor that encourages someone to commit physical or verbal aggression behavior. According to Horan, Chory, and Goodboy (2010),

aggression is described as antisocial behavior, while according to Efrati - Virtzer and Margarit (2009) identify aggression as disruptive behavior. According to Buss and Perry (1992) aggression behavior is a behavior whose intention is to threaten, hurt, or harm individuals or become the target object of the behavior either physically or verbally and directly or indirectly. The phenomenon of aggression itself is often found in the scope of students, especially in situations of high academic or social pressure.

One kind of aggression such as emotional aggression is still a fairly common problem among college students in recent years. Research shows that negative emotions, such as anger and frustration, are closely related to the tendency of aggressive behavior (Verona & Kilmer, 2007), for example in college students. The higher the level of negative emotions experienced, the greater the tendency of students to show aggressive behavior, both verbally and non-verbally. In addition, another study found that emotional intelligence also plays an important role in aggressive behavior; students with low emotional intelligence tend to be more easily involved in aggressive behavior, while those who can manage their emotions well tend to be better able to control aggressive urges (Savira et al., 2022). Based on the data, more than half of the students showed a fairly high level of aggression, which could be influenced by academic pressure, social environment, and less-than-optimal emotion regulation skills (Hussain Ganie & Malla, 2024). This finding confirms that emotional aggression in college students is a multidimensional phenomenon that needs special attention in efforts to improve mental health in the college environment.

This aggression itself can result in various things that happen to students such as a decrease in performance in learning, which makes the student's GPA low. Apart from having an effect on lecture performance emotional aggression itself causes interpersonal problems, stress, anxiety, and also depression (Yaratan & Uludag, 2012). If emotional aggression is not addressed immediately, this can lead to students having violent behavior, criminality, and more serious psychosocial disorders. Such as committing violence against their peers; these students can behave aggressively, such as screaming when talking, cursing at their friends, yelling when intimidating, calling their friends bad names, and joking excessively (Purnama et al., 2018).

One factor that is thought to play a role in increasing emotional aggression is sleep disorders, especially insomnia (Kamphuis et al., 2012). Insomnia itself is defined as a chronic sleep disorder in which a person does not have adequate sleep needs, both in terms of sleep quality and sleep hours, as well as how long a person sleeps. The characteristics of insomnia itself can be, difficulty falling asleep at night, unable to maintain sleep, and waking up early and unable to fall back asleep (Aroyewun & Nwokedi, 2023). Sleep disorders such as insomnia are commonly found among university students (Arbinaga, Joaquin-Mingorance, & Fernández-Cuenca, 2019).

Insomnia is a common phenomenon experienced by university students and is often closely related to the level of anxiety and stress they face. Recent research shows that anxiety experienced by university students, such as worries about the future, family problems, and academic pressure, are the main factors that trigger insomnia (Satura, Ernawati, & Purnomosidi, 2025). In addition, intensive use of gadgets also contributes to this sleep disorder, as the habit of staying up late and exposure to blue light from electronic devices disrupts the circadian rhythm of college students (Stikes et al., 2023). Insomnia in college

students not only impacts sleep quality, but also reduces concentration, memory, and overall academic performance. Thus, insomnia in college students is a multidimensional problem that requires special attention in the context of their mental health and lifestyle

Furthermore, someone who does not have quality sleep, such as lack of sleep, body functions will be damaged. Lack of quality sleep can also adversely affect a person's mental health and can cause a person to experience increased stress, excessive anxiety, depression, decreased ability to handle complex tasks, and reduced ability to find solutions. A study states that poor sleep quality, including insomnia, can cause neurochemical changes in the brain, affect emotion regulation, and increase emotional reactivity, which can ultimately lead to aggressive behavior (Utomo, 2019).

Based on the above, some previous studies have indeed shown an association between poor sleep quality and increased emotional aggression (Arbinaga et al., 2019). However, these results are still general and not many have significantly examined insomnia and its relationship with aggressive emotions, especially in university students. In addition, there are differences in findings regarding the role of insomnia in influencing emotion regulation where some studies show a strong relationship (Aroyewun & Nwokedi, 2023), while others show that the effect can be minimized by other factors such as academic stress and emotional intelligence (Savira, Sari, & Harahap, 2022). Therefore, this study was conducted with the aim of addressing the gap in the literature by providing a specific focus on insomnia and emotional aggression among university students as a group vulnerable to sleep disturbances.

2. Methods

This study used a quantitative approach to collect and analyze data. The participants of this study were active students at universities in Indonesia. With a sample size of 69 respondents using the convenience sampling technique. The measuring instruments used in this study are the Regensburg Insomnia Scale (RIS) to assess insomnia in student. This measuring instrument was developed by the University of Regensburg team (2013). Which consists of four dimensions, namely (1) Sleep Depth (for example, I often wake up earlier than I want), (2) Sleep Quantity (for example, I feel like I don't sleep at all throughout the night) (3) Fearfully Focusing on Insomnia (for example, I am afraid to go to bed because of the sleep disturbance I experience) (4) Daytime Fitness & Medication (for example, I feel fresh and energized during the day, I take medicine to fall asleep). Using a 5-point Likert scale (1- never to 5- always). Meanwhile, the Brief Aggression Questionnaire (BAQ) measuring instrument to assess emotional aggression. This instrument was developed by Webster et al. (2014). We measured 2 aspects of aggression from the four dimensions of the tool, namely: (1) Anger (e.g., I often have difficulty controlling my anger) and (2) Hostility (e.g., I sometimes feel very jealous of others). Using a 4-point Likert scale (1- strongly disagree to 4- strongly agree).

3. Results dan Discussion

Based on the table 1, the data shows that the age range of respondents is between 18 and 25 years old. The highest percentage is at 20 years old (34.8%), followed by 18 years old (23.2%) and 19 years old (20.3%). The other age groups-21, 22, 23, and 24 years old, counted for 2.9%, with the exception of 25 years old, which accounted for 4.3%. This shows that most respondents are in the early adult stage, which is generally university students. In terms of gender distribution, 29% of respondents were male and 71% were female. The dominance of female respondents is an important consideration in further analysis, following the findings of

previous studies. Furthermore, the analysis will be conducted to see the contribution of insomnia to emotional aggression towards college students using regression analysis.

Table 1. Descriptive statistics

	N	Freq	%	Mean	SD
Age	69			19.9	1.78
18		16	23.2%		
19		14	20.3%		
20		24	34.8%		
21		6	8.7%		
22		2	2.9%		
23		2	2.9%		
24		2	2.9%		
25		3	4.3%		
Gender	69				
Male		20	29%		
Female		49	71%		

Table 2 shows that there is a significant influence between insomnia and emotional aggression. The results of the regression analysis show a value of $F = 6.93$ with $p < .001$, which means that this regression model can be used to predict emotional aggression. In addition, the coefficient of determination (R^2) value of 0.242 indicates that the variables of insomnia, age, and gender together contribute 24.2% to emotional aggression. Specifically, the insomnia variable has a significant effect ($p < .001$) with an estimated value of 0.906 and a standard estimate of 0.4952, which indicates that the higher the level of insomnia, the higher the level of emotional aggression. Meanwhile, the variables of age and gender did not show a significant effect on emotional aggression ($p > 0.05$). This means that in this model, insomnia is the dominant predictor in explaining emotional aggression, although other factors also contribute.

Table 2. Hypothesis testing

Model	R	R^2	Overall Model Test			
			F	df1	df2	p
1	0.492	0.242	6.93	3	65	< .001
Predictor	Estimate	Standard Error	t-value	p-value	Standard Estimate	
Intercept	23.774	12.232	1.944	0.056		
Insomnia	0.906	0.202	4.489	< .001	0.4952	
Age	-0.361	0.570	-0.633	0.529	-0.0685	
Gender	-0.478	2.260	-0.211	0.834	-0.0508	

This study found a significant relationship between insomnia and emotional aggression. This is followed by the experimental study by Bozzay & Verona (2023), that sleep loss may predict aggression, also shorter sleeper tends to do rash action. This is because sleep disorders

or lack of sleep can make a person experience emotional instability, which results in a person tending to behave aggressively (Novela, Kuncara, & Artikel, 2022).

The results showed a coefficient value of 0.906 with high significance ($p < 0.001$), which means that any increase in insomnia scores will be associated with an increase in emotional aggression scores by 0.906. This shows that insomnia contributes to the deterioration of emotional regulation, which can cause emotional aggression. The results of this study are under the theory put forward by Raviyoga dan Marheni (2019), that student aggression behavior can be influenced by internal factors and external factors. Internal factors are factors from within the individual, one of which is sleep quality. When someone has poor sleep quality or lacks sleep, individuals are likely to get angry and feel irritable, which can lead to emotional aggression behavior. (Guswani & Kawuryan, 2011)

However, the regression model shows that insomnia contributes to emotional aggression with an R^2 value of 0.242, or 24.2%. This shows that other factors can affect a person's level of emotional aggression, such as a person's level of mental health, stress, social situations, and other psychological factors (Faradisa Fauziyah & Nur Aretha, 2021).

However, the regression model shows that insomnia contributes to emotional aggression with an R^2 value of 0.242 or 24.2%. Interestingly, the gender variable did not show a significant influence on emotional aggression, even though the majority of respondents were female. One possible cause is because women tend to be more open in expressing stress or emotional problems, including sleep disorders, but express aggression in a non-physical or internalized form (Purba, Sinolungan, & David, 2025) while men may tend to suppress or externalize their emotions differently. These results suggest that the effect of gender on emotional aggression may be mediated by different coping styles or emotion regulation, rather than by gender itself as a single variable (Hussain Ganie & Malla, 2024).

Overall, the results of this study highlight the importance of insomnia or distraction as a factor that can affect emotional regulation and emotional aggression behavior. Given the impact on emotional aggression, interventions in the form of sleep management as well as stress management may reduce symptoms of emotional aggression in insomniac symptoms.

4. Conclusion

This study found a significant relationship between insomnia and emotional aggression in college students. The results of the analysis show that the higher a person's level of insomnia, the higher the level of emotional aggression. Although insomnia has a significant contribution to emotional aggression, only 24.2% of the variability in emotional aggression can be explained by insomnia, suggesting that other factors, such as stress, social conditions, and other psychological factors, also play a role in aggressive behavior. In addition, this study also found that women tended to have higher levels of insomnia and emotional aggression than men, although this difference was not tested significantly. This study confirms the importance of attention to sleep quality to manage emotion regulation and reduce aggressive behavior. Interventions such as sleep management and stress management may be effective strategies to reduce the negative impact of insomnia on college student's emotional well-being. Further research is needed to explore other factors that contribute to emotional aggression to broaden the understanding of the relationship between sleep disturbance and emotion regulation.

Acknowledge

We would like to express our sincere gratitude to everyone who contributed to the completion of this study. Special thanks go to the students and schools in South Jakarta who participated in the research, providing invaluable data and insights. We also extend our appreciation to our academic advisors and colleagues for their constructive feedback and guidance throughout the research process.

Reference

- Arbinaga, F., Joaquin-Mingorance, M., & Fernández-Cuenca, S. (2019). Expression of anger in university students according to perceived quality of sleep. *Sleep Science, 12*(1), 28–34. <https://doi.org/10.5935/1984-0063.20190058>
- Aroyewun, B. A., & Nwokedi, B. C. (2023). Aggressive Behaviour in Nigerian University: Examining the Role of Sleep Quality and Examination Anxiety. *Cradle of Knowledge: African Journal of Educational and Social Science Research (The), 11*(2), 85–91. <https://doi.org/10.4314/ajessr.v11i2.4>
- Bozzay, M. L., & Verona, E. (2023). Linking Sleep and Aggression: Examining the Role of Response Inhibition and Emotional Processing. *Clinical psychological science : a journal of the Association for Psychological Science, 11*(2), 271–289. <https://doi.org/10.1177/21677026221100235>
- Buss, A. H., & Perry, M. (1992). *The aggression questionnaire*. *Journal of Personality and Social Psychology, 63*, 452–459.
- Efrati-Virtzer, M., & Margalit, M. (2009). *Students' behavior difficulties, sense of coherence and adjustment at school: Risk and protective factors*. *European Journal of Special Needs Education, 24*(1), 59–73.
- Faradisa Fauziyah, N., & Nur Aretha, K. (2021). Hubungan Kecemasan, Depresi Dan Stres Dengan Kualitas Tidur Mahasiswa Fakultas Kedokteran Selama Pandemi Covid-19. In *Herb-Medicine Journal*.
- Guswani, A. M., & Kawuryan, F. (2011). *Perilaku Agresi pada Mahasiswa Ditinjau dari Kematangan Emosi. 1 no 2*.
- Horan, S. M., Chory, R. M., & Goodboy, A. K. (2010). *Understanding students' classroom justice experiences and responses*. *Communication Education, 59*(4), 453–474.
- Hussain Ganie, A., & Malla, A. (2024). Emotional Intelligence and Aggression among University Students. *International Journal of Indian Psychology, 11*. <https://doi.org/10.25215/1103.233>
- Kamphuis, J., Meerlo, P., Koolhaas, J. M., & Lancel, M. (2012). Poor sleep as a potential causal factor in aggression and violence. *Sleep Medicine, 13*(4), 327–334. <https://doi.org/10.1016/j.sleep.2011.12.006>
- Novela, I. Q., Kuncara, D. B., & Artikel, H. (2022). Hubungan antara Kualitas Tidur dengan Kecenderungan Berperilaku Agresif pada Mahasiswa. *Jurnal Kedokteran STM, 5*. Retrieved from <https://jurnal.fk.uisu.ac.id/index.php/stm>
- Purba, R., Sinolungan, J. S. V., & David, L. E. V. (2025). Hubungan Durasi Tidur dengan Agresivitas Mahasiswa Program Studi Pendidikan Dokter Universitas Sam Ratulangi Relationship between Sleep Duration and Aggression among Medical Students of Universitas Sam Ratulangi. *Medical Scope Journal, 7*(1), 91–95. <https://doi.org/10.35790/msj.v7i1.559>
- Raviyoga, T.T. Marheni, A. (2019). Hubungan kematangan emosi dan konformitas teman sebaya terhadap agresivitas remaja di SMAN 3 Denpasar. *Jurnal Psikologi Udana, 6*.
- Satura, A., Ernawati, S., & Purnomosidi, F. (2025). *Kecemasan Pada Mahasiswa Insomnia (Vol. 4)*.
- Savira, M., Sari, H., & Harahap, I. M. (2022). Hubungan Antara Kecerdasan Emosional Dengan Perilaku Agresi Pada Mahasiswa. *Idea Nursing Journal, XIII*(1), 2022.
- Stikes, R., Dahlan, A., Marwati, C., Ahmad, S., Cirebon, D., & Trihandayani, Y. (2023). Hubungan Tingkat Stress dengan Insomnia pada Mahasiswa. *Jurnal Mahasiswa Ilmu Farmasi Dan Kesehatan, 1*(3). <https://doi.org/10.59841/jumkes.v1i2>
- Utomo, anthony anggoro. (2019). Hubungan antara Kurang Tidur (Sleep Deprivation) Dengan agresi Pada Dewasa Awal Dengan suasana hati mediator. *Calyptra Jurnal Ilmiah Mahasiswa Universitas Surabaya, 8*. Retrieved from <https://journal.ubaya.ac.id/index.php/jimus/issue/view/166>

- Verona, E., & Kilmer, A. (2007). Stress exposure and affective modulation of aggressive behavior in men and women. *Journal of Abnormal Psychology*, 116(2), 410–421. <https://doi.org/10.1037/0021-843X.116.2.410>
- Yaratan, H., Uludag, O. (2012). The impact of verbal aggression on burnout: An empirical study of student. *Procedia Social and Behavioral Science*, 46. <https://doi.org/10.1016/j.sbspro.2012.05.064>