

PREVALENCE OF DEPRESSION, ANXIETY, STRESS IN INDONESIAN FEMALE STUDENTS :LITERATURE REVIEW

Syadia Callista^{1*}, Astika Nabilla², Fatimah Kayla³

^{1,2,3}Faculty of Medicine, Islamic University of Malang, Malang, Indonesia

ABSTRAK

Article History:

Submitted: 18/07/2025

Accepted: 16/09/2025

Published: 25/03/2026

Keywords:

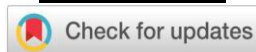
Anxiety,
Depression,
Female Students,
Stress

Abstract:

The cause of depression, anxiety, and stress in female students is due to the burden of the lecture and academic environment to get the best grades. The purpose of this article is to add the scientific treasure trove regarding the prevalence of depression, anxiety, and stress in Indonesian female students. This type of research is a literature study obtained from scientific articles that are searched using the keywords Anxiety, Depression, Indonesia, Students, Students, Stress, and Prevalence through Google Scholar, PubMed, Science Direct and Research Gate. The criteria for the article used have been published for 10 years, namely 2015-2025, the title and content of the journal are in accordance with the title of the research. The results of the analysis from 23 articles showed that most of the respondents were female students with higher levels of depression, anxiety, and stress than men.

Abstrak:

Penyebab depresi, ansietas, dan stres pada mahasiswi dikarenakan karena beban lingkungan perkuliahan dan akademis untuk mendapatkan nilai terbaik. Tujuan dari artikel ini adalah untuk menambah khazanah keilmuan mengenai prevalensi depresi, ansietas, dan stres pada mahasiswi Indonesia. Jenis penelitian ini adalah studi literatur yang diperoleh dari artikel-artikel ilmiah yang ditelusuri menggunakan kata kunci Ansietas, Depresi, Indonesia, Mahasiswa, Mahasiswi, Stres, dan Prevalensi melalui Google Scholar, PubMed, Science Direct dan Research Gate. Kriteria artikel yang digunakan telah diterbitkan 10 tahun, yaitu 2015-2025, judul dan isi jurnal sesuai dengan judul penelitian. Hasil analisis dari 23 artikel menunjukkan bahwa sebagian besar responden merupakan mahasiswi dengan tingkat depresi, ansietas, dan stres yang lebih tinggi ketimbang laki-laki.



*Corresponding Author:

Syadia Callista
Faculty of Medicine,
Islamic University of Malang,
Malang, Indonesia.
Email: calista.syadia@gmail.com

How to Cite:

S. Callista, A. Nabilla, F. Kayla, "Prevalence of Depression, Anxiety, Stress in Indonesian Female Students: Literature Review", Indonesia. J. Heal. Sci., vol. 10, no. 1, pp. 18-24, 2026.

INTRODUCTION

According to the Great Dictionary of Indonesian (KBBI), students can be interpreted as people who study in higher education (Kamus Besar Indonesian Online, kbbi.kemdikbud.go.id). College students, particularly first-year students, are in a critical transitional phase from secondary education to higher education, during which they face substantial changes in learning environments, daily routines, and levels of independence. This transition places them at increased risk of mental health problems, as they are required to independently manage academic demands, personal responsibilities, and adaptation to a new social and living environment, thereby heightening their vulnerability to psychological [1]. In several studies, it has been explained that Indonesian students experience depression, anxiety, and stress [2], [3].

Depression is a mental disorder that involves a burdened mood or loss of interest and passion for activities for a long period of time and can occur to anyone [4]. Anxiety is a feeling that can be accompanied by physical tension, other behavioral and cognitive symptoms that are difficult to control, and cause significant stress [5]. Stress can be interpreted as a state of worry or mental tension caused by a complicated condition. Stress is a natural human response that encourages us to face various challenges and threats to life [6].

A study suggests factors that can affect depression, anxiety, and stress such as academic load in the form of assignments, exams, and projects, as well as pressure to achieve good grades [7]. In addition, excessive pressure in the lecture environment can lead to stress [8]. When students do not have motivation, it can make the student unable to adjust and unable to achieve what he wants to do [9].

Knowledge related to depression, anxiety, and stress in the academic environment is quite clear and widespread among academics, both lecturers and students themselves. It was found that

85.33% of undergraduate pharmacy students experiencing depression, anxiety, and stress were female students who were enrolled in odd semesters [10]. Based on the study findings, the average age of Airlangga University students from the 2016–2018 cohorts who experienced symptoms of depression, anxiety, and stress was 19 years, with female students accounting for 70% of the cases [11]. Although the number of discoveries is high, there are still few efforts from campuses to reduce the number of possible depression, anxiety, and stress in its students.

The purpose of this article is to add the scientific treasure trove regarding the prevalence of depression, anxiety, and stress in Indonesian female students.

RESEARCH METHOD

This study is a literature study obtained from scientific articles searched through Google Scholar, PubMed, Science Direct and Research Gate using the keywords Anxiety, Depression, Indonesia, Students, Female Students, Stress, and Prevalence. The criteria for the article used have been published for 10 years, namely 2015-2025, the title and content of the journal are in accordance with the title of the research.

RESULT AND ANALYSIS

Table 1.
Results and Analysis of Articles

Journal	Population	Samples	Instrument	Demografi
[2]	Students of the Faculty of Medicine throughout Indonesia aged 20-24 years	258	DASS 42	Female: 64.7% Male: 35.3%
[10]	Pharmacy students in Malang post-pandemic	150	DASS 42	Female: 85.33%, students in semesters 1, 3, 5, and 7
[11]	Medical student of Airlangga University, Surabaya	359	DASS 42	Female: 71%, mean age 19 years
[12]	Students of	100	MMSQ	Women:

	the Faculty of Medicine, University of North Sumatra aged 18-21 years			61.1% moderately stressed Male: 38.9% moderately stressed
[13]	University of Surabaya students in the age range of 17-21 years old	416	DASS-42	Age 21 years old with a mean of 34.9
[14]	University students in Indonesia during COVID-19	271	DASS-42	220 females, 51 males, mean age 20.11 years
[15]	Students from 49 medical faculties in Indonesia during COVID-19	7949	GAD-7, PHQ-2	Female: 69.4%, mean age 20.9 years
[16]	Medical students in Jakarta before the pandemic	532	DASS, Brief COPE, and CD-RISC	Female: 59.6% with an age range of 17-27 years
[17]	Sriwijaya University Students	1564	DASS-42	Not specifically explained
[18]	Active student of the Faculty of Psychology, Hang Tuah University Surabaya	207	DASS-42	Gender (L: 28.9%, P: 71.1%), ethnicity, family income, year of study
[19]	Underprivileged students receiving Bidikmisi/KIP scholarship at Diponegoro University	872	DASS-21 and CD-RISC 10	Gender (L: 28.21%, P: 71.79%), regional origin, parents' employment status, parents' income
[20]	Students of Padang State University during the Covid-19 pandemic	238	DASS-42	male 17.6% (2020) & 43.7% (2017); women 82.4% and 56.3%; Ages: 17-

				19 (2020) & 21-24 (2017)
[21]	Preclinical student of FKIK Unika Atma Jaya, Jakarta (class of 2016-2018)	196	DASS-42 and MS-Q	Male 50% Female 50% Age: 18-21 years old
[22]	Preclinical students class of 2017-2019 FKIK Catholic University of Indonesia Atma Jaya	185	DASS-42 and PHQ-9	Women (75.14%) are more than men (25.86%)
[23]	Active students in the VI semester of FIKKIA, Universitas Airlangga Banyuwangi with an age range of 20-22 years	54	CES-D	Female (66.67%) and male (33.33%)
[24]	Undergraduate students during COVID-19	606	DASS-21, WORLD HEALTH ORGANIZATION QoL-BREF	81% of women aged 21-27 years, 98.5% unmarried
[25]	Students of the University of Nusa Cendana class of 2018-2020	100	DASS-21	Random subjects, from 8 different study programs
[26]	Mahasiswa Universitas yang berada di Jawa Barat	200	Customized questionnaire (Likert scale, closed-ended questions)	Categorized by gender, generation, faculty
[27]	Medical students at the University of Indonesia	532	DASS, Brief COPE, CD-RISC	A mix of clinical/practice-clinic students with various living conditions
[28]	Students	510	DSI-SS,	76.7%

from various universities in Indonesia, aged 18-25 years	PHQ-9	female, mean age 19.7 years, diverse origin
--	-------	---

Respondent Characteristics

From the research data that has been obtained from previous studies, it is shown that the respondents are students who have met the inclusion criteria and did not meet the exclusion criteria. From the research data that has been obtained, it is shown that the age range of students and female students is 17-27 years old. The most genders that were the sample of previous research were women.

DISCUSSION

Distribution of Depression, Anxiety, and Stress Levels

The results of a systematic literature review showed that the levels of depression, anxiety, and stress were higher in the group of female student respondents with an age range of 17-27 years.

Sex differences in stress vulnerability are closely linked to biological variations in neuroendocrine and autonomic regulation. The stress response is primarily mediated by two major physiological systems, namely the hypothalamic–pituitary–adrenal (HPA) axis and the sympathetic nervous system. These systems work together to help the body adapt to stressors by initiating hormonal and cardiovascular responses and by maintaining homeostasis through negative feedback mechanisms.

The HPA axis plays a central role in regulating the secretion of cortisol, a key stress hormone that influences metabolism, immune function, and brain activity. In parallel, the sympathetic nervous system is responsible for rapid physiological adjustments, including increases in heart rate, blood pressure, and alertness. Effective coordination between these systems is essential for an adaptive stress response, allowing the body to respond

appropriately and recover once the stressor has subsided.

However, the regulation and reactivity of these systems differ between men and women. Evidence suggests that men generally exhibit stronger activation of the HPA axis and autonomic nervous system in response to stress, resulting in higher acute physiological responses. In contrast, women's stress responses are strongly influenced by sex hormones, particularly estrogen and progesterone, which can modulate HPA axis activity and sympathetic output. These hormonal influences may alter cortisol secretion patterns and reduce the efficiency of negative feedback mechanisms to the brain.

As a result, although female sex hormones may attenuate certain acute stress responses, they may also contribute to prolonged or dysregulated stress processing under specific conditions. This altered regulation can increase susceptibility to stress-related symptoms, especially when stress exposure is chronic or repeated. Consequently, women may be more vulnerable to experiencing higher levels of perceived stress and stress-related psychological outcomes compared to men, despite differences in physiological reactivity [29]

Not only that, the demands of dual roles such as being a wife or mother while studying and family expectations also affect the stress level of female students [30]. This dual role conflict if it occurs more often in female students, it can reduce their motivation to learn, if there is less and less conflict, the higher the motivation to learn [31].

Psychosocial stressors, including role expectations, academic pressure, and motivational challenges, may further intensify physiological stress responses and contribute to negative academic outcomes. Among university students, who are in a critical developmental transition, the combination of biological vulnerability and environmental demands can reduce learning motivation, engagement, and

academic persistence. Prolonged exposure to stress may impair self-regulation and coping capacity, creating a cycle in which increased stress leads to reduced motivation and academic difficulties, which in turn exacerbate stress levels. This interaction highlights that stress-related outcomes in students are not solely driven by biological or social factors alone, but rather by the dynamic interplay between neurobiological processes and psychosocial contexts [32].

These show that several factors can affect how women experience stress.

CONCLUSION

The level of depression, anxiety, and stress in university students is influenced by many factors, with the prevalence of stress, depression and anxiety being the most common among female students.

ACKNOWLEDGEMENTS

The authors would like to express their sincere gratitude to the University of Islam Malang for providing the facilities and support for this research. We also thank our colleagues for their valuable input and suggestions during the course of this study.

REFERENCE

- [1] J. Ou, K. Wang, M. Zuo, D. Chen, and H. Luo, "Factors Influencing the Mental Health of First-Year College Students: Evidence from Digital Records of Daily Behaviors," *Behavioral Sciences*, vol. 15, no. 5, May 2025, doi: 10.3390/bs15050618.
- [2] N. Romadhona, S. Fitriyana, R. G. Ibnusantosa, and T. Respati, "Level of Depression, Anxiety, and Stress of College Students in Indonesia during the Pandemic COVID-19," *Global Medical and Health Communication (GMHC)*, vol. 9, no. 3, Dec. 2021, doi: 10.29313/gmhc.v9i3.8337.
- [3] T. Shah and T. Pol, "Prevalence of depression and anxiety in college students," *Journal of Mental Health and Human Behaviour*, vol. 25, no. 1, p. 10, 2020, doi: 10.4103/jmhbb.jmhbb_16_20.
- [4] World Health Organization, "Depression." Accessed: Feb. 06, 2026. [Online]. Available: https://www.who.int/health-topics/depression#tab=tab_1
- [5] World Health Organization, "Anxiety disorders." Accessed: Feb. 06, 2026. [Online]. Available: <https://www.who.int/news-room/fact-sheets/detail/anxiety-disorders>
- [6] World Health Organization, "Stress." Accessed: Feb. 06, 2026. [Online]. Available: <https://www.who.int/news-room/questions-and-answers/item/stress>
- [7] A. Al Rivaldi, J. Soedarto, K. Tembalang, K. Semarang, and J. Tengah, "Analisis Faktor Penyebab Stres pada Mahasiswa dan Dampaknya terhadap Kesehatan Mental," *Jurnal Inovasi Riset Ilmu Kesehatan*, no. 4, pp. 11–18, 2024, doi: 10.55606/detector.v2i3.4378.
- [8] R. Kurniawan Djoar *et al.*, "Faktor-Faktor Yang Mempengaruhi Stress Akademik Mahasiswa Tingkat Akhir Factors Influencing Academic Stress Among Senior College Students," *Jambura Health and Sport Journal*, vol. 6, no. 1, 2024.
- [9] W. R. Syachtiyani and N. Trisnawati, "Analisis Motivasi Belajar Dan Hasil Belajar Siswa Di Masa Pandemi Covid-19," *Prima Magistra: Jurnal Ilmiah Kependidikan*, vol. 2, no. 1, pp. 90–101, Mar. 2021, doi: 10.37478/jpm.v2i1.878.
- [10] D. Prawira Nugraha and R. Anshari, "Jurnal Ilmiah STIKES Yarsi Mataram An Overview the Levels of Depression, Anxiety and Stress in Pharmacy Students Post Covid-19 Pandemic," 2025. [Online]. Available: <http://journal.stikesyarsimataram.ac.id/index.php/jik>
- [1] T. Rizkina Maulida, A. Karimah, P. Lestari, and M. Rochmanti, "223 Depression, Anxiety, and Stress among

- Medical Students in the Faculty of Medicine Universitas Airlangga Year Batch,” 2020.
- [12] S. Inama and Y. Sarastri, “Stress Levels Among Undergraduate Medical Students On Exposure To Online Learning,” *Jurnal Pendidikan Kedokteran Indonesia: The Indonesian Journal of Medical Education*, vol. 11, no. 1, p. 98, Mar. 2022, doi: 10.22146/jpki.64507.
- [3] H. Wahyuni, S. Elgeka, J. K. Pudjibudojo, A. Theodosia, and N. Poernomo, “The Extent of Depression, Anxiety, and Stress on Undergraduate Students The Effect of Adaptation During Pandemic Covid-19,” 2022.
- [14] F. N. Rosita, “Prevalensi dan Asosiasi Antara Depresi, Kecemasan, Stres, dan Kualitas Tidur Pada Mahasiswa Selama Pandemi Covid-19,” *PSIKODIMENSIA*, vol. 20, no. 2, pp. 131–143, Dec. 2021, doi: 10.24167/psidim.v20i2.3507.
- [15] P. A. Primatanti, Y. Turana, W. S. Sukarya, M. Wiyanto, and A. B. S. Duarsa, “Medical students’ mental health state during pandemic COVID-19 in Indonesia,” *Bali Medical Journal*, vol. 12, no. 2, pp. 1295–1301, 2023, doi: 10.15562/bmj.v12i2.4104.
- [16] A. S. Ramadianto, I. Kusumadewi, F. Agiananda, and N. W. Raharjanti, “Symptoms of depression and anxiety in Indonesian medical students: association with coping strategy and resilience,” *BMC Psychiatry*, vol. 22, no. 1, Dec. 2022, doi: 10.1186/s12888-022-03745-1.
- [17] U. Habibah, R. A. Syakurah, D. S. Ikhsan, E. F. Zulissetiana, and S. Aini, “Depression, anxiety, and stress among students of Sriwijaya University,” *Indigenous: Jurnal Ilmiah Psikologi*, vol. 6, no. 3, pp. 23–35, Dec. 2021, doi: 10.23917/indigenous.v6i3.12629.
- [18] F. Patrika and R. B. Villaruel, “Depression, Anxiety, And Stress Among Students In Surabaya During Covid-19 Pandemic,” *Insight: Jurnal Ilmiah Psikologi*, vol. 23, no. 2, Aug. 2021, doi: 10.26486/psikologi.v23i2.1601.
- [19] H. Sakti, D. V. S. Kaloeti, and A. N. H. Sholikhah, “Resilience as mediator of depression, anxiety, and stress among underprivileged university students,” *Jurnal Psikologi*, vol. 24, no. 1, pp. 87–100, May 2025, doi: 10.14710/jp.24.1.87-100.
- [20] F. Fahrianti and P. Universitas Negeri Padang, “Perbedaan Kecemasan Mahasiswa Baru Ditinjau dari Jenis Kelamin pada Masa Pandemi Covid-19,” 2021.
- [21] S. Nurrezki, R. Irawan, F. Kedokteran, and I. Kesehatan, “Hubungan Stres, Cemas, Dan Depresi Dengan Kejadian Migrain Pada Mahasiswa Kedokteran Di Jakarta Relationship Of Depression, Anxiety, And Stress With The Incidence Of Migraine Among Medical Students In Jakarta,” Jakarta Utara, 2020.
- [22] G. Samudero, H. Hadiyanto, and D. Agus, “Factors Associated With Depression Among Medical Students In A Medical School During The Covid-19 Pandemic,” *Jurnal Pendidikan Kedokteran Indonesia: The Indonesian Journal of Medical Education*, vol. 11, no. 1, p. 89, Mar. 2022, doi: 10.22146/jpki.63305.
- [23] I. H. Sa’adah, R. P. Wardani, Y. L. E. Wardani, W. N. Aini, and J. D. E. Sari, “The Relationship Between Gender And The Level Of Depression Among Students In Indonesia: A Cross-Sectional Study,” *Journal of Community Mental Health and Public Policy*, vol. 7, no. 1, pp. 71–79, Oct. 2024, doi: 10.51602/cmhp.v7i1.182.
- [24] H. Karuniawati *et al.*, “Assessment of Mental Health and Quality of Life Status of Undergraduate Students in Indonesia during COVID-19 Outbreak: A Cross-Sectional Study,” *Int. J. Environ. Res. Public Health*, vol. 19, no. 19, Oct. 2022, doi: 10.3390/ijerph191912011.

- [25] S. A. S. Mola, M. D. Melly, and E. S. Yublina Pandie, "Implementation of the Psychological Scale Depression Anxiety Stress Scale 21 (Dass-21) in the Expert System for Diagnosing Mental Health Disorder," *Compiler*, vol. 13, no. 1, p. 19, May 2024, doi: 10.28989/compiler.v13i1.1938.
- [26] S. K. Maisharah and M. Umer Farooq Mujahid, "Mental Health Issues in Higher Education: Increasing Awareness, Access to Therapy, and Campus Support," 2023.
- [27] A. S. Ramadianto, I. Kusumadewi, F. Agiananda, and N. W. Raharjanti, "Symptoms of depression and anxiety in Indonesian medical students: association with coping strategy and resilience," *BMC Psychiatry*, vol. 22, no. 1, Dec. 2022, doi: 10.1186/s12888-022-03745-1.
- [28] L. Geshica, F. Djajadisastra, and S. Sugiarti, "The Indonesian Version of the Depressive Symptom Index-Suicidality Subscale: Adaptation and Psychometric Evaluation," *Jurnal Psikologi*, vol. 50, no. 2, p. 125, Aug. 2023, doi: 10.22146/jpsi.83712.
- [29] R. J. Handa, J. A. Sheng, E. A. Castellanos, H. N. Templeton, and R. F. McGivern, "Sex Differences in Acute Neuroendocrine Responses to Stressors in Rodents and Humans," *Cold Spring Harb. Perspect. Biol.*, vol. 14, no. 9, Sep. 2022, doi: 10.1101/cshperspect.a039081.
- [30] F. O. Grahani, S. K. Kusnadi, and A. Zuroida, "Studi Literatur Regulasi Diri Mahasiswi Dengan Peran Ganda Terkait Motivasi Berprestasi," 2022.
- [31] M. Ayuaulia And D. Rusmawati, "Hubungan Antara Konflik Peran Ganda Dengan Motivasi Berprestasi Pada Mahasiswi Yang Sudah Berkeluarga Di Jombang," 2020.
- [32] W. W. W. Brata, H. Susanto, and S. Zubaidah, "Theoretical underpinnings and future research on academic stress in biological and educational perspectives," Dec. 01, 2025, *Springer Nature*. doi: 10.1057/s41599-025-04484-w.
- [34] P. Weraman, "Pengaruh Akses Terhadap Pelayanan Kesehatan Primer Terhadap Tingkat Kesehatan dan Kesejahteraan Masyarakat Pedesaan," *J. Rev. Pendidik. dan Pengajaran*, vol. 7, no. 3, pp. 9142–9148, 2024.
- [35] T. Dlangalala, A. Musekiwa, and T. Mashamba-Thompson, "Quality of TB diagnostic services at primary healthcare clinics in eThekweni district, South Africa," *PLoS One*, vol. 19, no. 7 July, pp. 1–9, 2024, doi: 10.1371/journal.pone.0307149.