

Relationship between parenting styles and mental health in first-year university students

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ABSTRACT

This study examined the relationship between parenting styles and mental health among first-year university students in Indonesia. An analytic observational design with a cross-sectional approach was used. The research was conducted at two academies under Education Foundation X in Jakarta and included 43 first-year students aged 18–19 years who completed the Parental Authority Questionnaire-Short (PAQ-S) and the Depression, Anxiety, and Stress Scale-21 (DASS-21). Parenting styles were classified as authoritative, authoritarian, or permissive, and mental health was assessed in terms of depression, anxiety, and stress. Descriptive analysis showed that students who perceived their parents as authoritarian had the highest proportions of severe and extremely severe symptoms in all three domains. Non-parametric tests indicated significant differences in depression, anxiety, and stress scores across parenting style groups, with the authoritarian group showing higher median scores than the authoritative group. Post hoc comparisons confirmed that authoritarian parenting was associated with significantly poorer mental health than authoritative parenting. These findings suggested that parenting style remained an important factor for psychological well-being in late adolescence and supported the promotion of more authoritative parenting to help protect first-year university students from mental health problems.

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INTRODUCTION

Mental health problems in adolescence are a major public health concern because they are associated with significant impairment in social, academic, and occupational functioning, and often persist into adulthood. The World Health Organization (WHO) estimates that approximately one in seven adolescents worldwide lives with a mental disorder, with anxiety, depression, and related emotional problems contributing substantially to the global burden of disease in this age group (World Health Organization [WHO], 2025). When not recognised and addressed, symptoms of depression, anxiety, and stress in adolescents and young adults can undermine educational

attainment and quality of life and are consistently associated with increased risk of self-harm and suicidal ideation. Recent large-scale studies among adolescents in Indonesia and other regions have shown that higher levels of stress, anxiety, and depression are significantly related to suicidal thoughts and poorer well-being and functioning (Verlenden et al., 2024; Windarwati et al., 2022).

In Indonesia, recent national data highlight that mental health problems among young people require serious attention. The Indonesian Health Survey 2023 (Survei Kesehatan Indonesia 2023), a nationally representative health survey, reports that 2.0% of individuals aged 15 years and over experience mental health problems in the last month, as measured with the Self-Reporting Questionnaire-20 (SRQ-20). Prevalence is higher in the 15–24 year age group, reaching 2.8%, indicating that older adolescents and young adults contribute significantly to the national burden (Ministry of Health of the Republic of Indonesia, 2023). These findings suggest that a meaningful proportion of Indonesian youth experience emotional difficulties that may interfere with daily functioning but often remain undiagnosed and untreated.

Late adolescence, including the ages of 18–19 years, is a particularly sensitive phase because many young people are undergoing the transition from school to university. First-year university students must adapt to new academic demands, social environments, and, in many cases, physical separation from their families (Arnett, 2015). In the Indonesian context, 18–19-year-old first-year students often experience a rapid shift from the more structured and supervised environment of senior high school, where daily routines, academic schedules, and parental monitoring are relatively fixed, to a university setting that requires greater self-regulation, independent study, and decision-making about future careers. Unlike younger high school students, they are expected to behave as emerging adults, take responsibility for academic and financial decisions, and negotiate new peer and romantic relationships while parental expectations regarding academic success remain high. This combination of increased autonomy, persistent parental demands, and simultaneously changing social roles can heighten vulnerability to emotional problems for first-year university students compared with both younger adolescents and older students who have had more time to adjust to campus life. Studies in Indonesian university populations show notable levels of depression, anxiety, and stress. Research using the Depression, Anxiety, and Stress Scale-21 (DASS-21) has found that substantial proportions of students fall into mild to extremely severe categories for at least one of these domains, often in connection with academic pressure, social adjustment difficulties, and lifestyle changes (Dewi et al., 2025; Fayasari & Lestari, 2022; Ifdil et al., 2022). These results indicate that late adolescent university students constitute an important risk group for mental health problems.

Beyond academic and individual factors, the family remains one of the most influential social contexts for adolescents and young adults, and parent–child relationships continue to shape psychological adjustment in late adolescence, even when young people have gained greater autonomy and spend more time outside the home. Contemporary reviews confirm that parenting style, understood as a stable pattern of attitudes, behaviours, and emotional climate in parent–child interactions, is closely linked to adolescent mental health, with authoritative parenting associated with better emotional regulation and well-being, and authoritarian or inconsistent parenting linked to higher levels of depression, anxiety, and behavioural problems (Azman et al., 2021; Sanvictores & Mendez, 2022; Yani, 2025). This evidence builds on Baumrind’s influential typology, which distinguishes authoritative (high warmth and high control), authoritarian (low warmth and high control), and permissive (high warmth and low control) parenting styles as key contexts in which adolescents develop self-regulation, coping strategies, and internal models of relationships (Baumrind, 1991; Darling & Steinberg, 1993).

A large body of recent international evidence has demonstrated that parenting styles are closely related to mental health outcomes in children and adolescents. Authoritative parenting is generally associated with better psychosocial adjustment, including higher self-esteem, more adaptive coping, and lower levels of internalising and externalising problems, whereas negative or

less supportive styles are linked to a broader range of difficulties (Almeida & Santos, 2024; Jannah et al., 2022; Zhang & Wang, 2023). By contrast, authoritarian parenting, characterised by strict control and low emotional responsiveness, and permissive parenting, marked by inconsistent limits, are more often associated with emotional problems, behavioural difficulties, and poorer self-regulation (Almeida & Santos, 2024; Khadka et al., 2024; Liu, 2024). Large-scale and longitudinal analyses have shown that adolescents exposed to harsh, rejecting, or emotionally distant parenting report more symptoms of depression, anxiety, and behavioural problems than those raised in warm and structured family environments, and that these associations are partly mediated by factors such as self-esteem, self-control, and resilience (Azman et al., 2021; Khadka et al., 2024; Zhang & Wang, 2023). Taken together, these findings support the view that parenting style is a modifiable family-level factor that can either protect against or increase the risk of mental health problems in young people.

Evidence from Indonesia is broadly consistent with these international findings. School-based studies have reported that adolescents who perceive their parents as supportive and appropriately controlling tend to show better psychological well-being, whereas harsh, rejecting, or inconsistent parenting is associated with higher levels of emotional and behavioural problems (Maula et al., 2023). Research in West Java found that parenting style, together with peer pressure and self-esteem, was significantly associated with mental health indicators in adolescents, with more adaptive parenting linked to fewer symptoms of depression, anxiety, and stress (Lubis & Mahendika, 2023). However, much of this research has focused on junior or senior high school students, while less is known about how parenting styles relate to mental health among late adolescents who have already entered university.

Recent Indonesian studies have begun to examine parenting styles and mental health using standardised psychological instruments. (Anggawi et al., 2025), for example, investigated the relationship between parenting styles and adolescent mental health using the Parental Authority Questionnaire-Short (PAQ-S) and the DASS-21, and reported that less adaptive parenting styles were associated with higher levels of depression, anxiety, and stress. Their findings underscore the importance of parenting style for adolescent mental health in the Indonesian context. Nonetheless, the sample in that study consisted mainly of school-aged adolescents, and there remains limited evidence on late adolescents at the beginning of higher education, a period that combines ongoing family influence with new academic and social pressures.

To assess parenting styles in adolescents and university students, the PAQ-S is frequently used. The PAQ-S is a brief self-report instrument that measures adolescents' perceptions of authoritative, authoritarian, and permissive parenting and has demonstrated acceptable reliability and construct validity across different youth and student samples in recent studies (Alkharusi et al., 2011; Anggawi et al., 2025). Mental health in this study is conceptualised in terms of symptoms of depression, anxiety, and stress, measured using the DASS-21, a widely used self-report scale that provides separate scores for each domain and has shown robust psychometric properties in university and adolescent samples from multiple countries, including Asian settings (Manzar et al., 2025; Zanon et al., 2021). Indonesian validation studies have confirmed that the DASS-21 yields reliable and valid scores in student populations, making it suitable for assessing psychological distress among university students (Arjanto, 2022; Ifdil et al., 2022; Muttaqin & Ripa, 2021).

National surveillance data, such as SKI 2023, and campus-based studies together point to a significant burden of mental health problems among Indonesian adolescents and young adults. SKI 2023 demonstrates that mental health problems are relatively more common in the 15-24 age group than in older adults (Ministry of Health of the Republic of Indonesia, 2023). At the same time, studies using the DASS-21 in Indonesian university settings frequently report that a considerable proportion of students experience at least mild symptoms of depression, anxiety, or stress (Dewi et al., 2025; Fayasari & Lestari, 2022; Ifdil et al., 2022). These findings highlight the

need to identify factors within the family environment, including parenting style, that may contribute to the vulnerability or resilience of late adolescent university students.

Despite the growing literature on adolescent mental health and parenting in Indonesia, several gaps remain. First, research that specifically targets late adolescents aged 18–19 years who are in their first year of university is still limited, even though this group faces unique developmental and contextual challenges. Second, although some Indonesian studies have used PAQ-S and DASS-21, the number of investigations focusing on the association between parenting styles and symptoms of depression, anxiety, and stress in this late adolescent university population is still small. Third, national surveys such as SKI 2023 provide important estimates of mental health burden but do not examine detailed family relational factors such as parenting style. There is therefore a need for analytic studies that directly evaluate how perceived parenting styles are related to mental health outcomes in late adolescents.

Based on these considerations, this study focuses on first-year university students aged 18–19 years in Indonesia. Specifically, it addresses the existing gap by analysing whether levels of depression, anxiety, and stress differ across authoritative, authoritarian, and permissive parenting styles in a cohort of first-year students from two health-related academies in Jakarta, using validated Indonesian versions of the PAQ-S and DASS-21. The objective of the research is to examine the relationship between parenting styles and the mental health of first-year university students in late adolescence. By clarifying how authoritative, authoritarian, and permissive parenting styles are associated with levels of depression, anxiety, and stress in this population, the study is expected to provide empirical evidence that can support the design of family-informed and campus-based mental health promotion strategies for first-year university students in late adolescence.

RESEARCH METHOD

This study used an analytic observational method with a cross-sectional design to examine the relationship between parenting styles and mental health in first-year university students aged 18–19 years. The research was conducted at two academies under Education Foundation X in Jakarta, Indonesia, involving first-year students of the 2025/2026 academic year aged 18–19 years. Research permission was granted by the foundation (No.27/Skep/YGWA/VIII/2025), and data were collected online via Google Form from 10–15 September 2025. A total sampling technique was applied. Inclusion criteria were: first-year students under Education Foundation X in the 2025/2026 academic year, aged 18–19 years, and willing to participate by providing informed consent. Exclusion criteria were: academic leave, incomplete questionnaire data, or self-reported intensive psychiatric treatment that could hinder independent completion of the questionnaire. A total of 43 students met the criteria and were included in the analysis.

The independent variable was parenting style, measured using the Parental Authority Questionnaire-Short (PAQ-S), which classifies perceived parenting into authoritative, authoritarian, and permissive styles. The PAQ-S used in this research is an Indonesian translation and has been validated (Anggawi et al., 2025). The dependent variable was mental health, measured with the Depression, Anxiety, and Stress Scale-21 (DASS-21), which yields separate scores for depression, anxiety, and stress. The DASS-21 used in this research is an Indonesian translation and has been validated (Arjanto, 2022). Both instruments were self-administered within the same online form after participants had given informed consent.

Data were analysed using Statistical Product and Service Solutions (SPSS) version 29. Descriptive statistics were used to describe participant characteristics, parenting style categories, and DASS-21 scores. Because the outcome data were not normally distributed, non-parametric tests were applied. The Kruskal-Wallis test showed significant differences in depression, anxiety, and stress scores across the three parenting style groups. Therefore, pairwise Mann-Whitney U

tests were conducted as post hoc analyses to compare the parenting style groups. A p-value < 0.05 was considered statistically significant.

RESULTS AND DISCUSSIONS

This section presents the findings of the study on the relationship between parenting styles and mental health among first-year university students, including the distribution of depression, anxiety, and stress levels as well as comparisons of these outcomes across parenting style groups. Among the 43 first-year university students, approximately one third were classified as having normal levels of depression (30.2%) and less than one quarter as having normal anxiety (23.2%), whereas just over half had normal stress levels (53.5%). Students who reported experiencing authoritarian parenting showed the poorest mental health profile: 44.4% were in the extremely severe category for depression, 88.8% for anxiety, and 55.5% for stress. In contrast, those who perceived their parents as authoritative or permissive were more likely to fall within the normal range, particularly for stress, where 62.9% of the authoritative group and 71.4% of the permissive group were classified as normal. These distributions of depression, anxiety, and stress levels across parenting styles are presented in Table 1.

Table 1. Categorical distribution of depression, anxiety, and stress levels based on parenting styles

Mental Health	Parenting Styles						Total (N=43)		
	Authoritative (N=27)		Authoritarian (N=9)		Permissive (N=7)		N	%	
	N	%	N	%	N	%			
Depression	Normal	11	40.7	1	11.1	1	14.3	13	30.2
	Mild	4	14.8	0	0	2	28.6	6	13.9
	Moderate	8	29.6	2	22.2	2	28.6	12	27.9
	Severe	3	11.1	2	22.2	1	14.3	6	13.9
	Extremely severe	1	3.7	4	44.4	1	14.3	6	13.9
Anxiety	Normal	9	33.3	0	0	1	14.3	10	23.2
	Mild	3	11.1	1	11.1	1	14.3	5	11.6
	Moderate	8	29.6	0	0	2	28.6	10	23.2
	Severe	4	14.8	0	0	2	28.6	6	13.9
	Extremely severe	3	11.1	8	88.8	1	14.3	12	27.9
Stress	Normal	17	62.9	1	11.1	5	71.4	23	53.5
	Mild	5	18.5	0	0	1	14.3	6	13.9
	Moderate	3	11.1	1	11.1	1	14.3	5	11.6
	Severe	2	7.4	2	22.2	0	0	4	9.3
	Extremely severe	0	0	5	55.5	0	0	5	11.6

In line with the main objective of this study, differences in depression, anxiety, and stress scores were examined across the three parenting style groups. Students who perceived their parents as authoritarian had the highest median scores for all three outcomes (depression 26, anxiety 30, stress 28), indicating more severe symptoms. In contrast, those in the authoritative group showed the lowest median scores (depression 12, anxiety 16, stress 6), while the permissive group had intermediate values (depression 16, anxiety 20, stress 8). Kruskal-Wallis tests showed that these differences were statistically significant for depression (p = 0.007), anxiety (p = 0.003), and stress (p < 0.001) (Table 2), suggesting that more authoritarian parenting is associated with poorer mental health among first-year university students.

Table 2. Differences in depression, anxiety, and stress scores across parenting style groups

Parenting Styles	Mental Health		
	Depression	Anxiety	Stress
	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)
Authoritative	12 (0-30)	16 (4-36)	6 (0-26)
Authoritarian	26 (8-32)	30 (14-34)	28 (4-32)

Parenting Styles	Mental Health		
	Depression	Anxiety	Stress
	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)
Permissive	16 (4-28)	20 (8-28)	8 (4-18)
p-value	0,007 ^{a*}	0,003 ^{a*}	<0,001 ^{a*}

^{a)} Kruskal Wallis Test

^{*}) Significant

Post hoc pairwise comparisons using Mann-Whitney U tests showed that students who perceived authoritarian parenting had significantly higher levels of depression, anxiety, and stress than those who perceived authoritative parenting ($p = 0.002$, $p = 0.001$, and $p < 0.001$, respectively). When authoritarian and permissive parenting were compared, there were no significant differences in depression scores ($p = 0.099$), but anxiety and stress were significantly higher in the authoritarian group (both $p = 0.008$). No significant differences in depression, anxiety, or stress were found between the authoritative and permissive groups ($p > 0.05$ for all comparisons) (Table 3).

Table 3. Pairwise comparisons of depression, anxiety, and stress scores across parenting style groups

Comparison	p-value		
	Depression	Anxiety	Stress
Authoritative vs Authoritarian	0.002 ^{a*}	0.001 ^{a*}	<0.001 [*]
Authoritative vs Permissive	0.267 ^a	0.355 ^a	0.652 ^a
Authoritarian vs Permissive	0.099 ^a	0.008 ^{a*}	0.008 ^{a*}

^{a)} Mann-Whitney U Tests – Post Hoc

^{*}) Significant

Discussions

In this study, most first-year university students perceived their parents as authoritative, with smaller proportions reporting authoritarian or permissive parenting. The categorical distribution of DASS-21 scores in Table 1 shows that elevated levels of depression, anxiety, and stress were more frequent among students who perceived their parents as authoritarian than among those who perceived authoritative parenting. A larger proportion of the authoritarian group fell into the moderate to extremely severe categories for all three mental health domains, whereas students with authoritative or permissive parents were more often classified as normal, particularly for stress.

This pattern is in line with previous research. Anggawi et al. (2025) reported that Indonesian adolescents who perceived authoritarian parenting had significantly poorer mental health than those who perceived authoritative parenting. Similarly, Arifin et al. (2024) found that pre-university students in Malaysia whose parents experienced authoritarian and neglectful styles were more likely to meet criteria for a mental disorder than those with authoritative parents. At the student level, Jannah et al. (2022) showed that authoritarian and neglectful parenting were positively associated with depressive symptoms, while authoritative parenting was negatively associated with depression through higher self-esteem. International evidence also points in the same direction. King et al. (2016) found that youth experiencing authoritarian parenting had higher depression scores than those experiencing authoritative parenting in a large U.S. sample, and Hou et al. (2020) reported that parental rejection and overprotection were associated with higher depression and anxiety among Chinese college students.

From a developmental perspective, these findings are compatible with Baumrind's typology and self-determination theory. Authoritative parenting, characterised by warmth and consistent but reasonable control, tends to foster self-esteem, autonomy, and adaptive coping, which can protect young people from internalising problems. In contrast, authoritarian parenting emphasises obedience, criticism, and unilateral control, which may undermine the development of self-worth and emotion regulation, making adolescents more vulnerable to depressive and anxiety symptoms when they encounter new academic and social demands (Hou et al., 2020; Jannah et al.,

2022). Based on these results, the researcher assumes that first-year students from authoritarian family environments may have learned to respond primarily to external control and evaluation, and thus feel less able to manage stress independently when they transition to university. It is also plausible that some authoritarian parents respond to academic or economic stress with harsher discipline, which then spills over into more coercive parenting and contributes to students' mental health problems. However, because the data are cross-sectional and based on self-report, bidirectional effects cannot be ruled out; students with more severe symptoms might also perceive their parents as more critical or controlling.

The results in Table 2 show that median scores for depression, anxiety, and stress differed significantly across parenting styles. In this study, students who perceived their parents as authoritarian had the highest median DASS-21 scores in all three domains, followed by those with permissive parents, whereas students with authoritative parents had the lowest median scores. The Kruskal-Wallis tests indicated that these differences were statistically significant for depression, anxiety, and stress ($p < 0.05$), suggesting that parenting style is meaningfully related to the severity of psychological symptoms among first-year university students.

These findings accord with the broader literature. Anggawi et al. (2025), also reported significant differences in mental health scores across parenting style categories using PAQ-S and DASS-21 in Indonesian adolescents. Arifin et al. (2024) found that adolescents with authoritarian or neglectful parents were more likely to have any mental disorder compared to those with authoritative parents. At the university level, Hou et al. (2020) demonstrated that parental rejection and overprotection were positively associated with depression and anxiety among Chinese college students, whereas parental warmth showed the opposite pattern. More recently, Wu et al. (2025) showed that negative parenting styles predicted higher depressive symptoms among college students through eating disorders and maladaptive cognitive emotion regulation strategies. Together, these studies and the present findings suggest that more negative or controlling parenting styles are linked with higher symptom severity, while supportive parenting is associated with lower levels of distress.

Theoretically, the pattern of median scores observed here can be understood through attachment and family-stress models. Authoritative parenting likely contributes to secure attachment and a sense of competence, which may help students tolerate academic pressure and social transitions. Authoritarian parenting, by contrast, may heighten perceived threat and reduce perceived control, fuelling chronic stress responses and internalising symptoms. Wu et al. (2025) also highlighted the role of maladaptive cognitive strategies and disordered eating in translating negative parenting experiences into depressive symptoms, which suggests that parenting might influence mental health both directly and via intermediary processes. As a working assumption, the researcher interprets the gradients in median DASS-21 scores as reflecting cumulative effects of long-term parenting practices that continue to shape emotional functioning in late adolescence. It is possible that students from authoritarian homes enter university with fewer adaptive coping resources, making them more sensitive to stressors such as academic workload and separation from home. Nevertheless, unmeasured factors, including parental mental health, peer relationships, and campus climate, may also contribute to the observed differences and should be examined in future longitudinal studies.

The pairwise Mann-Whitney U tests in Table 3 provide more detailed information about which parenting styles differ from one another. This study found that students who perceived authoritative parenting had significantly lower depression, anxiety, and stress scores than those who perceived authoritarian parenting, with all p -values below 0.01. Comparisons between authoritative and permissive parenting were not statistically significant, whereas authoritarian versus permissive comparisons showed significant differences for anxiety and stress but not for depression. These results indicate that the most robust contrast in this sample lies between

authoritative and authoritarian parenting, with authoritarian parenting associated with the poorest mental health profile.

Again, this pattern is consistent with findings from Anggawi et al. (2025), who reported that Indonesian adolescents exposed to authoritative parenting had better mental health than those exposed to authoritarian parenting, while results for the permissive group were less clear, partly due to small numbers. Internationally, King et al. (2016) reported that authoritarian parenting was uniquely associated with higher youth depression in a national sample, even after adjusting for other factors. Hou et al. (2020) similarly found that parental rejection and overprotection (conceptually close to authoritarian style) were associated with higher levels of depression and anxiety among college students, whereas parental warmth was associated with lower distress. Wu et al. (2025) also concluded that negative parenting styles exert a significant effect on depressive symptoms among university students. The stronger and more consistent differences between authoritative and authoritarian styles, compared with those involving permissive parenting, are theoretically plausible. Authoritative parents combine warmth with clear expectations, which tends to support autonomy, problem-solving skills, and a stable sense of self. Authoritarian parents emphasise obedience and control with limited emotional responsiveness, which may foster fear of failure, difficulty expressing emotions, and rumination, processes that are well-known risk factors for depression and anxiety. The non-significant findings for some comparisons involving permissive parenting might reflect limited statistical power due to the small number of permissive cases in this sample, rather than the absence of any true effect.

The researcher assumes that, in this Indonesian context, permissive parenting is relatively uncommon and may be perceived differently than in Western settings, which could blur its statistical association with mental health. By contrast, the opposition between authoritative and authoritarian styles is more clearly defined and more strongly linked to students' psychological outcomes. Taken together, the pairwise results reinforce the view that fostering authoritative parenting may be an important family-level target for interventions aiming to improve mental health among first-year university students.

This study has several strengths, including the focus on first-year university students as a late-adolescent group, the use of validated Indonesian versions of PAQ-S and DASS-21, and the application of appropriate non-parametric analyses that allowed a detailed comparison of mental health outcomes across parenting styles. Nonetheless, the findings should be interpreted with caution because the design was cross-sectional, the sample was relatively small and drawn from only two academies in one city, all data were self-reported, and the authoritarian and especially permissive groups were limited in size. Important factors such as parental mental health, family socioeconomic status, peer support, and campus climate were not assessed and may have influenced the results.

Future studies should employ larger and more diverse samples from multiple universities, use longitudinal designs to clarify temporal and causal relationships, and include additional variables such as coping strategies and parental mental health. It would also be useful to distinguish maternal and paternal parenting styles and to combine adolescent and parent reports. At a practical level, the results point to the potential value of campus-based mental health screening for first-year students and of parent-focused psychoeducation that encourages more supportive, authoritative parenting, in order to reduce the risk of depression, anxiety, and stress during the transition to university.

CONCLUSION

This study examined the relationship between parenting styles and mental health among first-year university students aged 18–19 years. The findings show that perceived parenting style is associated with levels of depression, anxiety, and stress, with authoritarian parenting linked to higher symptom severity and authoritative parenting associated with lower psychological distress.

These results indicate that the family environment remains an important determinant of mental health at the beginning of higher education.

The pattern of differences between parenting styles has concrete implications for intervention. At the campus level, routine mental health screening of first-year students using brief instruments such as the DASS-21 can be integrated into admission or orientation procedures, accompanied by clear referral pathways to counseling or mentoring services and orientation sessions that provide psychoeducation on stress management, help-seeking, and communication with parents. At the family level, the results support parenting psychoeducation that promotes more authoritative, warm, and structured practices through parent webinars or seminars that explain the impact of parenting style on late-adolescent mental health and offer practical strategies for balancing expectations with emotional support. Future research should use larger and more diverse samples and longitudinal designs, but the present findings already suggest that strengthening authoritative parenting and campus-based support may help reduce depression, anxiety, and stress among first-year university students.

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References

- Alkharusi, H., Aldhafri, S., Kazem, A., Alzubiadi, A., & Al-Bahrani, M. (2011). Development and validation of a short version of the Parental Authority Questionnaire. *Social Behavior and Personality: An International Journal*, 39(9), 1193–1208. <https://doi.org/10.2224/sbp.2011.39.9.1193>
- Almeida, D., & Santos, G. (2024). Parenting styles and youth's externalizing and internalizing behaviors: Does self-control matter? *International Criminology*, 4(3), 248–264. <https://doi.org/10.1007/s43576-024-00137-1>
- Anggawi, A. H., Silitonga, H. T. H., Tandoyo, E. D., Tantana, O., & Adrianto, H. (2025). Relationship between parenting styles and mental health in adolescent. *Jurnal Psikiatri Surabaya*, 14(2), 228–236.
- Arifin, S. R. M., Syaziman, N. S. S., Abang Abdullah, K. H., Abd Aziz, K. H., Che Mat, K., Muhammad, N. A., & Wardaningsih, S. (2024). Association between parenting styles and adolescents' mental disorders: Findings among pre-university students. *Malaysian Journal of Medical Sciences*, 31(3), 149–159. <https://doi.org/10.21315/mjms2024.31.3.11>
- Arjanto, P. (2022). Uji reliabilitas dan validitas Depression Anxiety Stress Scales 21 (DASS-21) pada mahasiswa. *Jurnal Psikologi Perseptual*, 7(1), 60. <https://doi.org/10.24176/perseptual.v7i1.6196>
- Arnett, J. J. (2015). *Emerging adulthood: The winding road from the late teens through the twenties* (2nd ed., Vol. 1). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199795574.013.9>
- Azman, Ö., Mauz, E., Reitzle, M., Geene, R., Hölling, H., & Rattay, P. (2021). Associations between parenting style and mental health in children and adolescents aged 11–17 years: Results of the KiGGS cohort study (second follow-up). *Children*, 8(8), 672. <https://doi.org/10.3390/children8080672>
- Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *The Journal of Early Adolescence*, 11(1), 56–95. <https://doi.org/10.1177/0272431691111004>
- Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model. *Psychological Bulletin*, 113(3), 487–496. <https://doi.org/10.1037/0033-2909.113.3.487>
- Dewi, A. D. A., Muniandy, N. D., Subardjo, R. Y. S., Nurmaguphita, D., & Fauzia, F. R. (2025). The correlation between mental health and eating behavior in Indonesian college students: a cross-sectional study. *JHeS (Journal of Health Studies)*, 9(1), 71–79. <https://doi.org/10.31101/jhes.4023>
- Fayasari, A., & Lestari, P. W. (2022). Stres dan depresi berkaitan dengan emotional eating dan mindful eating pada mahasiswa saat pandemi Covid-19. *AcTion: Aceh Nutrition Journal*, 7(2), 127. <https://doi.org/10.30867/action.v7i2.622>

- Hou, Y., Xiao, R., Yang, X., Chen, Y., Peng, F., Zhou, S., Zeng, X., & Zhang, X. (2020). Parenting style and emotional distress among chinese college students: A potential mediating role of the zhongyong thinking style. *Frontiers in Psychology, 11*. <https://doi.org/10.3389/fpsyg.2020.01774>
- Ifdil, I., Syahputra, Y., Fadli, R. P., Zola, N., Putri, Y. E., Amalianita, B., Rangka, I. B., Suranta, K., Zatrachadi, M. F., Sugara, G. S., Situmorang, D. D. B., & Fitria, L. (2022). The depression anxiety stress scales (DASS-21): an Indonesian validation measure of the depression anxiety stress. *COUNS-EDU: The International Journal of Counseling and Education, 5*(4), 205-215. <https://doi.org/10.23916/0020200536840>
- Jannah, K., Hastuti, D., & Riany, Y. E. (2022). Parenting style and depression among students: The mediating role of self-esteem. *Psikohumaniora: Jurnal Penelitian Psikologi, 7*(1), 39-50. <https://doi.org/10.21580/pjpp.v7i1.9885>
- Khadka, R., Bhatt, A., Thapa, M., Sharma, A., Joshi, M., & Mishra, D. K. (2024). Influence of parenting styles on depression, anxiety, stress and self-esteem of adolescents. In *medRxiv Preprint*. <https://doi.org/10.1101/2024.08.16.24312121>
- King, K. A., Vidourek, R. A., & Merianos, A. L. (2016). Authoritarian parenting and youth depression: Results from a national study. *Journal of Prevention & Intervention in the Community, 44*(2), 130-139. <https://doi.org/10.1080/10852352.2016.1132870>
- Liu, Z. (2024). The impact of parenting styles on adolescents' mental health. *Journal of Education, Humanities and Social Sciences, 40*, 191-196. <https://doi.org/10.54097/nx6ka644>
- Lubis, AM. L., & Mahendika, D. (2023). Hubungan parenting style, peer pressure, self-esteem dan kesehatan mental pada remaja Indonesia di Jawa Barat. *Jurnal Psikologi Dan Konseling West Science, 1*(02), 90-104.
- Manzar, M. D., Salahuddin, M., Nureye, D., Kashoo, F. Z., Noohu, M. M., Alotaibi, J. S., Alamri, M. S., & Griffiths, M. D. (2025). Depression, Anxiety, and Stress Scale-21 (DASS-21): Further psychometric exploration using robust item response theory and classical theory measures among university students. *PLOS One, 20*(7), 1-16. <https://doi.org/10.1371/journal.pone.0325238>
- Maula, Y. N., Lina, N., & Neni. (2023). Hubungan pola asuh orang tua dan lingkungan teman sebaya dengan kesehatan mental remaja di SMA Negeri 2 Majalengka. *Jurnal Kesehatan Komunitas Indonesia, 18*(2), 104-114.
- Ministry of Health of the Republic of Indonesia. (2023). *2023 Indonesian Health Survey (Survei Kesehatan Indonesia/SKI): Main report (English Version)*.
- Muttaqin, D., & Ripa, S. (2021). Psychometric properties of the Indonesian version of the Depression Anxiety Stress Scale: Factor structure, reliability, gender, and age measurement invariance. *Psikohumaniora: Jurnal Penelitian Psikologi, 6*(1), 61-76.
- Sanvictores, T., & Mendez, M. D. (2022). Types of parenting styles and effects on children. *StatPearls*. <https://www.ncbi.nlm.nih.gov/books/NBK568743/>
- Verlenden, J., Kaczkowski, W., Li, J., Hertz, M., Anderson, K. N., Bacon, S., & Dittus, P. (2024). Associations between adverse childhood experiences and pandemic-related stress and the impact on adolescent mental health during the COVID-19 pandemic. *Journal of Child & Adolescent Trauma, 17*(1), 25-39. <https://doi.org/10.1007/s40653-022-00502-0>
- Windarwati, H. D., Lestari, R., Wicaksono, S. A., Kusumawati, M. W., Ati, N. A. L., Ilmy, S. K., Sulaksono, A. D., & Susanti, D. (2022). Relationship between stress, anxiety, and depression with suicidal ideation in adolescents. *Jurnal Ners, 17*(1), 36-41. <https://doi.org/10.20473/jn.v17i1.31216>
- World Health Organization. (2025). *Mental health of adolescents*. World Health Organization. <https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health>
- Wu, R., Huang, Y., Shao, L., Guang, Z., Niu, Q., Chen, J., Zhou, J., Ge, L., & Wang, S. (2025). Negative parenting style and depressive symptoms among college students: a longitudinal moderated mediation model involving eating disorders, ethnicity and maladaptive cognitive emotion regulation strategies. *BMC Psychology, 13*(1), 371-384. <https://doi.org/10.1186/s40359-025-02693-1>
- Yani, A. (2025). Parenting styles and adolescent development: Mental health, digital behavior, and academic outcomes - A global review. *Jurnal Multisains Indonesia, 1*(1), 13-24.
- Zanon, C., Brenner, R. E., Baptista, M. N., Vogel, D. L., Rubin, M., Al-Darmaki, F. R., Gonçalves, M., Heath, P. J., Liao, H.-Y., Mackenzie, C. S., Topkaya, N., Wade, N. G., & Zlati, A. (2021). Examining the dimensionality, reliability, and invariance of the Depression, Anxiety, and Stress Scale-21 (DASS-21) across eight countries. *Assessment, 28*(6), 1531-1544. <https://doi.org/10.1177/1073191119887449>
- Zhang, W., & Wang, Z. (2023). Parenting styles and adolescents' problem behaviors: The mediating effect of adolescents' self-control. *Psychological Reports, 126*(6), 2979-2999. <https://doi.org/10.1177/00332941221105216>

