J u r n a l   B e r k a l a
EPIDEMIOLOGI
PERIODIC EPIDEMIOLOGY JOURNAL

ORIGINAL ARTICLE

FACTORS RELATED TO MENTAL HEALTH PROBLEMS IN BACHELOR STUDENTS OF PUBLIC HEALTH

Faktor-Faktor Yang Berhubungan Dengan Masalah Kesehatan Mental Pada Mahasiswa Sarjana Kesehatan Masyarakat

Johannes Bastira Ginting[1] iD **, Styfani Karo-Karo[2], Hasnita Ayu Suntiarma Situmeang[3], Putri Mustika Ananda[4], Hartono[5]** iD

[1]Department of Bachelor of Public Health, Faculty of Public Health, Prima University Indonesia, North Sumatra, Indonesia, 20118, johannesbastiraginting@unprimdn.ac.id
[2]Bachelor of Public Health Study Program, Faculty of Public Health, Prima University Indonesia, North Sumatra, Indonesia, 20118, styfanikarokaro10@gmail.com
[3]Bachelor of Public Health Study Program, Faculty of Public Health, Prima University Indonesia, North Sumatra, Indonesia, 20118, hasnitaayussitumeang@gmail.com
[4]Bachelor of Public Health Study Program, Faculty of Public Health, Prima University Indonesia, North Sumatra, Indonesia, 20118, putrimustikaananda@gmail.com
[5]Department of Bachelor of Public Health, Faculty of Public Health, Prima University Indonesia, North Sumatra, Indonesia, 20118, hartonoahmad@yahoo.com
Corresponding Author: Johannes Bastira Ginting, johannesbastiraginting@unprimdn.ac.id, Prima University Indonesia, North Sumatra, 20118, Indonesia

ABSTRACT

Background: Mental health is the ability to realize one's potential and cope with the usual demands of daily life. Students in Public Health programs are especially at risk of developing mental health problems while studying as a result of academic stress. This study explored the factors related to mental health problems among the Bachelor of Public Health students at Universitas Prima Indonesia. **Methods:** This survey research is quantitative, and a cross-sectional design was employed. The population of this study was all Bachelor of Public Health students in the even semester of the year 2023/2024 at FKKGIK, Universitas Prima Indonesia. Primary data were collected using questionnaires, and secondary data included scientific articles and research papers published within the last 5-10 years. Univariate, bivariate, and multivariate data analysis was done. **Results:** The study found a positive correlation between academic pressure, interpersonal relations, learning strategies, social relations, individual motivation, group interactions, psychological well-being, and the severity of mental health problems among undergraduate public health students (p-value $\leq$ 0.05). However, the study's findings showed that gender, semester, place of residence, and psychological pressure have no relationship (p-value > 0.05). **Conclusion:** These results indicate that social and academic factors should be considered to promote students' mental health. Therefore,

universities should design strategies to address these essential factors to support students' mental health and learning achievements.

ABSTRAK

Latar belakang: *Kesehatan mental adalah kemampuan untuk mewujudkan potensi diri dan mengatasi tuntutan kehidupan sehari-hari. Mahasiswa program studi Kesehatan Masyarakat memiliki risiko tinggi mengalami masalah kesehatan mental saat belajar akibat stres akademik. Penelitian ini mengeksplorasi faktor-faktor yang berhubungan dengan masalah kesehatan mental pada mahasiswa S1 Kesehatan Masyarakat di Universitas Prima Indonesia.* ***Metode:*** *Penelitian survei ini bersifat kuantitatif, dengan menggunakan desain cross-sectional. Populasi penelitian ini adalah seluruh mahasiswa S1 Kesehatan Masyarakat semester genap tahun ajaran 2023/2024 di FKKGIK Universitas Prima Indonesia. Data primer dikumpulkan dengan menggunakan kuesioner, dan data sekunder meliputi artikel ilmiah dan makalah penelitian yang diterbitkan dalam 5-10 tahun terakhir. Analisis data dilakukan secara univariat, bivariat, dan multivariat.* ***Hasil:*** *Penelitian ini menemukan korelasi positif antara tekanan akademik, hubungan interpersonal, strategi belajar, hubungan sosial, motivasi individu, interaksi kelompok, kesejahteraan psikologis, dan tingkat keparahan masalah kesehatan mental di kalangan mahasiswa sarjana kesehatan masyarakat (p-value ≤ 0,05). Namun, temuan penelitian menunjukkan bahwa jenis kelamin, semester, tempat tinggal, dan tekanan psikologis tidak memiliki hubungan (p-value > 0,05).* ***Simpulan:*** *Hasil penelitian ini menunjukkan bahwa faktor sosial dan akademis harus dipertimbangkan untuk meningkatkan kesehatan mental mahasiswa. Oleh karena itu, universitas harus merancang strategi untuk mengatasi faktor-faktor penting ini untuk mendukung kesehatan mental dan prestasi belajar mahasiswa.*

INTRODUCTION

Mental health is essential for overall well-being, influencing stress management, productivity, and social interactions (1). University students are particularly vulnerable to mental health issues due to academic pressure, social adjustments, and family expectations (2,3). Indonesia's demographic bonus between 2020-2035 highlights the importance of developing a high-quality workforce, including university students. Ensuring good mental health is essential for maximizing this potential (4). Unmanaged academic and social pressures may negatively affect students, potentially impacting their academic performance and future societal contributions (5,6).

Depression rates in Southeast Asia reach 27%, emphasizing the urgency of mental health interventions for students (7). According to Azmi et al (8), there are six typical causes of stress among students: Academic Related Stressors (difficulty understanding material and poor performance), Teaching and Learning Related Stressors (many tasks from lecturers), Social Related Stressors (problems in social relationships), Intrapersonal and Interpersonal Related Stressors (difficulties in interaction), Group Activities Stressors (conflicts in group work), and Drive and Related Stressors (pressure to choose a major and parents' expectations). Studies indicate a high prevalence of mental health disorders among students. A study at Nusa Cendana University reported that 15.70% of students experienced moderate depression, while 18.30% suffered from severe depression (9). Similarly, research at Muhammadiyah Aceh University found that 21% of students had very severe depression, 17.70% had very severe anxiety, 54.80% experienced poor sleep quality, and 51.6% led unhealthy lifestyles (10). The Ministry of Education encourages universities to create supportive environments for student mental health. In North Sumatra, around 45,65 individuals experience depression, and the province ranks among the top ten for suicide rates, with 41 cases

reported from January to October 2023 (11). Addressing these mental health challenges requires collaboration among the government, universities, and student organizations and support from family and friends (12). A survey at Universitas Prima Indonesia highlighted high academic demands and the need for improved interpersonal relationships and motivation. This study examines what affects the mental health of Public Health students and suggests ways to improve their mental well-being.

METHODS

This study is an analytical survey with a cross-sectional design to simultaneously analyze the relationship between independent and dependent variables. The research was conducted at Prima Indonesia University, Medan, North Sumatra, from May to August 2024. The study population comprised 346 undergraduate Public Health students in the even semester of the 2023/2024 academic year at FKKGIK. The sample size was determined using the Slovin formula (d=0.05), resulting in 186 respondents, rounded to 200 samples. The sample size was increased by 10% to 205 respondents to enhance data validity and anticipate respondent dropout. However, the final sample size was 200 respondents due to voluntary participation. The study utilized a non-probability sampling approach to ensure accessibility while acknowledging its potential limitations in generalizability. A purposive sampling method was applied to select participants who met specific criteria, ensuring relevance to the study objectives. Inclusion criteria included undergraduate Public Health students at Universitas Prima Indonesia who were in their 2nd, 4th, or 6th semester, willing to participate, and ready to complete questionnaires related to mental health problems. Exclusion criteria included students on academic leave, inactive in lectures, participating in similar research within the last six months, or refusing to provide written consent. Additionally, students with health conditions that hindered their ability to complete the questionnaire were excluded to maintain data validity.

Data were collected using structured questionnaires through interviews for primary data, supplemented by secondary data from the Public Health undergraduate program profile and recent research literature. Independent variables included gender, semester, place of residence, and stressors such as academic obligations, interpersonal relationships, learning processes, social relationships, personal motivation, ambition, and group activities. The dependent variable was mental health problems, which were categorized based on the combined scores of the SKM-12 questionnaire (measuring psychological well-being and distress) and the modified MSSQ questionnaire (assessing stress factors). Instrument validity was evaluated by comparing the calculated r-value with the r-table value of 0.361 (df = n-2 = 30-2 = 28, α = 5%). The instrument was deemed valid if the r-count exceeded the r-table and was positive. The analysis results indicated that all items met the validity criteria. Reliability testing was conducted using Cronbach's alpha, yielding a score of 0.929 (>0.60), suggesting a highly reliable instrument. It confirms that the instrument is consistent and suitable for measuring factors influencing the mental health of Public Health students.

The analysis involved univariate analysis to determine frequency distributions, bivariate analysis using the Chi-square test to examine relationships between independent and dependent variables, and multivariate analysis using multiple logistic regression to evaluate the impact of independent variables on mental health problems. This study adhered to ethical principles of beneficence, confidentiality, and justice and received an ethical clearance letter with reference No.059/KEPK/UNPRI/V/2024 from the Health Research Ethics Commission of Prima University Indonesia.

RESULTS

According to Table 1, the Chi-square test results indicate significant relationships between several independent variables and mental health issues among Bachelor of Public Health students at Universitas Prima Indonesia. Academic demands showed a strong association with mental health problems ($p<0.01$), where 92.50% of students with low academic demands reported no mental health issues. Additionally, interpersonal relationships ($p<0.01$), learning processes ($p<0.01$), social relationships ($p<0.01$), motivation and personal ambition ($p<0.01$), and group activities ($p<0.01$) were also significantly associated with mental health issues, indicating that these factors play a crucial role in student's psychological well-being. Conversely, gender ($p=0.65$), semester ($p=0.40$), place of residence ($p=0.83$), and psychological distress ($p=0.24$) did not show significant relationships with mental health problems. Due to the lack of statistical significance, these non-significant variables were excluded from further multivariate analysis.

Table 1
The Relationship of Independent Variables with Mental Health Indicators in Bachelor of Public Health Students, Universitas Prima Indonesia, 2024

Variable	Sub Categories	Mental Health Issues		Total	df	p-value
		No	Yes			
Gender	Male	23 / 11.50 %	2 / 1.00%	25 / 12.50%	1	0.65
	Female	165 / 82.50%	10 / 5.00%	175 / 87.50%		
	Total	188 / 94.00%	12 / 6.00%	200 / 100.00%		
Semester	2nd Semester	64 / 32.00%	2 / 1.00%	66 / 33.00%	2	0.40
	4th Semester	61 / 30.50%	6 / 3.00%	67 / 33.50%		
	6th Semester	63 / 31.50%	4 / 2.00%	67 / 33.50%		
	Total	188 / 94.00%	12 / 6.00%	200 / 100.00%		
Place of Residence	With Parents	100 / 50.00%	6 / 3.00%	106 / 53.00%	1	0.83
	Not with Parents	88 / 44.00%	6 / 3.00%	94 / 47.00%		
	Total	188 / 94.00%	12 / 6.00%	200 / 100.00%		
Academic Demands	Low	185 / 92.50%	8 / 4.00%	193 / 96.50%	1	<0.01
	High	3 / 1.50%	4 / 2.00%	7 / 3.50%		
	Total	188 / 94.00%	12 / 6.00%	200 / 100.00%		
Interpersonal Relationship	Good	174 / 87.00%	3 / 1.50%	177 / 88.50%	1	<0.01
	Not Good	14 / 7.00%	9 / 4.50%	23 / 11.50%		
	Total	188 / 94.00%	12 / 6.00%	200 / 100.00%		
Learning Process	Good	145 / 72.50%	0 / 0.00%	145 / 72.50%	1	<0.01
	Not Good	43 / 21.50%	12 / 6.00%	55 / 27.50%		
	Total	188 / 94.00%	12 / 6.00%	200 / 100.00%		
Social Relationships	Good	176 / 88.00%	4 / 2.00%	180 / 90.00%	1	<0.01
	Not Good	12 / 6.00%	8 / 4.00%	20 / 10.00%		
	Total	188 / 94.00%	12 / 6.00%	200 / 100.00%		

(*Continued*)

Table 1
Continued

| Variable | Sub Categories | Mental Health Issues | | Total | df | p-value |
		No	Yes			
Motivation and Personal Ambition	Good	179 89.50%	3 1.50%	182 91.00%		
	Not Good	9 4.50%	9 4.50%	18 9.00%	1	<0.01
	Total	188 94%	12 6%	200 100%		
Group Activity	Good	159 79.50%	0 0.00%	159 79.50%		
	Not Good	29 14.50%	12 6.00%	41 20.50%	1	<0.01
	Total	188 94.00%	12 6.00%	200 100.00%		
Psychological Well-being	Good	139 69.50%	4 2.00%	143 71.50%		
	Not Good	49 24.50%	8 4.00%	57 28.50%	1	0.01
	Total	188 94.00%	12 6.00%	200 100.00%		
Psychological Distress	Low	113 56.50%	5 3.50%	118 59.00%		
	High	75 37.50%	7 3.50%	82 41.00%	1	0.24
	Total	188 94.00%	12 6.00%	200 100.00%		

Source: Primary Data Processed in 2024

The results of the multiple logistic regression analysis (Table 2) indicate that none of the seven selected independent variables exhibit a statistically significant relationship with mental health problems among Public Health students ($p > 0.05$ for all variables). The extraordinarily high or low odds ratio (Exp(B)) values and the wide confidence intervals suggest potential multicollinearity issues among the independent variables. To address this issue and improve the validity of the model, the researchers propose two steps: first, assessing multicollinearity by calculating the variance inflation factor (VIF) for each independent variable to determine the extent of multicollinearity and identify highly correlated predictors, and second, model simplification using a backward elimination or stepwise regression approach to refine the model by systematically removing or including variables based on their statistical significance and contribution to the model's explanatory power.

These steps are expected to enhance the model's accuracy and provide more reliable insights into the factors influencing mental health problems among students.

Based on Table 3, the VIF test results show no variables with significant multicollinearity because all tolerance values are above 0.1 and VIF is below 10. Thus, the researcher proceeded to the stepwise regression test.

● Personal Motivation and Ambition: A-2 Log Likelihood change of 18.55 with a $p <$ of 0.001 indicates a significant influence when this variable is removed, signaling its importance in the model.

● Psychological Well-Being: A change in -2 Log Likelihood of 18.71 with a $p < 0.001$ indicates this variable is a significant predictor.

● Interpersonal Relationships: A change in -2 Log Likelihood of 14.97 with a $p < 0.001$ shows the significance of this variable in the model.

Table 2
Preliminary Results of Multiple Logistic Regression Test of Enter Method

Variable	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for EXP(B)	
							Lower	Upper
Academic Pressure	61.95	13320.67	0.00	1	1.00	8.011E+26	0.00	0.00
Interpersonal Relationships	58.42	2596.46	0.00	1	0.98	2.347E+25	0.00	0.00
Learning Process	-6.96	20653.27	0.00	1	1.00	0.001	0.00	0.00
Social Relations	29.46	1718.24	0.00	1	0.99	6262E+12	0.00	0.00
Personal Motivation and Ambition	58.95	2532.10	0.00	1	0.98	3.978E+25	0.00	0.00
Group Activities	37.96	20580.06	0.00	1	1.00	3.054E+16	0.00	0.00
Psychological Well-Being	87.78	3611.38	0.00	1	0.98	1.328E+038	0.00	0.00
Constant	-489.88	22417.40	0.000	1	0.98	0.00		

Source: Primary Data Processed in 2024

Table 3
VIF Test Results

Variable	Collinearity Statistics	
	Tolerance	*VIF*
Academic Pressure	0.88	1.14
Interpersonal Relationships	0.67	1.50
Learning Process	0.65	1.55
Social Relationships	0.56	1.80
Personal Motivation and Ambition	0.75	1.33
Group Activities	0.63	1.59
Psychological Well-Being	0.97	1.03

Source: Primary Data processed in 2024

Based on Table 4, the variables that showed significant changes in the -2 Log Likelihood when removed were Interpersonal Relationships, Personal Motivation and Ambition, and Psychological Well-being. These three variables significantly contribute to predicting mental health problems and will be included in multiple logistic regression analyses.

Based on Table 5, Relationships, Personal Motivation & Ambition, and Psychological Well-being significantly influence mental health. Interpersonal relationships have a coefficient of 4.01, a Wald value of 11.06, and a p-value of 0.001, increasing the likelihood of positive mental health by 54.98 times, highlighting the importance of social support. Personal Motivation & Ambition, with a coefficient of 5.37, a Wald value of 13.39, and a p-value of 0.00, enhances the chances of positive mental health by 215.82 times, underscoring the critical role of personal motivation in mental stability. Psychological Well-being, having a coefficient of 4.02, a Wald value of 6.88, and a p-value of 0.01, raises the likelihood of good mental health by 55.78 times, emphasizing its significance for emotional stability. The opposing model constant (-21.87) suggests that the absence of these factors results in meager chances of achieving good mental health. These three variables are essential for predicting and improving mental health outcomes.

Table 4
Test Results Stepwise Regression

	Variable	Model Log Likelihood	Change in-2 Log Likelihood	df	Sig. of the Change
Step 1	Academic Pressure	-3.52	7.04	1	0.01
	Interpersonal Relationships	-7.48	14.97	1	0.00
	Learning Process	0.00	0.00	1	1.00
	Social Relationships	-2.25	4.50	1	0.03
	Personal Motivation and Ambition	-9.27	18.55	1	0.00
	Group Activities	-4.47	9.49	1	0.00
	Psychological Well-Being	-9.35	18.71	1	0.00
Step 2	Academic Pressure	-3.52	7.04	1	0.01
	Interpersonal Relationships	-7.79	15.59	1	0.00
	Group Activities	-6.91	13.83	1	0.00
	Psychological Well-Being	-10.32	20.64	1	0.00

Table 5
Final Results of Multiple Logistic Regression Test Prediction Model after going through the VIF and Stepwise Regression Test Process

Variable	B	S.E.	Wald	df	Sig.	Exp(B)	EXP(B) Lower	EXP(B) Upper
Interpersonal Relationships	4.01	1.21	11.06	1	0.00	54.98	5.19	582.92
Personal Motivation & Ambition	5.37	1.47	13.39	1	0.00	215.82	12.13	3839.41
Psychological Well-Being	4.02	1.53	6.88	1	0.01	55.78	2.77	1124.97
Constant	-21.87	5.64	15.05	1	0.00	0.00		

DISCUSSION

Interpersonal relationships are crucial in maintaining mental well-being by providing social support and reducing stress. This aligns with the social support theory, which suggests positive interpersonal relationships enhance mental health by offering emotional security and psychological support. The findings of this study are consistent with Suharweny (13), who found that students with strong interpersonal relationships are less likely to experience mental health issues compared to those with poor social connections. Therefore, positive interpersonal relationships are essential for supporting students' mental well-being. The learning environment shapes students' psychological conditions. Dwi Hikmah et al (14) found that students exposed to suboptimal learning environments are more vulnerable to mental health challenges. This finding emphasizes the crucial role of a conducive learning atmosphere in maintaining students' psychological well-being. Furthermore, social relationships significantly impact students' mental health. Strong social support reduces the risk of mental disorders such as depression and anxiety. Social support creates an emotional network that helps students manage stress in both academic and social settings. Thus, establishing a supportive and inclusive social environment is essential for maintaining students' overall mental health (15).

This section also discusses the relationship between motivation, personal ambition, and mental health issues among Bachelor of Public Health students at Universitas Prima Indonesia. The study results indicate that students with low motivation and personal ambition are significantly more likely to experience mental health problems. This finding aligns with the theory that motivation is an internal drive influencing goal achievement, while ambition reflects an individual's goals, attitudes, and cognitive abilities (16,17). Previous studies, such as Santoni et al (18) also highlight the positive association between high motivation and ambition with better mental health outcomes. They suggest that students with strong motivation and ambition are better equipped to cope with stress, build resilience, and manage life challenges. In contrast, low motivation and ambition can contribute to feelings of hopelessness, low self-esteem, and anxiety, ultimately increasing the risk of mental health issues. Therefore, developing strategies that enhance students' motivation and ambition within the educational context is crucial to prevent mental health problems.

Additionally, the study findings indicate that high psychological well-being is associated with a lower prevalence of mental health problems. Psychological well-being, which includes life satisfaction, happiness, and overall quality of life, is vital in supporting positive mental health. Students with good psychological well-being tend to be more confident, have clear life goals, and build positive social relationships, reducing their risk of mental health disorders such as depression and anxiety.

Higher psychological well-being is linked to lower stress levels and better mental health. Conversely, low psychological well-being increases the risk of mental health disorders, reinforcing the importance of maintaining psychological well-being among college students. Therefore, systematic efforts should be made to enhance students' psychological well-being, enabling them to optimally reach their academic and social potential (19,20).

Research Limitations

This study has limitations, including its cross-sectional design, potential recall and social desirability bias in self-reported data, and unmeasured confounders like coping mechanisms, pre-existing conditions, and external factors. Future research should adopt a longitudinal approach and consider broader variables for more substantial findings.

CONCLUSION

This study found that interpersonal relationships, personal motivation and ambition, and psychological well-being significantly influence the mental health of S1 Public Health students at Prima Indonesia University. Good interpersonal relationships can increase social support and reduce stress, while high personal motivation and ambition contribute to students' mental resilience. In addition, good psychological well-being is essential in improving quality of life and reducing the risk of mental disorders.

Recommendations for future research are to explore other factors that may influence college students' mental health, such as coping strategies, academic support, and economic factors. In addition, campus-based interventions targeting improvements in motivation, psychological well-being, and social relationships could be developed to support students' mental health comprehensively.

REFERENCES

1. Hammoudi Halat D, Soltani A, Dalli R, Alsarraj L, Malki A. Understanding and fostering mental health and well-being among university faculty: a narrative review. J Clin Med. 2023;12(13).

2. Zergaw A, Tadesse S, Berheto TM, Bitew S, Worku A, Mulu C, et al. Trends in burden of diseases among adolescents in Ethiopia, from 1990 to 2019 : a subnational analysis in global burden of diseases 2019 study. Ethiop J Heal Dev. 2023;37(Special Issue 2):1–10.

3. Drescher A, Clements G, Espelage DL, Woolweaver AB, Mizelle M. University student perspectives on mental health: a qualitative analysis post mental health seminar. Coll Teach. 2023 Jun;1–10.

4. Rasyida A. Factors that are barriers to seeking formal psychological help among university students. Pers Psikol Indones. 2019 Dec;8(2):193–207.

5. Limone P, Toto GA. Factors that predispose undergraduates to mental issues: a cumulative literature review for future research perspectives. Front Public Heal. 2022;10(February).

6. Ulhaq MD, Wahid A. System dynamics modeling for demographic bonus projection in Indonesia. IOP Conf Ser Earth Environ Sci. 2022;1039(1).

7. Pangestu RA, Hidayati IZ, Martini S, Rahman FS, Nasr NMG, Rahman MA. Indonesian health in crisis: association

between cognitive function and depression. J Berk Epidemiol. 2023;11(2):101–9.

8.   Oktaria D, Sari MI, Azmy NA. Differences in stress levels in professional stage students undergoing minor stases with additional duty guarding and not guarding at the Faculty of Medicine, University of Lampung. JK Unila. 2019;3(1):112–6.

9.   Kedang EFS, Nurina RL, Manafe DT. Analysis of risk factors affecting the incidence of depression in students of the Faculty of Medicine, Nusa Cendana University. Cendana Med J. 2020;19(1):87–95.

10. Maudi V. The relationship between depression, anxiety, sleep quality and lifestyle with nutritional status in final year students of the Faculty of Public Health, University of Muhammadiyah Aceh. J Kesehat Tambusai. 2024;5(2):4700–8.

11. Ministry of Health of the Republic of Indonesia. North Sumatra Province Report Riskesdas 2018. Health Research and Development Agency. 2018. 596 p.

12. Ruliyandari R, Solikhah S, Rahmadhani W, Nuraisyah F. Identifying mental health factors of cancer patients in Hospital X. J Berk Epidemiol. 2023;11(1):92–100.

13. Suharweny M. The relationship between friendship and mental health in millennials who are students. 2022;1–27.

14. Dwi Hikmah, Akib MN., Sri Julyani, Ida Royani, Murfat Z. The effect of learning Islamic medical disciplines on the mental health of students of the Professional Doctor Program, Faculty of Medicine, Muslim University of Indonesia. Fakumi Med J J Mhs Kedokt. 2022;2(11):845–55.

15. Risal HG, Alam FA. Efforts to improve social relationships between peers through group guidance services at school. J Bimbing Konseling dan Psikol. 2021;1(1):1–10.

16. Wicaksono P, Wibowo ULN,. Learning motivation of cadets in online learning during the COVID-19 pandemic. Skyhawk J Aviasi Indones. 2021;1(1):34–40.

17. Putra RS. Work-life balance in female officials at one of the universities in Indonesia. J Ecopreneur 12. 2020;3(2):119–28.

18. Santoni R, Lestari PI, Febiara C. Learning motivation, academic stress and adolescent mental health. ISTISYFA J Islam Guid Couns. 2023;2(03):399–409.

19. Gautam S, Jain A, Chaudhary J, Gautam M, Gaur M, Grover S. Concept of mental health and mental well-being, it's determinants and coping strategies. Indian J Psychiatry. 2024 Jan;66(Suppl 2):S231–44.

20. Aulia S, Panjaitan RU. Psychological well-being and level of stress among the last year college students. 2019;7:127–34.