

Stressors Analysis Among Students With Low Grade Point Averages At The Faculty of Medicine, Universitas Muhammadiyah Sumatera Utara

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Abstract.

Stress is a significant issue among university students, especially those with low Grade Point Average (GPA). Low GPA can act as both a cause and a consequence of unmanaged stress, creating a worsening cycle. Various stressors such as academic demands, social relationships, family expectations, and the learning environment can affect students' psychological conditions and impact academic function, behavior, and physical health. Therefore, understanding the types of stressors, stress levels, and the impacts and strategies used by students is important to develop appropriate interventions. This study used a mixed methods approach. The quantitative component involved 36 respondents selected through purposive sampling, while the qualitative component included in-depth interviews with 9 participants. Most students experienced moderately severe stress (58,3%), severe stress (27,8%), moderate stress (11,1%), and mild stress (2,8%). The most dominant stressor was academic related stressor (ARS). Spearman test results showed that all stressor variables had significance values (p) > 0.05, indicating no significant relationship between types of stressors and stress levels, although all correlation coefficients showed a weak positive direction. Interview findings revealed stress impacts on sleep, eating patterns, emotions, concentration, and social interaction, as well as coping strategies such as eating favorite foods, spending time with close people, increasing learning motivation, and improving time management. Students with low GPA experience high stress levels dominated by academic stressors. Although no statistically significant relationship was found, the positive correlation direction indicates that increased stressors may still elevate stress levels.

Keywords: Stress, Stressors, Low GPA and Coping Strategies.

I. INTRODUCTION

Higher education is an important stage that requires students to adapt to various academic and social pressures. Students are required to be able to complete their workload, manage demanding schedules, and meet expectations for high academic achievement [1]. One of the educational programs that carries the heaviest academic pressure among other study programs is medical education. Medical students are required to understand complex materials within a limited period, participate in intensive practical activities, and prepare themselves for rigorous examinations. This requires them to possess strong learning abilities, effective time management skills, and high mental resilience. In the process, not all students are able to adapt to these pressures, which eventually leads to the emergence of stress [2].

Stress among university students is a condition in which an individual is unable to meet academic demands and perceives them as a burden [3]. According to Koochaki, the prevalence of stress among university students worldwide ranges from 38–71%, with the highest prevalence in Southeast Asia, ranging from 39.6–61.3%. Meanwhile, in Indonesia, the prevalence of stress among university students ranges from 36.7–71.6% [4]. Among first-year students of the Faculty of Medicine at Universitas Pattimura Ambon, 33.3% experienced mild stress and 66.7% experienced moderate stress [5]. Another study involving 40 students of the Medical Education Study Program at Universitas Islam Negeri Maulana Malik Ibrahim Malang (PSPD UIN Malang) found that 13 respondents (26.5%) experienced moderate stress, followed by 31 respondents (63.3%) who experienced severe stress [6]. A study conducted at the Faculty of Medicine, Universitas Muhammadiyah Sumatera Utara (FK UMSU), found that 39 respondents (40.6%) experienced mild stress, 51 respondents (53.1%) experienced moderate stress, 5 respondents (5.2%) experienced severe stress, and 1 respondent experienced very severe stress [7].

In addition, several factors contribute to stress-related problems among university students. These factors can be divided into two categories, namely internal factors originating from within the individual and external factors originating from the environment. Internal causes of stress may include thought patterns,

personality, and self-confidence. On the other hand, external causes of stress may arise from pressure and motivation to achieve high grades, prolonged study periods, and social interactions with peers [8].

Stress can affect various aspects of students' lives, including physical, emotional, and cognitive aspects. Some students may experience sleep disturbances, fatigue, loss of motivation, and even feelings of anxiety or depression [9]. When students experience excessive stress, it can reduce their concentration, comprehension, and memory, thereby hindering the completion of assignments, examinations, and academic achievement. Without proper management, stress can decrease motivation and productivity and increase the risk of academic failure, as reflected in GPA indicators [10], [11]. Previous research stated that a low GPA is defined as < 2.75 , which is considered the minimum threshold for graduation and for proceeding to the clinical stage of study [10], [12].

Students with low GPAs tend to experience greater pressure because, in addition to having to catch up academically, they often face pressure from their families or surrounding environment. They may feel less confident or even perceive themselves as failures [13], [14]. In some cases, students with low GPAs may discontinue their studies or *drop out* because they are unable to cope with such stress. Previous research demonstrated a significant relationship between stress and GPA, with a *p-value* of 0.000, indicating a strong and inverse correlation, meaning that the higher the level of stress, the lower the GPA [11]. This highlights the importance of continuous psychosocial support and academic guidance to help students manage stress, develop resilience, and enhance motivation and self-confidence so that they are able to persist in and complete their studies [15], [16].

Based on this background, the researcher is interested in analyzing stressors among students with low GPAs at the Faculty of Medicine, Universitas Muhammadiyah Sumatera Utara (FK UMSU). It is expected that the findings of this study will contribute to the development of appropriate intervention strategies or academic support programs aimed at improving students' psychological well-being as well as their academic achievement.

II. METHODS

This study employed a *mixed-methods* approach, combining a quantitative *cross-sectional* design and a qualitative phenomenological approach. The quantitative approach was used to analyze the relationship between stressors and stress levels among students of the Faculty of Medicine, Universitas Muhammadiyah Sumatera Utara (UMSU), with low GPAs, while the qualitative approach was used to explore students' subjective experiences regarding the impacts of and strategies for coping with stressors. The study was conducted at the Faculty of Medicine, UMSU, in Medan City, from July to November 2025. The study population consisted of students from the 2023 and 2024 cohorts, with the quantitative sample selected using *purposive sampling* based on the criteria of being active students, having a GPA of < 2.75 , and being willing to participate as respondents. The quantitative sample size was determined using a correlation test formula with Fisher's Z transformation, while the qualitative sample was selected purposively based on stress levels until data saturation was achieved, with one FGD group consisting of 9 participants.

Quantitative data were obtained from secondary data in the form of students' GPAs and primary data collected through the *Perceived Stress Scale-10* (PSS-10) and *Medical Student Stressor Questionnaire* (MSSQ), which were distributed online using Google Forms. Data collection was conducted after respondents received an explanation of the study and provided *informed consent*. Qualitative data were collected through FGDs and interviews to explore students' experiences regarding the impact of stress on mental health and GPA, disruptions in learning concentration, and strategies for coping with stressors. The interviews were recorded with the participants' consent and transcribed for analysis.

Quantitative data were processed through the stages of *editing*, *coding*, *entry*, and *saving*, followed by univariate analysis using frequency distributions, percentages, *mean*, median, minimum, and maximum values, as well as bivariate analysis using the Spearman correlation test. Qualitative data were analyzed using thematic analysis through the processes of transcription, theme identification, and interpretation of participants' experiences. The validity of the qualitative data was established through triangulation by returning the transcription results to the respondents (*member checking*) and conducting an *expert review*.

This approach was employed to obtain a more comprehensive description of the relationship between stressors and stress levels while simultaneously understanding the experiences and strategies of students with low GPAs in coping with stressors.

III. RESULT AND DISCUSSION

Results

Univariate Analysis

Table 1. Distribution Based on Stress Levels

Stress Level	Frequency (n)	Percentage (%)
Mild	1	2.8
Moderate	4	11.1
Severe	10	27.8
Very Severe	21	58.3
Total	36	100

Based on Table 1, it was found that among 38 university students, the majority experienced a very severe level of stress, with 21 students (58.3%).

Table 2. Distribution of Stressor Types by Stressor Level

Stressor	Stressor Level	Mild	Moderate	Severe	Very Severe
ARS	n	5	16	14	1
	%	13.9	44.4	38.9	2.8
IRS	n	27	6	3	0
	%	75	16.7	8.3	0
TLRS	n	23	11	2	0
	%	63.9	30.6	5.6	0
SRS	n	20	14	2	0
	%	55.6	28.9	5.6	0
DRS	n	20	12	2	2
	%	55.6	33.3	5.6	5.6
GARS	n	20	12	4	0
	%	55.6	33.2	11.1	0

Based on Table 2, which presents the distribution of stressor types according to stressor levels, it was found that at the mild stressor level, the most frequently experienced type of stressor among students was *IRS*, reported by 27 respondents (75%). At the moderate stressor level, the most frequently experienced type of stressor was *ARS*, reported by 16 respondents (44.4%). At the severe stressor level, the most frequently experienced type of stressor was *ARS*, reported by 14 respondents (38.9%). Meanwhile, at the very severe stressor level, the most frequently experienced type of stressor was *DRS*, reported by 2 respondents (5.6%).

Bivariate Analysis

Table 3. Results of the Spearman Correlation Test

Variables	<i>p</i>	<i>r</i>
ARS–Stress Level	0.051	0.328
IRS–Stress Level	0.785	0.047
TLRS–Stress Level	0.077	0.299
SRS–Stress Level	0.523	0.110
DRS–Stress Level	0.117	0.266
GARS–Stress Level	0.406	0.143

Based on Table 3, the results of the Spearman correlation test showed that all stressor variables had significance values (*p*) greater than 0.05. This indicates that there was no statistically significant relationship between each type of stressor and the stress level among students with low GPAs at the Faculty of Medicine, UMSU. All correlation coefficients indicated a positive direction of association with weak correlation strength. This means that as the level of stressors experienced by students increases, their stress levels tend to increase; however, the relationships were not statistically significant.

Thematic Analysis**Table 4. Impact of Stress**

Category	Subcategory
Sleep Pattern Disturbances	Difficulty sleeping
	Poor sleep quality
	Frequent awakenings
Eating Pattern Disturbances	Loss of appetite
	Irregular meal times
Emotional Reaction Disturbances	Restlessness
	Frequent urge to cry
	Feeling down
	Irritability
	Mood fluctuations
Social Interaction Disturbances	Feeling in a bad mood toward friends
Concentration Disturbances	Reduced concentration
	Difficulty concentrating
	Easily distracted while studying

Based on Table 4, the results of interviews with the subjects indicated that stress affected several aspects, namely sleep pattern disturbances, eating pattern disturbances, emotional reaction disturbances, concentration disturbances, and social interaction disturbances. Each category consisted of subcategories describing changes in the subjects' behavior and psychological conditions resulting from the stress they experienced.

The subjects reported disturbances in their sleep patterns, including difficulty sleeping, poor sleep quality, and frequent awakenings. These conditions indicate that stress affects the process of initiating sleep, maintaining sleep quality, and sustaining sleep stability throughout the night. The subjects' responses corresponding to each subcategory are as follows:

"....so, I also have difficulty sleeping because my thoughts are disturbed and I overthink a lot." (P9)

"I often wake up, and I don't sleep well." (P2)

"....I also have difficulty sleeping because I keep thinking about things." (P3)

"...I have difficulty sleeping and also wake up easily." (P7)

"....my sleep pattern is very disturbed, to the point that I sometimes don't sleep at all." (P5)

The subsequent impact of stress was observed in disturbances in eating patterns, particularly loss of appetite and irregular meal times. The subjects reported that stress caused a decrease in their interest in food as well as irregularity in meeting their daily nutritional needs. The subjects' responses corresponding to the following subcategories are as follows:

"....I don't feel like eating either." (P3)

".....and then I lose my appetite." (P7)

"....my meals also become irregular." (P5)

The research subjects also reported disturbances in emotional reactions, which consisted of several manifestations, including restlessness, frequent urges to cry, feeling down, irritability, and fluctuating moods. This indicates that stress has a significant impact on emotional stability and the subjects' ability to regulate their feelings. The subjects' responses corresponding to each subcategory are as follows:

"I feel restless, and I don't know what to do." (P3)

"...stress also makes me feel down." (P7)

"It affects me more mentally, so I become easily irritated." (P6)

"I lose the motivation to do anything, and my mood fluctuates easily." (P8)

In addition, stress also affected the social aspect, as indicated by feeling in a bad mood toward friends. The subjects stated that emotional changes and mental burdens made them more likely to withdraw or display negative attitudes during social interactions. The subjects' responses corresponding to the following subcategory are as follows:

"Yes, because when I'm stressed, whenever I get together with my friends, I tend to be in a bad mood toward them." (P9)

“Yes, sometimes my friends are affected when I’m unable to control my emotions.” (P8)

Based on the interview results, the research subjects also reported concentration disturbances as one of the impacts of the stress they experienced. These concentration disturbances consisted of three subcategories, namely reduced concentration, difficulty concentrating, and being easily distracted while studying. These three subcategories describe a decline in the subjects’ ability to focus their attention on the tasks or activities being performed. The subjects’ responses corresponding to the following subcategories are as follows:

“.....and when I’m studying, my concentration decreases.” (P1)

“Yes, it becomes difficult to concentrate while studying in class.” (P2)

“It interferes with my concentration because I tend to think more about the problem.” (P3)

“Yes, I become easily distracted while studying, and sometimes I also start thinking about other problems.” (P4)

“....my concentration is also considerably disturbed.” (P5)

“Because I’m emotionally distressed when I’m stressed, it’s difficult to concentrate, so when I study, I just do as much as I can.” (P6)

Table 5. Strategies for Coping with Stress

Category	Subcategory
Spending Time with Friends/Family	Spending time with friends
	Sharing stories with friends
	Going out with friends
Improving Time Management	Not postponing assignments
	Not waiting until the deadline
Consuming Favorite Foods	Eating chocolate
	Drinking sweet beverages
	Buying delicious food
	Buying preferred foods
Increasing Learning Motivation	Studying earlier
	Increasing study efforts

Based on Table 5, the interview results showed that the subjects employed various strategies to cope with stress. The strategies included spending time with friends/family, improving time management, consuming favorite foods, and increasing learning motivation. Each strategy consisted of several subcategories describing the forms of coping behaviors employed by the subjects to alleviate the pressure they experienced.

The subjects employed the strategy of spending time with friends or family as a form of social coping to reduce stress through interaction with people closest to them. The subcategories of this strategy included spending time with friends, sharing stories with friends, and going out with friends. These activities were carried out to obtain emotional support, express feelings, and divert their thoughts from academic and personal pressures. The subjects’ responses corresponding to the following subcategories are as follows:

“The way I cope is by eating chocolate and drinking something sweet, and then spending time with friends.” (P9)

“Besides sharing stories with friends, I also do self-reward, such as buying delicious food or watching a movie.” (P1)

“To cope with it, I go out with my friends, so I do my assignments together with them at a café rather than doing them alone.” (P2)

“I talk to someone close to me, then spend some time alone, and afterward go out with my friends.” (P3)

“I eat, then spend time going out with my family, and sometimes I also go karaoke by myself.” (P6)

“I sleep, and then I go out and spend some time with my friends.” (P8)

The strategy of improving time management emerged as an effort by the subjects to reduce stress by improving their task completion patterns and avoiding the accumulation of work. The subcategories of this strategy were not postponing assignments and not waiting until the *deadline*. Both behaviors were undertaken to prevent stress arising from urgent assignments and excessive academic workload. The subjects’ responses corresponding to the following subcategories are as follows:

“...and I don’t postpone doing my assignments, so I can improve my time management.” (P3)

“.....so whenever I have free time, I work on my assignments and don't wait until the deadline.” (P7)

The subjects also employed an *emotional coping* strategy by consuming their preferred foods. The subcategories of this strategy included eating chocolate, drinking sweet beverages, buying delicious food, and buying foods they liked. Consuming favorite foods served as a form of *self-reward* and provided temporary comfort for the subjects in reducing negative emotions. The subjects' responses corresponding to the following subcategories are as follows:

“The way I cope is by eating chocolate and drinking something sweet.....” (P9)

“Besides sharing stories with friends, I also do self-reward, for example, by buying delicious food.....” (P1)

“By eating food that I like.....” (P4)

“Because I like eating, I just eat.....” (P6)

The strategy of increasing learning motivation was employed with the aim of reducing stress through increased productivity. The subcategories of this strategy were studying earlier and increasing study efforts. The subjects stated that efforts to improve their study patterns could help them feel better prepared and reduce academic pressure. The subjects' responses corresponding to the following subcategories are as follows:

“Yes, especially when studying for the OSCE, because I had previously been too relaxed, so I did not study enough. From then on, I became motivated to study earlier and prepare myself better for the examination.” (P9)

“Now, I'm more focused on increasing my study efforts.” (P7)

“I study by myself, but if I don't understand something, then I ask other people. Family support is also very important because it gives us motivation and encouragement to study.” (P5)

Discussion

The high level of stress experienced by students with low GPAs at the Faculty of Medicine, UMSU, can be analyzed as the result of the accumulation of various interrelated academic and psychosocial pressures. The intensive medical education curriculum, high academic demands, rigorous evaluation systems, and continuous workload require students to consistently perform at an optimal level [2]. Among students with low GPAs, this condition is exacerbated by a discrepancy between academic demands and their perceived actual abilities, thereby triggering feelings of pressure, fear of failure, and decreased self-confidence. In addition, family expectations, social pressure, and the tendency to compare themselves with high-achieving peers further exacerbate students' psychological conditions. The accumulation of these pressures causes students to experience persistent stress that tends to increase until it reaches a very severe category [13], [14].

The phenomenon of high stress levels among students with low GPAs can be understood through the theory of academic stress, which explains that academic achievement is one of the primary sources of pressure for university students. When academic achievement does not meet expectations or institutional standards, students tend to experience internal pressures such as feelings of failure, doubts about their abilities, and uncertainty regarding their future. These conditions subsequently trigger various stress symptoms, ranging from physical disturbances to psychological disturbances [13], [14].

In addition, a low GPA is not only an *output* of a suboptimal learning process but also an *input* that exacerbates psychological conditions. Students with low GPAs often face high social and family expectations, as well as comparisons with their peers. This results in repeated emotional pressure and increases their vulnerability to stress. Thus, there is a reciprocal relationship between stress and academic achievement, forming a *vicious cycle* in which stress leads to decreased academic performance, while low academic performance further exacerbates stress [11]. The findings of this study are consistent with previous research showing that students with low GPAs are more vulnerable to experiencing severe stress than those with high GPAs [17].

Based on the research findings presented in Table 4.2, the most dominant stressor at the moderate and severe stressor levels was the *Academic Related Stressor (ARS)*. ARS encompasses pressures arising from academic assignments, examinations, learning workload, a demanding curriculum, and requirements to achieve certain competency standards. Students with low GPAs showed increased sensitivity to these

academic stressors because they felt the need to catch up academically, while their personal capacity and available time were often insufficient to meet these demands [18], [19].

Medical education is characterized by a heavy academic workload, a fast-paced academic rhythm, and high cognitive demands. Students who are unable to manage their time effectively may experience difficulties in balancing coursework, practical sessions, examinations, and non-academic activities. Under such conditions, learning motivation becomes an important factor determining students' ability to persist and adapt to academic demands. Students with high learning motivation tend to have an internal drive to continue making efforts, develop effective learning strategies, and seek ways to overcome academic difficulties, thereby preventing the pressures they experience from directly developing into severe stress [20], [21].

Conversely, students with low GPAs often experience decreased learning motivation accompanied by reduced *self-efficacy*, resulting in a stronger perception of academic pressure compared with students with better academic performance. The same academic workload may be perceived as more burdensome by students with low GPAs because they experience greater difficulties in adapting and have lower stress tolerance [22].

Based on the results of the Spearman test presented in Table 4.3, the significance values for the relationships between each type of stressor and stress level were all greater than the alpha value ($\alpha = 0.05$). Therefore, it can be concluded that there was no statistically significant relationship between each type of stressor and the stress level among the respondents. Nevertheless, the correlation coefficients (r) indicated a positive direction of association for all types of stressors, suggesting that, in general, higher levels of stressors tended to be associated with higher stress levels, although these relationships were not statistically significant.

Theoretically, the relationship between stressors and stress levels can be explained through the *Stimulus-Response Theory* in the psychology of stress, which states that stress is an individual's response to stimuli or pressures originating from the environment. The intensity, frequency, and individual perception of stressors influence the magnitude of the stress response that emerges [23]. Previous studies have shown that academic stressors generally have a significant relationship with students' stress levels, particularly under conditions of heavy academic workloads, examination pressure, and excessive academic demands. However, the absence of a significant relationship in this study may be attributed to the presence of effective adaptive mechanisms among the respondents, such as effective coping strategies, a supportive learning environment, or differences in the perception of stressors among individuals. In addition, factors such as *self-efficacy*, time management, and academic experience may also influence how students assess and respond to the stressors they experience [23], [24].

The stress experienced by students with low GPAs has wide-ranging impacts, including physical, psychological, social, and academic consequences. One of the most common impacts is sleep pattern disturbances. Students reported difficulty sleeping, difficulty initiating sleep, frequent awakenings during the night, or staying up too late due to persistent thoughts focused on academic assignments, falling behind in course material, and anxiety about academic performance. These sleep disturbances directly contribute to daytime fatigue, reduced concentration, and decreased cognitive processing speed in understanding course material. Several previous studies have stated that sleep pattern disturbances resulting from chronic stress can reduce emotional stability and information-processing abilities, ultimately worsening students' academic performance. In this context, students with low GPAs become increasingly vulnerable because insufficient sleep reinforces the cycle of declining academic performance, which generates new stress and exacerbates existing stress [25], [26].

The subsequent impact is reflected in disturbances in eating patterns. Some students experienced decreased appetite due to prolonged anxiety, whereas others increased their food consumption, particularly sweet or fatty foods, as a form of emotional release. These irregular eating patterns affect physical conditions, such as increased fatigue, headaches, and difficulty concentrating. An imbalance in nutritional intake also affects mood stability, making students more prone to irritability or sadness without an apparent trigger. Indirectly, this condition further reduces productivity and learning ability, thereby exacerbating their academic achievement [27].

Psychologically, students experience disturbances in emotional reactions. They become more easily irritated, quick to anger, or feel sad and anxious without an apparent cause. Feelings of pressure resulting from low GPAs and fear of academic failure trigger intense emotional changes. Some students feel that they have lost control over their daily routines, resulting in demotivation and feelings of helplessness. These emotional disturbances are often not recognized by students as part of stress symptoms, yet they have a substantial influence on their performance when engaging in the learning process or examinations [28].

In addition, significant concentration disturbances may occur. Students reported difficulties understanding course material, an inability to remain focused while reading, and frequently losing direction when completing assignments. The inability to sustain attention for extended periods hinders comprehension of complex course material, particularly in medical education. According to previous research, prolonged academic stress is directly associated with impairments in cognitive functioning, including working memory and attention. In students with low GPAs, these concentration disturbances create substantial barriers to improving academic performance, thereby forming a recurring cycle in which stress leads to decreased academic achievement, while low academic achievement, in turn, triggers the emergence of new stress [29], [30].

The final impact identified was impaired social interaction. Students tended to withdraw from social relationships and feel uncomfortable when being in social environments. Feelings of shame due to low GPAs, concerns about others' judgments, and emotional exhaustion led them to reduce their interactions with peers. This resulted in reduced social support, despite social support being an important factor in alleviating stress. When students lose opportunities to share their experiences, emotional complaints, anxiety, and concerns about their studies become increasingly accumulated. The decline in the quality of social relationships not only exacerbates students' emotional conditions but also deprives them of opportunities to study together, engage in discussions, or support one another in understanding academic material [31], [32].

Overall, these various impacts contribute significantly to a decline in students' academic functioning. All forms of disturbances in sleep, eating, emotions, concentration, and social interaction form an interconnected pattern that mutually influences and exacerbates students' conditions. This reinforces that stress does not merely arise from low GPA; rather, stress itself can further deteriorate GPA, thereby creating a cycle of academic problems that is difficult to break without appropriate intervention [9], [11]. This study is consistent with previous research showing that the impacts of stress on students include disturbances in eating patterns, sleep patterns, emotional reactions, social interaction, and, lastly, concentration [33].

To cope with the stress they experience, students develop various coping strategies. One strategy that is relatively frequently employed is consuming favorite foods as a means of alleviating emotional pressure. Although this strategy provides temporary comfort, scientifically, it does not address the root cause of the problem. Furthermore, excessive consumption of food, particularly foods high in sugar or fat, may affect mood and physical health in the long term. Nevertheless, this mechanism is a natural response among students because it represents a quick and easily accessible means of seeking comfort amid academic pressure [34], [35].

Another strategy is spending time with friends or family, which has been shown to provide positive emotional effects. Social support is one of the strongest protective factors in coping with academic stress. When students feel heard, valued, and understood, their emotional burden becomes lighter. Informal discussions with friends can also provide an opportunity to share solutions related to academic matters; therefore, this strategy not only promotes mental well-being but may also contribute to improved academic performance. Previous research has shown that students with strong social support experience lower levels of academic stress than those with limited social support [36], [37].

In addition to emotional coping strategies, students also develop strategies by increasing their learning motivation. Students attempt to rebuild their enthusiasm for learning through various approaches, such as setting small goals, creating a comfortable learning environment, and rediscovering internal reasons for achieving academic success. Efforts to enhance motivation function to directly confront stressors by improving academic performance. This strategy has more positive long-term effects than emotional coping because it promotes adaptive behavioral changes [38].

Another strategy is improving time management, which is one of the key factors in managing academic stress. Students attempt to develop more organized study schedules, prioritize assignments, and reduce non-essential activities. With effective time management, academic workloads become more manageable, thereby reducing the pressure perceived by students. Numerous studies have emphasized that time management is an important factor in academic success and in preventing excessive stress. When students are able to manage their time effectively, their anxiety regarding assignments and examinations tends to decrease [39].

Overall, the coping strategies employed by students demonstrate their active efforts to overcome the pressures they experience. However, the effectiveness of these strategies largely depends on the consistency and ability of students to implement them [40]. This study is consistent with previous research showing that students' strategies for managing stress include time management and social support, such as spending time with friends or family [41]. In addition, stress coping in the form of *emotional eating*, namely consuming favorite foods, was also identified [35]. Previous research has also indicated that another strategy for managing stress involves increasing learning motivation [32].

IV. CONCLUSION

The results showed that the most dominant stressor experienced by students with low GPAs was the *Academic-Related Stressor (ARS)*, which was associated with a high workload of assignments, examinations, and academic demands. The majority of students were categorized as experiencing a moderately severe level of stress, and there was a significant relationship between the types of stressors and stress levels among students with low GPAs at the Faculty of Medicine, Universitas Muhammadiyah Sumatera Utara. Qualitatively, the stress experienced by students affected various aspects of their lives, including physical, emotional, cognitive, and social aspects, such as sleep disturbances, changes in eating patterns, decreased learning concentration, and impaired social interactions. In coping with such stress, students employed various coping strategies, including spending time with friends or family, consuming preferred foods, practicing time management, and increasing learning motivation.

REFERENCES

- [1] D. Rika Widianita, Hubungan Antara Stress Akademik Dan Psychological Well-Being Pada Mahasiswa Kedokteran Yang Sedang Melaksanakan CO-ASS, vol. VIII, no. I. 2023.
- [2] Malahayati, "Hubungan Manajemen Waktu Dengan Stres Akademik Pada Mahasiswa Kedokteran Universitas Malahayati Angkatan 2020," vol. 7, no. 2, pp. 627–634, 2023.
- [3] V. Meliyana, "Hubungan Tingkat Stres Akademis Dengan Kesehatan Mental Mahasiswa Dalam Menjalani Proses Pembelajaran Kuliah," pp. 1–77, 2024.
- [4] R. Pandapotan, P. Pardede, U. Katolik, and I. Atma, "Hubungan Antara Stres Akademik Dengan Emotional Eating Pada Mahasiswa / Mahasiswi Kedokteran Preklinik Angkatan 2021-2023 Universitas Katolik Indonesia Atma Jaya," vol. 8, no. 11, pp. 2019–2022, 2024.
- [5] M. C. Rabuka, G. Latuheru, and Y. Taihuttu, "Hubungan stres akademik dengan academic burnout pada mahasiswa semester pertama tahun 2022 di Fakultas Kedokteran Universitas Pattimura Ambon," *J. Psikol. Tabularasa*, vol. 18, no. 2, pp. 150–158, 2023, doi: 10.26905/jpt.v18i2.11115.
- [6] J. Beno, A. . Silen, and M. Yanti, "Hubungan Stres Dengan Prestasi Akademik Mahasiswa Tingkat Pertama Program Studi Pendidikan Dokter Uin Maulana Malik Ibrahim Malang," *Braz Dent J.*, vol. 33, no. 1, pp. 1–12, 2022.
- [7] C. I. Mutia Sastra, "Gambaran Tingkat Stres Mahasiswa Fakultas Kedokteran Dan Fakultas Ekonomi Di Universitas Muhammadiyah Sumatera Utara," *J. Kedokt. UMSU*, no. 1808260136, 2021.
- [8] M. . Agustina and P. W. . Deastuti, "Hardiness dan stres akademik pada mahasiswa rantau," *IDEA J. Psikol.*, vol. 7, no. 1, pp. 34–45, 2023.
- [9] A. F. Berliani, "Hubungan Stres Akademik Dengan Gangguan Psikofisiologis Pada Mahasiswa Kedokteran Studi Observasional Pada Mahasiswa Universitas Islam Sultan Agung," 2022.
- [10] T. Ronzon et al., "No 主観的健康感を中心とした在宅高齢者における 健康関連指標に関する共分散構造分析

Title,” *Sustain.*, vol. 11, no. 1, pp. 1–14, 2025.

- [11] I. Darmawan, “Hubungan Antara Tingkat Stres Dengan Indeks Prestasi,” *Orphanet J. Rare Dis.*, vol. 21, no. 1, pp. 1–9, 2023.
- [12] D. Jenča et al., “Heart failure after myocardial infarction: incidence and predictors,” *ESC Hear. Fail.*, vol. 8, no. 1, pp. 222–237, 2021, doi: 10.1002/ehf2.13144.
- [13] C. P. Putri et al., “Pengaruh Stres Akademik Terhadap Academic Help Seeking,” vol. 1, 2018.
- [14] J. R. Tuldjuri, “The relationship of the incomplete learning achievement index with the anxiety level of semester vi students at stikes pasapua ambon,” no. November 2023, pp. 2–6, 2024.
- [15] A. Findyartini, E. Felaza, M. Wahid, R. Mustika, L. S. Menaldi, and S. Nusanti, “Dukungan dan Bimbingan Bagi Mahasiswa,” *Buku Refrensi Pendidik. Kedokt. Pengajaran dan Pembelajaran*, vol. 1, pp. 107–115, 2021.
- [16] Z. B. Syulthoni, M. Nazhif, H. Dwinka, S. Eljatin, and S. Aulia, “Pelatihan Psychological First Aid (PFA) dan Stress Management untuk Mahasiswa Kedokteran Tahun Pertama FKK ITS 2024,” vol. 9, no. 1, 2025.
- [17] M. Miraj, “Impact of Perceived Academic Stress Upon Academic Performance of Physiotherapy Students-A Cross Sectional Study,” *J. Pioneer. Med. Sci.*, vol. 13, pp. 76–80, 2024.
- [18] L. P. Pandiangan and K. M. B. Brahmana, “Perbedaan Stress Akademik Pada Mahasiswa Regular Dengan Mahasiswa Penerima Beasiswa KIP Di Universitas HKBP Nommensen Medan,” *J. Ilmu Pendidik. dan Sos.*, vol. 4, no. 4, pp. 685–699, 2026.
- [19] A. N. Hakim, A. Kusumawati, Y. B. H. Sakti, and I. Qoimatun, “Tingkat stres dan pencapaian kompetensi mahasiswa program profesi dokter: penelitian kuantitatif dan kualitatif,” *J. Kedokt. dan Kesehat.*, vol. 19, no. 2, pp. 173–186, 2023.
- [20] W. Wang, H. Xu, B. Wang, and E. Zhu, “The mediating effects of learning motivation on the association between perceived stress and positive-deactivating academic emotions in nursing students undergoing skills training,” *J. Korean Acad. Nurs.*, vol. 49, no. 4, pp. 495–504, 2019.
- [21] S. Ahmady, N. Khajeali, M. Kalantarion, F. Sharifi, and M. Yaseri, “Relation between stress, time management, and academic achievement in preclinical medical education: A systematic review and meta-analysis,” *J. Educ. Health Promot.*, vol. 10, p. 32, 2021.
- [22] O. Popa-Velea, I. Pirvan, and L. V. Diaconescu, “The impact of self-efficacy, optimism, resilience and perceived stress on academic performance and its subjective evaluation: a cross-sectional study,” *Int. J. Environ. Res. Public Health*, vol. 18, no. 17, p. 8911, 2021.
- [23] X. Gao, “Academic stress and academic burnout in adolescents: a moderated mediating model,” *Front. Psychol.*, vol. 14, p. 1133706, 2023.
- [24] M. U. Kholis, S. M. P. Lestari, D. Luthfianawa, and D. Hermawan, “Hubungan Jenis Stresor Dengan Tingkat Stres Pada Mahasiswa Program Studi Pendidikan Dokter Fakultas Kedokteran Universitas Malahayati Tahap Awal Tahun 2023,” *J. Ilmu Kedokt. dan Kesehat.*, vol. 11, no. 9, pp. 1717–1725, 2024.
- [25] A. Rahmi, N. S. Hasibuan, N. G. Purba, S. R. Manurung, and R. Thohiri, “Hubungan Stres Akademik dan Kualitas Tidur pada Mahasiswa: Penelitian,” *J. Pengabd. Masy. dan Ris. Pendidik.*, vol. 3, no. 4, pp. 2017–2024, 2025.
- [26] D. C. E. Mulyati, A. Ridfah, and N. Akmal, “Hubungan antara stres akademik dengan kualitas tidur pada mahasiswa yang menyusun skripsi,” *J. Online Keperawatan Indones.*, vol. 6, no. 1, pp. 12–20, 2023.
- [27] S. P. Ramadhani, H. Pratikto, and S. Suhadianto, “Stres Akademik dengan Emotional Eating pada Mahasiswa,” *JIIWA J. Psikol. Indones.*, vol. 3, no. 01, 2025.
- [28] R. N. Nadeak and H. Simbolon, “Hubungan Antara Regulasi Emosi Dengan Stres Akademik Pada Mahasiswa Yang Sedang Menyusun Skripsi Di Kota Medan,” *Dharmas Educ. J.*, vol. 4, no. 1, 2023.
- [29] S. M. Suhartini, R. F. E. Setyawati, W. Lestari, P. Y. Perwita, and B. Gunawan, “The Effect of Academic Stress on the Cognitive Function of Medical Students,” *Edunesia J. Ilm. Pendidik.*, vol. 6, no. 2, pp. 904–916, 2025.
- [30] A. F. Almarzouki, “Stress, working memory, and academic performance: a neuroscience perspective,” *Stress*, vol. 27, no. 1, p. 2364333, 2024.
- [31] M. Irwansyah, S. A. Andayani, and H. Khotimah, “Hubungan dukungan sosial dan mekanisme koping dengan tingkat stress santri Pondok Pesantren Nurul Jadid Paiton Probolinggo,” *J. Ilm. Kesehat. Keperawatan*, vol. 17, no. 2, pp. 189–197, 2021.
- [32] Y. Qi, V. Manchuk, N. Korylchuk, O. Kabitska, and O. Sydorovych, “Students’ Coping Strategies in Response to Academic Stress: A Study of Psychological Mechanisms and Their Effects on Adaptation,” *Futur. Soc. Sci.*, vol. 3, no. 3, pp. 24–45, 2025.
- [33] S. Musabiq and I. Karimah, “Gambaran stress dan dampaknya pada mahasiswa,” *Insight J. Ilm. Psikol.*, vol. 20, no. 2, pp. 75–83, 2018.

- [34] N. Dewi, M. P. Satiadarma, and E. Wijaya, "Emotional Eating Sebagai Strategi Koping Stres Pada Mahasiswa Tingkat Akhir Di Jakarta," *J. Muara Ilmu Sos. Humaniora, Dan Seni*, vol. 7, no. 1, pp. 72–79, 2023.
- [35] E. Gusni, S. Susmiati, and E. A. Maisa, "Stres dan emotional eating pada mahasiswa S1 Fakultas Keperawatan," *Link*, vol. 18, no. 2, pp. 155–161, 2022.
- [36] D. S. I. Wati and I. Y. Arifiana, "Dapatkah dukungan sosial menjadi prediktor strategi coping berfokus pada masalah pada Mahasiswa?," *Inn. J. Psychol. Res.*, vol. 1, no. 1, pp. 42–51, 2021.
- [37] E. H. Ansyah and P. N. Susanti, "Hubungan dukungan sosial dengan stres akademik mahasiswa Universitas Muhammadiyah Sidoarjo," *J. Consulen. J. Bimbingan. Konseling Dan Psikol.*, vol. 6, no. 2, pp. 214–223, 2023.
- [38] T. Rukhmana, "Jurnal Edu Research Indonesian Institute For Corporate Learning And Studies (IICLS) Page 25," *J. Edu Res. Indones. Inst. Corp. Learn. Stud.*, vol. 2, no. 2, pp. 28–33, 2021.
- [39] F. K. Zahwa and M. Hanif, "Strategi efektif mengatasi stres akademik melalui manajemen waktu untuk meningkatkan kesehatan mental mahasiswa," *J. Ilmu Pendidik. dan Psikol.*, vol. 2, no. 4, pp. 142–148, 2024.
- [40] N. H. Sholihah, S. Saragih, and Y. Prasetyo, "Stres Akademik pada Mahasiswa: Apakah Peranan Problem Focused Coping?," *Jiwa J. Psikol. Indones.*, vol. 1, no. 2, 2023.
- [41] N. G. Permata and N. Laili, "Peran dukungan sosial dan manajemen waktu pada stres akademik mahasiswa tingkat akhir Universitas Muhammadiyah Sidoarjo," *Al-Isyraq J. Bimbingan, Penyuluhan, dan Konseling Islam*, vol. 8, no. 10, pp. 101–112, 2025.