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Managing Academic Stress: Case Study of High School Students and Strategies in Biology Learning

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Abstract

Background: Stress is a phenomenon that is often ignored in society because it is related to mental health. Academic stress is a subjective response to high academic demands and changes in the school environment. **Objectve:** These findings highlight the need for educational institutions to consider lesson timing to manage students' academic stress. **Method:** The research method used is quantitative descriptive. In data analysis, 40 students from one class were taken as samples using purposive sampling technique. The sample determined by the researcher was public and private high school students without gender restrictions. **Result:** The variable biology lesson hours has a significant correlation with students' academic stress levels, while gender does not have a significant correlation. The Kruskal Wallis test showed little difference in stress levels between biology lessons held in the morning or afternoon. **Conclusion:** Using the SEL approach can help educational institutions create learning environments that are more adaptive and responsive to students' needs in dealing with academic stress.

Keywords : Academic Stress; Social Emotional Learning; Biology Learning Strategy

Abstrak

Latar Belakang: Stres merupakan fenomena yang sering diabaikan dalam masyarakat karena terkait dengan kesehatan mental. Stres akademik merupakan respons subjektif terhadap tuntutan akademik yang tinggi dan perubahan lingkungan sekolah. **Tujuan:** Temuan ini menyoroti perlunya institusi pendidikan mempertimbangkan pengaturan waktu pelajaran untuk mengelola stres akademik siswa. **Method:** Penelitian ini menggunakan metode deskriptif kuantitatif untuk mengeksplorasi tingkat stres akademik siswa Sekolah Menengah Atas pada pelajaran biologi. Metode penelitian yang digunakan yaitu deskriptif kuantitatif. Dalam analisis data, 40 siswa dari satu kelas diambil sebagai sampel menggunakan teknik purposive sampling. Sampel yang ditentukan oleh peneliti yaitu siswa SMA negeri dan swasta tanpa batasan jumlah gender. **Hasil:** Variabel jam pelajaran biologi memiliki korelasi signifikan dengan tingkat stres akademik siswa, sedangkan gender tidak memiliki korelasi signifikan. Uji Kruskal Wallis menunjukkan sedikit perbedaan dalam tingkat stres antara pelajaran biologi yang diadakan pada jam pagi atau siang. **Simpulan:** Penggunaan pendekatan SEL dapat membantu institusi pendidikan menciptakan lingkungan pembelajaran yang lebih adaptif dan responsif terhadap kebutuhan siswa dalam menghadapi stres akademik.

Keywords: Stres Akademik; Social Emotional Learning; Strategi Pembelajaran Biologi

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Stress is a condition that is most often ignored in society because it is related to elements of mental health (Abdullah *et al* ., 2020). Stress is an unavoidable part of life whether at school, work, family, or anywhere (Izzati *et al* ., 2020). Stress that occurs in the academic or school environment is known as academic stress. High school (SMA) students often experience academic stress because they are faced with higher academic expectations (Izzati *et al* ., 2020).

Academic stress is a subjective perception of a response experienced by students in the form of physical reactions, behavior, thoughts and negative emotions that arise due to academic or school demands (Octasya & Munawaroh, 2021). This is in line with research conducted by Astuti & Syaifuddin (2022), academic stress is a response that students show when facing many demands and changes in the academic environment. Academic stress can reduce motivation, hinder academic achievement, and cause an increase in school dropout rates (Pascoe *et al* ., 2020). Other research by Green *et al* ., (2021) shows that individuals who experience academic stress, but have strong emotional support can achieve better levels of mental health. This is supported by Astuti & Syaifuddin (2022), the effects caused by academic stress will lead individuals in a positive or negative direction depending on how the individual manages stress according to the causal factors and individual characteristics.

Karaman *et al* ., (2019) there are differences in academic stress experienced by female and male students. Research by Desamparado *et al* ., (2019) shows that the level of academic stress experienced by female students is higher than male students. This is because women are more likely to use *coping strategies* aimed at changing their emotional response to situations that cause stress, whereas men use more problem-focused methods in dealing with stress experiences and *ego coping* (Jannah *et al* ., 2022; Rohmatillah & Kholifah, 2021; Andiarna & Kusumawati, 2020). Costa *et al* ., (2021) Stress management is different between women and men. Jannah *et al* ., (2022) Women have a *hypothalamic pituitary adrenal* (HPA) system which can produce *adrenocorticotropic hormone* (ACTH). The HPA is a response to mental and physical maintenance and this is thought to explain women having higher levels of stress (Wilujeng *et al* ., 2023).

The response given by each individual in managing stress that occurs in life is one of the internal factors that influences individual stress levels (Shofiyah & Chamid, 2022). The research also discusses that external factors that influence academic stress levels consist of pressure to achieve, encouragement of social status, busy study hours, and parental expectations. Organizing study loads in Indonesia uses a learning system based on lesson hours per semester (Hidayat *et al* ., 2017:205). This is in line with research results which state that if

students have a busy subject schedule, students will tend to be stressed, which can reduce students' focus on learning and cause stress (Kusuma *et al* ., 2018). Sari's research (2018) states that study time and interest in learning are directly related to students' biology learning achievement . Valdez (2019) states that cognitive performance tends to be higher during the day and lower at night and early in the morning.

Every teacher cannot be separated from the use of technology in learning, because this era demands that. Teachers who have the wrong perception of seeing technology will be wrong in implementing it in learning. Many teachers also use technology as their main weapon in teaching. This is not entirely true, because actually learning technology is only a tool to make it easier for teachers to teach and make students better at learning. If technology becomes the only thing that is most important in learning, then the class will be meaningless. Real education talks about relationships, and learning should be student-oriented. At least in teaching, teachers must look at technology from three different perspectives, namely: Technology used before teaching, while teaching, and after teaching. If the teacher is able to put these three things in place, then learning will take place effectively and optimally (Panggabean, 2022).

In developing learning strategies to develop educational innovation, it must be done comprehensively. Learning strategies must be well designed and able to utilize existing potential such as technological advances to develop educational innovation . The rapid development of technology has brought major changes in areas of life, including education. The development of digital technology has influenced changes in the education system, where the previous education system only focused on books and was fixated on rote memorization which was too monotonous. So learning looks boring for students (Ambarwati *et al* ., 2022). Today's children very easily access information media via the internet, they are given the mandate to own devices such as cellphones, laptops, smartphones , and internet access in Indonesia is very adequate for their daily needs , with this kind of convenience teachers can develop a broader and more varied way of learning by utilizing game-based learning media via the internet (Aziz, 2022) . South (2017), said that although there are many good influences, teachers must ensure the use of technology by ensuring all students understand how to use it as a tool to engage creatively, productively, and be lifelong learners rather than just passively consuming content.

Apart from that, students also need to carry out activities that involve thinking skills and abilities. The monotonous learning process causes students to become passive, unmotivated and have low interest in biology lessons (Suliyati, 2019). If students succeed in getting good grades, they are not necessarily able to make connections between the concepts they get in class and the reality in the field or the conditions of the surrounding environment. Authentic experiences can be obtained by students through learning with field study activities. Field study-based learning can also encourage students to be more active, not only cognitively but also psychomotorically (Pertiwi, 2017).

Biology is one of the scientific disciplines that can stimulate mastery of science and technology, because of the importance of this role, studying it requires a high level of understanding to master the theory of biology lessons (Slameto, 2010 in Sari 2018).

Students today are less involved in activities that involve thinking skills and abilities. The monotonous learning process makes students passive, unmotivated and lose interest in Biology lessons. Even though students may succeed in getting good grades, this does not necessarily mean they are able to connect the concepts learned in class with the reality in the field or the situations around them. Authentic experiences can help students gain deeper understanding. Learning through field study activities can enable students to be more active cognitively and psychomotorically. By involving students directly in a real environment, they can experience more meaningful and relevant learning. Field studies can also provide opportunities for students to connect theoretical concepts with practice in the field, thereby strengthening their understanding.

Teachers can also integrate approaches using *Social Emotional Learning* (SEL). SEL can help students increase their motivation and resilience in managing emotions. *Social Emotional Learning* or SEL is a process of teaching and learning activities that deliberately involves children and adults simultaneously so that they understand each other both in terms of emotions, goals and can build empathy and establish positive and responsible relationships (Helaluddin & Alamsyah, 2019). Greenberg (in Yuliandari and Wijaya, 2021:2) social and emotional skills that are trained to students are related to the ability to regulate one's thoughts, emotions and behavior. In contrast to cognitive abilities such as literacy or numeracy, *Social Emotional Learning* trains how a person manages their emotions, understands themselves, and interacts with other people and influences various personal and social outcomes in a person's life (OECD, 2018). Students with good social and emotional competence can live healthier lives and have superior performance compared to those who do not. Therefore, it is important to optimize the components of SEL to minimize students' academic stress.

Based on the background of the problem, a case study is needed to find out the *profile* of high school students' academic stress levels, the relationship between gender and class hours on academic stress levels to review learning strategies that can be provided as a form of managing students' academic stress, especially in Biology learning because teachers play a key role. in curriculum implementation because they determine whether to implement any innovations in their classes as intended (Elmore & McLaughlin; Firestone; in Iskandar 2020). The teacher's decision to implement or not implement an innovation is very important because it has consequences for students. Teachers carry out their profession behind closed doors; therefore no one can control the decisions they make, even in very specific and detailed learning episodes (Tanner & Tanner; in Iskandar 2020). The hope is that educational institutions can design more effective strategies for managing student stress

Method

The research method used is quantitative descriptive research method. This method is used to explain what actually happens to an object in a particular case study through the results of observations, interviews, or questionnaires to test hypotheses and answer research questions based on the positivism philosophy which aims to explain a situation to be studied based on facts in the field supported by literature studies to strengthen the researcher's analysis in making a conclusion (Sugiyono, 2022). The main reason researchers use quantitative descriptive

methods through hypothesis testing with a causal design is to test the hypothesis proposed and answer research questions based on statistical test results and supported by relevant literature studies in terms of solutions that can be provided as a form of academic stress management, especially in biology learning.

Participant

This research was conducted on 40 students in grades X, XI, and XII in Indonesia, specifically on students in 3 schools from public and private schools.

Sample or Population

The population and samples were high school students from 3 schools, namely SMA Negeri 1 Kawali, SMA Labschool Bandung, and SMA Averos Sorong. The type of sampling technique used is nonprobability sampling with purposive sampling technique. The provision of this technique is based on the research objectives, namely to determine the profile of academic stress levels, the relationship between gender and class hours to academic stress levels to review solutions as a form of academic stress management, especially in biology learning. The sample category determined by the researcher is public and nonpublic high school students without gender restrictions.

Data Collection

Data collection used research instruments in the form of open-ended interview instruments with teachers to obtain more information about the curriculum, learning process, teaching modules, learning media, assessment, and evaluation used. Measurement of academic stress level using a non test instrument in the form of a questionnaire of students academic stress level based on physiological, psychological, and behavioral aspects of students with a Likert scale adapted from Goliszeck (2005). Developed by Fahmi & Slamet (2016). Likert scale with five alternative answers, namely always, often, sometimes, rarely, and never. Likert scale is used to measure attitudes, opinions, and perceptions of individuals or groups about social phenomena (Sugiyono, 2022).

Data Analysis

Based on the research objectives to determine the profile of high school academic stress levels and the relationship between gender and class hours to academic stress levels in this study using descriptive analysis and hypothesis testing are the data analysis methods used in this study. Descriptive analysis is used only to describe sample data without conducting generalizable analysis and conclusions (Agustini et al., 2023). Hypothesis testing uses a nonparametric correlation calculation technique, namely Spearman's rho to determine whether there is a significant relationship or not between the two factors being investigated, namely on the purpose of the relationship between gender and academic stress and the relationship between class hours and academic stress.

Result

The first question to get information about the profile of high school students academic stress level in biology learning uses the categorization of students academic stress score which can be seen in Table 2. The score categorization is used to analyze items that have the highest

score on physiological, psychological, and behavioral aspects in students academic stress level. Variable descriptions for descriptive analysis of gender variables and lesson hours and academic stress can be seen in Table 1.

Table 1. Variable Descriptions

Variable Descriptions		Frequency	%	Total
Gender	Male	18	45	100%
	Female	22	55	
Lesson Hours	07.00-08.30	6	15	100%
	08.30-10.20	2	5	
	09.00-11.00	8	20	
	12.00-13.30	5	12.5	
	13.00-14.30	19	47.5	

Variable descriptions based on descriptive statistics (Table 1) illustrate that most participants were female of 55%. The lesson hours variable illustrates that most participants get biology lessons at 13.00-14.30 WIB of 47.5%. Student academic stress variables are obtained through variable categorization using hypothetical statistics obtained based on the scale compiled (Agustin et al., 2023). The academic stress scale has 40 statement items based on physiological, psychological, and behavioral aspects in the score range of 5 (always) to 1 (never). Description of hypothetical data variables shows that the minimum level of academic stress in physiological aspects and the maximum in behavioral aspects with the highest score of 135, while the hypothetical mean is 83.18 with a standard deviation of 21.08. Categorization of high school students academic stress score can be seen in Table 2.

Table 2. Categorization of High School Students Academic Stress Score

Category	Score	Frequency	%
Vey High	≥ 169	0	0
High	137-168	0	0
Moderate	105-136	5	12.5
Low	73-104	22	55
Very Low	< 72	13	32.5
Amount		**40**	**100**

Source: Goliszek (2005) in Fahmi & Slamet (2016)

The categorization of high school students academic stress score illustrates that out of 40 students, there are 5 students by 12.5% who have academic stress levels in the moderate category, 22 students by 55% in the low category, and 13 students by 32.5% in the very low category. Based on the categorization results, the majority of high school students have academic stress levels that are in the

low category. The mean in each aspect based on categorization is the physiological aspect of 79.4 with the highest score of 135 on the statement item "I am sleepy when studying biology in class", the psychological aspect of 82.3 with the highest score of 122 on the statement item "I am afraid every time I study with a fierce teacher", and the behavioral aspect of 88.18 with the highest score of 104 on the statement item "I have difficulty choosing the right words in expressing my opinion".

The hypothesis results for testing the first and second questions using the Spearman rank correlation can be seen in Table 3. The hypothesis criteria used are if the Spearman rank correlation value <0.05 then Ho is rejected and Ha is accepted.

Table 3. Spearman Rank Correlation Test Results

Hypothesis	**r**	**p**	**Conclusion**
First Question Hypothesis			
Gender Academic Stress	0.183	0.258	No Significant Correlation
Second Question Hypothesis			
Lesson Hours Academic Stress	0.423	0.007	There is a Significant Correlation

Based on the table above shows the correlation coefficient (r) to see the correlation between gender and academic stress and the sig. (2-tailed) value (p) to see how much correlation between gender and academic stress. Spearman rank correlation can be seen in the p value of 0.258 from the first question hypothesis test it is known that the p value> 0.05 (significance level) this indicates Ho is accepted, there is no relationship between gender (male and female) with the level of student academic stress in biology learning. Therefore it can be concluded that 18.3% shows a correlation but a negative correlation, this is seen from the Spearman rank correlation value that there is no significant correlation between gender and academic stress of high school students in learning biology.

The results of the second question hypothesis test using Spearman's rank correlation p value of 0.007 is known <0.05. This shows that Ho is rejected, there is a relationship between lesson hours and academic stress levels in biology learning. Therefore, it can be concluded that 42.3% shows a correlation, this is seen from the Spearman rank correlation value of 0.7% which shows that there is a significant correlation between biology lesson hours and the academic stress level of high school students. This is in line with the basic concept of the correlation test that when the r value is close to 0 then there is no influence (correlation) but when it is close to 1 then there is influence (correlation).

Therefore, to determine the difference in academic stress levels with different lesson hours, the Kruskal Wallis test statistical analysis was carried out, which is the development of the Wilcoxon test with categories of more than two independent sample groups (Quraisy et al., 2021). The Kruskal Wallis test ranks table can be seen in Table 4.

Table 4. Kruskal Wallis Test Ranks

	Lesson Hours	**F**	**Mean Rank**

Students Academic Stress Scores	07.00-08.30	8	12.58
	08.30-10.20	2	28.00
	09.00-11.00	8	15.50
	12.00-13.30	5	14.40
	13.00-14.00	10	24.40
	13.00-14.30	9	27.61
	Amount	40	

The Kruskal Wallis test ranks table shows the value of student academic stress based on the mean rank. Based on the mean rank, it can be seen that academic stress scores are high at 08.30-10.20 with 28.00, 13.00-14.30 with 27.61, and 13.00-14.00 with 24.40. Therefore, to find out whether or not there is a significant difference between the level of lesson hours and academic stress scores, we need to look at the results of the Kruskal Wallis statistical test in Table 5.

Table 5. Kruskal Wallis Test Result

	Students Academic Stress Scores
Chi-Square	10.866
Df	5
Asymp. Sig	0.054

Based on the results of the Kruskal Wallis test, the asymp. sig (p) value of 0.054 which shows that 5.4% of biology lesson hours are different for each high school student proves that there are some facts that oppose the null hypothesis, but it does not necessarily prove a significant difference or influence. This is because in statistical hypothesis testing, a p value of 0.054 is often considered marginally significant but it shows slightly significant and slightly insignificant results.

Therefore, it can be concluded that biology class hours have a statistically significant correlation with academic stress level of 0.7% based on Spearman rank correlation. When viewed from the Kurskal Wallis test of 5.4% the level of biology lessons is slightly different or significantly different from the level of student academic stress. This shows that the level of biology lesson hours or different biology lesson hours in this case biology lessons that start in the morning and afternoon are not too different from academic stress levels. The significant correlation between lesson hours and academic stress level may be seen from the tight schedule of lesson hours. Non-statistical analysis is needed in this case the study of relevant literature to support the interpretation of statistical tests.

Discussion

Profile of Academic Stress Level based on Score Categorization

Based on the results of the score categorization in Table 2, the majority of high school students have a level of academic stress that is in the low category. Low or moderate category

academic stress is needed as a driving factor in learning and doing things related to academics (Fahmi & Slamet, 2016). Desmita (2012), explained that positive stress helps students motivate themselves to optimize their potential in living life. The mean in each aspect based on categorization is the physiological aspect of 79.4 with the highest score of 135 on the statement item "I am sleepy when studying biology in class". Rosanti et al. (2022) state that the physical aspect is one of the stress factors related to the condition and function of the individual's body. Therefore, individuals who experience stress will show different physical reactions according to the physical condition or organs of each individual (Barseli et al., 2018). Distractions that can indicate that individuals experience stress in the form of headaches, back pain, fatigue, and irregular sleep which causes students to become sleepy when studying in class.

The psychological aspect amounted to 82.3 with the highest score of 122 on the statement item "I am afraid every time I study with a fierce teacher". Fahmi & Slamet (2016), explained that academic stress is caused by academic stressors in the learning process such as anxiety about facing exams, the burden of assignments that must be completed in the near future, getting bad test scores, peer interactions, and teacher-student relationships. Rahayu & Djabbar (2019), stated that stressors in adolescents at school arise when they spend time in the school environment. When students are afraid of every study with a fierce teacher, it indicates that the relationship between teachers and students triggers academic stress experienced by students. The behavioral aspect is 88.18 with the highest score of 104 on the statement item "I have difficulty choosing the right words in expressing my opinion". According to Khoirunnisa & Gumiandari, when students experience academic stress, students will experience several reactions from the burden of thoughts and feelings that are represented negatively, this will cause students to be unable to express opinions, gather information from others, and behave positively (Khoirunnisa & Gumiandari, 2023).

The Relationship of Gender and Lesson Hours to Academic Stress Levels

Gender and Academic Stress Levels

The results of the research show that there is no significant relationship between gender (male and female) and academic stress levels in biology learning. Although there was a small indication (18.3%) of a negative correlation, this finding was not statistically significant. Socio-cultural theory can explain that complex social and cultural factors may play a role in influencing how students respond to stress, although they were not detected in the context of this research.

The academic pressure experienced in general does not differ significantly based on gender (Dony Darma Sagita *et al* ., 2021). Other studies also show that there is no difference in academic pressure between male and female nursing study program students (Hafifah *et al* ., 2017). However, in certain conditions female students tend to feel stressed when they get a lot of assignments compared to men and the stress experienced affects the physical condition, generally those who have high academic pressure feel palpitations, fatigue and headaches (Bariyyah & Latifah , 2015).

Different gender was found to have no effect on stress during online lectures in this study. The lack of influence of gender on stress can be caused by the presence of the same

stressor. Previous research which states that different genders respond to stress differently (Olff, 2017) cannot be confirmed by this research. Another study that also contradicts the results of this study is Kowal *et al* ., (2020) who concluded that higher levels of stress are associated with younger age, female gender, lower education level, single, living with more children. , and live in a country that has a more severe COVID-19 situation. Meanwhile, research that is confirmed by the results of this study is Yikealo *et al* ., (2018) concluding that stress levels are not related to gender.

Maulana & Iswari (2020) stated that gender is one of the factors that influences stress in the academic field. This is in line with the research results of Hafifah *et al* ., (2017) which concluded that there was no difference between male and female nursing students in responding to stress. This is because there are similar stressors received by male and female students. The fact is that stress is a very individual experience and not all women will experience higher levels of stress than men. Therefore, the model of the relationship between gender and stress needs to be tested again using many contexts, for example in adults (not students or young people) in Indonesia, with various organizational cultures and types of work, which may cause differences in perceptions of the level of stress experienced.

Lesson Hours and Academic Stress Levels

The results showed a significant correlation between biology lesson hours and academic stress levels. The theory of biological intelligence or chronobiology supports this by highlighting the importance of learning time that matches the individual's biological rhythm. Correspondence theory aspects of academic stress are also related, as appropriate study time can influence perceptions and responses to stress. Organizing study loads in Indonesia uses a learning system based on lesson hours per semester (Hidayat *et al* ., 2017:205). This is supported by Kusuma *et al* ., (2018) If students have a busy subject schedule, students will tend to be stressed, which can reduce focus on studying and cause stress. Valdez (2019), states that cognitive performance tends to be higher during the day and lower at night and early in the morning.

Apart from that, Gardner said that IQ can be a factor in how a person can face problems. IQ is mathematical-logical and linguistic ability. Meanwhile, according to Gardner, a person's intelligence cannot only be measured by written tests, but is more suited to how that person solves problems in real life; a person's intelligence can be developed through education; and there is a large amount of intelligence (Suparno, 2013: 19). This, of course, has positive implications for learning in schools.

Based on the discussion related to how the profile of academic stress levels of high school students, the relationship between gender and class hours on academic stress levels, learning strategies that can be provided as a form of managing student academic stress, especially in Biology learning will be reviewed. The object of science lessons is the universe with its contents. The objects studied are so diverse that not all can be presented in the classroom. Therefore, it is the students who go to the location where the object is located. The object being studied can actually be brought to the classroom, but if the object is brought to the classroom, students cannot learn as a whole because the object is separated from its

environment (Widodo, 2021). Biology learning is inseparable from theoretical and practical activities, which have several learning outcomes that must be achieved by students. Among them are being able to analyze problems, being able to be skilled in the laboratory, the ability to think systematically, bring up scientific properties, etc. This of course must be supported by approaches, approaches, and practices. Therefore, this must be supported by the right approach, methods, models and learning media (Saputri et al., 2022).

The advantages of this field study method are that learning outside the classroom will improve learning achievement through organizational skills. This happens because in learning outside the classroom we not only think about what we learn, but also think about how and when we learn, field study learning can improve attitudes towards a better environment. The involvement of each participant is higher when compared to classical learning, the material, or information obtained will be remembered longer and not immediately abandoned (Ahmad & Laha, 2020). Therefore, in addition to using appropriate methods, in order to initiate existing shortcomings, teachers can integrate it with a psychological approach (paying attention to social-emotional aspects). Learning biology using the Social Emotional Learning (SEL) approach, educational institutions can design more effective strategies in managing stress.

The components of SEL (OECD, 2019) consist of: Awareness and Understanding (Openness to Experience), an understanding of Student Challenges and Needs: Teachers can be more sensitive to how certain class times may affect stress levels. They can notice certain patterns that may emerge at certain times and adjust learning approaches accordingly; Emotional Regulation and Support (Emotional Stability), Stress management and Emotional Support: Through SEL learning, students can learn emotion regulation skills that help them manage stress that may arise during identified lesson hours. Teachers can also provide emotional support and a supportive environment for students to feel safer and more comfortable; Collaboration and Engaging Teaching Methods (Agreeableness, Extraversion), collaboration in Learning: Teachers can use teaching methods that involve interaction and collaboration between students, helping them to understand and cope with stress that may arise. Group discussions, group projects, or classroom activities that encourage cooperation can help reduce the burden of individual stress; and Task Performance and Achievement (Conscientiousness), improved Performance in Learning: A focus on performance in a more controlled and supportive atmosphere can help them cope with the pressure and stress that may be associated with certain class hours.

Conclusion

Institutions need to consider lesson time management in managing students' academic stress. Although gender does not play a significant role in students' academic stress levels in biology learning, the arrangement of class hours may be an important factor that must be considered to improve students' well-being. Field study activities that are integrated with the *Social Emotional Learning approach* to Biology learning can provide students with the opportunity to learn directly from the natural environment and learning objects. This can increase students' understanding of biodiversity concepts and help them link theory with practice in the field so that learning does not become boring and is effective in managing

student stress to improve their academic well-being. By using this SEL approach, educational institutions can design learning environments that are more responsive, supportive, and adaptive to students' needs in managing academic stress. This can help improve the overall welfare of students in the context of Biology learning.

Suggestion

This research has limitations, including sample size and other variables that may not have been considered. Recommendations for future research include expanding the sample, considering other factors that may affect academic stress, and using more comprehensive analysis methods to deepen understanding of this phenomenon.

References

Abdullah, S. F., Shah, N. A., & Idaris, R. M. (2020). Stress and its Relationship with the Academic Performance of Higher Institution Students. *International Journal of Advanced Research in Education and Society*, *2*(1), 61-73.

Ahmad, B., & Laha, M. S. (2020). Penerapan Studi Lapangan dalam Meningkatkan Kemampuan Analisis Masalah (Studi Kasus Pada Mahasiswa Sosiologi Iisip Yapis Biak). *Jurnal Nalar Pendidikan*, *2*(1), 63-72.

Ambarwati, D., Wibowo, U., Arsyiadanti, H., & Susanti, S. (2022). Studi literatur: Peran inovasi pendidikan pada pembelajaran berbasis teknologi digital. Jurnal Inovasi Teknologi Pendidikan, *8*(2), 173-184. doi:https://doi.org/10.21831/jitp.v8i2.43560.

Andiarna, F., & Kusumawatim E. (2020). Pengaruh Pembelajaran Daring terhadap Stes Akademik Mahasiswa selama Pandemi Covid-19. *Jurnal Psikologi*, *16*(2).

Agustin, I. S., Razak, A., & Jalal, N. M. (2023). Resiliensi dan Stres Akademik Mahasiswa. *Jurnal Psikologi Talenta Mahasiswa*, *3*(1), 96-107.

Astuti, H. P. P., & Syaifuddin. (2022). Pengelolaan Stres Akademik di Masa Pandemi: Studi Kasus pada Siswa di Sidoarjo. *Jurnal Ilmiah Kependidikan*, *9*(2), 110-122.

Aziz, H. A. (2022). Guru harus dapat Adaptif Soal Teknologi agar menjadi Alat dalam Melawan Problematika Pendidikan. Thesis Commons. https://doi.org/10.31237/osf.io/zw2rs

Bariyyah, K., & Latifah, L. (2015). Tingkat Tekanan akademik Mahasiswa Fakultas Keguruan dan Ilmu Pendidikan Universitas Kanjuruhan Malang. Universitas Pelita Harapan Surabaya, *1*(1).

Barseli, M., Ahmad, R., & Ifdil, I. (2018). Hubungan Stres Akademik Siswa dengan Belajar. *Jurnal Edicatto*: *Jurnal Pendidikan Indonesia*, *4*(1), 40-47.

Costa, C., Briguglio, F., Mondello, S., Teodoro, M., Pollicino, M., Canalella, A., Verduci, F., Italia, S., & Fenga, C. (2021). Perceived Stress in a Gender Perspective: a Survey in a Population of Unemployed Subjects of Southern Italy. *Frontiers in Public Health*, *9*(1), 1-9.

Desamparado, C. G. A., Mendoza, S. J., Minguito, T. K., & Moneva, J. C. (2019). Stress Levels among the Senior High School Students in Practical. *International Journal of Scientific and Research Publications*, *9*(1), 464-475. http://dx.doi.org/10.29322/IJSRP.9.01.2019.p8559

Desmita. (2012). *Psikologi Perkembangan Peserta Didik*. Bandung: Remaja Rosdakarya.

Dony Darma Sagita, Shafna Utami Nur Fairuz, & Syifa Aisyah. (2021). Perbedaan Tekanan akademik Mahasiswa Berdasarkan Jenis Kelamin. *Jurnal Konseling Andi Matappa*, *5*(1), 9–16. http://dx.doi.org/10.31100/jurkam.v5i1.862

Fahmi, N. N., & Slamet. (2016). Layanan Konseling Kelompok dalam Meningkatkan Rasa Percaya Diri Siswa SMK Negeri 1 Depok Sleman. *Jurnal Hisbah*, *13*(1).

Goliszek, A. (2005). *Stress Management*: *60 Second*, (*in Indonesian*). Jakarta: Bhuana Ilmu Populer.

Green, Z. A., Faizi, F., Jalal, R., & Zadran, Z. (2021). Emotional Support Received Moderates Academic Stress and Mental Well-being in a Sample of Afghan University Students amid COVID-19.

Hafifah, N., Widiani, E., & Rahayu, W. H. (2017). Perbedaan Tekanan akademik pada Mahasiswa Program Studi Ilmu Keperawatan berdasarkan Jenis Kelamin di Fakultas Kesehatan Universitas Tribhuwana Tunggadewi Malang. *Nursing News*, *2*(3), 220-229.

Helaluddin & Alamsyah. (2019). Kajian Konseptual tentang Social-Emotional Learning (SEL) dalam Pembelajaran Bahasa. *Jurnal Pendidikan*, *11*(1), 1-16.

Hidayat, R., Siswanto, A., & Bangun, B. N. (2017). *Dinamika Perkembangan Kurikulum di Indonesia Rentjana Pembelajaran 1947 hingga Kurikulum 2013*. Jakarta: Penerbit Labsos.

Husamah. (2013). *Pembelajaran Luar Kelas* "*Outdoor Learning*". Jakarta: Prestasi Pustaka.

Iskandar. (2020). Teachers' Fidelity to Curriculum: An Insight From Teachers' Implementation of The Indonesian EFL Curriculum Policy. *International Journal of Humanities and Innovation (IJHI),* Vol. 3, No. 2, 2020, pp. 50-55.

Izzati, I. D. C., Tentama, F., & Suyono, H. (2020). Academic Stress Scale: A Psychometric Sudy for Academic Stress in Senior High School. *European Journal of Education Studies*. *7*(7), 153-165.

Jannah, A. B. N., Kholili, M. I., & Hidayat, R. R. (2022). Stres Akademik dalam Mengikuti Pembelajaran Jarak Jauh: Perbedaan Gender. *Jurnal Psikoedukasi dan Konseling*, *6*(1), 36-48. https://doi.org/10.20961/jpk.v6i1.62485

Karaman, M. A., Lerma, E., Vela, J. C., & Watson, J. C. (2019). Predictors of Academic Stress among College Students. *Journal of College Counseling*, *22*(1), 41-55. https://doi.org/10.1002/jocc.12113

Khoirunnisa., & Gumiandari, S. (2023). Menurunkan Stres Akademik Siswa SMA NU Lemahabang dengan Menggunakan Teknik Self Instruction dan Self Efficacy. *Jurnal Ilmu Pendidikan*, *6*(2), 887-895.

Kowal, M., Coll-Martín, T., Ikizer, G., Rasmussen, J., Eichel, K., Studzińska, A., Koszałkowska, K., Karwowski, M., Najmussaqib, A., Pankowski, D., Lieberoth, A., & Ahmed, O. (2020). Who is the Most Stressed During the COVID-19 Pandemic? Data From 26 Countries and Areas. *Applied Psychology*: *Health and Well-Being*, 1–21. https://doi.org/10.1111/aphw.12234

Kusuma, A. D., Rachmah, D. N., & Dewi, R. S. (2018). Perbedaan Stres Akademik pada Siswa yang Bersekolah Full Day dan yang tidak Full Day di MAN Tanah Bumbu dan MAN 3 Banjarmasin. *Jurnal Kognisia*, *1*(1), 55-62.

Maulana, H. A., & Hamidi, M. (2020). Persepsi Mahasiswa terhadap Pembelajaran Daring pada Mata Kuliah Praktik di Pendidikan Vokasi. *Equilibrium*: *Jurnal Pendidikan*, *8*(2), 224–231. https://doi.org/10.26618/equilibrium.v8i2.3443

Octasya, T., & Munawaroh, E. (2021). Level of Academic Stress for Students of Guidance and Counseling at Semarang State University during the Pandemic. *Journal of Professionals in Guidance and Counseling*, *2*(1), 27-33.

OECD. (2018). *Social and Emotional Skills Well-being, Connectedness and Success*. Directorate for Education and Skills OECD: Prancis.

Olff, M. (2017). Sex and Gender differences in Post-Traumatic Stress disorder: an update. *European Journal of Psychotraumatology*, *8*(4). https://doi.org/10.1080/20008198.2017.1351204

Öner, H., & Karabudak, S. S. (2021). Negative Emotions and Coping Experiences of Nursing Students During Clinical Practices: A Focus Group Interview. *Journal of Psychiatric Nursing*, *12*(3), 205-215. https://doi.org/10.14744/phd.2021.59480.

Panggabean, D., & Hidayat, D. (2022). Integrasi Teknologi Pembelajaran dalam Aktivitas Belajar dan Mengajar. *JIIP-Jurnal Ilmiah Ilmu Pendidikan*, *5*(11), 5020-5024. https://doi.org/10.54371/jiip.v5i11.1061.

Pascoe, M. C., Hetrick, S. E., & Parker, A. G. (2020). The Impact of Stress on Students in Secondary School and Higher Education. *International Journal of Adolescence and Youth*. *25*(1), 104-112.

Quraisy, A., Wahyuddin., & Hasni, N. (2021). Analisis Kruskal-Wallis terhadap Kemampuan Numerik Siswa. *Journal of Statistics and its Application on Teaching and Research*. *3*(3), 156-161. https://doi.org/10.35580/variansiunm12895

Rahayu, E. W., & Djabbar, M. E. A. (2019). Peran Resiliensi terhadap Stres Akademik Siswa SMA. *Prosiding Temilnas XI IPPI*, 216-224.

Rohmatillah, W., & Kholifah, N. (2021). Stres Akademik antara Laki-Laki dan Perempuan Siswa School from Home. *Jurnal Psikologi*: *Jurnal Ilmiah Fakultas Psikologi Universitas Yudharta Pasuruan*, *8*(1), 38-52.

Rosanti., Purwanti., & Wicaksono, L. (2022). Studi tentang Stres Akademik pada Peserta Didik Kelas VIII SMP Negeri 18 Pontianak. *Jurnal Pendidikan dan Pembelajaran*, *11*(9), 1576-1582.

Saputri, N. V. C., Rohimah, T. R., Riandi., & Widodo, A. (2022). Analisis Rancangan Inovasi Menggunakan Berbagai Aplikasi pada Pendekatan, Metode, Model, dan Media dalam Pembelajaran Biologi. *Jurnal Ilmiah Pendidikan Biologi*, *8*(4), 84-90.

Shofiyah, M. N., & Chamid, M. S. (2022). Faktor-Faktor yang Mempengaruhi Tingkat Stres Siswa saat Pembelajaran Daring Menggunakan Metode Regresi Logistik Ordinal. *Jurnal Sains dan Seni ITS*, *11*(1), 23-28.

Sugiyono. (2022). *Metode Penelitian Kuantitatif*, *Kualitatif*, dan *R&D*. Bandung: Alfabeta.

Suliyati. (2019). Upaya Peningkatan Hasil Belajar IPA melalui Pendekatan Jelajah Alam Sekitar (Jas) Pada Siswa Kelas V Mi Mabdaul Huda Kedung Karang Wedung Demak, Tahun Pelajaran 2018/2019.

Suparno, P. (2013). *Konsep Inteligensi Ganda Dan Aplikasinya Di Sekolah: Cara Menerapkan Konsep Multiple Intelligences Howard Gardner*. Yogyakarta: Kanisius.

South, J. (2017). *Reimagining the Role of Technology in Education*: *National education Technology Plan Update*. USA: U.S. Department of Education.

Tantri, S., & Roseline, C. (2021). Hubungan Jenis Kelamin, Stress, dan Kepuasan Mahasiswa Akuntansi terhadap Pembelajaran Daring di Masa Pandemi COVID-19. *E-Jurnal Akuntansi*, *31*(7), 1783-1797. doi:10.24843/EJA.2021.v31.i07.p14

Valdez, P. (2019). Circadian Rhytms in Attention. *The Yale Journal of Biology and Medicine*, *92*(1), 81-92.

Widodo, A. (2021). *Pembelajaran Ilmu Pengetahuan Alam*. Bandung: UPI Press.

Wilujeng, C. S., Habibie, I. Y., Ventyaningsih, A. D. I. (2023). Hubungan antara Jenis Kelamin dengan Kategori Stres pada Remaja di SMP Brawijaya Smart School. *Smart Society Empowerment Journal*, *3*(2), 6-11.

Yikealo, D., Yemane, B., & Karvinen, I. (2018). The Level of Academic and Environmental Stress among College Students: A Case in the College of Education. *Open Journal of Social Sciences*, *6*(11), 40–57. https://doi.org/10.4236/jss.2018.611004

Yuliandri, B. S., & Wijaya, H. E. (2021). Social Emotional Learning (SEL) to Reduce Student Academic Stress during the COVID-19 Pandemic: Social Emotional Learning (SEL) untuk Mengurangi Stres Akademik Siswa di Masa Pandemi COVID-19. *Proceding of Innter-Islamic University Conference on Psychology*, *1*(1), 1-8.