

Mediator Relationship of Social Support to Academic Stress and Self-Regulated Learning in Students

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ABSTRACT

Someone who has self-regulated learning will be able to reduce the influence of factors that cause academic stress. Self-regulated learning can be influenced by social support which is part of the social environment. Social support is a process in social relationships and interactions that include emotions, cognitive and behaviour that can help an individual in adapting and dealing with the situation he encounters. This study aims to determine mediator relationship of social support to academic stress and self-regulated learning in students. This type of research is a non-experimental quantitative research. Three measuring instruments were being used in this study, namely Educational Stress Scale for Adolescents (ESSA) for measuring academic stress, Motivated Strategies for Learning Questionnaire (MSLQ) for measuring self-regulated learning and Multidimensional Scale of Perceived Social Support (MSPSS) for measuring social support. Purposive sampling was being used as the sampling technique. The participants were 30 junior high school students aged 12-15 years. The results of this study indicate that there is no relationship between academic stress and self-regulated learning ($r = -0.029$, $p = 0.878$ (> 0.05)), there is no relationship between academic stress and social support ($r = -0.013$, $p = 0.945$ (> 0.05)), but there is a relationship between self-regulated learning and social support ($r = 0.411$, $p = 0.024$ (< 0.05)). Mediator relationship of social support cannot be proven because there is no relationship between academic stress and self-regulated learning.

Keywords: Academic Stress, Self-Regulated Learning, Social Support, Junior High School Student

1. INTRODUCTION

All activities such as social interaction, transportation, sports, entertainment, education, research, worship, economy, business and politics are affected by the COVID-19 pandemic which is spreading throughout the world [1]. In the world of education, to avoid the spread of the virus, learning is done from home through online. In addition to avoiding the spread of the virus, online learning at home is also expected by the government to provide new experiences for students [2]. However, in reality online learning can cause academic stress, especially for students [3].

Academic stress is the pressures that occur in a student which can be caused by competition and academic demands [4]. Academic stress arises because of the academic stressor [3]. Academic stressor is a cause of stress that starts from the learning process such as pressure to get good grades, length of study time, number of assignments, low grades obtained and anxiety in facing exams [3]. Based on what was reported by Tempo.co [5], according to the Indonesian Child Protection Commission (KPAI) many students experienced stress and had to drop out of school during the learning period at home. The

things that have the most influence on children's stress are due to inadequate media tools, network difficulties and the workload of pursuing a curriculum that was originally planned by education providers.

A student must have self-regulated learning (SRL) in order to control his stress. SRL is a process of self-regulation carried out by students where students set their learning goals, try to monitor and carry out a learning process that is suitable for themselves as well as regulate their motivation, cognition, and behaviour to suit their goals and also the contextual conditions of their environment [6]. Zimmerman [7] defines SRL as an individual's ability to regulate learning that involves metacognition, motivation and behaviour to acquire knowledge.

According to Zimmerman [8], there are three cognitive social theories that influence a person to do SRL, namely individual, behaviour, and environment. Individual factors are the individual's own abilities, behavioural factors are the responses that individuals do something and environmental factors can be in the form of the social environment or the physical environment.

SRL can be influenced by social environment where social support is one part of the social environment. Social support is a process in social relationships and interactions that include emotions, cognitive and behaviour that can

help an individual in adapting and dealing with the situation he encounters [9]. A person's emotions and behavior can be influenced by the social support received by him. So it can be said that social support has a close association with SRL. A number of previous studies supported what have been mentioned.

Based on the background described above, it can be seen that social support from people in the surrounding environment can increase one's self-regulated learning. Therefore, academic stress can be reduced because people who have high SRL can control the stress they experience. From this explanation, researchers are interested in examining the Social Support as a mediator for the relationship between Academic Stress and SRL in Junior High School Students.

1.1. Related Work

According to Restiva [10] the factors that cause academic stress in students can be reduced if the students have SRL. Another study conducted by Rahimmatussalisa and Sawitri [11] showed that between SRL and academic stress, a significant negative relationship is occurred. SRL also has a positive relationship with social support. This is supported by research Triyatni and Rozali[12] showing that there is a positive relationship between social support and self-regulated learning.

1.2. Our Contribution

This study was conducted to determine Social Support as a mediator for the relationship between Academic Stress and SRL in Junior High School Students.

1.3. Paper Structure

Furthermore, this paper is structured as follows. Section 2 discusses SRL, academic stress, and social support, result tables along with the discussion, conclusion, acknowledgement and references.

2. BACKGROUND

2.1. Self-Regulated Learning

Self-regulated learning (SRL) is the process of individual self-regulation to carry out a learning process that is suitable for him. SRL is a process when a person can make learning goals and try to control and regulate his thinking, motivation, and behavior to suit the goals and contextual conditions of his environment [6]. Someone who has SRL, can do good learning and can also set academic goals.

Zimmerman [7] defines SRL as an individual's ability to organize learning and involve metacognitive, motivational and behavioral learning to acquire knowledge. Metacognitively individuals organize and evaluate themselves at the stages of learning. In terms of

motivation, individuals perceive themselves as competent, independent, and autonomous people. Finally, behaviorally, individuals create an environment that maximizes learning. Therefore, individuals know what is good and can be learn optimally.

Pintrich and Groot [13] mentions that there are five dimensions of SRL which are divided into two parts, namely motivation and learning strategies. In the motivation section, there are three dimensions, namely: (a) intrinsic value, which is the student's perception of the reason he is involved and how he does the task. How are students' perceptions of the subject matter about interest, importance, and usefulness; (b) self-efficacy, is a student's belief that the positive results he gets come from the efforts they make, which means if a student feels that he can control his academic performance, he is likely to be able to do what is needed strategically to influence the desired change; (c) test anxiety, has two components: namely, the worry or cognitive component is a student's performance that is disturbed due to negative thoughts, while the emotional component is the affective and physiological aspects of anxiety arousal. The level of anxiety can be reduced by training the effective usage and learning strategy skills when performing tasks.

In the learning strategies section there are two dimensions, namely, (d) cognitive strategy use, which are various strategies, for example basic training, critical thinking, organization and elaboration. The last dimension is (e) self-regulation, which will shape metacognitive self-regulation activities in three general processes, namely: planning, monitoring, and regulation. Planning is setting goals and analyzing tasks can help to activate. Monitoring is someone's attention when reading. The latter is an arrangement that is assumed to improve performance by examining and correcting students' behavior as they work on assignments.

2.2. Academic Stress

Academic stress is the pressures that occur in a student which can be caused by competition and academic demands [4]. Sun et al.,[14] divide academic stress into five dimensions including; (a) pressure from study, which includes feelings of pressure experienced by students caused by the burden of study at school; (b) workload, which is an indicator of academic stress where students think there is too much workload; (c) worry about grades, ie when students worry about grades at school are very important because students think grades are very important; (d) self-expectation, namely when students feel worried and dissatisfied when they cannot meet the standards that have been set themselves; and (e) despondency, which includes feeling less confident and experiencing many difficulties when studying at school.

2.3. Social Support

According to Zimet [15], social support can be obtained from the closest people who have contact with the

individual's daily life such as family and friends. Forms of social support such as providing information, material obtained or behavioural assistance from close social relationships which make a person feel that he or she is valued, cared for and loved.

According to Zimet (1988), support from someone who has close contact with the individual is social support. Namely (a) support from families such as brothers, sisters, and parents; (b) support from friends; and (c) support from other people who are considered important such as teachers. There are four types of social support according to Sarafino [12], namely (a) emotional support, this aspect includes empathy and concern for individuals. This support provides a sense of comfort, serenity, and can lead to feelings of being loved for the individual who receives it; (b) instrumental support, this aspect includes direct assistance in the form of services, time, and money.

The third is (c) informative support, this support includes giving advice, suggestions and also feedback. This support helps individuals overcome problems by broadening their horizons and understanding of the problems at hand. The information obtained can be used to make decisions and solve problems. Lastly, namely (d) friendship support, this support includes the willingness of other people to spend time or together with individuals, thereby providing a sense of membership in a group that shares interests and carries out joint social activities.

The participants of this research are junior high school students aged 12-15 years. Gender, ethnicity, and religion are not limited by the author. Total participants obtained are 30 people.

Table 1 Participants Demographic

Demographic		N=30	(%)
Sex	Male	15	50.0
	Female	15	50.0
Age	12 Years Old	2	6.7
	13 Years Old	6	20.00
	14 Years Old	12	40.0
	15 Years Old	10	33.3
Class	7 th Grade	7	23.3
	8 th Grade	10	33.3
	9 th Grade	13	43.3

This study used quantitative research with nonexperimental method. The type of research used is correlational, with the aim of finding out mediator relationship of social support to academic stress and self-regulated learning in junior high school students. Purposive sampling was being used as the sampling technique. Data was obtained by distributing Google Forms questionnaires online through instant messaging.

This research was conducted in Jakarta in May 2021. The research instruments consisted of five parts: a cover letter, informed consent, participant's personal data, Educational Stress Scale for Adolescents (ESSA) questionnaire, Motivated Strategies for Learning Questionnaire (MSLQ) questionnaire, and Multidimensional Scale of Perceived Social Support (MSPSS) questionnaire.

Academic Stress was measured using Stress Scale for Adolescents (ESSA) translated by Hidayah who adapted

from Sun et al.,[14]. ESSA has a 16-question questionnaire using Likert scale of 1 to 5. In the ESSA measuring instrument, academic stress is measured in five dimensions, namely pressure from study, workload, worry about grades, self-expectation, and despondency. All items on the ESSA measuring instrument are favourable.

SRL was measured by using the measuring tool called Motivated Strategies for Learning Questionnaire (MSLQ) which was developed by Pintrich and Groot [13]. MSLQ consists of 44 items using a Likert Scale of 1 to 7. In this measuring instrument, there are 5 dimensions, namely, self-efficacy, intrinsic value, test anxiety, cognitive strategy use, and self-regulation.

Multidimensional Scale of Perceived Social Support (MSPSS) developed by Zimet was being used to measure social support [15]. There are 12 items and this measuring tool uses a Likert Scale of 1 to 7. There are three sources of social support measured in the MSPSS, namely family, significant others, and friends.

Academic stress has a hypothetical mean of 3. The total academic stress has an empirical mean of 3.380 (SD = 0.794). The empirical mean value is greater than the hypothetical mean, meaning that the participants' academic stress is high.

The pressure from study dimension has an empirical mean of 2,925 (SD = 1,000), the empirical mean value is smaller than the hypothetical mean, meaning that academic stress on the pressure from study participant dimension is low. The workload dimension has an empirical mean of 3,600 (SD=0.991), the dimension of worry about grades has an empirical mean of 3,966 (SD = 0.964), self-expectation has an empirical mean of 3,233 (SD = 1.124), and the dimension of despondency has an empirical mean of 3,177 (SD = 0.916). the empirical mean value is greater than the hypothetical mean, meaning academic stress on the workload dimension, worry about grades, self-expectation, and high despondency. Table 2 shows the empirical mean of each dimension and total academic stress.

Table 2 Empirical Means of Academic Stress

Dimension	Hypothetical Mean	Empirical Mean	Meaning
Total Academic Stress	3	3.380	High
Pressure From Study	3	2.925	Low
Workload	3	3.600	High
Worry About Grades	3	3.966	High
Self-expectation	3	3.233	High
Despondency	3	3.177	High

SRL has a hypothetical mean of 4. The total self-regulated learning has an empirical mean of 5.145 (SD=0.589). The empirical mean value is greater than the hypothetical mean, meaning that the SRL of the participants is high.

The test anxiety dimension has an empirical mean of 3.944 (SD = 1.543), the empirical mean value is smaller than the hypothetical mean, meaning that SRL on the test anxiety dimension is low. The self-efficacy dimension has an empirical mean of 5.514 (SD = 0.779), the dimension of intrinsic value has an empirical mean of 5.437 (SD = 0.888), cognitive strategy use has an empirical mean of

5.533 (SD = 0.860), and the dimension of self-regulation has an empirical mean of 5.300 (SD = 0.992). the empirical mean value is greater than the hypothetical mean, which means that SRL on the dimensions of self-efficacy, intrinsic value, cognitive strategy use, and self-regulation is in the high category. Table 3 shows the empirical mean of each dimension and total self-regulated learning.

Table 3 Empirical Means of Self-Regulated Learning

Dimension	Hypothetical Mean	Empirical Mean	Meaning
Total SRL	4	5.145	High
Self-Efficacy	4	5.514	High
Intrinsic Value	4	5.437	High
Test Anxiety	4	3.944	Low
Cognitive Strategy Use	4	5.533	High
Self-Regulation	4	5.300	High

Social support has a hypothetical mean of 4. All dimensions have scores above the hypothetical mean, meaning that they are considered to be high. Therefore, overall social support is considered to be high. Table 4 shows the empirical mean of each dimension and total social support.

Table 4 Empirical Means of Social Support

Dimension	Hypothetical Mean	Empirical Mean	Meaning
Total Social Support	4	5.197	High
Significant Others	4	5.383	High
Friends	4	4.800	High
Family	4	5.408	High

Normality testing was carried out using the Shapiro-Wilk Test to determine the correlation technique that will be used. The academic stress variable has a significant value of $p = 0.250 (> 0.05)$, which means that the data is found normally distributed, the SRL variable has a significant value of $p = 0.291 (> 0.05)$, which means that the data is normally distributed whereas social support variable has a significant value of $p = 0.014 (< 0.05)$, which means that the data is found not normally distributed. Based on the results the overall data is not normally distributed because one of the variables has a significance value below 0.05.

With the data not being normally distributed, Spearman correlation was being used to calculate the correlation of the variables. It is known that the correlation between academic stress and SRL shows that there is no significant relationship based on the value of $r = -0.029, p = 0.878 (> 0.05)$.

Likewise, it is known that the correlation between academic stress and social support shows no relationship between academic stress and social support based on data $r = -0.013, p = 0.945 (> 0.05)$.

However, it is known that there is a significant positive relationship between SRL and social support based on the value of $r = 0.411, p = 0.024 (< 0.05)$.

Based on the analysis of additional data through the processing of academic stress differences test based on gender, Mann-Whitney U was used. Results show the value of $p = 0.836 (> 0.05)$, which means that there is no significant difference in academic stress based on gender. Male has a higher mean score (15.83) than female (15.17), as shown in Table 5.

Table 5 Academic Stress Based on Gender

Gender	N	Mean Rank	Sig.
Male	15	15.83	0.838
Female	15	15.17	
Total	30		

Mann-Whitney U was used in the processing of SRL differences test based on gender, results show that the value of $p = 0.101 (> 0.05)$, which means that there is no significant difference in SRL based on gender. Male has a higher mean score (18.13) than female (12.87), as shown in Table 6.

Table 6 Self-Regulated Learning Based on Gender

Gender	N	Mean Rank	Sig.
Male	15	18.13	0.101
Female	15	12.87	
Total	30		

Mann-Whitney U was used in the processing of social support differences test based on gender, results show the value of $p = 0.506 > 0.05$, meaning that there are no significant differences in social support based on gender. Male has a higher mean score (16.57) than female (14.43). As shown in Table 7.

Table 7 Social Support Based on Gender

Gender	N	Mean Rank	Sig.
Male	15	16.57	0.506
Female	15	14.43	
Total	30		

Kruskal-Wallis Test was used in the processing of academic stress differences test based on age, results show the value of $p = 0.750 (> 0.05)$, meaning that there are no significant differences in academic stress based on age. The 15 years old has a higher mean score (16.95) and the 12 years old has a lowest mean score (9.50), as shown in Table 8.

Table 8 Academic Stress Based on Age

Age	N	Mean Rank	Sig.
12 Years Old	2	9.50	0.750
13 Years Old	6	15.17	
14 Years Old	12	15.46	
15 Years Old	10	16.95	
Total	30		

Kruskal-Wallis Test was used in the processing of SRL differences test based on age, results show the value of $p = 0.263 (> 0.05)$, meaning that there are no significant differences in SRL based on age. The 12 years old has a

higher mean score (24.00) and the 13 years old has a lowest mean score (12.50), as shown in Table 9.

Table 9 Self-Regulated Learning Based on Age

Age	N	Mean Rank	Sig.
12 Years Old	2	24.00	0.263
13 Years Old	6	12.50	
14 Years Old	12	12.50	
15 Years Old	10	18.00	
Total	30		

Kruskal-Wallis Test was used in the processing of social support differences test based on age, results show the value of $p = 0.327 (> 0.05)$, meaning that there are no significant differences in social support based on age. The 12 years old has a higher mean score (26.00) and the 13 years old has a lowest mean score (13.00), as shown in Table 10.

Table 10 Social Support Based on Age

Age	N	Mean Rank	Sig.
12 Years Old	2	26.00	0.327
13 Years Old	6	13.00	
14 Years Old	12	14.71	
15 Years Old	10	15.85	
Total	30		

Kruskal-Wallis Test was used in the processing of academic stress differences test based on class, results show the value of $p = 0.038 (< 0.05)$, meaning that there are significant differences in academic stress based on class. The 9th grade has a higher mean score (20.19) and the 8th grade has a lowest mean score (11.75). As shown in Table 11.

Table 11 Academic Stress Based on Class

Class	N	Mean Rank	Sig.
7 th Grade	7	12.14	0.038
8 th Grade	10	11.75	
9 th Grade	13	20.19	
Total	30		

Kruskal-Wallis Test was used in the processing of SRL differences test based on class, results show the value of $p = 0.391 (> 0.05)$, meaning that there are no significant differences in SRL based on class. The 9th grade has a higher mean score (18.00) and the 8th grade has a lowest mean score (13.30), as shown in Table 12.

Table 12 Self-Regulated Learning Based on Class

Class	N	Mean Rank	Sig.
7 th Grade	7	14.00	0.391
8 th Grade	10	13.30	
9 th Grade	13	18.00	
Total	30		

Kruskal-Wallis Test was used in the processing of social support differences test based on class, results show the value of $p = 0.664 (> 0.05)$, meaning that there are no significant differences in social support based on class. The 9th grade has a higher mean score (16.61) and the 8th

grade has a lowest mean score (13.45), which is shown in Table 13.

Table 13 Social Support Based on Class

Class	N	Mean Rank	Sig.
7 th Grade	7	16.36	0.664
8 th Grade	10	13.45	
9 th Grade	13	16.62	
Total	30		

Based on the data obtained, it is known that the results of this study indicate that there is a relationship between SRL and social support. These results are in line with the research conducted by Triyatni and Rozali [12] which shows that a relationship between self-regulated learning and social support is occurred.

Other results of this study showed that there is no relationship between academic stress and social support. This result is not supported by Aza, Atmoko and Hitipeuw in their research findings [18] which show that academic stress has a relationship with social support.

Data indicates that there is no relationship between academic stress and self-regulated learning, so the mediation of social support cannot be proven. This result is not in line with the results of research by Restiva [10] which shows that academic stress has a bond with self-regulated learning.

Based on additional data analysis tests, there are significant difference in academic stress based on class. The different test on academic stress between grades 7, 8, and 9 had the highest mean value in grade 9 compared to grade 7 and grade 8.

Research by Wardah [19] explains that there are external and internal causes of the emergence of academic stress in 9th grade junior high school students, external factors are: (1) High learning intensity, (2) Longer study time frequency, and (3) Task load high academic. In addition, there are internal causative factors, such as: (1) Anxiety about exams, (2) Easily tired of doing assignments, and (3) Fear of failing in exams.

3. CONCLUSION

The researchers concluded that there is no significant relationship between academic stress and self-regulated learning, as well as no significant relationship between academic stress and social support, but there is significant relationship between self-regulated learning and social support, as shown in junior high school students. Mediator of social support cannot be proven because there is no relationship between academic stress and self-regulated learning. Based on additional data analysis tests, there are significant differences in academic stress in terms of class.

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